

FIERY HEARTS

Retail catalogue 2022/ 2023



 **LEDA**
Guss ist Qualität

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FINA F (straight)

with yellow enamelled cast iron inner lining of combustion chamber (1004-00960)


FINA F (straight)

with black cast iron inner lining of combustion chamber and D-Adapter (1004-00935 + 1004-00932)


FINA DS (double sided)

with yellow enamelled cast iron inner lining of combustion chamber (1004-00961)


FINA DS (double sided)

with black cast iron inner lining of combustion chamber (1004-00936)

FINA

for Fireplace installations with direct connection to the chimney or with ceramic heating gas flue:

Models:

2 installation options:

- FINA (with VSR)
 - with D-Adapter for direct connection to the chimney
 - with top-mounted cast iron heat exchanger (to be used as hot air system or heat storage stove) for compact heat storage installations
- FINA plus: specially designed for installations with heat storage flues exchanger (ceramic or cast iron) for a high storage performance

3 Models:

F (straight), **DS** (double sided) and

ES (L-shape: bended glazing, optionally right of left)

Model	Output range	Application
FINA with D-Adapter	7 - 9 kW	direct connection to the chimney
FINA with top mounted heat exchanger	10 kW	direct connection to the chimney
FINA plus with LHK/ GSK	10 kW	with cast iron exchanger for more hot air production
FINA plus	2.3 - 4 kW	with LWS or ceramic heat storage flue (light or semi-heavy construction)
Other uses within professional planning are possible according to local regulations or German TROL.		

Scope of delivery

Fireplace insert with installation and operating manual, three-part flue gas spigot with cleaning cover Ø180 mm (except FINA plus), 2 cha-motte stones for the bottom of combustion chamber, stove pass, external air connector Ø 150 mm, 4 adjustable feet (height regulation, with rubber pads), protective glove

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2)
- Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+


FINA ES R (L-shape right)

with yellow enamelled cast iron inner lining of combustion chamber (1004-00962)

FINA ES R (L-shape right)

with black cast iron inner lining of combustion chamber (1004-00962)


FINA plus F (straight)

with yellow enamelled cast iron inner lining of combustion chamber (1004-01055), displayed: with flue gas spigot

FINA plus ES R (L-shape right)

with yellow enamelled cast iron inner lining of combustion chamber (1004-01055), displayed: with flue gas spigot

FINA Product benefit at a glance:

- High quality cast iron insert with a very slim fitting depth
- different options for the installation:
 - FINA with D-Adapter (opt. Accessory) for direct connection to the chimney
 - FINA with top mounted heat exchanger (twin-wall with 110 kg high quality refractory inside plus 50 kg cast iron casing) also for the installation as heat storage stove (closed system without inlet and outlet air valves)
 - FINA plus to be combined with heating gas flues (ceramic or cast iron e.g. LHK/GSK/LWS)
- hinged all-glass door/s with stainless steel handle
- FINA F/ DS: Door hinge can be changed (factory setting left hinged) with door handle for right hand hinge (ref: 1004-00933)
- FINA DS with two equal-sized doors
- FINA ES with bended glass pane (one-piece)
- double glazing (except FINA ES)
- fuel: wood logs (max. length 33 cm)
- comfortable single-lever operation to adjust the combustion air with separate lighting position

Airflow Volume Regulator: Air supply control with draught adjustment

Innovative air valve installed in the furnace bottom:

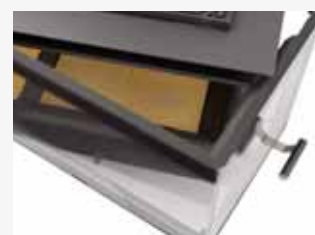
- Improved installation possibilities of the fireplace with excessive chimney draft* without additional draught regulator
- Optimisation of the complete combustion cycle through adequate airflow volume of the combustion air
- Simple adjustment on site according to the chimney calculation
- Lighting booster

*It. EN 13384

- cast iron fire box interior lining (optionally black laquered or yellow enamelled) bottom of the combustion chamber with cast iron collar and chamotte inlay
- high efficiency
 - external combustion air connection with different options of lincage:
 - on adjustable feet (connection from underneath)
 - on base frame (external air connection from underneath, laterally, to the rear or front), opt. accessory
 - with airbox (external air connection laterally, to the rear or front), for low installation height, opt. accessory
 - with airbox and base frame (external air connection laterally, to the rear or front), for higher installation heights, opt. accessory
- Airflow Volume Regulator (Air supply control with draught adjustment) included, ex. FINA plus
- very particularly eco-friendly combustion
- suitable for the connection to one chimney with multiple stoves


Door handle FINA

detail view

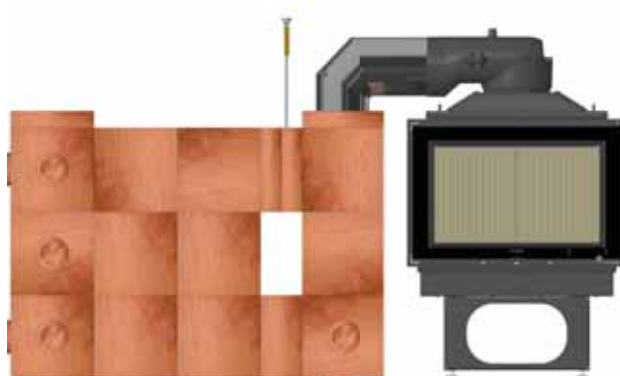

Hinged door, FINA ES

detail view


FINA with D-Adapter










for direct connection to the chimney
(1004-00932)

FINA with top mounted heat exchanger

for compact heat storage installations
(1004-01037 / 1004-00780)

FINA plus with LWS

and horizontal cast iron flue gas spigot (1004-00780 + 1004-00077)
(fig.: FINA plus F with LWS 2.1) (1004-00987)

FINA

Ident-Nr.	Product - basic Insert, firebox inner lining excluded	€	
	FINA - without D-Adapter/top mounted heat exchanger		
1003-02230	FINA 65 F straight, with hinged all-glass door	2830.00	 ^{1,2}
1003-02233	FINA 65 DS double sided, with hinged all-glass doors	3900.00	 ^{1,2}
1003-02236	FINA 65 ES L left L-shape, with hinged all-glass door	3670.00	 ^{1,2}
1003-02239	FINA 65 ES R right L-shape, with hinged all-glass door	3670.00	 ^{1,2}
	FINA plus - without flue gas spigot		 ³
1003-02232	FINA plus 65 F straight, with hinged all-glass door	2730.00	 ^{2,3}
1003-02235	FINA plus 65 DS double sided, with hinged all-glass doors	3800.00	 ^{2,3}
1003-02238	FINA plus 65 ES L left L-shape, with hinged all-glass door	3570.00	 ^{2,3}
1003-02241	FINA plus 65 ES R right L-shape, with hinged all-glass door	3570.00	 ^{2,3}

Essential accessories - Inner lining of combustion chamber and flue gas spigot for FINA plus have also to be ordered separately.		€	
1004-00935	Inner lining for FINA F, black laquered	250.00	
1004-01054	Inner lining for FINA plus F, black laquered	250.00	
1004-00936	Inner lining for FINA DS/ FINA plus DS, black laquered	150.00	
1004-00937	Inner lining for FINA ES/ FINA plus ES, black laquered	210.00	
1004-00960	Inner lining for FINA F, yellow enamelled	400.00	
1004-01055	Inner lining for FINA plus F, yellow enamelled	400.00	
1004-00961	Inner lining for FINA DS/ FINA plus DS, yellow enamelled	220.00	
1004-00962	Inner lining for FINA ES/ FINA plus ES, yellow enamelled	310.00	
1004-00932	D-Adapter for direct connection to the chimney (only for FINA)	150.00	
1004-01037	Cast iron top mounted heat exchanger for FINA F/ DS/ ES (except FINA plus)	1070.00	


FINA F / FINA plus F

with black / yellow cast iron inner lining of combustion chamber


FINA DS / FINA plus DS

FINA ES / FINA plus ES

with black / yellow cast iron fire box inner lining

Checkbox: What do I need to order?

<input type="checkbox"/> FINA Fireplace insert	<input type="checkbox"/> FINA plus Fireplace insert
<input type="checkbox"/> Inner lining	<input type="checkbox"/> Inner lining
<input type="checkbox"/> D-Adapter or	<input type="checkbox"/> Flue gas spigot
<input type="checkbox"/> Cast iron top mounted heat exchanger	<input type="checkbox"/> Cast iron heat exchange box
	<input type="checkbox"/> LWS/Ceramic heat accumulation system
+ optional accessories	+ optional accessories

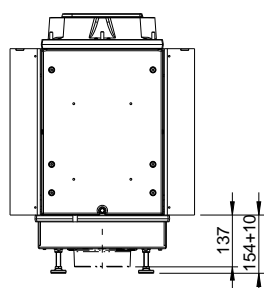
Essential accessories - Inner lining of combustion chamber and flue gas spigot for FINA plus have also to be ordered separately.

	Flue gas spigots	€	
1004-00780	Flue gas spigot Ø 180 mm (only for FINA plus)	50.00	
1004-00093	Flue gas spigot Ø 200 mm (only for FINA plus)	50.00	
1004-00077	Horizontal cast iron flue gas spigot Ø 180 mm, endless (360°) rotatable, for very low flue connections (e.g. room dividers)	200.00	
1004-00310	MFS Double flue gas outlet with cleaning cover	300.00	p. 326
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	p. 326
1004-00968	Frame for FINA (plus) F/DS, black	160.00	
1004-00969	Frame for FINA (plus) ES, black	260.00	

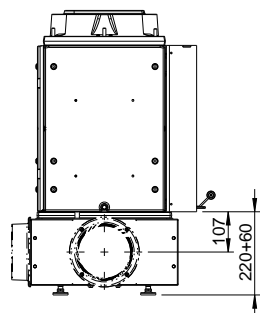
Optional accessories	€	
1004-00568 Supporting frame (F/ DS) Length 1390 mm, supporting surface 50 mm	140.00	
1004-00570 Supporting frame (ES) Length 1360 mm x 1360 mm, supporting surface 50 mm	340.00	
1004-00799 Tie rod with eyelet for tie rod hook (1 pc)	60.00	
1004-00800 Tie rod hook and plugs (1 pc)	40.00	
1004-00965 Convection plate for FINA F/ FINA plus F	100.00	
1004-00966 Convection plate for FINA DS/ FINA plus DS	70.00	
1004-00967 Convection plate for FINA ES/ FINA plus ES	90.00	


Cast iron top mounted heat exchanger

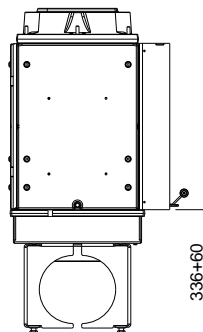
Sectional drawing (1004-01037)


FINA on adjustable feet

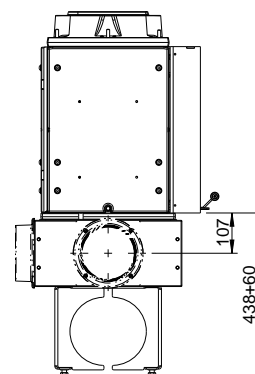
(external air connection laterally, to the rear or front), for low installation height


FINA with airbox

(external air connection laterally, to the rear or front), for low installation height


FINA on base frame

(external air connection laterally, to the rear or front)


FINA with airbox and base frame

(external air connection laterally, to the rear or front), for higher installation heights

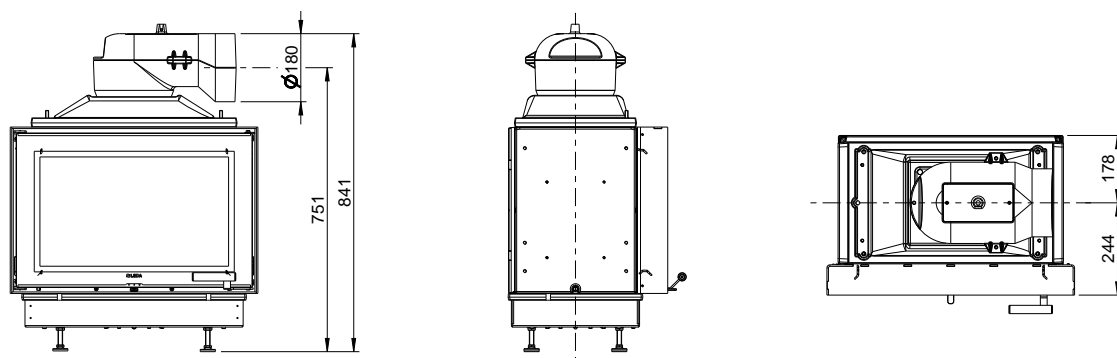
FINA

Optional accessories		€	
1004-00304	Base frame	200.00	
1004-00933	Door handle for conversion to hinge right for FINA (plus) F / DS	70.00	
1004-01015	Removable handle, kit	90.00	
1004-01106	LEDA Service surcharge: change of door hinge in the factory	90.00	
1004-00938	Airbox, black laquered, for the external air connection to the rear, laterally or to the front	370.00	
1004-01264	LEDATRONIC LT3 WiFi electronic combustion air control device with VSR box for FINA/ FINA plus, complete kit	1380.00	p.260
1004-00981	Door contact trigger for 2nd door FINA DS/ FINA plus DS with LT3	170.00	
1003-01494	GSK Cast iron heat exchanger box with soap stone inlay	810.00	p. 302
	LHK Cast iron heat-exchanger box for FINA		p. 304
1003-00561	LHK 320 Cast iron heat exchanger	1210.00	
1003-01832	LHK 695 Cast iron heat exchanger	530.00	
1003-01722	LHK 745 Cast iron heat exchanger	540.00	
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	p. 306

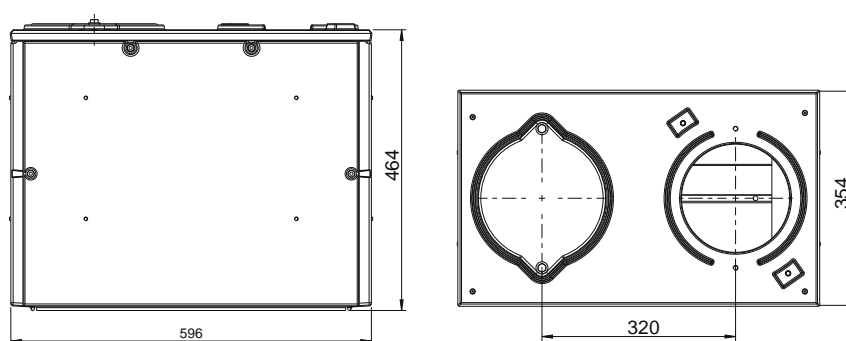
Optional accessories		€	
	LWS Heat Accumulation System		p. 278
1004-00952	LWS set 1, nine elements	1150.00	
1004-00986	LWS set 1.1 with heat-up damper, eleven elements	1440.00	
1004-00953	LWS Set 2, twelve elements	1470.00	
1004-00987	LWS Set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS Set 3, seven elements	980.00	
	LWS single elements for customised composition		
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

- ¹ For FINA it is absolutely necessary to order as well as a D-Adapter (1004-00932) or the cast iron top mounted heat exchanger (1004-01037).
- ² For the installation of a FINA fireplace with construction walls consisting of, or containing flammable materials, convention plate(s) 1004-00965/6/7 should be ordered and installed!
- ³ Flue gas connector should be ordered with the fireplace!
- ⁴ The surcharge for the door hinge change includes 1004-00933
- ⁵ LT3 WiFi without Display, optional display can be ordered optionally (1004-00542). Second contact switch for fina DS to be ordered additionally as well (1004-00981).
- ⁶ Ø180 mm Flue gas spigot 1004-00780 has to be ordered as well. This has to be mounted underneath.

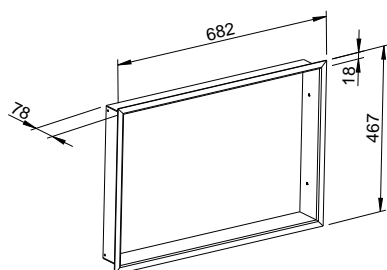
FINA plus with horizontal cast iron flue gas spigot (1004-00077)



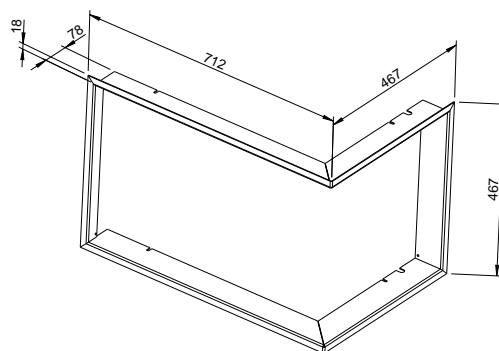
Top mounted heat exchange box for FINA (except FINA plus) (1004-01037)



Frame for FINA F/ DS (1004-00968)

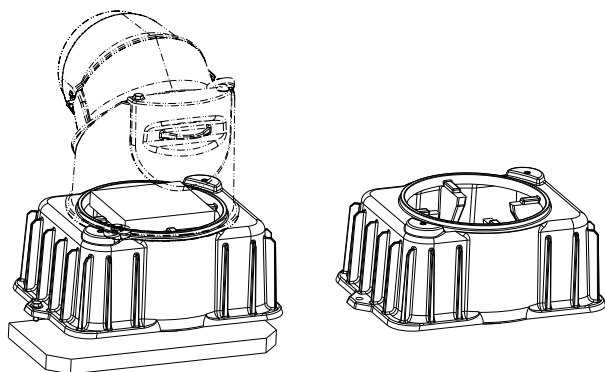


Frame for FINA ES (1004-00969)

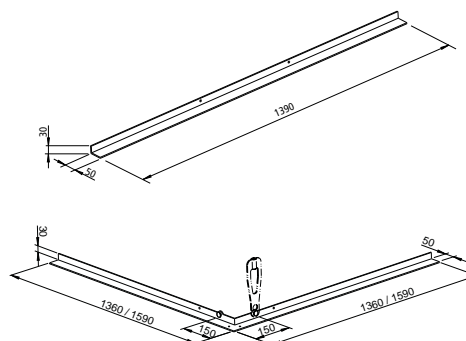


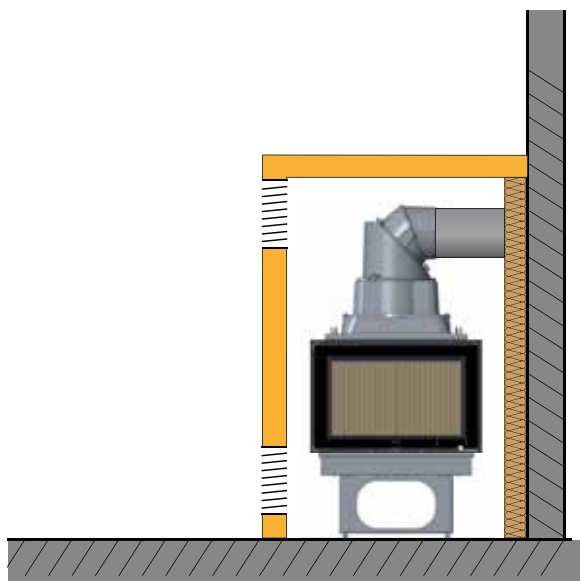
D-Adapter
with flue gas spigot on top

D-Adapter
(1004-00932)

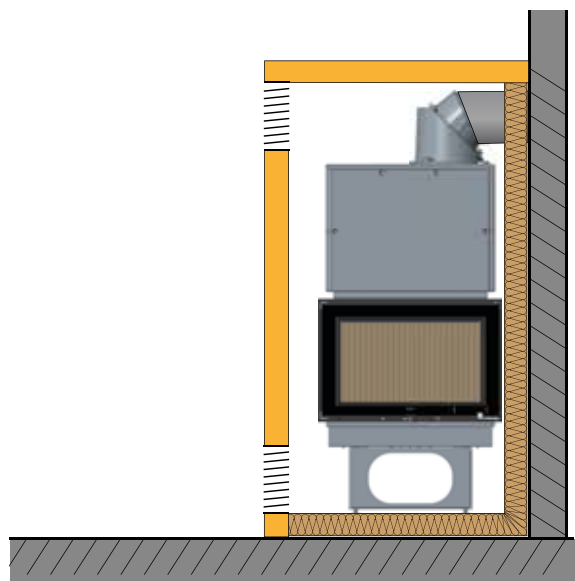


Supporting frame system F/DS (1004-00568) / ES (1004-00570)
above: for FINA F/DS, below for FINA ES




FINA with D-Adapter for direct connection to the chimney

Application example for all FINA models (except FINA plus)


FINA with top mounted heat exchanger

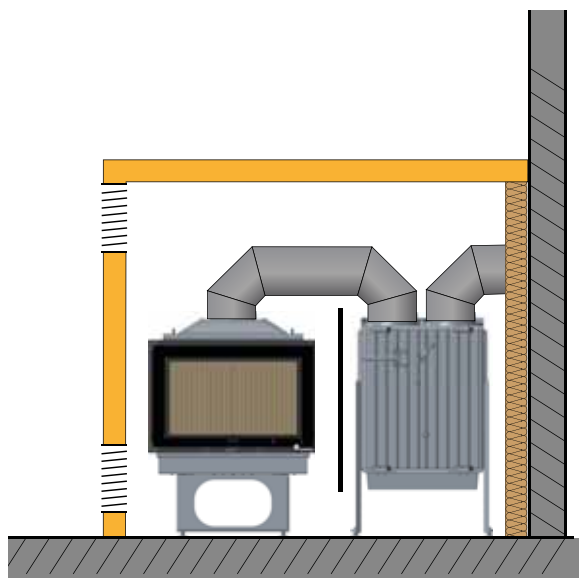
Application example for all FINA models (except FINA plus)

FINA

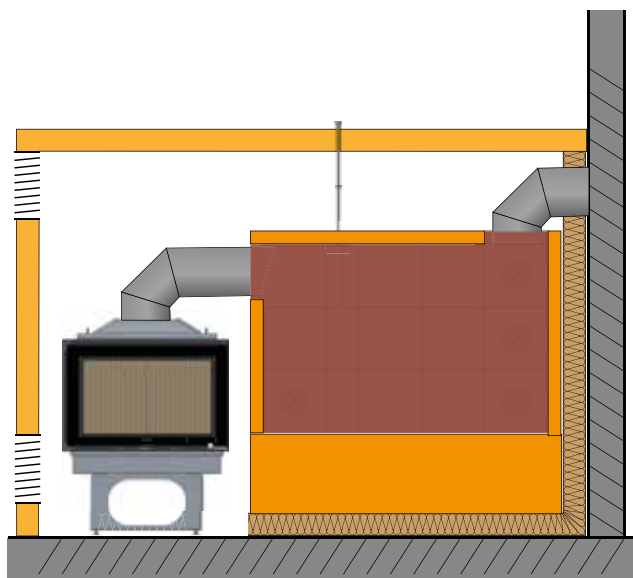
Compliance with	
Operation mode	
	FINA model
Output	[kW]
Heat emission period	
Wood loading quantity	[kg]
Wood consumption	[kg/h]
Wood loading quantity	[kg]
Heat distribution time	[h]
Tract length with LWS	appr. [m]
Type of construction	
Output during the combustion	[kW]
- Heat emission over the window	[kW]
Heat output when storage is charging	[kW]
Cross-section air intake vent (non-combustible)	[cm ²]
Cross-section convection air outlet vent (non-combustible)	[cm ²]
Thermal insulation (inflammable/combustible construction wall) pre-walling and convection plates*	[cm]
Total energy content of total wood loading	[kWh]
- of which is usable	[kWh]

*additional pre-walling and convection plate(s) are absolutely necessary.

FINA direct connection to the chimney			FINA with top mounted heat exchanger		
CE			CE		
Direct heat emission			Direct heat emission and heat storage		
F	DS	ES	F	DS	ES
7	8	9	10		
constantly			constantly/ + 5 hours / light construction		
1.8 to 2			2.2		
2.2 to 2.8			2.9		
—			—		
—			—		
—			—		
7	8	9	7		
1.3	2.4	2.8	1.6	2.7	3.2
—			—		
approx. 1060 (F)			1100 (F)		
approx. 880			900		
12			12		
—			—		
—			—		


FINA plus with cast iron heat exchanger box LHK

Application example for all FINA plus models (not for FINA)


FINA plus with LWS or ceramic heat storage

Application example for all FINA plus models (not for FINA)

FINA plus


Compliance with	
Operation mode	
	FINA model
Output	[kW]
Heat emission period	
Wood loading quantity	[kg]
Wood consumption	[kg/h]
Wood loading quantity	[kg]
Heat distribution time	[h]
Tract length with LWS	appr. [m]
Type of construction	
Output during the combustion	[kW]
- Heat emission over the window	[kW]
Heat output when storage is charging	[kW]
Cross-section air intake vent (non-combustible)	[cm ²]
Cross-section convection air outlet vent (non-combustible)	[cm ²]
Thermal insulation (flammable/combustible construction wall) pre-walling and convection plates*	[cm]
Total energy content of total wood loading	[kWh]
- of which is usable	[kWh]

FINA plus with LHK			FINA plus with LWS / ceramic heat storage					
CE			CE					
Standard			Heat storage					
F	DS	ES	F	DS	ES	F	DS	ES
10			3.5			2.2		
constantly			5 hrs. / light			8 hrs. / semi-heavy		
2.2			5			5		
3			5.2			5.2		
—			5			5		
—			1					
—			3			3		
—			light			semi-heavy		
10			11.7			11.2		
2.5	4	4.5	2.5	4	4.5	2.5	4	4.5
—			1.4			0.9		
1490 (F)			1260 (F)			1260 (F)		
1240			approx. 1050			approx. 1050		
14 / 12			14 / 10			14 / 10		
—			21			21		
—			17.4			17.4		

*additional pre-walling and convection plate(s) are absolutely necessary.


Type FINA / FINA S		F	DS	ES
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229		
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250		
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40		
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120		
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200		
Efficiency	[%]	≥ 81 ²⁾	≥ 81 ²⁾	≥ 81 ²⁾
Flue gas temperature, with direct connection to the chimney	[°C]	191 ²⁾	202 ²⁾	183 ²⁾
Flue gas temperature, with cast iron heat exchanger box	[°C]	228	231	241


I. Operation with direct connection to the chimney (required „D-Adapter“)

Performance data				
Nominal heat output, \dot{Q}_N	[kW]	7	8	9
Direct radiation and convection output	[kW]	5.7	5.6	6.2
Heat output over the front surface(s) and glass pane(s)	[kW]	1.3	2.4	2.8
Chimney dimensioning data according to EN 13384 part 1 and 2				
Flue gas temperature (at the spigot of insert)	[°C]	229	243	219
Flue gas mass flow	[g/s]	6.6	7.9	8.9
Minimum required chimney draft ¹⁾	[Pa]	12	12	12
Required combustion air flow rate	[m ³ /h]	18.5	22.3	25.0
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	1.8	1.8	2.0
Feeding rate, wood logs	[kg/h]	2.2	2.4	2.8
Fuel quantity, wood briquettes	[kg]	1.7	1.7	1.9
Feeding rate, wood briquettes	[kg/h]	2.1	2.3	2.7
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	883	786	990
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	951	869	1082
Convection air outlet ³⁾	[cm ²]	1059	944	1188
Inner gaps in the convection chamber ³⁾				
inner gaps between insert and thermal insulation or cladding	[cm]	8	14	13
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)				

II. Operation with top mounted heat exchanger (with cast iron top mounted heat exchanger) - FINA S

Performance data				
Nominal heat output, \dot{Q}_N	[kW]	10	10	10
Direct radiation and convection output	[kW]	7.5	5.8	5.3
Heat output over the front surface(s) and glass pane(s)	[kW]	2.5	4.2	4.7
Chimney dimensioning data according to EN 13384 part 1 and 2				
Flue gas temperature (at the spigot of top mounted exchanger)	[°C]	274	277	290
Flue gas mass flow	[g/s]	8.8	9.7	9.7
Minimum required chimney draft ¹⁾	[Pa]	15	15	15
Required combustion air flow rate	[m ³ /h]	24.6	27.3	27.3
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	2.2	2.2	2.2
Feeding rate, wood logs	[kg/h]	3	3	3
Fuel quantity, wood briquettes	[kg]	2.1	2.1	2.1
Feeding rate, wood briquettes	[kg/h]	2.9	2.9	2.9

Type FINA / FINA S		F	DS	ES
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1226	805	793
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1318	907	894
Convection air outlet ³⁾	[cm ²]	1472	966	951
Inner gaps in the convection chamber ³⁾				
inner gaps between insert and thermal insulation or cladding	[cm]	11	14	10
 <p>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)</p>				


III. Specifications regarding fire protection and thermal insulation				
 <p>Convection plate(s) (1004-00965/6/7) are absolutely necessary for the installation of a FINA insert in front of construction walls containing combustible / inflammable materials!</p>				
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp. Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾ (insulation thickness additional required to the required 10 cm pre-wallings)				
to the setup floor	[cm]	3	3	3
to the side	[cm]	12	12	12
to the rear	[cm]	12	--	12
to the ceiling ⁷⁾	[cm]	12	12	12
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation				
to the setup floor	[cm]	7	7	7
to the front of thermal insulation to the side	[cm]	10	10	10
to the front of thermal insulation to the rear	[cm]	10	--	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)				
Minimum convection air outlet, non-closable	[cm ²]	1350	1350	1350
Minimum convection air inlet, non-closable	[cm ²]	1620	1620	1620
Required distance in the radiation area of the front (with no additional radiation protection)				
Required distance - FINA (with direct connection to the chimney)	[cm]	85	85	85
Required distance - FINA S (with top mounted heat exchanger)	[cm]	95	95	95

IV. Measurements, weights and miscellaneous				
External air connector	Ø [mm]	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180/200
Static valve position of the LT3/VSR box air valve (test mode), direct connection to the chimney	%	75	75	63
Static valve position of the LT3/VSR box air valve (test mode), with cast iron top mounted heat exchanger	%	100	50	77
Smallest valve position of the LT3/VSR box air valve (dynamic test mode), direct connection to the chimney	%	25	25	25
Smallest valve position of the LT3/VSR box air valve (dynamic test mode), with cast iron top mounted heat exchanger	%	25	25	25
Maximum log size	[cm]	33	33	33
Weight of insert with D-Adapter and inner lining of the insert	approx. [kg]	188	183	181
Weight of cast iron top mounted heat exchanger (with inner lining)	approx. [kg]	160	160	160
Weight of inner lining of top mounted heat exchanger	approx. [kg]	110	110	110
Weight of insert with top mounted heat exchanger and inner lining	approx. [kg]	328	323	318
Heat receptiveness of top mounted heat exchanger (at 350 K)	[kWh]	up to 18.7	up to 18.7	up to 18.7


Type FINA / FINA S		F	DS	ES


- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above. With correct adjustment of the Airflow Volume Regulator (AVR) a requested operation is possible even at higher chimney draft (with chimneys at natural draft conditions) (see installation manual für correct adjustment of der Airflow Volume Regulator).
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) Each model has been tested at direct connection to the chimney with the spigot up, 90°-elbow and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of 3.2 m², 4.2 m², resp. 3.1 m² (FINA F, DS or ES), or 3.4 m², 4.4 m², resp. 3.3 m² (FINA S F, DS or ES).
Other types of construction can be performed according to local regulations or the German TROL
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.

Type FINA 65 plus		F	DS	ES
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229		
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250		
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40		
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120		
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200		
Efficiency	[%]	≥ 81	≥ 81	≥ 81
Flue gas temperature, with cast iron heat exchanger box	[°C]	231	238	231

I. Operation with cast iron heat exchanger box ^{2,4)}				
Cast iron heat exchanger box				
Operation with cast iron heat exchanger box possible		yes	yes	yes
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK		
Performance data				
Nominal heat output, \dot{Q}_N	[kW]	10	10	10
Direct radiation and convection output	[kW]	7.7	6.2	5.7
Heat output over the front surface(s) and glass pane(s)	[kW]	2.3	3.8	4.3
Chimney dimensioning data according to EN 13384 part 1 and 2				
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	278	285	278
Flue gas mass flow	[g/s]	10.3	10.1	10.3
Minimum required chimney draft ¹⁾	[Pa]	12	12	12
Required combustion air flow rate	[m³/h]	29.2	28.5	29.2
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	2.2	2.3	2.2
Feeding rate, wood logs	[kg/h]	3.0	3.1	3.0
Fuel quantity, wood briquettes	[kg]	2.1	2.2	2.1
Feeding rate, wood briquettes	[kg/h]	2.9	3.0	2.9
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1215	839	822
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1323	944	930
Convection air outlet ³⁾	[cm²]	1458	1006	986
Inner gaps in the convection chamber ³⁾				
inner gaps between insert and thermal insulation or cladding	[cm]	7	6	4
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	7	6	4
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4	4
<div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</div>				

II. Operation with LWS / ceramic heat storage ⁴⁾				
LWS / ceramic heat storage possible		yes	yes	yes
Performance data				
combustion capacity – heat input, \dot{Q}_f	[kW]	23	23	23
heat output of insert	[kW]	10.0	10.0	10.0
Heat load of heating gas at spigot of insert	[kW]	13.8	14.4	13.8
Usable heat load of heating gas at spigot of insert	[kW]	9.5	10.0	9.5
Heat output over the front surface(s) and glass pane(s)	[kW]	2.5	4.0	4.5
Direct radiation and convection output (without heat storage)	[kW]	8.3	7.6	8.3

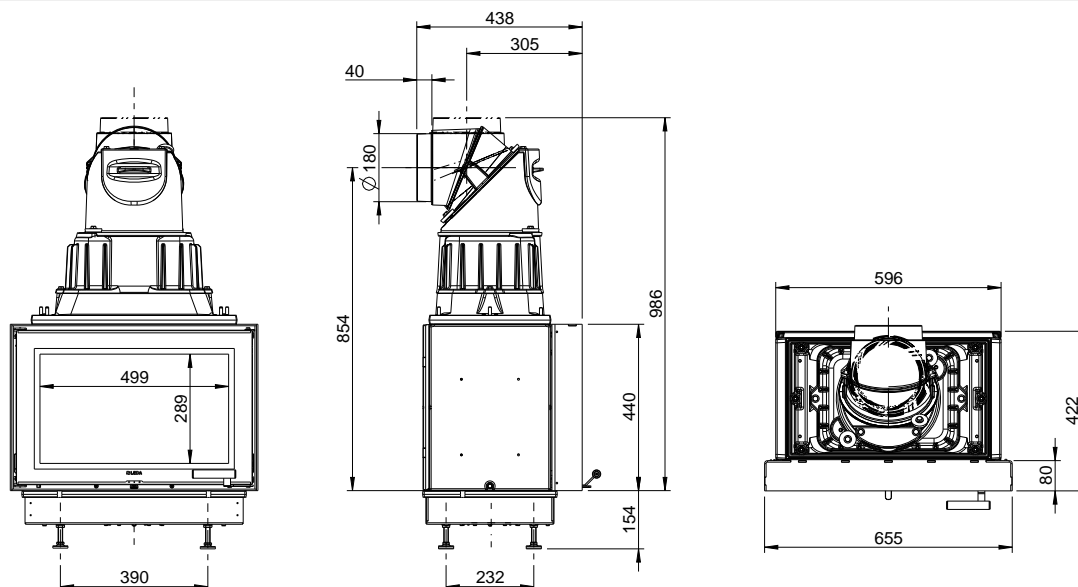
Type FINA 65 plus		F	DS	ES
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2				
Heating gas temperature (at the spigot of insert)	[°C]	554	669	554
Flue gas mass flow	[g/s]	16.9	14.4	16.9
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15
Required combustion air flow rate	[m³/h]	47.6	44.3	47.6
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	5.1	5.1	5.1
Feeding rate, wood logs	[kg/h]	5.3	5.4	5.3
Fuel quantity, wood briquettes	[kg]	4.9	4.9	4.9
Feeding rate, wood briquettes	[kg/h]	5.0	5.1	5.0
Operation with LWS, heat accumulation system				
Admissible LWS sets		Set 1, Set 3	Set 1, Set 3	Set 1, Set 3
Recommended number of LWS elements (25/25/25 cm)		10	10	10
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	175	164	175
Minimum required chimney draft for each 90° bend	[Pa]	0.76	0.60	0.76
Minimum required chimney draft for each 45° bend	[Pa]	0.35	0.28	0.35
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)				
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	198	195	198
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	20	19	20
Flue gas mass flow	[g/s]	16.9	14.4	16.9
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)				
Flue gas temperature (at output spigot of LWS set 3)	[°C]	251	265	251
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	20	19	20
Flue gas mass flow	[g/s]	16.9	14.4	16.9
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1206	802	793
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1382	966	970
Convection air outlet ³⁾	[cm²]	1447	962	952
Inner gaps in the convection chamber ³⁾				
Inner gaps between insert and thermal insulation or cladding	[cm]	11	14	10
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)				

III. Specifications regarding fire protection and thermal insulation				
 Convection plate(s) (1004-00965/6/7) are absolutely necessary for the installation of a FINA insert in front of construction walls containing combustible / inflammable materials!				
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp. Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾ (insulation thickness additional required to the required 10 cm pre-wallng)				
to the setup floor	[cm]	0	0	0
to the side (insert)	[cm]	12	12	12
to the side (heat exchanger box)	[cm]	12	12	12
to the rear (insert)	[cm]	14	14	14
to the rear (heat exchanger box)	[cm]	12	12	12
to the ceiling ⁷⁾	[cm]	20	20	20

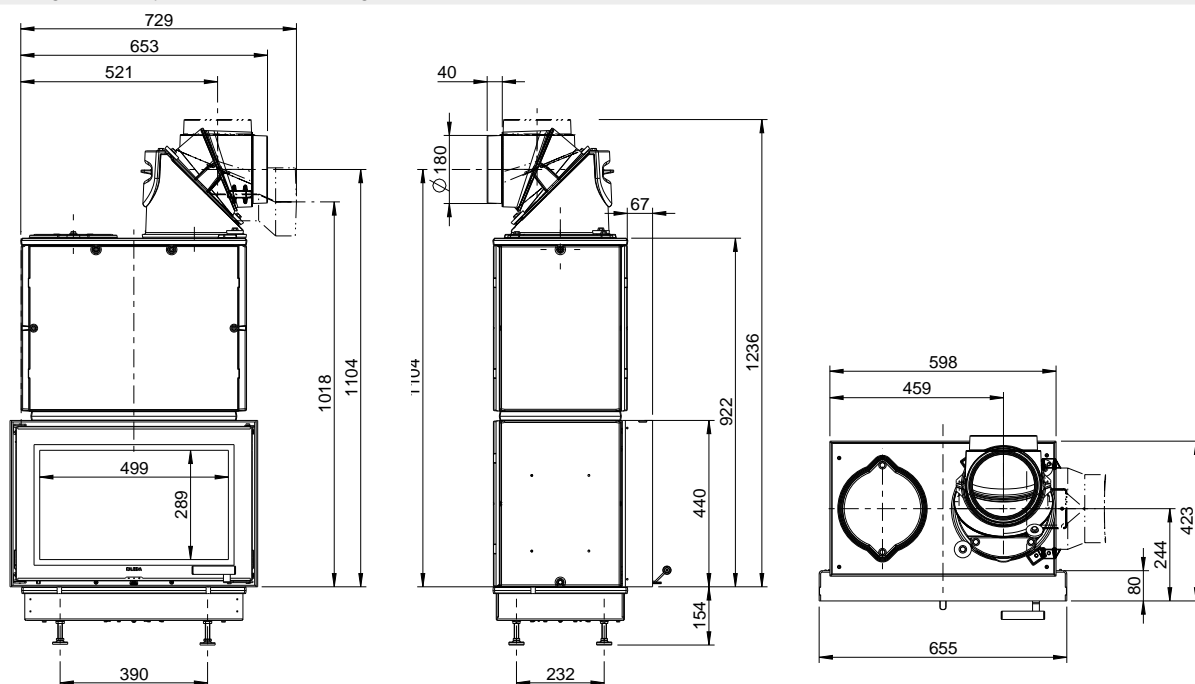
Type FINA 65 plus		F	DS	ES
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation				
between insert and setup floor	[cm]	7	7	7
between heat exchanger box and setup floor	[cm]	15	15	15
between insert and the front of thermal insulation to the side	[cm]	10	10	10
between heat exchanger box and the front of thermal insulation to the side	[cm]	10	10	10
between insert and the front of thermal insulation to the rear	[cm]	10	10	10
between heat exchanger box and the front of thermal insulation to the rear	[cm]	10	10	10
between insert or heat exchanger box and the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)				
Minimum convection air outlet, non-closable	[cm ²]	2000	2000	2000
Minimum convection air inlet, non-closable	[cm ²]	2400	2400	2400
Required distance in the radiation area of the front (with no additional radiation protection)				
Required distance	[cm]	90	90	90
IV. Measurements, weights and miscellaneous				
External air connector	Ø [mm]	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180/200
Preadjustment of the LT-3 combustion air valve (optional)	%	57	57	57
Static valve position of the LT-3 combustion air valve (test mode)	%	32	32	32
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	17	17	17
Maximum log size	[cm]	33	33	33
Weight of insert an inner lining of the insert	approx. [kg]	168	163	158
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66		

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert an heat exchanger box, 90°-elbow and a heating/ flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.1 m², approx. 5.0 m², approx. 4.0 m² (FINA plus F, DS, ES) - with cast iron heat exchanger box, approx. 2.4 m², approx. 3.4 m², approx. 2.6 m² (FINA plus F, DS, ES) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-wallling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.

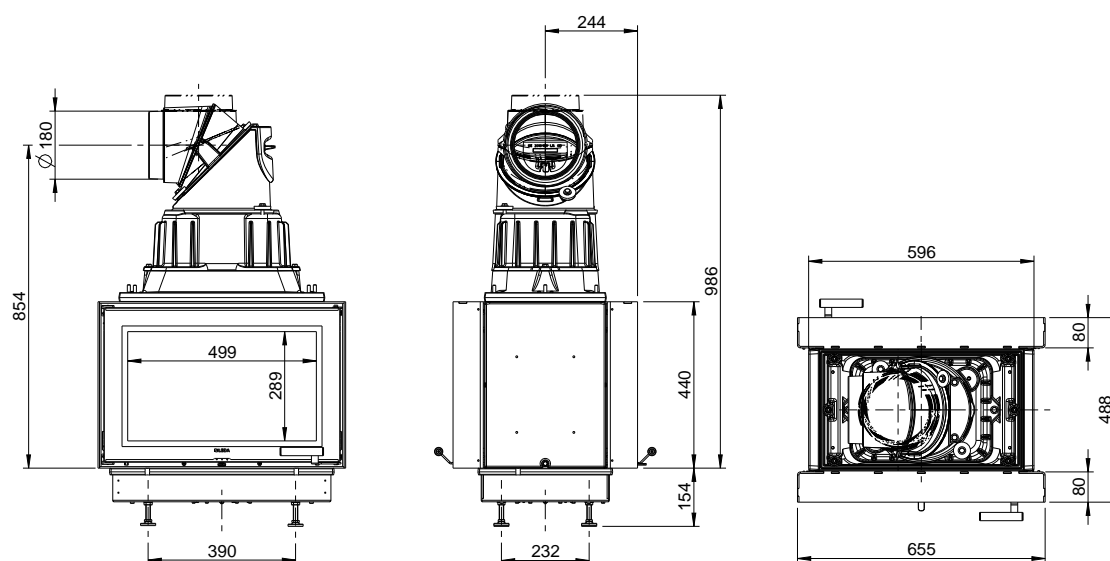
FINA F (straight) with D-adapter (1004-00932) / M1:20



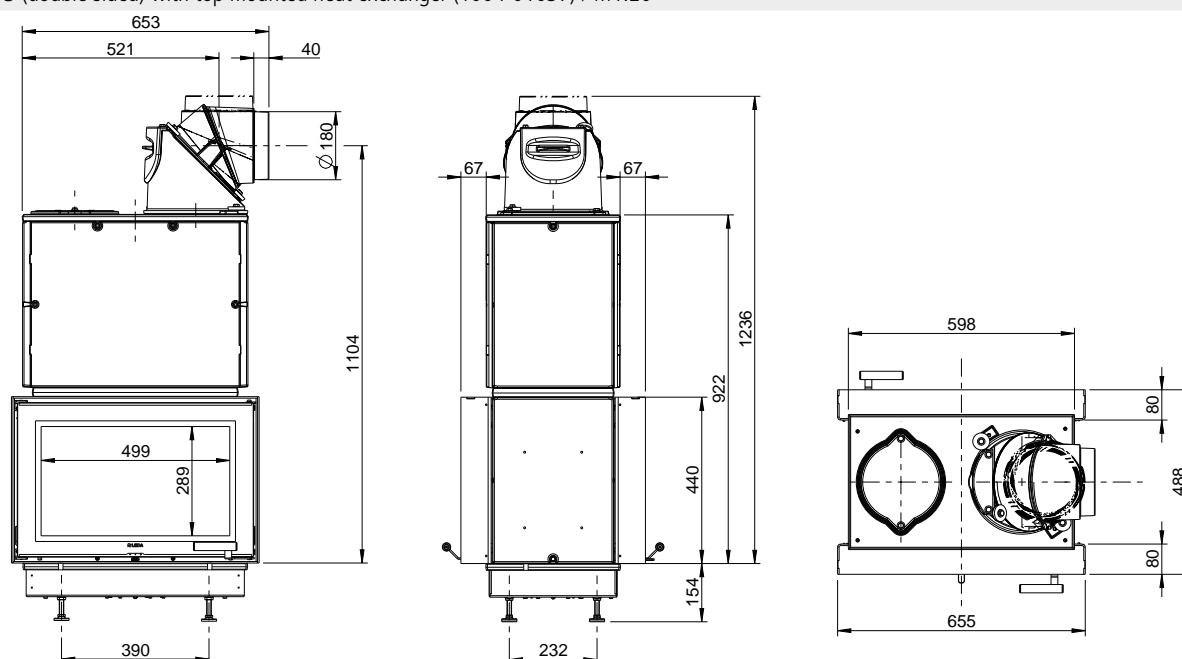
FINA F (straight) with top mounted heat exchanger (1004-01037) / M1:20



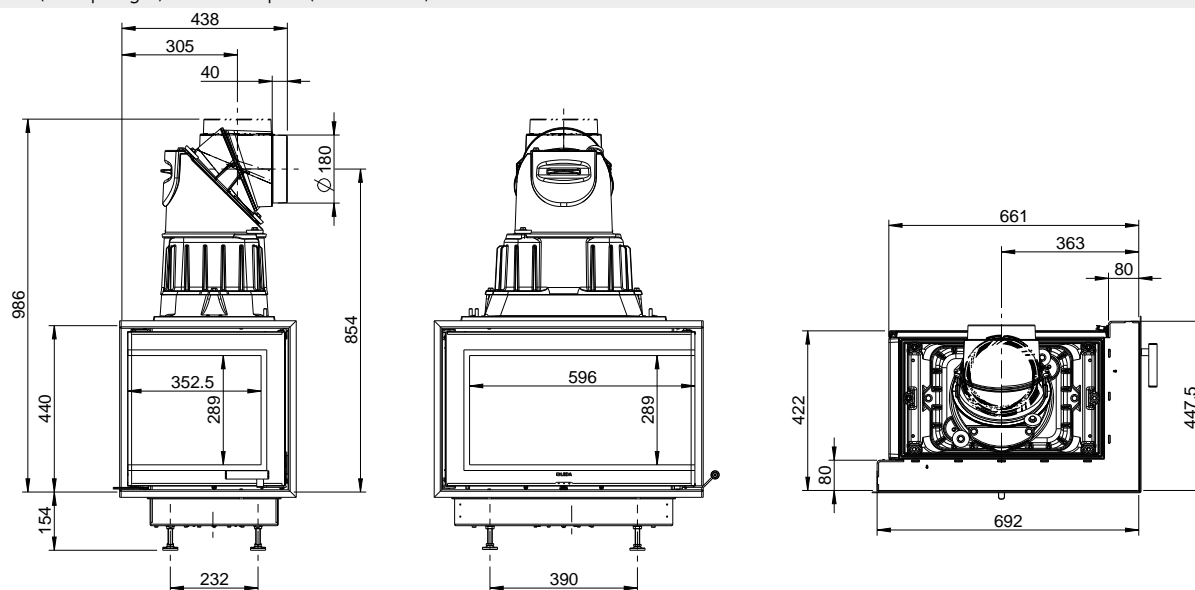
FINA DS (double sided) with D-adapter (1004-00932) / M1:20



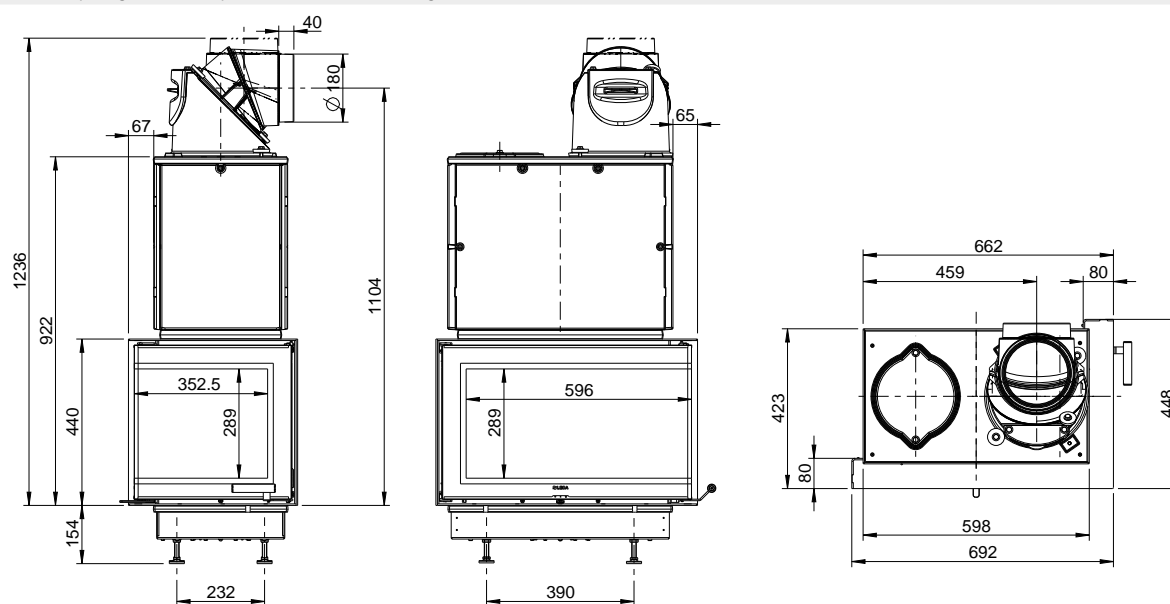
FINA DS (double sided) with top mounted heat exchanger (1004-01037) / M1:20



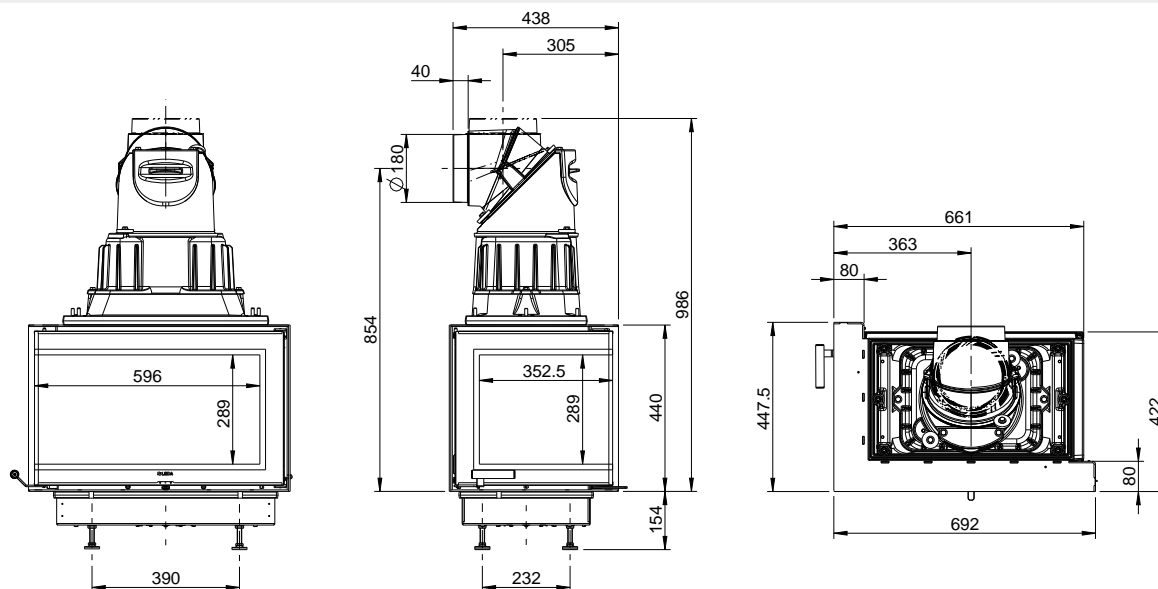
FINA ES R (L-shape right) with D-adapter (1004-00932) / M1:20



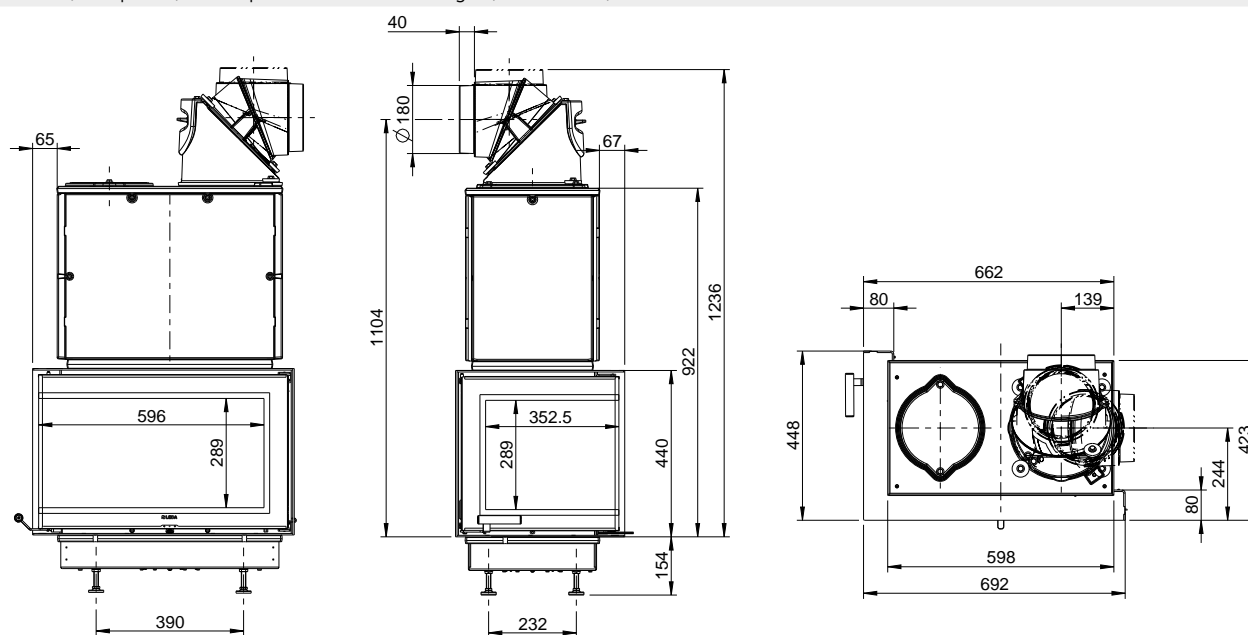
FINA ES R (L-shape right) with top mounted heat exchanger (1004-01037) / M1:20



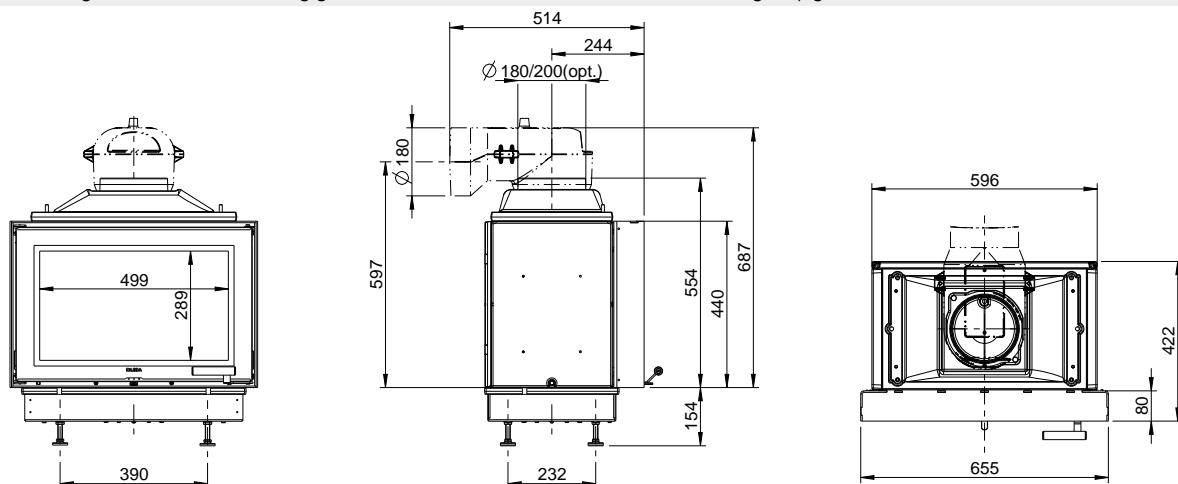
FINA ES L (L-shape left) with D-adapter (1004-00932) / M1:20



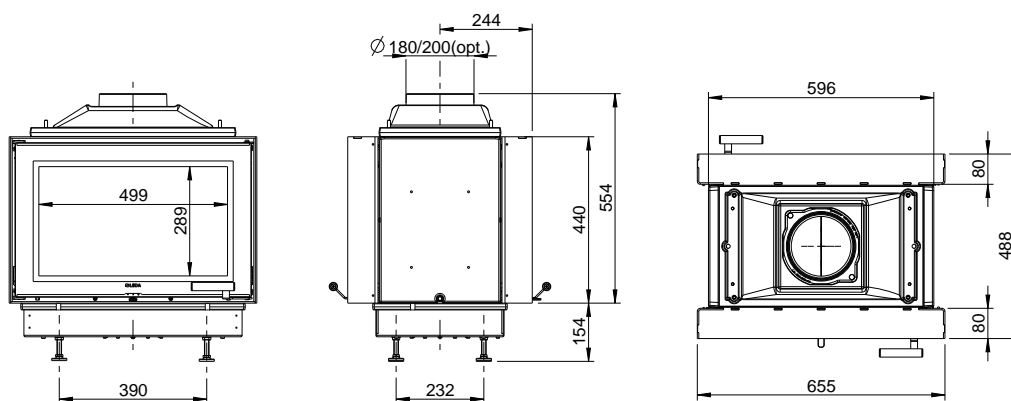
FINA ES L (L-shape left) with top mounted heat exchanger (1004-01037) / M1:20



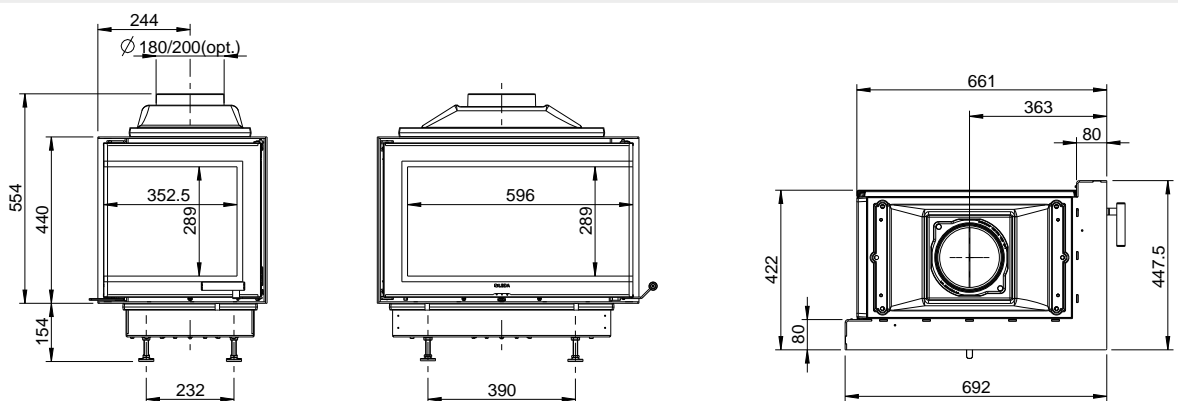
FINA plus F (straight) with 180 mm heating gas connection (1004-00780) and horizontal flue gas spigot (1004-00077) / M1:20



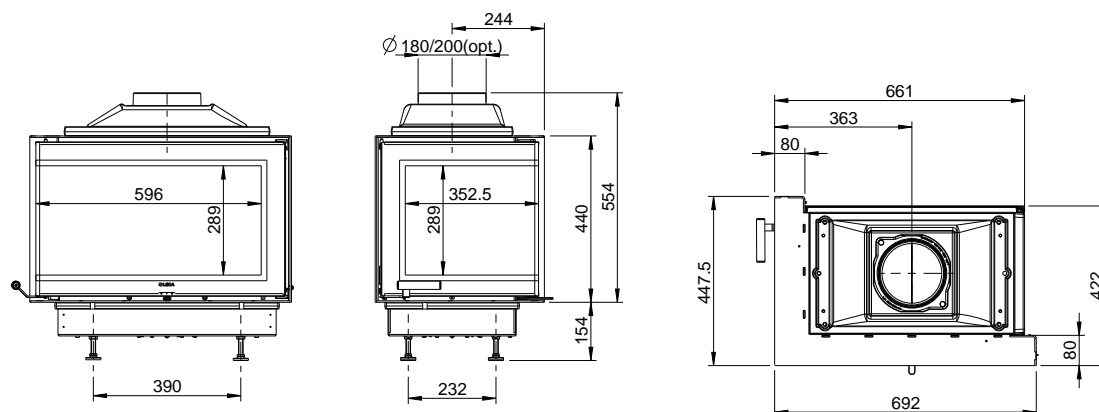
FINA plus DS (double sided) / M1:20



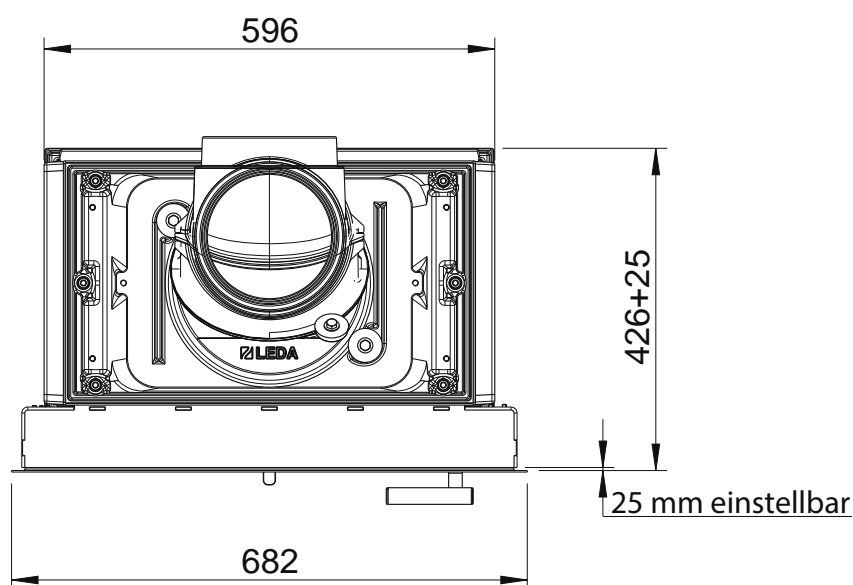
FINA plus ES R (L-shape right) / M1:20



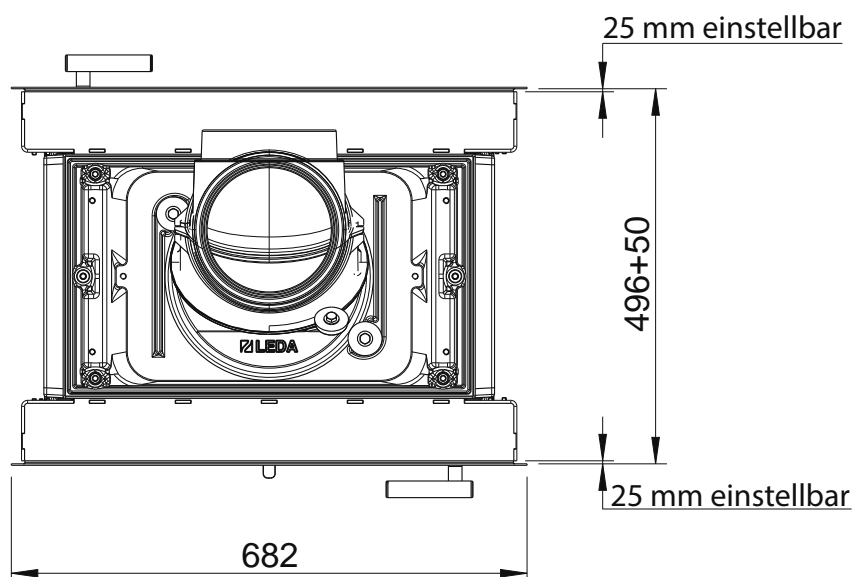
FINA plus ES L (L-shape left) / M1:20



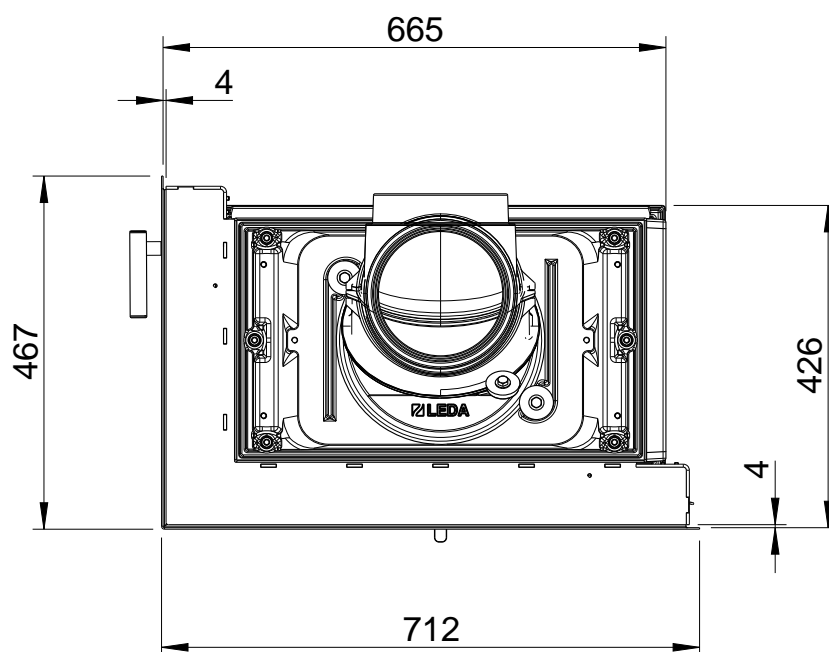
Frame on FINA F / FINA plus F (1004-00968) (top view, M1:10)



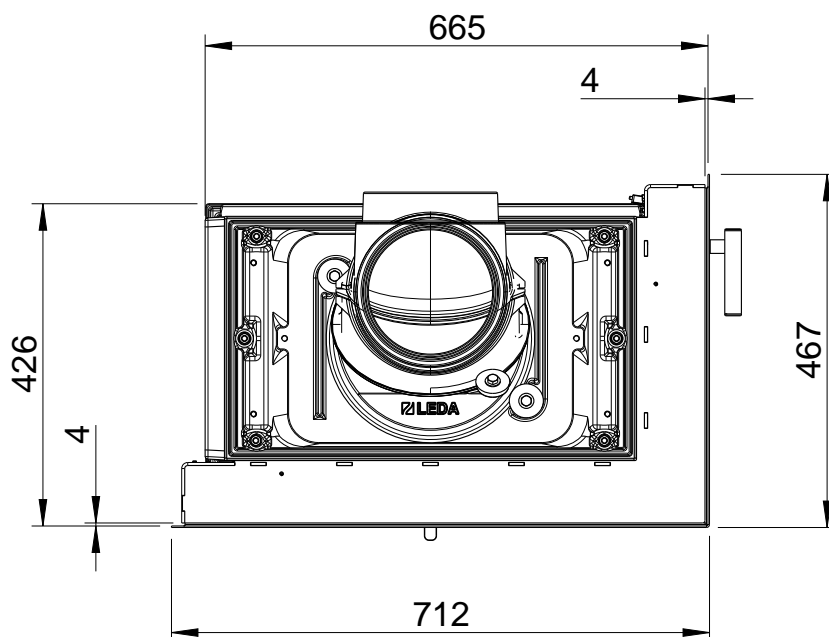
Frame on FINA DS / FINA plus DS (1004-00968) (top view, M1:10)



Frame on FINA ES L / FINA plus ES L (1004-00968) (top view, M1:10)



Frame on FINA ES R / FINA plus ES R (1004-00969) (top view, M1:10)




NEU
KALA S F 55 L

Straight, hinged door, handle right,
displayed: with three-part flue gas spigot
(1004-01140)


NEU
KALA S DS 55 L

double sided, hinged door, handle right,
opposite door right hinged, displayed:
with three-part flue gas spigot
(1004-01140)

KALA

for fireplace installations with top mounted cast iron heat exchanger,
LEDA LWS Flue Accumulation System or handcrafted ceramic heat storage but not for direct connection to the chimney:

Models:		Hinged door(s)	Guillotine glass front
KALA		S	H
NEW S F 55	straight, 1-sided	X	
NEW S DS 55	double sided, 2-sided	X	
S ES 45	L-shaped, 2-sided	X	
S ES 55	L-shaped, 2-sided	X	
S US	U-view, 3-sided	X	
NEW H F 55	straight, 1-sided		X
NEW H DS 55	double sided, 2-sided		X
H ES 45	L-shaped, 2-sided		X
H ES 55	L-shaped, 2-sided		X
QS	Square-view, 3-sided		X
PS	Panoramic-view, 3-sided		X
US	U-view, 3-sided		X

Product benefit at a glance:

- High quality cast iron insert with a very slim fitting depth
- Flexible in application:
 - with top mounted heat exchanger, for all KALA-models (twin-wall with 120 kg, high quality refractory and cast iron casing), also for the installation as heat storage stove or hypocaust system (closed system without inlet and outlet air valves)
 - with ceramic heat storage flueFuel: wood logs (max. 25 / 33 length, depending on the model)
- Fuel: logs (max. 25/ 33 cm length depending on variant), wood briquettes
- Comfortable one-hand lever for the combustion air adjustment with separate lighting position
- Cast Iron inner lining of combustion chamber (either black laquered or yellow enamelled)
- High efficiency
- External air connection
- Built in airflow volume regulator (combustion air control valve with adaptation to the chimney draft)
- Base frame factory-assembled
- Adjustable feet (with rubber pads) 50 mm height regulation
- Particularly eco-friendly combustion
- Suitable for the connection to one chimney with multiple stoves


KALA S ES 45 R

L-shape right, hinged door, handle left,
displayed: with three-part flue gas spigot
(1004-01140)


KALA S ES 55 R

L-shape right, hinged door, handle left,
displayed: with 180 mm flue gas spigot
(1004-00780) and horizontal cast iron
flue gas spigot (1004-00077)


KALA S US

U-view with hinged doors
displayed: with 180 mm flue gas spigot
(1004-00780) and horizontal cast iron
flue gas spigot (1004-00077)

KALA S F/ DS/ ES: Heating fireplace insert with hinged all-glass door,
with stainless steel handle (ventilated for cooling):

- F 55: straight, rectangular basic shape
Front width: 55 cm, hinged glass door (double glazed) with door hinge
L (left) or R (right)
- DS 55: double sided, rectangular basic shape
Front width: 55 cm, hinged glass doors (double-glazed), opposite door
hinges: 1x left/ 1x right, can be fitted as required by the operator
- ES 45 L-shaped view, square body
Front width: 45 cm, hinged, frameless 1-part (curved) glass door with
door hinge L (left) or R (right)
- ES 55 L-shaped view, rectangular basic shape
Front width: 55 cm, hinged, frameless 1-piece (curved) glass door with
door hinge on short side: L (left) or R (right)

KALA S US: Fireplace insert with hinged doors, 3-sided glass, with
detachable inox door handle (air-cooled):

- S US U-view, rectangular basic shape
Front width: 50 cm, 3-sides glass, both doors can be opened widely,
glass front fixed


NEU
KALA H F 55

straight, guillotine front door


NEU
KALA H DS 55

double sided, guillotine front door


KALA H ES 45

L-shape, guillotine door


KALA H ES 55 R

L-shape right, handle left,
displayed: with guillotine door

KALA

KALA H F/ DS/ ES: with guillotine front door, with new door function technology:

- Designed for closed construction with high temperatures
- Particularly smooth-running and quiet
- Can be opened wide for cleaning
- F 55 straight, rectangular basic shape
Front width: 55 cm, with guillotine front door, double-glazed
- DS 55 double sided, rectangular basic shape
Front width: 55 cm, double-glazed, operator side can be pushed up, other glass door can be swung open for cleaning with removable handle,
- ES 45 L-shaped view, square body
Front width: 45 cm, frameless, bended (one-piece) guillotine glass door
- ES 55 L-shaped view, rectangular body
Front width: 55 cm, frameless, bended (one-piece) guillotine glass door, shorter side: L(left) or R (right)

KALA QS / PS / US: Fireplace insert with guillotine front door, 3-sided glass with new door function technology:

- designed for closed (hypocaust) systems with high temperatures
- with guillotine front door, double-glazed and fixed glass side panels (both single-glazed)
- Window hood only at the front, thus make it to use the top mounted heat exchanger
- very smooth running and quiet
- the lateral windows can be wide opened for cleaning
- PS panoramic view, rectangular body
60 cm front width, three sided glass with guillotine front
- QS square-view, square body
Front width: 50cm. with three-sided glass with guillotine front
- US U-view, rectangular basic shape
50 cm front width, three-sided glass with guillotine front



KALA QS

Square-view with guillotine front door,
displayed: with cast iron heat exchanger +
horizontal flue gas spigot



KALA PS

Panoramic view with guillotine front door



KALA US

U-view with guillotine front door (lifted)
displayed: with horizontal cast iron flue
gas spigot

Device	Typ. Output	Installation
KALA S/H F 55	8 kW*	with cast iron heat exchanger
KALA S/H DS 55	10 kW*	
KALA S/H ES 45	9 kW	
KALA QS	10 kW	
KALA S/H ES 55	11 kW	
KALA PS	11 kW	
KALA US	11 kW	
KALA (all)	2 - 3 kW	Basic stove, if necessary with cast-iron storage attachment
KALA S/H F, KALA S/H DS, KALA S/H ES 45, KALA QS	1.1 - 5.4 kW	customised composition LWS or ceramic heat storage flues
KALA S/H ES 55, KALA PS, KALA S US, KALA US	1.4 - 6.8 kW*	
KALA (all)	2 - 3 kW	Hypocaust, if necessary with cast storage attach- ment
Other uses within professional planning are possible according to local regulations or German TROL.		

Airflow Volume Regulator: Air supply control with draught adjustment

Innovative air valve installed in the furnace bottom:

- Improved installation possibilities of the fireplace with excessive chimney draft* without additional draught regulator
- Optimisation of the complete combustion cycle through adequate airflow volume of the combustion air
- Simple adjustment on site according to the chimney calculation
- Lighting booster

*It. EN 13384

Scope of delivery

Fireplace insert, chamotte stone for the bottom of combustion chamber, base frame (installed), airflow volume regulator, external air connector Ø 150 mm (installed), 4 adjustable feet with rubber pads (50 mm height regulation), installation and operating manual, protective glove, stove pass

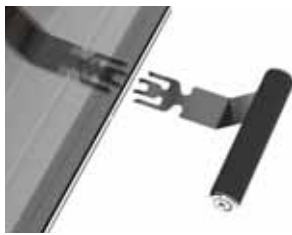
Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2)
- Austrian § 15a-B-VG
- Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+ (ES) / A (QS/PS/US)

Checkbox: What do I need to order?

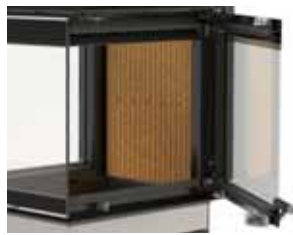
- ☐ KALA Fireplace insert
- ☐ Inner lining of combustion chamber
- ☐ Flue gas spigot
- ☐ Cast iron heat exchanger
- + optional accessories

* provisional Data



KALA S US handle

Detachable handle made of stainless steel (air-cooled)



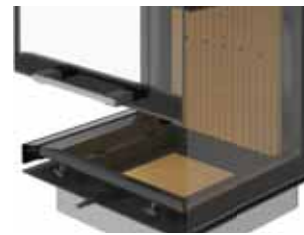
Hinged door(s)

of KALA S US can be opened widely on both sides



KALA H ES 55/ US/ PS/ QS handle

Door handle made of stainless steel



All-glass guillotine door

Fixed side panels the KALA QS/PS/US with new door function technology: smooth running and quiet



KALA S ES handle

Door handle made of stainless steel: air-cooled



Hinged door

KALA S ES 45 with bended L-shape glass (one-piece)



KALA H ES 45 handle

Door handle made of stainless steel



All-glass guillotine door

The KALA H ES with new door function technology: smooth running and quiet

KALA

Ident-No.	Fireplace insert - <i>without inner lining of combustion chamber and flue gas spigot</i>	€	
KALA S			
1003-02263 NEW	KALA S F 55 straight with hinged all-glass door, hinge left, (handle right)	2900.00	^{1,2}
1003-02264 NEW	KALA S F 55 flach with hinged all-glass door, hinge right, (handle left)	2900.00	^{1,2}
1003-02262 NEW	KALA S DS 55 Durchsicht with hinged all-glass door	3850.00	^{1,2}
1003-02135	KALA S ES 45 L-shape with hinged all-glass door, hinge left, (handle right)	2910.00	^{1,2}
1003-02136	KALA S ES 45 L-shape with hinged all-glass door, hinge right, (handle left)	2910.00	^{1,2}
1003-02158	KALA S ES 55 L L-shape left, with hinged all-glass door, hinge left, (handle right)	3140.00	^{1,2}
1003-02159	KALA S ES 55 R L-shape right, with hinged all-glass door, hinge right, (handle left)	3140.00	^{1,2}
1003-02192	KALA S US U-view with hinged all-glass doors	4060.00	^{1,2}

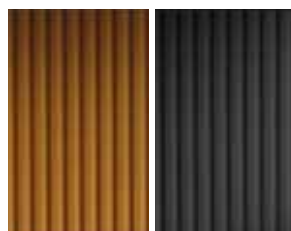
Ident-No.	Fireplace insert - <i>without inner lining of combustion chamber and flue gas spigot</i>	€	
KALA H			
1003-02260 NEU	KALA H F 55 straight with all-glass guillotine door	3850.00	^{1,2}
1003-02261 NEU	KALA H DS 55 double sided with all-glass guillotine doors	4800.00	^{1,2}
1003-02083	KALA H ES 45 with all-glass guillotine door	3750.00	^{1,2}
1003-02161	KALA H ES 55 R L-shape right, with with all-glass guillotine door	4110.00	^{1,2}
1003-02160	KALA H ES 55 L L-shape left, with with all-glass guillotine door	4110.00	^{1,2}
1003-02095	KALA QS square-view with guillotine all-glass front door	4540.00	^{1,2}
1003-02163	KALA PS panoramic view with guillotine all-glass front door	4750.00	^{1,2}
1003-02162	KALA US U-view with guillotine all-glass front door	4780.00	^{1,2}


KALA QS/PS/US

with semi-lifted glass front door and opened side-windows for cleaning


Top mounted cast iron heat exchanger

Sectional drawing (1004-01133)


Inner lining of combustion chamber

Made of cast iron: yellow enamelled or black laquered


KALA with top mounted heat exchanger

displayed: KALA S ES 45 R + heat exchanger (1004-01133) + flue gas spigot Ø180 mm (1004-00780) + 180 mm flue gas spigot (1004-00780 + horizontal cast iron flue gas spigot (1004-00077)

Essential accessories -

Inner lining of combustion chamber and flue gas spigot have also to be ordered!

€



1004-01373	Inner lining for KALA S/H F 55, black laquered	180.00	
NEU			
1004-01374	Inner lining for KALA S/H F 55, yellow enamelled	230.00	
NEU			
1004-01067	Inner lining for KALA S/H ES 45, black laquered	170.00	
1004-01068	Inner lining for KALA S/H ES 45, yellow enamelled	240.00	
1004-01149	Inner lining for KALA S/H ES 55, black laquered	190.00	
1004-01150	Inner lining for KALA S/H ES 55, yellow enamelled	300.00	
1004-01134	Inner lining for KALA QS/US, black laquered	100.00	
1004-01135	Inner lining for KALA QS/US, yellow enamelled	160.00	
1004-01151	Inner lining for KALA PS, black laquered	130.00	
1004-01152	Inner lining for KALA PS, yellow enamelled	190.00	
1004-01133	Cast Iron top mounted heat exchanger for KALA (suitable for all models)	700.00	

Essential accessories -

Inner lining of combustion chamber and flue gas spigot have also to be ordered!

€



	Flue gas spigot & co.		p.398
1004-00778	Flue gas spigot Ø 160 mm	50.00	
1004-00780	Flue gas spigot Ø 180 mm	50.00	
1004-00093	Flue gas spigot Ø 200 mm	50.00	
1004-00077	Horizontal cast iron flue gas spigot Ø 180 mm, infinitely rotatable	200.00	
1004-01140	Three-part flue gas spigot with inspection port	220.00	
1004-01395	Connecting piece with inspection opening - for combination with MFS double flue gas outlet	110.00	
NEU			
1004-00310	MFS double flue gas outlet with cleaning cover	300.00	
1004-00311	MFS double flue gas outlet with diverter damper	330.00	

¹ For KALA it is absolutely necessary to order as well the cast iron top mounted heat exchanger (1004-01133) or to plan a heat exchanger box (e.g. LHK/ LWS)!

² The flue gas spigot has to be ordered separately!

³ Usable spigots for top heat exchanger:

1004-00780 or 1004-01140 or 1004-00780+1004-00077

⁴ Ø180 mm flue gas spigot 1004-00759 has to be ordered additionally, because it will be mounted on top.

⁵ Three-part flue gas spigot has to be ordered separately (1004-01140)

⁶ MFS double flue gas outlet 1004-00310 or 1004-00311 has to be ordered separately!



KALA with supporting rack




displayed: KALA S QS + 4-sided installation frame (1004-01236) + supporting rack (1004-01181)



KALA with heat storage flue system

displayed: KALA S ES 45 + LWS + three-part flue gas spigot with inspection port (1004-01140) and LWS Set 3 (1004-01104)

KALA

Optional accessories		€	
1004-01175	Additional door weight for KALA H ES for conversion to self-closing door	50.00	 7
1004-01174	Additional door weight for KALA QS/ PS/ US for conversion to self-closing door	40.00	
1004-01176	Convection plate for models with 45 cm body width when fitted in front of a combustible wall or containing combustible materials	50.00	
1004-01177	Convection plate for models with 55 cm body width when fitted in front of a combustible wall or containing combustible materials	60.00	
Supporting frames for KALA			
1004-00568	Supporting frame for KALA F/ DS	140.00	 8
1004-01178	Supporting frame for KALA ES	270.00	
1004-01179	Supporting frame for KALA QS/ US	320.00	
1004-01281	Supporting frame for KALA S US	320.00	
1004-01180	Supporting frame for KALA PS	300.00	
1004-01181	Supporting rack KALA QS/ PS/ US (without frame) loadable up to 300kg	580.00	

Optional accessories		€	
1004-00799	Tie rod with eyelet for tie rod hook (1 pc)	60.00	9,11
1004-00800	Tie rod hook and plugs (1 pc)	40.00	
1004-01388	Door lock for KALA S DS/ US	20.00	
1004-01265	LEDATRONIC LT3 WiFi electronic combustion air control device with VRS-box for KALA, complete set	1380.00	
1004-01387	Door contact switch for 2nd door for KALA DS and KALA S US with LT3	100.00	p.350
LWS Heat Accumulation System			
1004-00952	LWS Set 1, nine elements	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper, eleven elements	1440.00	
1004-01104	LWS Set 3, seven elements	980.00	p.338
	LWS single elements for customised composition	opt.	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	



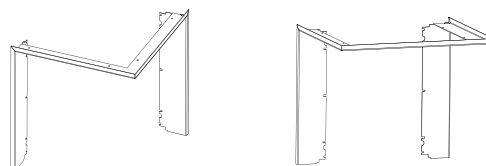
Frames for KALA

Precise push-in system (displayed: open)



Frames for KALA

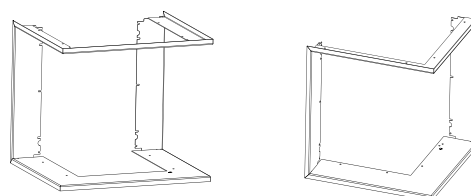
Precise push-in system



Frames for KALA

3-sided: top + laterals

L-profile with 20 mm folded edge, for installation with overhang or bench, underneath the combustion chamber opening, precise push-in system, powder-coated in black



Frontblenden für KALA

4-sided: top + laterals + bottom

L-profile with 20 mm folded edge, for installation without overhang or bench, underneath the combustion chamber opening, precise push-in system, powder-coated in black

Optional accessories €

Frames for KALA:

3-sided: top + laterals

1004-01378	Frame set for KALA S F/ DS 55, three-sided: top and laterals	100.00
NEW		
1004-01153	Frame set for KALA S ES 45, three-sided: top and laterals	190.00
1004-01159	Frame set for KALA S ES 55 L, three-sided: top and laterals	190.00
1004-01161	Frame set for KALA S ES 55 R, three-sided: top and laterals	190.00
1004-01279	Frame set for KALA S US, three-sided: top and laterals	250.00
1004-01379	Frame set for KALA H F/DS 55, three-sided: top and laterals	100.00
NEW		
1004-01155	Frame set for KALA H ES 45, three-sided: top and laterals	180.00
1004-01163	Frame set for KALA H ES 55 L, three-sided: top and laterals	190.00
1004-01165	Frame set for KALA H ES 55 R, three-sided: top and laterals	190.00
1004-01157	Frame set for KALA QS, three-sided: top and laterals	230.00
1004-01169	Frame set for KALA PS, three-sided: top and laterals	250.00
1004-01167	Frame set for KALA US, three-sided: top and laterals	250.00

Optional accessories €

Frames for KALA:

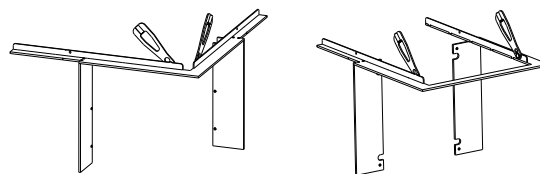
4-sided: top + laterals + bottom

1004-01380	Frame set for KALA S F/ DS 55, four-sided: top, laterals and bottom	100.00
NEW		
1004-01154	Frame set for KALA S ES 45, four-sided: top, laterals and bottom	250.00
1004-01160	Frame set for KALA S ES 55 L/R, four-sided: top, laterals and bottom	250.00
1004-01288	Frame set for KALA S US, four-sided: top, laterals and bottom	320.00
1004-01381	Frame set for KALA H F/ DS 55, four-sided: top, laterals and bottom	120.00
NEW		
1004-01156	Frame set for KALA H ES 45, four-sided: top, laterals and bottom	240.00
1004-01164	Frame set for KALA H ES 55 L, four-sided: top, laterals and bottom	250.00
1004-01166	Frame set for KALA H ES 55 R, four-sided: top, laterals and bottom	250.00
1004-01158	Frame set for KALA QS, four-sided: top, laterals and bottom	300.00
1004-01170	Frame set for KALA PS, four-sided: top, laterals and bottom	340.00
1004-01168	Frame set for KALA US, four-sided: top, laterals and bottom	330.00



Installation frame/ Supporting rack

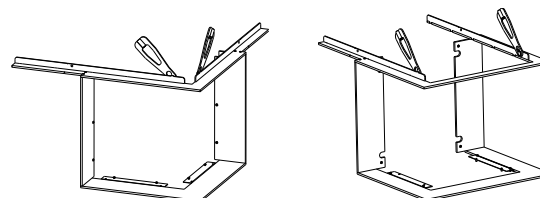
displayed: KALA QS with supporting rack (1004-01236) and 4-sided installation frame (1004-01181)



Installation frame for KALA

3-sided: top + laterals

Massive steel with 8 mm thickness, for installation with overhang or bench, underneath the combustion chamber opening, precise, powder-coated in black





Installation frame for KALA


4-sided: top + laterals + bottom


Massive steel with 8 mm thickness, for installation without overhang or bench, underneath the combustion chamber opening, precise, powder-coated in black

KALA


Optional accessories		€	
Installation frame for KALA:			
3-sided: top + laterals			
1004-01382	Install. frame set for KALA S F/ DS 55, 3-sides: top + laterals	290.00	
NEW			
1004-01272	Install. frame set for KALA S ES 45, 3-sides: top + laterals	610.00	
1004-01274	Install. frame set for KALA S ES 55 L, 3-sides: top + laterals	680.00	
1004-01276	Install. frame set for KALA S ES 55 R, 3-sides: top + laterals	680.00	
1004-01278	Install. frame set for KALA S US, 3-sides: top + laterals	680.00	
1004-01383	Install. frame set for KALA H F/ DS 55, 3-sides: top + laterals	330.00	
NEW			
1004-01243	Install. frame set for KALA H ES 45, 3-sides: top + laterals	610.00	
1004-01245	Install. frame set for KALA H ES 55 L, 3-sides: top + laterals	680.00	
1004-01247	Install. frame set for KALA H ES 55 R, 3-sides: top + laterals	680.00	
1004-01237	Install. frame set for KALA QS, 3-sides: top + laterals	670.00	
1004-01239	Install. frame set for KALA PS, 3-sides: top + laterals	680.00	
1004-01241	Install. frame set for KALA US, 3-sides: top + laterals	670.00	


 ⁷ For all KALA ES models two convectio plates need to be ordered!


 ⁸ incl. 1004-00799/00800

 ⁹ LT3 WiFi without display which can be ordered optionally (1004-00542)

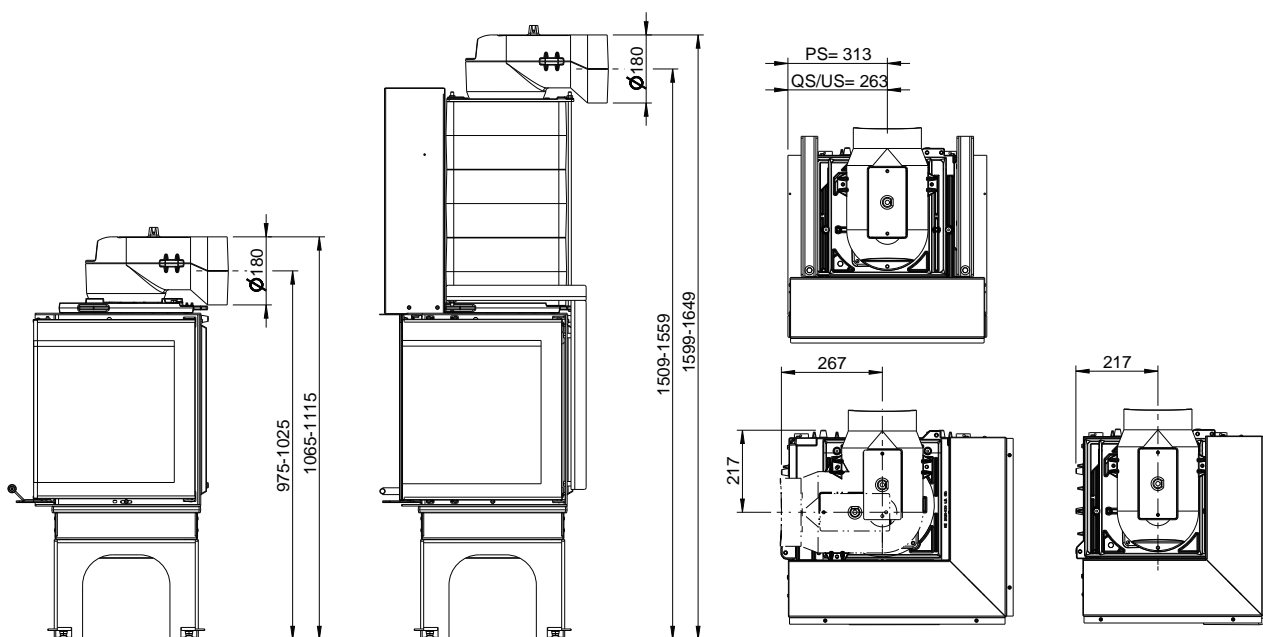
NEW

Optional accessories		€	
Installation frame for KALA:			
4-sided: top + laterals + bottom			
1004-01384	Installation frame set KALA S F/ DS 55, 4-sided: top + laterals + bottom	290.00	
1004-01271	Installation frame set KALA S ES 45, 4-sided: top + laterals + bottom	880.00	
1004-01273	Installation frame set KALA S ES 55 L 4-sided: top + laterals + bottom	910.00	
1004-01275	Installation frame set KALA S ES 55 R 4-sided: top + laterals + bottom	910.00	
1004-01385	Installation frame set KALA H ES 45, 4-sided: top + laterals + bottom	990.00	
1004-01277	Installation frame set KALA S US 4-sided: top + laterals + bottom	330.00	
1004-01242	Installation frame set KALA H ES 45, 4-sided: top + laterals + bottom	880.00	
1004-01244	Installation frame set KALA H ES 55 4-sided: top + laterals + bottom	910.00	
1004-01246	Installation frame set KALA H ES 55 4-sided: top + laterals + bottom	910.00	
1004-01236	Installation frame set KALA QS, 4-sided: top + laterals + bottom	970.00	
1004-01238	Installation frame set KALA PS, 4-sided: top + laterals + bottom	980.00	
1004-01240	Installation frame set KALA US, 4-sided: top + laterals + bottom	990.00	

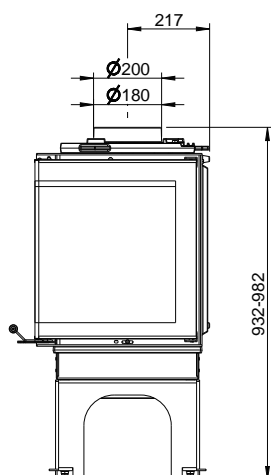
 ¹⁰ No additional support frame necessary

 ¹¹ Order door contact switch for KALA DS 2nd door! (1004-01387)

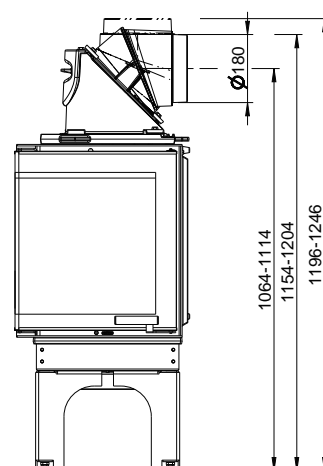
KALA with different flue gas spigots



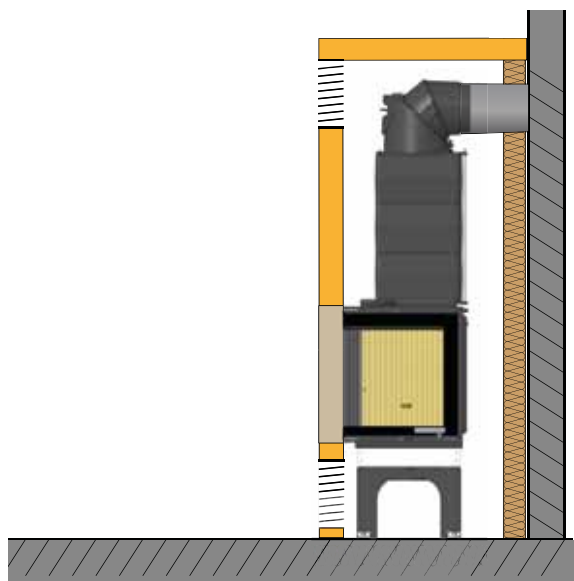
KALA displayed with heating gas spigot 180 mm and horizontal flue gas spigot
(1004-00780 + 1004-00077)



KALA displayed with flue gas spigot 180/200 mm
(1004-00778 / 1004-00093)



KALA displayed with three-part flue gas spigot with inspection port
(1004-01140)



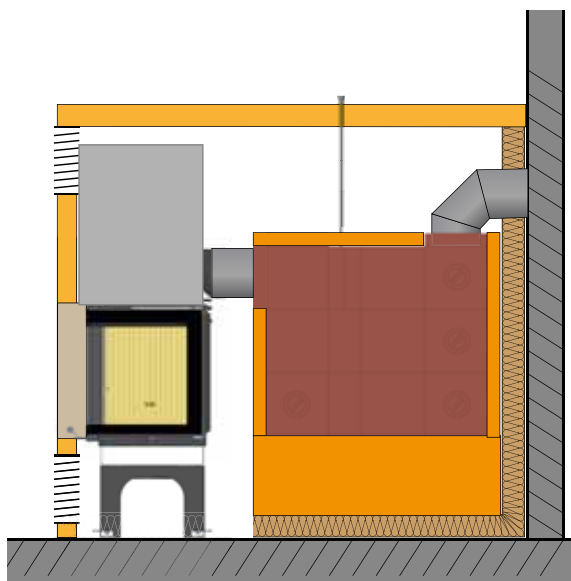
KALA with top mounted heat exchanger

Application example for all KALA models (S/ H/ QS/ PS/ US)

KALA

		KALA fireplace insert with top mounted heat exchanger						
Compliance with Operation mode		CE Direct heat emission and heat storage						
	KALA model	F 55**	DS 55**	ES 45	ES 55	QS	PS	US
Output	[kW]	8	10	9	11	10	11	11
Heat emission period		–	–	–	–	–	–	–
Wood loading quantity	[kg]	2.0	2.2	2.0	2.4	2.2	2.4	2.4
Wood consumption	[kg/h]	2.3	2.9	2.7	3.3	3.0	3.3	3.3
Total wood loading quantity	[kg]	–	–	–	–	–	–	–
Heat distribution time	[h]	–	–	–	–	–	–	–
Tract length with LWS	appr. [m]	–	–	–	–	–	–	–
Tract length with heating gas spigot	appr. [m]	–	–	–	–	–	–	–
Type of construction		–						
Output during the combustion	[kW]	8	10	9	11	10	11	11
Heat emission share over the window	[kW]	1.1	2.1	2.5	2.8	3.7	3.9	4.1
Heat output when storage is charging	[kW]	–	–	–	–	–	–	–
Cross-section air intake vent (non-combustible)	[cm ²]	1268	1508	1221	1613	1193	1371	1309
Cross-section convection air outlet vent (non-combustible)	[cm ²]	1057	1257	1017	1344	994	1142	1091
Thermal insulation (combustible/inflammable construction wall)	[cm]			10/20	12/20	10/20	12/20	12/20
Total energy content of total wood loading	[kWh]	–	–	–	–	–	–	–
- of which is usable	[kWh]	–	–	–	–	–	–	–

*additional pre-walling and convection plate(s) are absolutely necessary. ** provisional Data



KALA with LWS or ceramic heat storage flue


Application example for all KALA models (S/ H/ QS/ PS/ US)

KALA as hot air system with ceramic heat storage flue/ LWS													
1 time refueling CE/ TROL Heat accumulation							2 times refueling CE/ TROL Heat accumulation						
F 55**	DS 55**	ES 45	ES 55	QS	PS	US	F 55**	DS 55**	ES 45	ES 55	QS	PS	US
1.7	1.7	1.7	2.2	1.7	2.2	2.2	3.5	3.5	3.5	4.4	3.5	4.4	4.4
8	8	8	8	8	8	8	8	8	8	8	8	8	8
4.0	4.0	4.0	5.0	4.0	5.0	5.0	4.0	4.0	4.0	5.0	4.0	5.0	5.0
4.0	4.0	4.1	4.8	4.1	4.9	4.9	4.0	4.0	4.1	4.8	4.1	4.9	4.9
4.0	4.0	4.0	5.0	4.0	5.0	5.0	8.0	8.0	8.0	10.0	8.0	10.0	10.0
1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0
2.0	2.3	2.3	2.3	2.3	2.5	2.5	2.0	2.3	2.3	2.3	2.3	2.5	2.5
3.6	4.2	4.7	5.0	4.3	5.7	5.7	3.6	4.2	4.7	5.0	4.3	5.7	5.7
semi-heavy							semi-heavy						
9.4	9.6	9.2	11.7	11.4	11.8	12.0	9.4	9.6	9.2	11.7	11.4	11.8	12.0
1.5	2.9	3.4	3.7	4.6	4.8	5.0	1.5	2.9	3.4	3.7	4.6	4.8	5.0
12.6	12.6	12.6	15.7	12.3	15.7	15.7	24.7	24.7	24.9	30.7	24.2	30.8	30.7
1516	838	563	1073	481	548	486	1516	838	563	1073	481	548	486
1263	698	470	894	401	457	405	1263	698	470	894	401	457	405
		10.0	12.0	10.0	12.0	12.0			10	10	10	10	10
17.2	17.2	17.2	21.5	17.2	21.5	21.5	34.3	34.4	34.4	43.0	34.4	43.0	43.0
13.9	13.9	13.9	17.4	13.9	17.4	17.4	27.9	27.9	27.9	34.8	27.9	34.8	34.8

*additional pre-wall and convection plate(s) are absolutely necessary. ** provisional Data


Type KALA		F 55*	DS 55*	ES 45	ES 55	QS	PS	US
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229						
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+	A	A	A
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250						
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40						
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120						
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200						
Efficiency	[%]	≥ 81	≥ 81	≥ 81	≥ 81	≥ 80	≥ 80 ²⁾	≥ 80 ²⁾
Flue gas temperature, with top mounted cast iron heat exchanger	[°C]	220	228	257	222	247	224	224

I. Operation with top mounted heat exchanger (with cast iron top mounted heat exchanger)

Performance data								
Nominal heat output, \dot{Q}_N	[kW]	8	10	9	11	10	11	11
Direct radiation and convection output	[kW]	6.9	7.9	6.6	8.2	6.3	7.1	6.9
Heat output over the front surface(s) and glass pane(s)	[kW]	1.1	2.1	2.5	2.8	3.7	3.9	4.1
Chimney dimensioning data according to EN 13384 part 1 and 2								
Flue gas temperature (at the spigot of top mounted exchanger)	[°C]	290	310	309	266	297	269	269
Flue gas mass flow	[g/s]	8.3	9.2	7.8	8.9	9.5	9.5	9.5
Minimum required chimney draft ¹⁾	[Pa]	12	12	12	12	12	12	12
Required combustion air flow rate	[m ³ /h]	23.6	25.9	22.4	26.6	26.7	26.9	26.9
Admissible fuels and feeding rate								
Admissible fuels		wood logs (preferred) and wood briquettes						
Fuel quantity, wood logs	[kg]	2.0	2.2	2.0	2.4	2.2	2.4	2.4
Feeding rate, wood logs	[kg/h]	2.3	2.9	2.7	3.2	3.0	3.3	3.3
Fuel quantity, wood briquettes	[kg]	1.9	2.1	1.9	2.3	2.1	2.3	2.3
Feeding rate, wood briquettes	[kg/h]	2.2	2.8	2.6	3.1	2.9	3.1	3.1
Air cross-sections ³⁾								
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1057	1257	1017	1344	994	1142	1091
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1144	1353	1100	1443	1093	1242	1190
Convection air outlet ³⁾	[cm ²]	1268	1508	1221	1613	1193	1371	1309
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)								

II. Operation with LWS / ceramic heat storage ⁴⁾

LWS / ceramic heat storage possible	yes	yes	yes	yes	yes	yes	yes	yes
Performance data								
combustion capacity – heat input, \dot{Q}_f	[kW]	18	18	18	21	18	21	21
heat output of insert	[kW]	7.9	7.1	7.3	9.8	8.0	8.9	8.9
Heat load of heating gas at spigot of insert	[kW]	10.4	11.3	11.3	11.8	10.4	13.3	13.3
Usable heat load of heating gas at spigot of insert	[kW]	7.1	7.9	7.9	7.9	7.0	9.3	9.3
Heat output over the front surface(s) and glass pane(s)	[kW]	1.5	2.9	3.4	3.7	4.6	4.8	5.0
Direct radiation and convection output (without heat storage)	[kW]	7.9	6.3	6.3	8.8	7.2	7.8	7.8
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2								
Heating gas temperature (at the spigot of insert)	[°C]	520	530	610	584	546	618	618
Flue gas mass flow	[g/s]	13.7	14.5	12.4	13.6	12.9	14.4	14.4
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15	15	15	15
Required combustion air flow rate	[m ³ /h]	38.7	41.2	34.7	39.4	36.3	40.2	40.2
Admissible fuels and feeding rate								
Admissible fuels		wood logs (preferred) and wood briquettes						
Fuel quantity, wood logs	[kg]	520	530	610	584	546	618	618
Feeding rate, wood logs	[kg/h]	13.7	14.5	12.4	13.6	12.9	14.4	14.4
Fuel quantity, wood briquettes	[kg]	15	15	15	15	15	15	15
Feeding rate, wood briquettes	[kg/h]	38.7	41.2	34.7	39.4	36.3	40.2	40.2

Type KALA		F 55*	DS 55*	ES 45	ES 55	QS	PS	US
Operation with LWS, heat accumulation system								
Admissible LWS sets		Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3
Recommended number of LWS elements (25/25/25 cm)		8	9	9	9	9	10	10
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	170	177	165	175	165	159	159
Minimum required chimney draft for each 90° bend	[Pa]	0.48	0.55	0.42	0.50	0.44	0.58	0.58
Minimum required chimney draft for each 45° bend	[Pa]	0.22	0.25	0.19	0.23	0.20	0.26	0.26
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)								
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	170	177	165	175	165	187	187
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	18	18	18	18	18	19	19
Flue gas mass flow	[g/s]	13.7	14.5	12.4	13.6	12.9	14.4	14.4
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)								
Flue gas temperature (at output spigot of LWS set 3)	[°C]	218	226	227	233	217	250	250
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	18	18	18	18	18	19	19
Flue gas mass flow	[g/s]	13.7	14.5	12.4	13.6	12.9	14.4	14.4
Air cross-sections ³⁾								
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1014	563	470	894	401	457	405
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1158	716	598	1040	535	606	554
Convection air outlet ³⁾	[cm²]	1217	676	563	1073	481	548	486
Inner gaps in the convection chamber ³⁾								
Inner gaps between insert and thermal insulation or cladding	[cm]	8	4	7	13	13	11	13
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)								

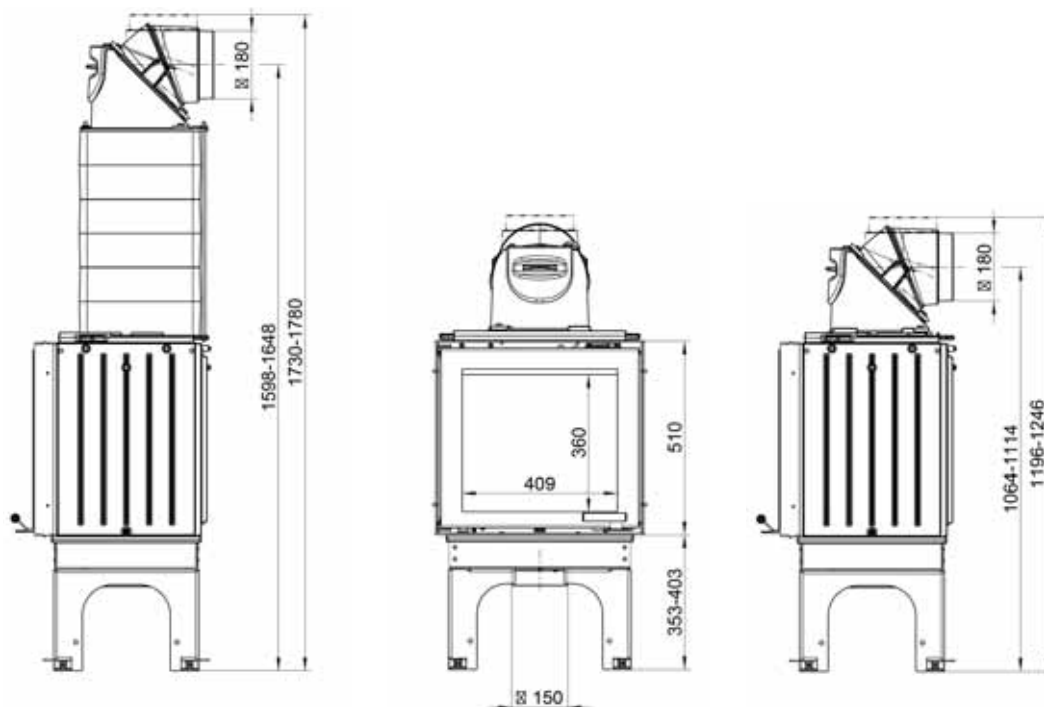
III. Specifications regarding fire protection and thermal insulation								
Convection plate(s) (1004-01176/01177) are absolutely necessary for the installation of a FINA insert in front of construction walls containing combustible / inflammable materials!								
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp. Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾ (insulation thickness additional required to the required 10 cm pre-wallings)								
to the setup floor	[cm]	0	0	0	0	0	0	0
to the side	[cm]	12	12	10	12	--	--	--
to the rear	[cm]	12	--	10	12	10	12	12
to the ceiling	[cm]	20	20	20	20	20	20	20
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation								
to the setup floor ⁵⁾	[cm]	0	0	0	0	0	0	0
to the front of thermal insulation to the side	[cm]	10	10	10	10	--	--	--
to the front of thermal insulation to the rear	[cm]	10	--	10	10	10	10	10
to the front of thermal insulation to the ceiling	[cm]	20	20	20	20	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)								
Minimum convection air outlet, non-closable	[cm²]	1300	1300	900	1000	900	1000	1000
Minimum convection air inlet, non-closable	[cm²]	1560	1560	1080	1200	1080	1200	1200
Minimum distance between convection air outlet and combustible material at the ceiling								
for operation with cast-iron storage tank top	[cm]	50	50	28	17	28	17	17
for operation with ceramic heating gas flues	[cm]	50	50	50	50	50	50	50
Required distance in the radiation area of the front (with no additional radiation protection)								
Required distance at the front glass pane (broader glass pane) ⁸⁾	[cm]	90 ⁷⁾	90 ⁷⁾	80 ⁷⁾	90 ⁷⁾	80 ⁷⁾	90 ⁷⁾	90 ⁷⁾
Required distance at the side glass pane (smaller glass pane) ⁸⁾	[cm]	90 ⁷⁾	90 ⁷⁾	80 ⁷⁾	80 ⁷⁾	80 ⁷⁾	90 ⁷⁾	90 ⁷⁾

Type KALA		F 55*	DS 55*	ES 45	ES 55	QS	PS	US
V. Measurements, weights and miscellaneous								
External air connector	Ø [mm]	150	150	150	150	150	150	150
Flue gas spigot resp. connector piece (operation with cast iron top mounted heat exchanger)	Ø [mm]	180	180	180	180	180	180	180
Flue gas spigot resp. connector piece (operation with LWS or ceramic heat storage)	Ø [mm]	160, 180, 200	160, 180, 200	160, 180, 200	160, 180, 200	160, 180, 200	160, 180, 200	160, 180, 200
Preadjustment of the LT-3 combustion air valve (optional)	%	67	67	50	34	34	67	67
Static valve position of the LT-3 combustion air valve (test mode), with cast iron top mounted heat exchanger	%	25	25	25	25	25	25	25
Smallest valve position of the LT-3 combustion air valve (dynamic test mode), with cast iron top mounted heat exchanger	%	33	33	25	33	25	33	33
Maximum log size	[cm]	148	148	132	148	--	--	--
Weight of insert with hinged door and inner lining of the insert	approx.[kg]	184	184	168	184	171	183	174
Weight of insert with guillotine door and inner lining of the insert	approx.[kg]	160	160	160	160	160	160	160
Weight of cast iron top mounted heat exchanger with inner lining	approx.[kg]	60	60	60	60	60	60	60
Weight of inner lining of top mounted heat exchanger	approx.[kg]	344	344	328	344	331	343	334
Weight of insert with top mounted heat exchanger, each with inner lining	approx.[kg]			328	344	331	343	334

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above. With correct adjustment of the Airflow Volume Regulator (AVR) a requested operation is possible even at higher chimney draft (with chimneys at natural draft conditions) (see installation manual für correct adjustment of der Airflow Volume Regulator). Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) Each model has been tested at direct connection to the chimney with the spigot to the rear and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 3.5 m² (KALA ES 45), approx. 3.7 m² (KALA ES 55) - with top mounted heat exchanger, approx. 2.9 m² (KALA ES 45), approx. 3.0 m² (KALA ES 55) - with LWS / ceramic heat storage. Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp.
- 5) The given values of required inner gap to the setup floor is for inserts with installed base frame.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-wallling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) The given values of the required distance in the radiation area of the front are valid for the operation with cast iron top mounted heat exchanger with correct installed reducing plate (on top of the heat exchanger). They are also valid for operation with correct dimensioned LWS or ceramic heat storage, used with fuel input one- or two-times per heating interval.

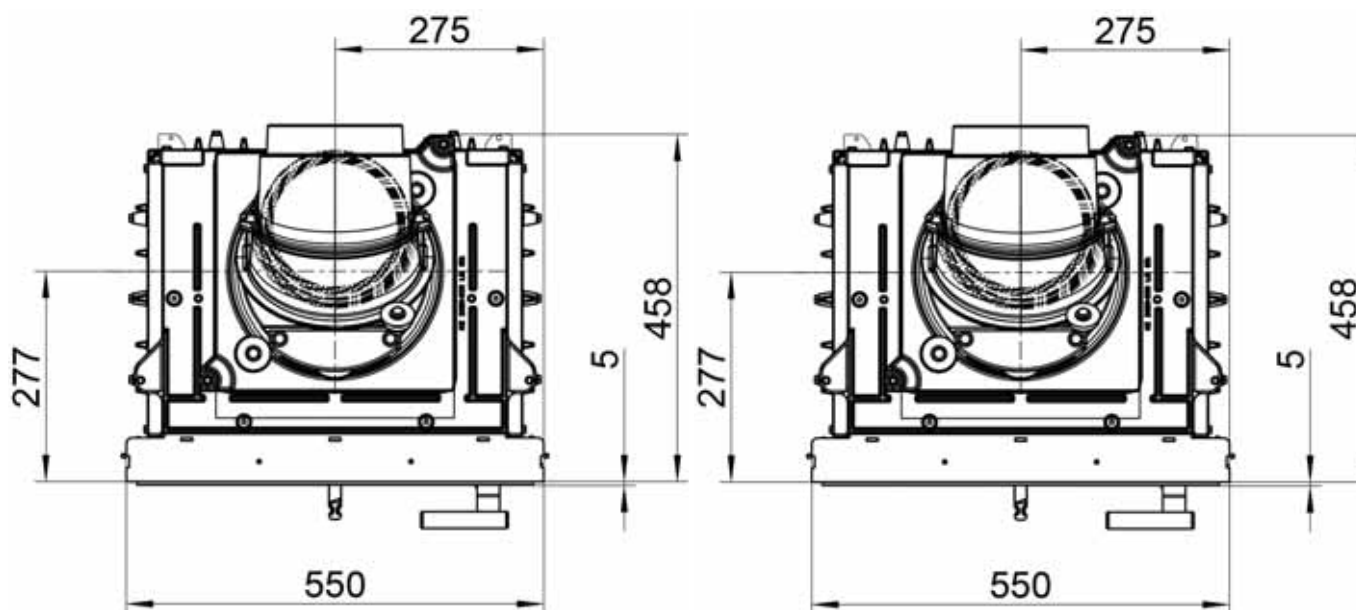
*provisional data

KALA S F 55 (straight, with hinged door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

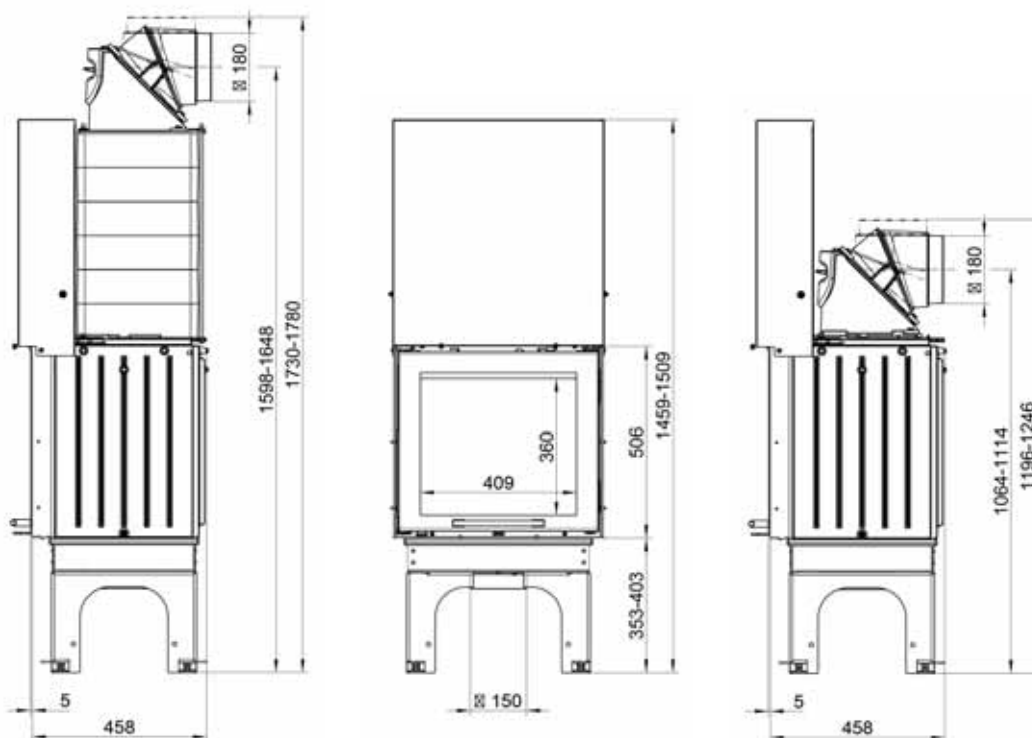


KALA S F 55 cast-iron top mounted heat exchanger
top view / M1:20

KALA S F 55
top view / M1:10

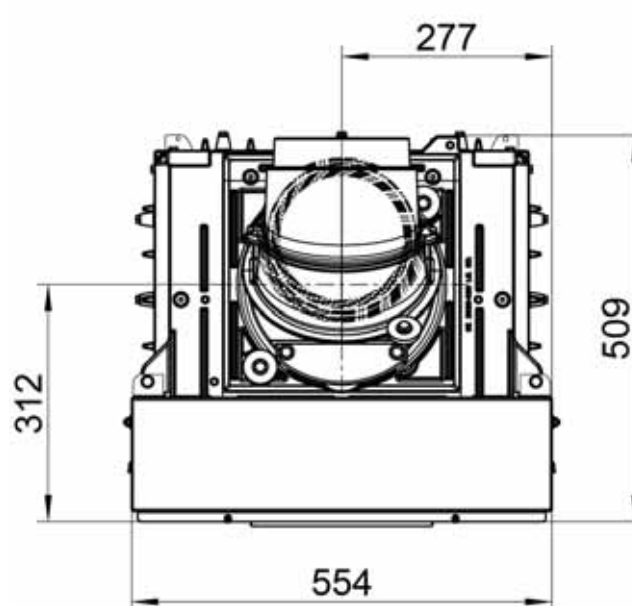
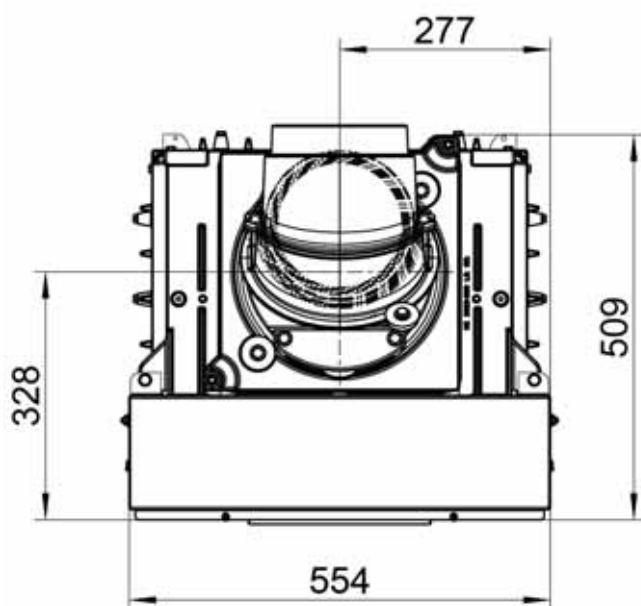


KALA H F 55 (straight, with guillotine door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

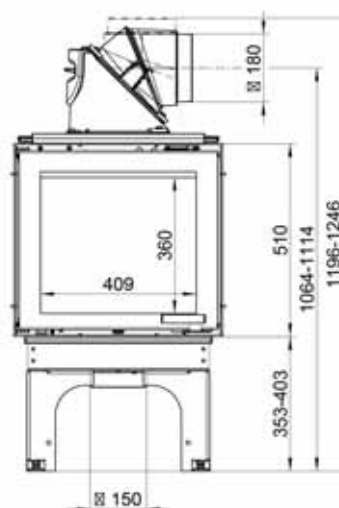
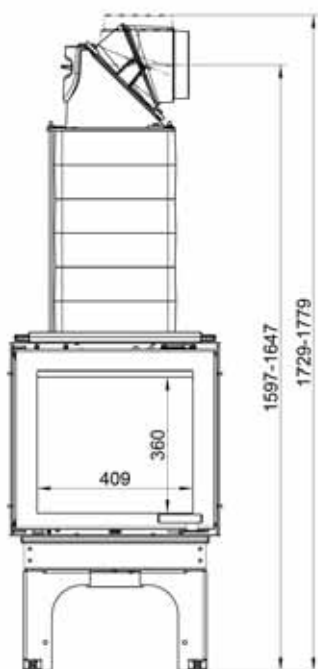


KALA H F 55 cast-iron top mounted heat exchanger
top view / M1:20

KALA H F 55
top view / M1:10

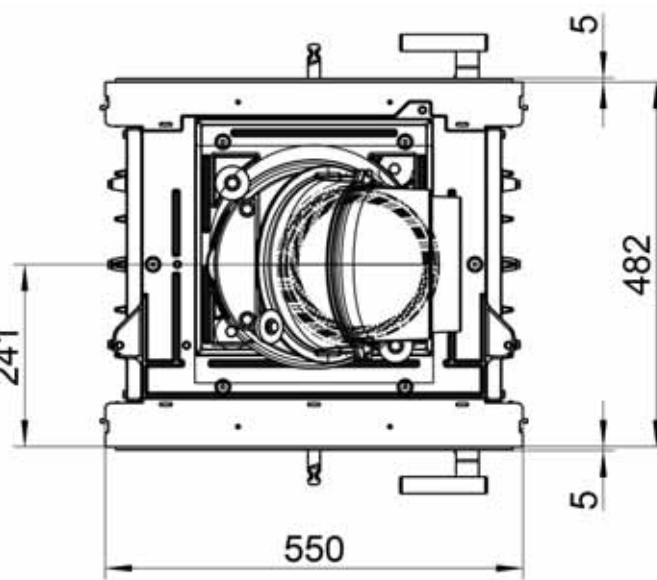
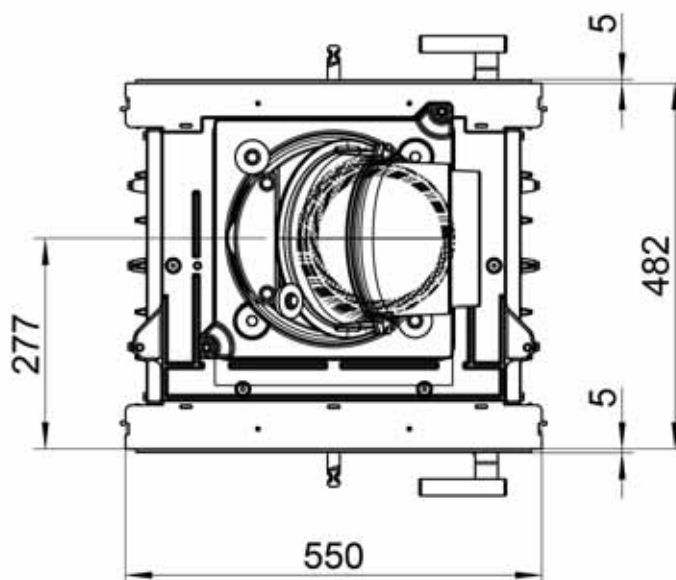


KALA S DS 55 (double sided, with hinged front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

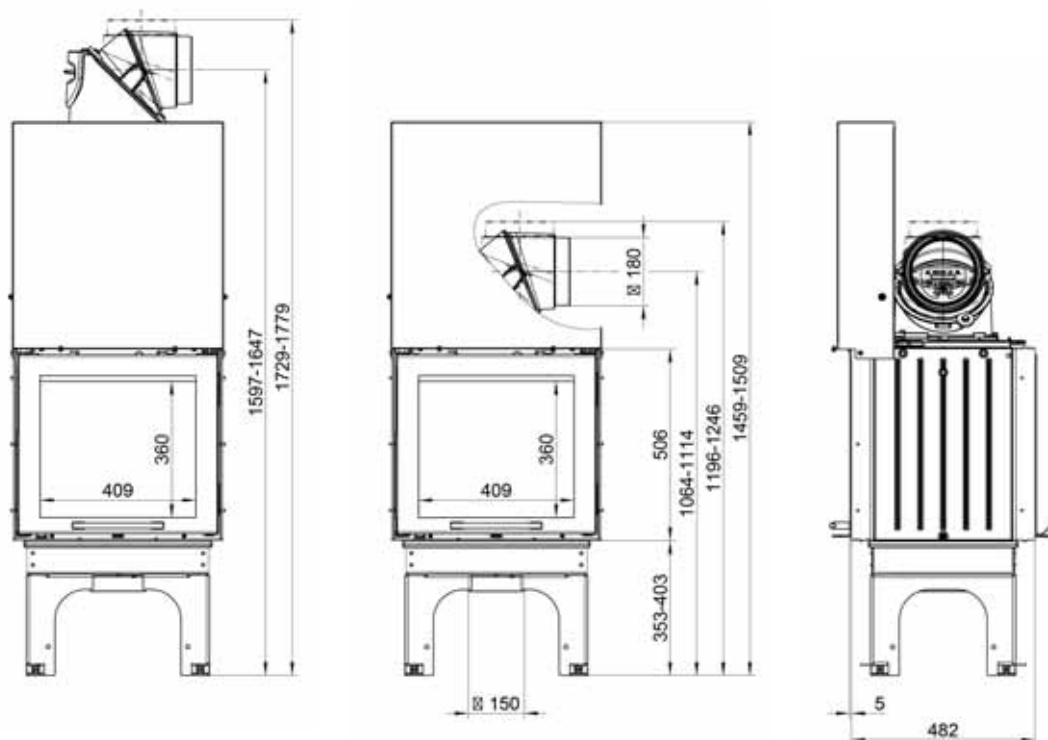


KALA S DS 55 cast-iron top mounted heat exchanger
top view / M1:10

KALA S DS 55
top view / M1:10

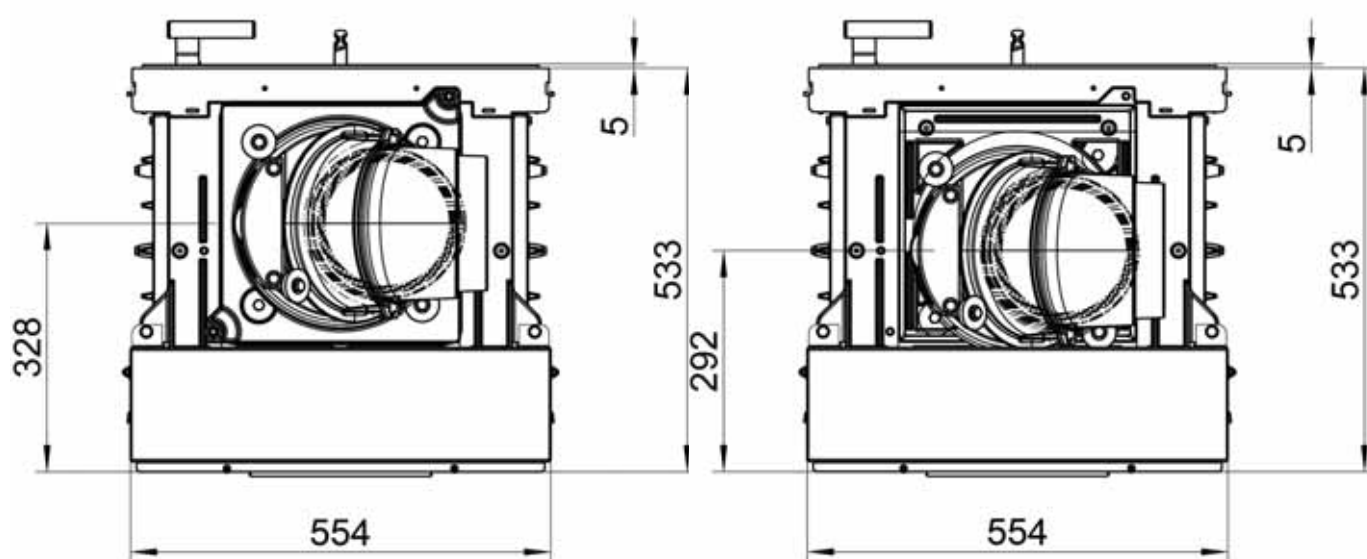


KALA H DS 55 (double sided, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

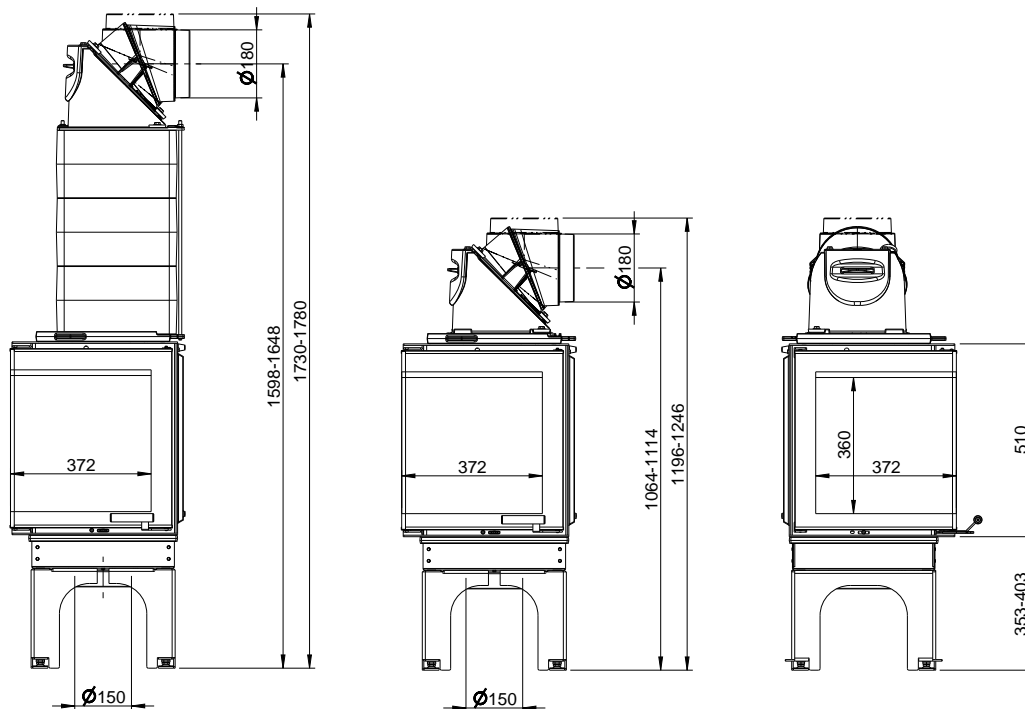


KALA H DS 55 cast-iron top mounted heat exchanger
top view / M1:10

KALA H DS 55
top view / M1:10

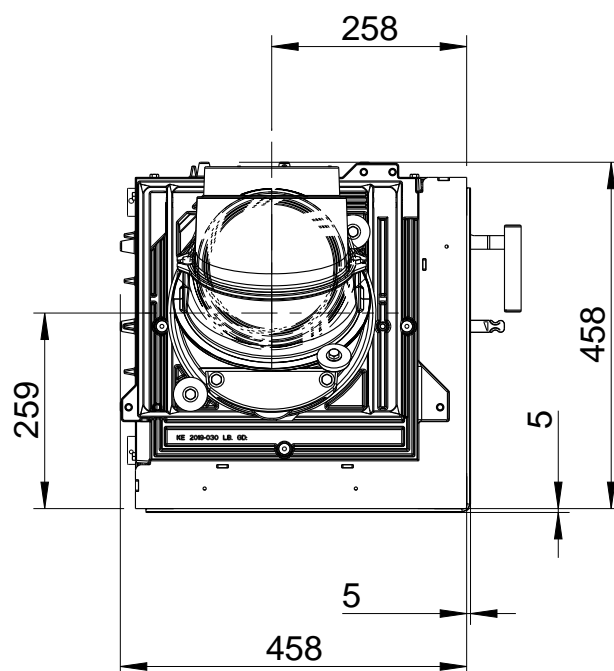
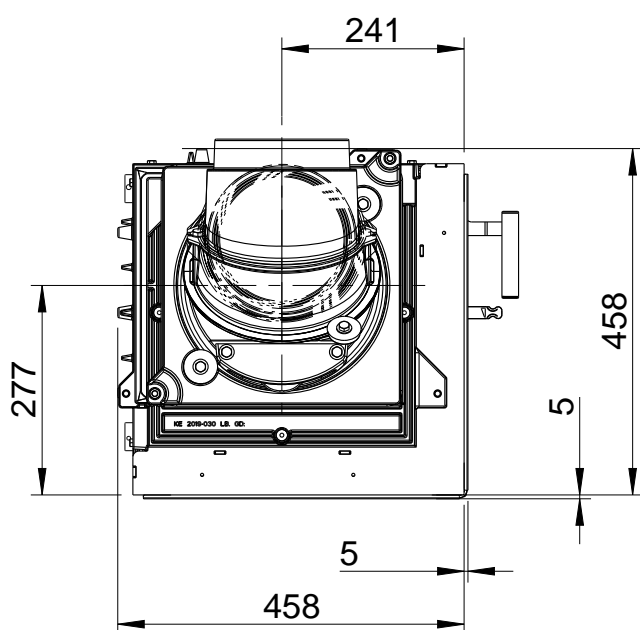


KALA S ES 45 L (corner view, left hinged, with hinged door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

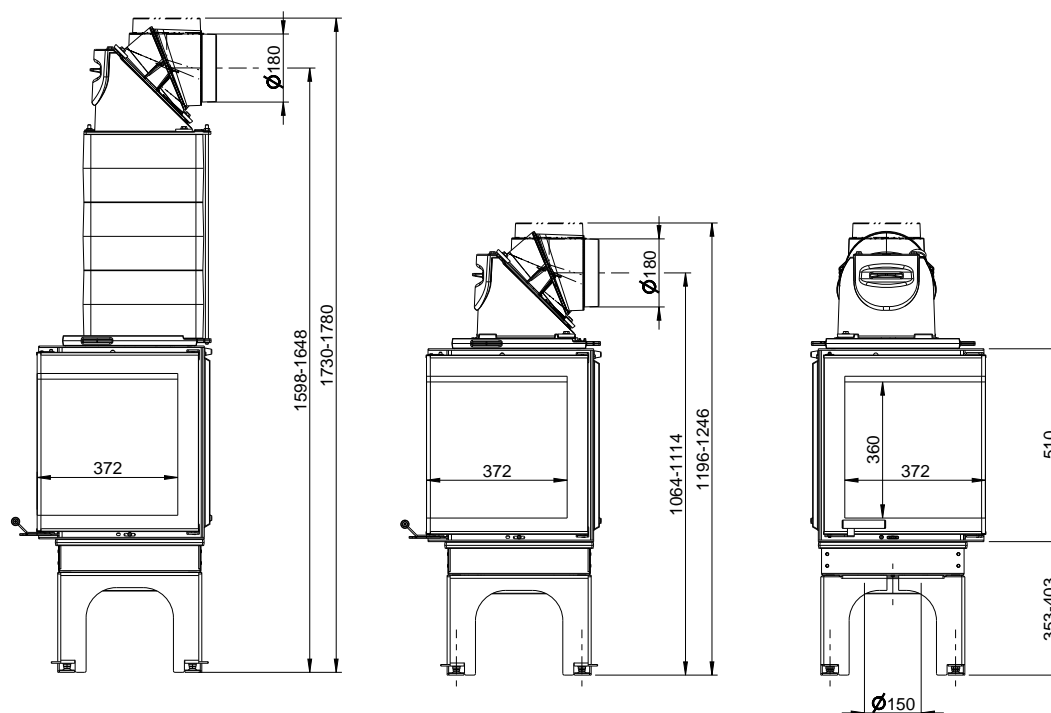


KALA S ES 45 L cast-iron top mounted heat exchanger
top view / M1:10

KALA S ES 45 L
top view / M1:10

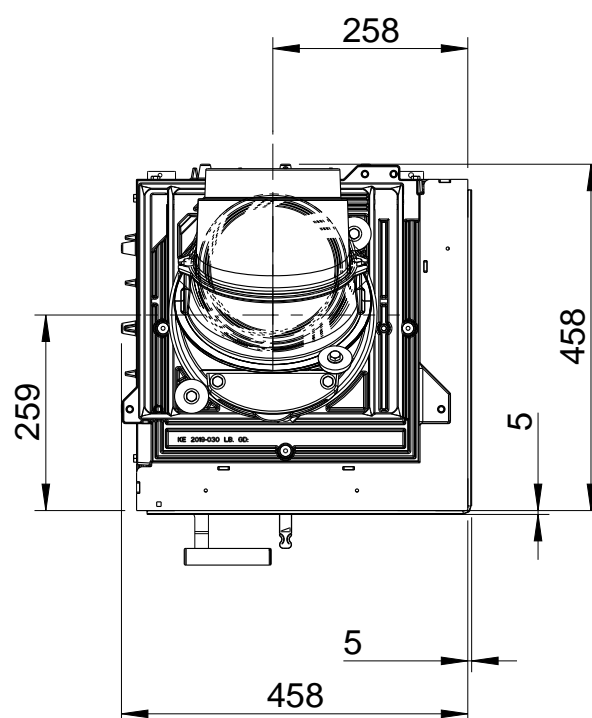
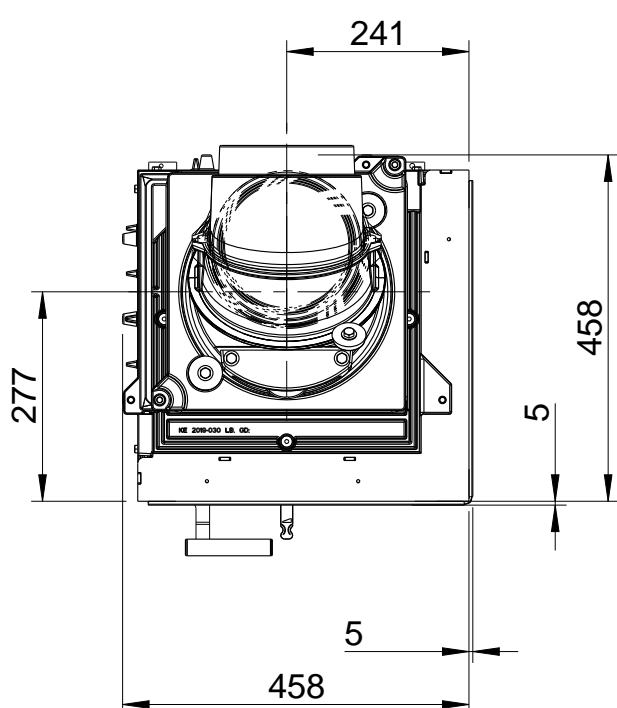


KALA S ES 45 R (corner view, right hinged, with hinged door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

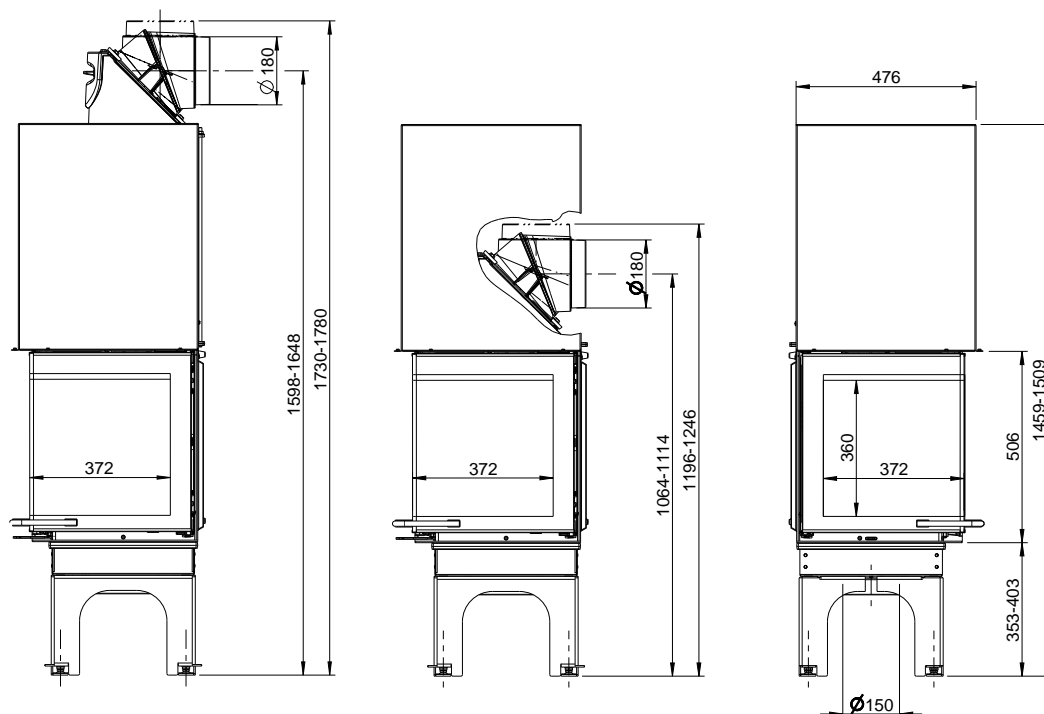


KALA S ES 45 R cast-iron top mounted heat exchanger
top view / M1:10

KALA S ES 45 R
top view / M1:10

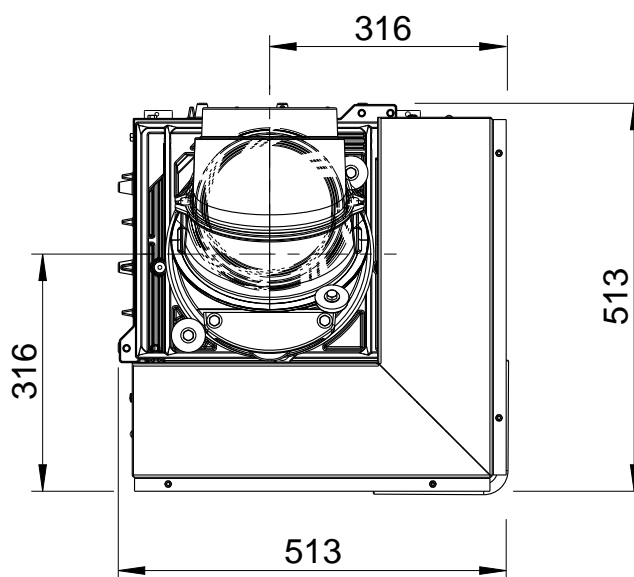
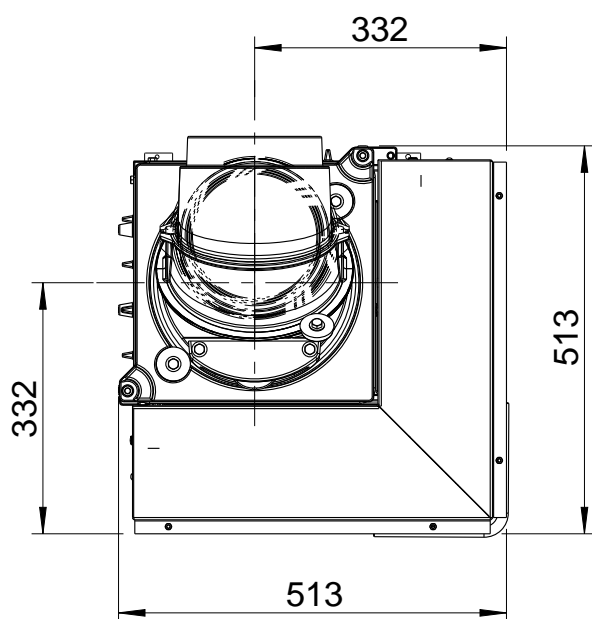


KALA H ES 45 (corner view, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

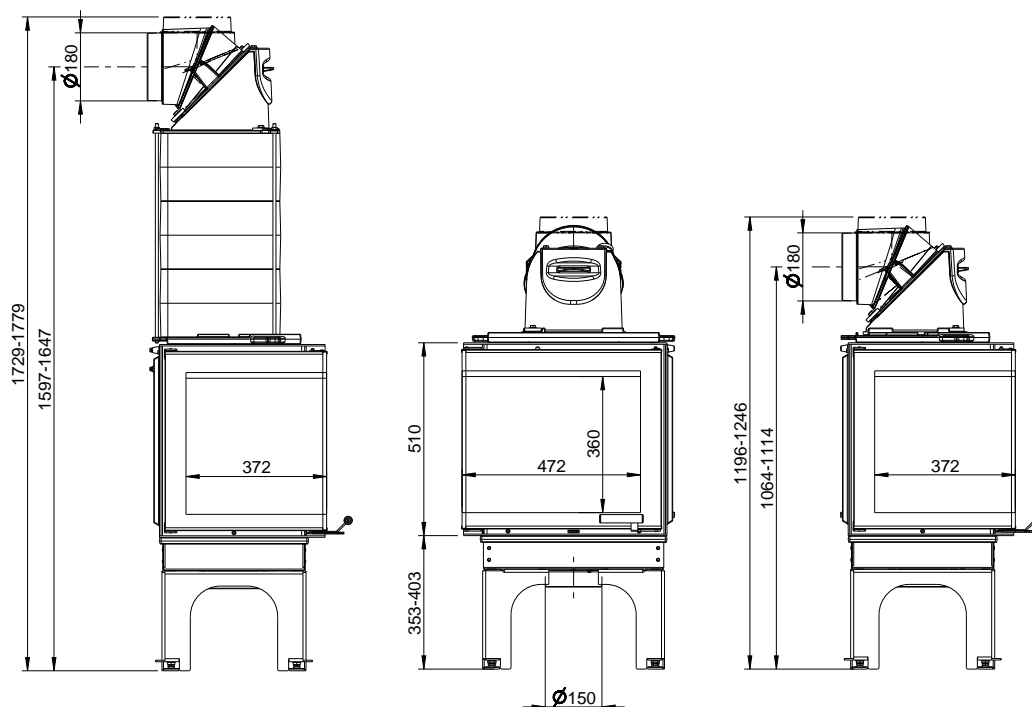


KALA H ES 45 cast-iron top mounted heat exchanger
top view / M1:10

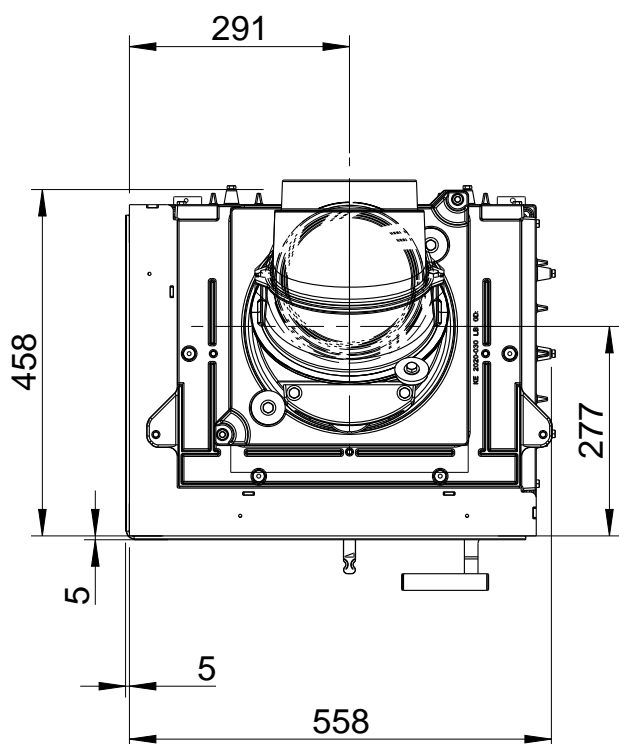
KALA H ES 45
top view / M1:10



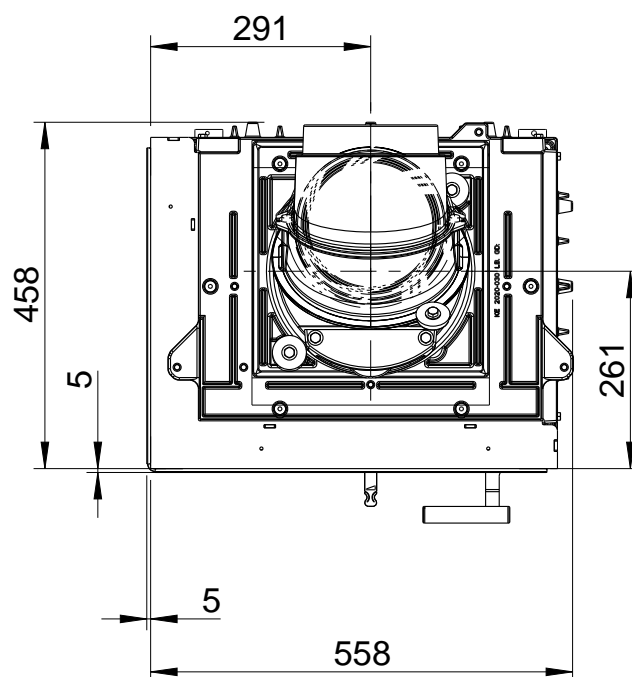
KALA S ES 55 L (corner view, left hinged, with hinged door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20



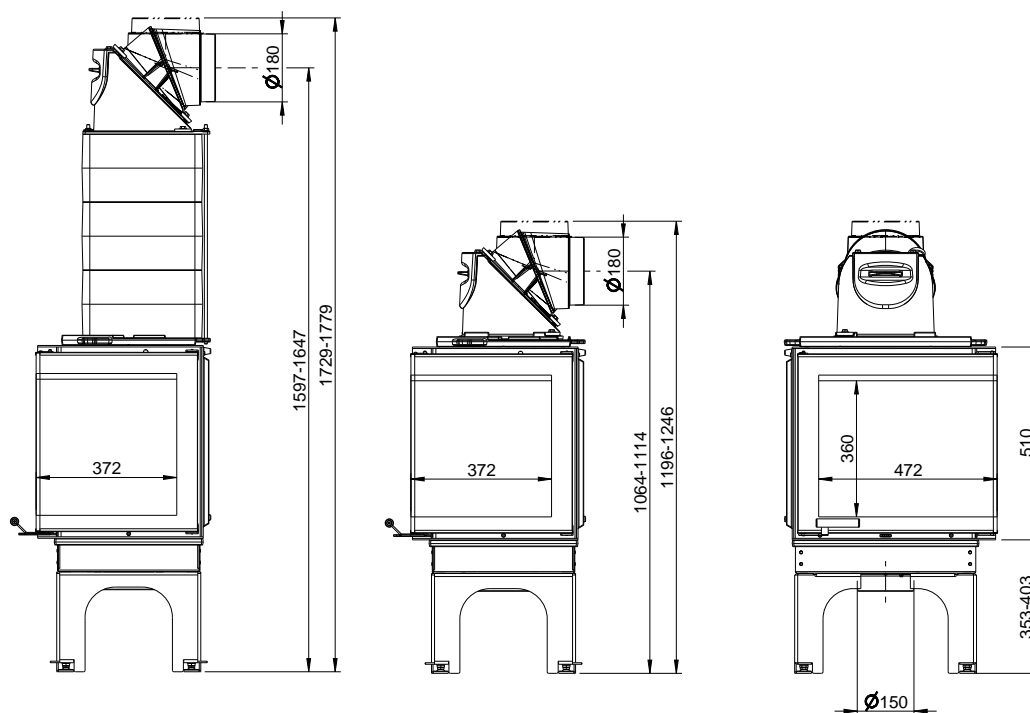
KALA S ES 55 L cast-iron top mounted heat exchanger
top view / M1:10



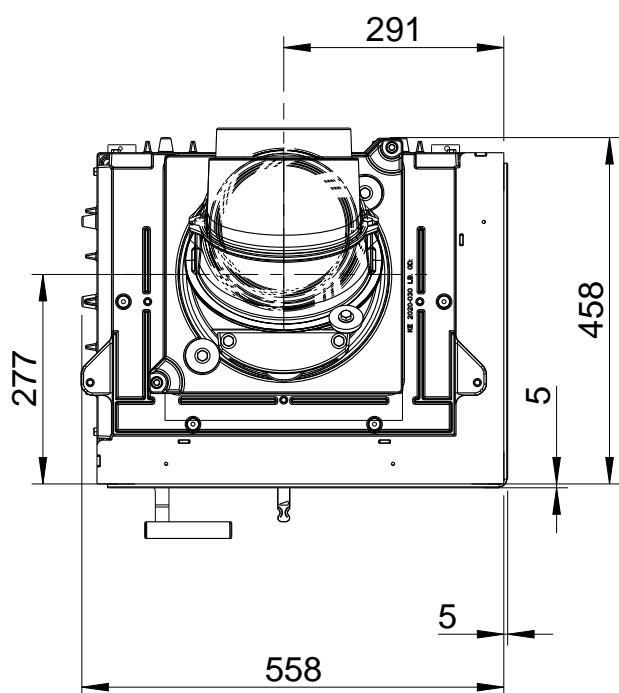
KALA S ES 55 L
top view / M1:10



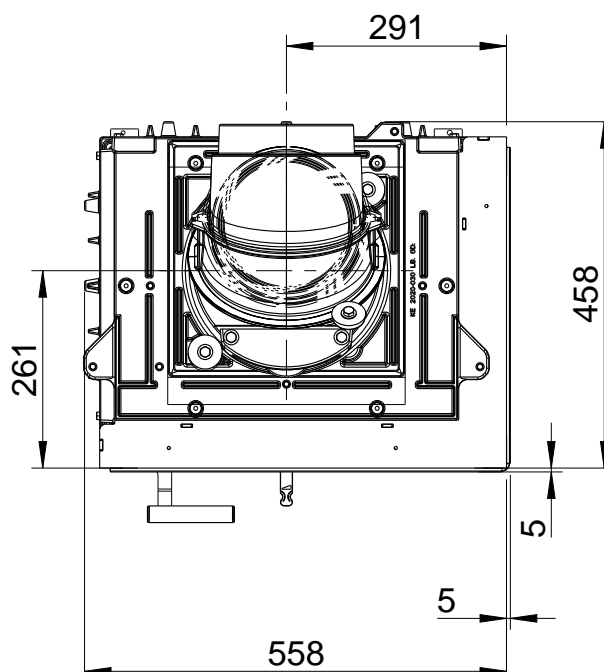
KALA S ES 55 R (L-shaped, right hinged, with hinged door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20



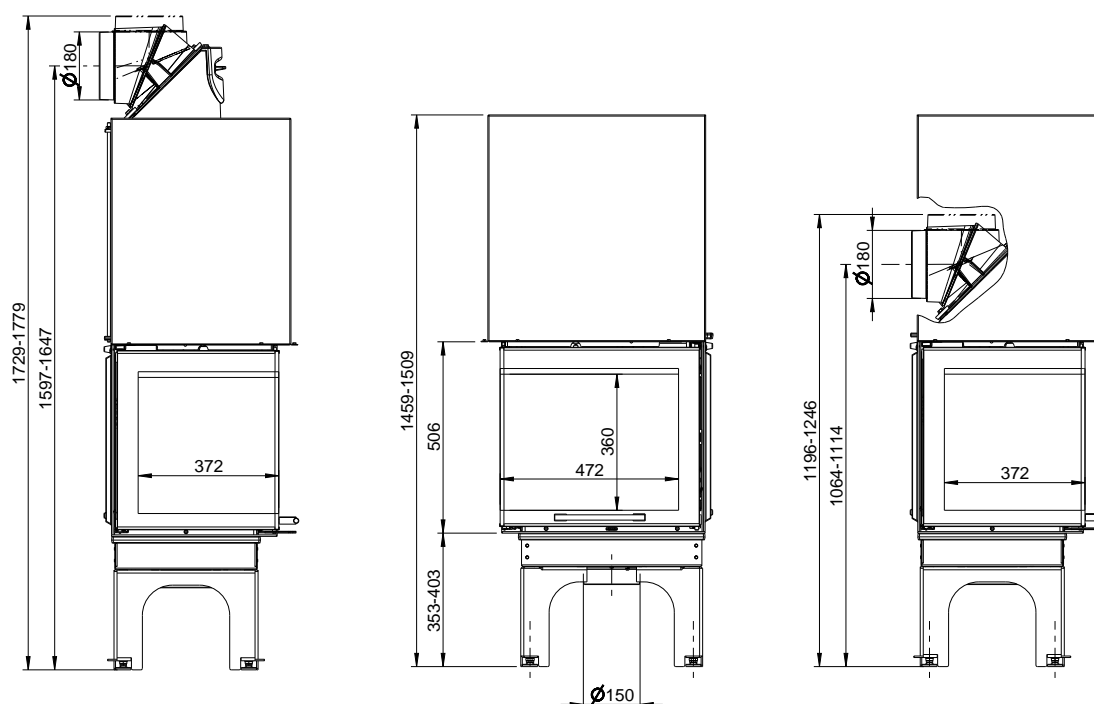
KALA S ES 55 R cast-iron top mounted heat exchanger
top view / M1:30



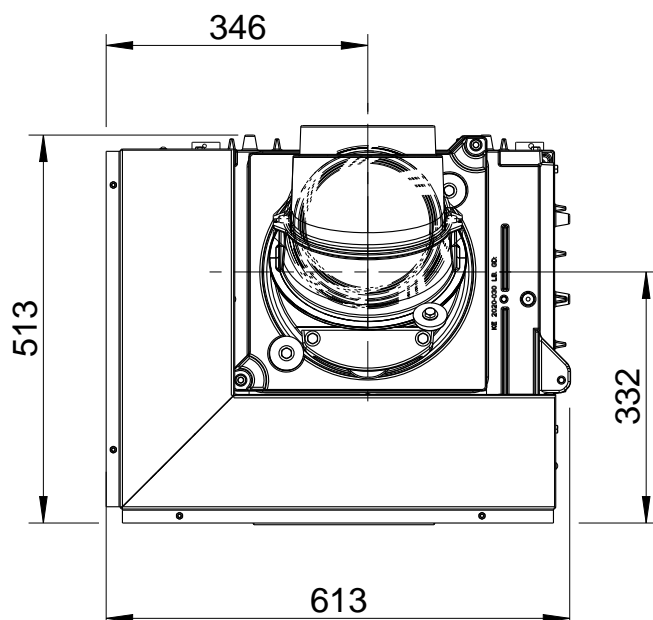
KALA S ES 55 R
top view / M1:10



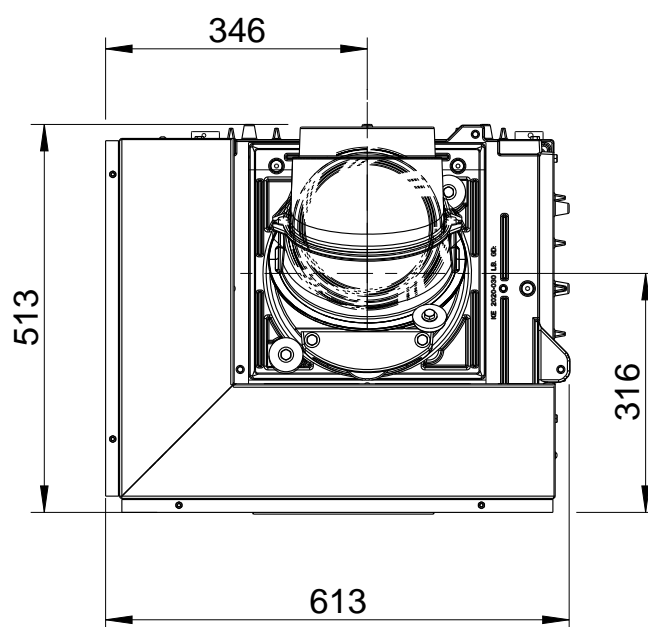
KALA H ES 55 L (L-shaped left, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20



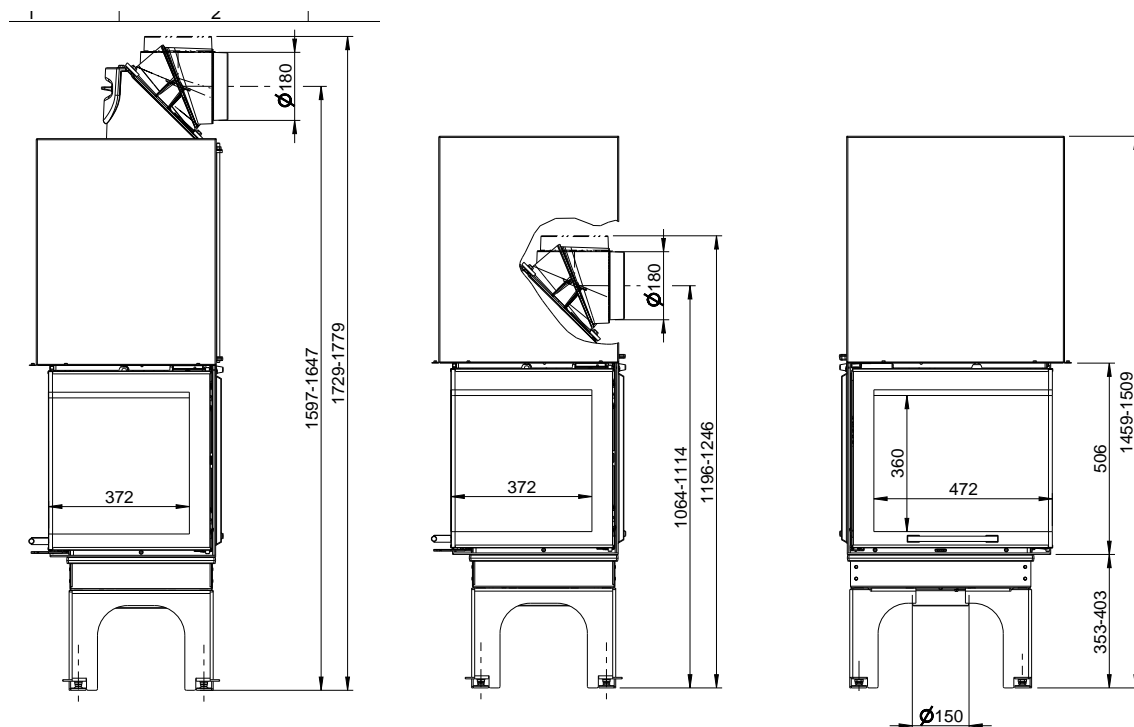
KALA H ES 55 L cast-iron top mounted heat exchanger
top view / M1:10



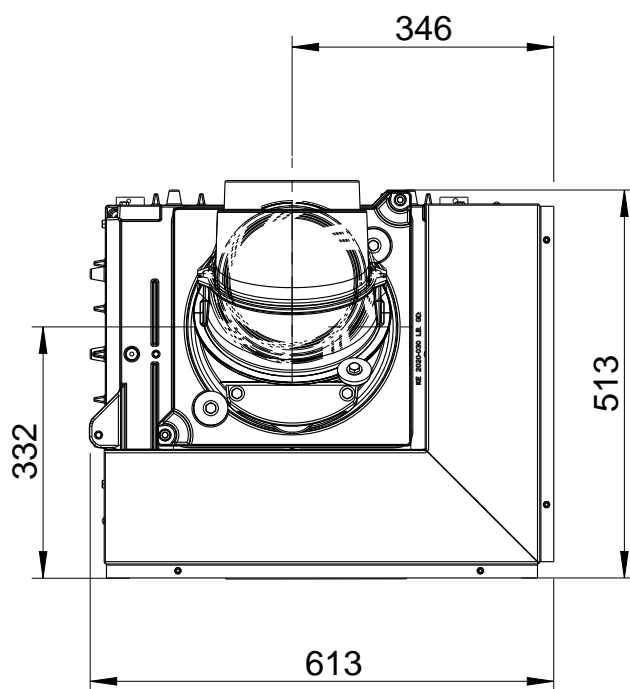
KALA H ES 55 L
top view / M1:10



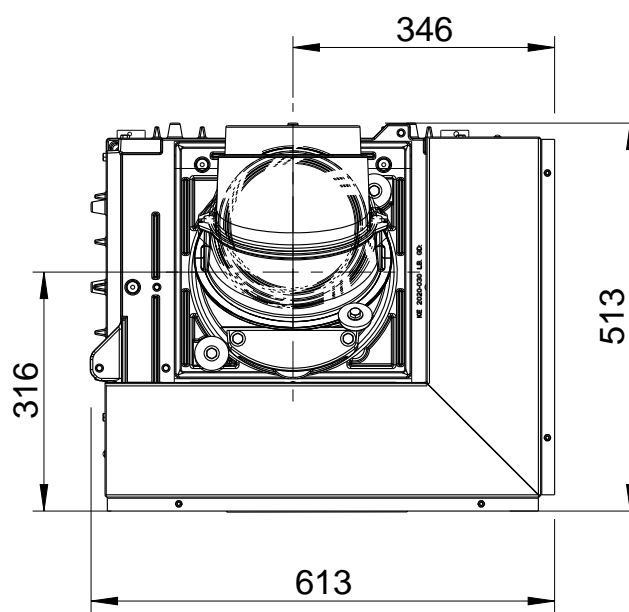
KALA H ES 55 R (L-shaped right, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20



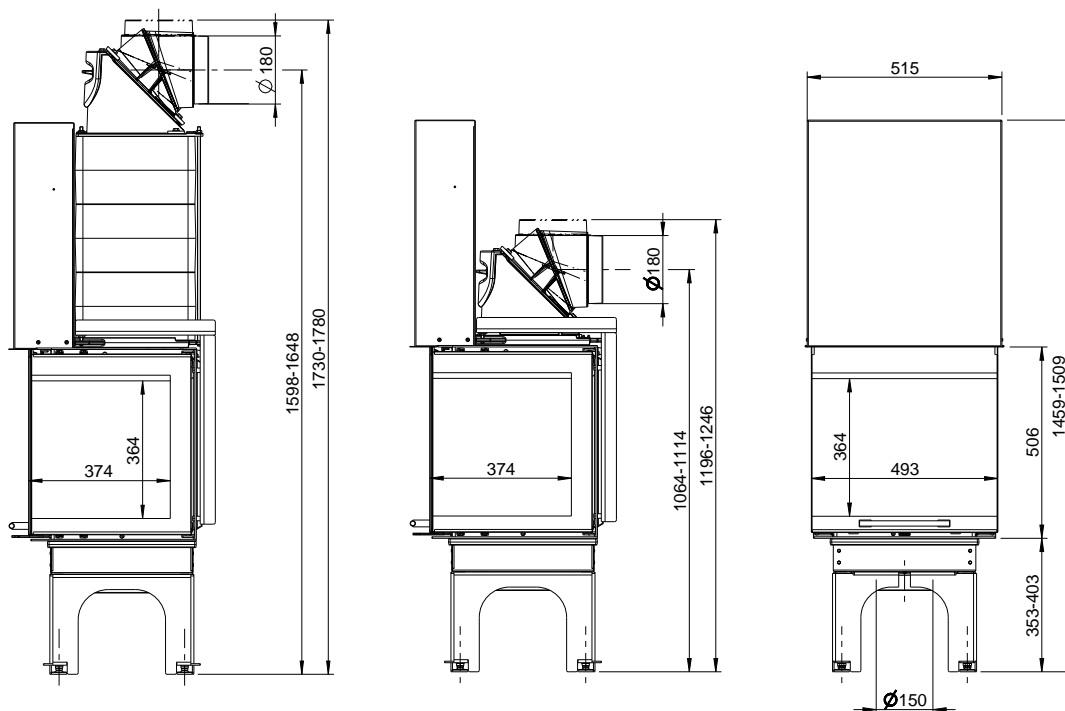
KALA H ES 55 R cast-iron top mounted heat exchanger
top view / M1:10



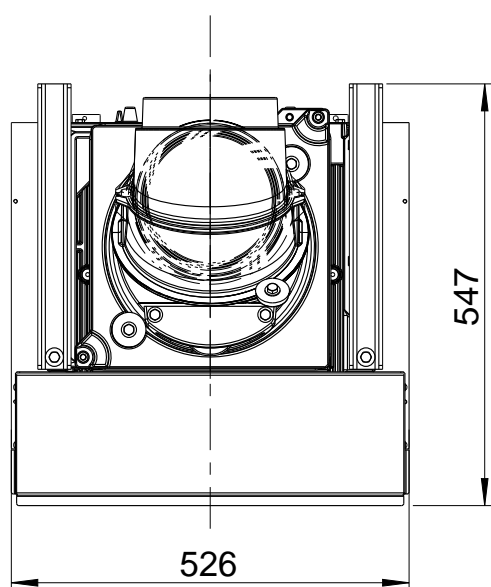
KALA H ES 55 R
top view / M1:10



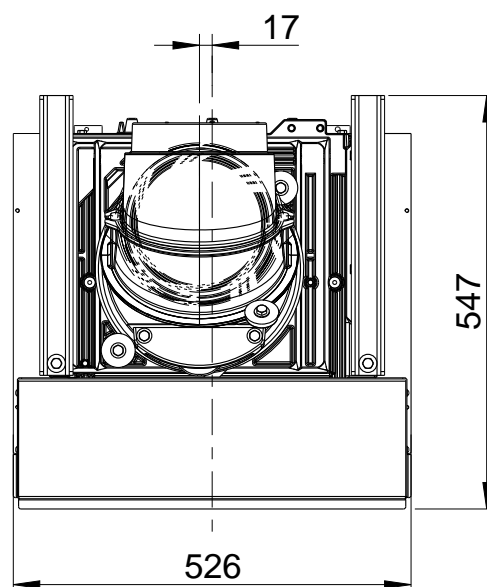
KALA QS (square-view, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20



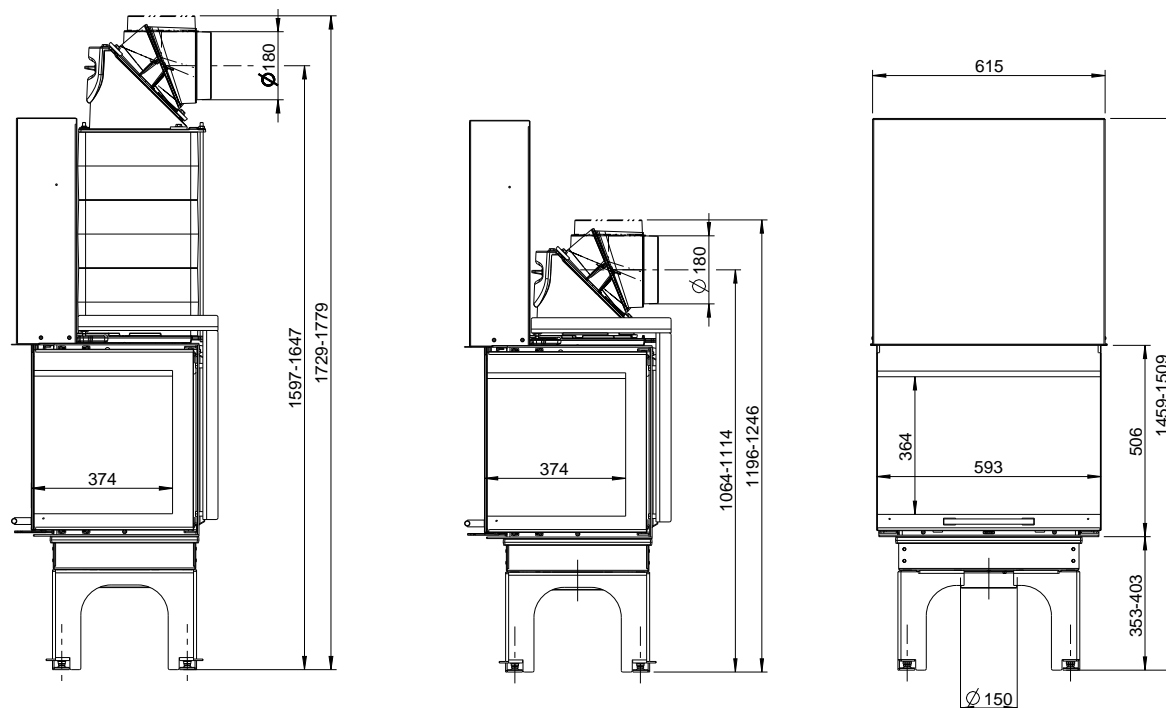
KALA QS cast-iron top mounted heat exchanger
top view / M1:10



KALA QS
top view / M1:10

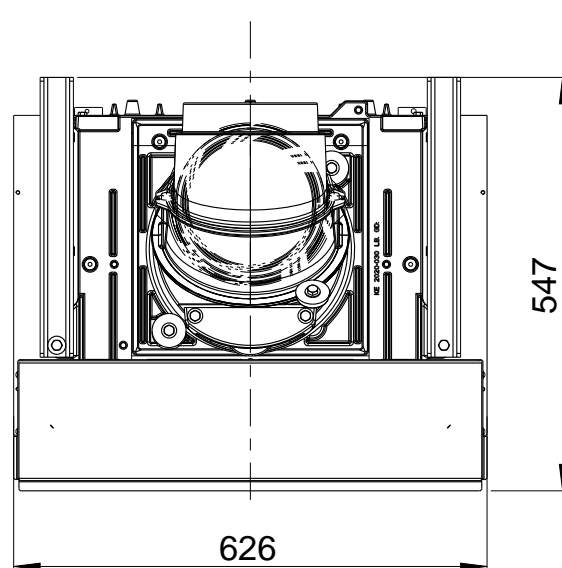
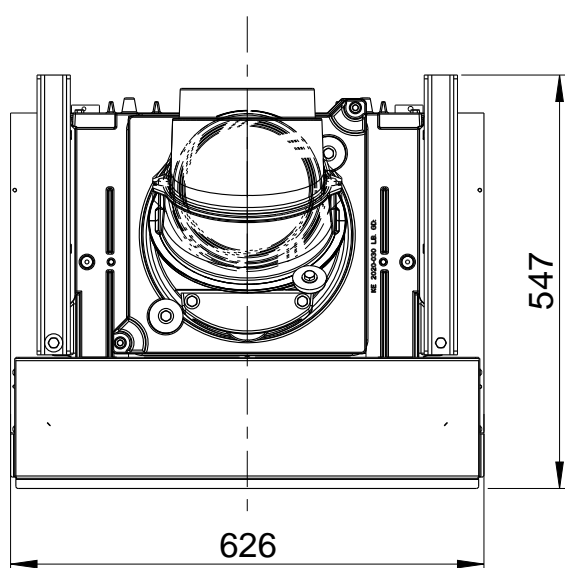


KALA PS (panoramic view, with guillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

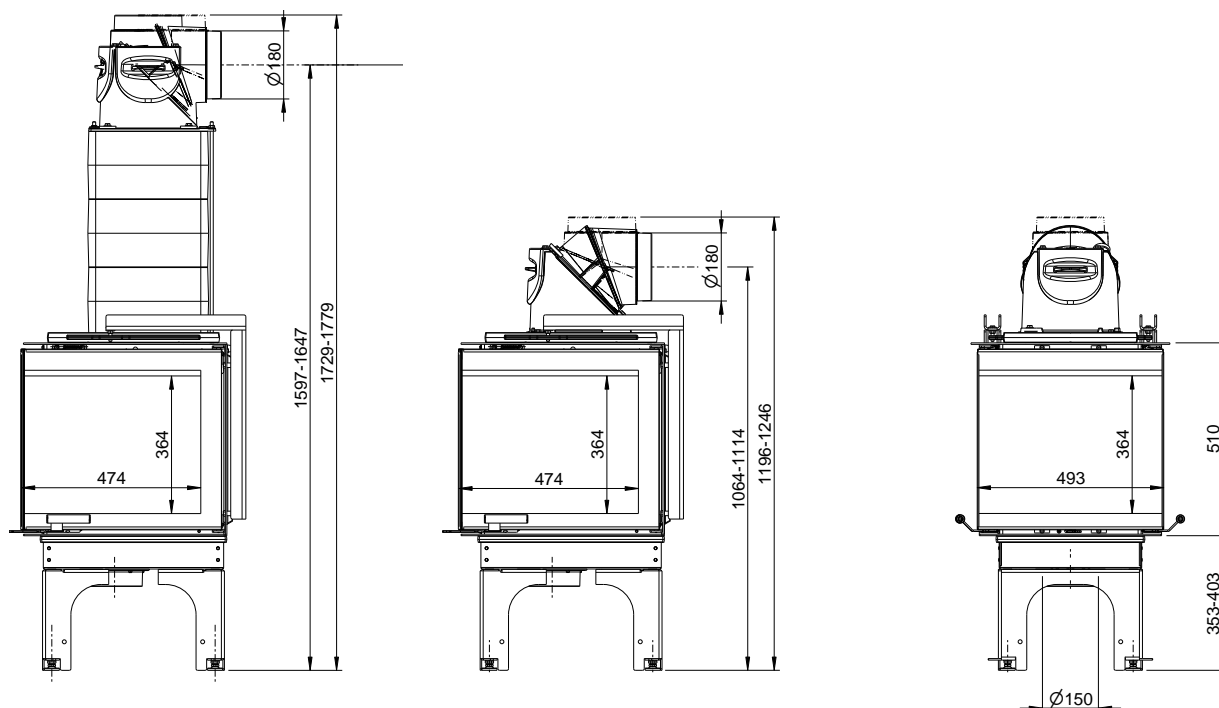


KALA PS cast-iron top mounted heat exchanger
top view / M1:30

KALA PS
top view / M1:10

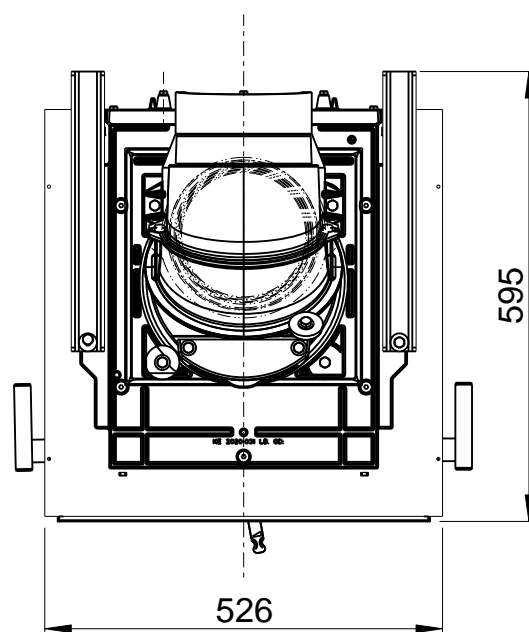
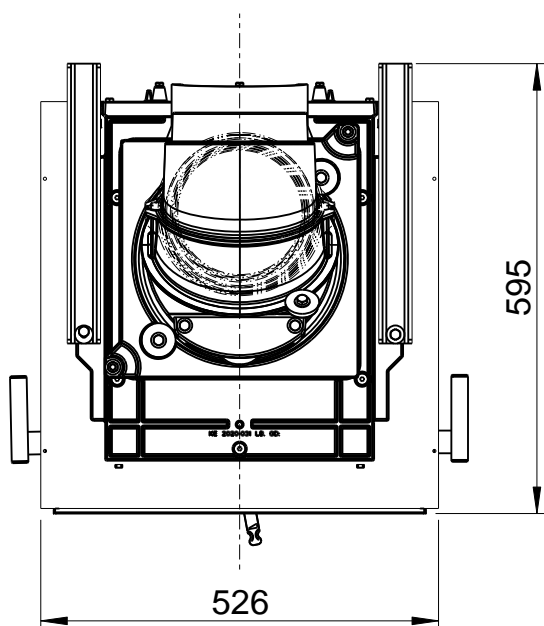


KALA S US (U-view, with hinged doors), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

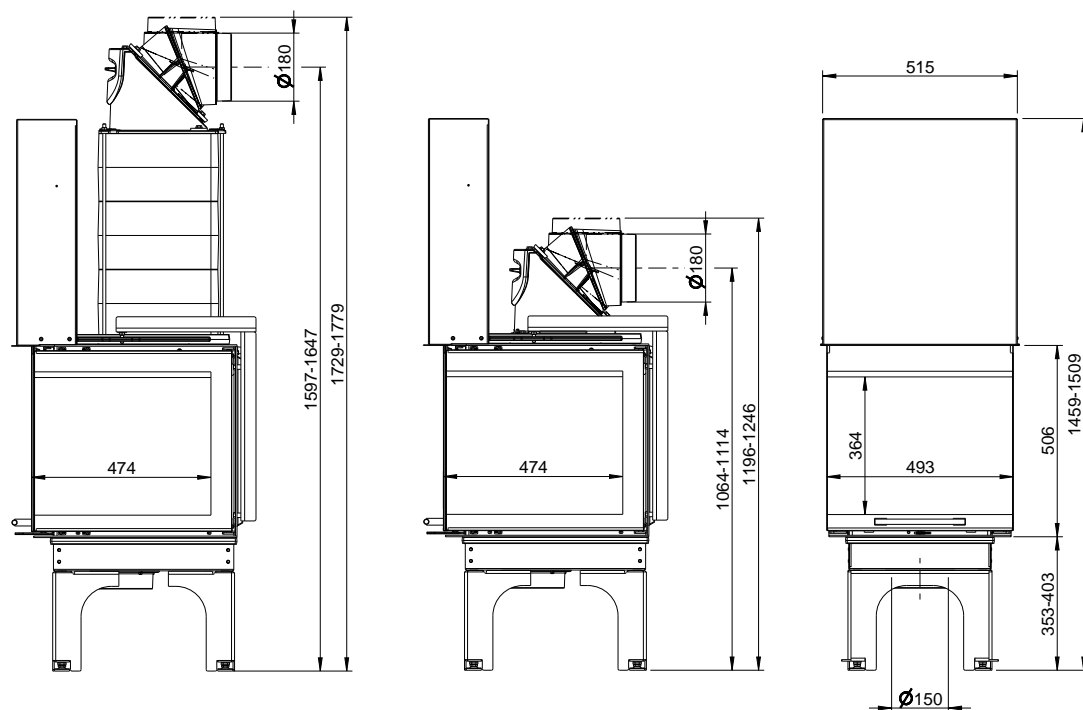


KALA S US cast-iron top mounted heat exchanger
top view / M1:10

KALA S US
top view / M1:10

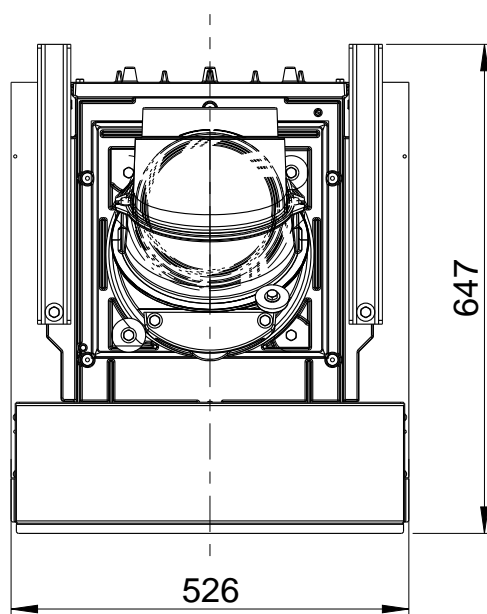
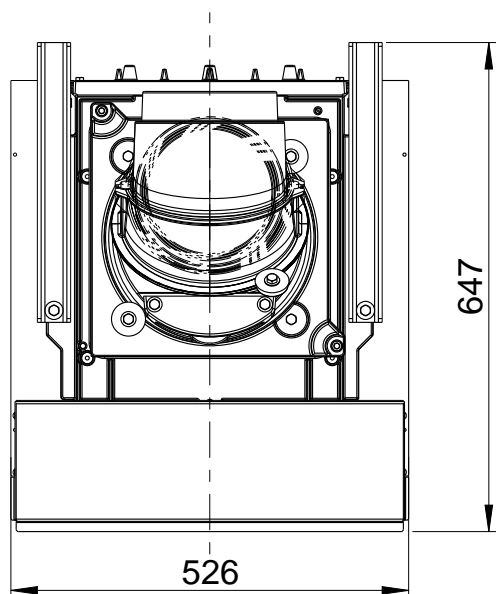


KALA US (U-view, with gillotine front door), here: w/o cast-iron top mounted heat exchanger (1004-01133) and three-part flue gas spigot with inspection opening (1004-01140) / M1:20

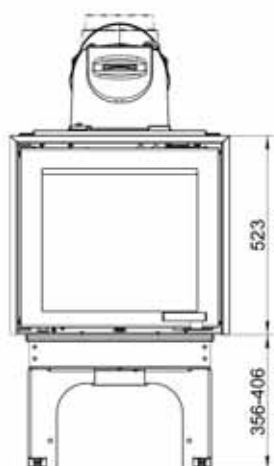


KALA US cast-iron top mounted heat exchanger
top view / M1:10

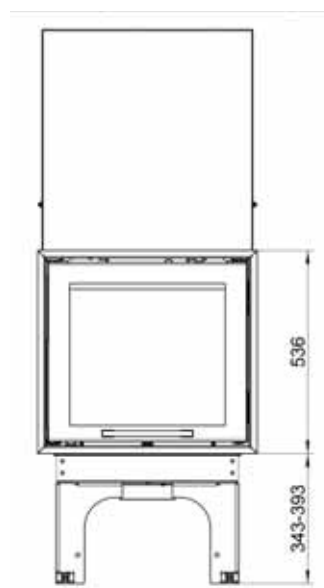
KALA US
top view / M1:10



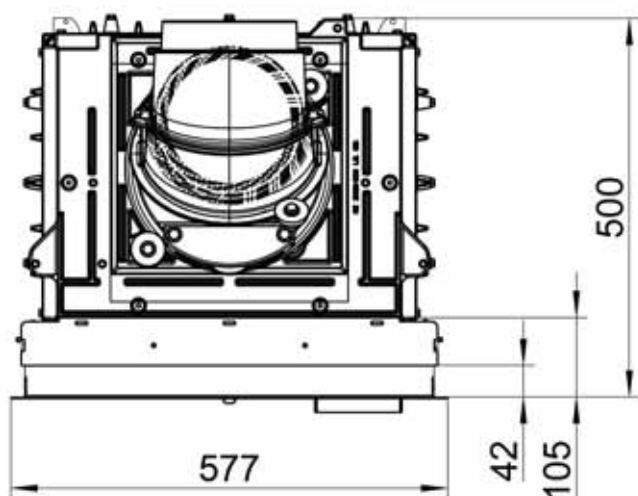
Frame at KALA S F/DS (three-sided)
(top and laterals) (1004-01378) / M1:20



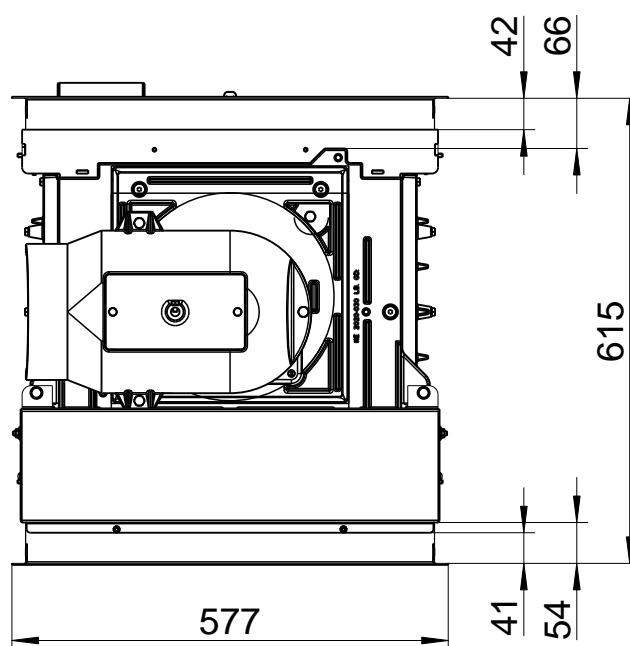
Frame set at KALA H F/DS (four-sided)
(top, bottom and laterals) (1004-01381) / M1:20



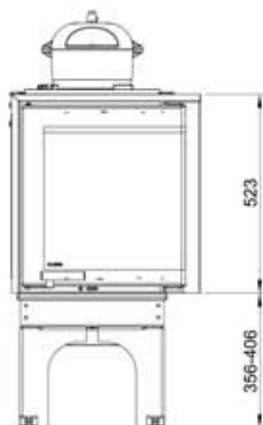
KALA S F 55 L with frame set
top view / M1:10



KALA H DS 55 with frame set
top view / M1:10



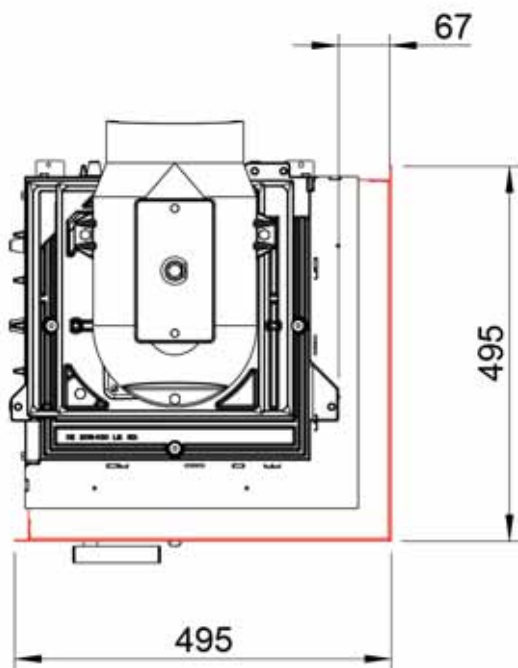
Frame at KALA S ES (three-sided)
(top and laterals) / M1:20



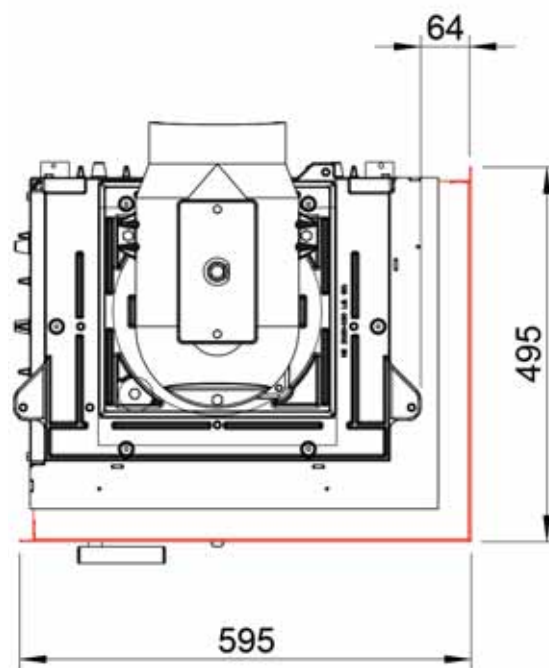
Frame set at KALA S ES (four-sided)
(top, bottom and laterals) / M1:20



KALA S ES 45 R with frame set
top view / M1:10



KALA S ES 55 R with frame set
top view / M1:10

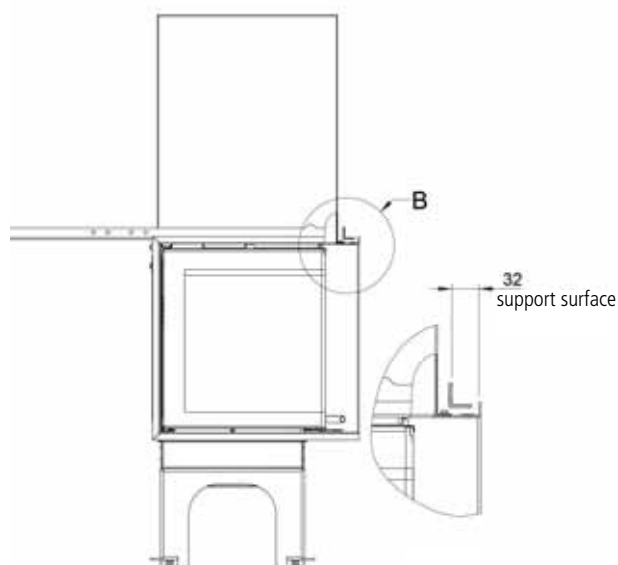
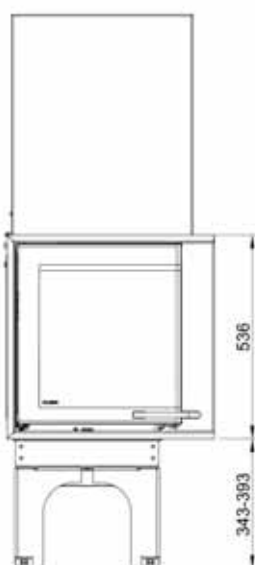
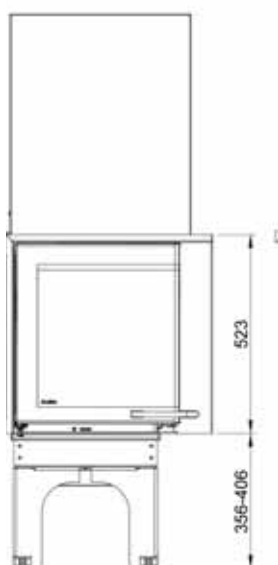


Frame set at KALA H ES / M1:20

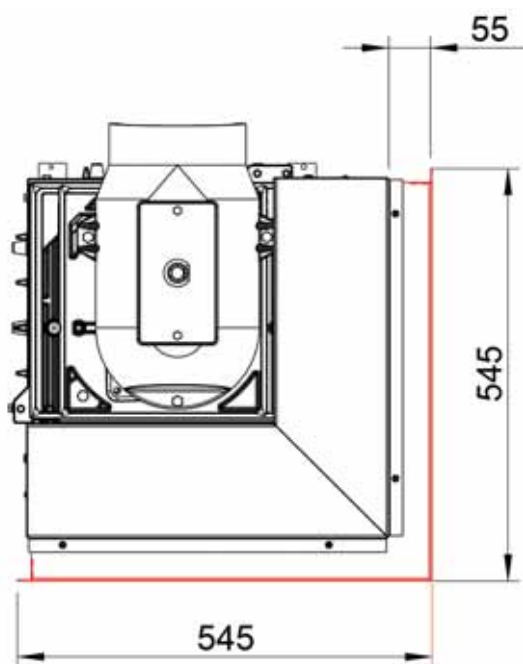
with frame set three-sided
(top and laterals)

with frame set four-sided
(top, bottom and laterals)

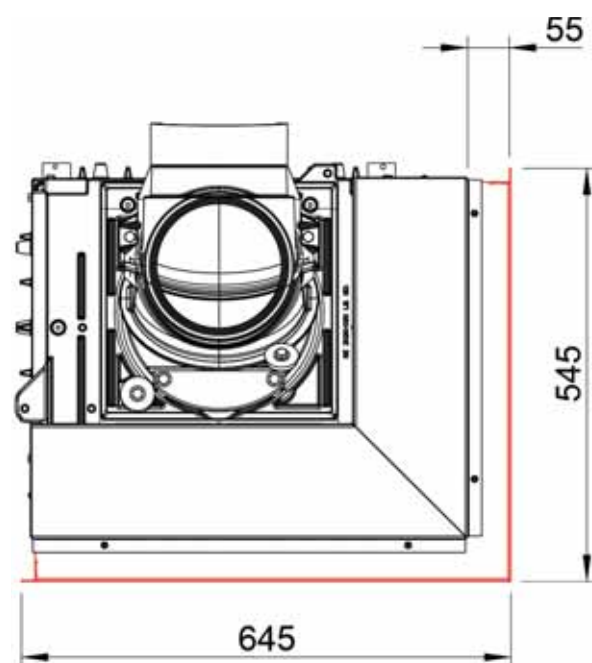
with frame set + supporting frames (1004-01178)



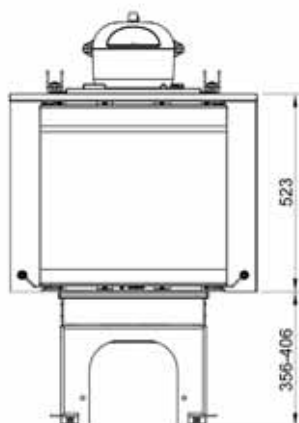
KALA H ES 45 with frame set
top view / M1:10



KALA H ES 55 R with frame set
top view / M1:10



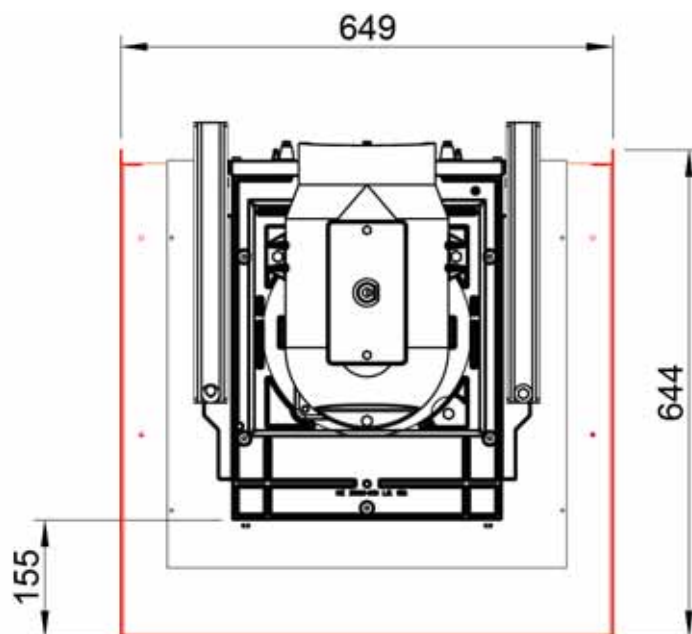
Frame set at KALA S US (three-sided)
(top and laterals) / M1:20



Frame set at KALA S US (four-sided)
(top, bottom and laterals) / M1:20

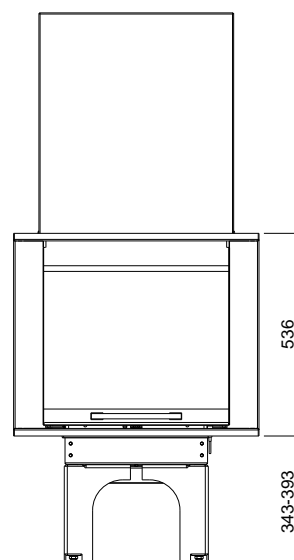
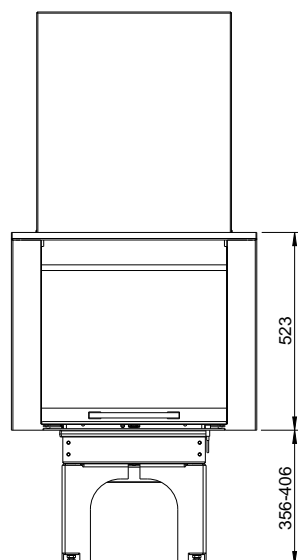


KALA S US with frame set
top view / M1:10

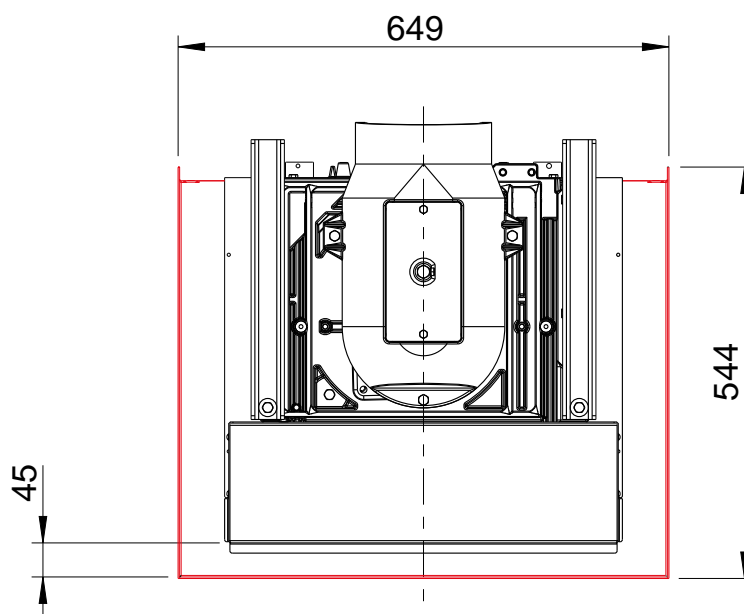


Frame set at KALA QS/ PS/ US (three-sided)
(top and laterals) / M1:20

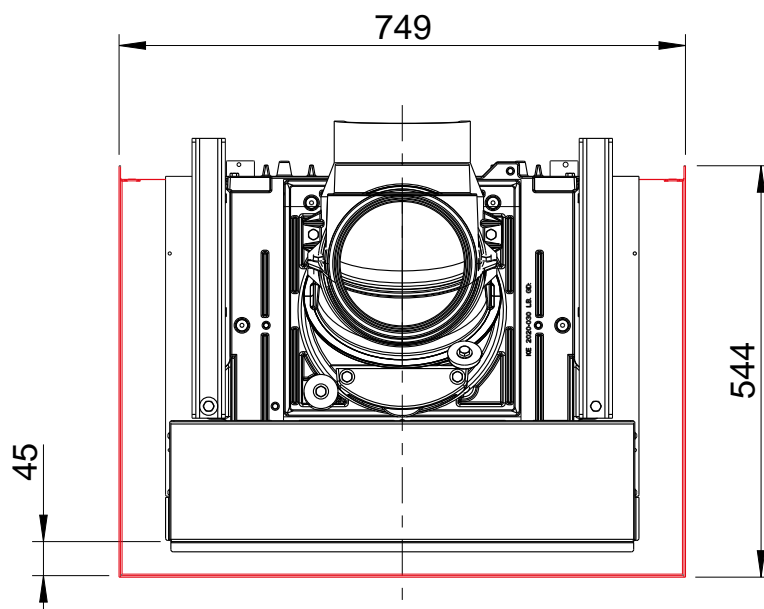
Frame set at KALA QS/ PS/ US (four-sided)
(top, bottom and laterals) / M1:20



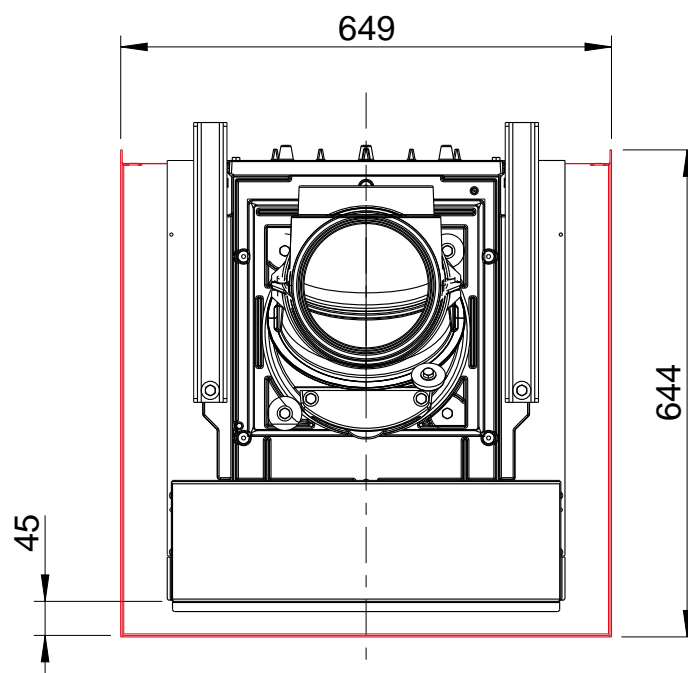
KALA QS with frame set
top view / M1:10



KALA PS with frame set
top view / M1:10



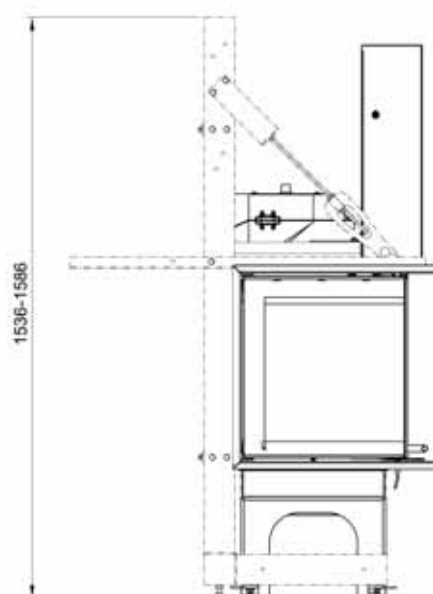
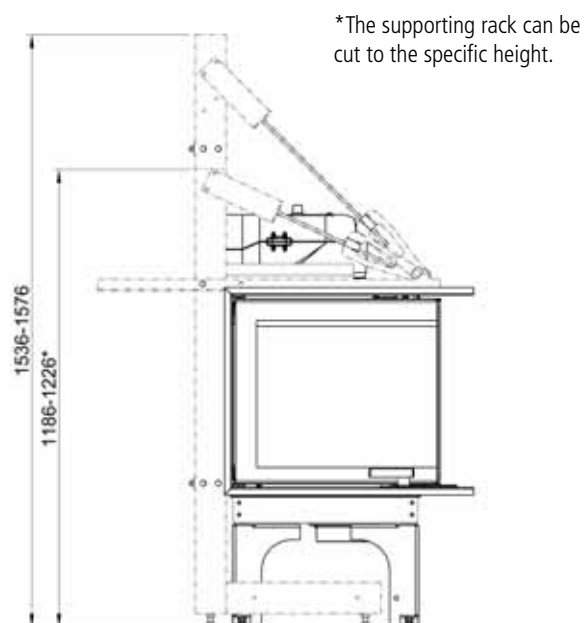
KALA US with frame set
top view / M1:10



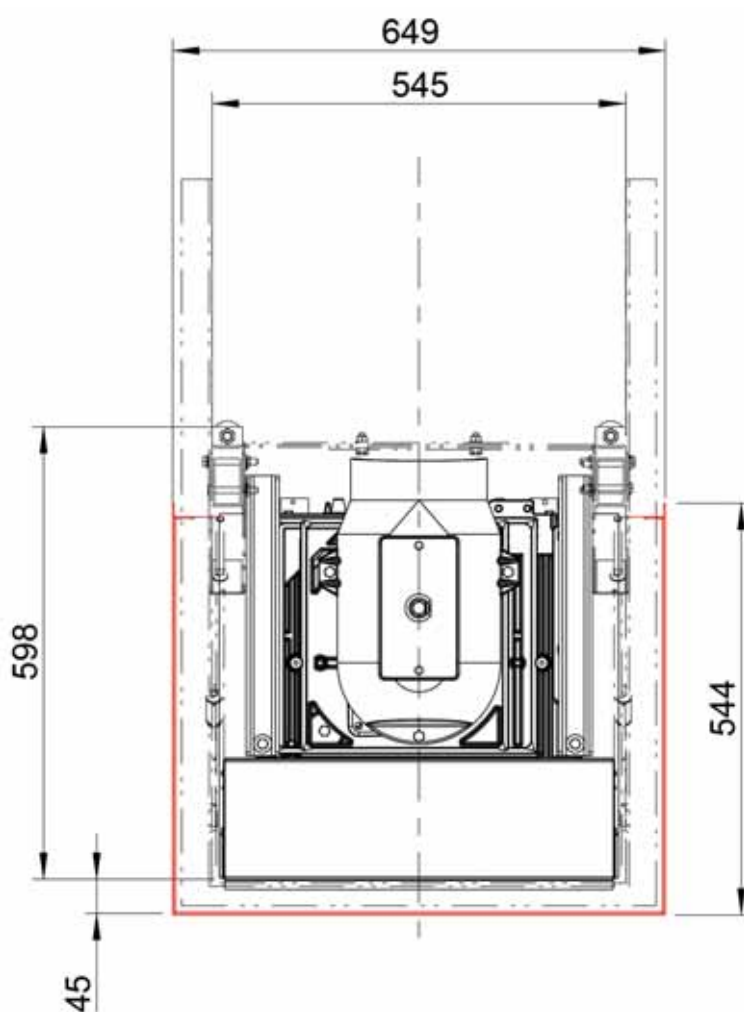
KALA with supporting rack, -frame and frame set / M1:20

KALA S US with frame set, supporting rack and - frame

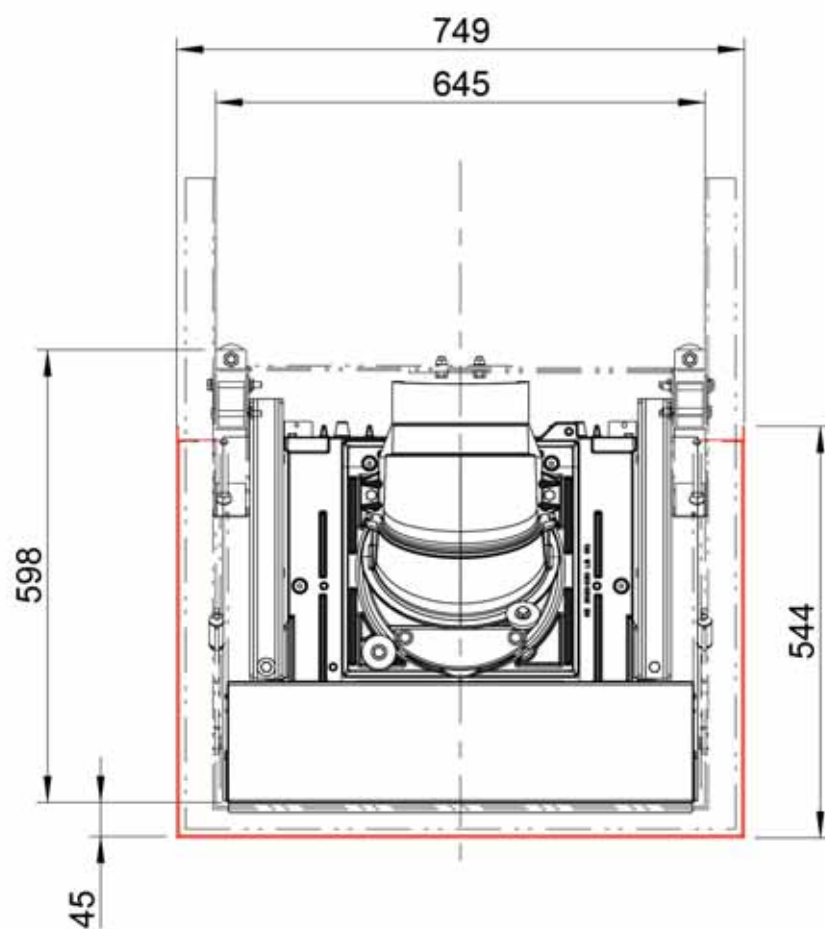
KALA QS, PS, US with frame set, supporting rack and - frame



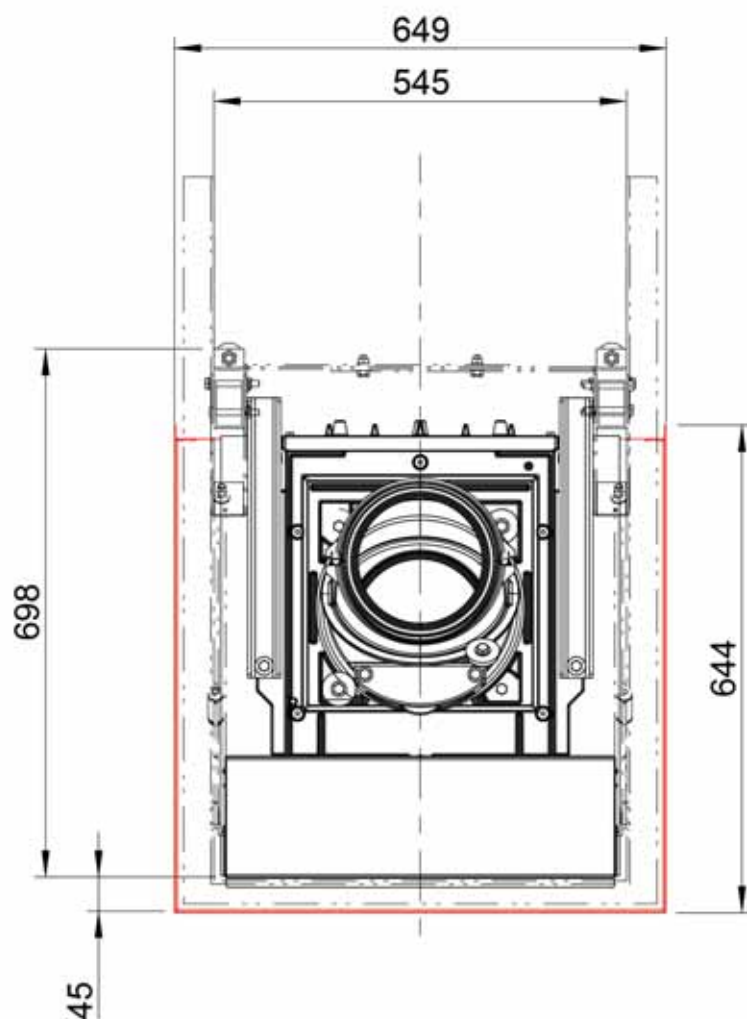
KALA QS with frame set and supporting rack
top view / M1:10



KALA PS with frame set and supporting rack
top view / M1:10

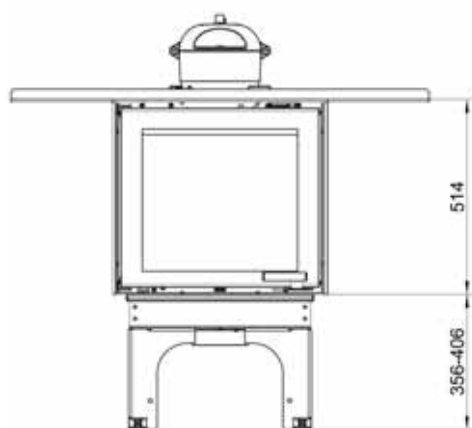


KALA US with frame set and supporting rack
top view / M1:10

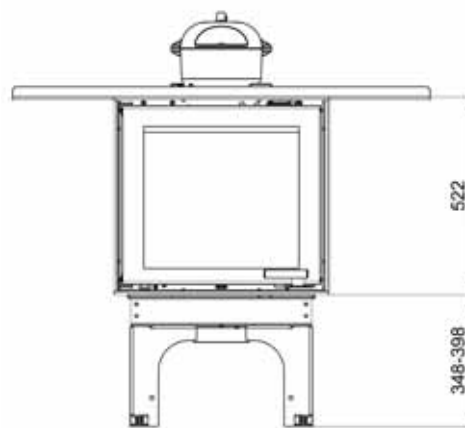


KALA with installation frame

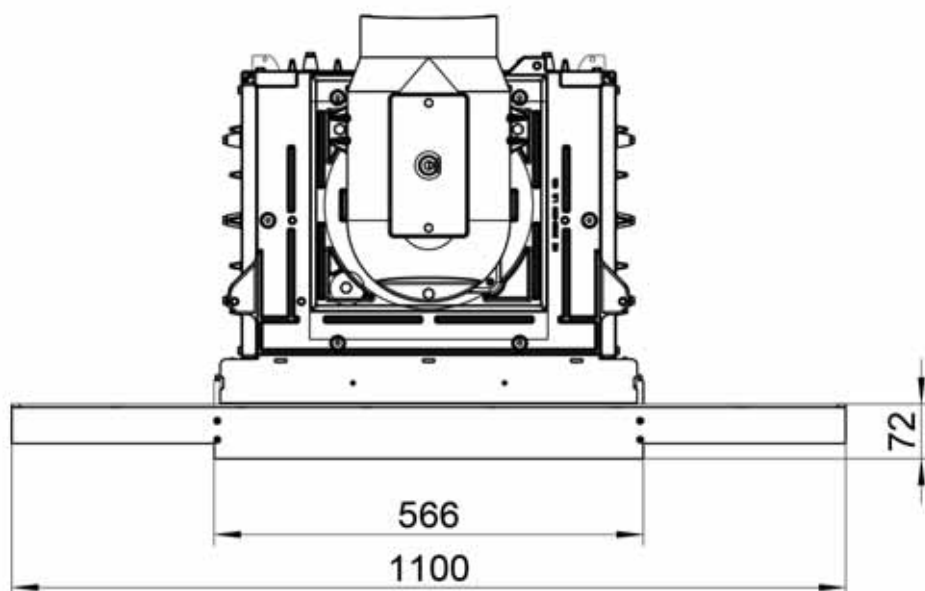
KALA S F/ DS 55
with three-sided installation frame / M1:20



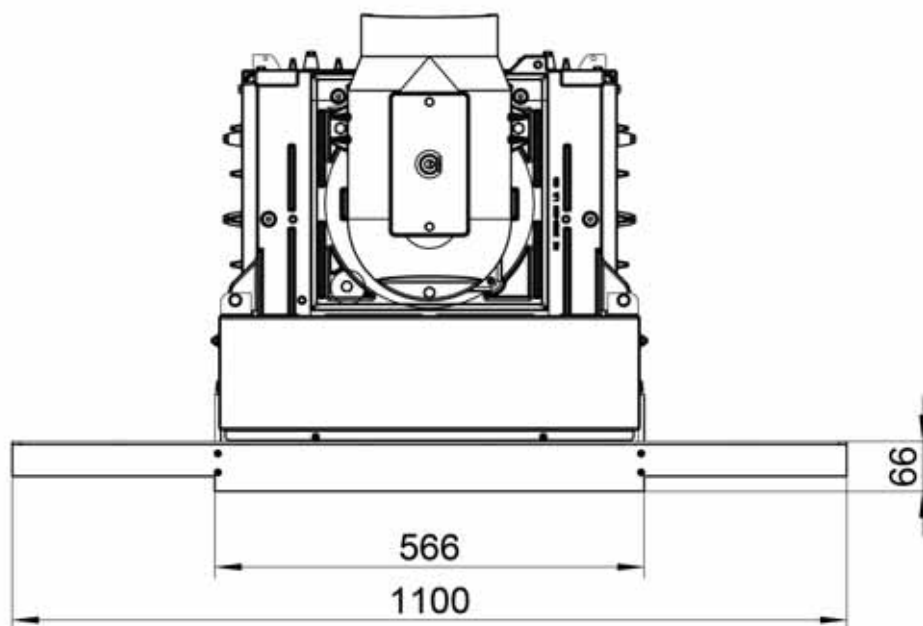
KALA S F/DS 55
with four-sided installation frame / M1:20



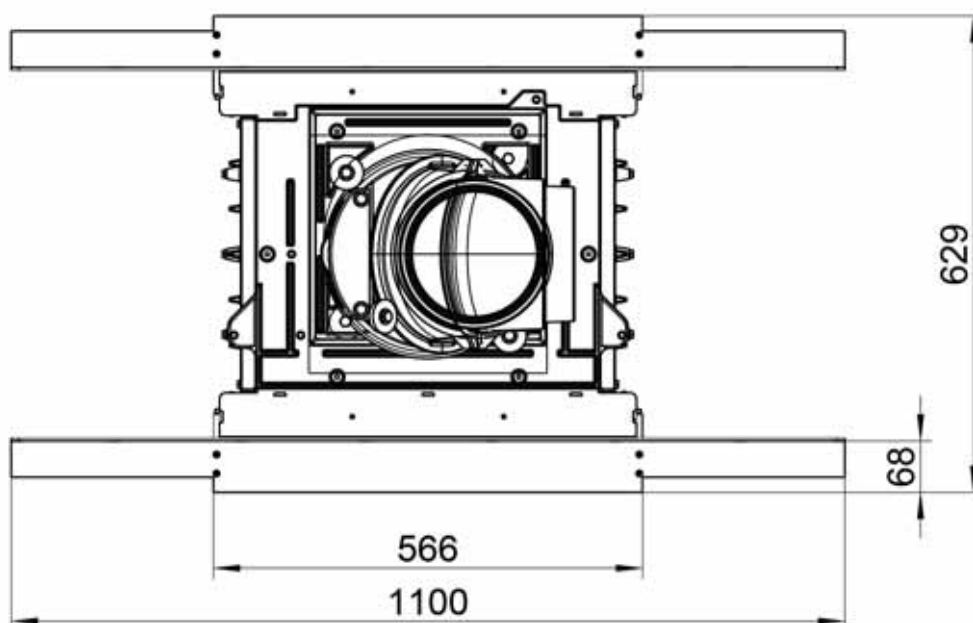
KALA S F 55 with installation frame
top view / M1:10



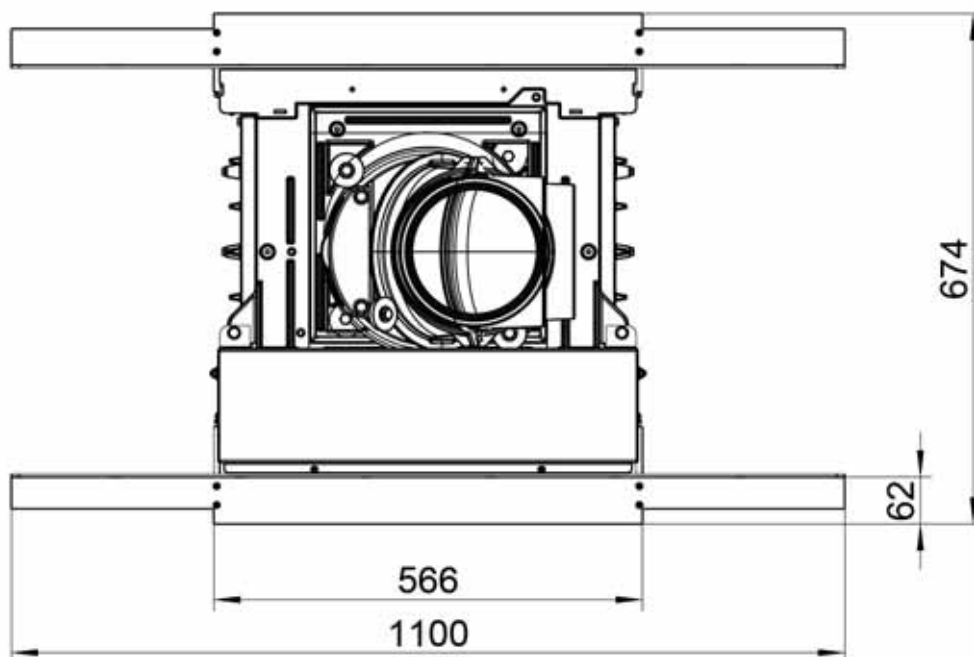
KALA H F 55 with installation frame
top view / M1:10



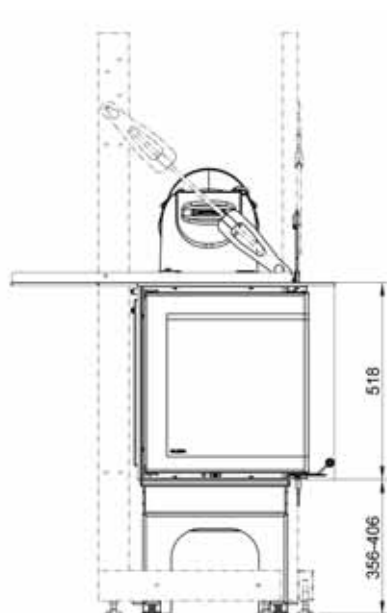
KALA S DS 55 with installation frame
top view / M1:10



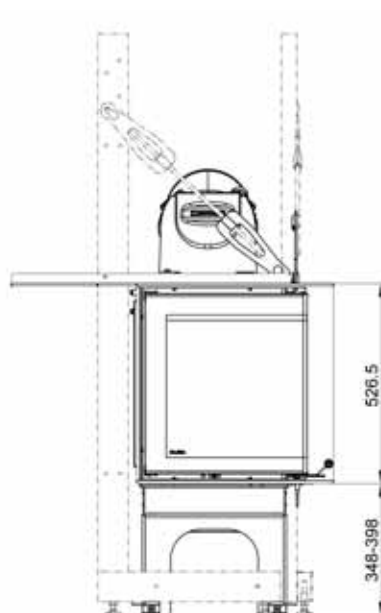
KALA S DS 55 with installation frame
top view / M1:10



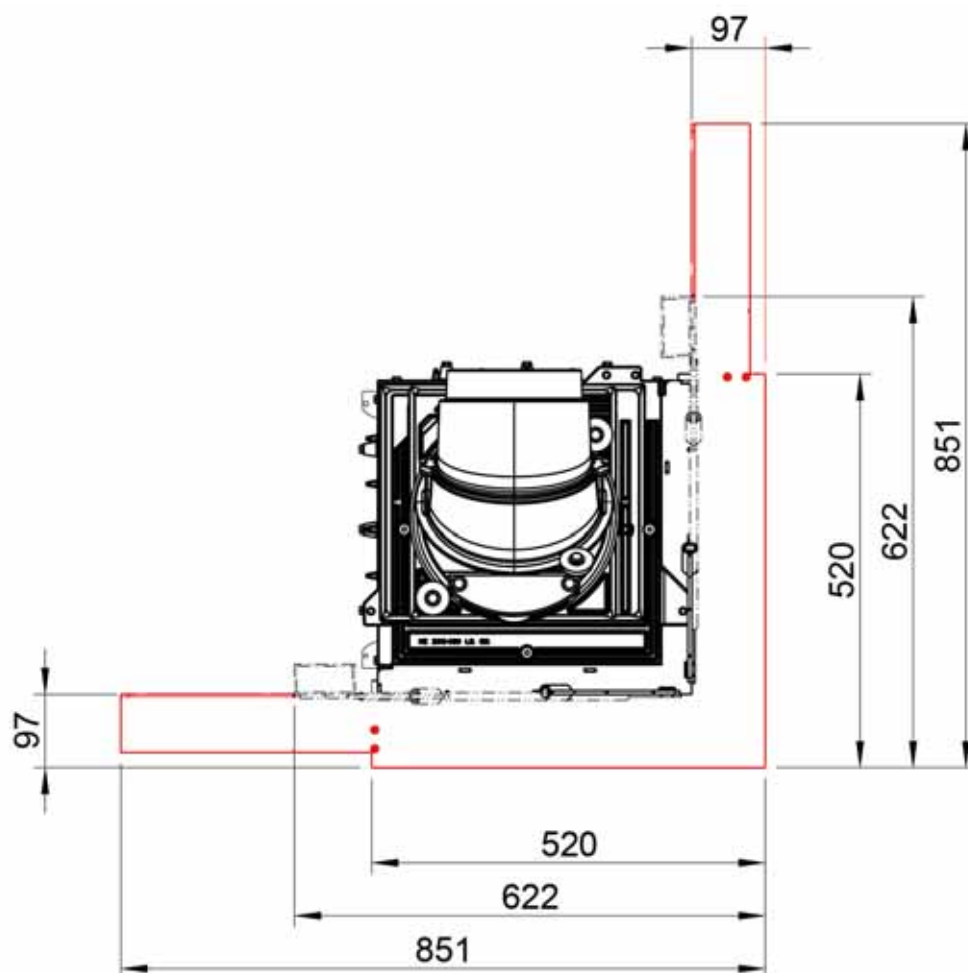
KALA S ES 45 (displayed: R)
with three-sided installation frame / M1:20



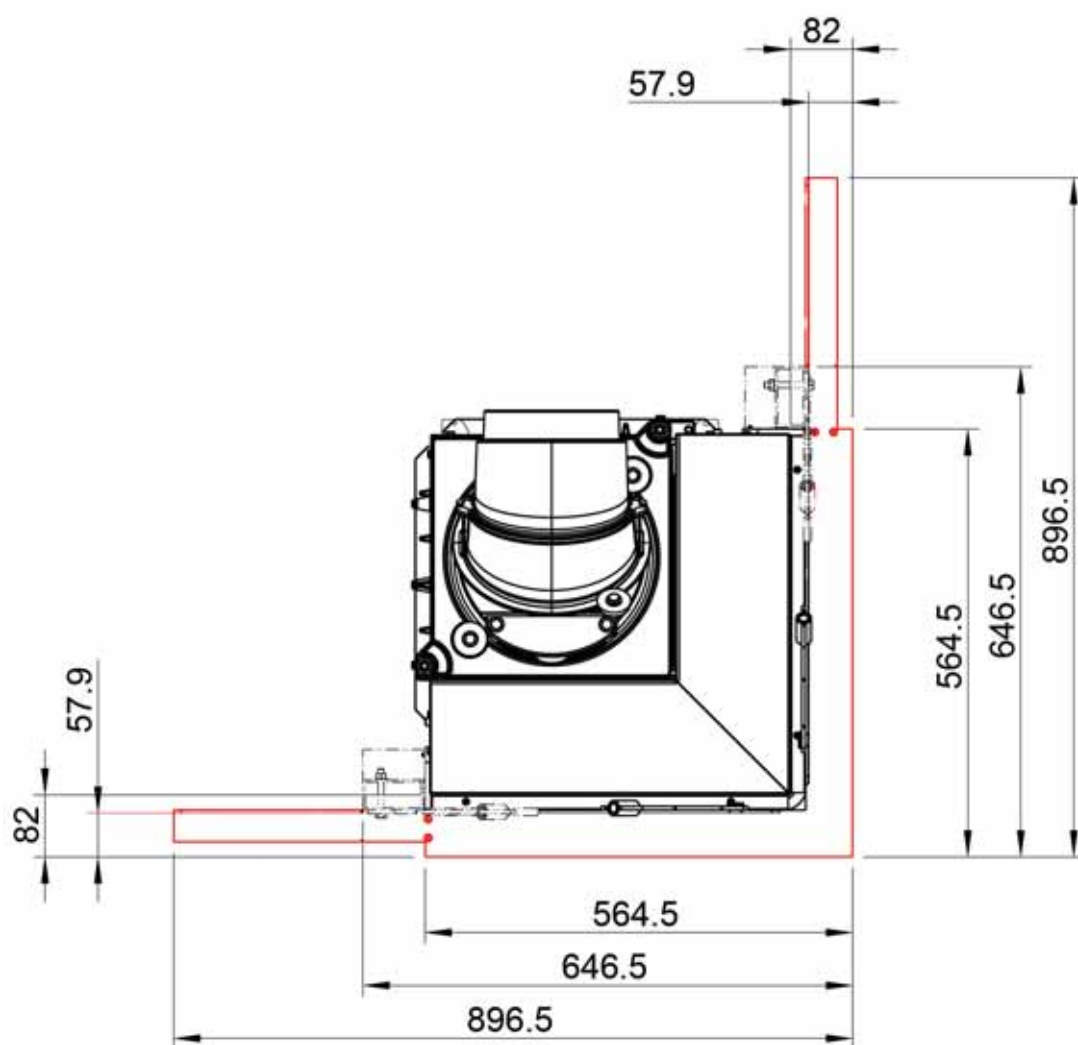
KALA S ES 45 (displayed: R)
with four-sided installation frame / M1:20



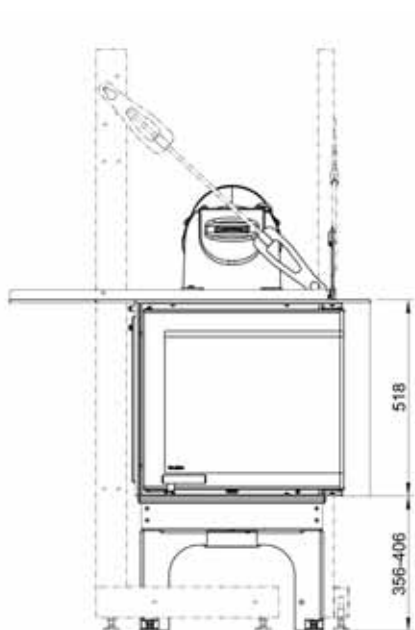
KALA S ES 45 with installation frame
top view / M1:10



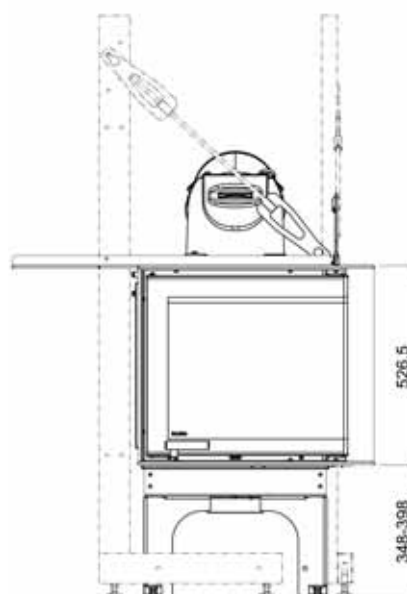
KALA H ES 45 with installation frame
top view / M1:10



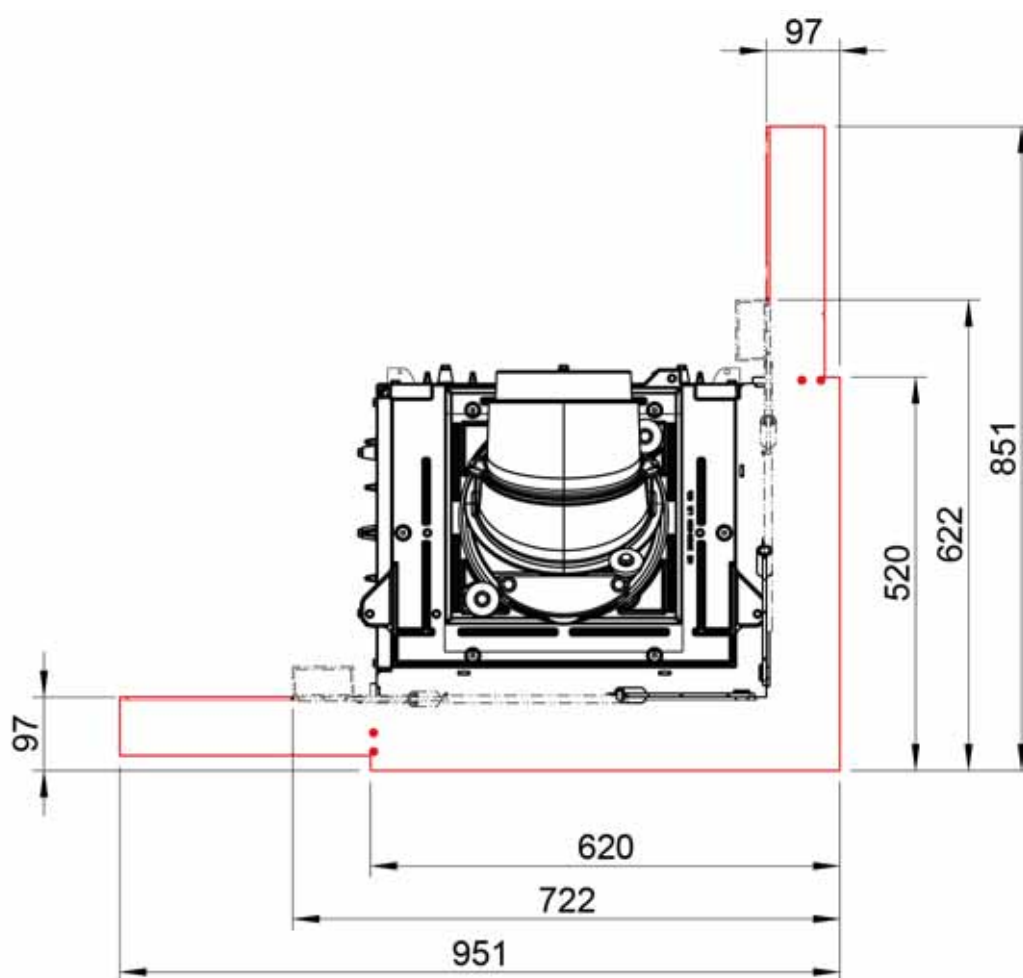
KALA S ES 55 (displayed: R)
with three-sided installation frame / M1:20



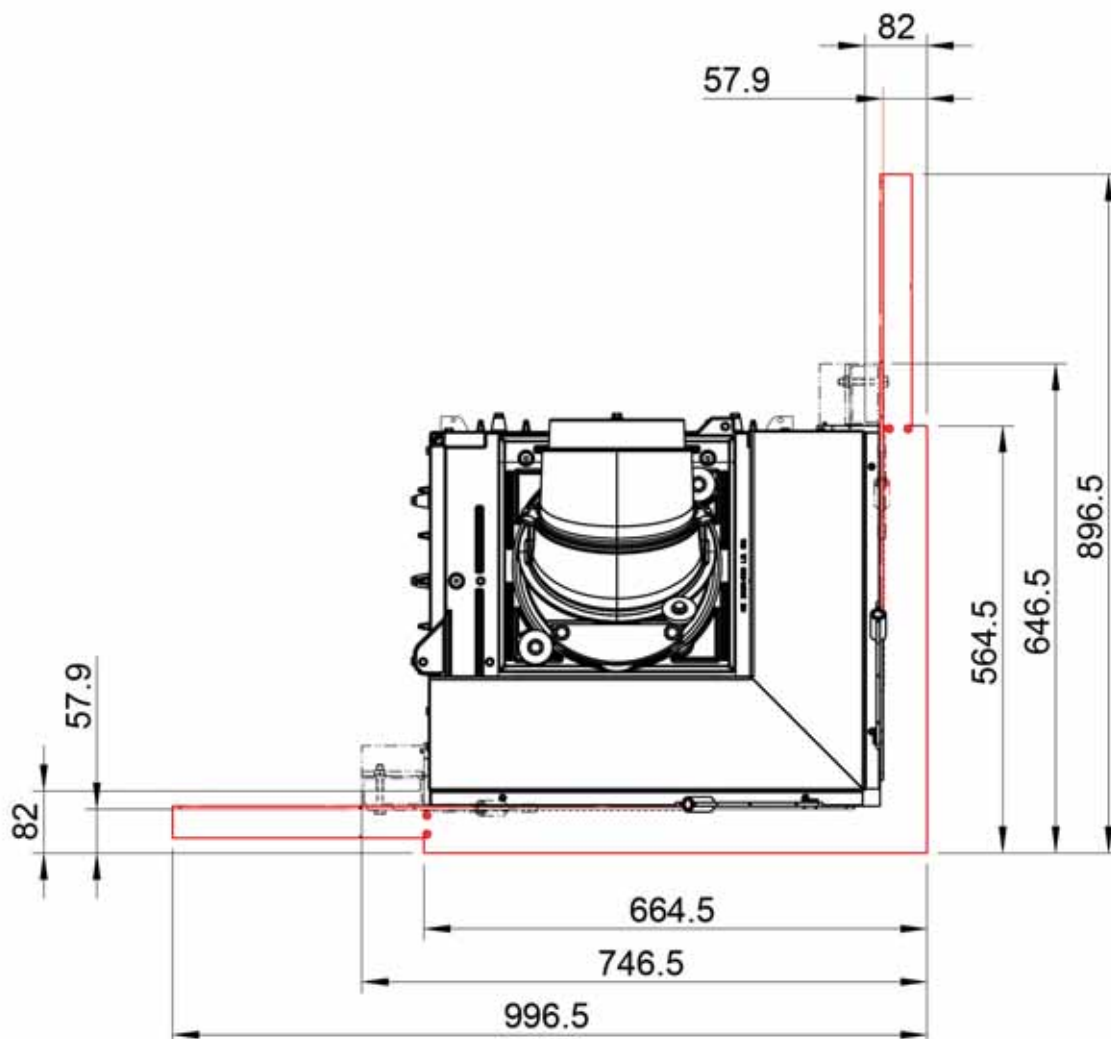
KALA S ES 55 (displayed: R)
with four-sided installation frame / M1:20



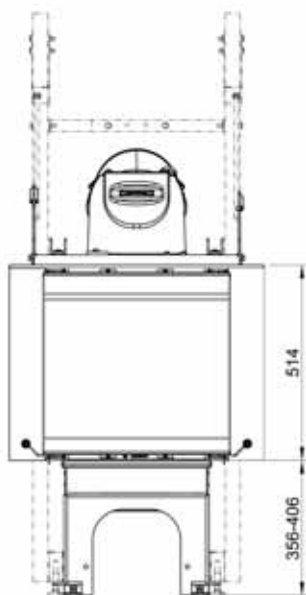
KALA S ES 55 with installation frame
top view / M1:10



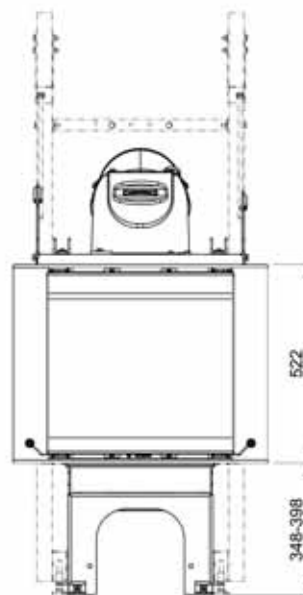
KALA H ES 55 with installation frame
top view / M1:10



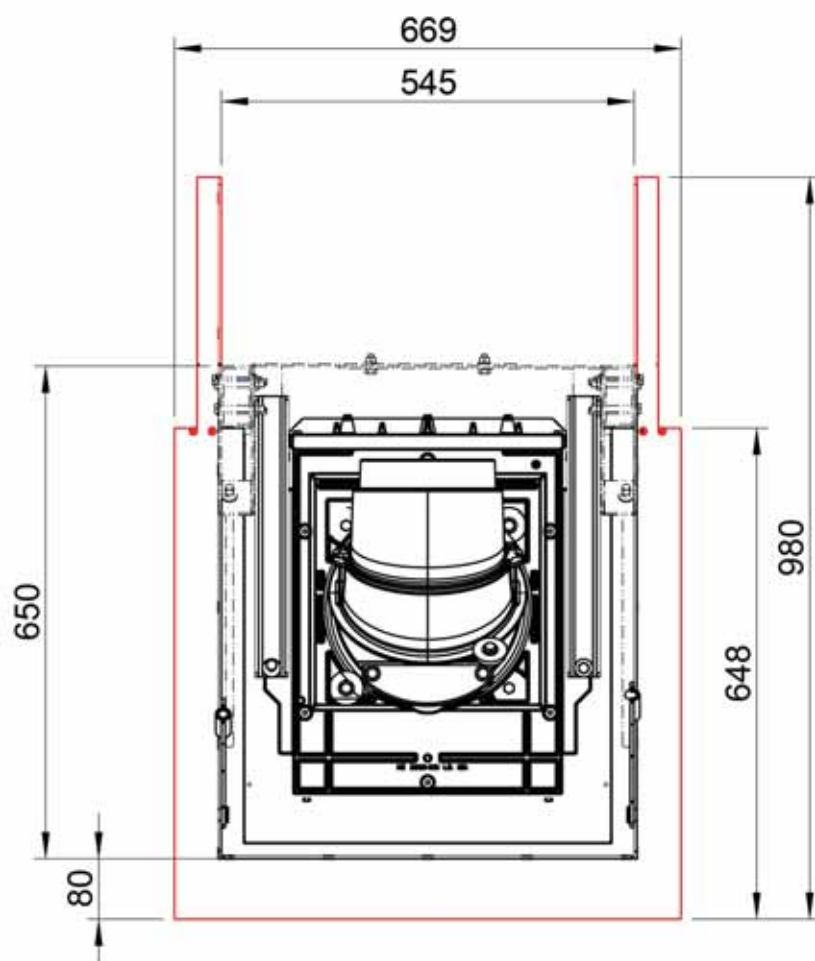
KALA S US
with three-sided installation frame / M1:20



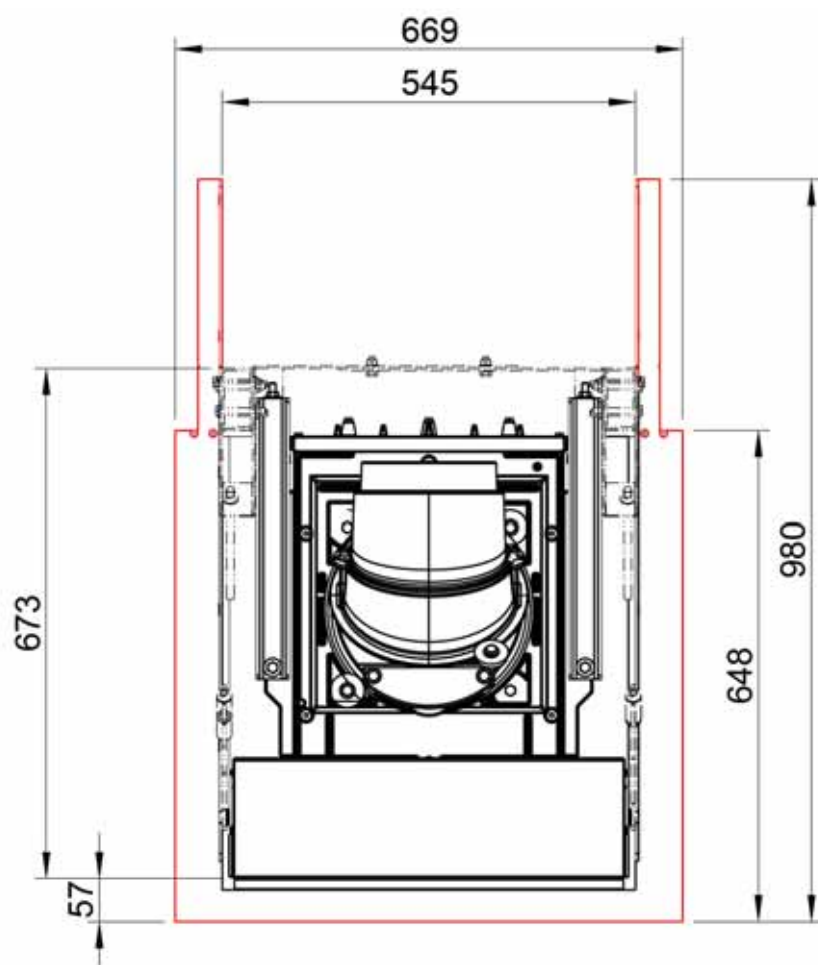
KALA S US
with four-sided installation frame / M1:20



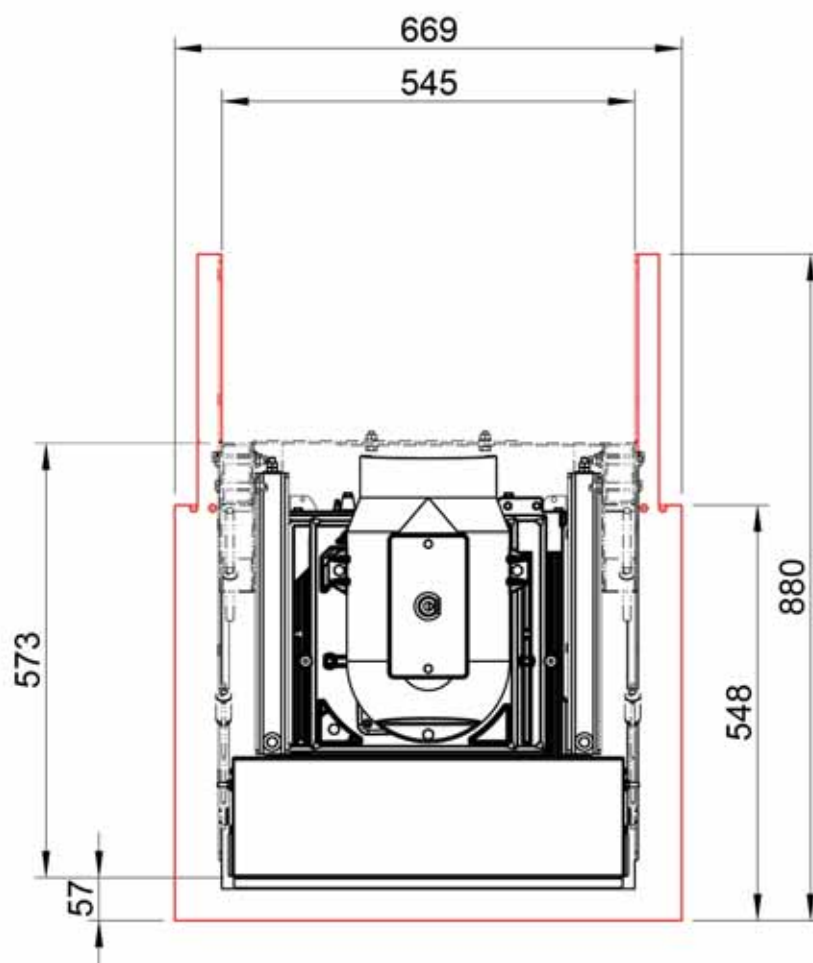
KALA S US with supporting frame and installation frame
top view / M1:10



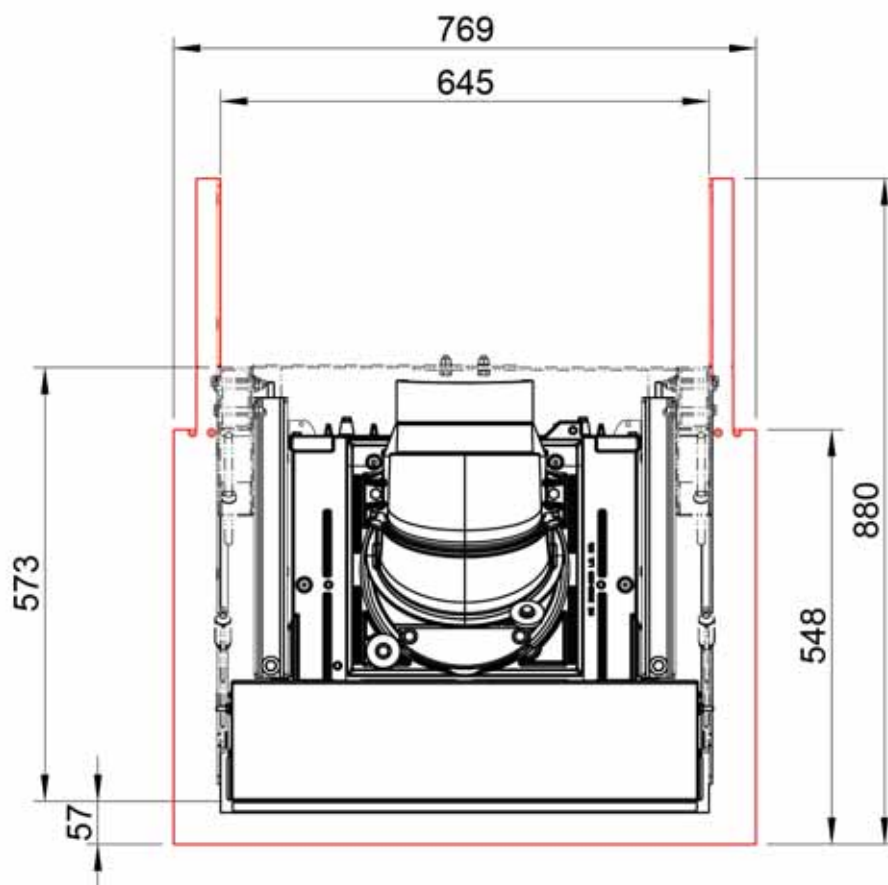
KALA US with installation frame
top view / M1:10



KALA QS with installation frame
top view / M1:10



KALA PS with installation frame
top view / M1:10





LAVA D straight
for direct connection to the chimney



LAVA N rounded shape
to be operated with additional heat exchanger

LAVA

for fireplace installations with direct connection to the chimney or with cast iron heat exchange or ceramic heating gas flues

Models:

- LAVA D [only for direct connection to the chimney](#)
- LAVA N [only for installations with heat exchanger](#) (ceramic or cast iron heat exchanger LHK 320)

Models:

two different doors: straight or rounded

Scope of delivery


Fireplace insert with chamotte inner lining of combustion chamber, installation and operating manual, cast iron dome with 180° rotatable and flue gas spigot, 160 mm Ø (LAVA D), Ø 180 mm (LAVA N), either vertically or horizontally adjustable, fixing set with cast iron washer, external air connector Ø 125 mm + fixing set, 3 adjustable feet with rubber pads, stove pass, protective glove

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2), Munich Solid Fuel Ordinance
- Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A (LAVA D) A+ (LAVA N)

Product benefit at a glance:

- High quality cast iron insert with cast iron door
- slim fitting depth for compact installations
- grate-less wood firing
- LAVA N to be operated with additional heat exchanger like GSA top mounted heat exchanger, cast iron heat exchanger LHK 320/ GSK or ceramic heat exchanger flue or LWS (see the indications in the installation manual)
- fuel: wood logs (opt.: 33 cm length), wood briquettes
- comfortable one hand adjustment of the combustion air
- high quality chamotte combustion chamber inner lining
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- optional door hinge (factory setting left)
- suitable for the connection to one chimney with multiple stoves
- height-adjustable legs (up to 10 cm) with adjustable feet


Ident-No.	Item	€	
	LAVA D		
1003-00969	LAVA D straight with cast iron door	2830.00	
1003-00921	LAVA D straight with rounded cast iron door	3420.00	
	LAVA N		
1003-00970	LAVA N straight with cast iron door	2690.00	
1003-00973	LAVA N straight with rounded cast iron door	3270.00	



LAVA straight


Cast iron door



LAVA rounded shape

Cast iron door


Optional accessories		€	
1004-01106	LEDA Service surcharge: Change of door hinge in the factory	90.00	
1004-00248	Hot-air jacket LAVA D with 4 hot-air outlets Ø 150 mm	590.00	
1004-00443	Support frame for LAVA round 80 mm supporting surface	490.00	
1004-00799	Tie rod with eyelet for tie rod hook (1 pc)	60.00	
1004-00800	Tie rod hook and plugs (1 pc)	40.00	
1003-02018	LEDATRONIC LT3 WiFi electronic combustion air control device for LAVA, complete set	1380.00	 ¹ p.260
	GSA Cast iron top mounted heat exchanger for LAVA N		p.298
1004-00283	GSA connection kit for LAVA N	290.00	
1004-00282	GSA Cast iron ring with chamotte heat storage inlay, possible to attach 3 to 6 rings	250.00	
	Spigot		
1004-01057	Cast iron spigot Ø 180/ 200 mm, (two-piece), endless rotatable	130.00	
1004-00310	MFS Double flue gas outlet with cleaning cover	300.00	p.326
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	p.326

Optional accessories			
1003-00561	LHK 320 cast iron heat exchanger for LAVA N	1210.00	p.304  ²
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	p.306
	LWS Heat Accumulation System		p.278
1004-00952	LWS Set 1, nine elements	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper eleven elements	1440.00	
1004-01104	LWS Set 3, seven elements	980.00	
	LWS single elements, for customised composition	opt.	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.0	p.266


¹ LT3 WiFi without display which can be ordered optionally
(1004-00542)

² Practical tip: In 1004-0311 the heat-up damper is already comprised.


Type LAVA		LAVA D	LAVA N
front type		straight or rounded shape	
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229	
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250	
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40	
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120	
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200	
Efficiency	[%]	≥ 80	≥ 81
Flue gas temperature	[°C]	237	165

I. Operation with direct connection to the chimney			
Performance data			
Nominal heat output, \dot{Q}_N	[kW]	7	
Direct radiation and convection output	[kW]	4.9	
Heat output over the front surface(s) and glass pane(s)	[kW]	2.1	
Chimney dimensioning data according to EN 13384 part 1 and 2			
Flue gas temperature (at the spigot of insert)	[°C]	290	
Flue gas mass flow	[g/s]	7.6	
Minimum required chimney draft ¹⁾	[Pa]	12	
Required combustion air flow rate	[m ³ /h]	21.6	
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]	1.7	
Feeding rate, wood logs	[kg/h]	2.2	
Fuel quantity, wood briquettes	[kg]	1.6	
Feeding rate, wood briquettes	[kg/h]	2.1	
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	735	
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	814	
Convection air outlet ³⁾	[cm ²]	881	
Inner gaps in the convection chamber ³⁾			
inner gaps between insert and thermal insulation or cladding	[cm]	7	
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)			

II. Operation with cast iron heat exchanger box ^{2,3,4)}			
Cast iron heat exchanger box			
Operation with cast iron heat exchanger box possible		no	yes
Cast iron heat exchanger			
Cast iron heat exchanger to be used ⁴⁾			LHK 320
Performance data			
Nominal heat output, \dot{Q}_N	[kW]		7.5
Direct radiation and convection output	[kW]		51
Heat output over the front surface(s) and glass pane(s)	[kW]		2.4
Chimney dimensioning data according to EN 13384 part 1 and 2			
Flue gas temperature (at the spigot of heat exchanger box)	[°C]		220
Flue gas mass flow	[g/s]		7.6
Minimum required chimney draft ¹⁾	[Pa]		12
Required combustion air flow rate	[m ³ /h]		21.6

Type LAVA		LAVA D	LAVA N
	front type	straight or rounded shape	
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]		2.1
Feeding rate, wood logs	[kg/h]		2.2
Fuel quantity, wood briquettes	[kg]		2.0
Feeding rate, wood briquettes	[kg/h]		2.1
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]		690
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]		770
Convection air outlet ³⁾	[cm²]		828
Inner gaps in the convection chamber ³⁾			
inner gaps between insert and thermal insulation or cladding	[cm]		3
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]		3
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]		4
<div></div> <div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</div>			

III. Operation with LWS / ceramic heat storage ⁴⁾			
LWS / ceramic heat storage possible		no	yes
Performance data			
combustion capacity – heat input, \dot{Q}_f	[kW]		19
heat output of insert	[kW]		8.9
Heat load of heating gas at spigot of insert	[kW]		10.6
Usable heat load of heating gas at spigot of insert	[kW]		7.0
Heat output over the front surface(s) and glass pane(s)	[kW]		3.0
Direct radiation and convection output (without heat storage)	[kW]		8.1
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2			
Heating gas temperature (at the spigot of insert)	[°C]		490
Flue gas mass flow	[g/s]		14.9
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]		15
Required combustion air flow rate	[m ³ /h]		42.2
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]		5.0
Feeding rate, wood logs	[kg/h]		4.4
Fuel quantity, wood briquettes	[kg]		4.8
Feeding rate, wood briquettes	[kg/h]		4.2
Operation with LWS, heat accumulation system			
Admissible LWS sets			Set 1, Set 3
Recommended number of LWS elements (25/25/25 cm)			9
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]		175
Minimum required chimney draft for each 90° bend	[Pa]		0.56
Minimum required chimney draft for each 45° bend	[Pa]		0.26
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)			
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]		175
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]		18
Flue gas mass flow	[g/s]		14.9

Type LAVA		LAVA D	LAVA N
front type		straight or rounded shape	
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)			
Flue gas temperature (at output spigot of LWS set 3)	[°C]		219
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]		18
Flue gas mass flow	[g/s]		14.9
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]		988
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]		1145
Convection air outlet ³⁾	[cm²]		1186
Inner gaps in the convection chamber ³⁾			
Inner gaps between insert and thermal insulation or cladding	[cm]		8
<div><div></div><div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)</div></div>			

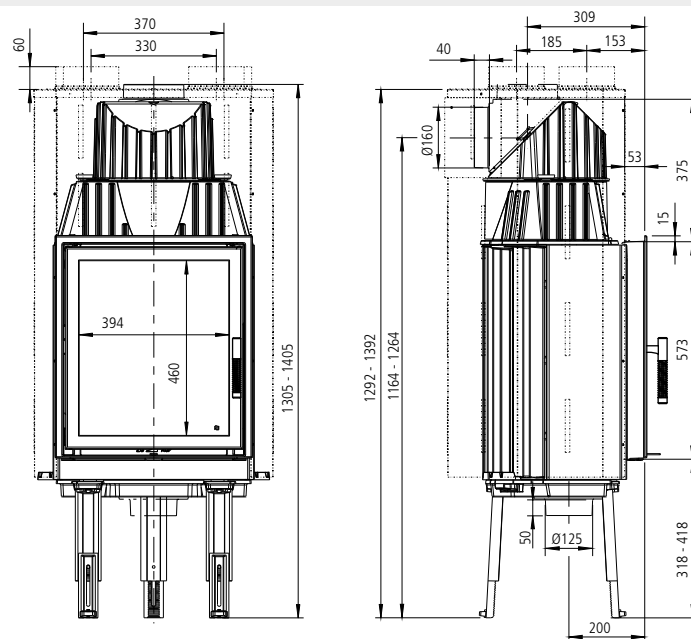
IV. Specifications regarding fire protection and thermal insulation ⁶⁾			
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.			
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾			
(insulation thickness additional required to the required 10 cm pre-wallling)			
to the setup floor	[mm]	0	0
to the side	[mm]	100	100
to the rear	[mm]	100	100
to the ceiling	[mm]	100	100
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation			
to the setup floor	[cm]	20	20
to the front of thermal insulation to the side	[cm]	8	8
to the front of thermal insulation to the rear	[cm]	8	8
to the front of thermal insulation to the ceiling	[cm]	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)			
Minimum convection air outlet, non-closable	[cm ²]	980	1120
Minimum convection air inlet, non-closable	[cm ²]	590	680
Required distance in the radiation area of the front (with no additional radiation protection)			
Required distance	[cm]	120	120

V. Measurements, weights and miscellaneous			
External air connector	Ø [mm]	125	125
Flue gas spigot resp. connector piece	Ø [mm]	160	180
Preadjustment of the LT-3 combustion air valve (optional)	%	55	55
Static valve position of the LT-3 combustion air valve (test mode)	%	29	32
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	15	16
Maximum log size	[cm]	33	33
Weight of insert with inner lining of the insert	approx. [kg]	170	160
Weight of cast iron heat exchanger box LHK 320	approx. [kg]		92

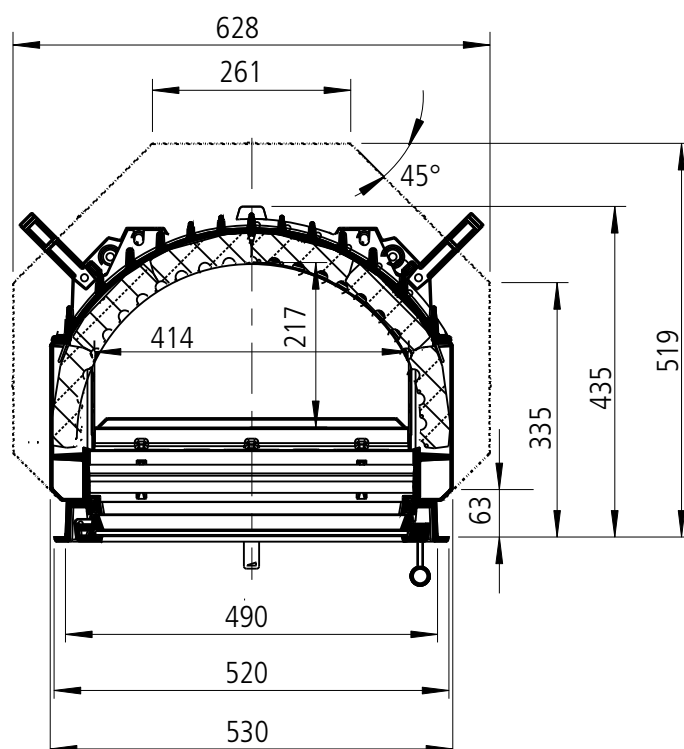
Type LAVA	LAVA D	LAVA N
front type	straight or rounded shape	

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) The insert LAVA N has been tested with cast iron heat exchanger box (LHK320), spigot up, double-90°-elbow between insert an heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box. The insert LAVA D has been tested with spigot to rear and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of
approx. 3.1 m² - with direct connection to the chimney,
approx. 4.1 m² - with cast iron heat exchanger box,
approx. 2.4 m² - with LWS / ceramic heat storage
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert LAVA N can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp. The type LAVA D can only be used with direct connection to the chimney.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.

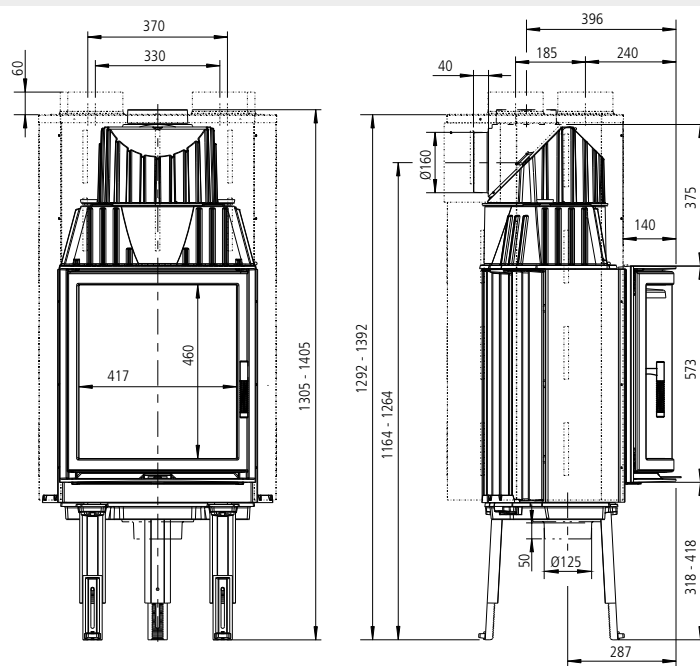
LAVA D straight / M1:20



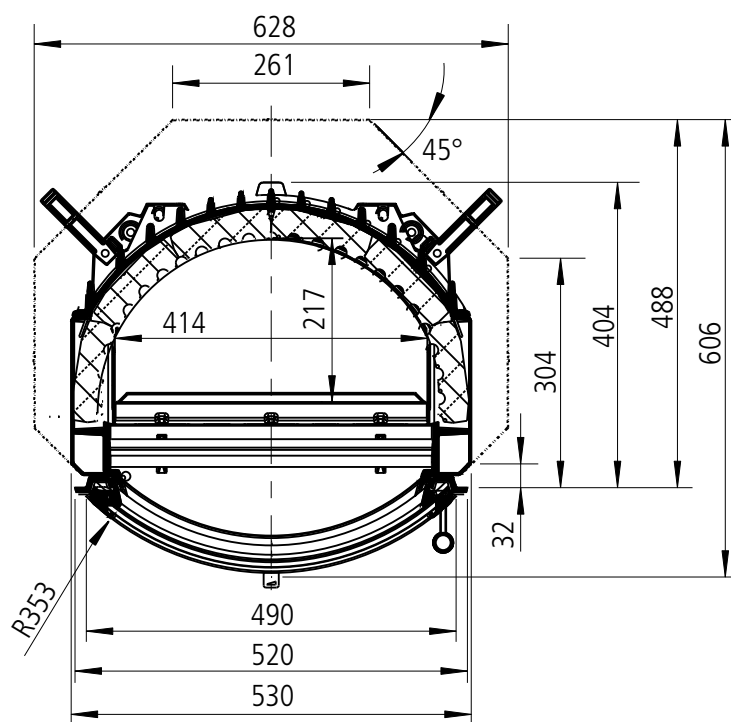
LAVA D straight
top view / M1:10



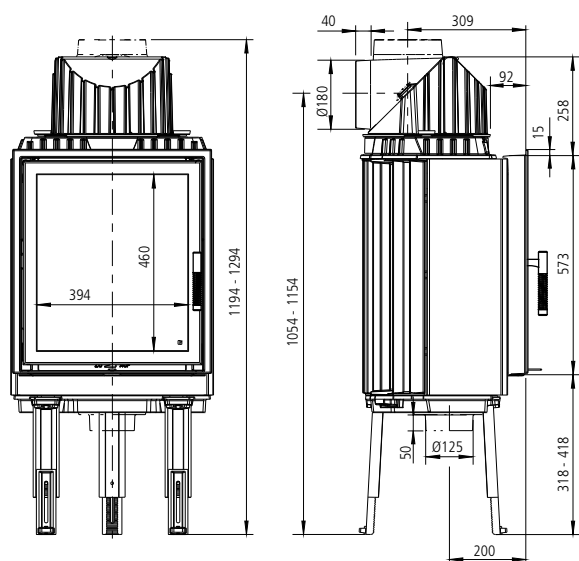
LAVA D rounded shape / M1:20



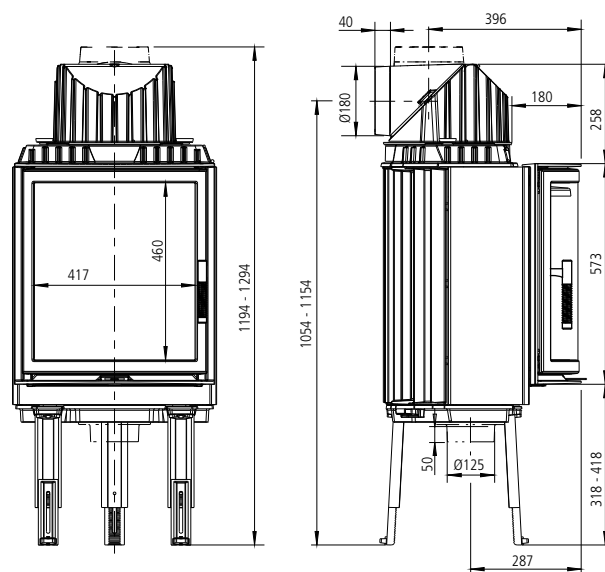
LAVA D rounded shape
top view / M1:10



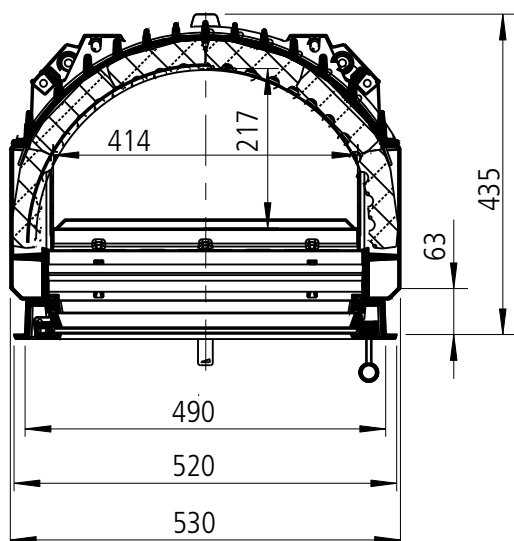
LAVA N straight / M1:20



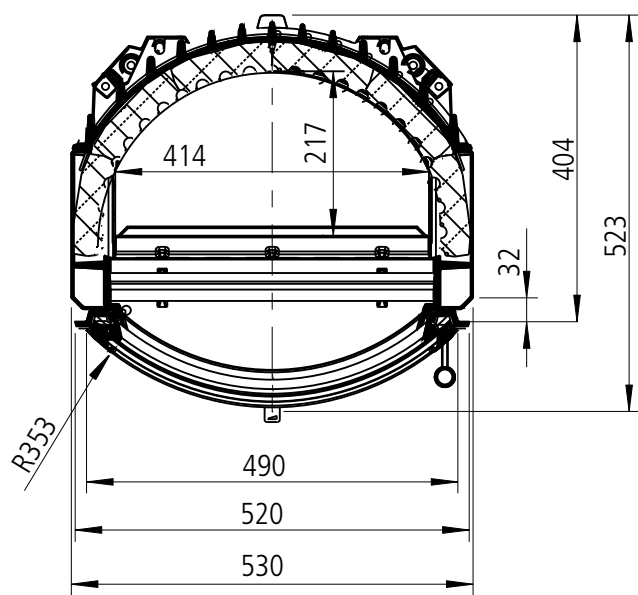
LAVA N rounded shape / M1:20



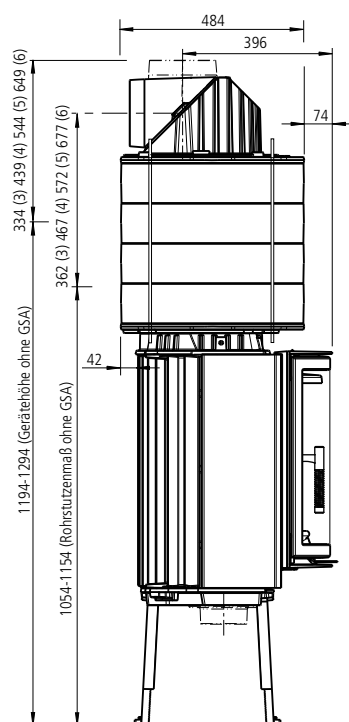
**LAVA N straight
top view / M1:10**



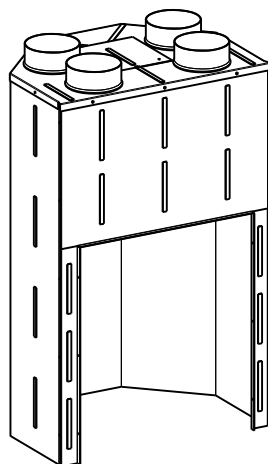
**LAVA N rounded shape
top view / M1:10**



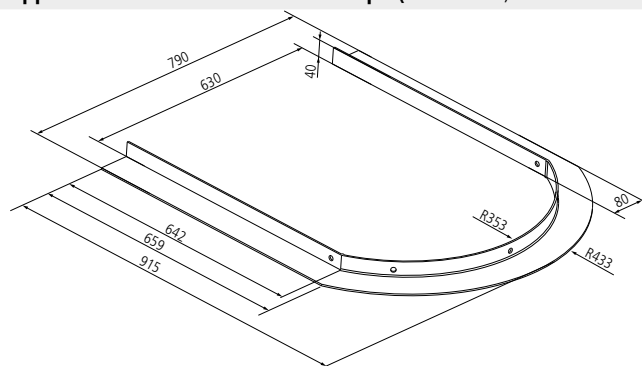
LAVA N with GSA (1004-00283 + 1004-00282) / M1:20



Hot-air jacket for LAVA (1004-00248)



Support frame for LAVA rounded shape (1004-0043)





SERA 55 F
straight



SERA 55 DS
double sided



SERA 78 ES L
L-shape left
displayed: on base frame (1004-00304)

SERA

for fireplace installations with direct connection to the chimney or partially with cast iron heat exchanger or ceramic heating gas flues

Models:

– 5 versions:

SERA F (straight)

SERA DS (double sided)

SERA ES (L-shaped: two-piece glazed, optionally left or right)

SERA PS (panoramic view: three-piece glazed)

SERA US (U-view: three-piece glazed)

– Different frontal widths:

SERA F/ DS/ ES/ PS: 55 / 78

SERA US: 55

Scope of delivery

Fireplace insert, chamotte inner lining of combustion chamber, cast iron dome and two-piece spigot (endless rotatable) installation and operating manual, stove pass, accessories kit consisting of: External air connector Ø 150 mm, 4 adjustable feet (with rubber pads, 6 cm height regulation), protective glove, special silicone lubricant (with SERA US/PS)

Compliance with the following environmental standards

– German 1. BImSchV (level 1 and 2)

– Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)

– Energy class according to (EU) 2015/1186: A

Product benefits at a glance:



- High quality cast iron insert
- installation as low fire (traditional style) or on base frame
- guillotine door and high-quality inox door handle
- front and lateral windows can be wide tilted for cleaning (SERA ES / PS) unlocking the catch at the doorframe
- double glazing (SERA F / SERA DS)
- SERA DS with two equal-sized doors, the second door is always hinged
- patented door sliding mechanism without counter weights: compact, quite and extremely smooth-running
- fuel: wood logs (opt.: 33 cm length), wood briquettes
- comfortable one-hand lever for the combustion air adjustment
- high-quality chamotte inner lining of combustion chamber, bottom of the combustion chamber with cast iron collar and chamotte inlay
- SERA with additional heat exchanger:
 - SERA 55/ 78 F/ DS with GSA cast iron top mounted heat exchanger
 - SERA 55/ 78 F with LHK cast iron heat exchanger, ceramic heat storage flues or LWS (observe the indications in the manual)
- high efficiency
- external air connection (on SERA F, ES, PS, US optionally to the rear)
- particularly eco-friendly combustion
- factory setting non self-closing door. Easy conversion on site to self-closing for the connection to one chimney with multiple stoves



SERA 78 PS
panoramic view (three-sided)



SERA 55 US
U-view
displayed: with wide frame (1004-00766)

Ident-No.	Description	€		Optional accessories	€	
	SERA F straight			1004-00304	Base frame	200.00
1003-01873	SERA 55 F straight fireplace	3860.00		1004-00575	Carrying handle for SERA F/DS (for ES only one lateral)	40.00
1003-01883	SERA 78 F straight fireplace	4750.00		1004-00574	External combustion airbox (SERA F, ES, PS, US) incl. blind cover external air connection to the rear	70.00
	SERA DS double sided				Supporting frames	
1003-01868	SERA 55 DS double sided fireplace	4830.00	 ¹	1004-00568	Supporting frame (SERA 55/ 78 F/ DS), Length 1390 mm, 50 mm sup- porting surface	140.00
1003-01880	SERA 78 DS double sided fireplace	5850.00	 ¹	1004-00570	Supporting frame (SERA 55/ 78 ES) Length 1360 mm x 1360 mm, 50 mm supporting surface	340.00
	SERA ES L-shape (two-piece glazed)			1004-00571	Supporting frame (SERA 55/ 78 ES) Length 1590 mm x 1590 mm, 50 mm supporting surface	350.00
1003-01869	SERA 55 ES L, L-Shape left appliance	5450.00		1004-00603	Supporting frame (SERA 55 PS) Width 775 mm x depth 888 mm, 50 mm supporting surface	320.00
1003-01871	SERA 55 ES R, L-Shape right appliance	5440.00		1004-00604	Supporting frame (SERA 78 PS) Width 1005 x depth 888 mm, 50 mm supporting surface	340.00
1003-01881	SERA 78 ES L, L-Shape left appliance	5700.00		1004-00765	Supporting frame (SERA 55 US) Width 647 mm x depth 1095 mm, 50 mm supporting surface	350.00
1003-01882	SERA 78 ES R, L-Shape right appliance	5700.00				
	SERA PS panoramic view (three-piece glazed)					
1003-01874	SERA 55 PS panoramic view appliance	6200.00				
1003-01884	SERA 78 PS panoramic view appliance	6780.00				
	SERA US U-view (three-piece glazed)					
1003-01875	SERA 55 US U-view fireplace	6800.00				


SERA 55 F

SERA 78 DS

SERA 78 ES L

SERA

Optional accessories		€	
1004-00799	Tie rod with eyelet for tie rod hook (1 pc)	60.00	
1004-00800	Tie rod hook and plugs (1 pc)	40.00	
1004-00681	Supporting rack, variable SERA 55/ 78 ES/ PS (without frame), loadable up to 300kg	500.00	²
1004-00768	Supporting rack, variable SERA 55 US (without frame), loadable up to 300kg	450.00	²
1003-01977	LEDATRONIC LT3 WiFi Electronic combustion air control device for SERA, complete set	1280.00	³ p.260
	GSA cast iron top mounted heat exchanger (SERA 55/ 78 F/ DS)		p.298
1004-00837	GSA connection kit for SERA	280.00	
1004-00282	GSA cast iron ring with chamotte heat storage inlay, 4 rings (SERA F) 3 rings (SERA DS) attachable	250.00	
	MFS multi-functional flue gas connectors for SERA 55/ 78		p.326
1004-00310	MFS double flue gas outlet with cleaning cover	300.00	
1004-00311	MFS double flue gas outlet with diverter damper	330.00	

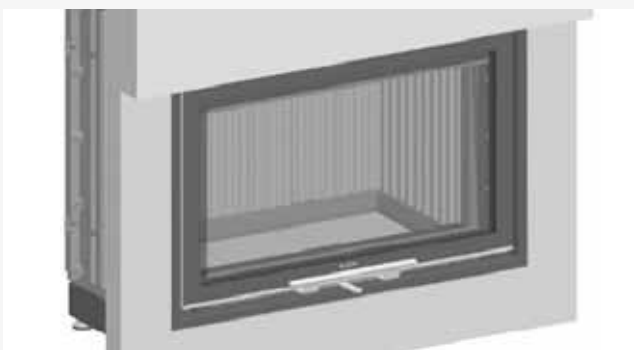
Optional accessories		€	
1003-01494	GSK cast iron heat exchanger box with soap stone inlay (SERA 55/ 78 F)	810.00	⁴ p.302
	LHK cast iron heat exchanger box for SERA 55/ 78 F		p.304
1003-00561	LHK 320 cast iron heat exchanger	1210.00	
1003-01832	LHK 695 cast iron heat exchanger	530.00	⁴
1003-01722	LHK 745 cast iron heat exchanger	540.00	⁴
1004-00988	LSB cast iron heat storage block, 1 element	100.00	p.306
	LWS LEDA Heat Accu. System		p.278
1004-00952	LWS set 1, nine elements	1150.00	
1004-00986	LWS set 1.1 with heat-up damper,, eleven elements	1440.00	
1004-00953	LWS set 2, twelve elements	1470.00	
1004-00987	LWS set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS set 3, seven elements	980.00	
	LWS single elements for customised composition	opt.	
1003-01720	LUC draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266


SERA 78 PS

SERA 55 US

Optional accessories		€	
	Flat frames, black (powder coated)		
1004-00547	lateral frames, 2 pc., black, flat (SERA F/ DS/ ES/ PS/ US)	70.00	
1004-00548	lower frame, flat black (SERA 55 F/ DS)	60.00	⁵
1004-00549	lower frame, flat black (SERA 78 F/ DS)	60.00	⁵
1004-00556	lower frame, flat black (SERA 55 ES links)	120.00	
1004-00559	lower frame, flat black (SERA 55 ES right)	120.00	

Optional accessories		€	
1004-00557	lower frame, flat black (SERA 78 ES left)	130.00	
1004-00560	lower frame, flat black (SERA 78 ES right)	130.00	
1004-00597	lower frame, flat black (SERA 55 PS)	170.00	
1004-00598	lower frame, flat black (SERA 78 PS)	170.00	
1004-00767	lower frame, flat black (SERA 55 US)	200.00	
1004-00904	Frame for the DS-second side flat, black (SERA 55 DS)	150.00	
1004-00905	Frame for the DS-second side flat, black (SERA 78 DS)	160.00	


SERA with flat frame (laterally and bottom side)

Installation example

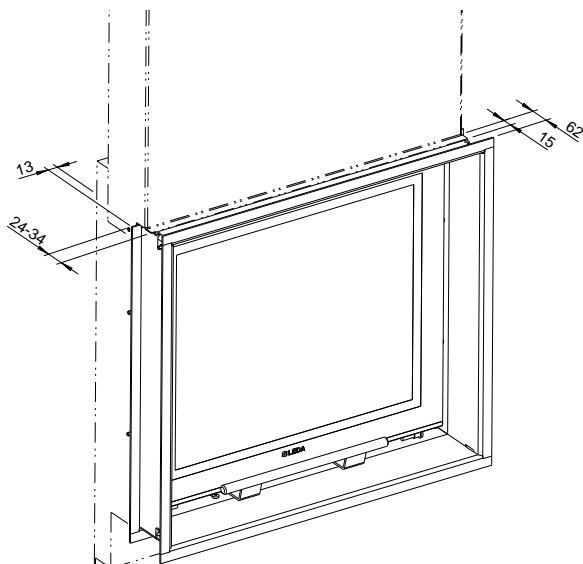
¹ Rear side of the DS has no frame or door sill this has to be ordered additionally for the second side.

² incl. 1004-00799/800, but suitable supporting frame 1004-00603/ 1004-00604/ 1004-00605/ 1004-00765 has to be ordered additionally

³ LT3 WiFi without display, which can be ordered optionally (1004-00542)

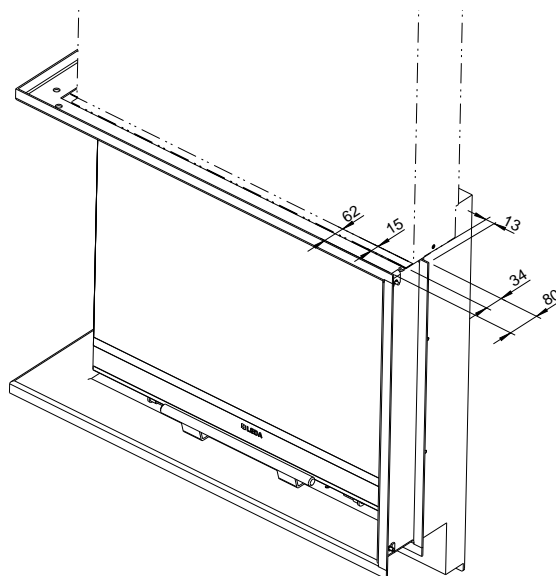
⁴ Practical tip: in 004-00311 the heat-up damper is already comprised.

⁵ This frame is only suitable for the front side, not for the DS-rear side.



Deep frames

SERA F / DS

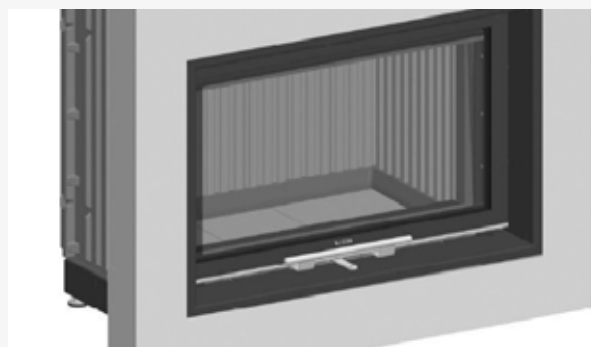


Deep frames

SERA ES/ PS/ US

SERA

Optional accessories		€	
	Deep frames, black (powder coated) consisting of top, lateral and bottom side panels		
1004-00552	deep frame set, black (SERA 55 F/ DS)	160.00	¹
1004-00553	deep frame set, black (SERA 78 F/ DS)	170.00	¹
1004-00562	deep frame set, black (SERA 55 ES left)	290.00	²
1004-00565	deep frame set, black (SERA 55 ES right)	290.00	²



SERA with deep frame-sets (top+laterals+bottom side)

Installation example

Optional accessories		€	
1004-00563	deep frame set, black (SERA 78 ES left)	330.00	²
1004-00566	deep frame set, black (SERA 78 ES right)	330.00	²
1004-00600	deep frame set, black (SERA 55 PS)	400.00	²
1004-00601	deep frame set, black (SERA 78 PS)	460.00	²
1004-00766	deep frame set, black (SERA 55 US)	460.00	²
1004-00907	Deep frame set, for DS- rear side/ 2nd side, black flat (SERA 55 DS), consisting of two parts door frame straight and surrounding cover frame	250.00	³
1004-00908	Deep frame set, for DS- rear side/ 2nd side, black flat (SERA 78 DS), consisting of two parts door frame straight and surrounding cover frame	290.00	³

¹ Frames only suitable for front sides, not for DS rear side

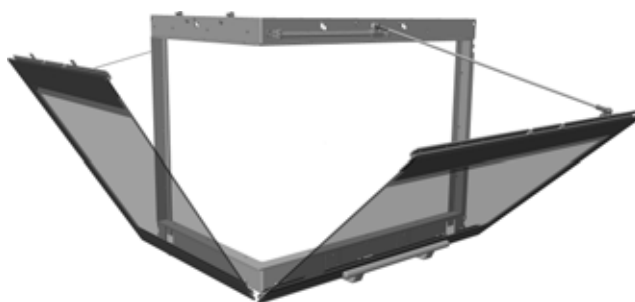
² Fixing of the upper frame segment to the supporting frame only

³ Frame adjustable in depth (30-120 mm)

SERA without frame: installation example



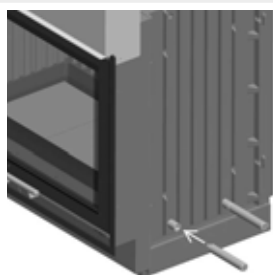
Glass cleaning: front and side windows tiltable



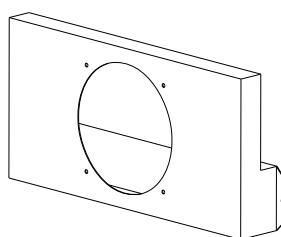
Glass printing



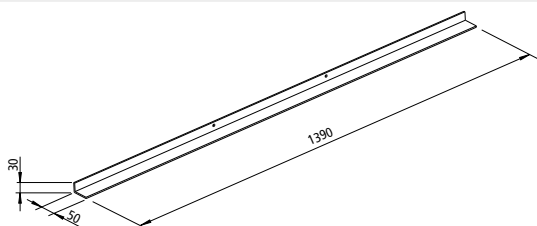
Carrying- transport handle
(1004-00575)



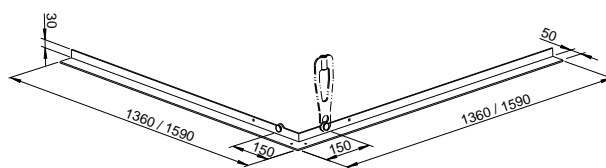
External combustion airbox
(1004-00574)



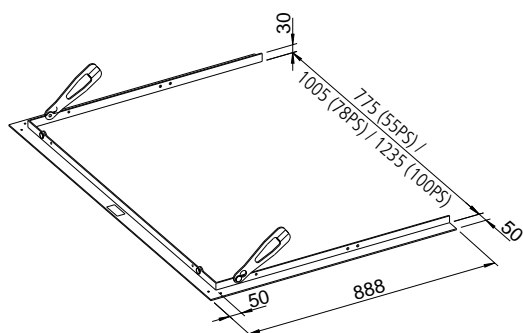
Supporting frame: SERA 55/ 78 F/ DS (1004-00568)



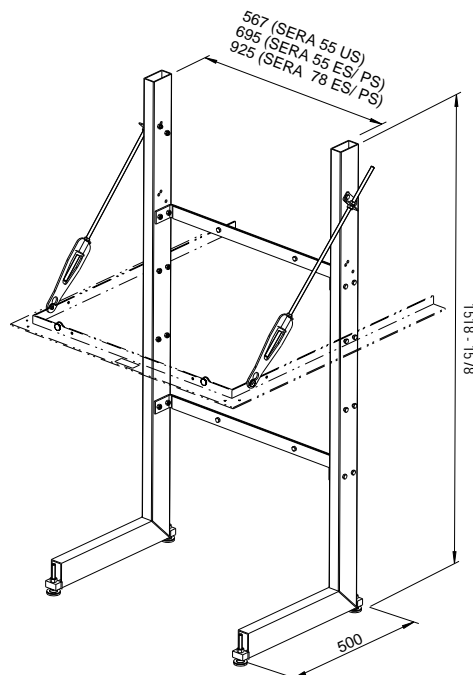
Supporting frame: SERA 55/ 78 ES (1004-00570)



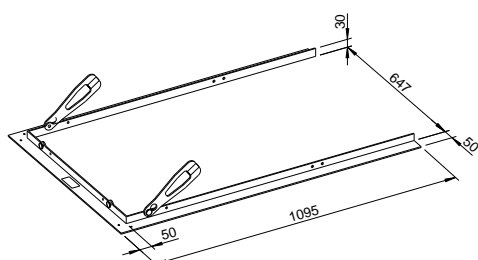
Supporting frame: SERA 55/ 78 PS
(1004-00603 / 1004-00604)



Adjustable supporting rack without supporting frame
(1004-BB768 / 1004-00681)



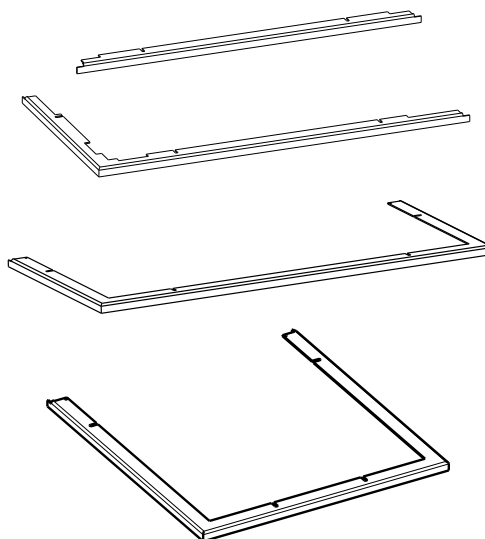
Supporting frame: SERA 55 US (1004-00765)



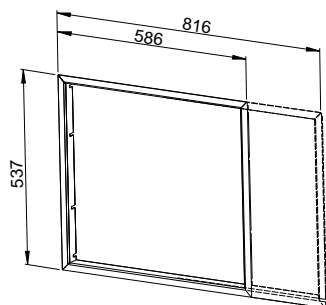
Lateral frames, flat: for all SERA models (1004-00547)



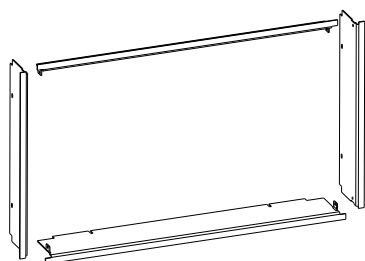
Lower frame, flat: F / ES / PS / US



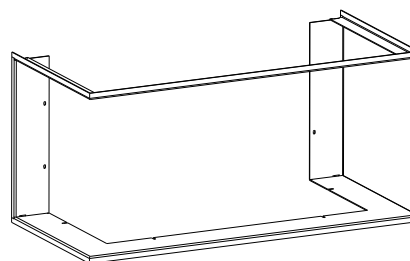
Frame for DS rear side, flat: SERA DS 55/ 78 (1004-00904/ -00905)



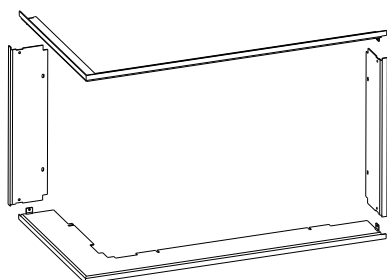
Deep frame (set): SERA F/ DS (1004-00552/ 1004-00553)



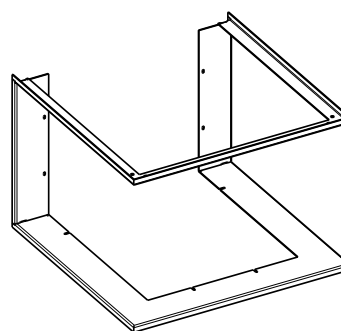
Deep frame (set): SERA PS (1004-00600 / 1004-00601)



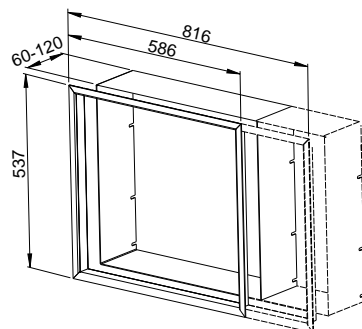
Deep frame (set): SERA ES




Deep frame (set): SERA US (1004-00766)




Deep frame set, for DS-rear side: SERA DS 55/ 78 (1004-00907/ 1004-00908)




Type SERA		F		DS		ES	
type of front		55	78	55	78	55	78
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A	A	A	A	A	A
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250	≤ 1250	≤ 1250	≤ 1250	≤ 1250	≤ 1250
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120	≤ 120	≤ 120	≤ 120	≤ 120	≤ 120
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200	≤ 200	≤ 200	≤ 200	≤ 200	≤ 200
Efficiency	[%]	≥ 78 (≥ 80 ⁸⁾)	≥ 78 (≥ 80 ⁸⁾)	≥ 80	≥ 78 (≥ 80 ⁸⁾)	≥ 78 (≥ 80 ⁸⁾)	≥ 78 (≥ 80 ⁸⁾)
Flue gas temperature, with direct connection to the chimney	[°C]	240	238	257	263	257	259
Flue gas temperature, with cast iron heat exchanger box	[°C]	225	234	--	--	--	--

I. Operation with direct connection to the chimney							
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	8	10	9	11	10	12
Direct radiation and convection output	[kW]	6.4	7.8	5.8	7.0	6.2	7.5
Heat output over the front surface(s) and glass pane(s)	[kW]	1.6	2.2	3.2	4.0	3.8	4.5
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of insert)	[°C]	310	305	334	321	325	328
Flue gas mass flow	[g/s]	8.5	10.5	9.5	12.1	11.0	12.9
Minimum required chimney draft ¹⁾	[Pa]	12	12	13	14	13	13
Required combustion air flow rate	[m ³ /h]	24.0	29.6	26.8	34.3	31.3	36.6
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	2.4	2.8	2.3	2.7	2.7	3.1
Feeding rate, wood logs	[kg/h]	2.6	3.2	2.9	3.5	3.1	3.7
Fuel quantity, wood briquettes	[kg]	2.3	2.7	2.2	2.6	2.6	3.0
Feeding rate, wood briquettes	[kg/h]	2.5	3.0	2.8	3.3	3.0	3.5
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	992	1241	798	977	951	1186
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1080	1351	897	1104	1067	1321
Convection air outlet ³⁾	[cm ²]	1190	1489	957	1172	1141	1423
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	8	9	11	14	12	12
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

II. Operation with cast iron heat exchanger box ^{2,3,4)}							
Cast iron heat exchanger box							
Operation with cast iron heat exchanger box possible		yes	yes	no	no	no	no
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK					
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	10.0	11.5	--	--	--	--
Direct radiation and convection output	[kW]	7.5	9.0	--	--	--	--
Heat output over the front surface(s) and glass pane(s)	[kW]	2.5	2.5	--	--	--	--
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	270	280	--	--	--	--
Flue gas mass flow	[g/s]	10.5	11.7	--	--	--	--
Minimum required chimney draft ¹⁾	[Pa]	12	12	--	--	--	--
Required combustion air flow rate	[m³/h]	29.6	32.8	--	--	--	--

Type SERA		F		DS		ES	
type of front		55	78	55	78	55	78
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	3.5	4.5	--	--	--	--
Feeding rate, wood logs	[kg/h]	3.2	4.0	--	--	--	--
Fuel quantity, wood briquettes	[kg]	3.3	4.3	--	--	--	--
Feeding rate, wood briquettes	[kg/h]	3.0	3.8	--	--	--	--
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1141	1411	--	--	--	--
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1251	1532	--	--	--	--
Convection air outlet ³⁾	[cm ²]	1369	1693	--	--	--	--
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	6	7	--	--	--	--
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	6	7	--	--	--	--
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4	--	--	--	--
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)							

III. Operation with LWS / ceramic heat storage ⁴⁾							
LWS / ceramic heat storage possible		ja	ja	--	--	--	--
Performance data							
combustion capacity – heat input, \dot{Q}_f	[kW]	17	22	--	--	--	--
heat output of insert	[kW]	4.3	6.9	--	--	--	--
Heat load of heating gas at spigot of insert	[kW]	13.2	15.0	--	--	--	--
Usable heat load of heating gas at spigot of insert	[kW]	9.9	10.9	--	--	--	--
Heat output over the front surface(s) and glass pane(s)	[kW]	3.2	4.0	--	--	--	--
Direct radiation and convection output (without heat storage)	[kW]	5.5	7.5	--	--	--	--
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2							
Heating gas temperature (at the spigot of insert)	[°C]	420	430	--	--	--	--
Flue gas mass flow	[g/s]	22.4	24.8	--	--	--	--
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	--	--	--	--
Required combustion air flow rate	[m ³ /h]	65.7	72.2	--	--	--	--
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	4.0	5.0	--	--	--	--
Feeding rate, wood logs	[kg/h]	4.0	5.0	--	--	--	--
Fuel quantity, wood briquettes	[kg]	3.8	4.8	--	--	--	--
Feeding rate, wood briquettes	[kg/h]	3.8	4.8	--	--	--	--
Operation with LWS, heat accumulation system							
Admissible LWS sets		Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	--	--	--	--
Recommended number of LWS elements (25/25/25 cm)		11	12	--	--	--	--
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	173	171	--	--	--	--
Minimum required chimney draft for each 90° bend	[Pa]	1.19	1.48	--	--	--	--
Minimum required chimney draft for each 45° bend	[Pa]	0.55	0.68	--	--	--	--
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)							
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	201	213	--	--	--	--
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	22	24	--	--	--	--
Flue gas mass flow	[g/s]	22.4	24.8	--	--	--	--

Type SERA		F		DS		ES	
	type of front	55	78	55	78	55	78
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)							
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	161	171	--	--	--	--
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	22	24	--	--	--	--
Flue gas mass flow	[g/s]	22.4	24.8	--	--	--	--
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)							
Flue gas temperature (at output spigot of LWS set 3)	[°C]	233	246	--	--	--	--
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	23	24	--	--	--	--
Flue gas mass flow	[g/s]	22.4	24.8	--	--	--	--
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	65	366	--	--	--	--
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	309	634	--	--	--	--
Convection air outlet ³⁾	[cm²]	79	440	--	--	--	--
Inner gaps in the convection chamber ³⁾							
Inner gaps between insert and thermal insulation or cladding	[cm]	2	2	--	--	--	--
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

IV. Specifications regarding fire protection and thermal insulation ⁶⁾							
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.							
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾							
(insulation thickness additional required to the required 10 cm pre-wallings)							
to the setup floor	[cm]	0	0	0	0	0	0
to the side	[cm]	15	15	15	15	15	15
to the rear	[cm]	17	17	--	--	17	17
to the ceiling ⁷⁾	[cm]	13	13	13	13	13	13
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation							
to the setup floor (without installed base frame)	[cm]	3	3	3	3	3	3
to the setup floor (with installed base frame)	[cm]	25	25	25	25	25	25
to the front of thermal insulation to the side	[cm]	10	10	10	10	10	10
to the front of thermal insulation to the rear	[cm]	10	10	--	--	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)							
Minimum convection air outlet, non-closable	[cm²]	720	900	580	600	625	660
Minimum convection air inlet, non-closable	[cm²]	1200	1500	960	1000	1040	1100
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	100	120	120	120	120	120

VI. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/ 200	180/ 200	180/ 200	180/ 200	180/ 200	180/ 200
Preadjustment of the LT-3 combustion air valve (optional)	%	45	45	45	45	45	45
Static valve position of the LT-3 combustion air valve (test mode)	%	45	45	20	33	33	39
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	23	23	10	16	16	20
Maximum log size	[cm]	33	33	33	33	33	33
Weight of insert with inner lining	approx. [kg]	230	280	220	265	225	275
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66					
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130					

Type SERA	F		DS		ES	
type of front	55	78	55	78	55	78

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) The inserts SERA 55 F and 78 F have been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
These inserts can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
Each model has been tested at direct connection to the chimney with the spigot to rear and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.1 m² (55 F), 4.8 m² (78 F), 1.7 m² (55 DS), 1.4 m² (78 DS), 3.2 m² (55 ES), 3.9 m² (78 ES) - with direct connection to the chimney, approx. 4.5 m² (55 F), or 4.9 m² (78 F) - with cast iron heat exchanger box, approx. 2.6 m² (55 F), or 3.0 m² (78 F) - with LWS or ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The inserts SERA 55 F and 78 F can be used with cast iron heat exchanger box or with ceramic heat storage or LWP.
Each model can be used with direct connection to the chimney. See installation manual for additional informationp.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-wallling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.
- 8) The inserts SERA F have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 30 cm, the inserts SERA DS have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 40 cm, the inserts SERA ES have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 35 cm.
Planning of the fireplace has to be regarding to these extensionp.

Type SERA		PS		US
	type of front	55	78	55
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229		
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A	A	A
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250		
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40		
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120		
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200		
Efficiency	[%]	≥ 78 (≥ 80 ⁸⁾)	≥ 78 (≥ 80 ⁸⁾)	≥ 76 (≥ 80 ⁸⁾)
Flue gas temperature, with direct connection to the chimney	[°C]	273	279	304

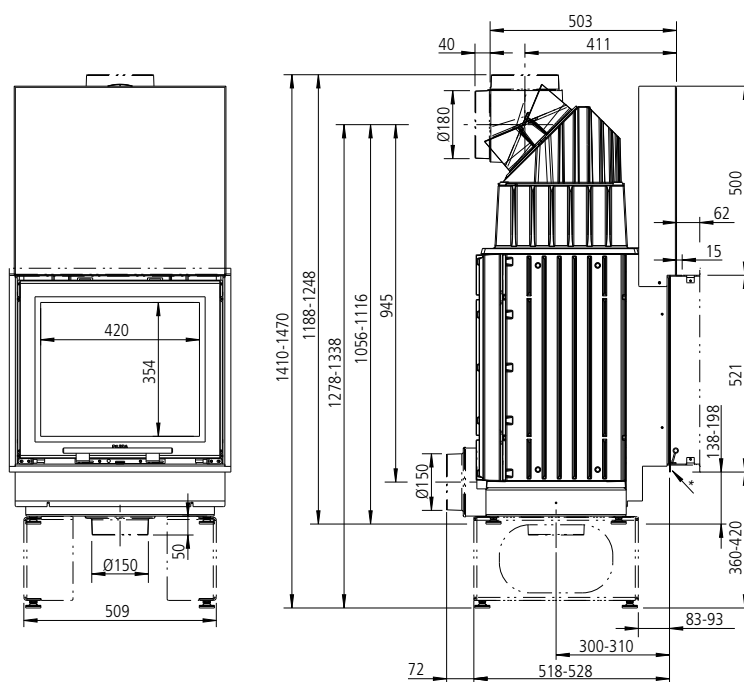
I. Operation with direct connection to the chimney				
Performance data				
Nominal heat output, \dot{Q}_N	[kW]	11	13	12
Direct radiation and convection output	[kW]	5.7	6.4	5.8
Heat output over the front surface(s) and glass pane(s)	[kW]	5.3	6.6	6.2
Chimney dimensioning data according to EN 13384 part 1 and 2				
Flue gas temperature (at the spigot of insert)	[°C]	327	328	321
Flue gas mass flow	[g/s]	12.1	13.5	13.0
Minimum required chimney draft ¹⁾	[Pa]	13	13	14
Required combustion air flow rate	[m ³ /h]	34.2	38.1	36.7
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	3.0	3.4	3.2
Feeding rate, wood logs	[kg/h]	3.6	4.1	4.0
Fuel quantity, wood briquettes	[kg]	2.9	3.2	3.0
Feeding rate, wood briquettes	[kg/h]	3.4	3.9	3.8
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1041	1181	1061
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1168	1323	1197
Convection air outlet ³⁾	[cm ²]	1250	1418	1274
Inner gaps in the convection chamber ³⁾				
inner gaps between insert and thermal insulation or cladding	[cm]	22	18	23

II. Specifications regarding fire protection and thermal insulation ⁶⁾				
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.				
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾				
(insulation thickness additional required to the required 10 cm pre-wallings)				
to the setup floor	[cm]	0	0	0
to the side	[cm]	15	15	15
to the rear	[cm]	17	17	17
to the ceiling ⁷⁾	[cm]	13	13	13
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation				
to the setup floor (without installed base frame)	[cm]	3	3	3
to the setup floor (with installed base frame)	[cm]	25	25	25
to the front of thermal insulation to the side	[cm]	10	10	10
to the front of thermal insulation to the rear	[cm]	10	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)				
Minimum convection air outlet, non-closable	[cm ²]	580	600	720
Minimum convection air inlet, non-closable	[cm ²]	960	1000	1200
Required distance in the radiation area of the front (with no additional radiation protection)				
Required distance	[cm]	100	120	120

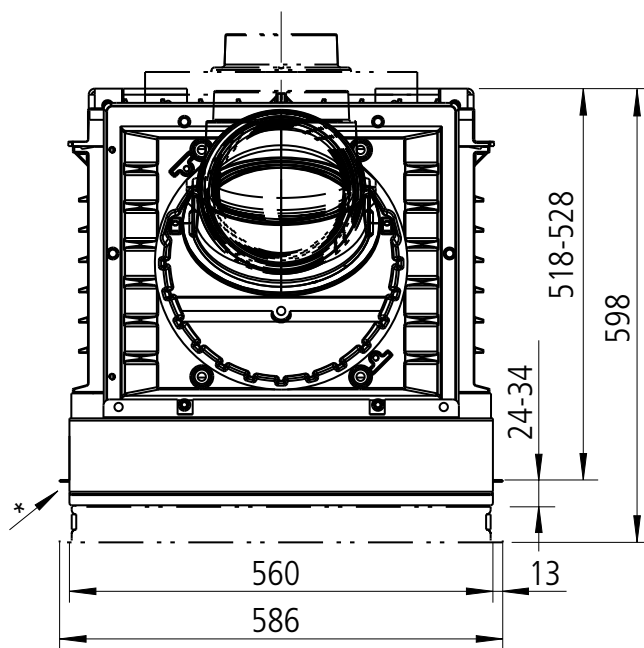
Type SERA		PS		US
type of front		55	78	55
IV. Measurements, weights and miscellaneous				
External air connector	Ø [mm]	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180/200
Preadjustment of the LT-3 combustion air valve (optional)	%	45	45	45
Static valve position of the LT-3 combustion air valve (test mode)	%	45	45	24
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	23	23	12
Maximum log size	[cm]	33	33	33
Weight of insert with inner lining	approx. [kg]	220	270	225

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass pane.
- 2) Each model has been tested at direct connection to the chimney with the spigot to the rear and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 3.3 m² (55 PS), approx. 4.1 m² (78 PS), approx. 3.3 m² (55 US) - with direct connection to the chimney.
Other types of construction can be performed according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute material. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) The inserts SERA PS have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 40 cm, the insert SERA US has been tested with an efficiency of 80% with an extension of the flue pipe with a length of 90 cm.
Planning of the fireplace has to be regarding to these extensions.

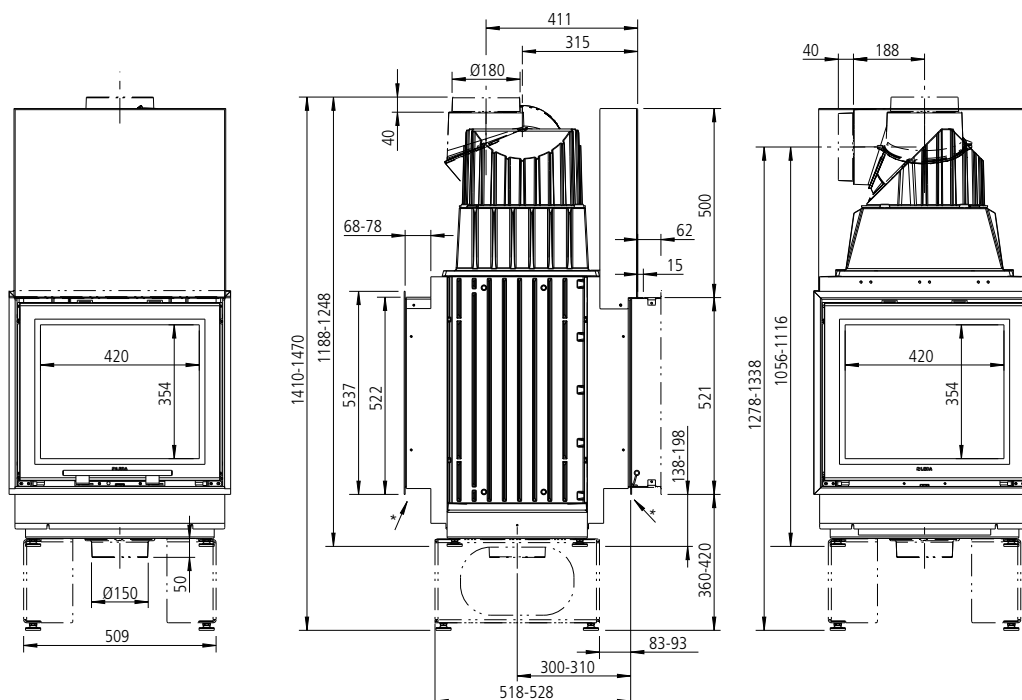
SERA 55 F (straight) / M1:20



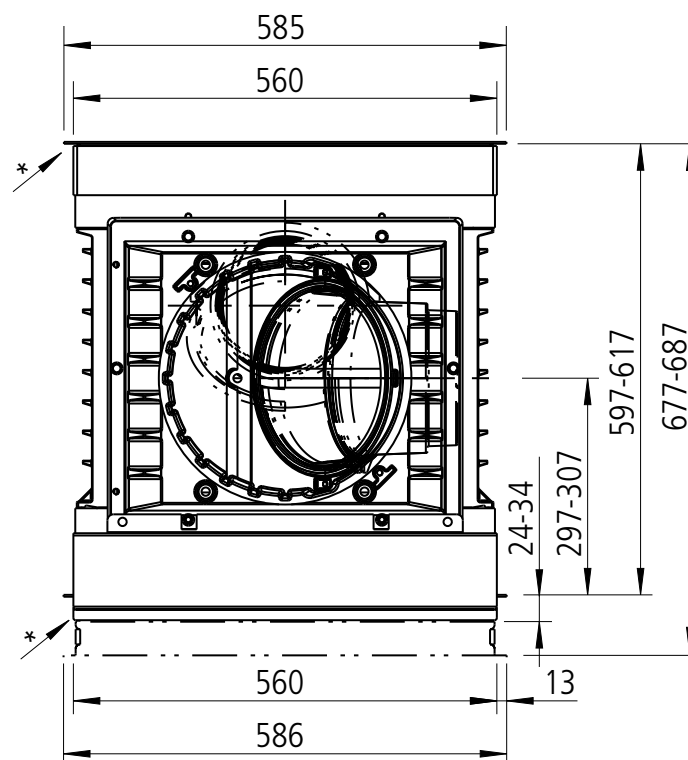
SERA 55 F



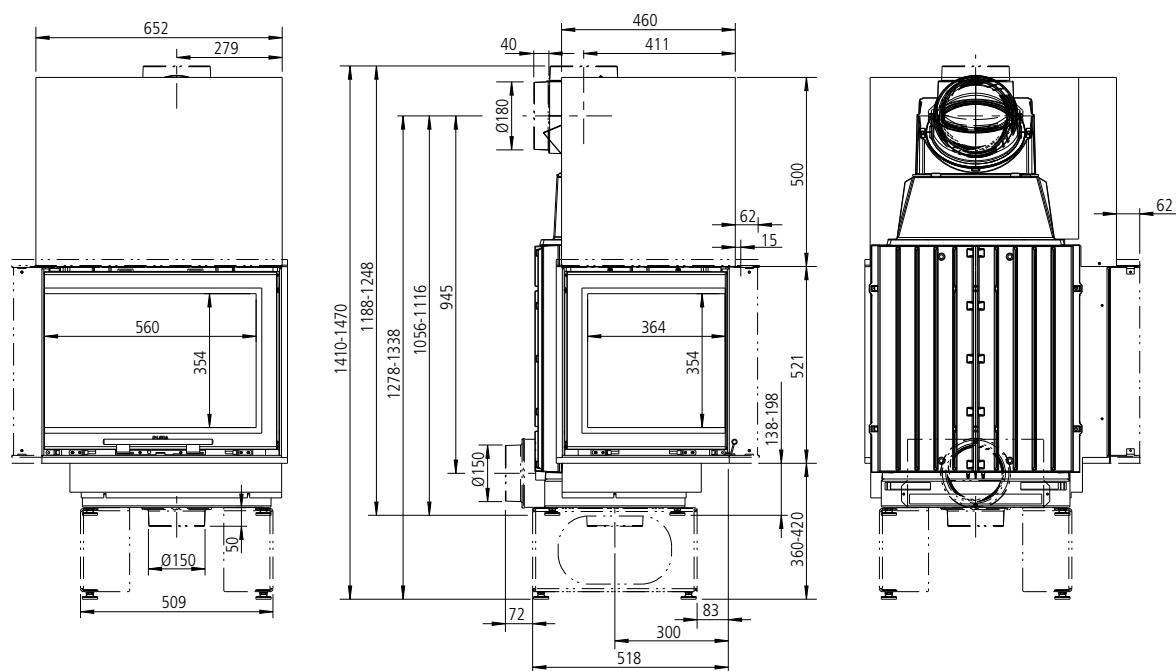
SERA 55 DS (Double sided) / M1:20



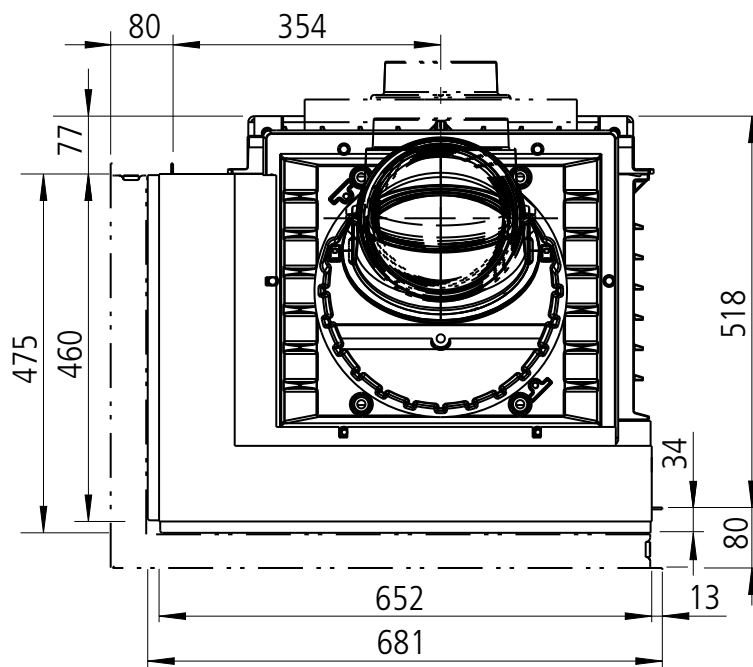
SERA 55 DS
top view / M1:10



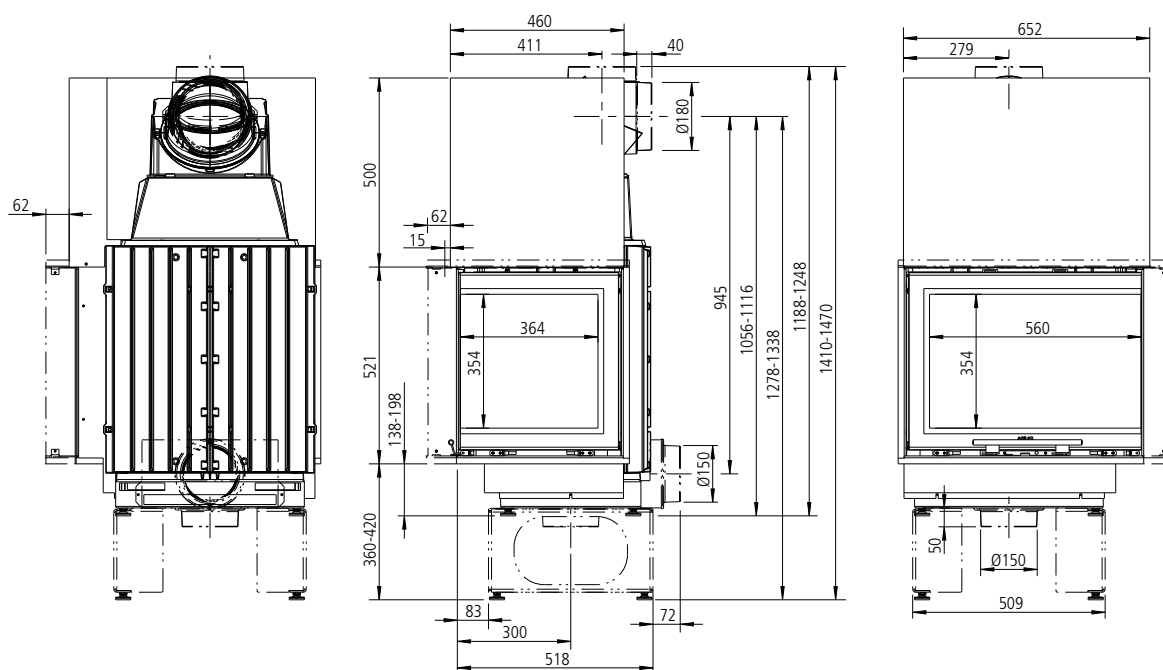
SERA 55 ES L (L-shape left) / M1:20



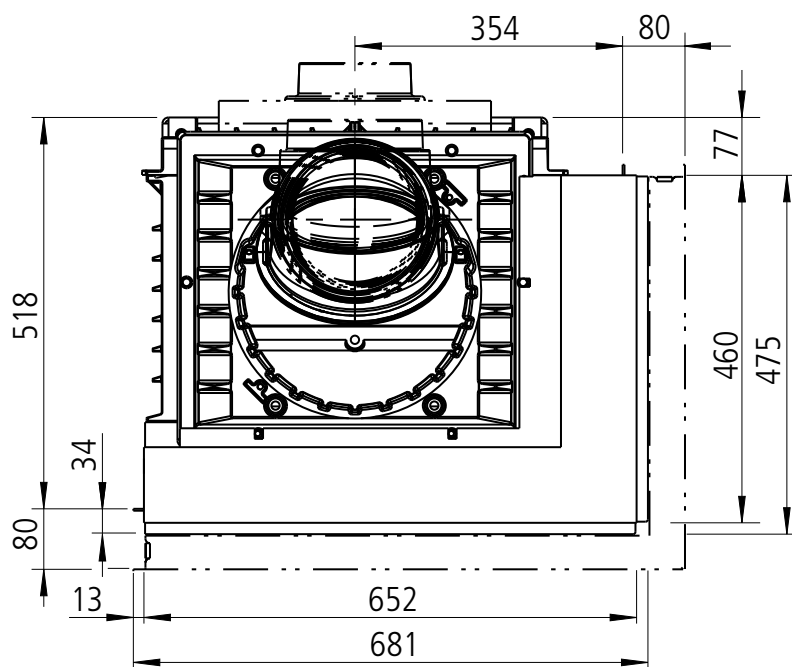
SERA 55 ES L
top view / M1:10



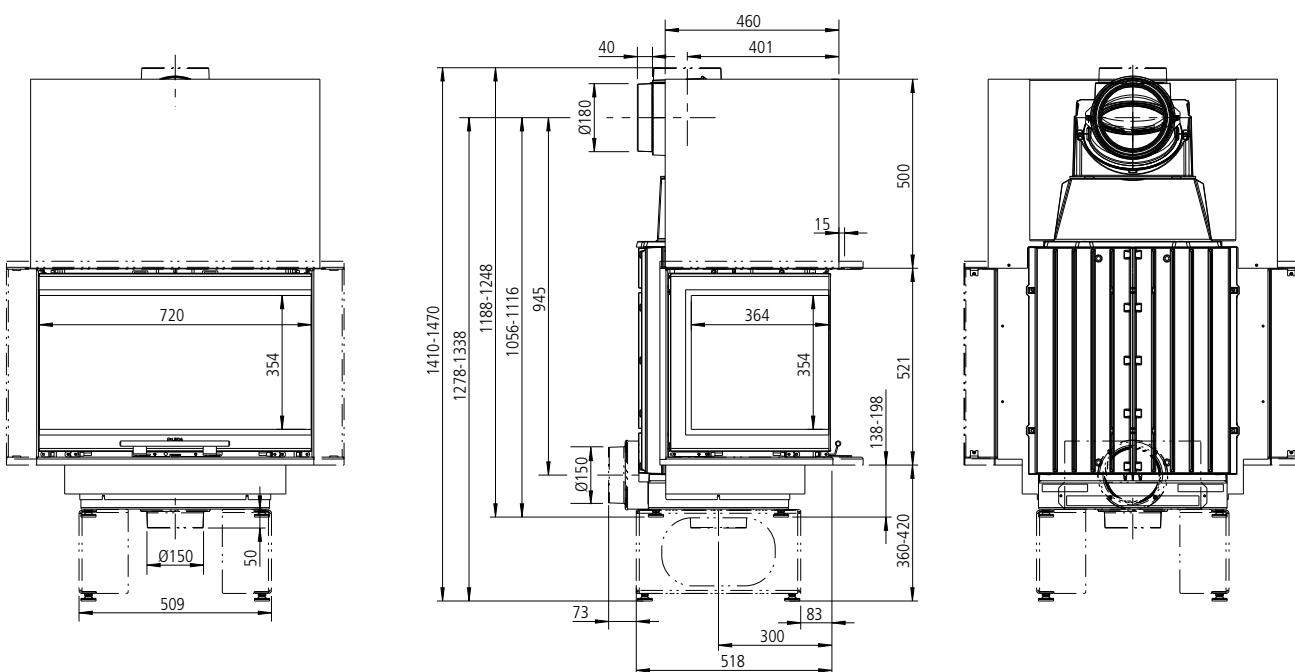
SERA 55 ES R (L-shape right) / M1:20



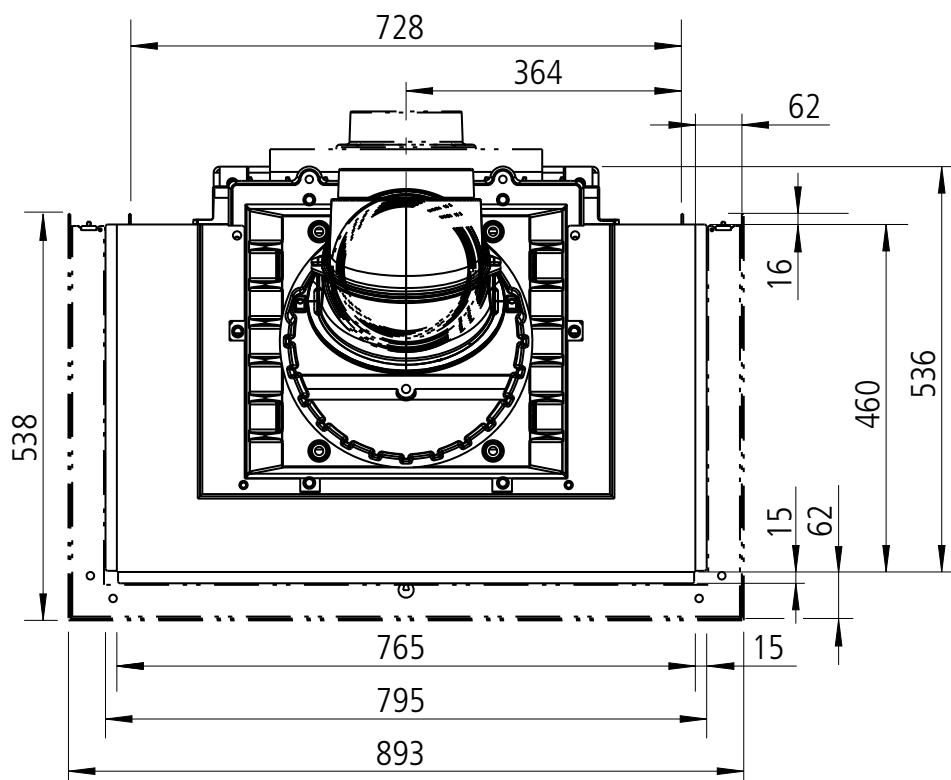
SERA 55 ES R
top view / M1:10

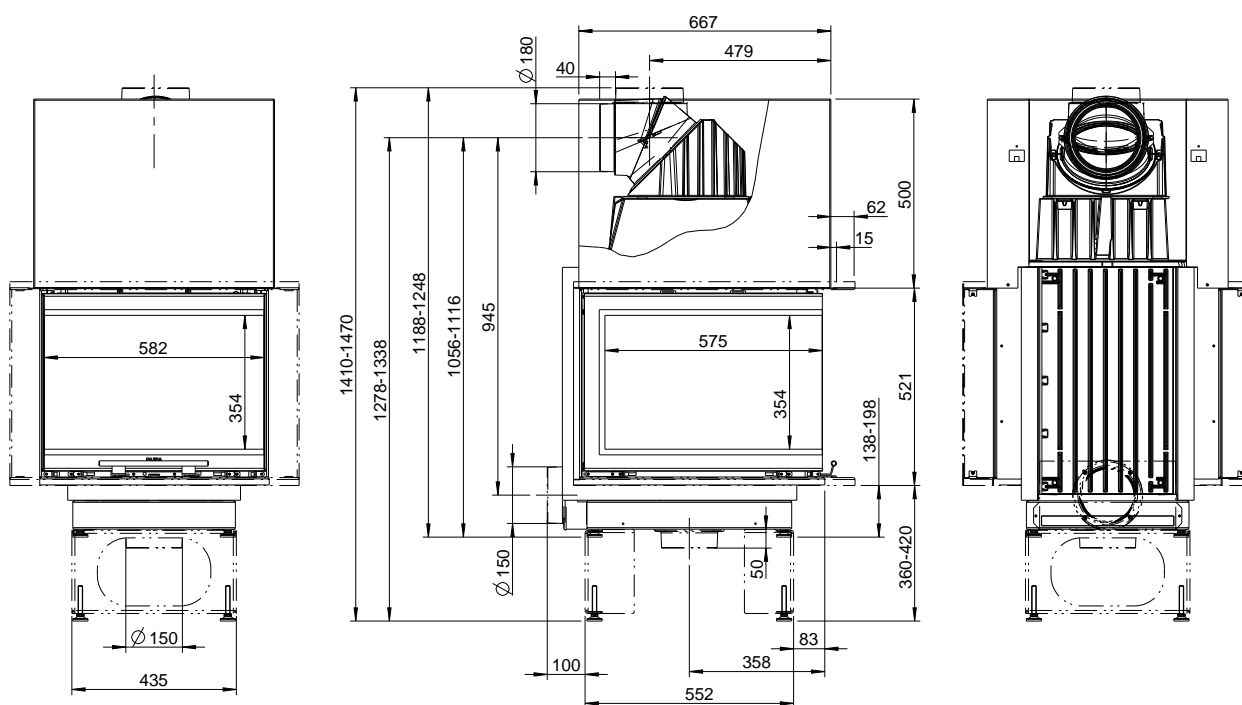


SERA 55 PS (panoramic view) / M1:20



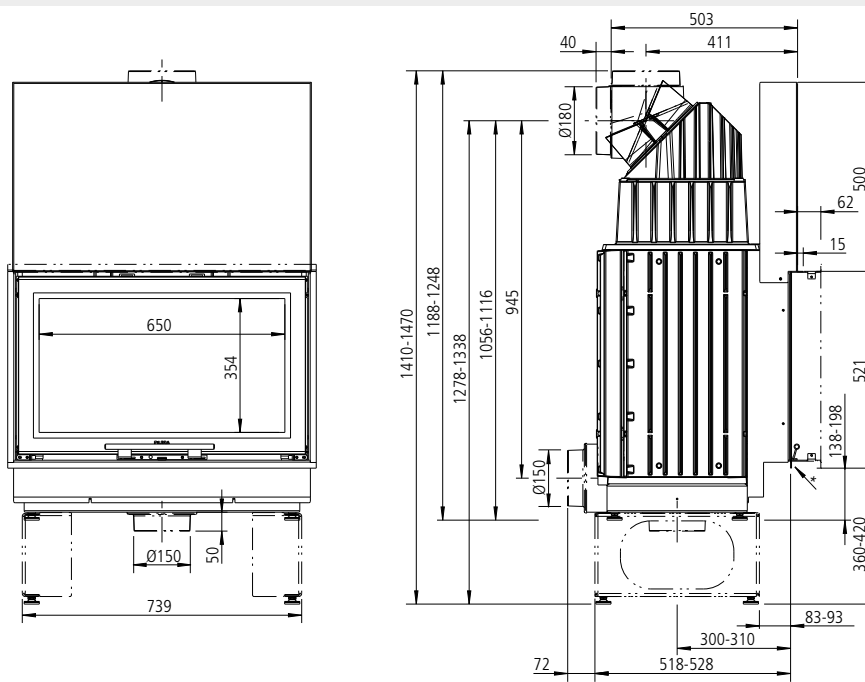
SERA 55 PS
top view / M1:10



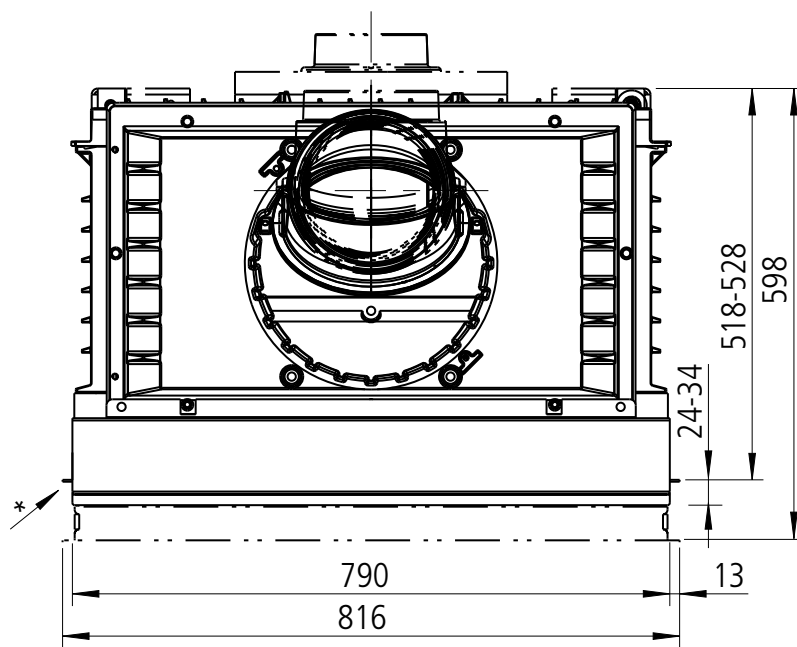


SERA 55 US
top view / M1:10

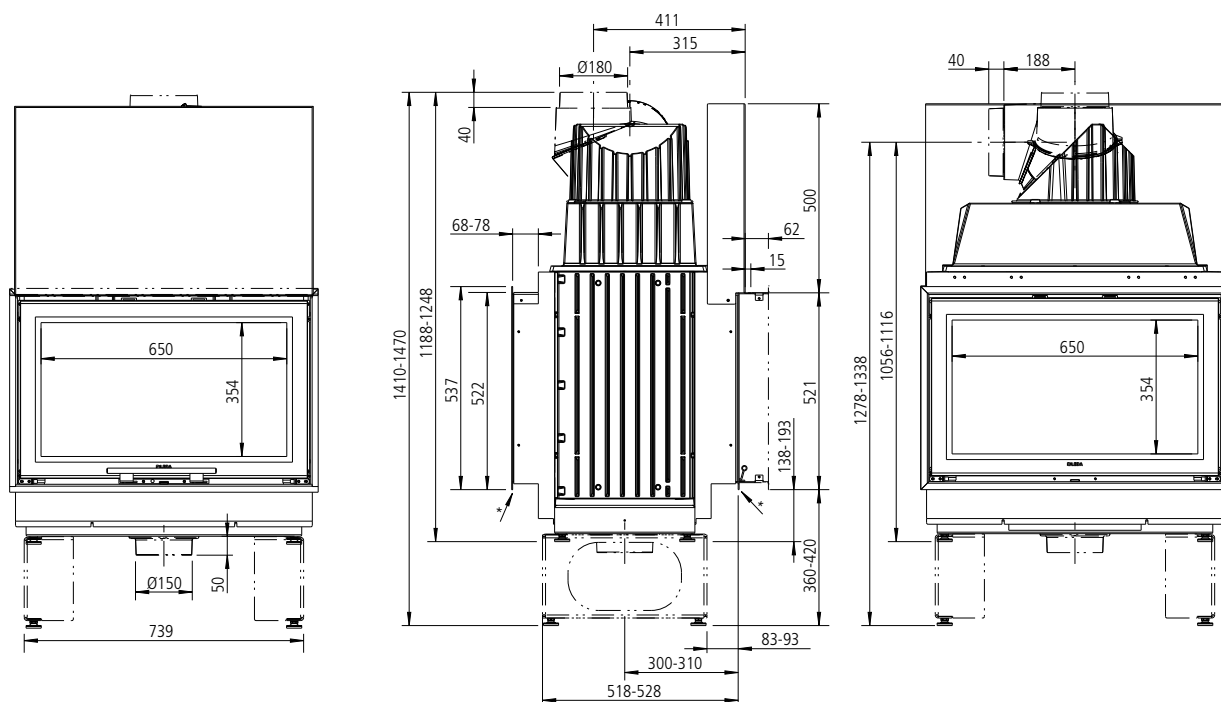
SERA 78 F (straight) / M1:20



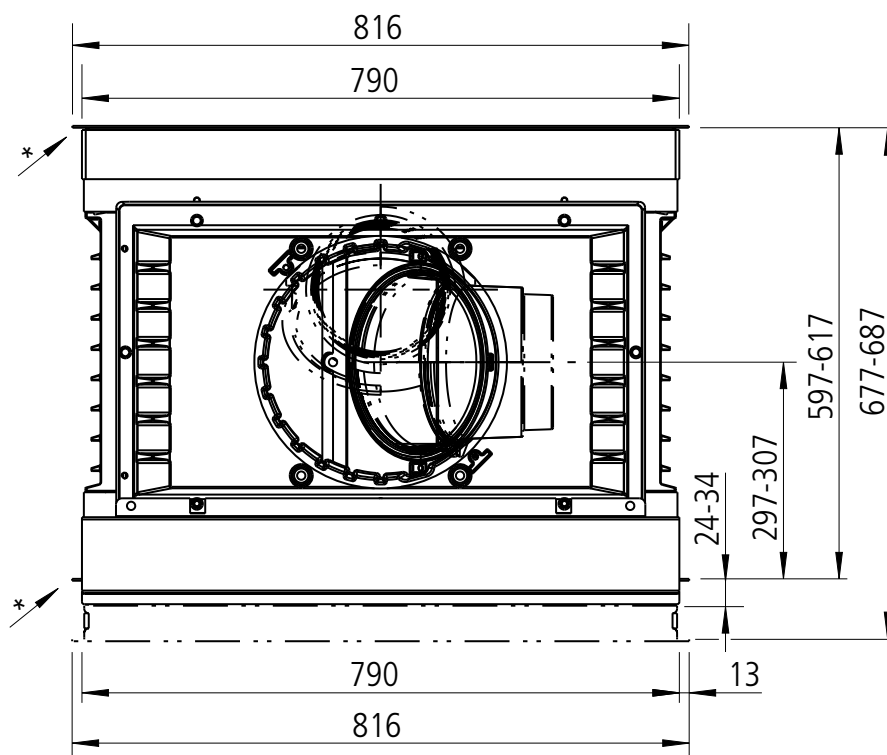
SERA 78 F
top view / M1:10



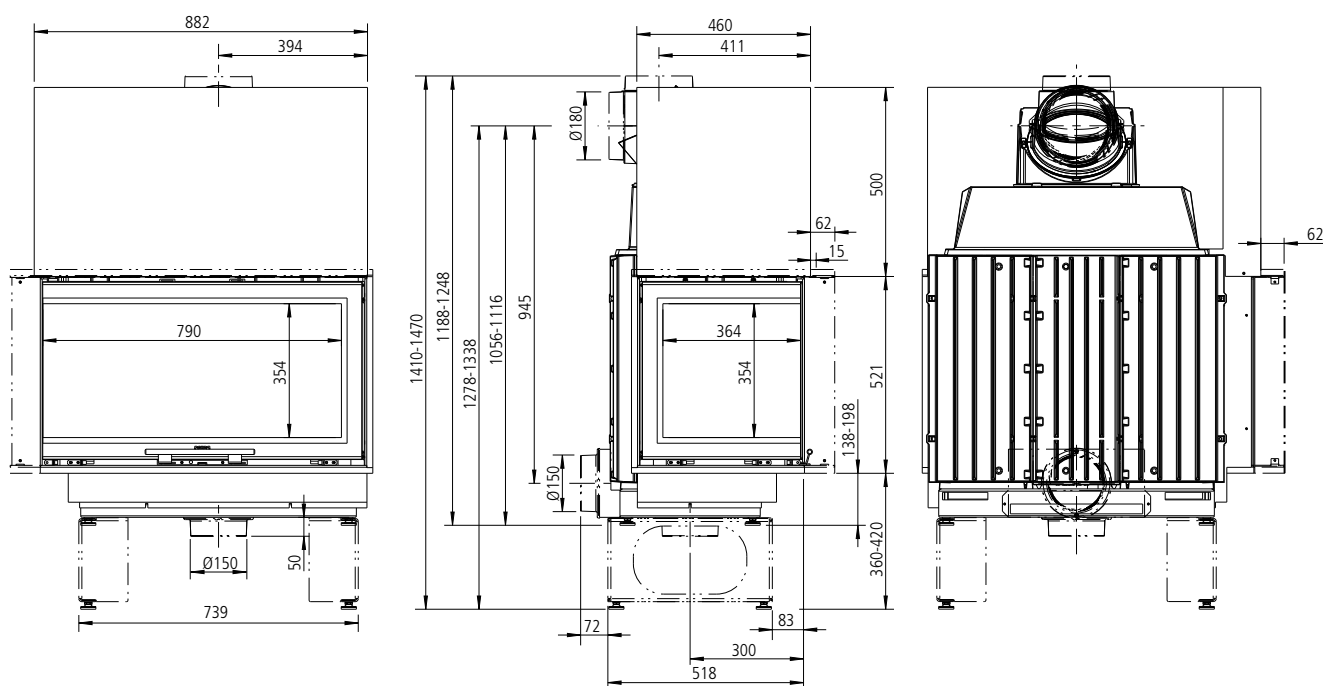
SERA 78 DS (double sided) / M1:20



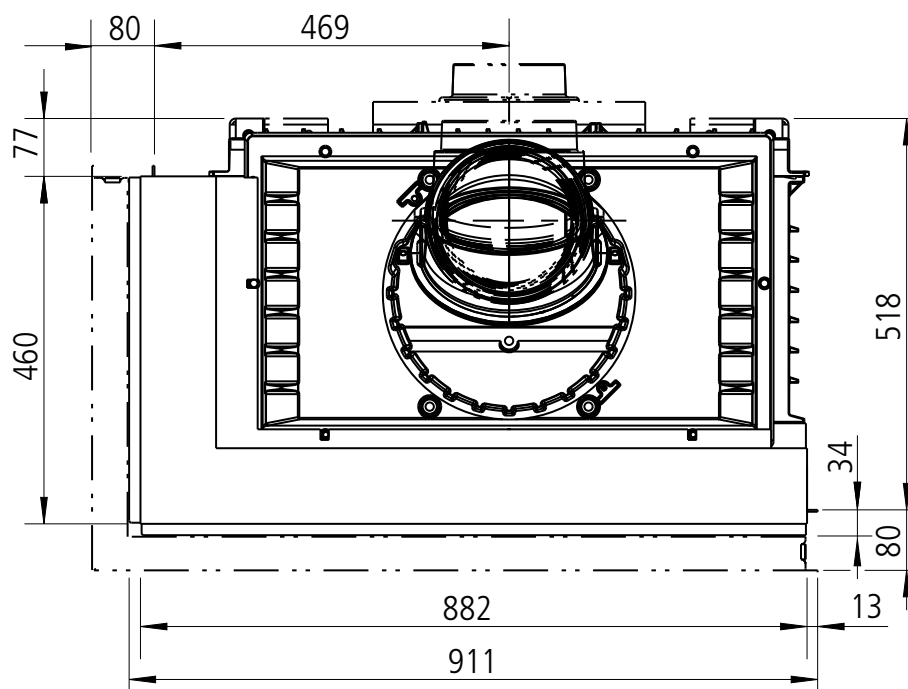
SERA 78 DS
top view / M1:10



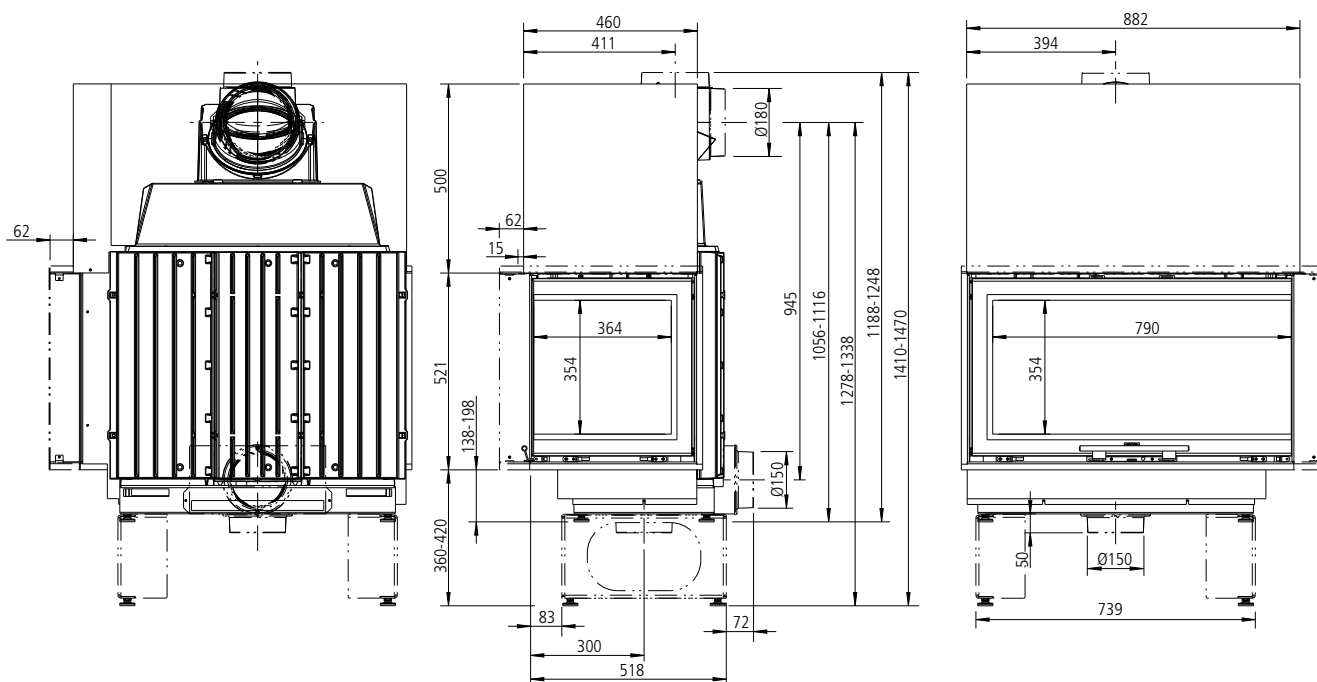
SERA 78 ES L (L-shape left) / M1:20



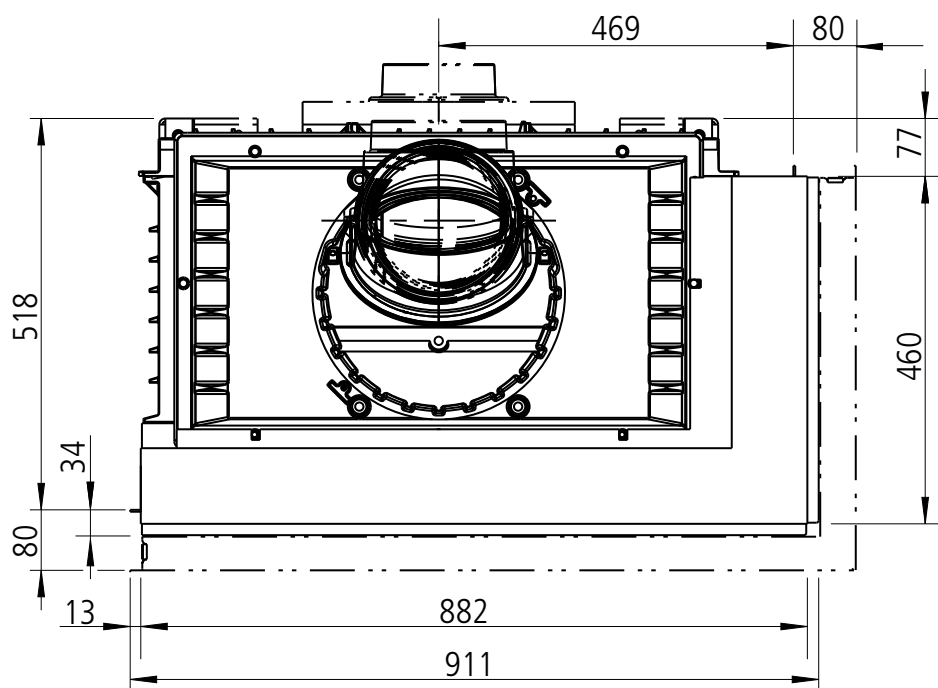
SERA 78 ES L
top view / M1:10



SERA 78 ES R (L-shape right) / M1:20



SERA 78 ES R
top view / M1:10



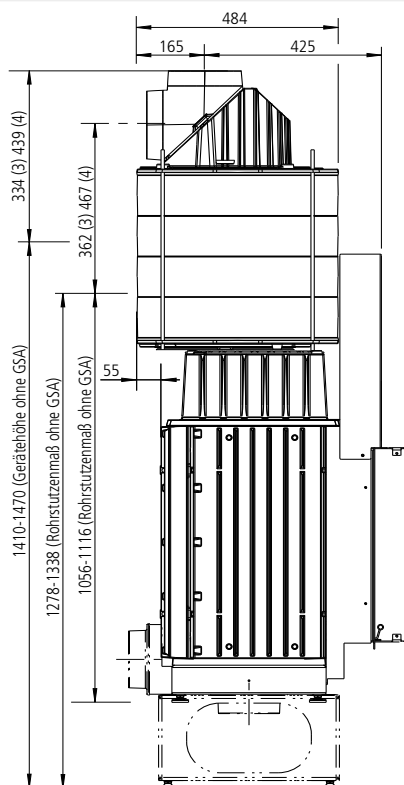
The technical drawings show the following dimensions:

- Front View (Left):**
 - Total width: 739 mm
 - Internal width: 950 mm
 - Height from base to top panel: 354 mm
 - Base diameter: Ø150 mm
 - Base height: 50 mm
- Side View (Right):**
 - Total depth: 518 mm
 - Top panel depth: 460 mm
 - Top panel offset: 411 mm
 - Top panel thickness: 40 mm
 - Door thickness: Ø180 mm
 - Door handle offset: 15 mm
 - Internal door width: 364 mm
 - Internal door height: 354 mm
 - Bottom panel offset: 138-198 mm
 - Bottom panel height range: 360-420 mm
 - Bottom panel offset: 83 mm
 - Bottom panel width: 300 mm
 - Bottom panel offset: 73 mm
 - Overall height range: 1410-1470 mm
 - Height to top panel: 1188-1248 mm
 - Height to door bottom: 1278-1338 mm
 - Height to internal door bottom: 1056-1116 mm
 - Internal door height: 945 mm
 - Door bottom diameter: Ø150 mm

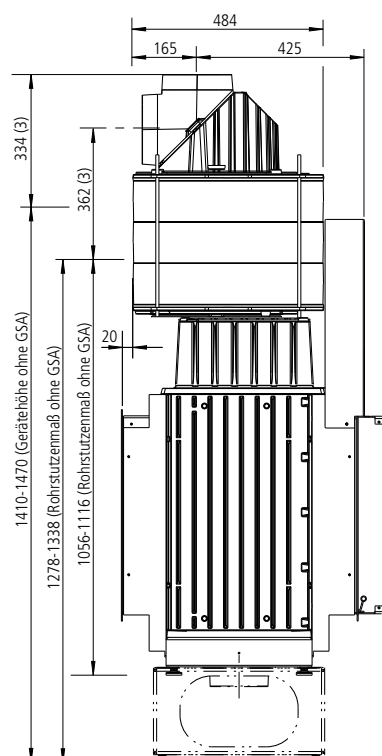
Technical drawing showing the front view of a camera with dimensions in millimeters (mm):

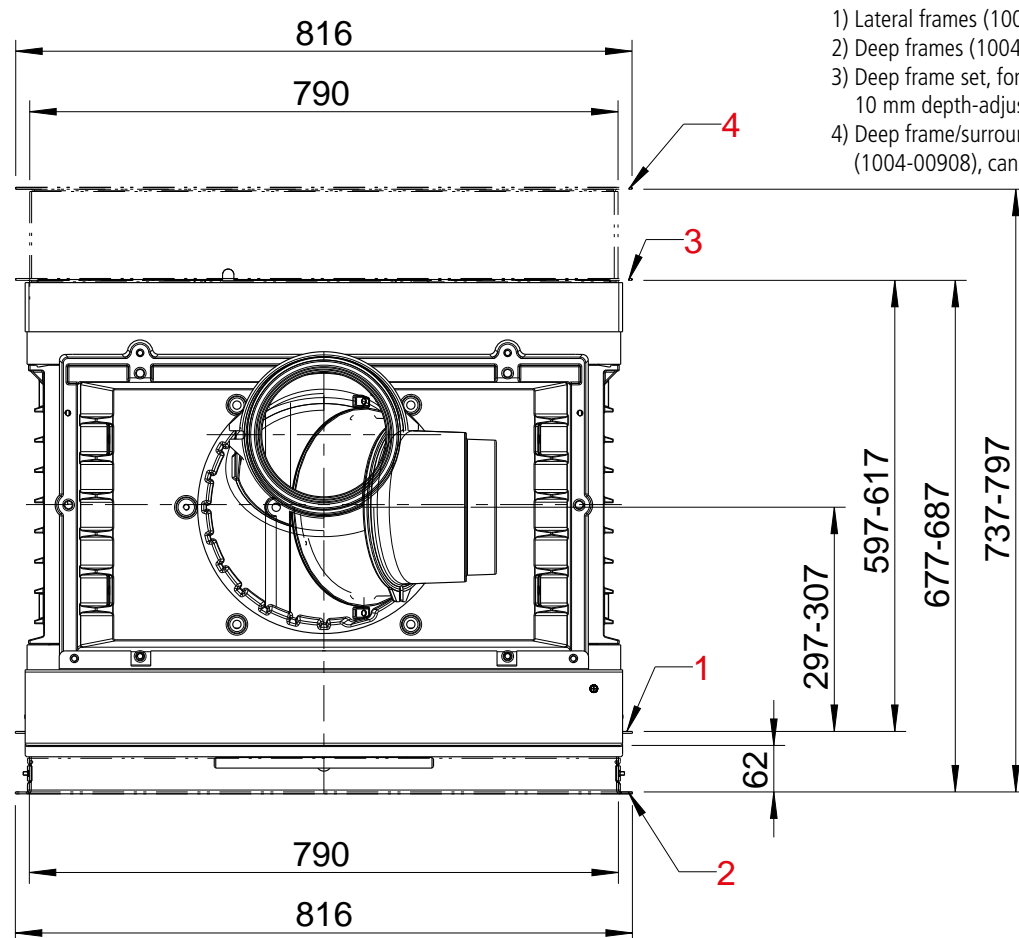
- Overall width: 958
- Distance from left edge to lens center: 479
- Distance from lens center to right edge: 62
- Overall height: 538
- Distance from top edge to lens center: 16
- Distance from lens center to bottom edge: 460
- Distance from bottom edge to lens center: 15
- Distance from lens center to bottom edge: 62
- Distance from bottom edge to lens center: 15
- Distance from lens center to bottom edge: 1025
- Distance from lens center to bottom edge: 1123

SERA F with GSA (4 GSA-rings) (1004-00837 + 1004-00282) / M1:20



SERA 78 DS (3 GSA-rings) (1004-00837 + 1004-00282) / M1:20



SERA 78 DS (double sided) / M1:20




VIDA 68 DS
with cast iron framed door



VIDA 68 F
with all-glass door
displayed: on base frame (1004-00304)

VIDA

for fireplace installations with direct connection to the chimney or partly with cast iron heat exchanger or ceramic heating gas flues

2 models:

- VIDA F (straight)
- VIDA DS (double sided)
- different frontal widths:
55 cm / 68 cm / 78 cm

Product benefits at a glance

- High quality cast iron insert
- installation as low fire (traditional style) or a base frame
- hinged all-glass door/s (VIDA 68 also with cast iron framed door/s available) and inox door handle
- double glazing (except VIDA 68/68 DS with cast iron door)
- VIDA DS with two equal-sized doors, the second door is without handle (to open with removable operating handle „cold hand“)
- fuel: wood logs (opt. Length 33 cm)
- comfortable one-hand lever for the combustion air adjustment
- high-quality chamotte inner lining of combustion chamber, bottom of the combustion chamber with cast iron collar and chamotte inlay
- high efficiency
- external combustion air connection:
VIDA 68 F/ DS underneath, left or right
VIDA 55 F, 78 F underneath or rear
VIDA 55 DS, 78 DS underneath
- particularly eco-friendly combustion
- for the connection to one chimney with multiple stoves
- door hinge can be changed (standard factory setting left hinged)

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2)
- Austrian § 15a-B-VG 2015, Swiss Clean Air act (LRV)
- Energy class according to (EU) 2015/1186: A

Scope of delivery

Fireplace insert, inner lining of the combustion chamber and pre-assembled frame, cast iron dome and two-piece spigot (endless rotatable), installation and operating manual, stove pass, baffle plate (only VIDA 68), external air connector Ø 150 mm, 4 adjustable feet (with rubber pads, 6 cm height regulation), operating handle, protective glove, tension nut for change of door hinge



Hinged door(s) VIDA F/DS
displayed: VIDA DS


VIDA 55 F


with hinged all-glass door with
hinged all-glass door

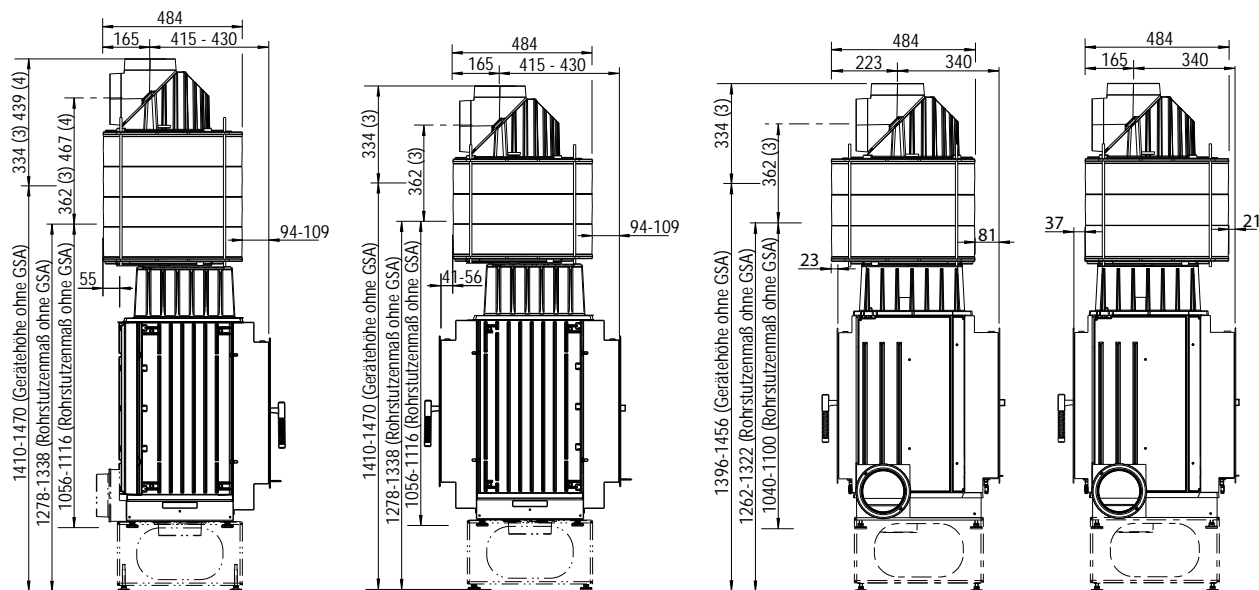
VIDA 68 F

with cast iron framed door
with hinged all-glass door

VIDA 78 F

with hinged all-glass door

Ident-No.	Description	€		Optional accessories	€	
	VIDA F straight					
1003-01607	VIDA 55 F with hinged all-glass door	2670.00		1004-00304 Base frame	200.00	
1003-01290	VIDA 68 F with cast iron framed door	2700.00		1004-00771 add. doorhandle (factory mounted, 2nd door) for VIDA 55/ 68/ 78 DS	100.00	
1003-01301	VIDA 68 F with hinged all-glass door	3180.00		1004-01106 LEDA Service surcharge: Change of door hinge in the factory	90.00	
1003-01609	VIDA 78 F with hinged all-glass door	3350.00		1004-00574 Airbox (VIDA 55/ 78 F) for the external air connection to the rear	70.00	
	VIDA DS double sided			1004-00575 Carrying- / transport handle for VIDA 55/ 78 F/ DS	40.00	
1003-01608	VIDA 55 DS with hinged all-glass doors	3380.00		1003-02043 LEDATRONIC LT3 WiFi Electronic combustion air control device for VIDA 55/ 68/ 78 F/ DS, complete package	1380.00	 p.260
1003-01303	VIDA 68 DS with cast iron framed doors	3490.00		1004-00531 Door contact trigger for 2nd door VIDA 55/ 68/ 78 DS with LT3	160.00	
1003-01304	VIDA 68 DS with hinged all-glass doors	4200.00		GSA Cast iron top mounted heat exchanger		p.302
1003-01610	VIDA 78 DS with hinged all-glass doors	4060.00		1004-00837 GSA Connection kit for VIDA	280.00	
				1004-00282 GSA Cast iron ring with chamotte heat storage inlay, 4 rings (VIDA F) 3 rings attachable (VIDA DS)	250.00	


VIDA 55/ 78 F with GSA
VIDA 55/ 78 DS with GSA
rear positioning

VIDA 68 DS GSA
left: rear positioning / right: front positioning

VIDA

Optional accessories		€	
	MFS multi-functional flue gas connectors		p.326
1004-00310	MFS Double flue gas outlet with cleaning cover	300.00	
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	
1003-01494	GSK Cast iron heat exchanger box with inner soap stone lining VIDA F	810.00	¹ p.302
	LHK Cast iron heat exchanger box for VIDA F		p.304
1003-00561	LHK 320 Cast Iron heat exchanger	1210.00	
1003-01832	LHK 695 Cast Iron heat exchanger	530.00	²
1003-01722	LHK 745 Cast Iron heat exchanger	540.00	²
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	p.306
	LWS Heat Accumulation System		p.278
1004-00952	LWS Set 1, nine elements	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper, eleven elements	1140.00	
1004-00953	LWS Set 2, twelve elements	1470.00	
1004-00987	LWS Set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS Set 3, seven elements	980.00	
	LWS single elements for customised composition	opt.	


Optional accessories		€	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

- ¹ LT3 WiFi without display, the graphic display has to be ordered separately (1004-00542)
The second Door contact trigger for 55/ 68/ 78 DS models has to be ordered separately (1004-00531)
² Practical tip: In 1004-0311 the heat-up damper is already comprised.


Type VIDA	front type	55		68		78	
		F	DS	F	DS	F	DS
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A	A	A	A	A	A
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250					
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40					
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120					
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200					
Efficiency	[%]	≥ 78 (≥ 80 ⁸⁾)		≥ 80		≥ 78 (≥ 80 ⁸⁾)	
Flue gas temperature, with direct connection to the chimney	[°C]	269	257	251	251	267	263

I. Operation with direct connection to the chimney							
Leistungsdaten							
Nominal heat output, \dot{Q}_N	[kW]	8	9	9	9	10	11
Direct radiation and convection output	[kW]	6.9	6.7	7.7	6.4	8.4	7.7
Heat output over the front surface(s) and glass pane(s)	[kW]	1.1	2.3	1.3	2.6	1.6	3.3
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of insert)	[°C]	310	334	289	289	305	321
Flue gas mass flow	[g/s]	8,5	9,5	8,8	8,8	10,5	12,1
Minimum required chimney draft ¹⁾	[Pa]	12	13	13	13	12	14
Required combustion air flow rate	[m ³ /h]	24.0	26.8	24.8	24.8	29.6	34.3
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	2.4	2.3	2.2	2.2	2.8	2.7
Feeding rate, wood logs	[kg/h]	2.6	2.9	2.6	2.6	3.3	3.5
Fuel quantity, wood briquettes	[kg]	2.3	2.2	2.1	2.1	2.6	2.6
Feeding rate, wood briquettes	[kg/h]	2.5	2.8	2.5	2.5	3.0	3.3
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1110	1002	1268	929	1386	1154
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1199	1101	1360	1021	1496	1281
Convection air outlet ³⁾	[cm ²]	1332	1203	1522	1115	1664	1385
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	8	11	9	11	9	13
Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

II. Operation with cast iron heat exchanger box ^{2,3,4)}							
Cast iron heat exchanger box							
Operation with cast iron heat exchanger box possible		yes	no	yes	no	yes	no
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK					
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	10.0	--	10.5	--	11.5	--
Direct radiation and convection output	[kW]	8.8	--	9.1	--	9.8	--
Heat output over the front surface(s) and glass pane(s)	[kW]	1.2	--	1.4	--	1.7	--
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	270	--	230	--	280	--
Flue gas mass flow	[g/s]	10.5	--	10.7	--	11.7	--
Minimum required chimney draft ¹⁾	[Pa]	12	--	12	--	12	--
Required combustion air flow rate	[m³/h]	29.6	--	30.0	--	32.8	--
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	3.5	--	4.0	--	4.5	--
Feeding rate, wood logs	[kg/h]	3.2	--	3.5	--	4.0	--
Fuel quantity, wood briquettes	[kg]	3.3	--	3.7	--	4.2	--
Feeding rate, wood briquettes	[kg/h]	3.0	--	3.3	--	3.7	--

Type VIDA	front type	55		68		78	
		F	DS	F	DS	F	DS
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1424	--	1482	--	1601	--
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1534	--	1593	--	1722	--
Convection air outlet ³⁾	[cm ²]	1709	--	1779	--	1921	--
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	5	--	6	--	7	--
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)							

III. Operation with LWS / ceramic heat storage ⁴⁾							
WS / ceramic heat storage possible		yes	no	yes	no	yes	no
Performance data							
combustion capacity – heat input, \dot{Q}_f	[kW]	17	--	19	--	22	--
heat output of insert	[kW]	4.3	--	6.4	--	6.9	--
Heat load of heating gas at spigot of insert	[kW]	13.2	--	12.9	--	15.0	--
Usable heat load of heating gas at spigot of insert	[kW]	9.9	--	9.2	--	10.9	--
Heat output over the front surface(s) and glass pane(s)	[kW]	1.3	--	1.5	--	2.0	--
Direct radiation and convection output (without heat storage)	[kW]	5.5	--	7.9	--	7.5	--
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2							
Heating gas temperature (at the spigot of insert)	[°C]	420	--	380	--	430	--
Flue gas mass flow	[g/s]	22.4	--	24.9	--	24.8	--
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	--	15	--	15	--
Required combustion air flow rate	[m ³ /h]	65.7	--	72.9	--	72.2	--
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	4.0	--	4.5	--	5.0	--
Feeding rate, wood logs	[kg/h]	4.0	--	4.5	--	5.0	--
Fuel quantity, wood briquettes	[kg]	3.8	--	4.3	--	4.8	--
Feeding rate, wood briquettes	[kg/h]	3.8	--	4.3	--	4.8	--
Operation with LWS, heat accumulation system							
Admissible LWS sets		Set 1, Set 2, Set 3	--	Set 1, Set 2, Set 3	--	Set 1, Set 2, Set 3	--
Recommended number of LWS elements (25/25/25 cm)		11	--	12	--	12	--
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	173	--	168	--	171	--
Minimum required chimney draft for each 90° bend	[Pa]	1.19	--	1.42	--	1.48	--
Minimum required chimney draft for each 45° bend	[Pa]	0.55	--	0.65	--	0.68	--
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)							
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	201	--	200	--	213	--
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	22	--	24	--	24	--
Flue gas mass flow	[g/s]	22,4	--	24.9	--	24.8	--
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)							
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	161	--	168	--	171	--
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	22	--	24	--	24	--
Flue gas mass flow	[g/s]	22,4	--	24.9	--	24.8	--
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)							
Flue gas temperature (at output spigot of LWS set 3)	[°C]	233	--	226	--	246	--
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	23	--	24	--	24	--
Flue gas mass flow	[g/s]	22,4	--	24.9	--	24.8	--

Type VIDA	front type	55		68		78	
		F	DS	F	DS	F	DS
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	460	--	896	--	788	--
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	704	--	1167	--	1055	--
Convection air outlet ³⁾	[cm ²]	552	--	1076	--	945	--
Inner gaps in the convection chamber ³⁾							
Inner gaps between insert and thermal insulation or cladding	[cm]	3	--	6	--	5	--
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

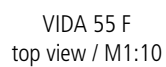
IV. Specifications regarding fire protection and thermal insulation ⁶⁾							
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.							
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾							
(insulation thickness additional required to the required 10 cm pre-wallings)							
to the setup floor	[cm]	0	0	0	0	0	0
to the side (with installed base frame)	[cm]	15	15	14	14	15	15
to the side (without installed base frame)	[cm]	15	15	15	15	15	15
to the rear (with installed base frame)	[cm]	17	--	17	--	17	--
to the rear (without installed base frame)	[cm]	17	--	19	--	17	--
to the ceiling (with installed base frame)	[cm]	13	13	16	16	13	13
to the ceiling (without installed base frame) ⁷⁾	[cm]	13	13	18	18	13	13
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation							
to the setup floor (without installed base frame)	[cm]	3	3	3	3	3	3
to the setup floor (with installed base frame)	[cm]	25	25	25	25	25	25
to the front of thermal insulation to the side	[cm]	10	10	4	4	10	10
to the front of thermal insulation to the rear	[cm]	10	10	10	10	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)							
Minimum convection air outlet, non-closable	[cm ²]	720	580	560	560	900	600
Minimum convection air inlet, non-closable (without installed base frame)	[cm ²]	1200	960	240	240	1500	1000
Minimum convection air inlet, non-closable (with installed base frame)	[cm ²]	1200	960	960	960	1500	1000
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	100	120	100	100	120	120

VI. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180/200	180/200	180/200	180/200
Preadjustment of the LT-3 combustion air valve (optional)	%	45	45	45	45	45	45
Static valve position of the LT-3 combustion air valve (test mode)	%	45	20	45	45	45	20
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	23	10	23	23	23	10
Maximum log size	[cm]	33	33	33	33	33	33
Weight of insert with inner lining	approx. [kg]	215	205	290	290	260	245
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66					
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130					

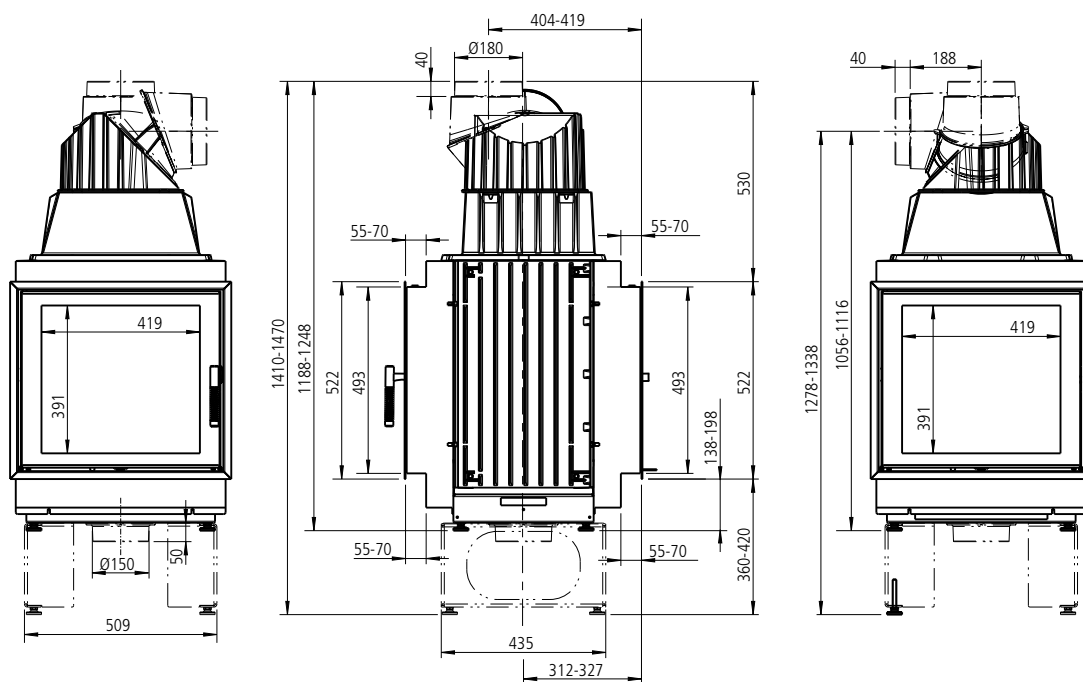
Type VIDA	front type	55		68		78	
		F	DS	F	DS	F	DS

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass panes.
- 2) The inserts VIDA 55 F, 68 F and 78 F have been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
These inserts can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
Each model has been tested at direct connection to the chimney with the spigot to rear and a heating/flue pipe length of 50 cm.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of
3.4 m² (55 F), 4.2 m² (55 DS), 3.4 m² (68 F), 4.4 m² (68 DS), 3.7 m² (78 F), 4.8 m² (78 DS) - operation with direct connection to the chimney,
4.2 m² (55 F), 4.2 m² (55 DS), 4.2 m² (68 F), 4.4 m² (68 DS), 4.5 m² (78 F), 4.8 m² (78 DS) - operation with cast iron heat exchanger box,
2.5 m² (55 F), 3.3 m² (55 DS), 2.5 m² (68 F), 3.5 m² (68 DS), 2.8 m² (78 F), 3.9 m² (78 DS) - operation with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The inserts VIDA 55 F, VIDA 68 F or VIDA 78 F can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional information.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute material. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) The inserts VIDA 55 F and 78 F have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 30 cm,
the inserts VIDA 55 DS and 78 F have been tested with an efficiency of 80% with an extension of the flue pipe with a length of 40 cm, Planning of the fireplace has to be regarding to these extension.

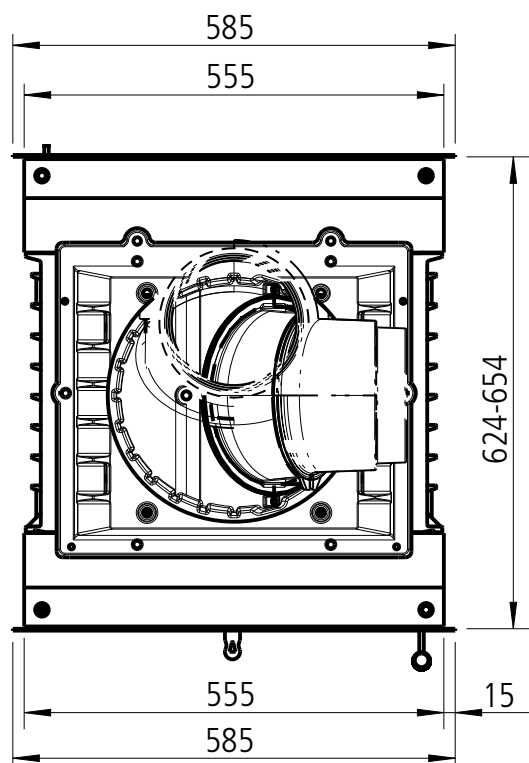
VIDA 55 F (straight) / M1:20



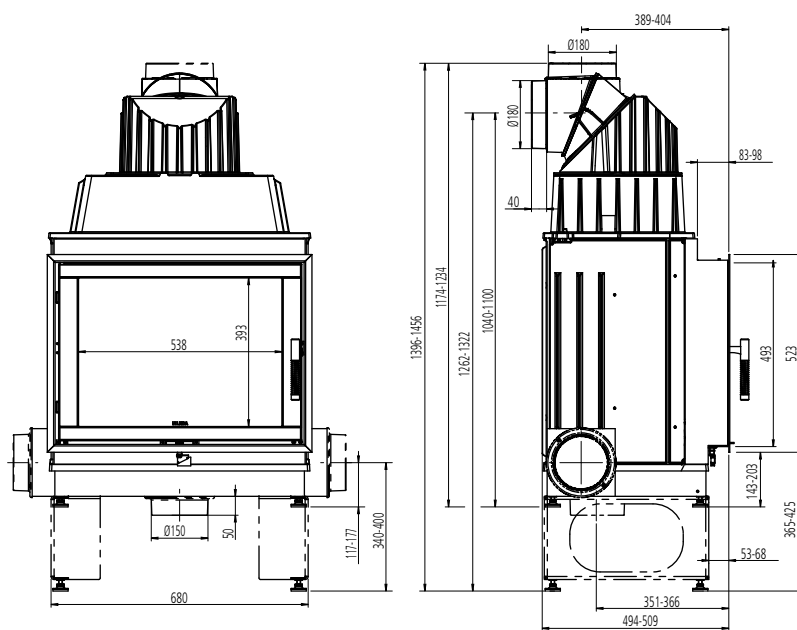
VIDA 55 DS (double sided) / M1:20



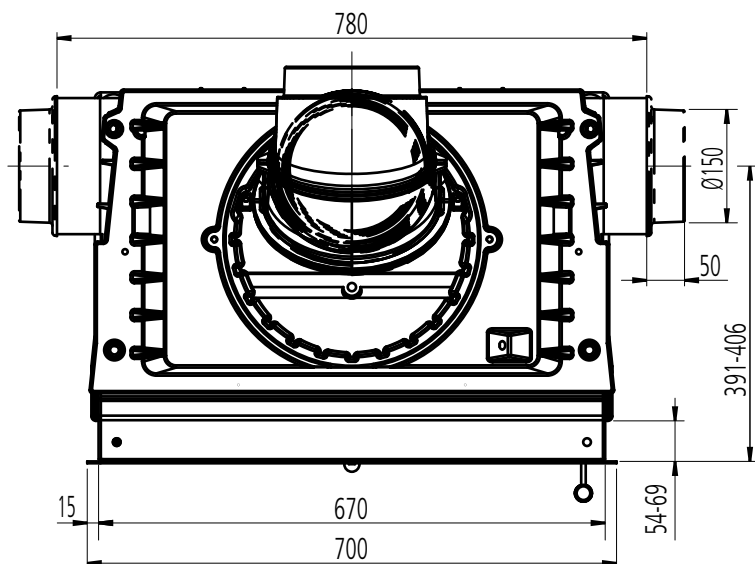
VIDA 55 DS
top view / M1:10



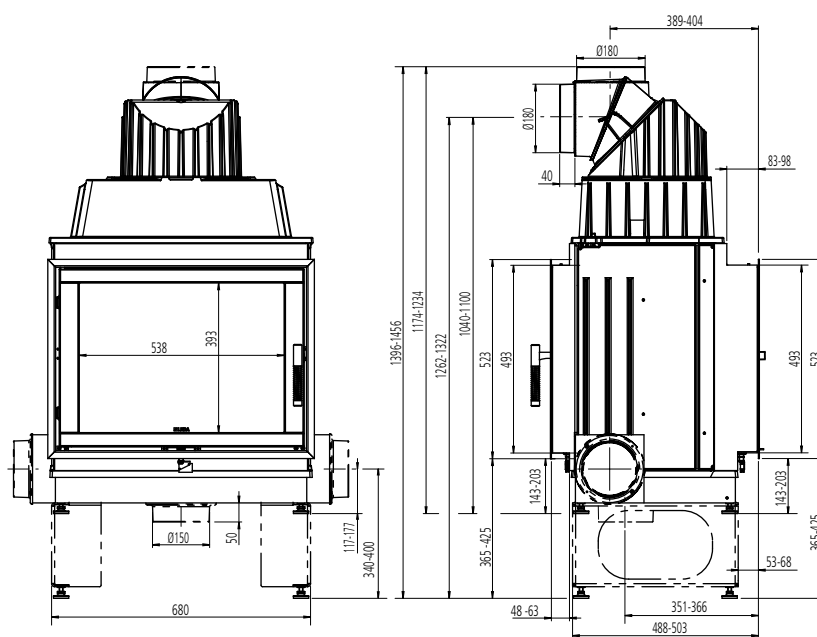
VIDA 68 F (straight) / M1:20



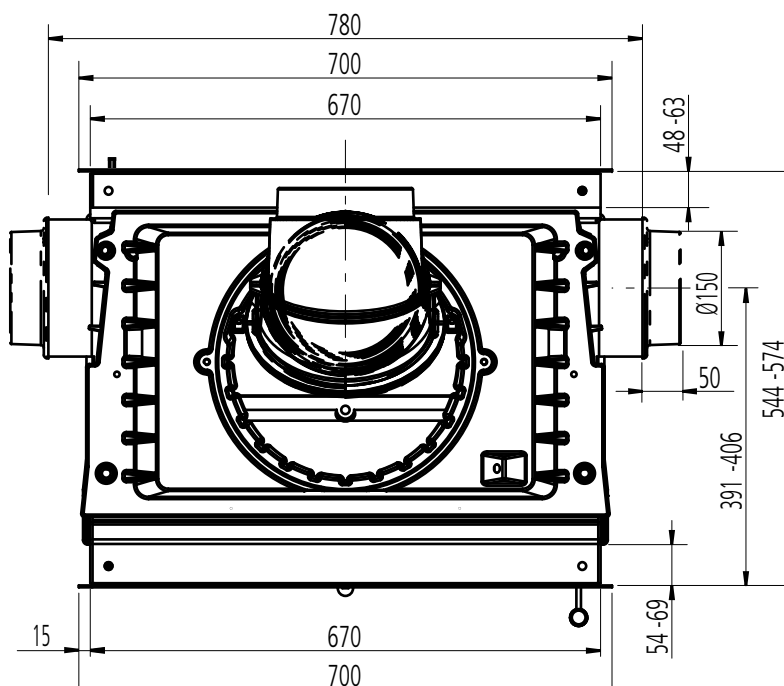
VIDA 68 F
top view / M1:10



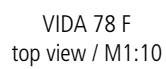
VIDA 68 DS (double sided) / M1:20



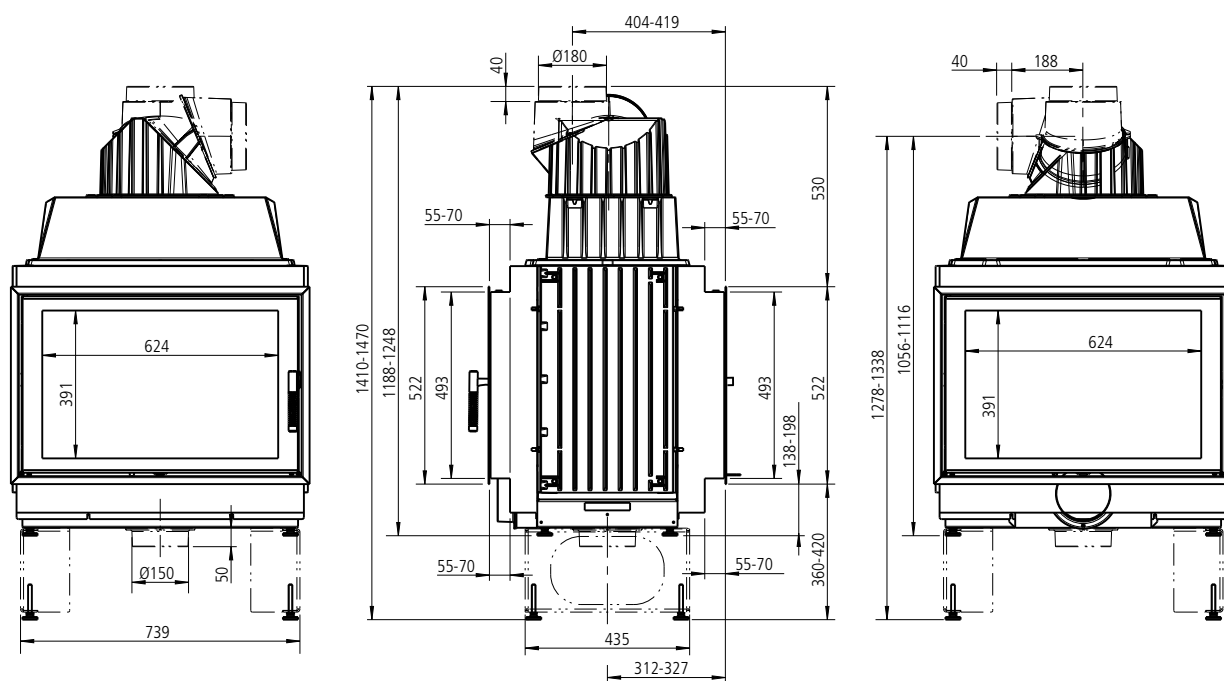
VIDA 68 DS
top view / M1:10



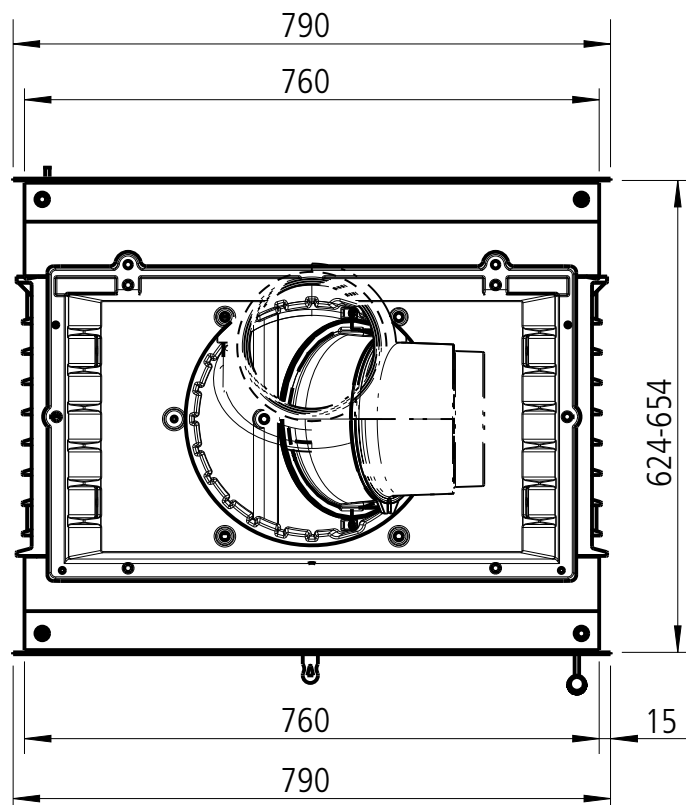
VIDA 78 F (straight) / M1:20



VIDA 78 F (double sided) / M1:20



VIDA 78 DS
top view / M1:10





JUWEL H1
with cast iron front plate



JUWEL H1
with steel frame

JUWEL

Appropriated for hot air tiled stoves, tiled stoves with ceramic heat storage.

Models:

2 Front versions:
Steel recess frame

Product benefit at a glance:

- Small compact tiled stove insert
- high quality cast iron appliance with cast iron door
- double glazing
- door hinge right
- fuels: wood logs (opt.: 33 cm length) , wood briquettes
- comfortable one hand adjustment of the combustion air
- high quality precise fit chamotte lining of combustion chamber which can be positioned loosely through the front door
- detachable frontplate (combustion chamber and air guidance accessible from outside)
- high quality chamotte inner lining of the combustion chamber (to be grouted)
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- with two transport rollers for easy positioning
- suitable for the connection to one chimney with multiple stoves
- 4 Flue gas outlets (with blind covers) top, rear, left or right
- flue gas spigot Ø 145/ 180 mm (therewith variable output)

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2),
- Munich Solid Fuel Ordinance,
- Austrian § 15a-B-VG (models K17,K19,K21)
- Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+

Scope of delivery

Tiled stove insert, installation and operating manual, stove pass, heat-protective glove, combustion air connector Ø 125 mm



JUWEL H1
with cast iron front plate



JUWEL H1
with steel frame



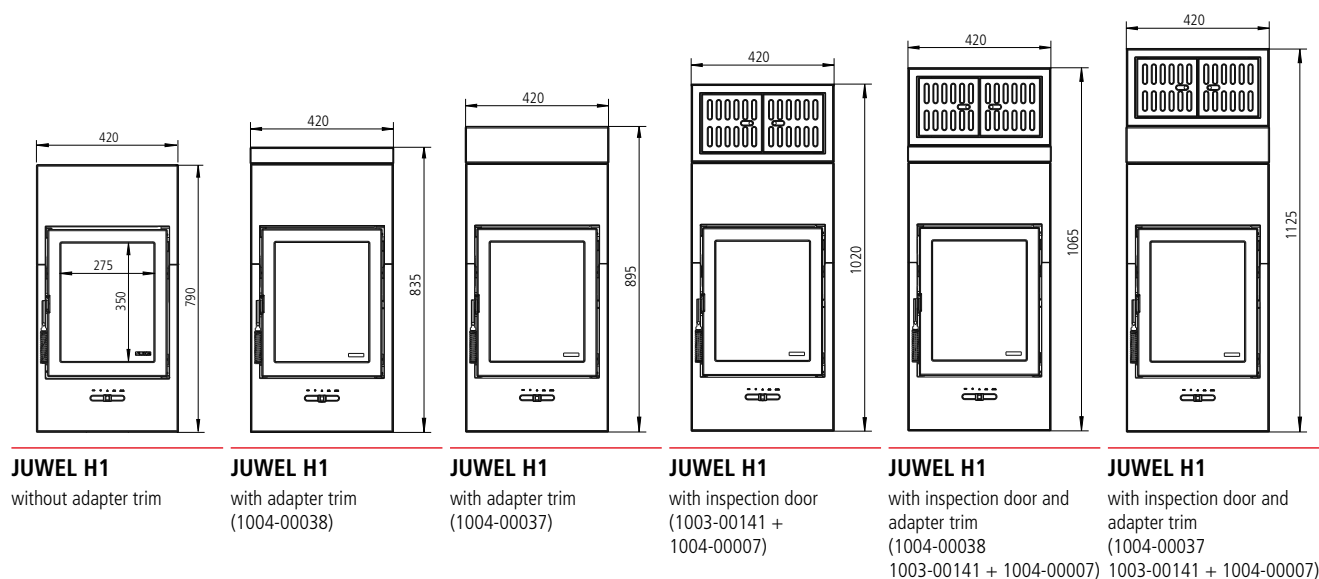
Cast iron inspection door
for JUWEL (1003-00141)

Ident-No.	Description - without firebox inner lining and flue gas spigot	€	
	JUWEL H1		
1003-00708	JUWEL H1 with cast iron front plate	2320.00	
1003-01648	JUWEL H1 for LEDATRONIC LT3 with cast iron front plate	2390.00	¹
1003-00898	JUWEL H1 E with steel frame	2070.00	
1003-01649	JUWEL H1 E for LEDATRONIC LT3 with steel frame	2130.00	¹

Checkbox: What do I need to order?

- ☐ JUWEL tiled stove insert
- ☐ inner lining of the combustion chamber
- ☐ Flue gas spigot
- ☐ LEDATRONIC (for devices for LEDATRONIC)
- + optional accessories

Optional accessories		€	
Firebox inner lining and flue gas spigot have to be ordered separately!			
1004-00212	inner lining of combustion chamber JUWEL H1	370.00	
1004-01264	Flue gas spigot Ø 145 mm	50.00	
1004-00780	Flue gas spigot Ø 180 mm	50.00	
1004-00078	Horizontal cast iron flue gas spigot Ø 145 mm, endless rotatable, for extreme shallow connection ▶ place on a spigot Ø180mm	200.00	³
1004-00077	Horizontal cast iron flue gas spigot Ø 180 mm, endless rotatable, for extreme shallow connection	200.00	³
1003-01984	LEDATRONIC LT3 WiFi Electronic combustion air control device for tiled stoves with Ø 125 mm combustion air connector, set for pre-equipped JUWEL H1	1260.00	²



JUWEL

Optional accessories		€	
1004-00038	Adapter trim 420 x 45 mm to enlarge the height of the front plate, total dimensions 420 x 835 mm	50.00	⁴
1004-00037	Adapter trim 420 x 105 mm to enlarge the height of the front plate, total dimensions 420 x 895 mm	70.00	⁴
1003-00141	Inspection door with louvre grid free cross-section approx. 127 cm ²	260.00	⁵
1004-00007	Inspection door adapter (for direct mounting on the front plate)	40.00	
Support base			p.308
1004-00993	Support base T2 for JUWEL H1, 8,6 kg	240.00	
1004-00996	Support base extension	160.00	
1003-01494	GSK Cast iron exchanger box with soap stone inlay	810.00	p.302
	LHK Cast iron heat exchanger box		p.304
1003-00561	LHK 320 cast iron heat exchanger box	1210.00	
1003-01832	LHK 695 cast iron heat exchanger box	530.00	
1003-01722	LHK 745 cast iron heat exchanger box	540.00	
1004-00988	LSB Cast Iron heat storage bloc	100.00	p.306

Optional accessories		€	
LWS Heat accumulation System			p.278
1004-00952	LWS set 1, nine elements	1150.00	
1004-00986	LWS set 1.1 with heat-up damper, eleven elements	1440.00	
1004-01104	LWS set 3, seven elements	980.00	
	LWS set single elements for customised composition or extension of the LWS set	opt.	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

¹ Models „for LT3“ can only be controlled by the electronic device.


² LT3 WiFi display is not included, it can be ordered optionally (1004-00542)

³ Flue gas spigot Ø180 mm 1004-00780 has to be ordered as well. This has to be ordered underneath.


⁴ Drilled holes for the assembly of the inspection door adapter are already available

⁵ To attach the inspection door to the front plate the inspection door adapter 1004-00007 has to be ordered.

Type JUWEL		H1		H1 E	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229			
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250			
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40			
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120			
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200			
Efficiency	[%]	≥ 80			
Flue gas temperature	[°C]	136	155	136	155

I. Operation with cast iron heat exchanger box ^{2,3,4)}					
Cast iron heat exchanger box					
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK			
Performance data					
Nominal heat output, \dot{Q}_N	[kW]	6	7	6	7
Direct radiation and convection output	[kW]	5.3	6.1	5.4	6.3
Heat output over the front surface(s) and glass pane(s)	[kW]	0.7	0.9	0.6	0.7
Chimney dimensioning data according to EN 13384 part 1 and 2					
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	140	160	140	160
Flue gas mass flow	[g/s]	6.5	7.5	6.5	7,5
Minimum required chimney draft ¹⁾	[Pa]	12	12	12	12
Required combustion air flow rate	[m³/h]	18.3	21.3	18.3	21.3
Admissible fuels and feeding rate					
Admissible fuels		wood logs (preferred) and wood briquettes			
Fuel quantity, wood logs	[kg]	2.0	1.7	2.0	1.7
Feeding rate, wood logs	[kg/h]	2.0	2.1	2.0	2.1
Fuel quantity, wood briquettes	[kg]	1.9	1.6	1.9	1.6
Feeding rate, wood briquettes	[kg/h]	1.9	2.0	1.9	2.0
Air cross-sections ³⁾					
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	744	904	752	932
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	812	983	820	1011
Convection air outlet ³⁾	[cm²]	893	1085	902	1118
Inner gaps in the convection chamber ³⁾					
inner gaps between insert and thermal insulation or cladding	[cm]	3	4	3	4
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	3	4	3	4
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4	4	4
<div><div></div><div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</div></div>					

II. Operation with LWS / ceramic heat storage ⁴⁾					
Performance data					
combustion capacity – heat input, \dot{Q}_f	[kW]	17	19	17	19
heat output of insert	[kW]	9.9	10.7	9.9	10.7
Heat load of heating gas at spigot of insert	[kW]	7.8	9.2	7.8	9.2
Usable heat load of heating gas at spigot of insert	[kW]	4.5	5.6	4.5	5.6
Heat output over the front surface(s) and glass pane(s)	[kW]	1.8	2.0	1.3	1.4
Direct radiation and convection output (without heat storage)	[kW]	8.5	9.2	8.5	9.2
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2					
Heating gas temperature (at the spigot of insert)	[°C]	510	525	510	525
Flue gas mass flow	[g/s]	10.5	12.0	10.5	12.0
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15
Required combustion air flow rate	[m ³ /h]	32.8	36.9	32.8	36.9

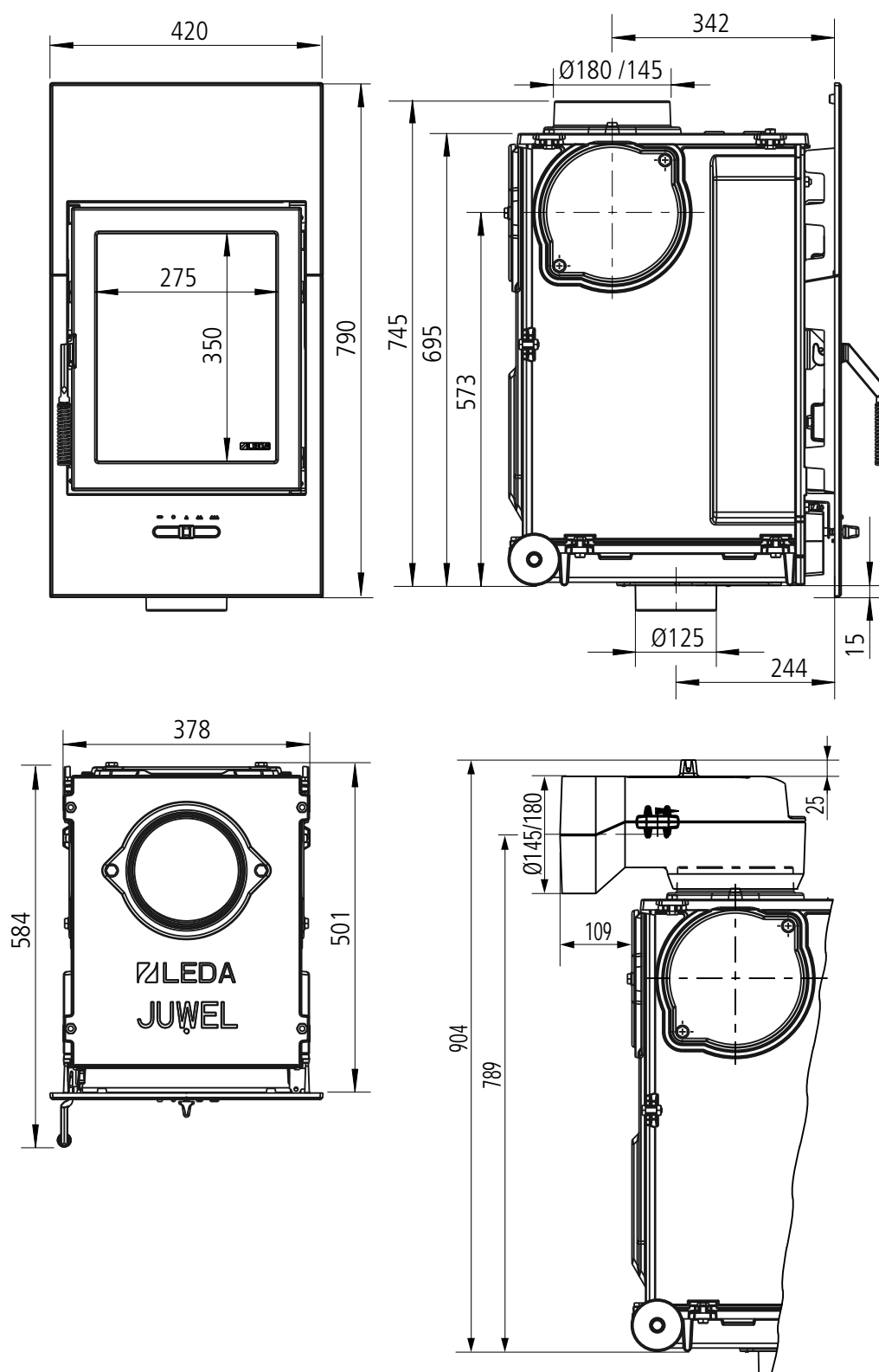
Type JUWEL		H1		H1 E	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180
Admissible fuels and feeding rate					
Admissible fuels		wood logs (preferred) and wood briquettes			
Fuel quantity, wood logs	[kg]	5.0	5.3	5.0	5.3
Feeding rate, wood logs	[kg/h]	4.0	4.5	4.0	4.5
Fuel quantity, wood briquettes	[kg]	4.8	5.0	4.8	5.0
Feeding rate, wood briquettes	[kg/h]	3.8	4.3	3.8	4.3
Operation with LWS, heat accumulation system					
Admissible LWS sets		Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3
Recommended number of LWS elements (25/25/25 cm)		8	8	8	8
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	167	180	167	180
Minimum required chimney draft for each 90° bend	[Pa]	0.28	0.37	0.28	0.37
Minimum required chimney draft for each 45° bend	[Pa]	0.13	0.17	0.13	0.17
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)					
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	145	157	145	157
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	17	17	17	17
Flue gas mass flow	[g/s]	10.5	12.0	10.5	12.0
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)					
Flue gas temperature (at output spigot of LWS set 3)	[°C]	192	206	192	206
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	17	17	17	17
Flue gas mass flow	[g/s]	10.5	12.0	10.5	12.0
Air cross-sections ³⁾					
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	1431	1558	1519	1665
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1553	1695	1640	1802
Convection air outlet ³⁾	[cm ²]	1717	1869	1822	1998
Inner gaps in the convection chamber ³⁾					
Inner gaps between insert and thermal insulation or cladding	[cm]	12	13	13	14
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)					

III. Specifications regarding fire protection and thermal insulation ⁶⁾					
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.					
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾					
(insulation thickness additional required to the required 10 cm pre-wallings)					
to the setup floor	[cm]	4	4	4	4
to the side	[cm]	10	10	10	10
to the rear	[cm]	10	10	10	10
to the ceiling ⁷⁾	[cm]	11	11	11	11
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation					
to the setup floor	[cm]	20	20	20	20
to the front of thermal insulation to the side	[cm]	10	10	10	10
to the front of thermal insulation to the rear	[cm]	10	10	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)					
Minimum convection air outlet, non-closable	[cm ²]	1460	1460	1460	1460
Minimum convection air inlet, non-closable	[cm ²]	1220	1220	1220	1220
Required distance in the radiation area of the front (with no additional radiation protection)					
Required distance	[cm]	80	80	80	80

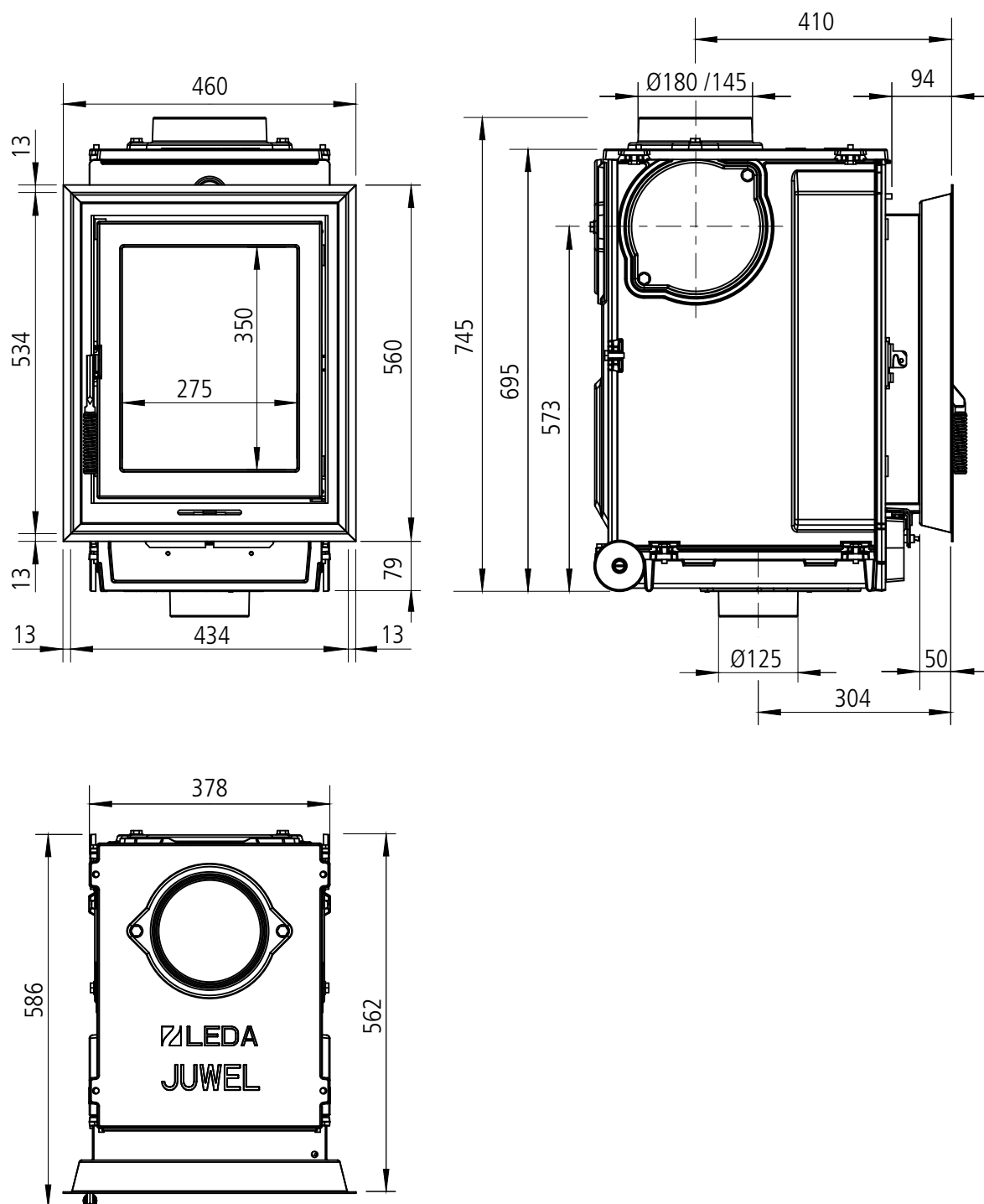
Type JUWEL		H1		H1 E	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180
V. Measurements, weights and miscellaneous					
External air connector	Ø [mm]	125	125	125	125
Flue gas spigot resp. connector piece	Ø [mm]	145	180	145	180
Preadjustment of the LT-3 combustion air valve (optional)	%	57	57	57	57
Static valve position of the LT-3 combustion air valve (test mode)	%	48	33	48	33
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	24	17	24	17
Maximum log size	[cm]	33	33	33	33
Weight of insert with inner lining	approx. [kg]	158	158	158	158
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66			
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130			

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert an heat exchanger box, 90°-elbow and a heating/ flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of
approx. 3.9 m² - with cast iron heat exchanger box,
approx. 2.1 m² - operation with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.

JUWEL H1 (displayed: with heating gas spigot 145/ 180 mm (1004-01264/ 1004-00780) and w/o/ with horizontal cast iron flue gas spigot 145/ 180 mm (1004-00078/ 1004-00077) / M1:10



JUWEL H1E (dispalyed: with heating gas spigot 145/ 180 mm (1004-01264/ 1004-00780) / M1:10



Tiled stove insert
JUWEL



RUBIN K16
(RUBIN K17 similar)



RUBIN K18



RUBIN K19



RUBIN K20
(RUBIN K21 similar)

RUBIN

Appropriated for hot air tiled stoves, tiled stoves with ceramic flues (heat storage).

Models:

	Body (WxD mm)	Front panel (HxW mm)	Log size (cm)	
			max.	opt.
K15	300 x 400	640 x 360	32	20
K16	360 x 420	790 x 390	34	25
K17	360 x 420	790 x 420	34	25
K18	360 x 500	790 x 420	38	33
K19	415 x 622	835 x 480	54	50
K20	415 x 490	835 x 480	54	33
K21	415 x 428	795 x 480	34	25

Front plate can be enlarged through additional adapter trimp.

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2), Munich Solid Fuel Ordinance
- Austrian § 15a-B-VG (models K17, K19, K21)
- Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+

Checkbox: What do I need to order?

- ☐ RUBIN Fireplace insert
- ☐ Inner lining of the combustion chamber
- ☐ Flue gas spigot
- + optional accessories

Product benefits at a glance:

- multifuel tiled stove insert for wood and lignite burning
- high quality cast iron appliance
- variable front dimensions through add-on trims
- perfect sized for the refurbishment of your tiled stove system
- optional door hinge (factory setting right)
- fuels: wood logs, wood briquettes and lignite briquettes (lignite briquettes burning with additional accessory: riddle grate)
- easy conversion to lignite briquettes burning
- comfortable one hand adjustment of the combustion air
- separate ash drawer enables an easy cleaning
- high quality chamotte combustion chamber inner lining (to apply with ceramic mortar)
- cast iron combustion chamber, rear wall lining (except K18)
- high efficiency
- particularly eco-friendly combustion
- with two transport rollers for easy positioning
- suitable for the connection to one chimney with multiple stoves
- flue gas spigot:
 - K15: Ø 130/ 145 mm
 - K16/ K17/ K18: Ø 145/ 180 mm (different diameter for variable output) top connection
 - K19/ K20: Ø 180 mm, top connection
 - K21: Ø 145/ 160/ 180 mm

Scope of delivery

Tiled stove insert with installation and operation manual, stove pass, spray paint can black-metallic, operation handle („cold hand“), heat-protective glove


RUBIN K16
RUBIN K17/ K18
RUBIN K19/ K20
RUBIN K21

Ref.-No.	Description - Inner lining not included	€	
1003-02187	RUBIN K15	1550.00	¹
1003-01901	RUBIN K16	1590.00	
1003-01902	RUBIN K17	1590.00	
1003-01904	RUBIN K18	1770.00	
1003-01905	RUBIN K19	1930.00	
1003-01906	RUBIN K20	1830.00	
1003-02072	RUBIN K21	1650.00	
Necessary accessories - Inner lining of combustion chamber and flue gas spigot have to be ordered separately		€	
1004-01251	Inner lining K15	110.00	
1004-00529	Inner lining K16/ K17	200.00	
1004-00204	Inner lining K18	220.00	
1004-00614	Inner lining K19	310.00	
1004-00818	Inner lining K20	290.00	
1004-01066	Inner lining K21	210.00	
	Flue gas spigot		
1004-01249	Flue gas spigot Ø 130 mm for K15	50.00	¹
1004-01250	Flue gas spigot Ø 145 mm for K15	50.00	¹
1004-01264	Flue gas spigot Ø 145 mm	50.00	
1004-00778	Flue gas spigot Ø 160 mm	50.00	
1004-00780	Flue gas spigot Ø 180 mm	50.00	

Necessary accessories - Inner lining of combustion chamber and flue gas spigot have to be ordered separately		€	
1004-00078	Horizontal cast iron flue gas spigot Ø 145 mm, endless rotatable, for extreme shallow connection ▶ put on Ø180 mm flue gas spigot	200.00	²
1004-01252	Horizontal cast iron flue gas spigot Ø 145/145 mm, endless rotatable, for extreme shallow connection ▶ put on Ø145 mm flue gas spigot	200.00	³
1004-00077	Horizontal cast iron flue gas spigot Ø 180 mm, endless rotatable	200.00	²
1004-01106	LEDA Service surcharge: Change of door hinge in the factory	90.00	
1004-01038	Cast iron door blind panel RUBIN	100.00	
1004-00931	Retrofit kit spring for conversion to self-closing door	20.00	

¹ For K15 only flue gas spigots 004-01249/-01250 suitable

² Ø180 mm Flue gas spigot 1004-00780 has to be ordered separately to be top mounted

³ Ø145 mm Flue gas spigot 1004-00777/-01250 has to be ordered separately to be top mounted











Front plate with inspection door

Door blind panel
made of cast iron (1004-01038)

Cast iron inspection door
with hot air openings for RUBIN

Riddle grate kit
for lignite briquettes burning

RUBIN

Optional accessories		€		Optional accessories		€	
	Riddle grate kit for lignite and briquettes burning			1003-00141	Cast iron inspection door 42/23, two wing door, air cross sections approx. 127 cm²	260.00	
1004-01230	Riddle grate kit for K15	100.00		1003-01591	Cast iron inspection door 48/23, two wing door, Air cross sections approx. 184 cm²	270.00	
1004-00927	Riddle grate kit for K16/ K17	110.00		1004-00007	Inspection door adapter (for direct connection to the front plate)	40.00	
1004-00928	Riddle grate kit for K18	110.00			Support base		p.308
1004-00929	Riddle grate kit for K19	140.00		1004-00992	Support base T1 for RUBIN K15/ 16 / 17, 7,0 kg	240.00	
1004-00930	Riddle grate kit for K20	140.00		1004-00993	Support base T2 for RUBIN K18, 8,6 kg	240.00	
1004-01064	Riddle grate kit for K21	110.00		1004-00994	Support base T3 for RUBIN K20/ K21, 9,3 kg	250.00	
	Installation Trims			1004-00995	Support base for RUBIN K19, 12,5 kg	260.00	
1004-00038	Installation trim 420 x 45 mm to enlarge the (height), cast iron	50.00		1004-00996	Support base extension	160.00	
1004-00037	Installation trim 420 x 105 mm to enlarge the (height), cast iron	70.00					
1004-00040	Installation trim 480 x 60 mm to enlarge the (height), cast iron	60.00					
1004-01065	Installation trim 480 x 100 mm to enlarge the (height), cast iron	70.00					
1004-01188	Installation trim 480 x 155 mm to enlarge the (height), cast iron	70.00					
1004-00039	Installation trims (pair) 30 x 835mm to enlarge the (width), steel	80.00					
1004-00041	Installation trims (pair) 30 x 895mm to enlarge the (width), steel	90.00					



Optional accessories		€	
1003-01494	GSK Cast iron heat exchanger box with soap stone inlay	810.00	p.302
	LHK Cast Iron heat exchanger		p.304
1003-00561	LHK 320 Cast iron heat exchanger	1210.00	
1003-01832	LHK 695 Cast iron heat exchanger	530.00	
1003-01722	LHK 745 Cast iron heat exchanger	540.00	
1004-00988	LSB Cast iron heat storage block , 1 element	100.00	p.306

Optional accessories		€	
	LWS Heat accumulation system		p.278
1004-00952	LWS Set 1, nine elements	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper, eleven elements	1440.00	
1004-00953	LWS Set 2, twelve elements	1470.00	
1004-00987	LWS Set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS Set 3, seven elements	980.00	
	LWS single elements for customised compositions	opt.	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

⁴ Drill holes for the inspection door adaptor are existent

⁵ Installation trim pair, 1004-00039 or 1004-00041 has to be ordered separately

⁶ Installation trim 1004-00038 has to be ordered separately

⁷ Installation trim 1004-00037 has to be ordered separately

⁸ To fix the cast iron inspection door direct to the front panel the adapter 1004-00007 has to be ordered separately.

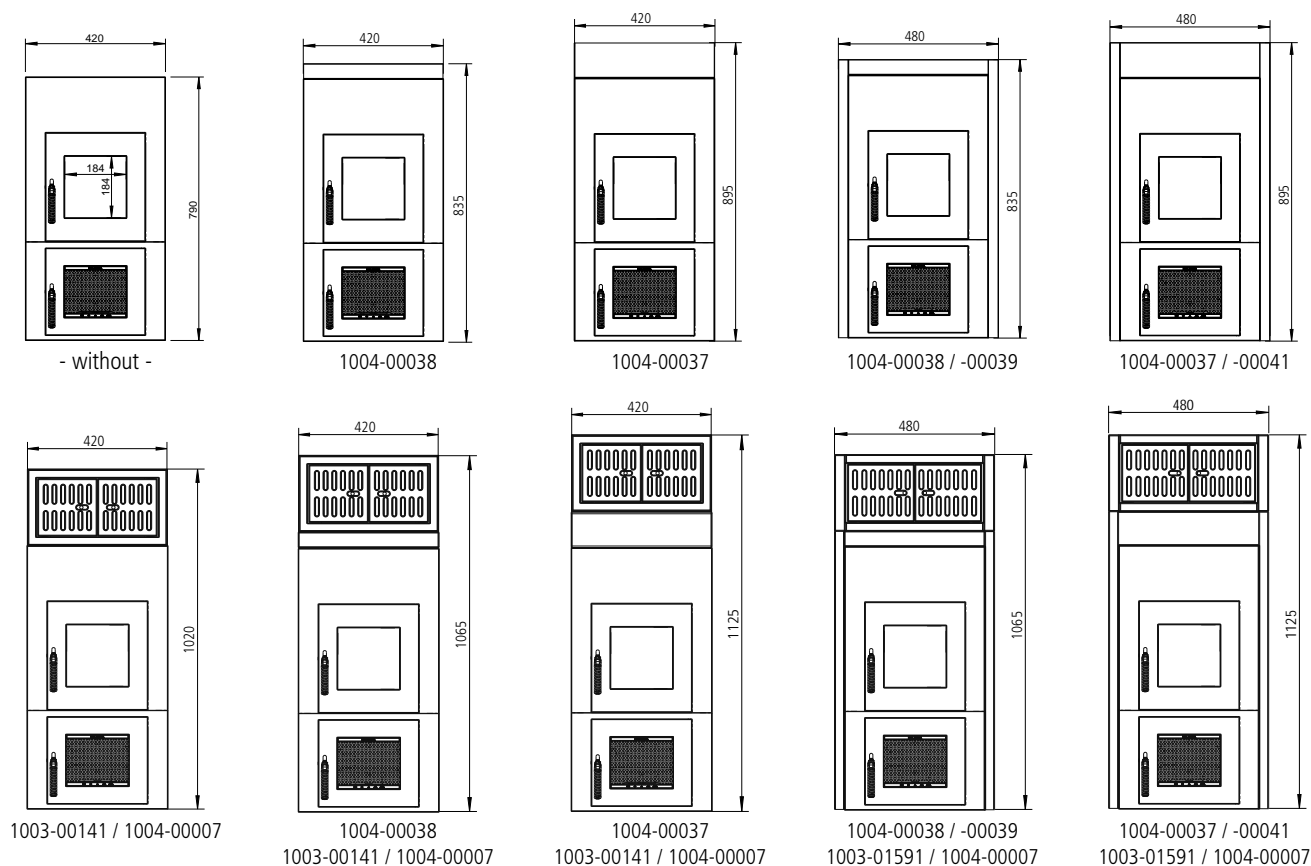


LSB Cast iron heat storage blocks

for extended heat release of approx.
3 to 5 hours (1 element - 1004-00988)

Summary of body and front measures (with installation trims)				
Insert body		Front panel size	Front panel size with inspection door	Applied installation trims
	(WxD mm)	(WxD mm)	(WxD mm)	Ref. No.
K15	300 x 400	640 x 360	—	—
K16	360 x 420	790 x 390	—	—
K17	360 x 420	790 x 420	1020 x 420	—
		835 x 420	1065 x 420	1004-00038
		895 x 420	1125 x 420	1004-00037
K18	360 x 500	835 x 480	1065 x 480	1004-00038 + 1004-00039
		895 x 480	1125 x 480	1004-00037 + 1004-00041
K19	415 x 622	835 x 480	1065 x 480	—
		895 x 480	1125 x 480	1004-00040
K20	415 x 490	935 x 480	1165 x 480	1004-01065
		990 x 480	1220 x 480	1004-01188
K21	415 x 428	795 x 480	1025 x 480	—
		855 x 480	1085 x 480	1004-00040
		895 x 480	1125 x 480	1004-01065
		950 x 480	1180 x 480	1004-01188

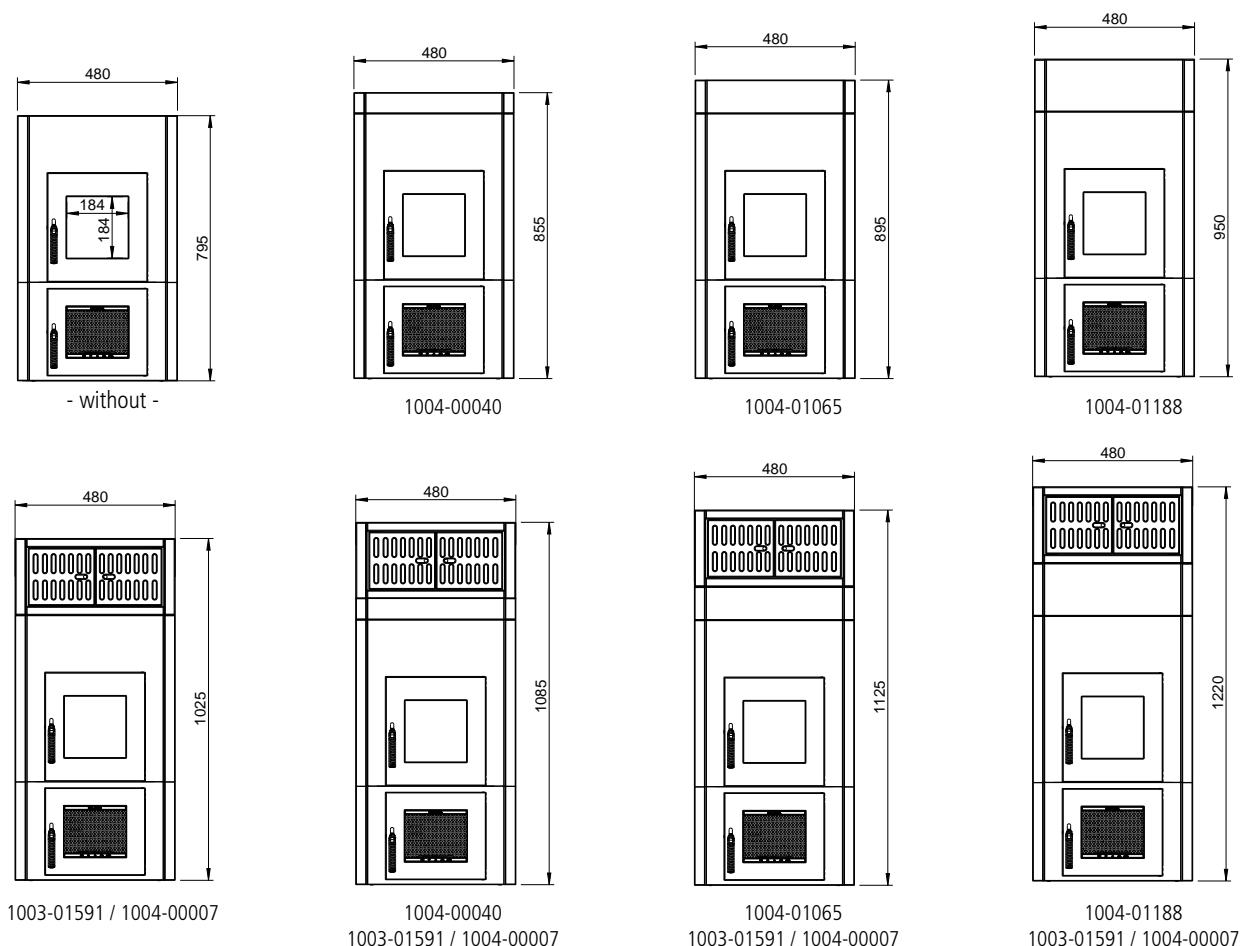
K17/ K18 RUBIN Front measures (without/ with installation trims)



K19/ K20 RUBIN Front measures (without/ with installation trims/ inspection door)



K21 RUBIN Front measures (without/ with installation trims/ inspection door)



Type RUBIN		K15	K16 / K17		K18		K19	K20	K21
spigot diameter		Ø 130 Ø 145	Ø 145	Ø 180	Ø 145	Ø 180	Ø 180	Ø 180	Ø 145 Ø 160 Ø 180
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229							
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+	A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250							
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40							
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120							
NO _x emissions - related to 13% O ₂ (wood logs/wood briquettes)	[mg/m ³ _N]	≤ 200							
NO _x emissions - related to 13% O ₂ (lignite briquettes)	[mg/m ³ _N]	≤ 300							
Efficiency	[%]	≥ 81							
Flue gas temperature (wood logs/wood briquettes) ¹⁰⁾	[°C]	160	160	164	181	188	227	208	200
Flue gas temperature (lignite briquettes) ^{8), 10)}	[°C]	170	166	180	164	201	235	218	207

I. Operation with cast iron heat exchanger box ^{2,3,4)}

Cast iron heat exchanger box

Admissible heat exchanger box ⁴⁾

LHK 320, LHK 695, LHK 745 or GSK

Performance data ^{8), 10)}

Nominal heat output, \dot{Q}_N	[kW]	7	6	7	7	8	11	9,5	9
Direct radiation and convection output	[kW]	6.3	5.4	6.3	6.3	7.2	9.7	8.4	8.1
Heat output over the front surface(s) and glass pane(s)	[kW]	0.7	0.6	0.7	0.7	0.8	1.3	1.1	0.9

Chimney dimensioning data according to EN 13384 part 1 and 2

used with wood logs or wood briquettes

Flue gas temperature (at the spigot of heat exchanger box)	[°C]	192	190	220	200	220	255	238	229
Flue gas mass flow	[g/s]	7	6	8	10	9,2	11	10,3	9
Minimum required chimney draft ¹⁾	[Pa]	12	12	13	12	12	12	12	12
Required combustion air flow rate	[m ³ /h]	19.9	17.0	23.0	28.4	29.6	31.0	28.9	25.4

used with lignite briquettes ⁸⁾

Flue gas temperature (at the spigot of heat exchanger box)	[°C]	204	175	210	200	220	255	238	223
Flue gas mass flow	[g/s]	6.5	7.0	7.5	10.0	10.5	11.0	10.3	9.4
Minimum required chimney draft ¹⁾	[Pa]	12	13	13	12	12	12	12	13
Required combustion air flow rate	[m ³ /h]	18.6	20.3	21.7	29.0	29.6	31.4	29.1	27.0

Admissible fuels and feeding rate

Admissible fuels		wood logs (preferred), wood briquettes and lignite briquettes ⁸⁾							
Fuel quantity, wood logs	[kg]	1.5	1.4	1.5	3.0	3.5	3.2	3.4	2.5
Feeding rate, wood logs	[kg/h]	2.0	1.8	2.0	2.9	3.3	3.4	3.4	2.7
Fuel quantity, wood briquettes	[kg]	1.4	1.3	1.4	2.9	3.3	3.0	3.2	2.4
Feeding rate, wood briquettes	[kg/h]	1.9	1.7	1.9	2.8	3.1	3.2	3.2	2.6
Fuel quantity, lignite briquettes	[kg]	1.6	1.4	1.6	3.8	5.0	2.9	3.9	2.3
Feeding rate, lignite briquettes	[kg/h]	1.7	1.5	1.7	2.1	3.2	2.9	3.1	2.3


Air cross-sections ³⁾

Convection air inlet ³⁾	[cm ²]	1028	843	1023	1005	1185	1653	1424	1377
Convection air outlet ³⁾	[cm ²]	1233	1012	1228	1206	1422	1984	1709	1653

Inner gaps in the convection chamber ³⁾

inner gaps between insert and thermal insulation or cladding	[cm]	6	4	6	5	7	9	8	9
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	6	4	6	5	7	9	8	9
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4	4	4	4	4	4	4

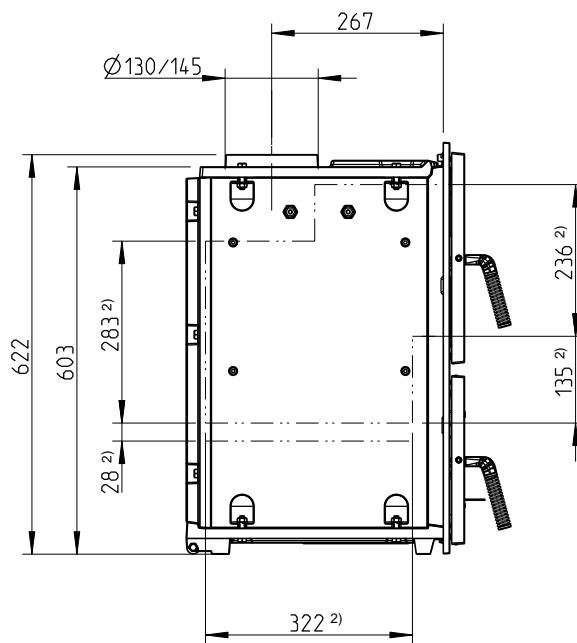
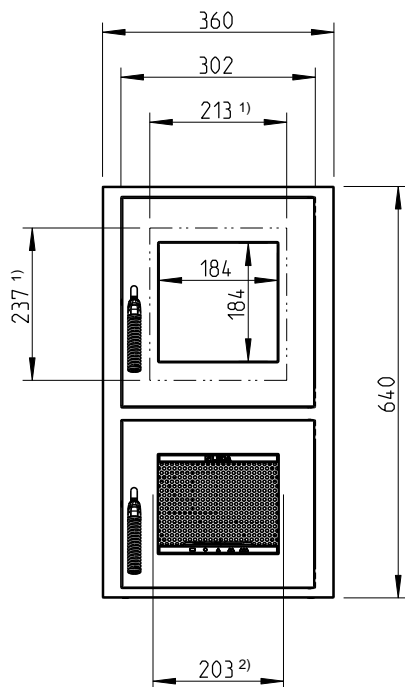
Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)

Type RUBIN		K15	K16 / K17		K18		K19	K20	K21
spigot diameter		Ø 130 Ø 145	Ø 145	Ø 180	Ø 145	Ø 180	Ø 180	Ø 180	Ø 145 Ø 160 Ø 180
II. Operation with LWS / ceramic heat storage ⁴⁾									
Performance data									
combustion capacity – heat input, \dot{Q}_f	[kW]	14	15	17	17	20	31	26	25
heat output of insert	[kW]	6.5	7.7	8.8	8.5	10.9	17.2	15.7	13.4
Heat load of heating gas at spigot of insert	[kW]	8.4	8.0	8.6	9.0	10.1	15.0	11.4	12.0
Usable heat load of heating gas at spigot of insert	[kW]	5.7	5.1	5.4	5.8	6.3	9.1	6.4	7.4
Heat output over the front surface(s) and glass pane(s)	[kW]	0.9	0.8	0.9	0.9	1.0	1.3	1.2	1.2
Direct radiation and convection output (without heat storage)	[kW]	5.3	6.5	7.4	7.0	8.9	13.8	12.8	11.0
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2									
Heating gas temperature (at the spigot of insert)	[°C]	591	550	570	575	590	595	590	575
Flue gas mass flow	[g/s]	9.5	9.8	10.2	10.5	11.5	16.9	13.0	14.1
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15	15	15	15	15
Required combustion air flow rate	[m³/h]	27.1	28.7	32.0	32.0	38.5	59.0	50.0	46.7
Admissible fuels and feeding rate									
Admissible fuels		wood logs (preferred) and wood briquettes							
Fuel quantity, wood logs	[kg]	3.5	4.0	5.0	5.0	6.0	10.0	8.0	7.6
Feeding rate, wood logs	[kg/h]	3.3	3.5	3.9	3.9	4.7	7.2	6.1	5.7
Fuel quantity, wood briquettes	[kg]	3.3	3.8	4.8	4.8	5.7	9.5	7.6	7.2
Feeding rate, wood briquettes	[kg/h]	3.1	3.3	3.7	3.7	4.5	6.9	5.8	5.4
Operation with LWS, heat accumulation system									
Admissible LWS sets		Set 3	Set 3	Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3	Set 1, Set 3
Recommended number of LWS elements (25/25/25 cm)		8	8	8	8	8	10	9	9
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	162	163	168	171	183	180	170	178
Minimum required chimney draft for each 90° bend	[Pa]	0.24	0.25	0.28	0.30	0.36	0.79	0.46	0.54
Minimum required chimney draft for each 45° bend	[Pa]	0.11	0.12	0.13	0.14	0.16	0.36	0.21	0.25
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)									
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	--	--	--	144	155	206	170	178
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	--	--	--	17	17	20	18	18
Flue gas mass flow	[g/s]	--	--	--	10.5	11.5	16.9	13.0	14.1
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)									
Flue gas temperature (at output spigot of LWS set 3)	[°C]	194	191	197	202	214	265	229	235
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	16	17	17	17	17	20	18	18
Flue gas mass flow	[g/s]	9.5	9.8	10.2	10.5	11.5	16.9	13.0	14.1
Air cross-sections ³⁾									
Convection air inlet ³⁾	[cm²]	950	1219	1432	1330	1793	2885	2692	2232
Convection air outlet ³⁾	[cm²]	1140	1463	1718	1596	2151	3462	3230	2678
Inner gaps in the convection chamber ³⁾									
Inner gaps between insert and thermal insulation or cladding	[cm]	10	12	14	11	15	20	23	21
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)									

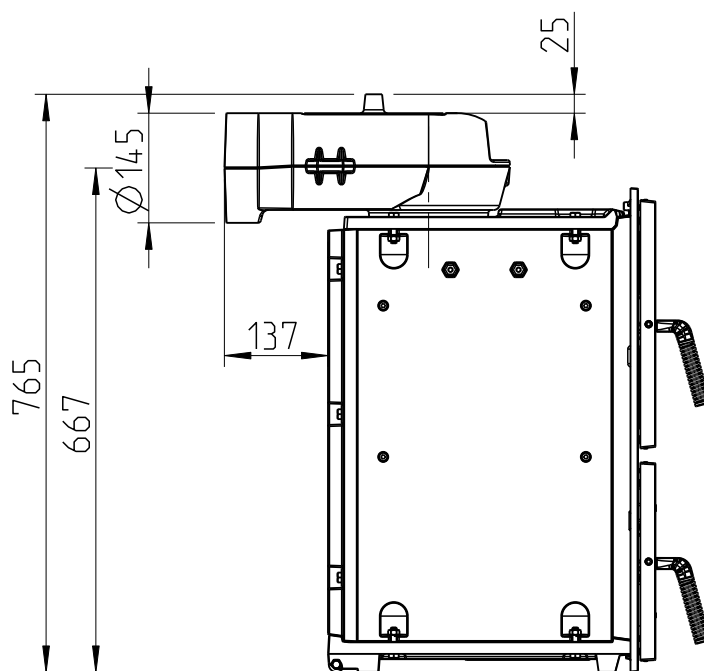
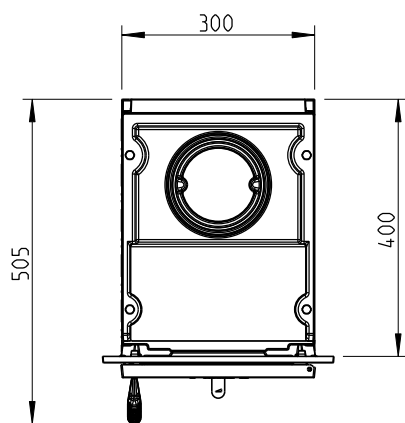
Type RUBIN		K15	K16 / K17		K18		K19	K20	K21
spigot diameter		Ø 130 Ø 145	Ø 145	Ø 180	Ø 145	Ø 180	Ø 180	Ø 180	Ø 145 Ø 160 Ø 180
III. Specifications regarding fire protection and thermal insulation ⁶⁾									
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.									
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾									
(insulation thickness additional required to the required 10 cm pre-wallings)									
to the setup floor	[cm]	— ⁹⁾	0	0	4	4	0	4	0
to the side	[cm]	— ⁹⁾	14	14	14	14	15	15	15
to the rear	[cm]	— ⁹⁾	14	14	12	12	15	15	15
to the ceiling ⁷⁾	[cm]	— ⁹⁾	15 ⁶⁾	15 ⁶⁾	— ⁶⁾	— ⁶⁾	14 ⁶⁾	14 ⁶⁾	15 ⁶⁾
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation									
to the setup floor	[cm]	— ⁹⁾	20	20	15	15	20	20	20
to the front of thermal insulation to the side	[cm]	— ⁹⁾	10	10	10	10	10	10	10
to the front of thermal insulation to the rear	[cm]	— ⁹⁾	10	10	10	10	10	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	— ⁹⁾	20	20	--	--	20	20	20
from flue gas pipe to the ceiling of the combustion chamber	[cm]	— ⁹⁾	--	--	6	6	--	--	--
Required air cross-sections for convection air inlet and outlet (for the fire protection)									
Minimum convection air outlet, non-closable	[cm ²]	— ⁹⁾	650	650	1260	1440	1190	1190	1190
Minimum convection air inlet, non-closable	[cm ²]	— ⁹⁾	1080	1080	1510	1730	2130	2130	2130
Required distance in the radiation area of the front (with no additional radiation protection) ¹⁰⁾									
Required distance	[cm]	100	80 ¹⁰⁾	80 ¹⁰⁾	80 ¹⁰⁾	80 ¹⁰⁾	80 ¹⁰⁾	80 ¹⁰⁾	80 ¹⁰⁾
V. Measurements, weights and miscellaneous									
Flue gas spigot resp. connector piece	Ø [mm]	130, 145	145	180	145	180	180	180	145, 160, 180
Optimal log size	[cm]	33	33	33	33	33	50	33	33
Weight of insert with inner lining	approx. [kg]	151	166	166	176	176	237	203	188
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66							
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130							

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass pane.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650 or 695 resp. 745), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
The inserts can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 2.9 m² (K15/K16/K17), approx. 3.1 m² (K18, K20), approx. 3.5 m² (K19), approx. 3.0 m² (K21) - with cast iron heat exchanger box, approx. 1.6 m² (K15/K16/K17/K18), approx. 1.9 m² (K19), approx. 1.7 m² (K20), approx. 1.7 m² (K21) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-wallings can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) Use with lignite briquettes is possible only with installed riddle grate set and preadjusted combustion air for lignite briquettes.
- 9) The intended use of the insert RUBIN K15 is mainly for installation in existing fireplaces (refurnishment) at incombustible walls and on incombustible setup floor. Therefore there are no required specifications regarding fire protection. The installation of the K15 in front of combustible / inflammable walls or on combustible setup floor is not admissible.
- 10) Given values are according to the German Regulations for fireplaces and chimneys (FeuVO) and not tested items acc. EN 13229.

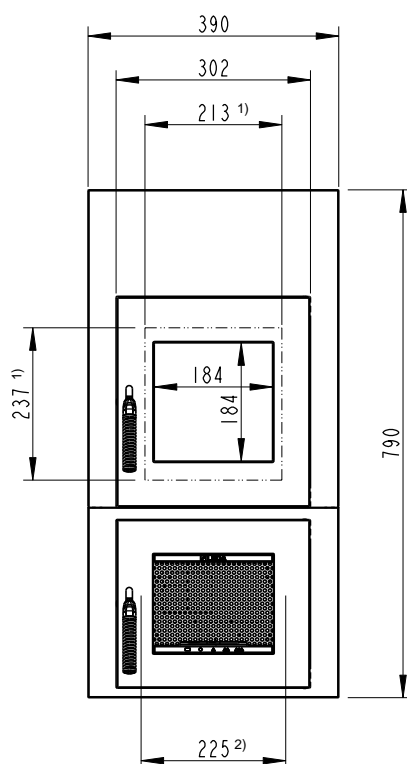
RUBIN K15 displayed: with flue gas spigot 130/ 145 mm (1004-01249/ 1004-01250) and w/o / with horizontal cast iron flue gas spigot 145/145 mm (1004-01252) / M1:10



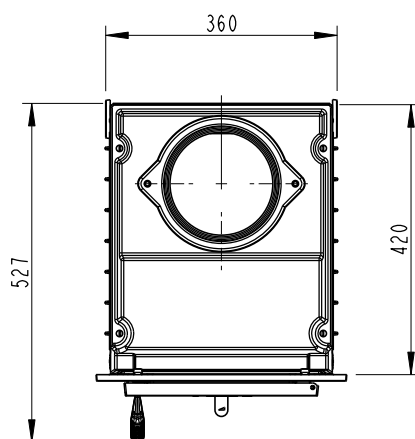
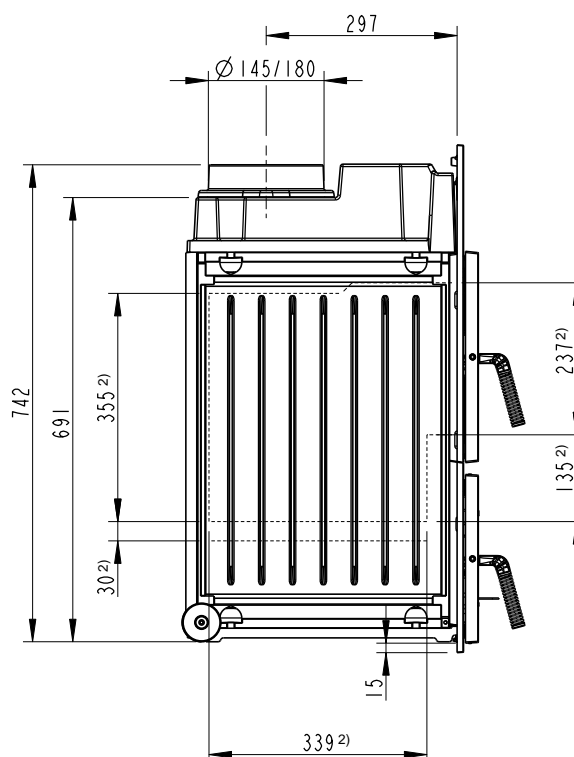
- 1) Door blind panel
2) Combustion chamber dimension



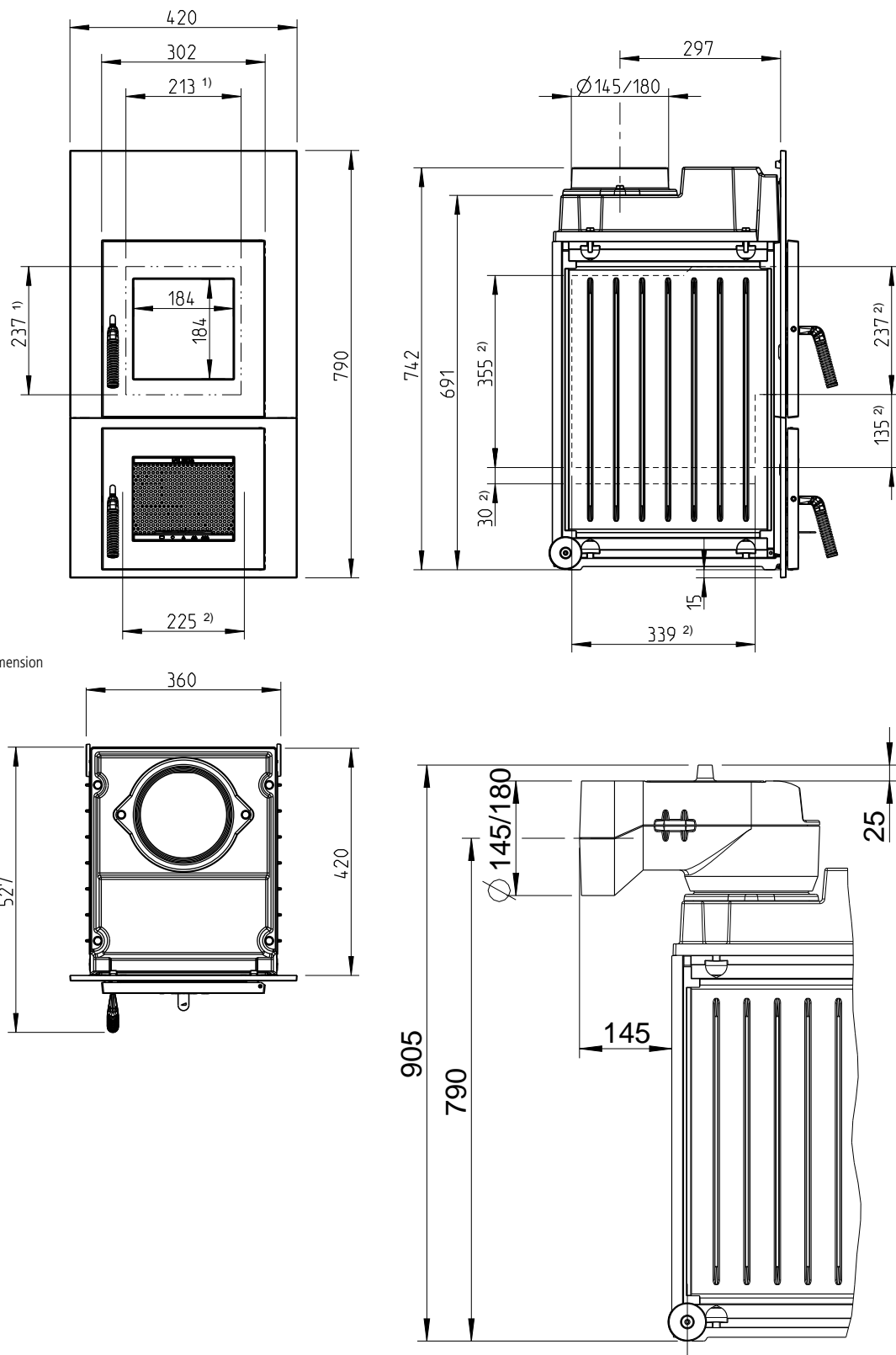
RUBIN K16 displayed: with flue gas spigot 145/ 180 mm (1004-01262/ 1004-00780) / M1:10



- 1) Door blind panel
2) Combustion chamber dimension

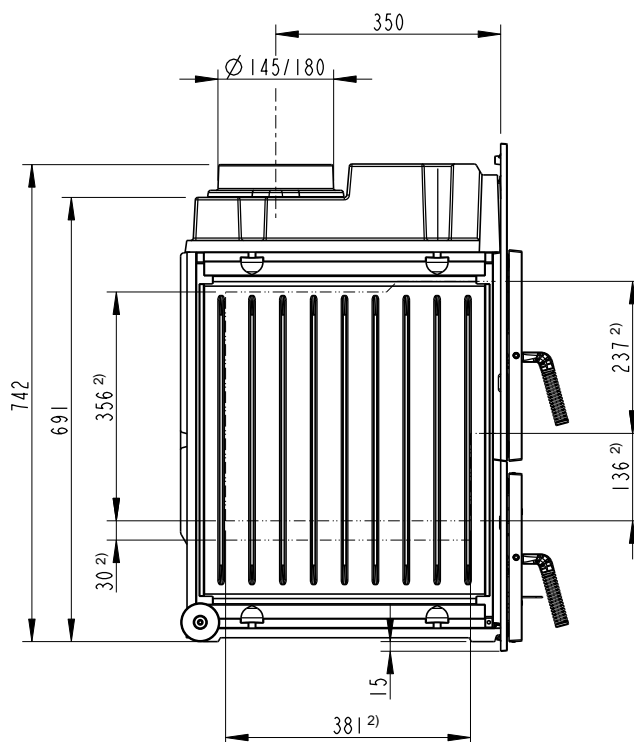
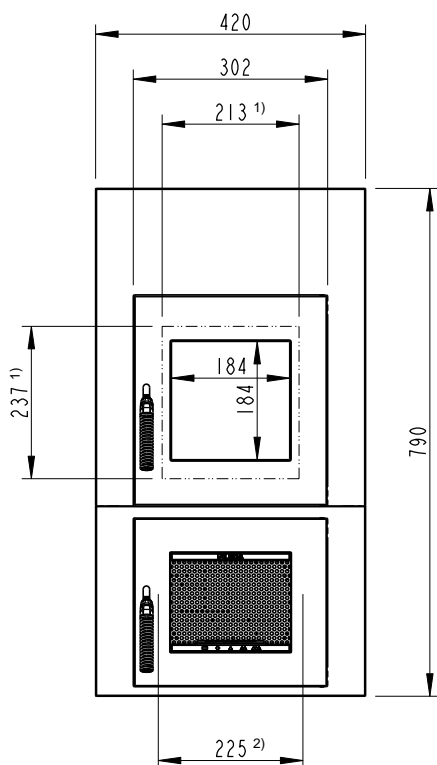


RUBIN K17 displayed: with flue gas spigot 145/ 180 mm (1004-01262/ 1004-00780) and w/o / with horizontal cast iron flue gas spigot 145/ 180 mm (1004-00078/ 1004-00077) / M1:10

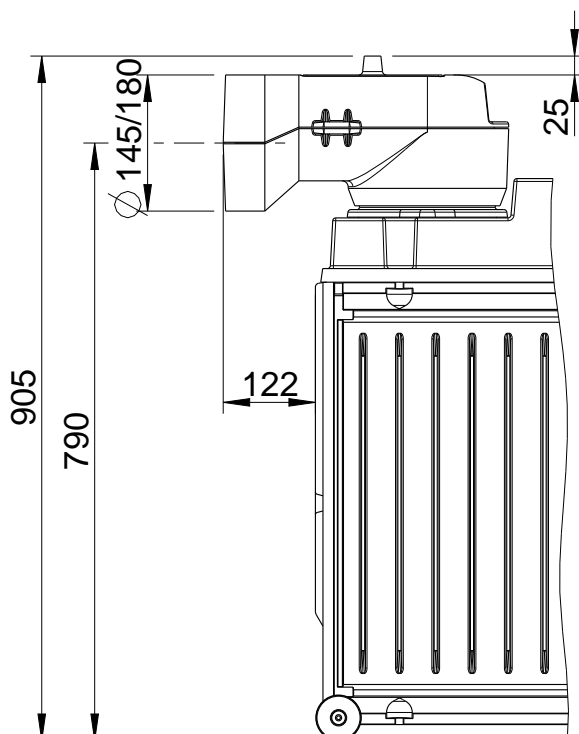
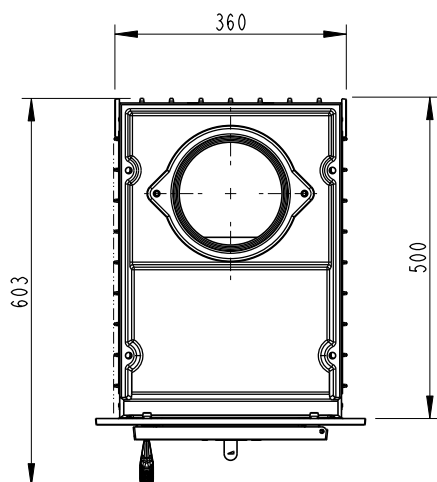


- 1) Door blind panel
2) Combustion chamber dimension

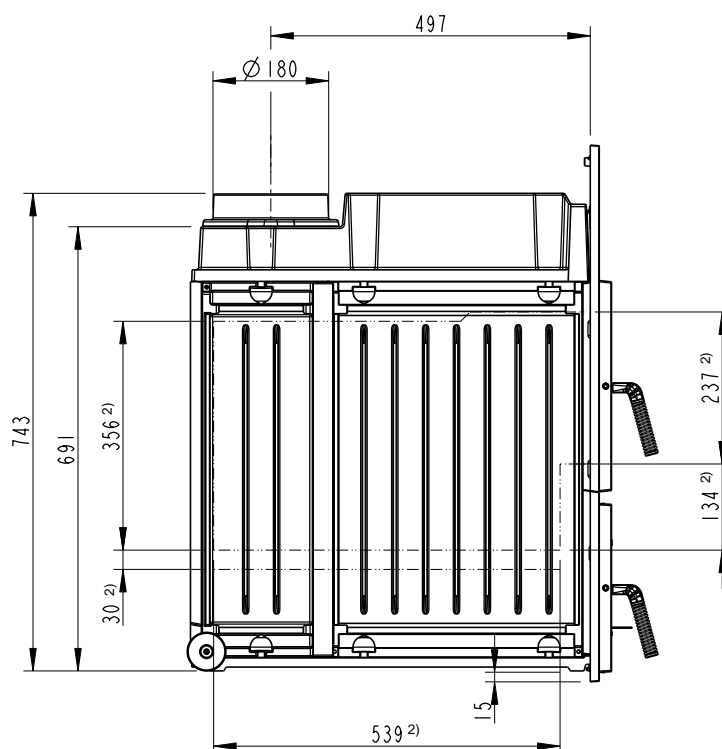
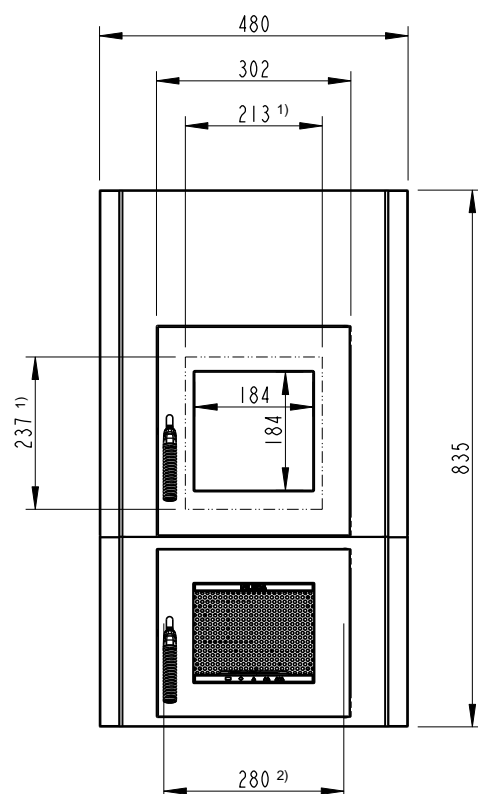
RUBIN K18 displayed: with flue gas spigot 145/ 180 mm (1004-01262/ 1004-00780) and w/o / with horizontal cast iron flue gas spigot 145/ 180 mm (1004-00078/ 1004-00077) / M1:10



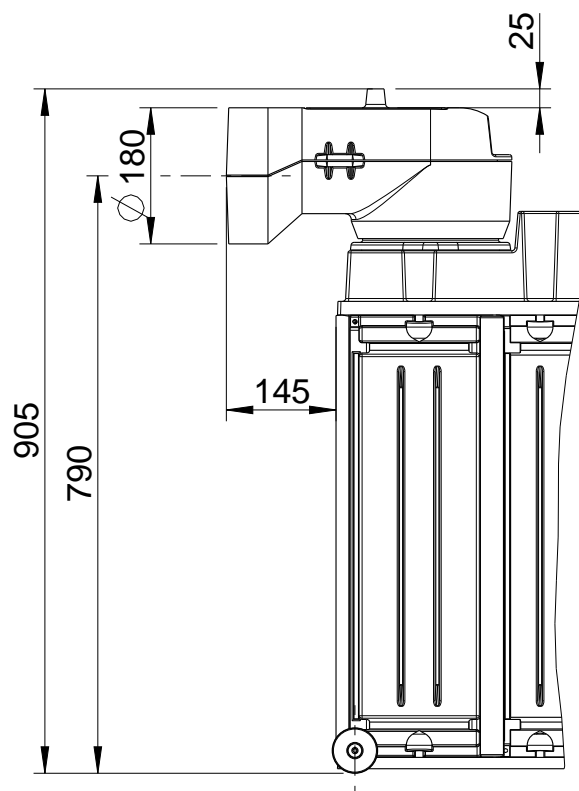
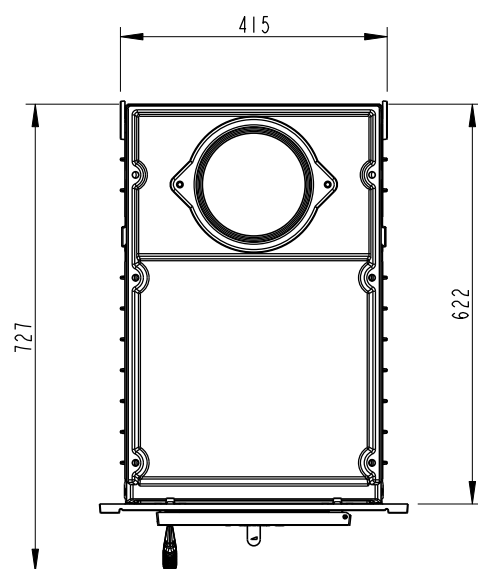
- 1) Door blind panel
2) Combustion chamber dimension



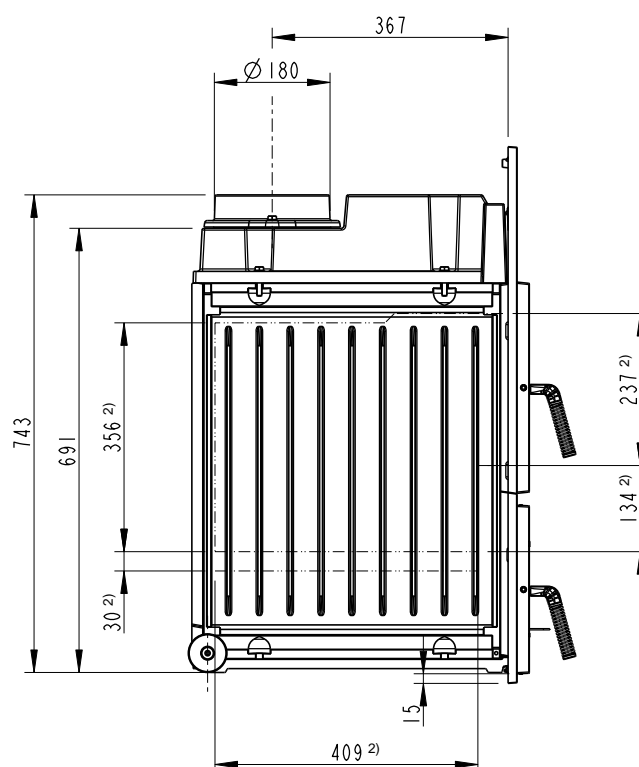
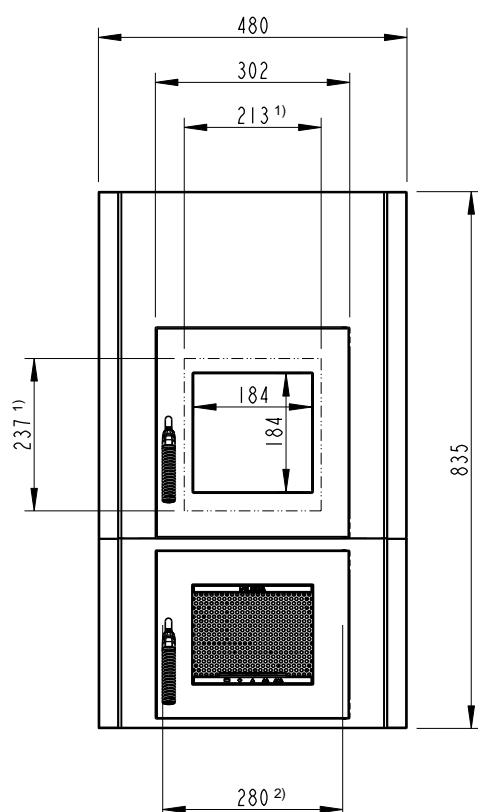
RUBIN K19 displayed: with flue gas spigot 180 mm (1004-00780) and w/o / with horizontal cast iron flue gas spigot 180 mm (1004-00077) / M1:10



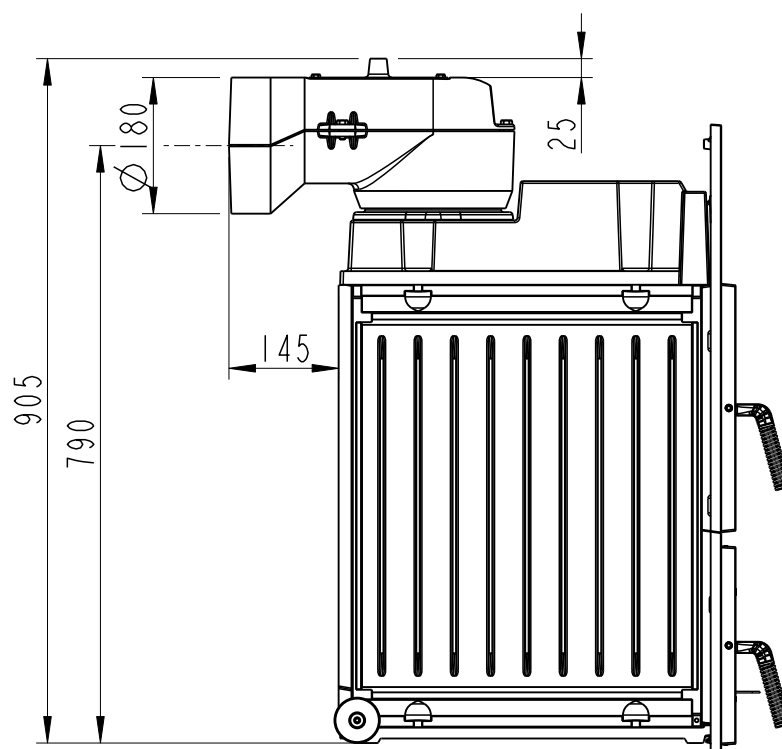
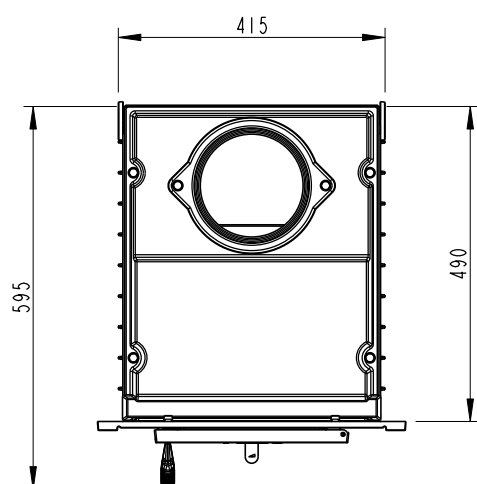
- 1) Door blind panel
2) Combustion chamber dimension



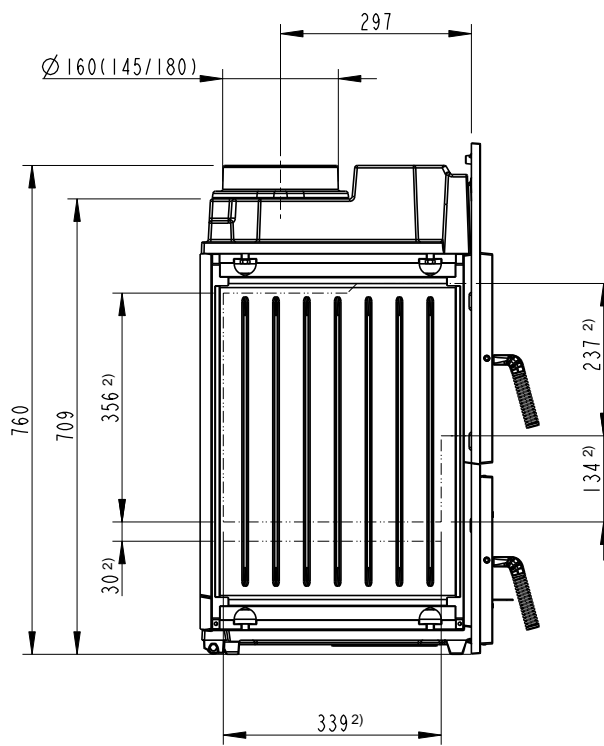
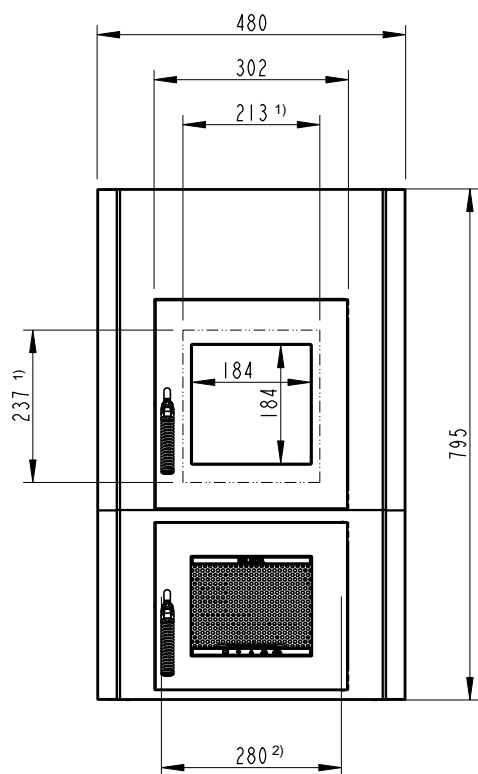
RUBIN K20 displayed: with flue gas spigot 180 mm (1004-00780) and w/o / with horizontal cast iron flue gas spigot 180 mm (1004-00077) / M1:10



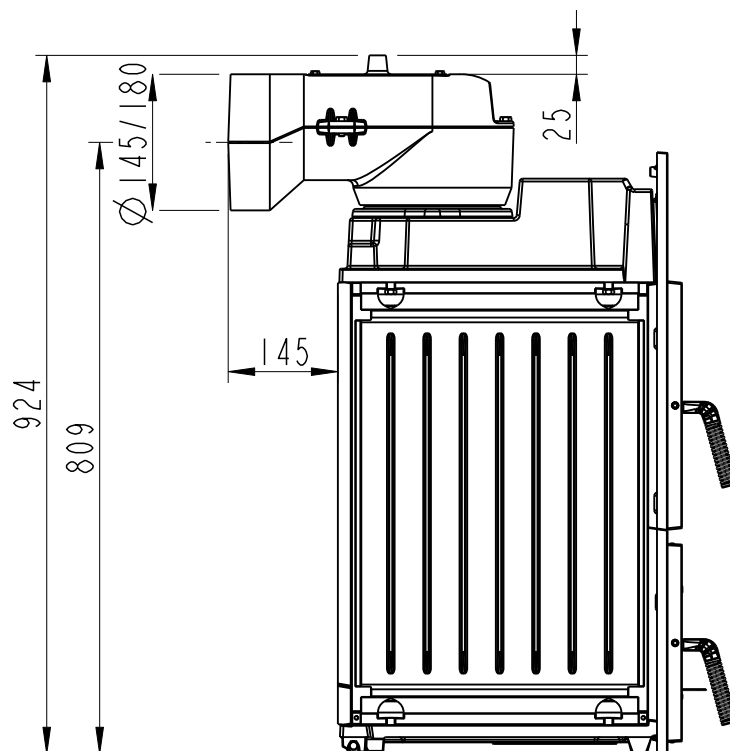
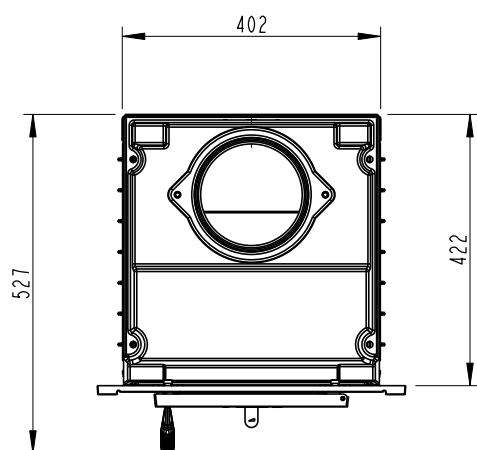
- 1) Door blind panel
2) Combustion chamber dimension



RUBIN K21 displayed: with flue gas spigot 145/ 160/ 180 mm (1004-01262/ 1004-00778/ 1004-00780) and w/o / with horizontal cast iron flue gas spigot 145/ 180 mm (1004-00078/ 1004-00077) / M1:10



- 1) Door blind panel
2) Combustion chamber dimension





TURMA H75 (standard model)

displayed with: diagonal install. frame, black (1004-01260), cast-iron flue gas spigot, (1004-00758/ 1004-00759)

TURMA H75 + top mounted heat exchanger

displayed with: install. frame, black (1004-01259), top mounted heat exchanger (1004-01133), 3-part flue gas spigot, (1004-01140)



TURMA (standard model)

displayed with: installation frame (1004-00760), cast iron flue gas spigot, (1004-00758/ 1004-00759)

TURMA DS (double sided)

displayed with: installation frame inox (1004-00763), glass-front-panel set (1004-00757), cast iron flue gas spigot (1004-00758/ -00759), base frame (1004-00304)

TURMA

appropriated for hot air tiled stoves, tiled stoves with ceramic flues (heat storage)

Models:

– 4 sizes/output classes:

TURMA H75 with 7 kW nominal output

TURMA H80 with 8/ 10/ 12 kW nominal output

TURMA H85 for high fuel loading quantity up to 10 kg and high heat storage performance (for logs of 33 cm length)

TURMA H80 XL with 12/ 13 kW nominal output

TURMA H85 XL for high fuel loading quantity up to 15 kg and high heat storage performance (both for logs of 55 cm length)

– 2/ 3 different versions:

TURMA/ TURMA XL (standard model)

TURMA DS/ TURMA XL DS (double sided)

TURMA HL/ TURMA XL HL (with rear fuel-door)

– optional with Culinary-Set (add. Accessory):

Top mounted module for food preparation for all TURMA H 80 XL

Product benefit at a glance:

- High efficient cast iron insert with a large glass pane for a great view to the fire
- high-quality appliance with modern all-glass door and inox handle
- double glazing
- optional door hinge (factory setting left)
- fuels: wood logs and wood briquettes
- comfortable one-hand lever for the combustion air adjustment
- high quality precise fit chamotte inner lining of the combustion chamber which can be positioned loosely through the firebox door (aesthetic set-up through continuous, large size stones)
- inner lining accessible through the front door
- adjustable feet (with rubber pads) 6 cm height regulation
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- for the connection to one chimney with multiple stoves

TURMA H75:

- Airflow Volume Regulator (Air supply control with draught adjustment) included
- also for cast iron top mounted heat exchanger (twin-wall with 110 kg high quality refractory inside plus 50 kg cast iron casing)

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2)
- Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+ (H85 DS: A)

Scope of delivery

Tiled stove insert including chamotte inner lining, installation and operating manual, vermiculite baffle plates, stove pass, combustion air connector Ø 150 mm, 4 adjustable feet, heat-protection glove


TURMA HL (with rear fuel-door)

displayed with: installation frame inox (1004-00761), cast iron flue gas spigot (1004-00758/ -00759)


Real cast iron fuel door











TURMA HL (displayed with: base frame, wall sleeve)


Real cast iron fuel door

TURMA HL with chamotte door inner lining (displayed with: base frame (1004-00304), wall sleeve (1004-00759))


Laterally rotating handle

of the rear cast iron fuel door
TURMA HL allows comfortable opening











Ref.-No.	Description - without flue gas spigot and frame	€	
TURMA			
1003-02194	TURMA H75 (standard model)	2420.00	 ¹
1003-02196	TURMA H75 LT3 (standard model) for LEDATRONIC	2530.00	 ^{1,2} p.260
1003-01707	TURMA H80 (standard model)	2700.00	 ¹
1003-01710	TURMA H80 (standard model) for LEDATRONIC LT3	2810.00	 ^{1,2} p.260
1003-01817	TURMA H80 XL (standard model)	3100.00	 ¹
1003-01820	TURMA H80 XL (standard model) for LEDATRONIC LT3	3210.00	 ² p.260
1003-01919	TURMA H85 (standard model)	2750.00	 ¹
1003-01922	TURMA H85 (standard model) for LEDATRONIC LT3	2860.00	 ^{1,2} p.260
1003-01925	TURMA H85 XL (standard model)	3150.00	 ¹
1003-01928	TURMA H85 XL (standard model) for LEDATRONIC LT3	3260.00	 ^{1,2} p.260

Airflow Volume Regulator: Air supply control with draught adjustment

Innovative air valve installed in the furnace bottom:

- Improved installation possibilities of the fireplace with excessive chimney draft* without additional draught regulator
- optimisation of the complete combustion cycle through adequate airflow volume of the combustion air
- simple adjustment on site according to the chimney calculation
- lighting booster

*It. EN 13384

Ref.-No.	Description - without flue gas spigot and frame	€	
TURMA DS two-sided model with two equal-sized sides (equal doors, door handle firm mounted (different frames for each side can be chosen))			
1003-02194	TURMA H75 DS	3260.00	 ¹
1003-02196	TURMA H75 DS LT3 for LEDATRONIC	3370.00	 ^{1,2} p.260
1003-01708	TURMA H80 DS	3560.00	 ^{1,3}
1003-01711	TURMA H80 DS for LEDATRONIC LT3	3670.00	 ^{1,2,3} p.260
1003-01818	TURMA H80 XL DS	3960.00	 ^{1,3}
1003-01821	TURMA H80 XL DS für LEDATRONIC LT3	4070.00	 ^{1,2,3} p.260
1003-01920	TURMA H85 DS	3610.00	 ^{1,3}
1003-01923	TURMA H85 DS for LEDATRONIC LT3	3720.00	 ^{1,2,3} p.260
1003-01926	TURMA H85 XL DS	4010.00	 ^{1,3}
1003-01929	TURMA H85 XL DS for LEDATRONIC LT3	4120.00	 ^{1,2,3} p.260

Checkbox: What do I need to order?

- ☐ TURMA Tiled stove insert
- ☐ Frames or front panel (optional)
- ☐ Flue gas spigot
- ☐ LEDATRONIC (for devices for LEDATRONIC)

+ optional accessories


Installation frame

TURMA H75
black powder coated
(1004-01259)

Installation frame

TURMA H80/ H85
black powder coated (1004-00760)
Inox (1004-00761)

Diagonal install. frame

TURMA H75
black powder coated (1004-01260)

Diagonal installation frame

TURMA H80/ H85
black powder coated (1004-01035)
inox (1004-01036)

TURMA

Ref.-No.	Description - without flue gas spigot and frame	€	
	TURMA HL with rear fuel door without glas pane (with interior lining and (laterally rotating handle) and depth-adjustable wall sleeve		
1003-01709	TURMA H80 HL	3620.00	¹
1003-01712	TURMA H80 HL für LEDATRONIC LT3	3730.00	^{1,2} p.260
1003-01819	TURMA H80 XL HL	4020.00	¹
1003-01822	TURMA H80 XL HL für LEDATRONIC LT3	4130.00	^{1,2} p.260
1003-01921	TURMA H85 HL	3670.00	¹
1003-01924	TURMA H85 HL für LEDATRONIC LT3	3780.00	^{1,2} p.260
1003-01927	TURMA H85 XL HL	4070.00	¹
1003-01930	TURMA H85 XL HL für LEDATRONIC LT3	4180.00	^{1,2} p.260

¹ Flue gas spigot and frame has to be ordered separately!

² Models „for LT3“ can only controlled by the electronic device

³ for the two sides of the TURMA DS two frames or front panel has to be ordered, if required

⁴ Front panel + glas front panel set has to be ordered!

⁵ Steel front panels suitable for all TURMA from serial no. A-317814 / production date: 02.07.2018

⁶ MFS or spigot for dome 1004-00797 has to be ordered

Essential accessories -

Flue gas spigot, if requested installation frame and LT3 have to be ordered separately!

	Frames	€	
1004-01259	Installation frame for TURMA H75, black (powder coated), 408 x 527 mm	170.00	
1004-00760	Installation frame for TURMA H80/85, black (powder coated), 480 x 593 mm	190.00	
1004-00761	Installation frame, for TURMA H80/85, inox, 480 x 593 mm	290.00	
1004-00801	Deep installation frame for TURMA H80/85, black (powder coated), 480 x 593 mm	210.00	
1004-00802	Deep installation frame for TURMA H80/85, inox, 480 x 593 mm	320.00	
1004-01260	Diagonal installation frame for TURMA H75, black (powder coated), 476 x 595 mm	200.00	
1004-01035	Diagonal installation frame for TURMA H80/85, black (powder coated), 548 x 661 mm	220.00	
1004-01036	Diagonal installation frame for TURMA H80/85, inox, 548 x 661 mm	330.00	


Steel front panel

TURMA H75
black powder coated
(1004-01261)

Steel front panel

TURMA H80/ H85
black powder coated
(1004-01081 / 1004-01105)

Front panel set and frame

TURMA H80/ H85
Front panel set, black glass
(1004-00757) + Front panel black
powder coated (1004-00762)

Front panel set and frame

TURMA H80/ H85
Front panel set, black glass
(1004-00757) + Front panel inox
(1004-00763)

Essential accessories -

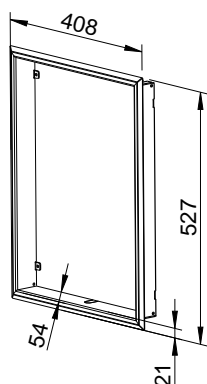
Flue gas spigot, if requested installation frame and LT3 have to be ordered separately!

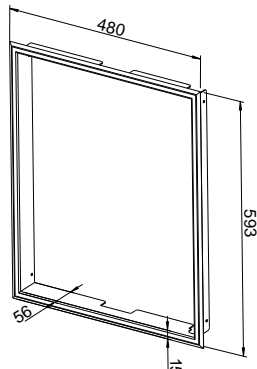
€

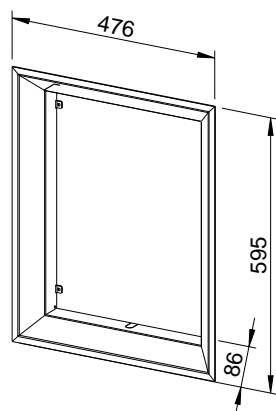


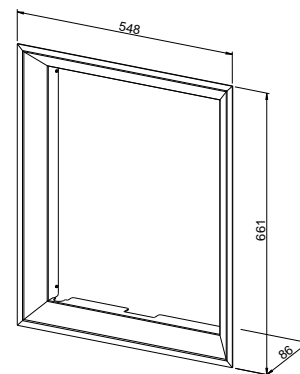
	Glass-front panel		
1004-00762	Front frame for front panel set, black (powder coated), 480 x 890 mm	230.00	4
1004-00763	Front frame for front panel set, inox 480 x 890 mm	380.00	4
1004-00757	Glass-front panel set, black	400.00	4
	Steel front panel one-piece steel front panel (black laquered), flush with the installation floor (no overhang), can be (plug-in) retrofited/ detachable		
1004-01261	Stahl-Frontplatte für TURMA H75, H790 x B420 mm (6 mm), schwarz pulverbeschichtet	290.00	
1004-01081	Steel front panel H892 x B480 mm (6 mm), black powder coated	300.00	5
1004-01105	Steel front panel H835 x B480 mm (6 mm), black powder coated	320.00	5
	Flue gas spigot		
1004-01262	Flue gas spigot Ø 1450 mm	50.00	
1004-00778	Flue gas spigot Ø 160 mm	50.00	
1004-00780	Flue gas spigot Ø 180 mm	50.00	
1004-00758	Cast iron flue gas spigot Ø 145 mm	100.00	
1004-00759	Cast iron flue gas spigot Ø 180 mm	100.00	

Which spigot for TURMA?		H75	H80/85
1004-00777	Flue gas spigot Ø 145 mm	X	
1004-00778	Flue gas spigot Ø 160 mm	X	
1004-00780	Flue gas connector Ø 180 mm	X	
1004-00093	Flue gas connector Ø 200 mm	X	
1004-00758	Flue gas connector Ø 145 mm		X
1004-00759	Flue gas connector Ø 180 mm		X
1004-00796	Flue gas dome		X
1004-00077	Horiz. flue gas spigot Ø 180 mm	X	X
1004-00078	Horiz. flue gas spigot Ø 145 mm	X	X
1004-01252	Horiz. flue gas spigot Ø145/145mm	X	
1004-00797	Spigot for dome Ø180 mm		X
1004-01140	3-part flue gas spigot	X	
1004-01057	Flue gas connector Ø 180/ 200 mm		X
1004-01182	Excentr. flue gas connect Ø 180 mm		X
1004-01395	Connection piece w/ inspection opening	X	
1004-00310	MFS double outlet (cleaning cover)	X	X
1004-00311	MFS double outlet (diverter damper)	X	X


Installation Frame (slim)








for TURMA H75
(1004-01259)

Installation Frame (slim)

for TURMA H80/ 85
(1004-00760 / 1004-00761)

Diagonal installation frame





for TURMA H75
(1004-01260)

Diagonal installation frame

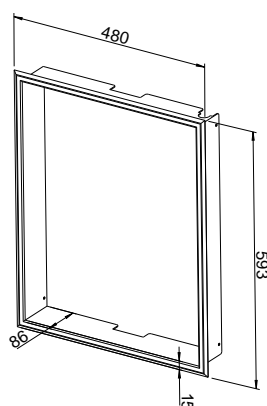
for TURMA H80/ 85
(1004-01035 / 1004-01036)

TURMA

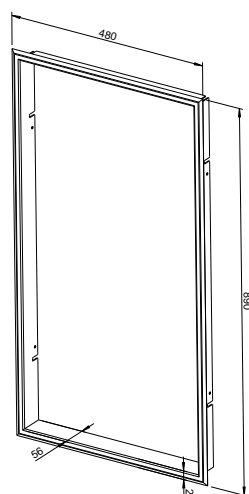
Essential accessories - Flue gas spigot, if requested installation frame and LT3 have to be ordered separately!		€	
1004-00796	Cast iron flue gas dome, endless rotatable	130.00	 ⁶
1004-00077	Horizontal cast iron flue gas spigot Ø 180 mm, endless rotatable, for extreme shallow connection	200.00	 ⁷
1004-00078	Horizontal cast iron flue gas spigot Ø 145 mm, endless rotatable, for extreme shallow connection ▶ place on Ø180 mm socket	200.00	 ⁷
1004-01252	Horizontal cast iron flue gas spigot Ø 145 mm, endless rotatable, for extreme shallow connection ▶ place on Ø145mm socket	200.00	 ⁸
1004-00797	Cast iron flue gas spigot for flue gas dome Ø 180 mm	100.00	 ⁹
1004-01140	Three-part flue gas spigot with inspection opening for top mounted heat exchanger	220.00	
1004-01057	Cast iron two-piece spigot Ø 180/ 200 mm (endless rotatable)	130.00	
1004-01182	Eccentric flue gas spigot Ø 180 mm	100.00	 ¹³
1004-01395	Connection piece with inspection opening - for combination with MFS Double flue gas outlet	110.00	 ¹²

NEW

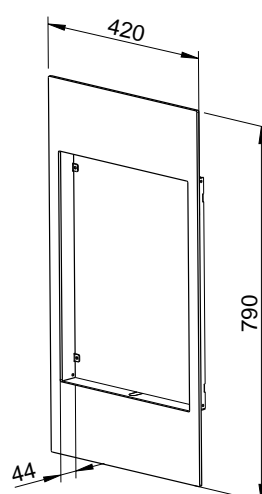
Essential accessories - Flue gas spigot, if requested installation frame and LT3 have to be ordered separately!		€	
1004-00310	MFS Double flue gas outlet with cleaning cover I	300.00	 ⁶
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	 ⁹
Convection plates			 ¹⁰
1004-01289	Convection plates (set) for H75	80.00	
1004-01290	Convection plates (set) for H75 DS	60.00	
1004-01291	Convection plates (set) for H75 + top mounted head exchanger	120.00	
1004-01292	Convection plates (set) for H75 DS + top mounted head exchanger	90.00	
Optional accessories		€	
1003-01976	LEDATRONIC LT3 WiFi electronic combustion air control device for tiled stove inserts with Ø 150 mm motorised combustion air supply		 ¹¹
1003-01976	LEDATRONIC WiFi for TURMA H80/H85	1260.00	
1004-01269	LEDATRONIC WiFi with VSR-box for TURMA H75	1380.00	
	▶ LT3 retrofitting set		p.260
1004-01106	LEDA Service surcharge: change of door hinge in the factory	100.00	


Installation Frame deep

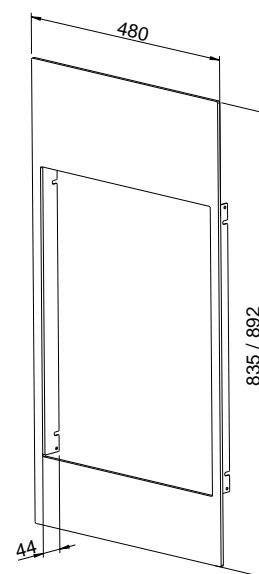
for TURMA H80/ 85
(1004-00801 / 1004-00802)


Front panel for front panel set

for TURMA H80/ 85
(1004-00762 / 1004-00763)


Steel front panel

for TURMA H75
1004-01261)


Steel front panel

for TURMA H80/ 85
(1004-01081 / 1004-01105)

Optional accessories		€	
1004-01042	Glass holding strip set for TURMA doors, black powder coated	80.00	
1004-00304	Base frame	200.00	
1004-00606	Removable door handle	70.00	
1004-00789	Supporting angle frame	50.00	
	Supporting base		p.308
1004-00993	Supporting base T2 for TURMA, 8,6 kg	240.00	
1004-00994	Supporting base T3 for TURMA, 9,3 kg	250.00	
1004-00995	Supporting base T4 for TURMA XL, 12,5 kg	260.00	
1004-00996	Support base extension	160.00	
1004-01133	Cast Iron top mounted heat exchanger for TURMA H75	700.00	
	GSA Cast iron top mounted heat exchanger		p.298
1004-00837	GSA Connecting set with TURMA	280.00	
1004-00282	GSA Cast iron top mounted heat exchanger with chamotte inlay	250.00	
1003-01494	GSK Cast iron heat exchanger box with soap stone inlay	810.00	p.302
	LHK Cast iron heat exchanger box		p.304
1003-00561	LHK 320 Cast iron heat exchanger	1210.00	

Optional accessories		€	
1003-01832	LHK 695 Cast iron heat exchanger	530.00	
1003-01722	LHK 745 Cast iron heat exchanger	540.00	
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	p.306
	LWS Heat Accumulation System		p.278
1004-00952	LWS set 1, nine elements	1150.00	
1004-00986	LWS set 1.1 with heat-up damper, eleven elements	1440.00	
1004-00953	LWS set 2, twelve elements	1470.00	
1004-00987	LWS set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS set 3, seven elements	980.00	
	LWS single elements for customised composition	opt.	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

7 Ø180 mm spigot 1004-00780 has to be ordered, because this has to be top-mounted

8 Ø145 mm spigot 1004-00777 has to be ordered, because this has to be top-mounted

9 Only suitable with cast iron dome

10 Absolutely necessary for installation in front of combustible components

11 LT3 WiFi without display which can be ordered optionally (1004-00542)

12 MFS Double flue gas outlet (1004-00310 or 1004-00311) has to be ordered.



TURMA H80 XL with culinary set

both with slim frames, stove and culinary set doors at the same side

TURMA H80 XL with culinary set

both with diagonal frames, stove and culinary set doors at the opposite sides (i)

TURMA H80 XL DS +culinary set

1st side: diagonal front frame and glass front panel
2nd side: diagonal installation frame


Culinary Set for TURMA

Culinary Set for TURMA H80 XL:

Product benefits at a glance

- High quality cast iron culinary set with complete chamotte firebox inner lining, top mounted set with a spacious preparation compartment (inside dimensions: H250 x B300 x T500 mm, weight: 200 kg)
- top mounted set as accessory for TURMA H80 SL - also suitable for the DS / HS models
- double glazed door and built-in thermometer, changeable door hinge (standard left)
- twin-wall construction: preparation compartment flushed around by the fire (not direct fired, for this reason is no risk of soot in the interior space), even heat distribution to the preparation compartment over the chamotte inner lining
- that's how it works: with a wood loading quantity of approx. 7.5 kg after the lighting, 200°C achieved in the culinary set. With a refuel of 4 kg of wood, this temperature can be maintained. With a refueling of 7,5 kg wood instead, the temperature can be increased up to 290°C in the interior compartment.
- also with the culinary set installed it will be possible to connect a long heat storage flue
- separately packed but ready assembled mounting on top on-site as a whole or in parts
- chamotte inner lining can be placed loose or fixed with mortar
- including separate fine pored heat storage stone as backing base, e.g. for pizza and bread or to place the food in the middle for even heat distribution
- different front options:
 - with individual installation frame (black powder coated) for the door of the culinary set, diagonally shallow or deep

- with common installation frame for the insert and the set (black powder coated) and black glass front panel between the stove door and the culinary set door
- top mounted set positioned to the front (stove and culinary set at the same side) or to the rear (stove and culinary set doors at the opposite sides)
- optional accessories for the culinary set: shovel, backing tray, grid and dough basket
- under normal conditions it is not necessary to clean the flue gas channels of the culinary set but it would be possible to do this with a brush from below through the combustion chamber of the TURMA

 Tip: Please use the diagonal installation frame 1004-01173 for the culinary set on the opposite side.)

Scope of delivery: Culinary set

Top mounted device with chamotte interior lining, installation and operating manual, 1 chamotte heat storage stone, 4 carrying handle

Checkbox: What do I need to order?

- ☐ Fireplace: tiled stove insert TURMA H80 XL
- ☐ Culinary set
- ☐ Frames or front panel (optional)
- ☐ Flue gas spigot

+ optional accessories


Installation frame, slim

TURMA with installation frame (1004-00760) and culinary set with installation frame (1004-01185)

Installation frame, diagonally

TURMA with diagonal installation frame (1004-01035) and culinary set with diagonal installation frame (1004-01173)

Front frame and glass front panel

TURMA with diagonal front frame (1004-01172) and culinary set with glass front panel (1004-01148)

Culinary set: Accessories for TURMA H80 XL		€	
1004-01144	Culinary set: Top mounted device for food preparation TURMA H80 XL/ XL DS/ XL HL	1950.00	¹³
1004-01173	Diagonal installation frame for culinary set, black (powder coated), 548 x 474 mm	150.00	
1004-01185	Slim installation frame for culinary set, black (powder coated), 484 x 410 mm	140.00	
1004-01172	Front frame (diagonally, black powder coated) for TURMA with culinary set 548 x 1168 mm	260.00	¹²
1004-01148	Glass front panel for TURMA with culinary set and diagonal front frame	180.00	
Optional accessories		€	
1004-01106	LEDA Service surcharge: change of door hinge in the factory	90.00	¹⁴
1004-01146	Additional chamotte heat storage stone (plate)	100.00	
1004-00028	Inox baking tray, 42 x 30 cm	90.00	
1004-00029	Inox roasting grid, 40 x 30 cm	60.00	
1004-00031	Beech wood shovel	80.00	
1004-00033	Rattan cane dough basket, 33 x 12 cm	40.00	

¹² Glass front panel 1004-01148 has to be ordered separately!

¹³ For a horizontal, rear flue gas exit at the culinary set the eccentric flue gas spigot has to be ordered separately!

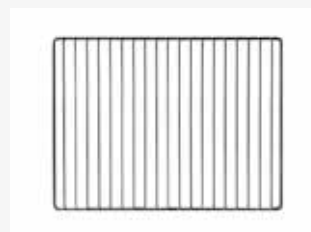
¹⁴ If the door hinges of both doors (TURMA and Culinary Set) should be changed, order 1004-01106 twice.


Culinary set

Top mounted device as accessory for the TURMA H80 XL (1004-01144)


Rattan cane dough basket

(1004-00033)


Inox roasting grid

(1004-00029)



Beech wood shovel

(1004-00031)


Type TURMA H75		H75	H75 DS
spigot diameter		Ø 180	Ø 180
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229	
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250	
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40	
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120	
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200	
Efficiency	[%]	≥ 81	
Flue gas temperature (top mounted heat exchanger)	[°C]	195	170
Flue gas temperature (cast iron heat exchanger box)	[°C]	205	179


I. Operation with top mounted heat exchanger (with cast iron top mounted heat exchanger)			
Performance data			
Nominal heat output, \dot{Q}_N	[kW]	7.0	7.0
Direct radiation and convection output	[kW]	5.2	3.4
Heat output over the front surface(s) and glass pane(s)	[kW]	1.8	3.6
Chimney dimensioning data according to EN 13384 part 1 and 2			
Flue gas temperature (at the spigot of top mounted exchanger)	[°C]	234	204
Flue gas mass flow	[g/s]	9.1	7.0
Minimum required chimney draft ¹⁾	[Pa]	12	12
Required combustion air flow rate	[m ³ /h]	26.2	19.8
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]	1.5	1.5
Feeding rate, wood logs	[kg/h]	2.2	2.1
Fuel quantity, wood briquettes	[kg]	1.4	1.4
Feeding rate, wood briquettes	[kg/h]	2.0	2.0
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	760	400
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	857	474
Convection air outlet ³⁾	[cm ²]	912	480
Inner gaps in the convection chamber ³⁾			
Inner gaps between insert and thermal insulation or cladding	[cm]	7	3
Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)			

II. Operation with cast iron heat exchanger box			
Cast iron heat exchanger box			
Admissible heat exchanger box ²⁾		LHK 695	
Performance data			
Nominal heat output, \dot{Q}_N	[kW]	7.0	7.0
Direct radiation and convection output	[kW]	5.2	3.4
Heat output over the front surface(s) and glass pane(s)	[kW]	1.8	3.6
Chimney dimensioning data according to EN 13384 part 1 and 2			
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	246	215
Flue gas mass flow	[g/s]	7.0	8.7
Minimum required chimney draft ¹⁾	[Pa]	12	12
Required combustion air flow rate	[m³/h]	19.8	25
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]	1.5	1.5
Feeding rate, wood logs	[kg/h]	2.1	2.1
Fuel quantity, wood briquettes	[kg]	1.4	1.4
Feeding rate, wood briquettes	[kg/h]	2.0	2.1

Type TURMA H75		H75	H75 DS
spigot diameter		Ø 180	Ø 180
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	748	388
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	821	480
Convection air outlet ³⁾	[cm ²]	897	465
Inner gaps in the convection chamber ³⁾			
inner gaps between insert and thermal insulation or cladding	[cm]	7	4
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	7	4
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)			

III. Operation with LWS / ceramic heat storage ⁴⁾			
Performance data			
combustion capacity – heat input, \dot{Q}_f	[kW]	12.0	12.0
heat output of insert	[kW]	7.2	7.2
Heat load of heating gas at spigot of insert	[kW]	4.8	4.8
Usable heat load of heating gas at spigot of insert	[kW]	2.5	2.5
Heat output over the front surface(s) and glass pane(s)	[kW]	1.8	1.8
Direct radiation and convection output (without heat storage)	[kW]	7.1	7.3
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2			
Heating gas temperature (at the spigot of insert)	[°C]	393	370
Flue gas mass flow	[g/s]	8.9	9.6
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15
Required combustion air flow rate	[m ³ /h]	25.0	27.2
Admissible fuels and feeding rate			
Admissible fuels		wood logs (preferred) and wood briquettes	
Fuel quantity, wood logs	[kg]	2.4	2.4
Feeding rate, wood logs	[kg/h]	2.8	2.8
Fuel quantity, wood briquettes	[kg]	2.3	2.3
Feeding rate, wood briquettes	[kg/h]	2.7	2.7
Operation with LWS, heat accumulation system			
Admissible LWS sets		set 1, set 3	set 1, set 3
Recommended number of LWS elements (25/25/25 cm)		7	7
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	171	173
Minimum required chimney draft for each 90° bend	[Pa]	0.18	0.20
Minimum required chimney draft for each 45° bend	[Pa]	0.08	0.09
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)			
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	148	153
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	16	16
Flue gas mass flow	[g/s]	8.9	9.6
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)			
Flue gas temperature (at output spigot of LWS set 3)	[°C]	171	173
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	16	16
Flue gas mass flow	[g/s]	8.9	9.6

Type TURMA H75		H75	H75 DS
spigot diameter		Ø 180	Ø 180
Air cross-sections ³⁾			
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	998	998
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	1091	1099
Convection air outlet ³⁾	[cm ²]	1197	1198
Inner gaps in the convection chamber ³⁾			
Inner gaps between insert and thermal insulation or cladding	[cm]	8	8
 <p>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)</p>			


IV. Specifications regarding fire protection and thermal insulation ⁶⁾			
 <p>Convection plate(s) are absolutely necessary for the installation of a TURMA H75 insert in front of construction walls containing combustible / inflammable materials!</p>			
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp. Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾ (insulation thickness additional required to the required 10 cm pre-wallings)			
to the setup floor	[cm]	0	0
to the side	[cm]	8	8
to the rear	[cm]	8	-
to the ceiling ⁷⁾	[cm]	12	12
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation			
to the setup floor	[cm]	15	15
to the front of thermal insulation to the side	[cm]	12	12
to the front of thermal insulation to the rear	[cm]	10	10
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	24	24
Required air cross-sections for convection air inlet and outlet (for the fire protection)			
Minimum convection air outlet, non-closable - for operation with cast-iron storage attachment	[cm ²]	1300	1300
Minimum convection air outlet, non-closable - for operation with LHK 695	[cm ²]	2000	2000
Minimum convection air inlet, non-closable - for operation with cast-iron storage attachment	[cm ²]	1560	1560
Minimum convection air inlet, non-closable - for operation with LHK 695	[cm ²]	2400	2400
Distance convection air inlet upwards to combustible ceiling - for operation with cast-iron storage attachment	[cm ²]	28	28
Distance convection air inlet upwards to combustible ceiling - for operation with LHK 695	[cm ²]	31	31
Required distance in the radiation area of the front (with no additional radiation protection)			
Required distance	[cm]	85	85

V. Abmessungen, Massen und sonstiges			
External air connector	Ø [mm]	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180	180
Static position of the air valve of the LT3/ VSR box (test mode)	%	32	24
Smallest position of the air valve of the LT3/ VSR box (dynamic test mode)	%	15	11
Maximum log size	[cm]	33	33
Weight of insert with inner lining	approx. [kg]	185	200
Weight of cast iron top mounted heat exchanger (with inner lining)	approx. [kg]	160	160
Weight of inner lining of top mounted heat exchanger	approx. [kg]	60	60
Weight of insert with top mounted heat exchanger and inner lining	approx. [kg]	319	332


Type TURMA H75	H75	H75 DS
spigot diameter	Ø 180	Ø 180

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above. With correct adjustment of the Airflow Volume Regulator (AVR) a requested operation is possible even at higher chimney draft (with chimneys at natural draft conditions) (see installation manual für correct adjustment of der Airflow Volume Regulator).
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 2) Each model has been tested with cast iron heat exchanger box (LHK695), spigot up, double-90°-elbow between insert an heat exchanger box, 90°-elbow and a heating/ flue pipe length of 50 cm at output spigot of heat exchanger box.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of
approx. 3.5 m² (H75 / H75 DS) - with top mounted heat exchanger,
approx. 3.7 m² (H75 / H75 DS) - with cast iron heat exchanger box LHK 695,
approx. 2.5 m² (H75 / H75 DS) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with top mounted heat exchanger, with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional information.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.

Type TURMA H80 (without XL-types)		H80		H80 HL		H80 DS	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250					
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40					
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120					
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200					
Efficiency	[%]	≥ 81					
Flue gas temperature	[°C]	209	204	209	204	226	247

I. Operation with cast iron heat exchanger box ^{2,3,4)}							
Cast iron heat exchanger box							
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK					
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	8	10	8	10	10	12
Direct radiation and convection output	[kW]	5.8	7.6	5.0	6.8	6.9	7.9
Heat output over the front surface(s) and glass pane(s)	[kW]	2.2	2.4	3.0	3.2	3.1	4.1
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	251	245	251	245	271	297
Flue gas mass flow	[g/s]	6.5	8.8	6.5	8.8	10.8	11.5
Minimum required chimney draft ¹⁾	[Pa]	11	11	11	11	11	11
Required combustion air flow rate	[m³/h]	18.2	24.7	18.2	24.7	30.8	32.4
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	1.7	2.1	1.7	2.1	2.1	2.6
Feeding rate, wood logs	[kg/h]	2.2	2.8	2.2	2.8	2.9	3.6
Fuel quantity, wood briquettes	[kg]	1.6	2.0	1.6	2.0	2.0	2.5
Feeding rate, wood briquettes	[kg/h]	2.1	2.7	2.1	2.7	2.8	3.4
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	832	1192	668	1028	1048	1248
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	899	1284	736	1120	1162	1368
Convection air outlet ³⁾	[cm²]	999	1431	802	1234	1258	1498
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	3	6	3	4	5	7
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	3	6	3	4	5	7
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	4	5	5	5	5
<div><div></div><div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</div></div>							

II. Operation with LWS / ceramic heat storage ⁴⁾							
Performance data							
combustion capacity – heat input, \dot{Q}_f	[kW]	24	31	24	31	25	25
heat output of insert	[kW]	13.0	17.5	13.0	17.5	11.4	11.2
Heat load of heating gas at spigot of insert	[kW]	11.2	13.8	11.2	13.8	14.6	14.9
Usable heat load of heating gas at spigot of insert	[kW]	6.8	8.0	6.8	8.0	9.8	10.1
Heat output over the front surface(s) and glass pane(s)	[kW]	4.0	5.5	5.0	6.7	6.8	6.1
Direct radiation and convection output (without heat storage)	[kW]	11.4	15.0	11.4	15.0	9.4	9.3
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2							
Heating gas temperature (at the spigot of insert)	[°C]	476	504	476	504	543	547
Flue gas mass flow	[g/s]	16.4	18.8	16.4	18.8	18.2	18.4
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15	15	15
Required combustion air flow rate	[m ³ /h]	45.9	58.2	45.9	58.2	51.2	51.8

Type TURMA H80 (without XL-types)		H80		H80 HL		H80 DS	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	5.0	6.1	5.0	6.1	5.0	6.1
Feeding rate, wood logs	[kg/h]	5.5	7.1	5.5	7.1	5.8	5.8
Fuel quantity, wood briquettes	[kg]	4.8	5.8	4.8	5.8	4.8	5.8
Feeding rate, wood briquettes	[kg/h]	5.2	6.8	5.2	6.8	5.5	5.5
Operation with LWS, heat accumulation system							
Admissible LWS sets		Set 1, Set 3	Set 1, Set 2, Set 3	Set 1, Set 3	Set 1, Set 2, Set 3	Set 1, Set 3	Set 1, Set 2, Set 3
Recommended number of LWS elements (25/25/25 cm)		10	11	10	11	11	11
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	165	163	165	163	162	164
Minimum required chimney draft for each 90° bend	[Pa]	0.67	0.90	0.67	0.90	0.88	0.90
Minimum required chimney draft for each 45° bend	[Pa]	0.31	0.41	0.31	0.41	0.40	0.41
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)							
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	183	201	183	201	206	208
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	19	21	19	21	21	21
Flue gas mass flow	[g/s]	16.4	18.8	16.4	18.8	18.2	18.4
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)							
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	--	146	--	146	--	145
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	--	20	--	20	--	20
Flue gas mass flow	[g/s]	--	18,8	--	18,8	--	18,4
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)							
Flue gas temperature (at output spigot of LWS set 3)	[°C]	225	246	225	246	258	259
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	19	21	19	21	22	21
Flue gas mass flow	[g/s]	16.4	18.8	16.4	18.8	18.2	18.4
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1583	2169	1383	1929	616	721
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1753	2385	1553	2145	805	912
Convection air outlet ³⁾	[cm²]	1900	2603	1660	2315	739	865
Inner gaps in the convection chamber ³⁾							
Inner gaps between insert and thermal insulation or cladding	[cm]	11	16	14	20	6	7
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							


III. Specifications regarding fire protection and thermal insulation ^{6,7)}							
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.							
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾							
(insulation thickness additional required to the required 10 cm pre-wallings)							
to the setup floor	[cm]	0	0	0	0	0	0
to the side - insert	[cm]	16	16	16	16	14	14
to the rear - insert	[cm]	16	16	--	--	--	--
to the side - heat exchanger box, long side	[cm]	10	10	10	10	10	10
to the side - heat exchanger box, small side	[cm]	16	16	16	16	14	14
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation							
to the setup floor - insert ⁸⁾	[cm]	22	22	22	22	22	22
to the front of thermal insulation to the side - insert	[cm]	10	10	10	10	15	15
to the front of thermal insulation to the rear - insert	[cm]	10	10	--	--	--	--
to the setup floor - heat exchanger box	[cm]	22	22	22	22	22	22
to the side - heat exchanger box, long side	[cm]	8	8	8	8	10	10
to the side - heat exchanger box, small side	[cm]	10	10	10	10	15	15

Type TURMA H80 (without XL-types)		H80		H80 HL		H80 DS	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180
Required air cross-sections for convection air inlet and outlet (for the fire protection)							
Minimum convection air outlet, non-closable	[cm²]	770	985	770	985	850	1165
Minimum convection air inlet, non-closable	[cm²]	1210	1640	1210	1640	1420	1940
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	80	80	80	80	90	90


V. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	145	180	145	180	145	180
Preadjustment of the LT-3 combustion air valve (optional)	%	74	74	74	74	74	74
Static valve position of the LT-3 combustion air valve (test mode)	%	42	42	42	42	41	41
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	21	21	21	21	21	21
Maximum log size	[cm]	33	33	33	33	33	33
Weight of insert with inner lining	approx. [kg]	267	267	278	278	227	227
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66					
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130					

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass panes.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.1 m² (H80), 3.2 m² (H80 HL or DS) - with cast iron heat exchanger box, approx. 2.3 m² (H80), 1.4 m² (H80 HL or DS) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informations
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute material. Maybe the pre-wall can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) The inner gap to the setup floor complies with the required specification if the base frame (1004-00304) is installed.

Type TURMA H85 (without XL-types)		H85	H85 HL	H85 DS
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229		
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250		
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40		
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120		
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200		
Efficiency	[%]	≥ 81		
Flue gas temperature	[°C]	251	251	244

I. Operation with cast iron heat exchanger box ^{2,3,4)}				
Cast iron heat exchanger box				
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK		
Performance data				
Nominal heat output, \dot{Q}_N	[kW]	14.0	14.0	14.0
Direct radiation and convection output	[kW]	11.5	10.7	10.5
Heat output over the front surface(s) and glass pane(s)	[kW]	2.5	3.3	3.5
Chimney dimensioning data according to EN 13384 part 1 and 2				
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	301	301	293
Flue gas mass flow	[g/s]	12.0	12.0	14.8
Minimum required chimney draft ¹⁾	[Pa]	12	12	12
Required combustion air flow rate	[m³/h]	33.6	33.6	41.9
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	3.3	3.3	3.1
Feeding rate, wood logs	[kg/h]	4.1	4.1	4.4
Fuel quantity, wood briquettes	[kg]	3.1	3.1	3.0
Feeding rate, wood briquettes	[kg/h]	3.9	3.9	4.2
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1972	1808	1768
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	2097	1933	1923
Convection air outlet ³⁾	[cm²]	2367	2170	2122
Inner gaps in the convection chamber ³⁾				
inner gaps between insert and thermal insulation or cladding	[cm]	11	12	12
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	11	12	12
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	4	5	5
<div><div></div><div><p>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</p></div></div>				

II. Operation with LWS / ceramic heat storage ⁴⁾				
Performance data				
combustion capacity – heat input, \dot{Q}_f	[kW]	28	28	31
heat output of insert	[kW]	15.1	15.1	14.8
Heat load of heating gas at spigot of insert	[kW]	13.4	13.4	17.8
Usable heat load of heating gas at spigot of insert	[kW]	8.1	8.1	11.8
Heat output over the front surface(s) and glass pane(s)	[kW]	3.1	4.0	5.7
Direct radiation and convection output (without heat storage)	[kW]	13.6	13.6	12.5
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2				
Heating gas temperature (at the spigot of insert)	[°C]	456	456	521
Flue gas mass flow	[g/s]	20.6	20.6	23.3
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15
Required combustion air flow rate	[m ³ /h]	58.0	58.0	65.6

Type TURMA H85 (without XL-types)		H85	H85 HL	H85 DS
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	10.0	10.0	10.0
Feeding rate, wood logs	[kg/h]	6.5	6.5	7.3
Fuel quantity, wood briquettes	[kg]	9.5	9.5	9.5
Feeding rate, wood briquettes	[kg/h]	6.2	6.2	7.0
Operation with LWS, heat accumulation system				
Admissible LWS sets		Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3
Recommended number of LWS elements (25/25/25 cm)		11	11	12
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	169	169	174
Minimum required chimney draft for each 90° bend	[Pa]	1.04	1.04	1.42
Minimum required chimney draft for each 45° bend	[Pa]	0.48	0.48	0.65
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)				
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	201	201	232
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	21	21	24
Flue gas mass flow	[g/s]	20.6	20.6	23.3
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)				
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	155	155	174
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	21	21	24
Flue gas mass flow	[g/s]	20.6	20.6	23.3
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)				
Flue gas temperature (at output spigot of LWS set 3)	[°C]	239	239	278
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	22	22	24
Flue gas mass flow	[g/s]	20.6	20.6	23.3
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	2212	2032	1505
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	2427	2247	1748
Convection air outlet ³⁾	[cm²]	2655	2439	1806
Inner gaps in the convection chamber ³⁾				
Inner gaps between insert and thermal insulation or cladding	[cm]	16	21	15
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)				


III. Specifications regarding fire protection and thermal insulation ^{6, 7)}				
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.				
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾				
(insulation thickness additional required to the required 10 cm pre-wallings)				
to the setup floor	[cm]	0	0	0
to the side - insert	[cm]	25	25	25
to the rear - insert	[cm]	21	--	--
to the side - heat exchanger box, long side	[cm]	18	18	18
to the side - heat exchanger box, small side	[cm]	21	21	21
Mindestabstände in der Heizkammer zu brennbaren Baustoffen				
to the setup floor - insert ⁸⁾	[cm]	6	6	6
to the front of thermal insulation to the side - insert	[cm]	14	14	14
to the front of thermal insulation to the rear - insert	[cm]	14	--	--
to the setup floor - heat exchanger box	[cm]	14	14	14
to the side - heat exchanger box	[cm]	14	14	14

Type TURMA H85 (without XL-types)		H85	H85 HL	H85 DS
Required air cross-sections for convection air inlet and outlet (for the fire protection)				
Minimum convection air outlet, non-closable	[cm²]	1450	1450	1450
Minimum convection air inlet, non-closable	[cm²]	1210	1210	1210
Required distance in the radiation area of the front (with no additional radiation protection)				
Required distance	[cm]	90	90	90


V. Measurements, weights and miscellaneous				
External air connector	Ø [mm]	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180	180	180
Preadjustment of the LT-3 combustion air valve (optional)	%	74	74	74
Static valve position of the LT-3 combustion air valve (test mode)	%	25	25	25
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	13	13	13
Maximum log size	[cm]	33	33	33
Weight of insert with inner lining	approx. [kg]	267	278	227
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66		
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130		

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass panep.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.1 m² (H80), 3.2 m² (H80 HL or DS) - with heat exchanger box, approx. 2.3 m² (H80), 1.4 m² (H80 HL or DS) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional informationp.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) The inner gap to the setup floor complies with the required specification if the the base frame (1004-00304) is installed.

Type TURMA H80 XL and H85 XL		H80 XL			H85 XL		
		XL	XL HL	XL DS	XL	XL HL	XL DS
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250					
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40					
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120					
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200					
Efficiency	[%]	≥ 81					
Flue gas temperature	[°C]	203	203	220	207	207	235

I. Operation with cast iron heat exchanger box ^{2,3,4)}							
Cast iron heat exchanger box							
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK					
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	12.0	12.0	13.0	15.0	15.0	15.0
Direct radiation and convection output	[kW]	10.3	9.6	9.8	12.7	11.8	12.0
Heat output over the front surface(s) and glass pane(s)	[kW]	1.7	2.4	3.2	2.3	3.2	3.0
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of heat exchanger box)	[°C]	243	243	264	248	248	281
Flue gas mass flow	[g/s]	13.3	13.3	13.1	10.4	10.4	14.7
Minimum required chimney draft ¹⁾	[Pa]	12	12	12	12	12	12
Required combustion air flow rate	[m³/h]	37.8	37.8	37.1	35.3	35.3	41.3
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	2.7	2.7	2.9	3.3	3.3	3.4
Feeding rate, wood logs	[kg/h]	3.7	3.7	3.9	4.3	4.3	4.7
Fuel quantity, wood briquettes	[kg]	2.6	2.6	2.8	3.1	3.1	3.2
Feeding rate, wood briquettes	[kg/h]	3.5	3.5	3.7	4.1	4.1	4.5
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1681	1535	1581	2161	1981	2015
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1821	1676	1718	2291	2111	2168
Convection air outlet ³⁾	[cm²]	2017	1843	1897	2593	2377	2419
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	7	7	8	10	11	11
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	7	7	8	10	11	11
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	5	5	5	5	5	5
<div><div></div><div>Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)</div></div>							

II. Operation with LWS / ceramic heat storage ⁴⁾							
Performance data							
combustion capacity – heat input, \dot{Q}_f	[kW]	28.0	28.0	28.0	33.0	33.0	43.0
heat output of insert	[kW]	16.2	16.2	16.2	17.0	17.0	21.1
Heat load of heating gas at spigot of insert	[kW]	12.8	12.8	12.8	17.3	17.3	23.3
Usable heat load of heating gas at spigot of insert	[kW]	7.4	7.4	7.4	11.0	11.0	15.2
Heat output over the front surface(s) and glass pane(s)	[kW]	2.0	2.7	3.6	2.2	3.0	4.2
Direct radiation and convection output (without heat storage)	[kW]	14.3	14.3	14.3	14.0	14.0	16.6
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2							
Heating gas temperature (at the spigot of insert)	[°C]	469	469	469	546	546	587
Flue gas mass flow	[g/s]	19.0	19.0	19.0	21.5	21.5	26.7
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15	15	15
Required combustion air flow rate	[m ³ /h]	54.1	54.1	54.1	63.1	63.1	81.2

Type TURMA H80 XL and H85 XL		H80 XL			H85 XL		
		XL	XL HL	XL DS	XL	XL HL	XL DS
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	7.2	7.2	7.2	15.1	15.1	15.0
Feeding rate, wood logs	[kg/h]	6.6	6.6	6.6	7.7	7.7	9.9
Fuel quantity, wood briquettes	[kg]	6.9	6.9	6.9	14.4	14.4	14.3
Feeding rate, wood briquettes	[kg/h]	6.3	6.3	6.3	7.3	7.3	9.4
Operation with LWS, heat accumulation system							
Admissible LWS sets		Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3
Recommended number of LWS elements (25/25/25 cm)		11	11	11	12	12	14
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	162	162	162	166	166	168
Minimum required chimney draft for each 90° bend	[Pa]	0.89	0.89	0.89	1.23	1.23	1.97
Minimum required chimney draft for each 45° bend	[Pa]	0.41	0.41	0.41	0.56	0.56	0.90
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)							
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	196	196	196	228	228	274
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	20	20	20	23	23	28
Flue gas mass flow	[g/s]	19.0	19.0	19.0	21.5	21.5	26.7
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)							
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	147	147	147	166	166	206
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	20	20	20	22	22	27
Flue gas mass flow	[g/s]	19.0	19.0	19.0	21.5	21.5	26.7
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)							
Flue gas temperature (at output spigot of LWS set 3)	[°C]	236	236	236	278	278	326
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	21	21	21	23	23	28
Flue gas mass flow	[g/s]	19.0	19.0	19.0	21.5	21.5	26.7
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	2611	2468	2291	2612	2452	2899
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	2811	2668	2491	2845	2685	3200
Convection air outlet ³⁾	[cm²]	3133	2961	2749	3134	2942	3479
Inner gaps in the convection chamber ³⁾							
Inner gaps between insert and thermal insulation or cladding	[cm]	16	19	18	16	19	22
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

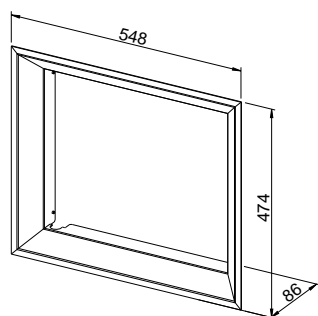
III. Specifications regarding fire protection and thermal insulation ⁶⁾							
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.							
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾							
(insulation thickness additional required to the required 10 cm pre-wallings)							
to the setup floor	[cm]	0	0	0	0	0	0
to the side - insert	[cm]	24	24	24	25	25	25
to the rear - insert	[cm]	14	--	--	21	--	--
to the side - heat exchanger box, long side	[cm]	14	14	14	12	12	12
to the side - heat exchanger box, small side	[cm]	14	14	14	21	21	21
to the ceiling ⁷⁾	[cm]	24	24	24	--	--	--
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation							
to the setup floor - insert ⁸⁾	[cm]	7	7	7	5	5	5
to the front of thermal insulation to the side - insert	[cm]	20	20	20	14	14	14
to the front of thermal insulation to the rear - insert	[cm]	14	--	--	14	--	--
from flue gas pipe up to the bottom side of thermal insulation ⁷⁾	[cm]	20	20	20	--	--	--
to the setup floor - heat exchanger box	[cm]	22	22	22	16	16	16
to the side - heat exchanger box	[cm]	14	14	14	14	14	14

Type TURMA H80 XL and H85 XL		H80 XL			H85 XL		
		XL	XL HL	XL DS	XL	XL HL	XL DS
Required air cross-sections for convection air inlet and outlet (for the fire protection)							
Minimum convection air outlet, non-closable	[cm ²]	2700	2700	2700	2000	2000	2000
Minimum convection air inlet, non-closable	[cm ²]	2200	2200	2200	1600	1600	1600
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	100	100	100	95	95	95
V. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180	180	180	180	180	180
Preadjustment of the LT-3 combustion air valve (optional)	%	74	74	74	74	74	74
Static valve position of the LT-3 combustion air valve (test mode)	%	47	47	47	25	25	25
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	24	24	24	13	13	13
Maximum log size	[cm]	50	50	50	50	50	50
Weight of insert with inner lining	approx. [kg]	333	293	344	333	293	344
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66					
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130					

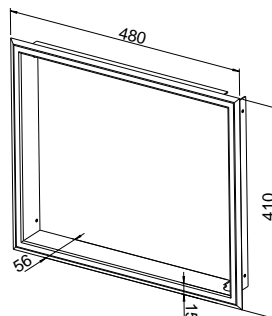
Type TURMA H80 XL and H85 XL	H80 XL			H85 XL		
	XL	XL HL	XL DS	XL	XL HL	XL DS

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass pane.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745..
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.7 m² (H80 XL), approx. 3.7 m² (H80 XL HL), approx. 3.8 m² (H80 XL DS), approx. 4.7 m² (H85 XL), approx. 3.8 m² (H85 XL HL), approx. 3.7 m² (H85 XL DS) - with heat exchanger box, approx. 2.7 m² (H80 XL), approx. 1.7 m² (H80 XL HL), approx. 1.8 m² (H80 XL DS), approx. 2.7 m² (H85 XL), approx. 1.8 m² (H85 XL HL), approx. 1.7 m² (H85 XL DS) - with LWS/ceramic heat storage. Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional information.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute material. Maybe the pre-wall can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 8) The inner gap to the setup floor complies with the required specification if the base frame (1004-00304) is installed.

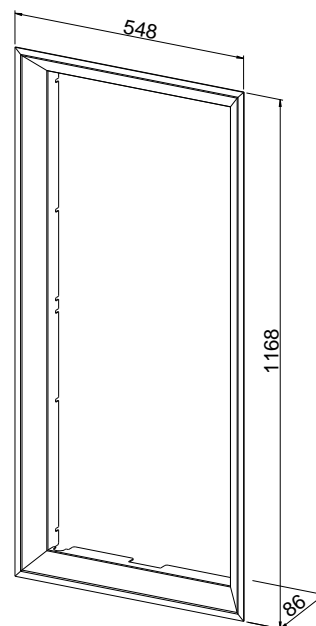
Frames / Fronts for TURMA



Diagonal installation frame for
Culinary Set for TURMA
(1004-01173)

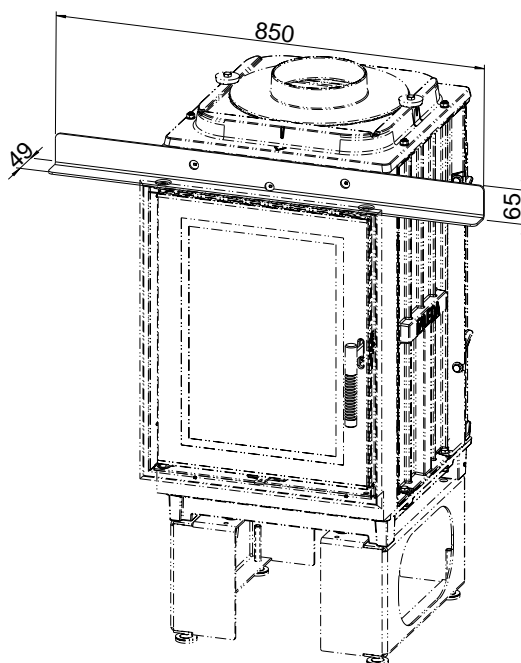


Slim installation frame for
TURMA with culinary set
(1004-01185)

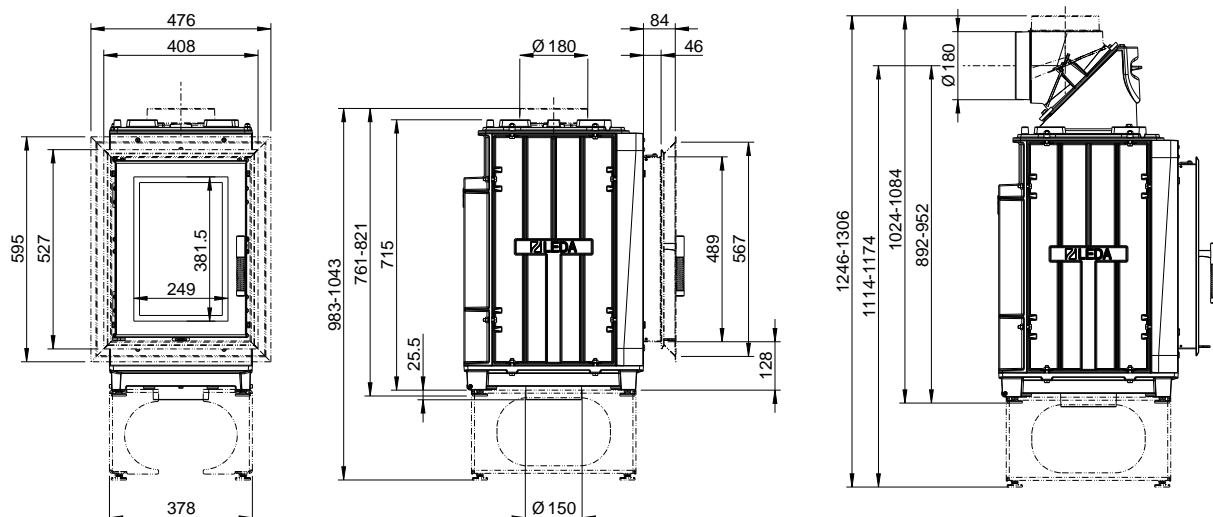


Diagonal front frame for TURMA with
culinary set
(1004-01172)

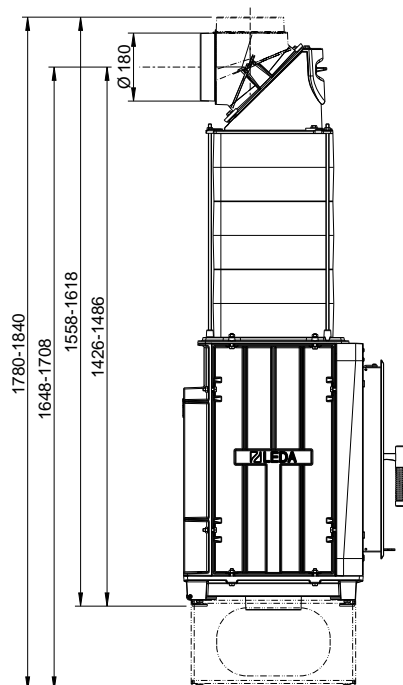
TURMA with supporting angle frame (1004-00789)



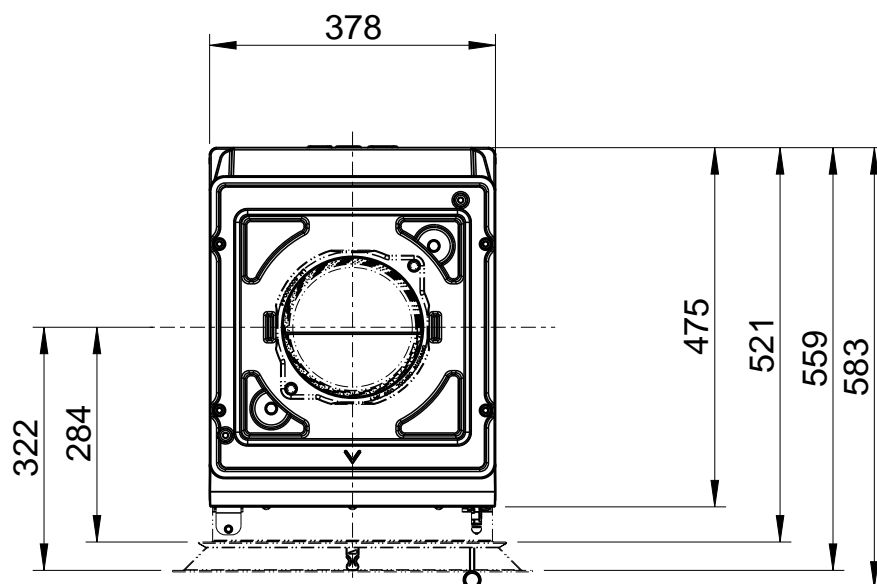
TURMA H75 (standard model, displayed: w/o / with flue gas spigot 180 mm (1004-00780) and w/o / withl three-part flue gas spigot (1004-01140)) / M1:20



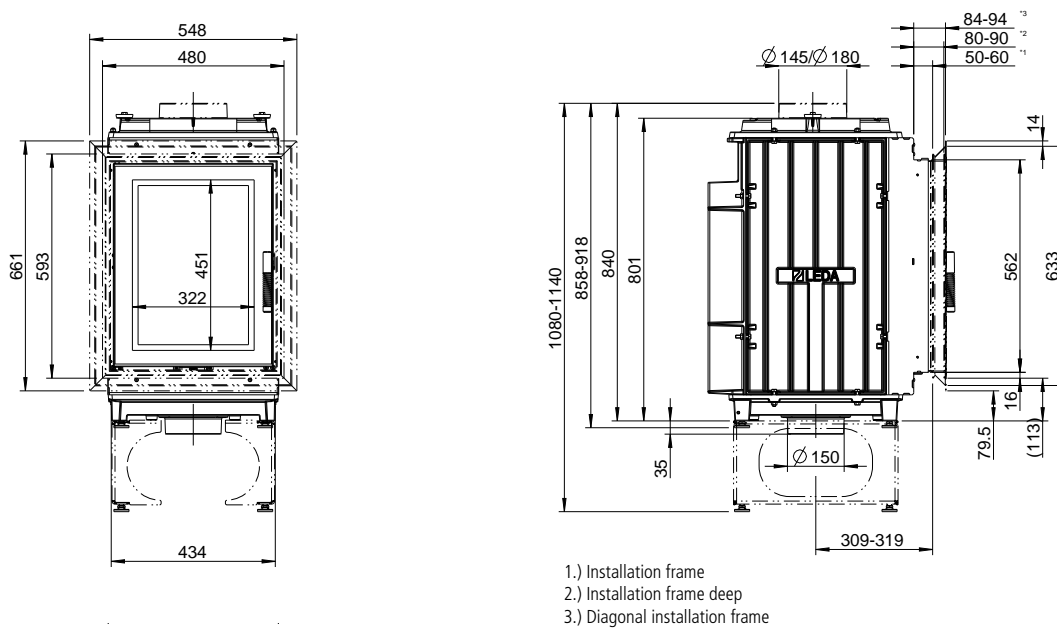
TURMA H75 with top mounted heat exchanger (1004-01133) / M1:20



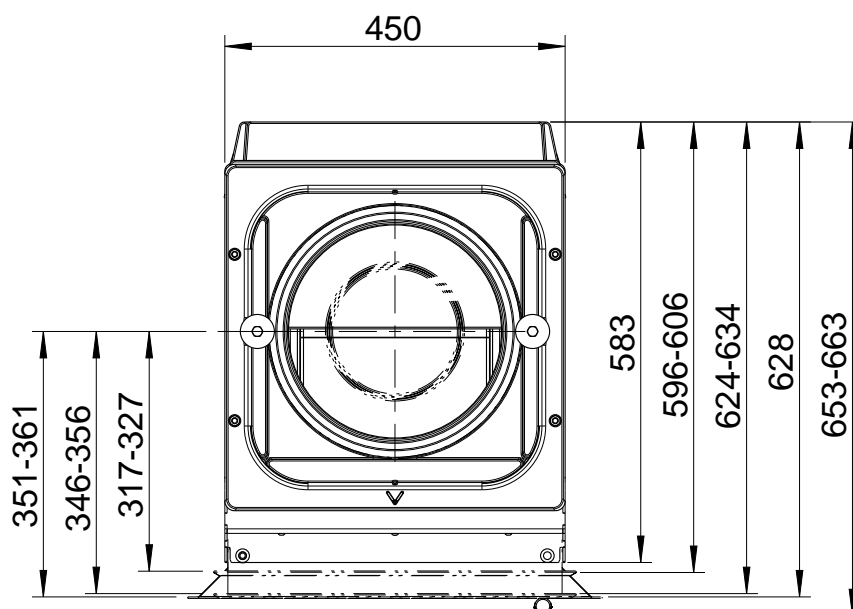
TURMA H75
top view / M1:10



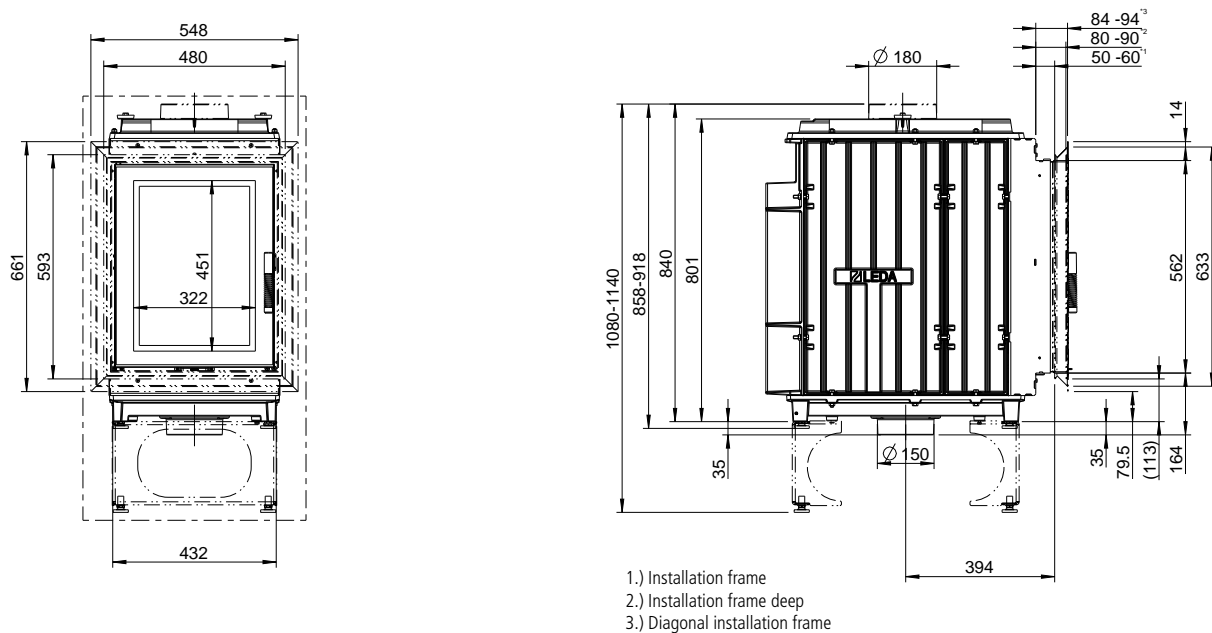
TURMA H80/ H85 (standard model, displayed: w/o / with flue gas spigot 145 mm (1004-00758) / 180 mm (1004-00759)) / M1:20



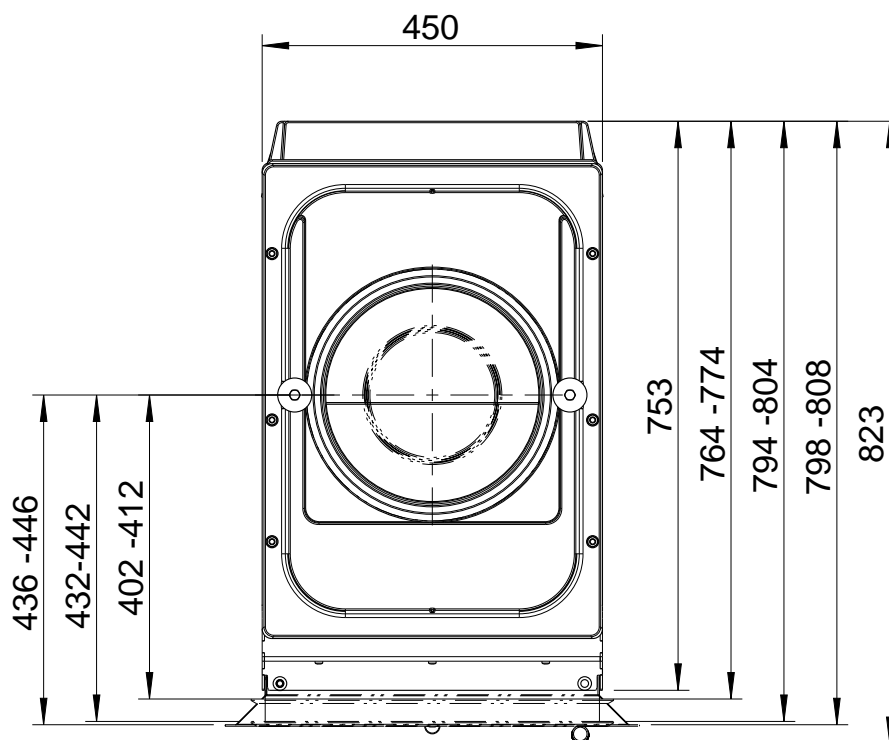
TURMA H80/ H85
top view / M1:10



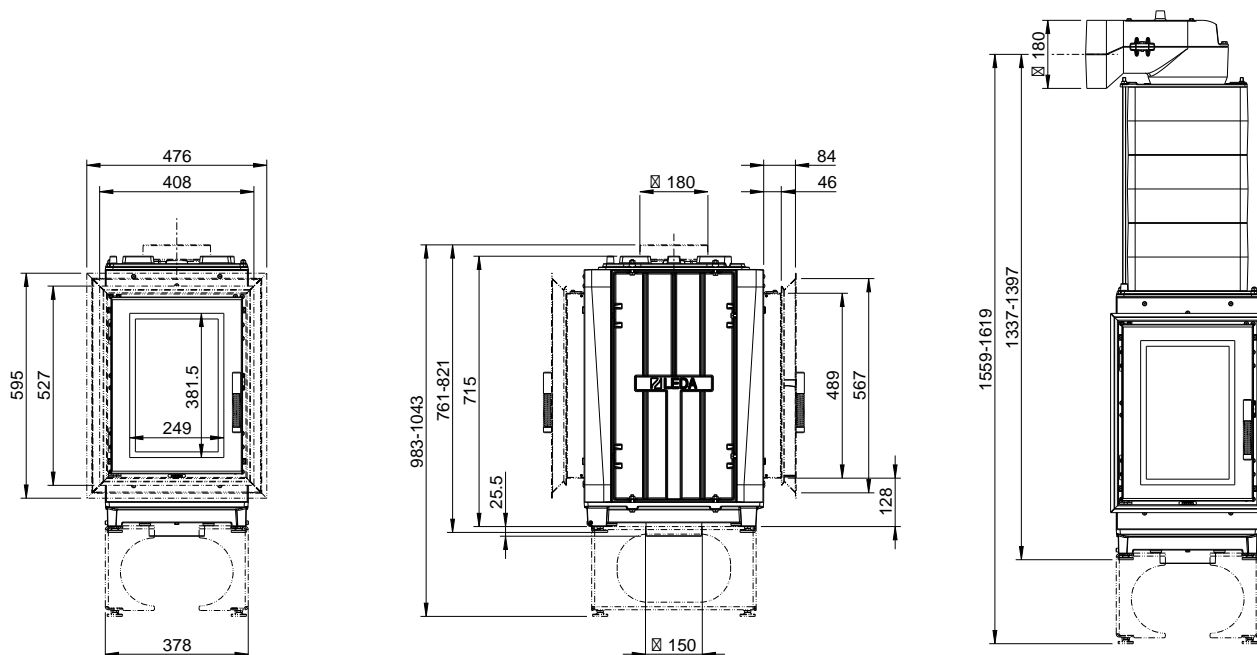
TURMA H80/ H85 XL (standard model, displayed: w/o / with flue gas spigot 180 mm (1004-00759)) / M1:20



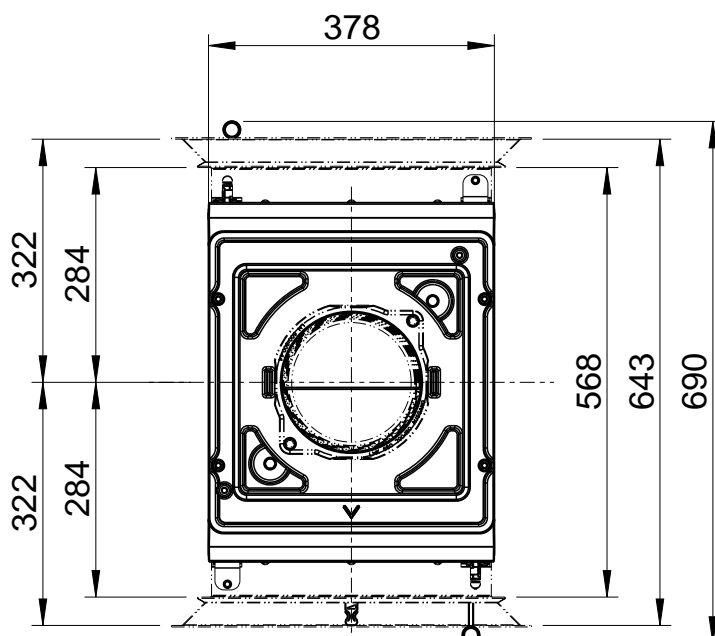
TURMA H80/ H85 XL
top view / M1:10



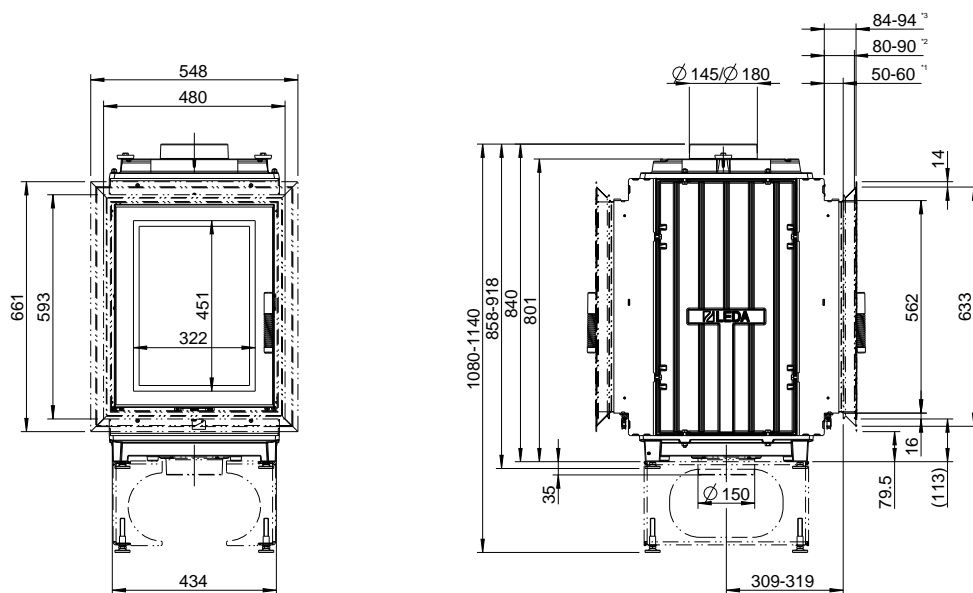
TURMA H75 DS (double sided, displayed: w/o / with cast iron flue gas spigot 180 mm (1004-00759) / GSA (1004-01133) and flue gas spigot 180 mm (1004-00780) / horizontal cast iron flue gas spigot 180 mm (1004-00077)) / M1:20



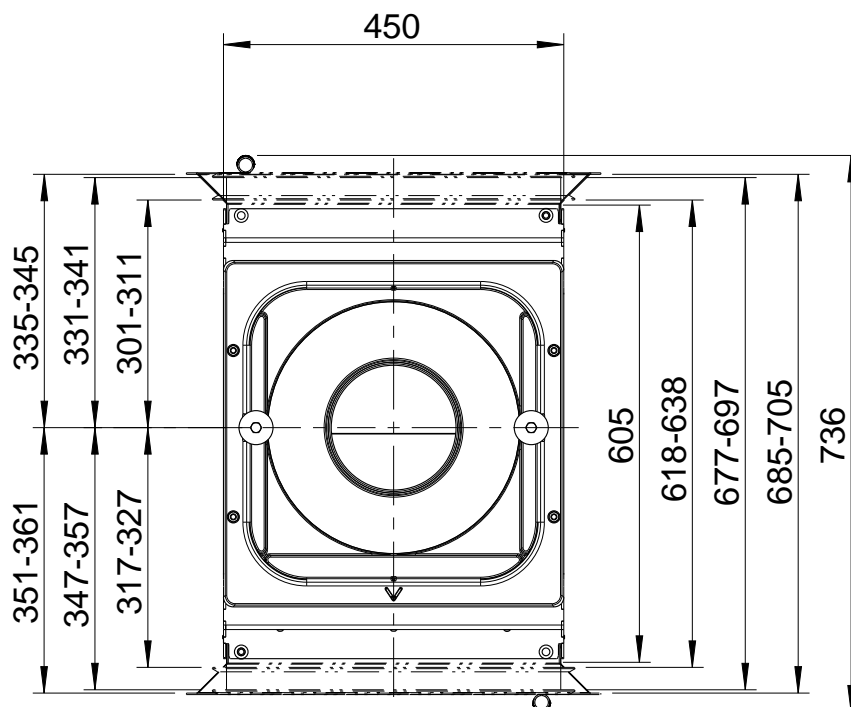
TURMA H75 DS
top view / M1:10



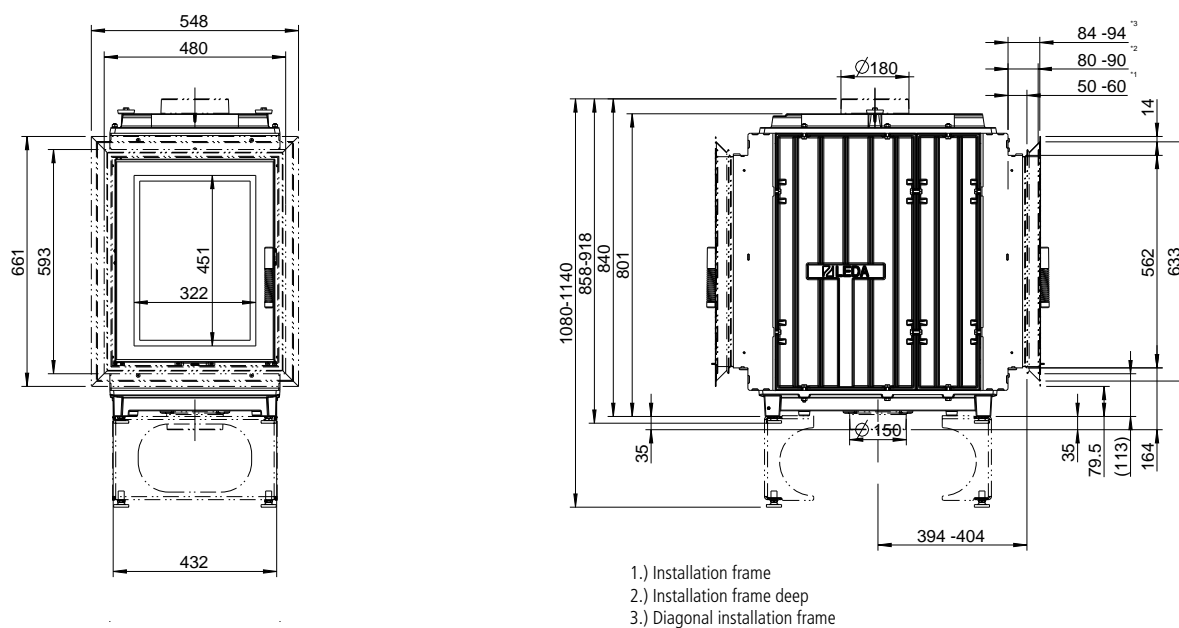
TURMA H80/ H85 DS (double sided, displayed: w/o / with cast iron flue gas spigot 145 mm (1004-00758) / 180 mm (1004-000759)) / M1:20



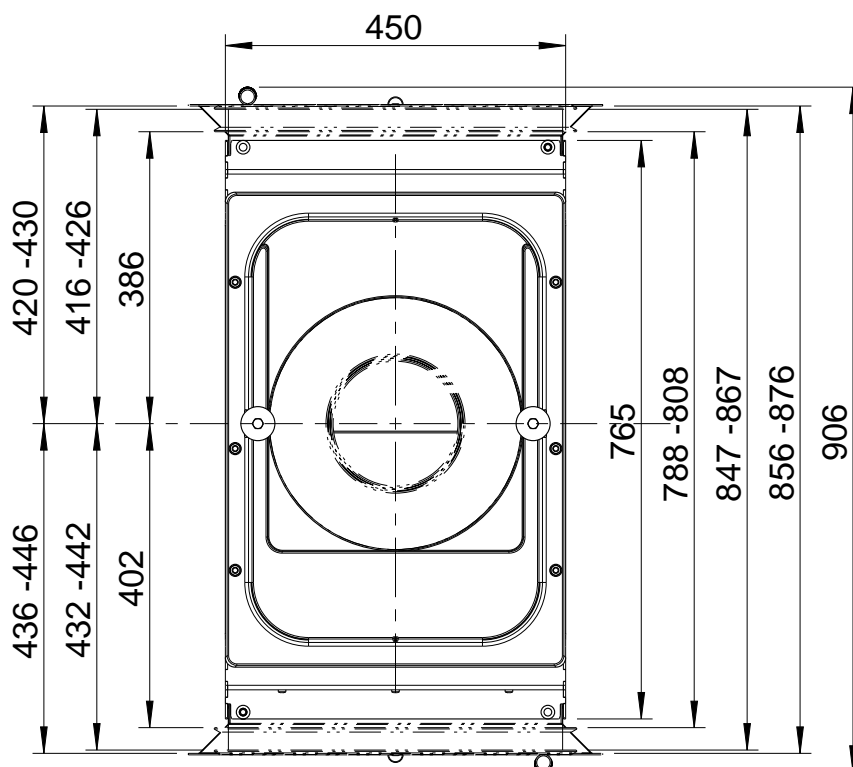
TURMA H80/ H85 DS
top view / M1:10



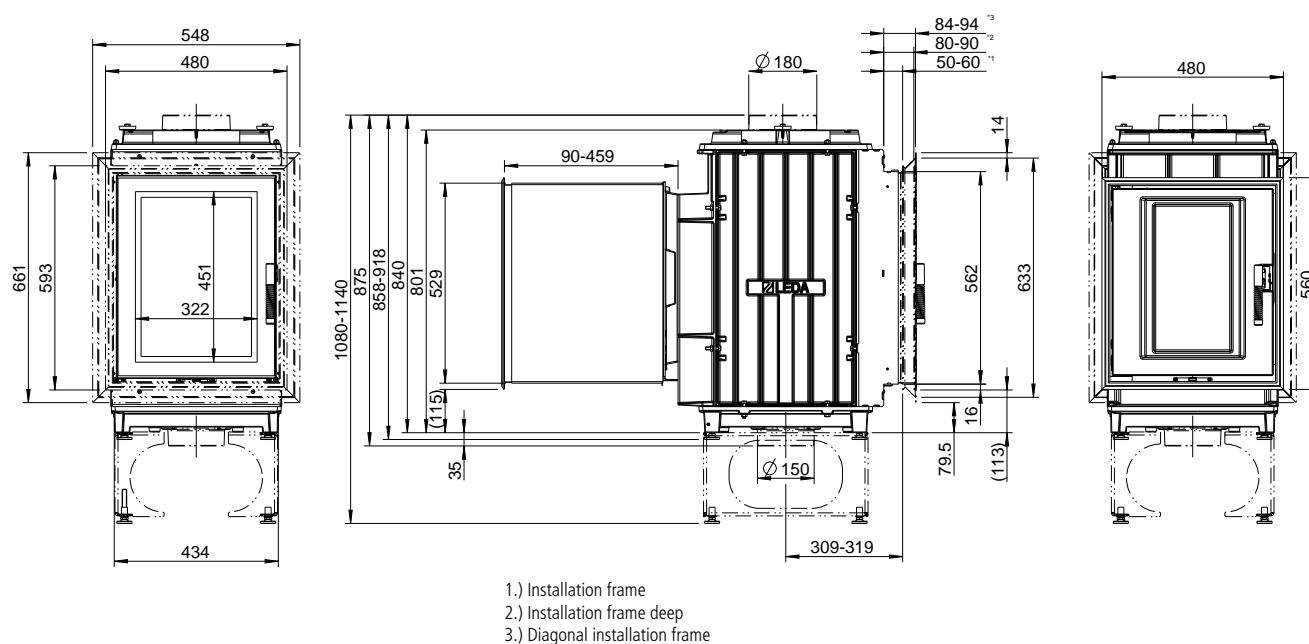
TURMA H80/ H85 XL DS (double sided, displayed: with cast iron flue gas spigot 180 mm (1004-00759)) / M1:20



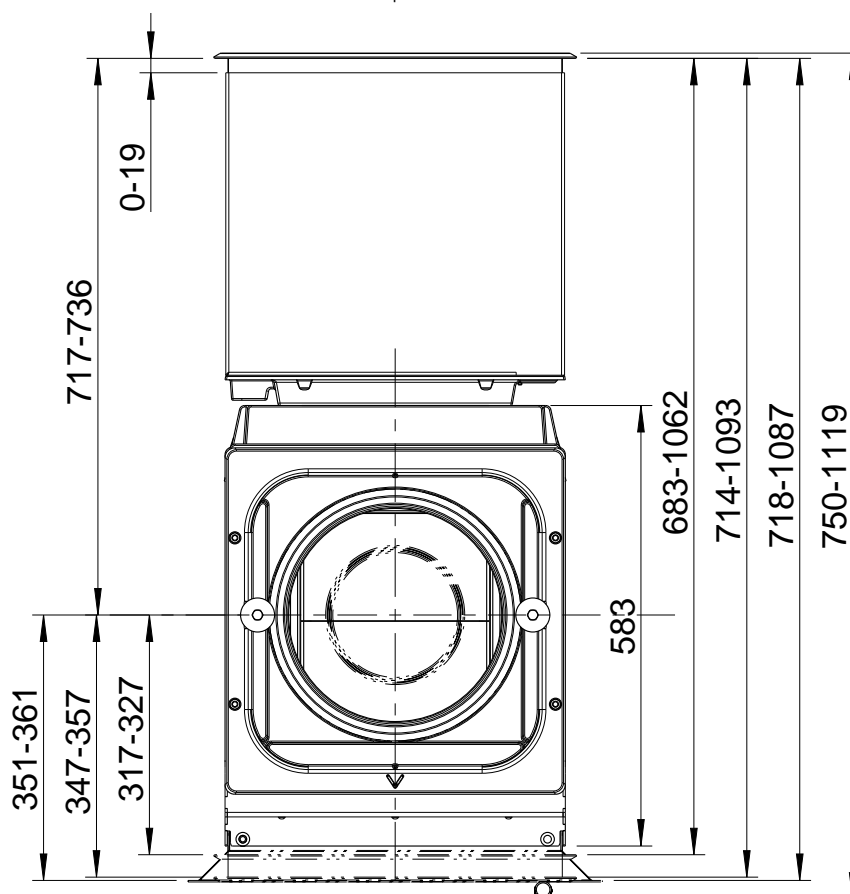
TURMA H80/ H85 XL DS
top view / M1:10



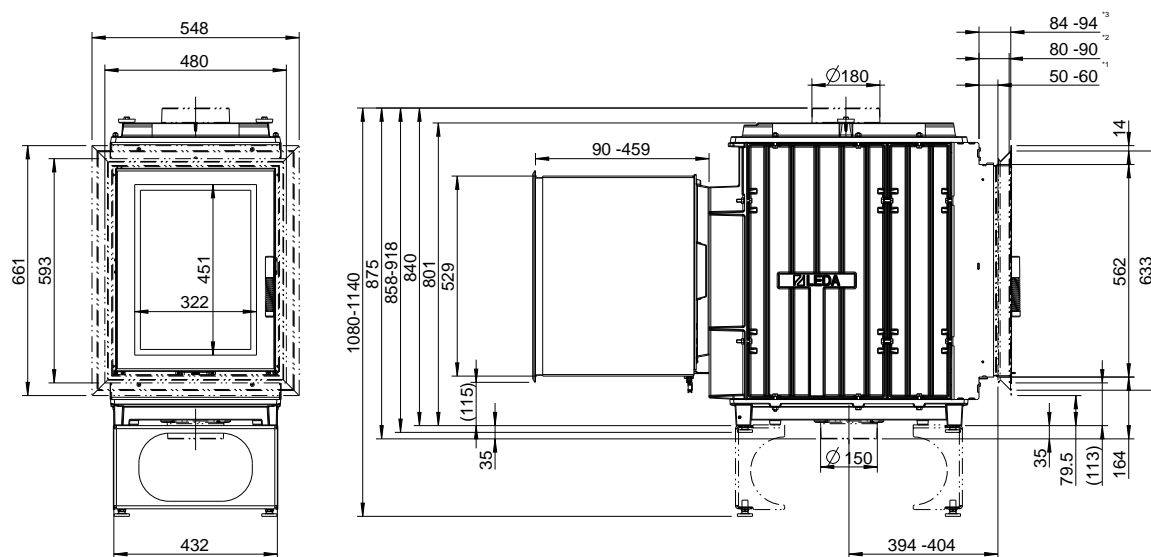
TURMA H80/ H85 HL (rear fuel-door, displayed: w/o / with cast iron flue gas spigot 180 mm (1004-00759) / M1:20



TURMA H80/ H85 HL
top view / M1:10

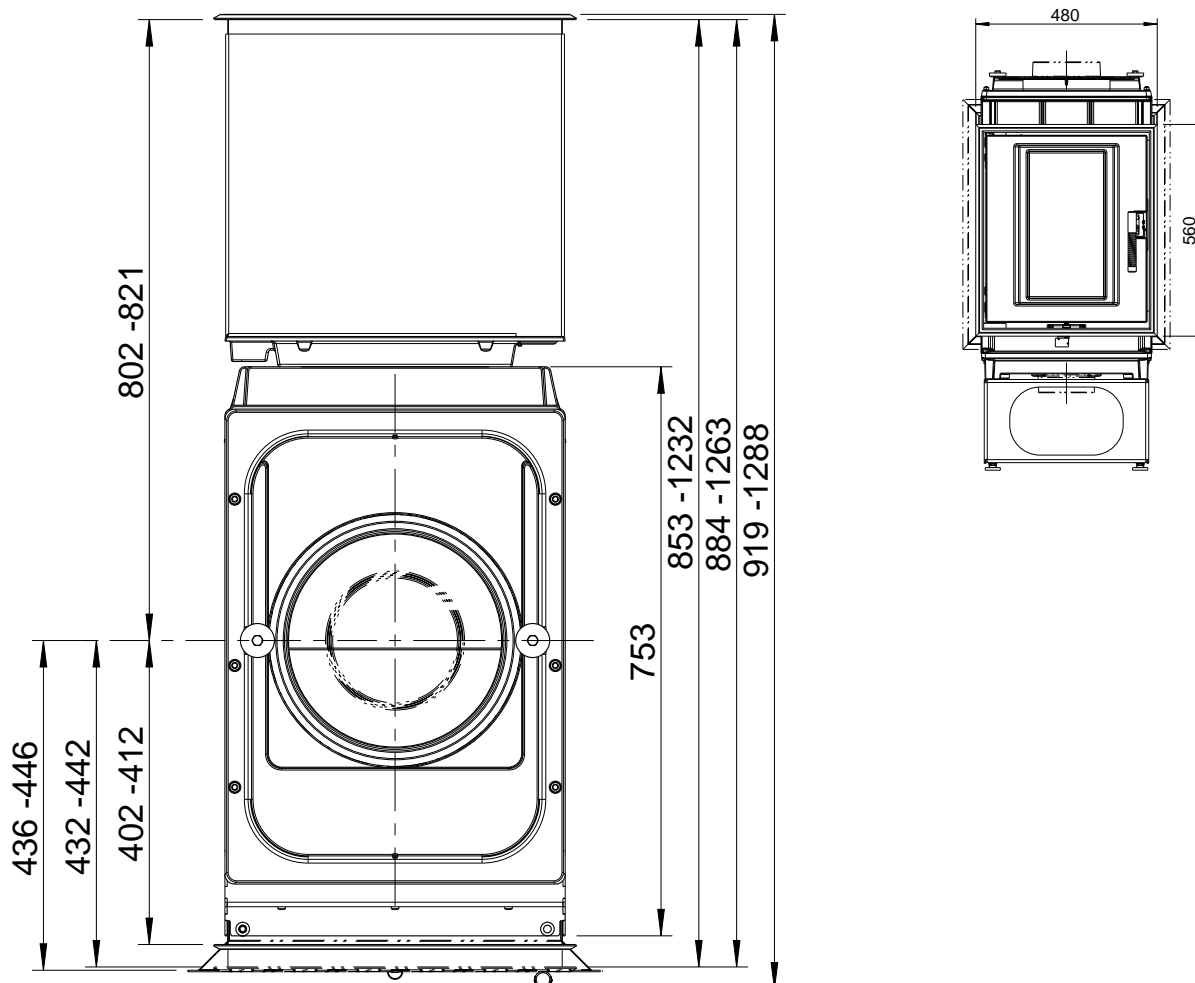


TURMA H80/ H85 XL HL (rear fuel-door, displayed: with cast iron flue gas spigot 180 mm (1004-00759)) / M1:20

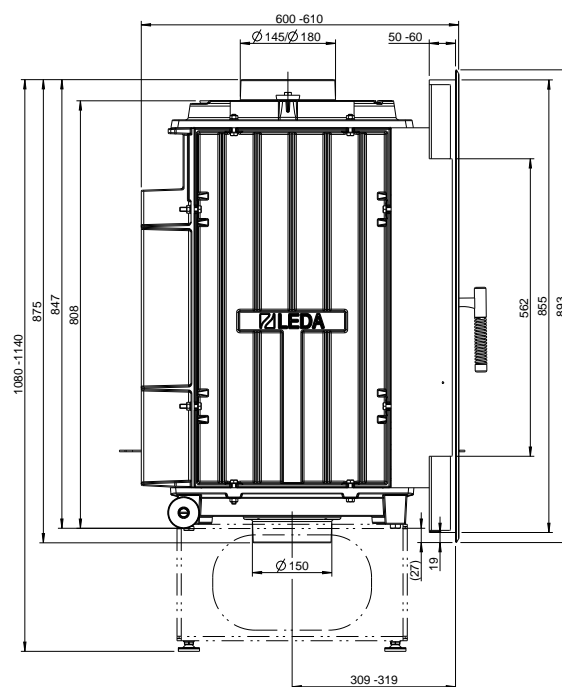


- 1.) Installation frame
- 2.) Installation frame deep
- 3.) Diagonal installation frame

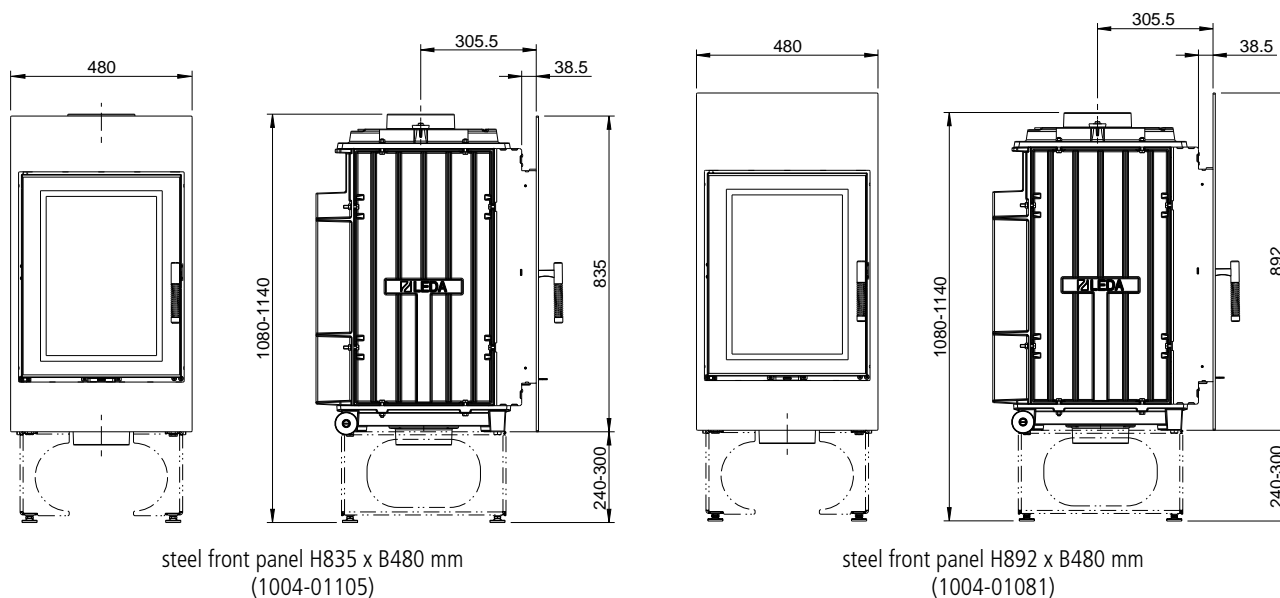
TURMA H80/ H85
top view / M1:10



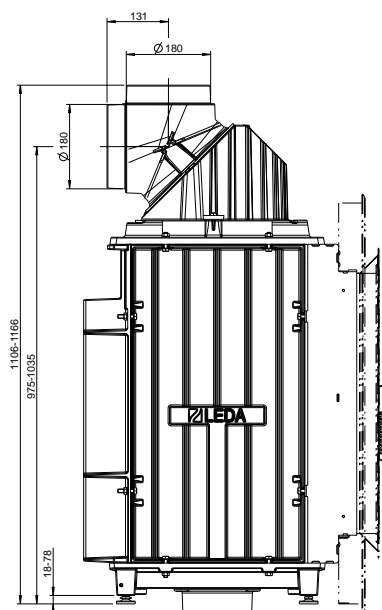
TURMA with front frame (1004-00762/ 1004-00763) and glass front panel set (1004-00757)



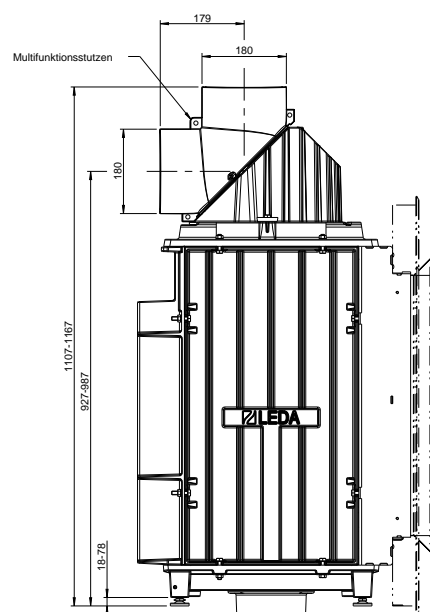
TURMA with steel front panel



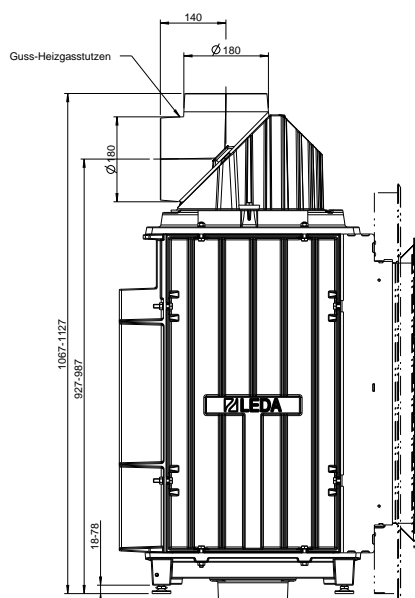
TURMA with cast iron flue gas dome



TURMA with cast iron flue gas dome (1004-00796) and cast iron two-piece spigot (endless rotatable) (1004-01057)

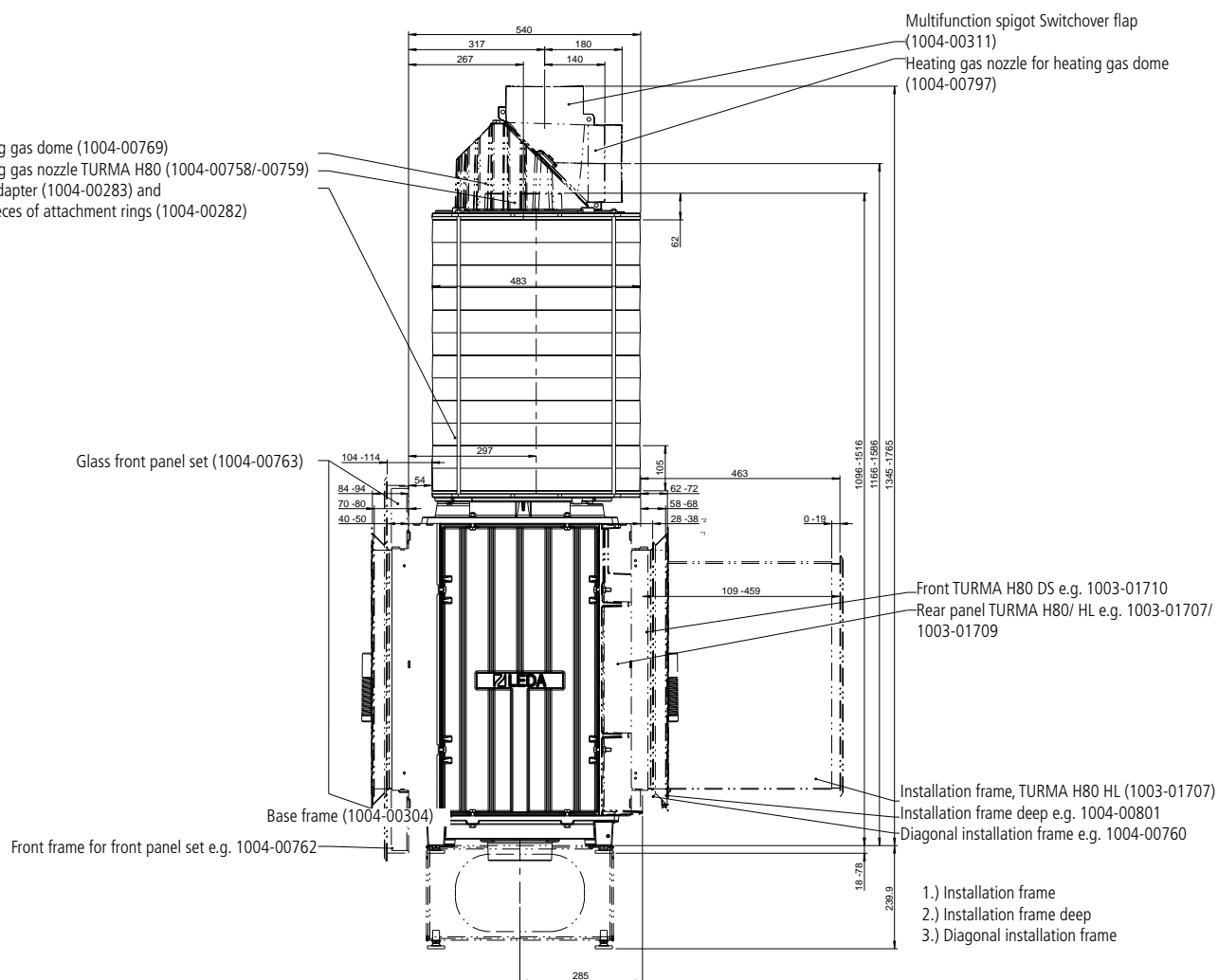



TURMA with cast iron flue gas dome (1004-00796) and MFS (1004-00310/ 1004-00311)



TURMA with cast iron flue gas dome (1004-00796) and cast iron flue gas spigot (1004-00797)

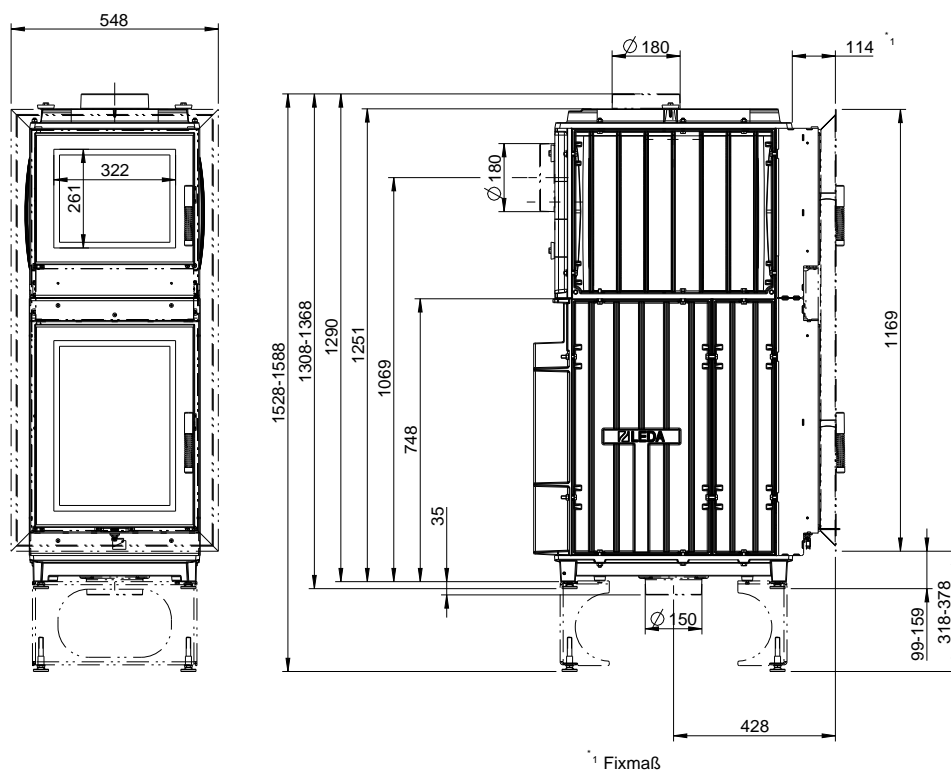
TURMA H80/ H85 with 3 - 6 GSA-rings (1004-00837 and 1004-00282), optional with flue gas spigot, flue gas spigot for flue gas dome and multifunctional spigot



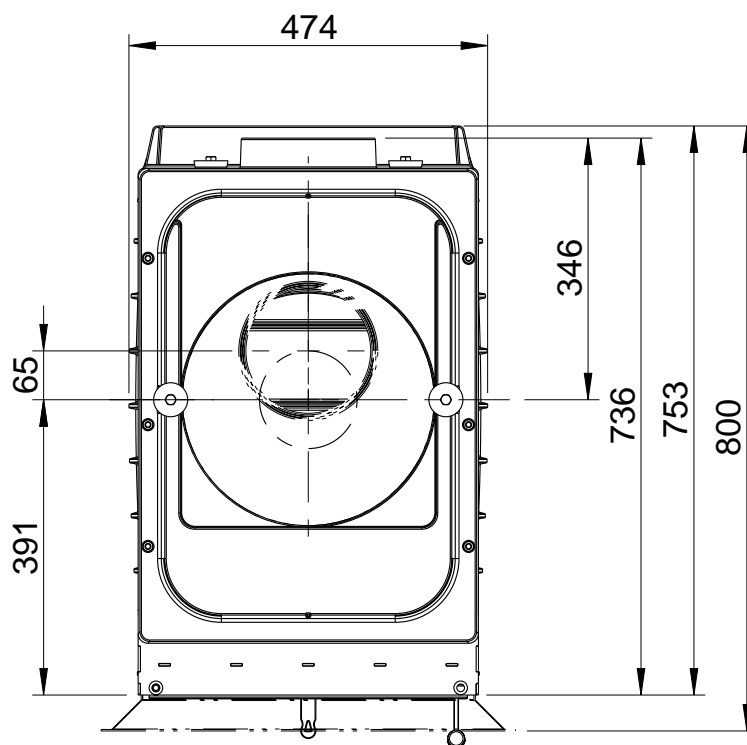
TURMA H80 XL with Culinary-Set		TURMA H80 XL		
		XL	XL HL	XL DS
Operation with Culinary-Set and LWS / ceramic heat storage				
Performance data				
Combustion capacity – heat input, \dot{Q}_f	[kW]	28.4	28.4	28.4
Heat output of insert \dot{Q}_{HE}	[kW]	20.0	20.0	20.0
Heat load of heating gas at spigot of culinary set, \dot{Q}_{spigot}	[kW]	7.9	7.9	7.9
Usable heat load of heating gas at spigot of insert		2.5	2.5	2.5
Heat output over the front surface(s) and glass pane(s)	[kW]	3.0	3.7	4.6
Direct radiation and convection output (without heat storage)	[kW]	20.5	20.5	20.5
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2				
Heating gas temperature (at the spigot of culinary-set)	[°C]	312	312	312
Flue gas mass flow	[g/s]	19,5	19,5	19,5
Minimum required chimney draft ¹⁾ (only for the insert / culinary-set)	[Pa]	15	15	15
Required combustion air flow rate	[m³/h]	54.5	54.5	54.5
Admissible fuels and feeding rate				
Admissible fuels		wood logs (preferred) and wood briquettes		
Fuel quantity, wood logs	[kg]	7.2	7.2	7.2
Feeding rate, wood logs	[kg/h]	6.6	6.6	6.6
Fuel quantity, wood briquettes	[kg]	6.9	6.9	6.9
Feeding rate, wood briquettes	[kg/h]	6.3	6.3	6.3
Operation with LWS, heat accumulation system				
Admissible LWS sets		Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3
Recommended number of LWS elements (25/25/25 cm)		10	10	10
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	169	169	169
Minimum required chimney draft for each 90° bend	[Pa]	0.80	0.80	0.80
Minimum required chimney draft for each 45° bend	[Pa]	0.37	0.37	0.37
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)				
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	175	175	175
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	20	20	20
Flue gas mass flow	[g/s]	19.5	19.5	19.5
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)				
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	157	157	157
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	20	20	20
Flue gas mass flow	[g/s]	19.5	19.5	19.5
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)				
Flue gas temperature (at output spigot of LWS set 3)	[°C]	190	190	190
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	20	20	20
Flue gas mass flow	[g/s]	19.5	19.5	19.5
Air cross-sections ³⁾				
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	3290	3146	2970
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	3475	3332	3155
Convection air outlet ³⁾	[cm²]	3948	3776	3564
Inner gaps in the convection chamber ³⁾				
Inner gaps between insert and thermal insulation or cladding	[cm]	20	24	23
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)				
Weights				
Weight of Culinary-Set without inner lining	[kg]	142	142	142
Weight of Culinary-Set with inner lining	[kg]	202	202	202
Weight of insert an Culinary-Set with each inner lining	[kg]	535	495	546

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass pane.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.7 m² (H80 XL), approx. 3.7 m² (H80 XL HL), approx. 3.8 m² (H80 XL DS), approx. 4.7 m² (H85 XL), approx. 3.8 m² (H85 XL HL), approx. 3.7 m² (H85 XL DS) - with heat exchanger box,
approx. 2.7 m² (H80 XL), approx. 1.7 m² (H80 XL HL), approx. 1.8 m² (H80 XL DS), approx. 2.7 m² (H85 XL), approx. 1.8 m² (H85 XL HL), approx. 1.7 m² (H85 XL DS) - with LWS/ceramic heat storage. Other types of construction can be performed according to local regulations or the German TROL.

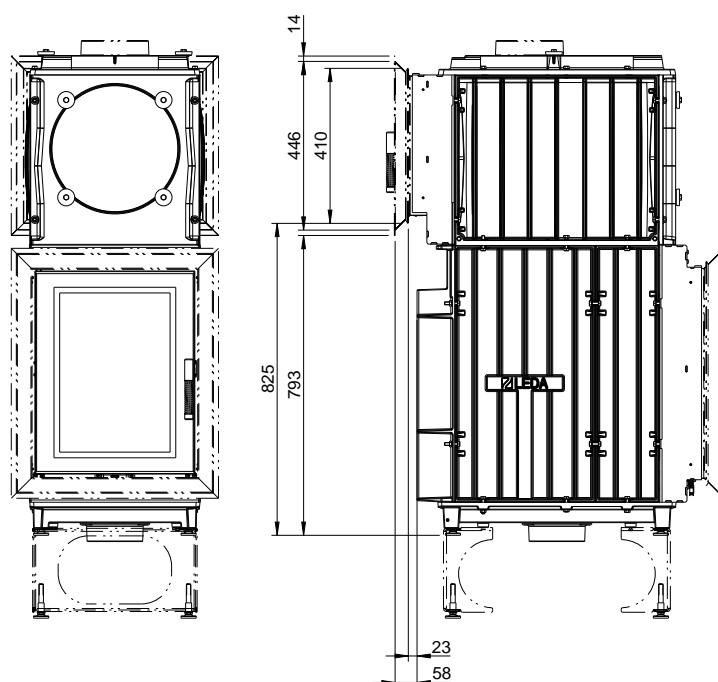
TURMA H80 XL (standard model) with culinary set / M1:20



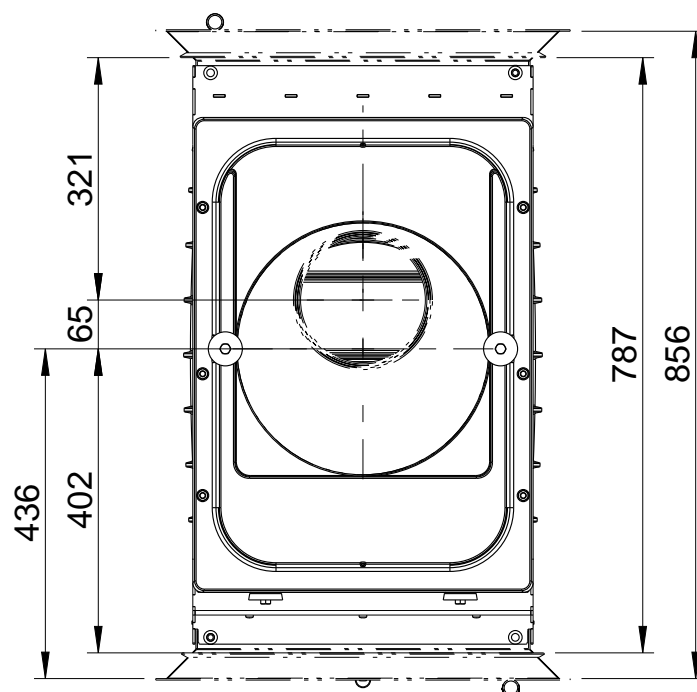
TURMA H80 XL with culinary set and eccentric flue gas spigot
top view / M1:10



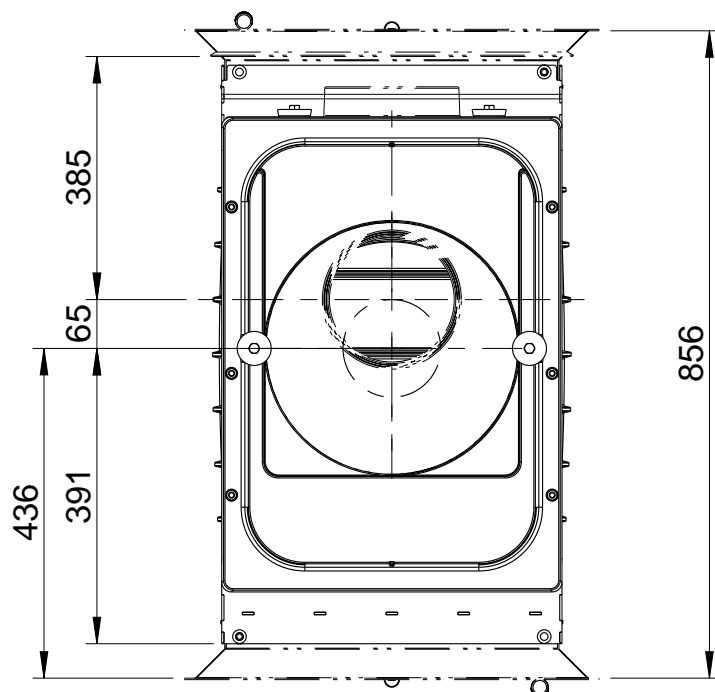
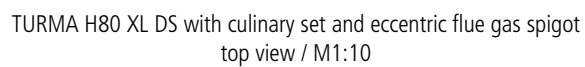
TURMA H80 XL (standard model) with culinary set – rearward mounted/ M1:20

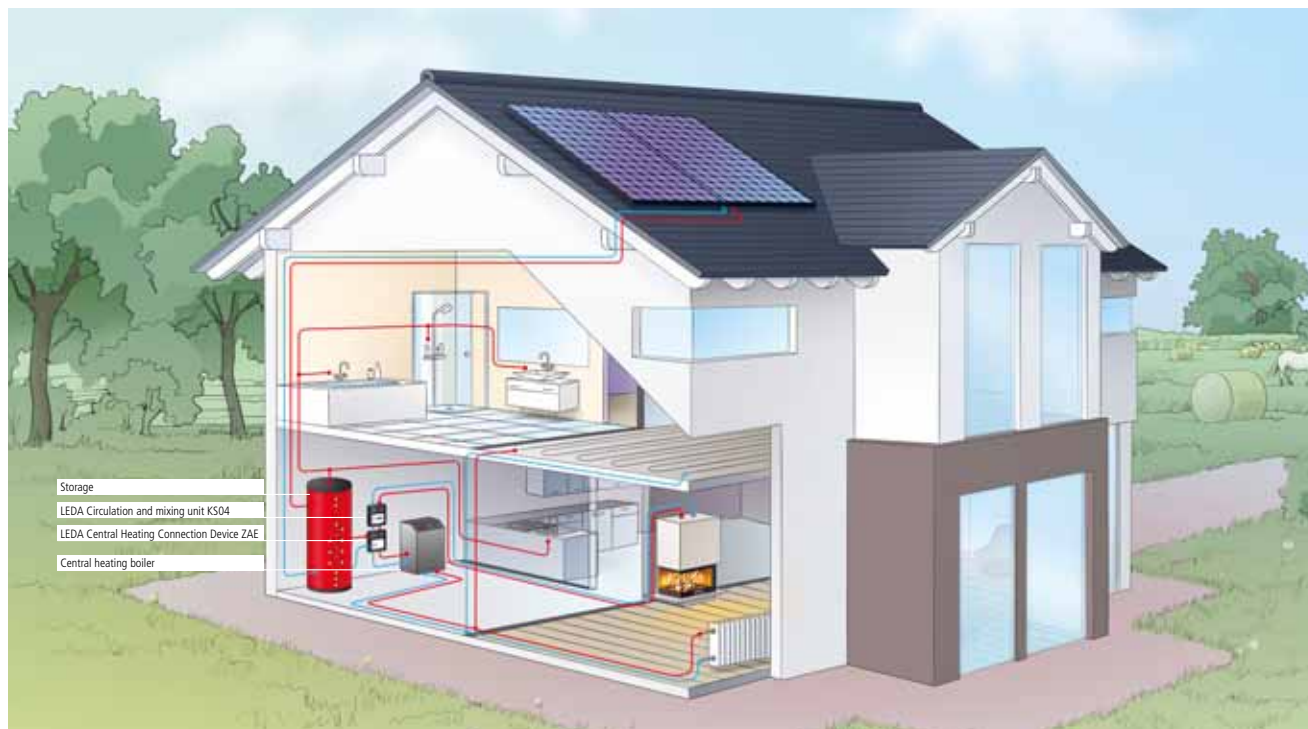


TURMA H80 XL with culinary set (rearward mounted) and eccentric flue gas spigot
top view / M1:10



TURMA H80 XL DS (double sided) with culinary set/ M1:20





Water Technology

Efficient use of renewable fuels: How does water technology work?

The combustion of wood releases an high amount of energy in form of extrem hot heating gas which flows through the fireplace/stove. This available energy can be acumulated in an conventional solid material storage unit or can be extracted over the heat exchanger of an hydronic stove.

The appliance with water technology releases heat into the room where it is set up and additionally supplements the central heating system. With the ideally coordinated LEDATERM components you will create a perfect harmonized entire system.

Only if the provided energy from the hydronic fireplace and possibly solar collectors should not cover the calorific demand, the conventional heating source will start.

Ingredients:

1. LEDA Fireplace
2. LEDATHERM KS04 Complete Circulation and Mixing Unit
3. ZAE Central Heating Connection Device
4. Buffer tank
5. LEDATRONIC (optional)
6. Solar system (optional)

3. ZAE Central Heating Connection Device

The ZAE makes the combination of the hydronic fireplace, Buffer and central heating system very simple and clear. The ZAE enables a demand oriented distribution of the heat into the buffer tank or from the fireplace respectively the buffer tank to the central heating heat generator, that means the perfect complement to the KS04.

4. Buffer Tank

In a stratified storage tank the water is layered according to its temperature as buffer tank or multifunctional buffer tank (combination of buffer for heating and domestic water). This hot water cylinder stores the surplus energy until demanded.

Preparation:

1. LEDA Appliance

You will find on the following pages a wide range of hydronic fireplace inserts and tiled stovep.

2. LEDATHERM KS04 Complete Circulation and Mixing Unit

The ideal completion. The LEDATHERM Complete Unit containing all the components which are necessary and prescribed to integrate a wood burner to a hot water circuit. This kit offers a circulating pump with a temperature difference control. The second main component of the KS04 is the mixing valve. This part ensures an optimum return temperature increase.

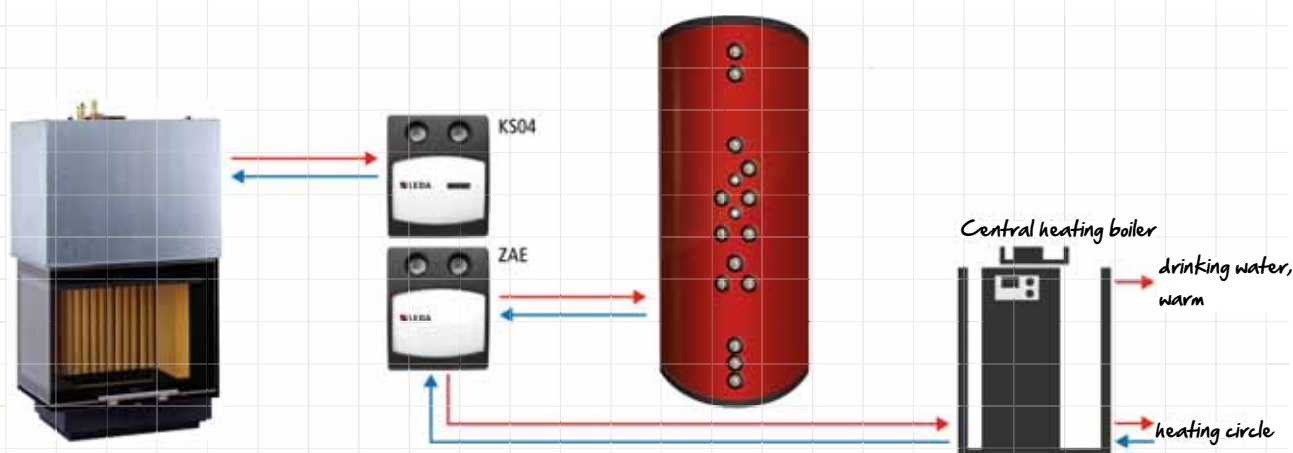
5. LEDATRONIC Comfort Combustion air control device



How long it takes until the wood logs in a tiled stove or fireplace are burned down is a matter of economy and particularly comfort. The combustion air control device LEDATRONIC adjust automatically the air supply and combustion performance of your fireplace system at any time of the combustion cycle. With an App on your smartphone or tablet you are always informed also when it is time to refuel.

6. Solar System

A good complement: During the good weather periods the solar system will heat up your domestic water and bridge the time when your fireplace is off.





LAVA W
with straight cast iron door



LAVA W
with straight cast iron door



LAVA W

LAVA W with hot water heat exchanger and complete water surrounding body appropriated for fireplace systems integrated to a central heating and domestic hot water system.

Product benefit at a glance:

- high quality hydronic fireplace insert
 - with boiler steel hot water exchanger, cast iron door and bottom
 - with integrated safety heat exchanger for the thermal discharge safety device
 - all prescribed safety devices are included in the scope of delivery
- small mounting depth
- grate-less combustion
- fuel: wood logs (opt.: 33 cm length)
- comfortable one hand adjustment of the combustion air
- high quality chamotte combustion chamber inner lining
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- flue gas connection: 45°
- flue gas spigot Ø 180 mm
- optional door hinge (factory setting left)
- suitable for the connection to one chimney with multiple stoves
- height-adjustable legs (up to 10 cm) with adjustable feet (with rubber pads)

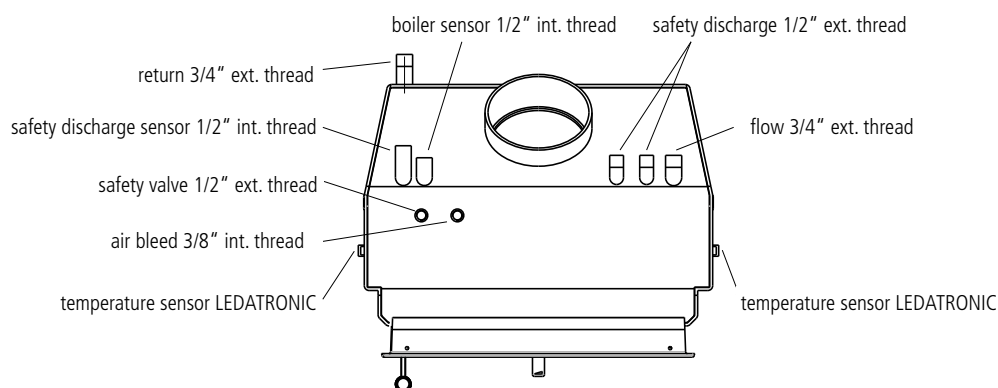
Environmental compliance

Compliance with the following environmental standards:

- German 1. BImSchV (level 1 and 2), Munich Solid Fuel Ordinance, Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A (LAVA D) A+ (LAVA N)

Scope of delivery

Fireplace insert with chamotte inner lining of combustion chamber, installation and operating manual, installation manual for LEDA hydronic fireplace inserts, cast iron buffer plate, stove pass, heat protective glove, external air connector Ø 125 mm+ fixing set, fixing set for the adjustable feet + rubber pads, 4 adjustable feet, sweeping brush, full-metal safety valve 2,5 bar, automatic air valve, thermal discharge safety device (TAS) with 4 m capillary line (not prolongable, built-in sensor pocket, mini ball-valve for the drain, plug, fitting kit for the safety heat exchanger)



LAVA W

Water pipe connections

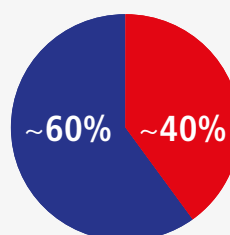
Ident-No.	Description	€	
1003-01066	LAVA W straight with cast iron door	4550.00	
Essential accessories			
1004-00678	LEDATHERM Complete Circulation and Mixing Unit KS04 with high-efficiency circulation pump	1430.00	^{2,3} p.252
Optional accessories		€	
1004-01106	LEDA service surcharge: change of door hinge in the factory	90.00	
1003-02018	LEDATRONIC LT3 WiFi electronic combustion air control device for LAVA W, complete set	1380.00	¹ p.260
1004-00764	ZAE Central Heating Connection Device for KS04	1100.00	³ p.256
1004-00731	Drain funnel	60.00	
1004-00732	Microbubble deaerators (air valve), vertical	190.00	
1004-00733	Microbubble deaerators (air valve), horizontal	140.00	

Optional accessories		€	
1004-00971	Backflow preventer BA-BM020, 3/4"	410.00	
1003-01720	LUC Draft Monitoring Device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

¹ LT3 WiFi without display which can be ordered optionally (1004-00542)

² LEDATHERM essential to guarantee the correct function and performance data of the system.

³ ZAE for the easy and direct connection to the KS04



LAVA W


Output ratio:

■ direct emission ■ contribution to the water

Checkbox: What do I need to order?

- ☐ Fireplace: LAVA W Hydronic fireplace insert
- ☐ LEDATHERM Complete Circulation and Mixing Unit KS04
- + Optional accessories

Type LAVA W		LAVA W
		straight
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200
Efficiency	[%]	≥ 81
Flue gas temperature	[°C]	225

I. Operation with direct connection to the chimney		
Performance data		
Nominal heat output, \dot{Q}_N	[kW]	13
Heat output to the water	[kW]	7.5
Direct radiation and convection output	[kW]	1.8
Heat output over the front surface(s) and glass pane(s)	[kW]	3.7
Chimney dimensioning data according to EN 13384 part 1 and 2		
Flue gas temperature (at the spigot of insert)	[°C]	255
Flue gas mass flow	[g/s]	13
Minimum required chimney draft ¹⁾	[Pa]	14
Required combustion air flow rate	[m ³ /h]	36.7
Admissible fuels and feeding rate		
Admissible fuels		wood logs
Fuel quantity, wood logs	[kg]	3.0
Feeding rate, wood logs	[kg/h]	4
Air cross-sections ³⁾		
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	294
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	430
Convection air outlet ³⁾	[cm ²]	353
Inner gaps in the convection chamber ³⁾		
Inner gaps between insert and thermal insulation or cladding	[cm]	3
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)		

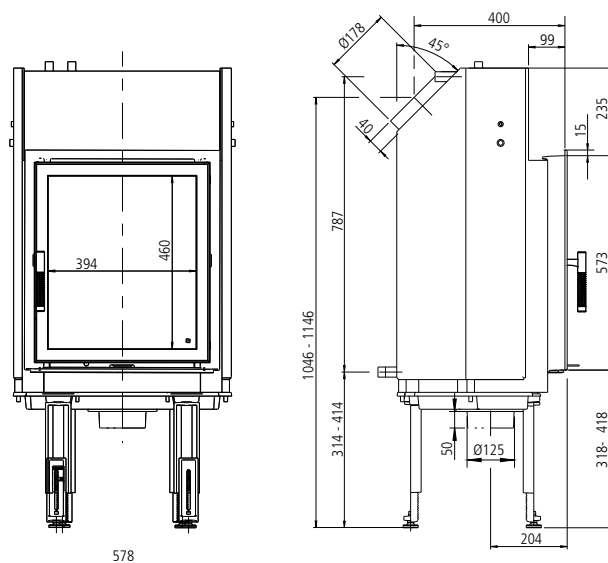
II. Specifications regarding fire protection and thermal insulation ⁵⁾		
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.		
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁵⁾		
(insulation thickness additional required to the required 10 cm pre-wallings)		
to the setup floor	[mm]	40
to the side	[mm]	40
to the rear	[mm]	40
to the ceiling	[mm]	40
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation		
to the setup floor	[cm]	20
to the front of thermal insulation to the side	[cm]	6
to the front of thermal insulation to the rear	[cm]	8
to the front of thermal insulation to the ceiling	[cm]	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)		
Minimum convection air outlet, non-closable	[cm ²]	360
Minimum convection air inlet, non-closable	[cm ²]	510
Required distance in the radiation area of the front (with no additional radiation protection)		
Required distance	[cm]	80

Type LAVA W		LAVA W
		straight
IV. Measurements, weights and miscellaneous		
External air connector	Ø [mm]	125
Flue gas spigot resp. connector piece	Ø [mm]	180
Preadjustment of the LT-3 combustion air valve (optional)	%	55
Static valve position of the LT-3 combustion air valve (test mode)	%	54
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	27
Maximum log size	[cm]	33
admissible operating pressure of the water heat exchanger	[bar]	2.5
Maximum of supply / flow temperatur at normal operation	[°C]	95
Maximum of supply / flow temperatur at failure situation ⁶⁾	[°C]	110
Water content of the water heat exchanger	[l]	29
Dimension of coupling - supply / flow		3/4" - ext.thr.
Dimension of coupling - return flow		3/4" - ext.thr.
Dimension of coupling - over pressure safety device		1/2" - ext.thr.
Dimension of coupling - thermal discharge safety exchanger		1/2" - ext.thr.
Dimension of coupling - drain		(1/2" - int.thr.)
Dimension of coupling - air valve		3/8" - int.thr.
Weight of insert with inner lining	approx. [kg]	220
Weight of insert with inner lining and filled water heat exchanger	approx. [kg]	249

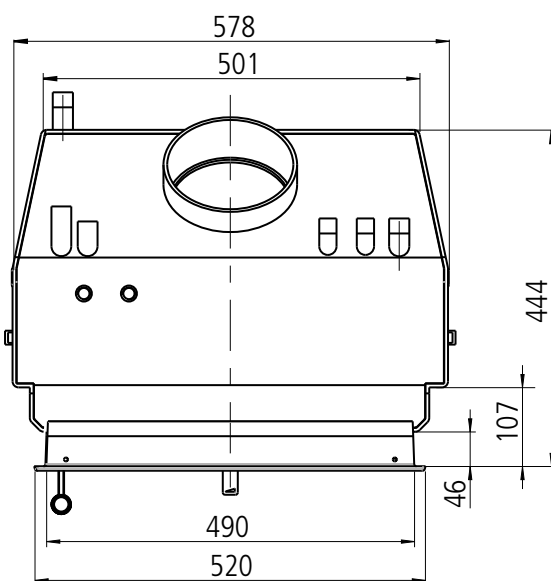
- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 3.3 m² - with direct connection to the chimney.
Other types of construction can be performed according to local regulations or the German TROL.
- 5) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 6) The LEDATHERM Complete Circulation and Mixing Unit KS04 provides a safety shut down function at to high flow temperature. Due to this safety function the temperature of supply / flow is terminated at 95°C (factory settings). If other components are used instead of LEDATHERM Complete Unit KS04, adequate safety devices are absolutely necessary to ensure the required termination of the flow temperature.



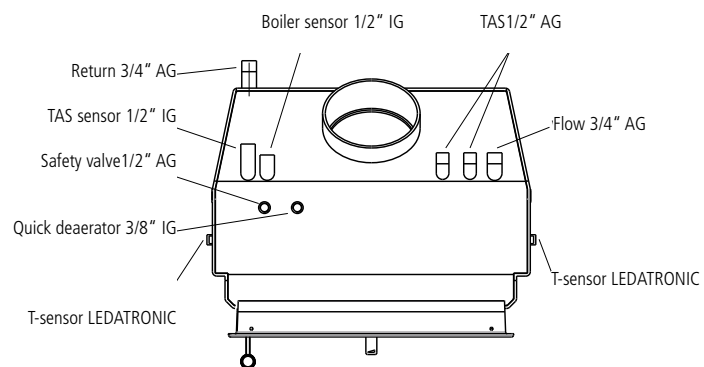
The insert LAVA W (with water heat exchanger) is only for use at direct connection to the chimney.



LAVA W straight
top view / M1:10



LAVA W straight connections





SERA 55 W ES L



SERA W

SERA W with hot water heat exchanger appropriated for fireplace system

Models:

- SERA W F (straight)
- SERA W DS (double sided)
- SERA W ES (L-shaped: two-piece glazed, optionally left or right) with hot water heat exchanger and complete water surrounded body

Different frontal widths:

55 cm / 78 cm

Product benefit at a glance:

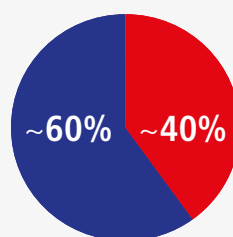
- High quality hydronic fireplace insert:
 - with boiler steel hot water exchanger
 - with integrated safety heat exchanger for the thermal discharge safety device
 - all prescribed safety devices are included in the scope of delivery
 - Installation as low fire (traditional style) or a base frame (1004-00304)
- guillotine door and high-quality inox door handle
- Front and lateral windows can be wide tilted for cleaning (SERA ES / PS) unlocking the catch at the door frame
- double glazing (except SERA W ES)

Environmental compliance

Compliance with the following environmental standards:

- German 1. BImSchV (level 1 and 2), Munich Solid Fuel Ordinance, Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+

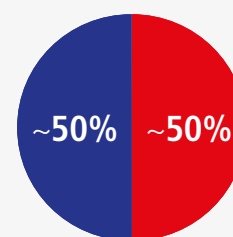
- SERA DS with two equal-sized doors, the second door is always hinged
- patented door sliding mechanism without counter weights: compact, quite and extremely smooth-running
- fuel: wood logs (opt.: 33 cm length) or wood briquettes
- comfortable one hand adjustment of the combustion air
- high-quality chamotte inner lining of combustion chamber, bottom of the combustion chamber with cast iron collar and chamotte inlay
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- height-adjustable feet up to 6 cm
- two-piece exhaust outlet (endless rotatable)
- Flue gas spigot Ø 180 mm (SERA W F: adjustable SERA W DS: top connection)
- suitable for the connection to one chimney with multiple stoves
- factory setting non self-closing door. Easy conversion on site to self-closing for the connection to one chimney with multiple stove



SERA 55/ 78 W F

Output ratio:

■ direct emission ■ to the water



SERA 55/ 78 W DS

Output ratio:

■ direct emission ■ to the water


SERA 55 W F

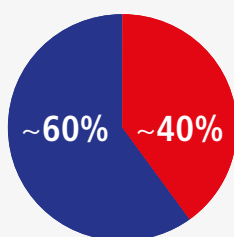
SERA 78 W DS

SERA 78 W ES L
Scope of delivery

Fireplace insert, chamotte inner lining of combustion chamber, cast iron dome, installation and operating manual for hydronic solid fuel fireplaces, stove pass, external air connector Ø 150 mm, 4 adjustable feet (with rubber pads, 6 cm height regulation) protective glove, full-metall safety valve 2,5 bar, automatic air valve, thermal discharge safety device (TAS with 4 m capillary line (not prolongable, built-in sensor pocket, mini ball-valve for the drain, plug, fitting kit for the safety heat exchanger

Checkbox: What do I need to order?

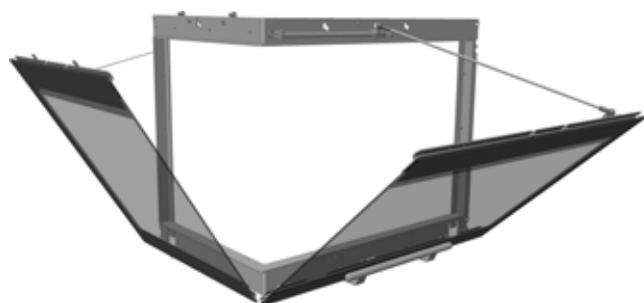
- ☐ Fireplace: SERA W hydronic fireplace insert
- ☐ LEDATHERM Complete Circulation and Mixing Unit KS04
- + optional accessories


SERA 55/ 78 W ES

Output ratio:

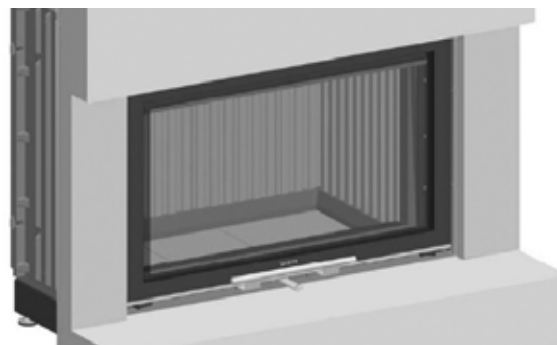
■ direct emission ■ to the water

Ident-No.	Description	€	
	SERA W F straight		
1003-01879	SERA 55 W F with guillotine all-glass door	5750.00	
1003-01888	SERA 78 W F with guillotine all-glass door	6380.00	
	SERA W DS double-sided		
1003-01876	SERA 55 W DS with guillotine all-glass door	6700.00	1
1003-01885	SERA 78 W DS with guillotine all-glass door	7310.00	1
	SERA W ES L-shape (two-piece glazed)		
1003-01877	SERA 55 W ES L L-shape left with guillotine all-glass door	6510.00	
1003-01878	SERA 55 W ES R L-shape right with guillotine all-glass door	6510.00	
1003-01886	SERA 78 W ES L L-shape left with guillotine all-glass door	7100.00	
1003-01887	SERA 78 W ES R L-shape right with guillotine all-glass door	7100.00	



Glass cleaning

Front and side windows tiltable











SERA without frames


Installation example





SERA W


Essential accessories		€	
1004-00678	LEDATHERM Complete Circulation and Mixing Unit KS04 with high-efficiency circulation pump	1430.00	 ^{3,4} p.252
Optional accessories		€	
1004-00304	Base frame	200.00	
1004-00575	Carrying- transport handle	40.00	
1004-00574	External combustion airbox (SERA W F, ES) incl. blind cover for external air connection to the rear	70.00	
Supporting frames			
1004-00568	Supporting frame (SERA 55/ 78 W F/ W DS) Length 1390 mm, supporting surface 50 mm	140.00	
1004-00570	Supporting frame (SERA 55/ 78 W ES) Length 1360 mm x 1360 mm, supporting surface 50 mm	340.00	
1004-00571	Supporting frame (SERA 55/ 78 W ES) Length 1590 mm x 1590 mm, supporting surface 50 mm	350.00	
1004-00799	Tie rod with eyelet for tie rod hook (1 pc)	60.00	
1004-00800	Tie rod hook and plugs (1 pc)	40.00	

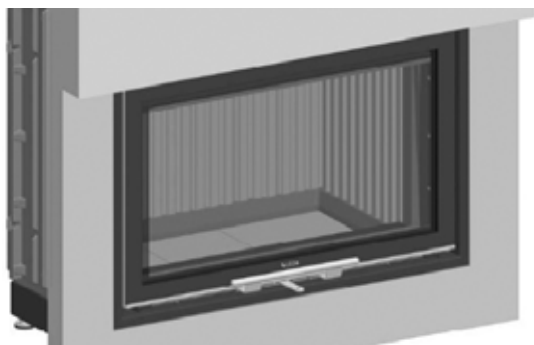
Optional accessories		€	
1004-00681	Support frame, variable for SERA 55/ 78 W ES (without support frame), can be loaded up to 300 kg	500.00	 ²
1003-01977	LEDATRONIC LT3 WiFi electronic combustion air control device, for SERA W, complete set	1380.00	 ² p.260
1004-00764	ZAE Central Heating Connection Device for KS04	1100.00	 ⁴ p.256
1004-00731	Drain funnel	60.00	
1004-00732	Microbubble deaerators (air valve), vertical	190.00	
1004-00733	Microbubble deaerators (air valve), horizontal	140.00	
1004-00971	Backflow preventer BA-BM020, 3/4"	410.00	
1003-01720	LUC Draft monitoring Device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	 p.266

 ¹ Rear side of the DS has no frame or door sill; this has to be ordered additionally for the second side

 ² LT3 WiFi without display, which can be ordered optionally (1004-00542)

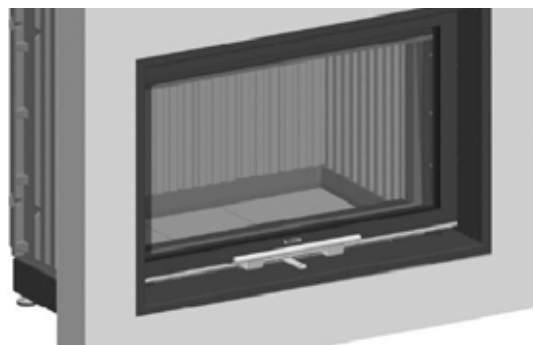
 ³ The LEDATHERM KS04 is essential to ensure safety, correct function and optimum efficiency of the system.

 ⁴ ZAE for the simple and direct connection to the KS04



SERA with flat frame (laterally and lower side)

Installation example



SERA with deep frame-sets (top+laterals+down side)

Installation example

Optional accessories		€	
	Flat frames, black (powder coated)		¹
1004-00547	lateral frames 2 pcep. black, flat (SERA W F/ W DS/ W ES)	70.00	²
1004-00548	lower frame, flat black (SERA 55 W F/ W DS)	60.00	²
1004-00549	lower frame, flat black (SERA 78 W F/ W DS)	60.00	²
1004-00556	lower frame, flat black (SERA 55 W ES left)	120.00	
1004-00559	lower frame, flat black (SERA 55 W ES right)	120.00	
1004-00557	lower frame, flat black (SERA 78 W ES left)	130.00	
1004-00560	lower frame, flat black (SERA 78 W ES right)	130.00	
1004-00904	Frame for the DS-second side, flat, black (SERA 55 W DS)	150.00	
1004-00905	Frame for the DS-second side, flat, black (SERA 78 W DS)	160.00	

¹ Dimensioning frame variants see SERA

² Cover only suitable for the front, not for the DS rear

Optional accessories		€	
	Deep frames, black (powder coated) consisting of top, lateral and down side panels		¹
1004-00552	deep frame set, black (SERA 55 W F/ W DS)	160.00	²
1004-00553	deep frame set, black (SERA 78 W F/ W DS)	170.00	²
1004-00562	deep frame set, black (SERA 55 W ES left)	290.00	³
1004-00565	deep frame set, black (SERA 55 W ES right)	290.00	³
1004-00563	deep frame set, black (SERA 78 W ES left)	330.00	³
1004-00566	deep frame set, black (SERA 78 W ES right)	330.00	³
1004-00907	Deep frame set, for DS rear side/ 2nd side, black flat (SERA 55 W DS), two parts door frame straight and surrounding cover frame	250.00	⁴
1004-00908	Deep frame set, for DS rear side/ 2nd side, black flat (SERA 78 W DS), two parts door frame straight and surrounding cover frame	290.00	⁴

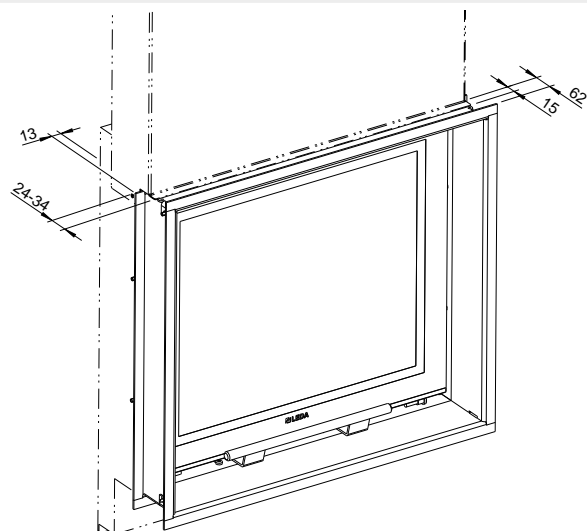
¹ Dimensioning frame variants see SERA

² Cover only suitable for the front, not for the DS rear

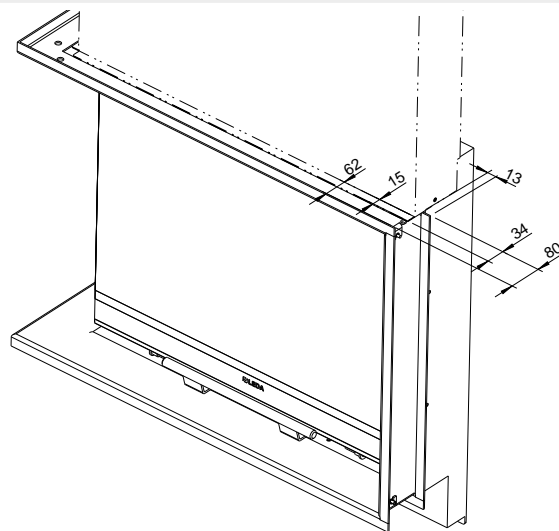
³ Attachment of the upper frame segment only guaranteed to the support frame

⁴ Frame adjustable in depth (30-120 mm)

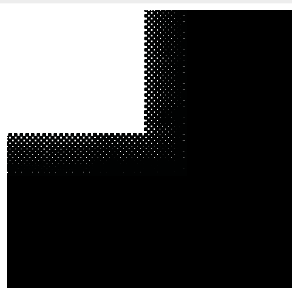
SERA W F/ DS: flat/ deep frames



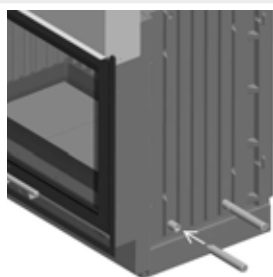
SERA W ES: flat/ deep frames



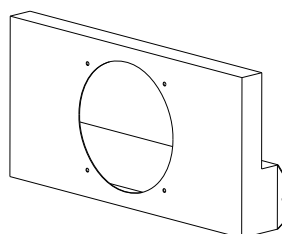
Glass printing



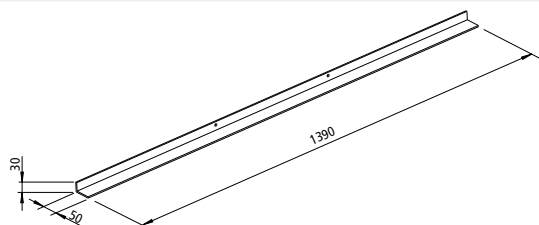
Carrying- transport handles
(1004-00575)



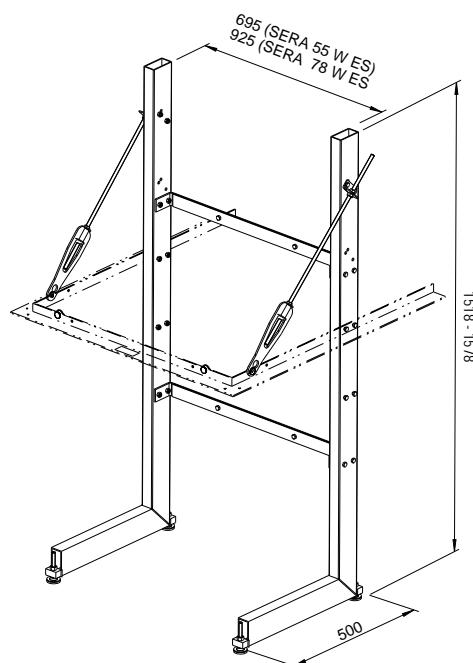
External combustion airbox
(1004-00574)



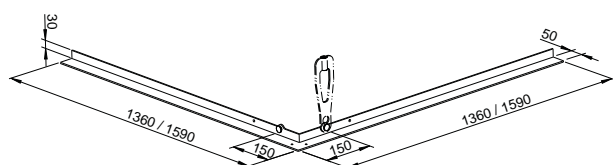
Supporting frame: SERA 55/ 78 W F/ W DS (1004-00568)



Adjustable supporting rack: without supporting frame (1004-00681)



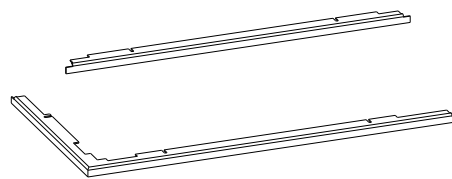
Supporting frame: SERA 55/ 78 W ES (1004-00570/ 1004-00571)



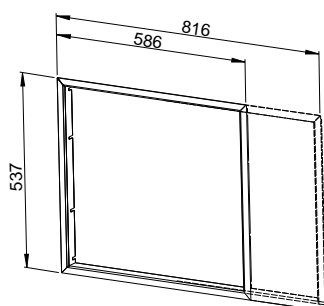
Lateral frames , flat: for all SERA models (1004-00547)



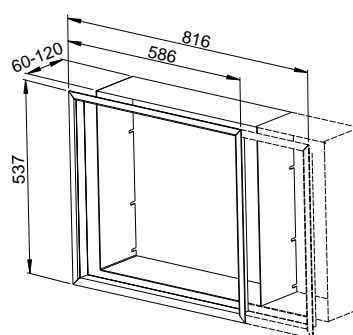
Lower frame, flat: W F / W ES



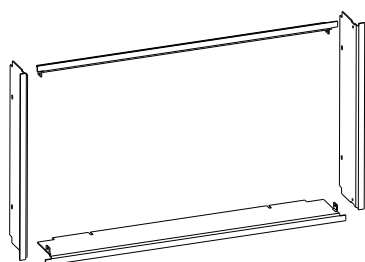
Frame set for DS-rear side, flat: SERA 55/ 78 W DS
(1004-00904/ 1004-00905)



Deep frame set, for DS- rear side: SERA 55/ 78 W DS
(1004-00907 / 1004-00908)



Deep frames (set): SERA W F/ W DS (1004-00552/ 1004-00553)



Type SERA W		W F		W DS		W ES	
front width		55	78	55	78	55	78
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250					
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40					
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120					
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200					
Efficiency	[%]	≥ 81					
Flue gas temperature	[°C]	193	199	194	223	222	211

I. Operation with direct connection to the chimney

Performance data

Nominal heat output, \dot{Q}_N	[kW]	10.0	13.0	10.0	13.0	11.0	13.0
Heat output to the water	[kW]	6.0	7.5	5.0	6.5	6.5	7.5
Direct radiation and convection output	[kW]	2.3	3.7	2.4	2.5	0.6	1.2
Heat output over the front surface(s) and glass pane(s)	[kW]	1.7	1.8	2.6	4.0	3.9	4.3

Chimney dimensioning data according to EN 13384 part 1 and 2

Flue gas temperature (at the spigot of insert)	[°C]	218	221	232	244	254	221
Flue gas mass flow	[g/s]	9.7	15.3	11.6	14.0	11.0	12.9
Minimum required chimney draft ¹⁾	[Pa]	12	14	13	13	13	13
Required combustion air flow rate	[m ³ /h]	27.3	43.8	33.2	39.7	30.9	36.1

Admissible fuels and feeding rate

Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	2.3	2.9	2.3	3.5	2.5	2.9
Feeding rate, wood logs	[kg/h]	3.0	3.9	3.0	4.0	3.5	4.3
Fuel quantity, wood briquettes	[kg]	2.2	2.8	2.2	3.3	2.4	2.8
Feeding rate, wood briquettes	[kg/h]	2.9	3.7	2.9	3.8	3.3	4.1

Air cross-sections ³⁾

Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	388	660	389	394	48	161
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	489	823	512	541	162	295
Convection air outlet ³⁾	[cm ²]	465	792	467	473	57	194

Inner gaps in the convection chamber ³⁾

inner gaps between insert and thermal insulation or cladding	[cm]	3	5	6	6	3	3
--	------	---	---	---	---	---	---



Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)

II. Specifications regarding fire protection and thermal insulation ⁶⁾

Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.

Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾
(insulation thickness additional required to the required 10 cm pre-wallings)

to the setup floor	[cm]	1	1	1	1	1	1
to the side	[cm]	3	3	3	3	3	3
to the rear	[cm]	4	4	4	4	4	4
to the ceiling ⁷⁾	[cm]	3	3	3	3	3	3

Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation

to the setup floor (without installed base frame)	[cm]	3	3	3	3	3	3
to the setup floor (with installed base frame)	[cm]	25	25	25	25	25	25
to the front of thermal insulation to the side	[cm]	4	4	4	6	4	4
to the front of thermal insulation to the rear	[cm]	6	6	6	6	6	6
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20	20	20	20

Required air cross-sections for convection air inlet and outlet (for the fire protection)

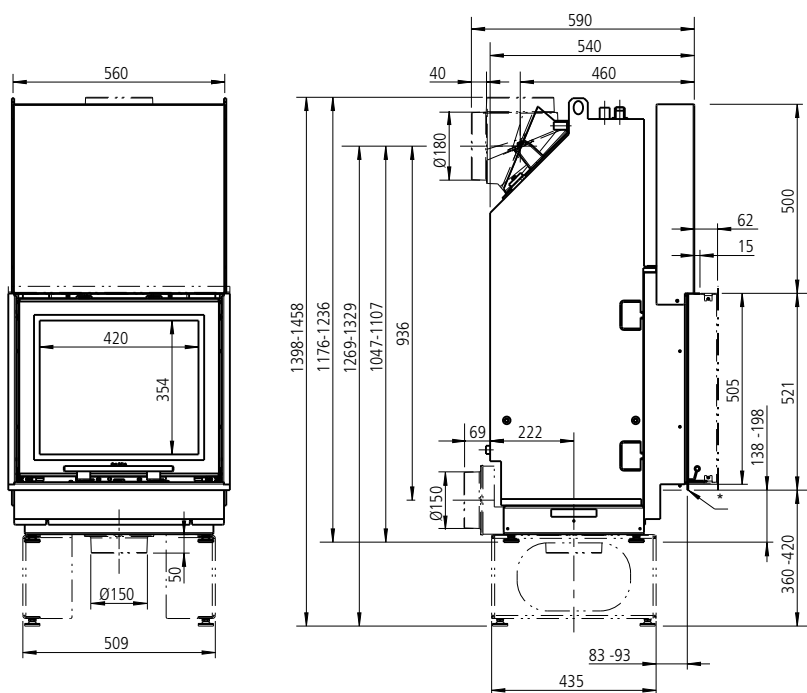
Minimum convection air outlet, non-closable	[cm ²]	125	125	125	125	125	125
Minimum convection air inlet, non-closable	[cm ²]	200	200	200	200	200	200

Type SERA W		W F		W DS		W ES	
	front width	55	78	55	78	55	78
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	100	120	100	120	100	120
IV. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180	180	180/200	180/200
Preadjustment of the LT-3 combustion air valve (optional)	%	45	45	45	45	45	45
Static valve position of the LT-3 combustion air valve (test mode)	%	45	45	20	33	33	39
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	23	23	10	16	16	20
Maximum log size	[cm]	33	33	33	33	33	33
admissible operating pressure of the water heat exchanger	[bar]	2.5	2.5	2.5	2.5	2.5	2.5
Maximum of supply / flow temperatur at normal operation ¹⁰⁾	[°C]	95	95	95	95	95	95
Maximum of supply / flow temperatur at failure situation ¹⁰⁾	[°C]	110	110	110	110	110	110
Water content of the water heat exchanger	[l]	40	50	32	42	32	42
Dimension of coupling - supply / flow		3/4" - ext.thr.					
Dimension of coupling - return flow		3/4" - ext.thr.					
Dimension of coupling - over pressure safety device		1/2" - ext.thr.					
Dimension of coupling - thermal discharge safety exchanger		1/2" - ext.thr.					
Dimension of coupling - drain		1/2" - int.thr.					
Dimension of coupling - air valve		3/8" - int.thr.					
Weight of insert with inner lining	approx. [kg]	250	300	240	285	245	295
Weight of insert with inner lining and filled water heat exchanger	approx. [kg]	290	350	272	327	277	337

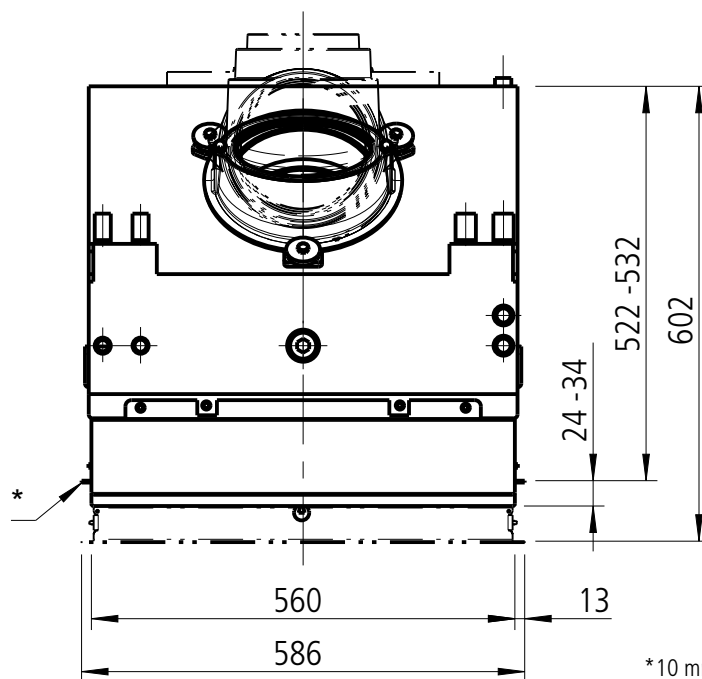
- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 4.1 m² (55 W F), approx. 4.8 m² (78 W F), approx. 1.7 m² (55 W DS), approx. 1.4 m² (78 W DS), approx. 3.2 m² (55 W ES), approx. 3.9 m² (78 W ES) - with direct connection to the chimney.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) Each model of SERA W can only be used with direct connection to the chimney.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.
- 10) The LEDATHERM Complete Circulation and Mixing Unit KS04 provides a safety shut down function at to high flow temperature. Due to this safety function the temperature of supply / flow is terminated at 95°C (factory settings). If other components are used instead of LEDATHERM Complete Unit KS04, adequate safety devices are absolutely necessary to ensure the required termination of the flow temperature.



Each model of SERA W (with water heat exchanger) is only for use at direct connection to the chimney.

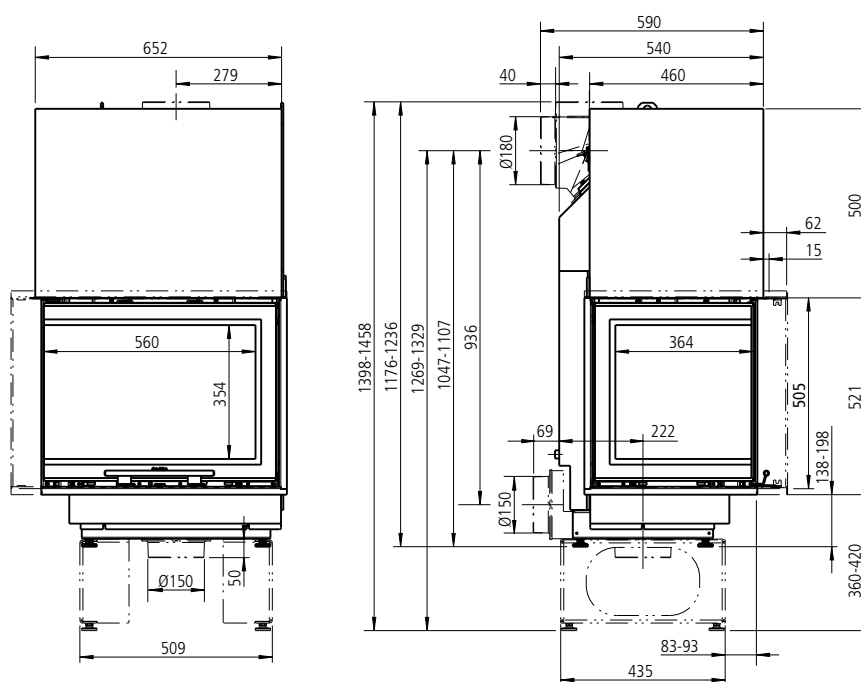


SERA 55 W F
top view / M1:10

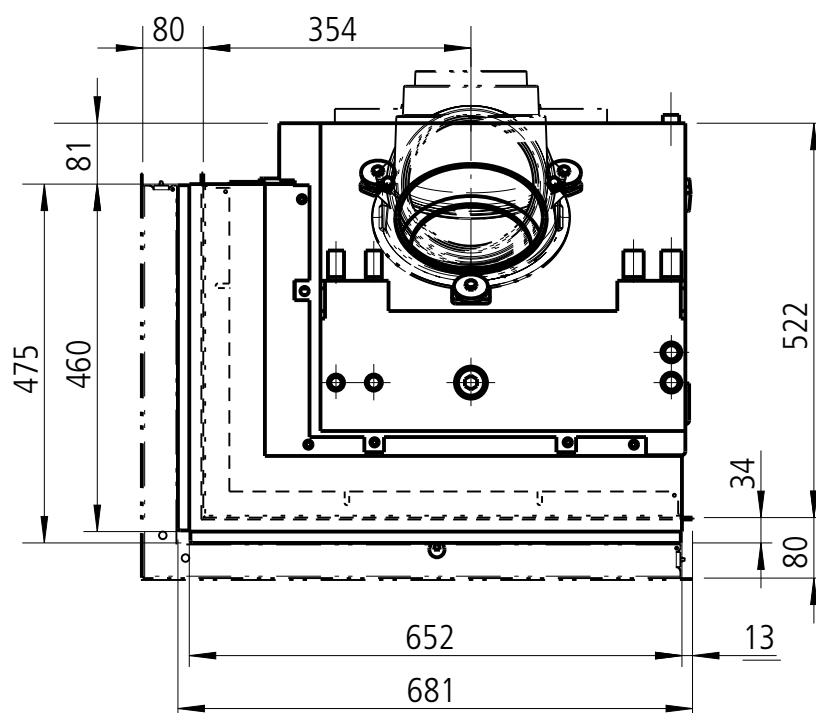


*10 mm adjustment range

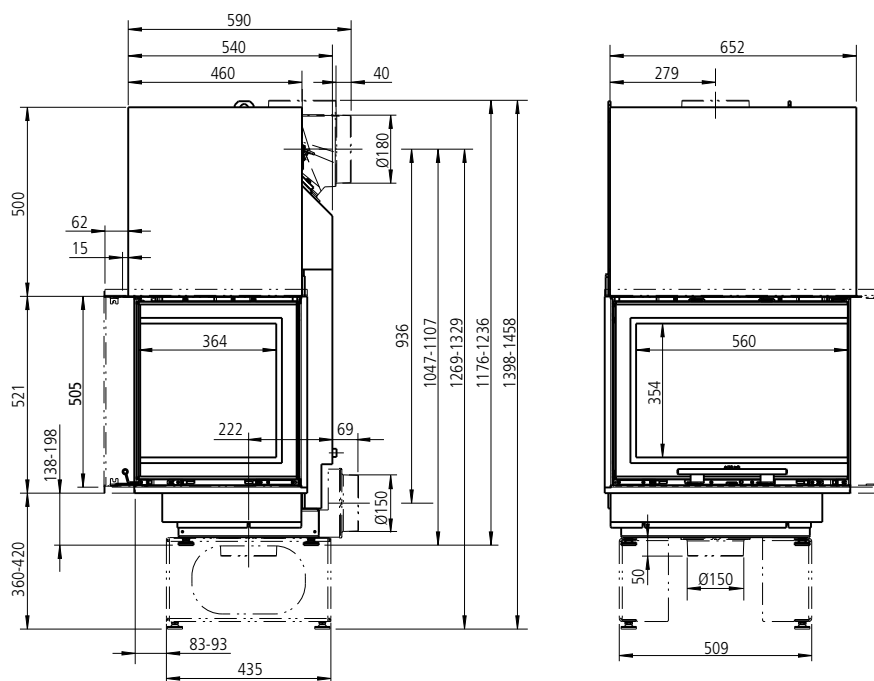
SERA 55 W ES L (L-shape left) / M1:20



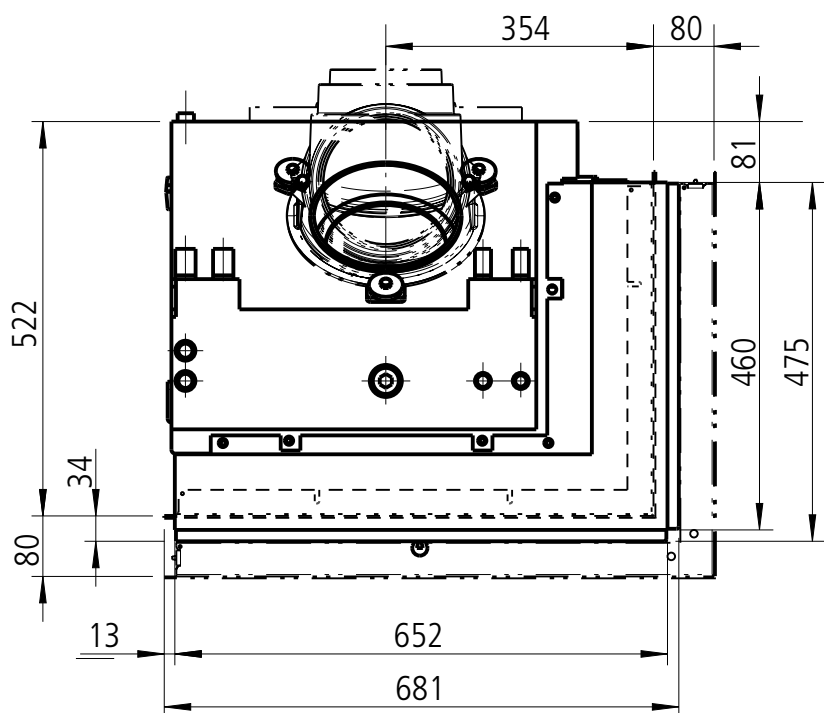
SERA 55 W ES L
top view / M1:10



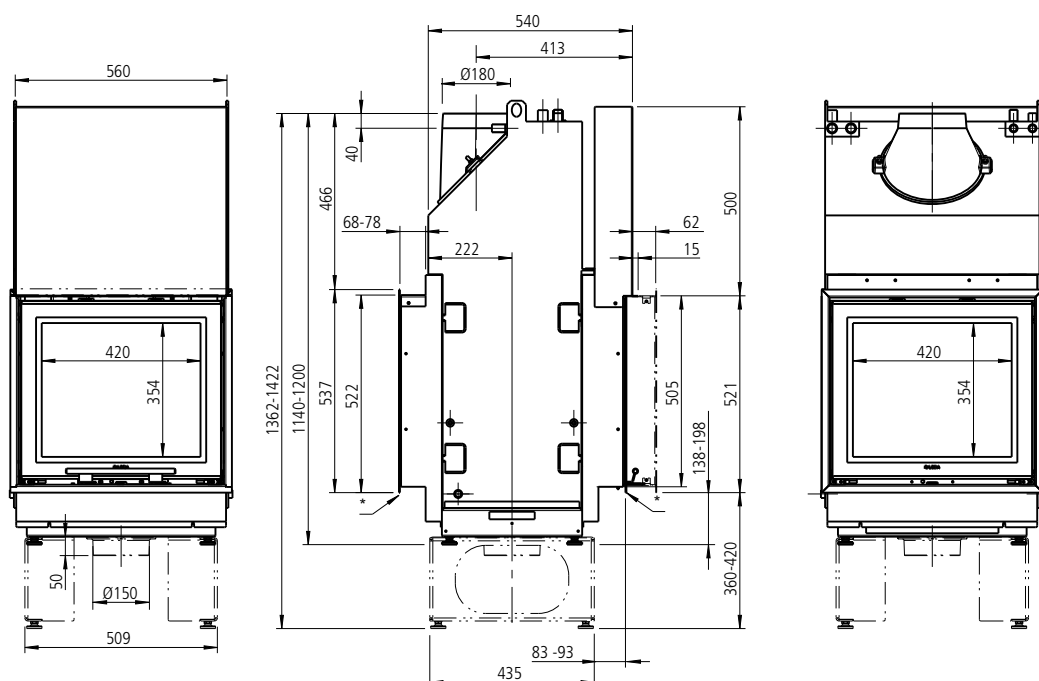
SERA 55 W ES R (Ecksicht rechts) / M1:20



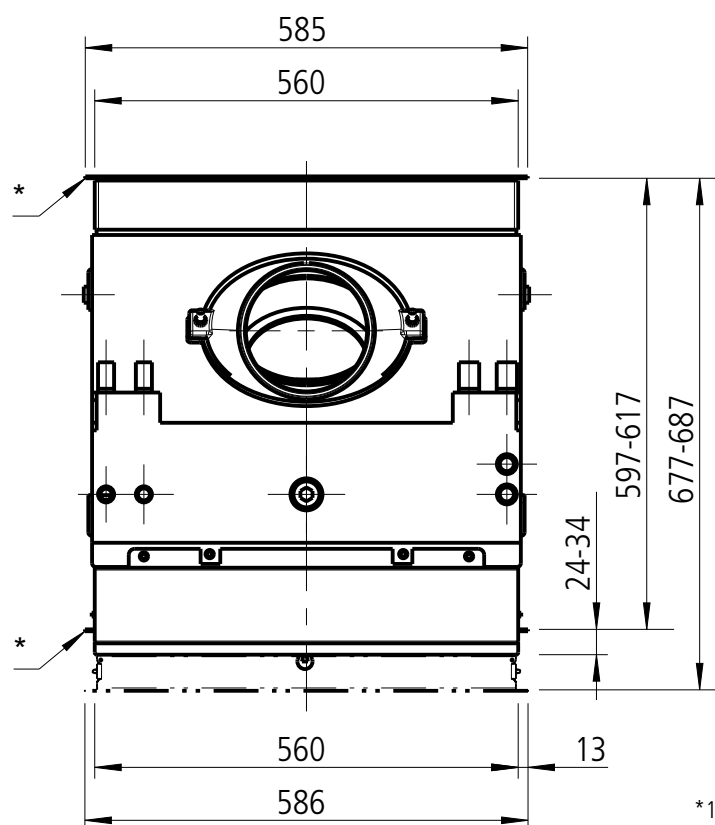
SERA 55 W ES R
top view / M1:10



SERA 55 W DS (double sided) / M1:20

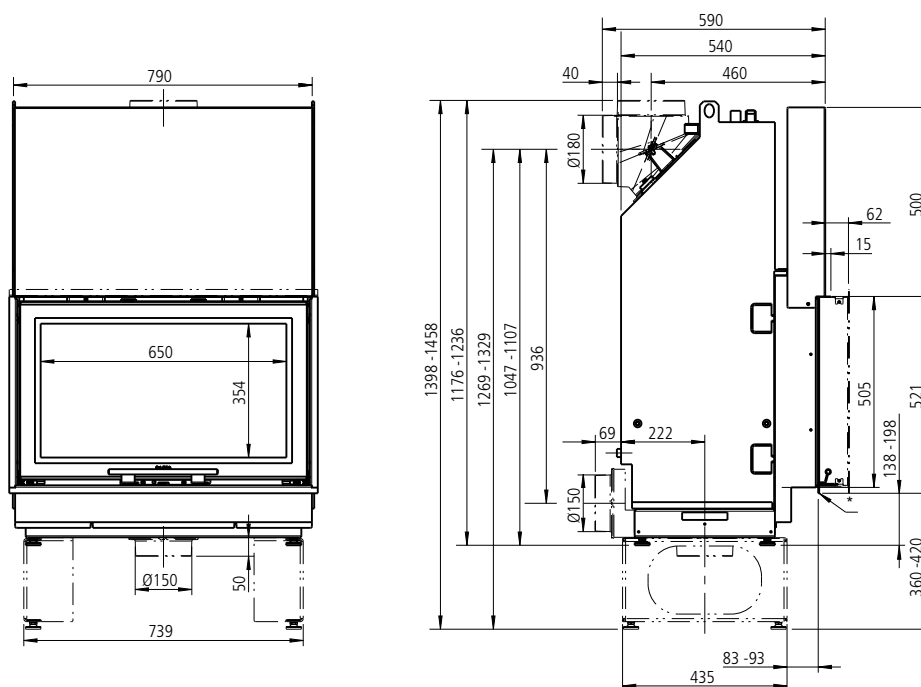


SERA 55 W DS
top view / M1:10

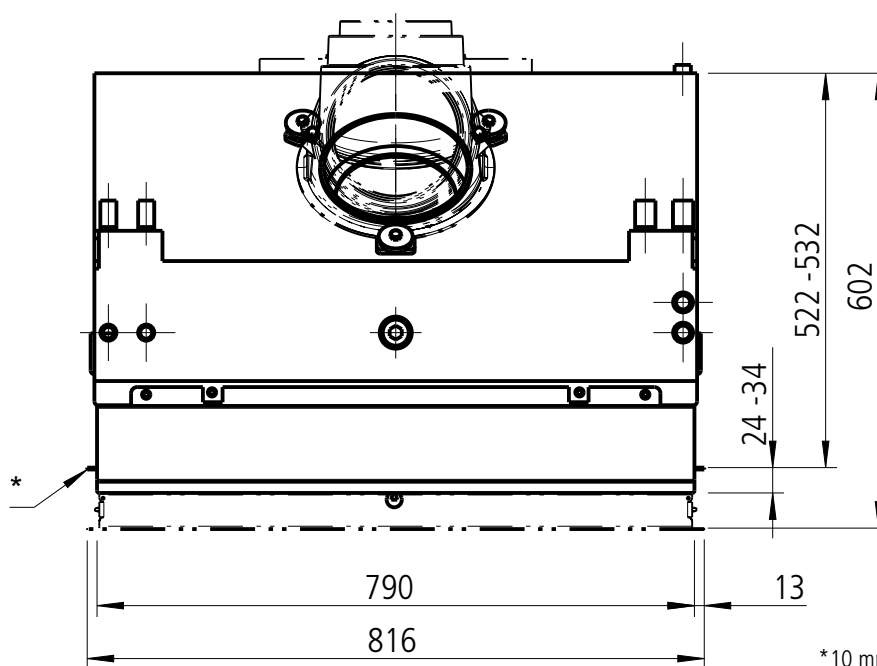


* 10 mm adjustment range

SERA 78 W F (straight) / M1:20

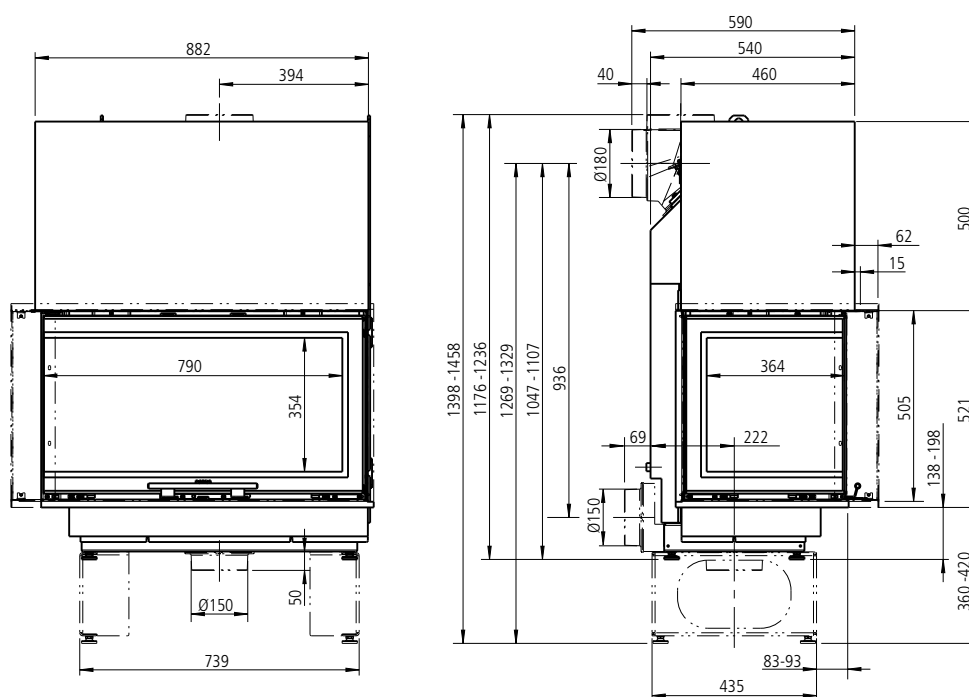


SERA 78 W F
top view / M1:10

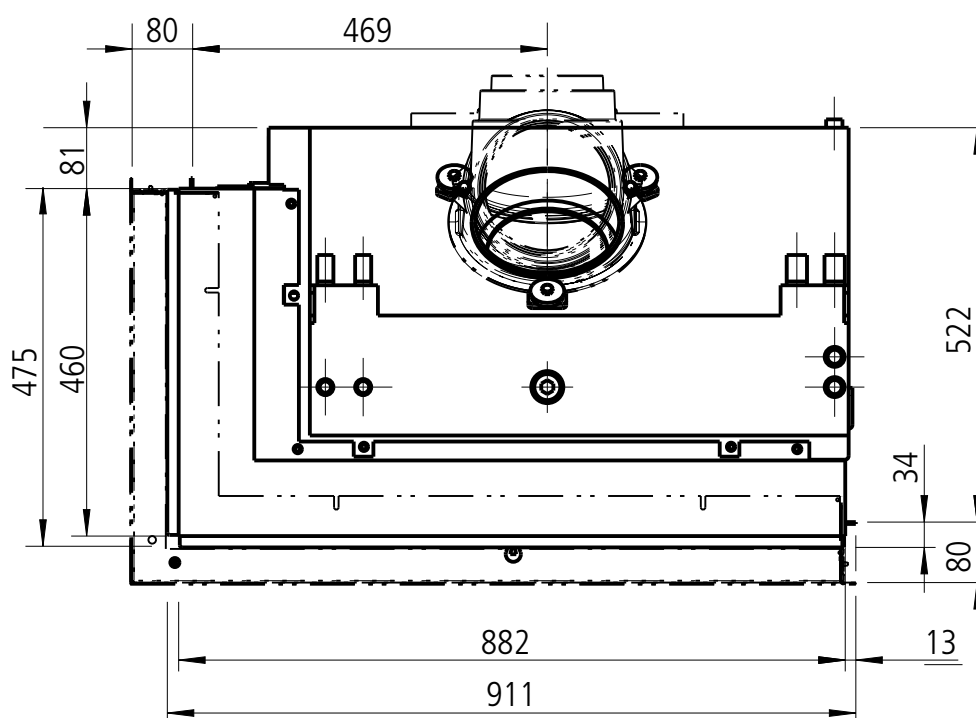


*10 mm adjustment range

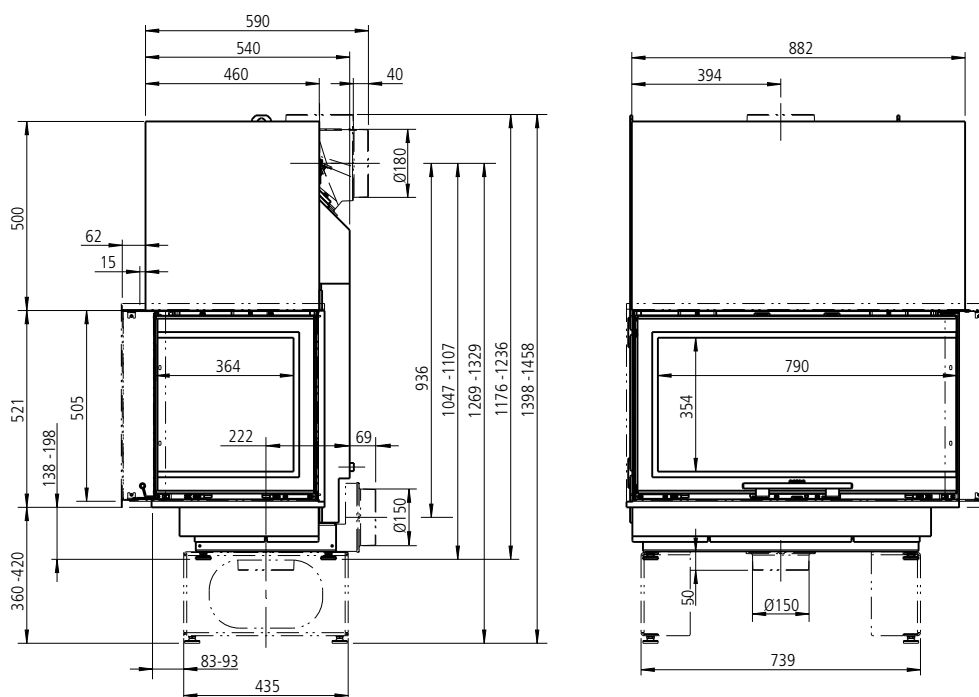
SERA 78 W ES L (L-shape left) / M1:20



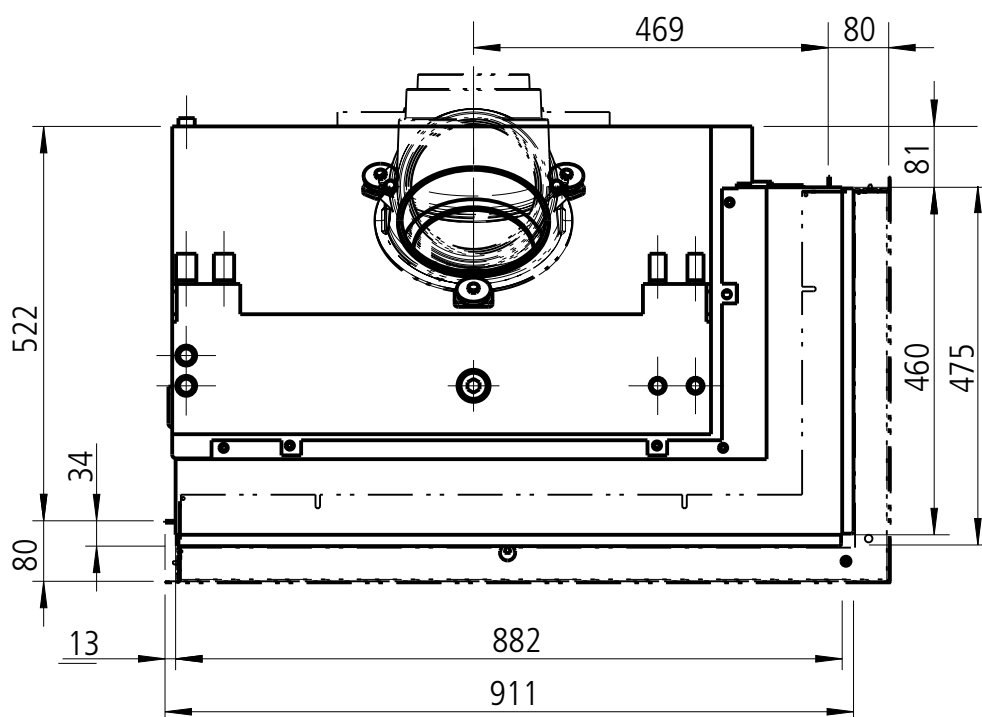
SERA 78 W ES L
top view / M1:10



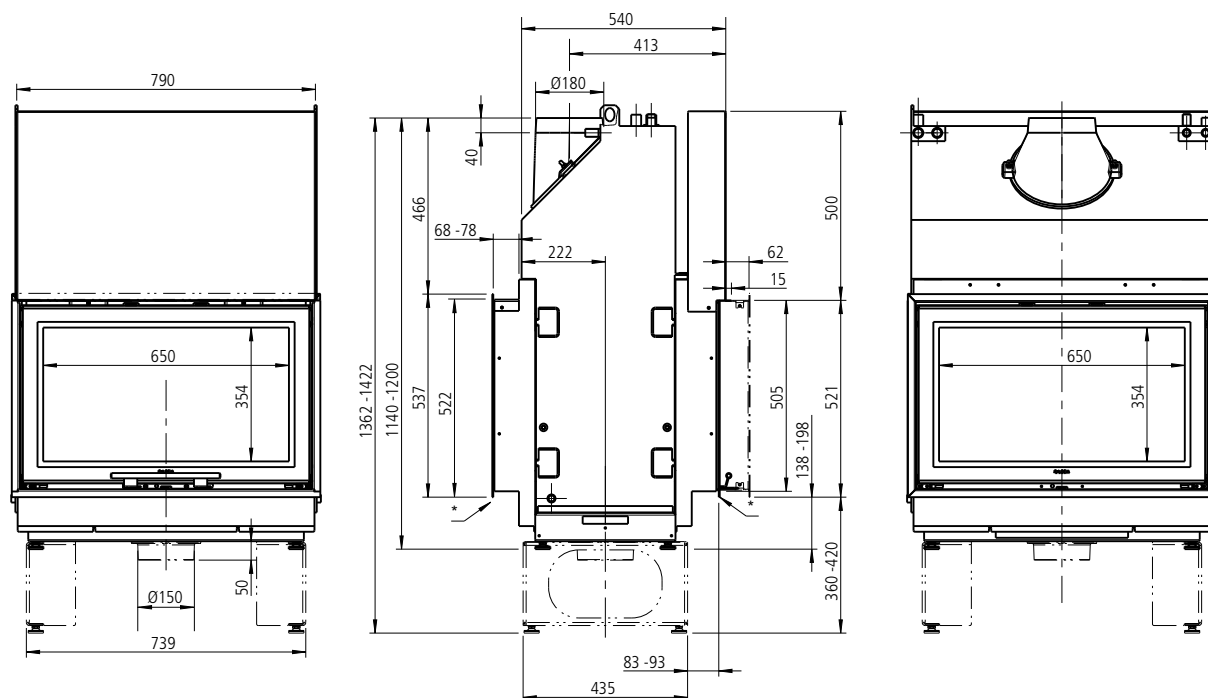
SERA 78 W ES R (L-shape right) / M1:20



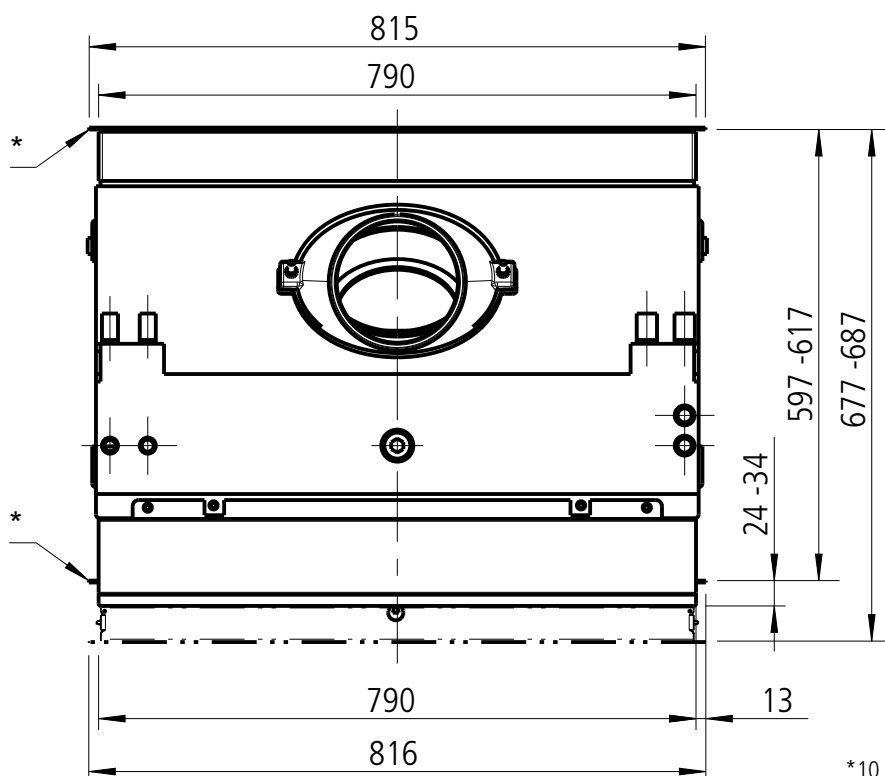
SERA 78 W ES R
top view / M1:10



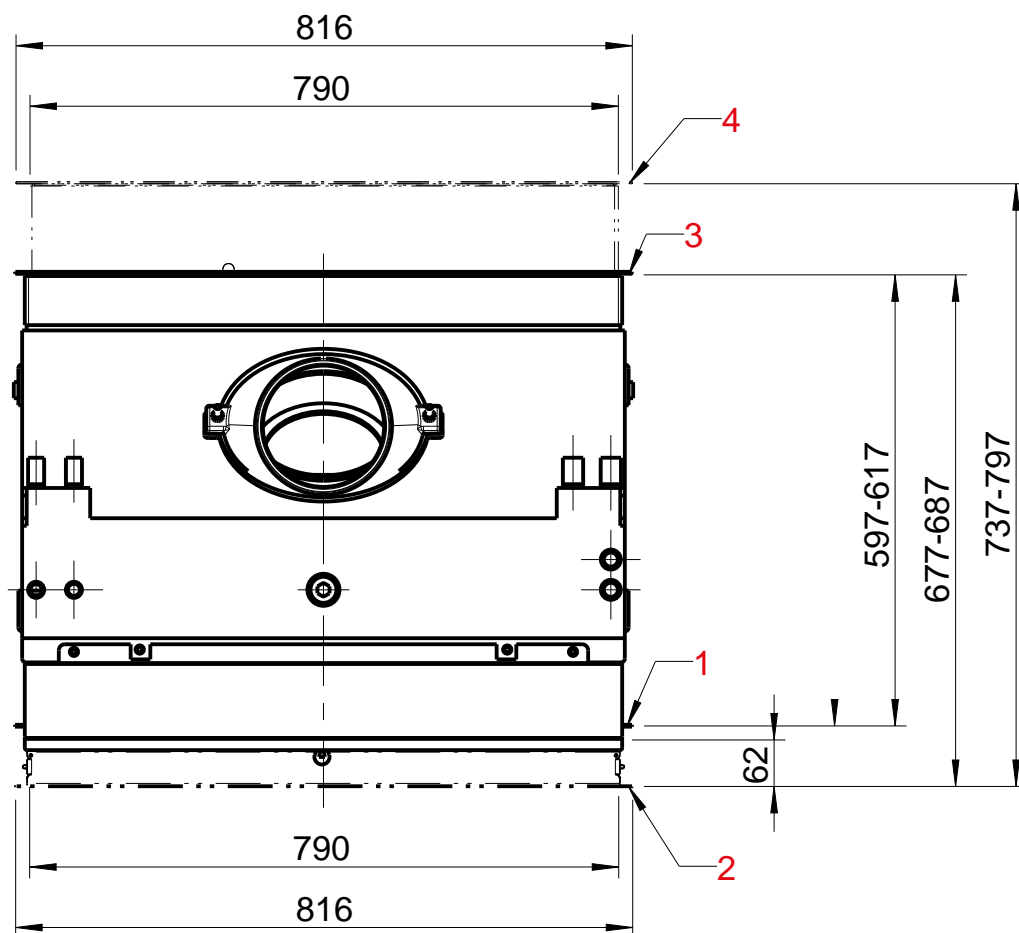
SERA 78 W DS (double sided) / M1:20



SERA 78 W DS
top view / M1:10

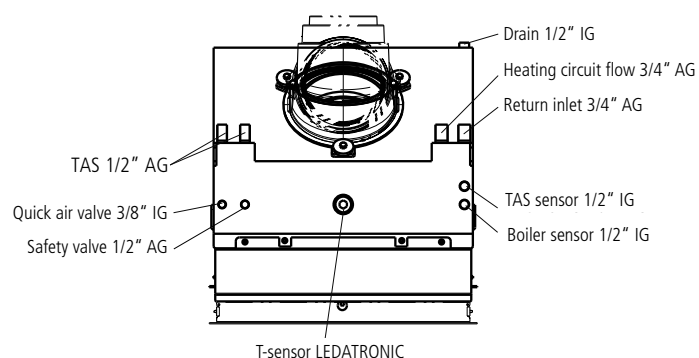


* 10 mm adjustable range

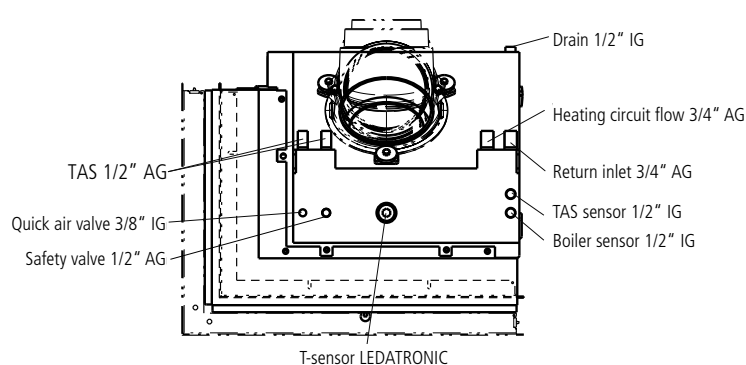


- 1) Lateral frames (1004-00547): 10 mm depth adjustable
- 2) Deep frames (1004-00553)
- 3) Deep frame set, for DS rear side (1004-00905): 10 mm depth adjustable
- 4) Deep frame/ surrounding cover frame for DS rear side (1004-00908): can be shortened up to 60 mm

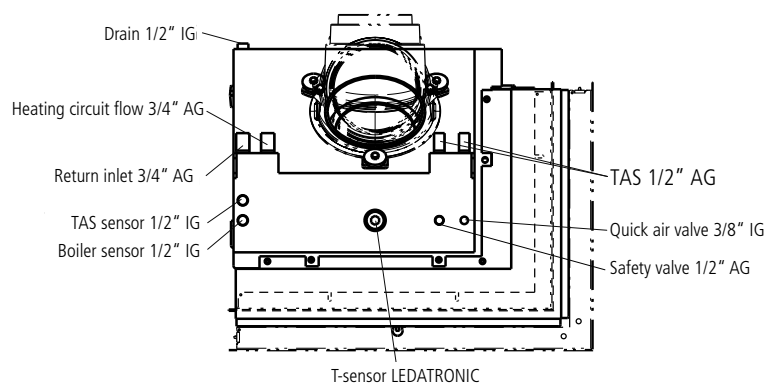
SERA W F Connections



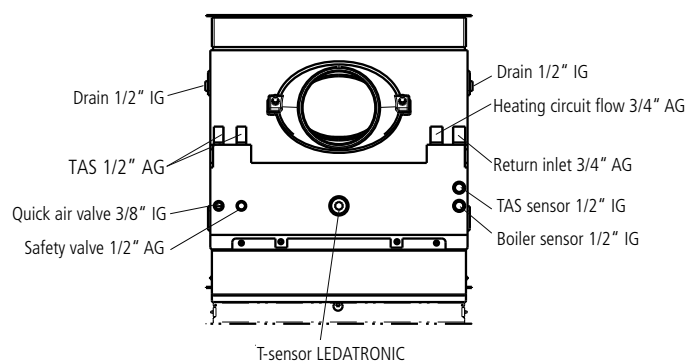
SERA W ES L Connections



SERA W ES R Connections



SERA W DS Connections





VIDA 78 W F



VIDA W

VIDA W with hot water heat exchanger appropriated for fireplace systems integrated to a central heating and domestic hot water system.

Models:

- VIDA W F (straight)
 - VIDA W DS (double sided)
- with hot water heat exchanger and complete water surrounded body

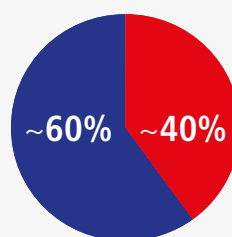
Different frontal widths:

55 cm / 78 cm width

Product benefit at a glance:

- High quality hydronic fireplace insert
 - with boiler steel hot water exchanger
 - with integrated safety heat exchanger for the thermal discharge safety device
- all prescribed safety devices are included in the scope of delivery
- installation as low fire (traditional style) or a base frame (1004-00304)
- angled all glass door/s with inox door handle
- double glazing
- VIDA DS with two equal sized, hinged doors, the second door is without handle (to open with removable operating handle „cold hand“)
- fuel: wood logs (opt.: 33 cm length) or wood briquettes
- comfortable one hand adjustment of the combustion air
- high-quality chamotte inner lining of combustion chamber, bottom of the combustion chamber with cast iron collar and chamotte inlay

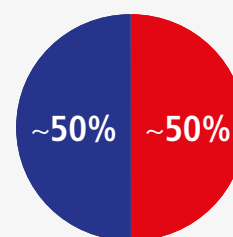
- high efficiency
- external combustion air connection:
 - VIDA 55 W F, 78 W F underneath or rear
 - VIDA 55 W DS, W 78 DS underneath
- particularly eco-friendly combustion
- two part cast iron Flue gas spigot endless rotatable Ø 180 mm (VIDA W F: angle adjustable, VIDA W DS: top outlet)
- suitable for the connection to one chimney with multiple stoves
- changeable door hinge (standard factory setting left hinged)



VIDA 55/ 78 W F

Output ratio:

■ direct emission ■ to the water



VIDA 55/ 78 W DS

Output ratio:

■ direct emission ■ to the water



VIDA 55 W F
with hinged all-glass door



VIDA 78 W F
with hinged all-glass door

Scope of delivery

Fireplace insert, inner lining of the combustion chamber and pre-assembled frame, cast iron Flue gas spigot, installation and operating manual for hydronic solid fuel fireplaces, stove pass, external air connector Ø 150 mm, 4 adjustable feet (with rubber pads, 6 cm height regulation) protective glove, operating handle (DS Version), lock nut for door hinge change, cleaning brush, full-metall safety valve 2,5 bar, automatic air valve, thermal discharge safety device (TAS with 4 m capillary line (not prolongable, built-in sensor pocket, mini ball-valve for the drain, plug, fitting kit for the safety heat exchanger

Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2), Munich Solid Fuel Ordinance
- Austrian § 15a-B-VG (except 78 W F), Swiss Clean Air Act (LRV)
- Energy class according to (EU) 2015/1186: A+

Ident-No.	Description	€	
	VIDA W F straight		
1003-01612	VIDA 55 W F with hinged all-glass door	4710.00	
1003-01613	VIDA 78 W F with hinged all-glass door	5450.00	
	VIDA W DS double sided		
1003-01623	VIDA 55 W DS with hinged all-glass doors	5700.00	
1003-01624	VIDA 78 W DS with hinged all-glass doors	6990.00	

Checkbox: What do I need to order?

- ☐ Fireplace: VIDA W Hydronic fireplace insert
- ☐ LEDATHERM KS04 Complete Circulation and Mixing Unit
- + optional accessories










Hinged door(s) VIDA F/ DS


imaged: VIDA DS




VIDA W


Essential accessories		€	
1004-00678	LEDATHERM KS04 Complete Circulation and Mixing Unit	1430.00	 ^{2,3} p.252
Optional accessories		€	
1004-00304	Base frame	200.00	 ¹ p.260
1004-01106	LEDA Service surcharge: Change of door hinge in the factory	90.00	
1004-00771	additional door handle (firmly mounted) for VIDA 55/ 68/ 78 W DS	100.00	
1004-00574	Airbox (VIDA 55/ 78 W F) including blind cover for the external air connection to the rear	70.00	
1003-02043	LEDATRONIC LT3 WiFi Electronic combustion air control device for VIDA 55/ 78 (W) F/ DS, complete set	1380.00	
1004-00531	Door contact trigger for 2nd door VIDA 55/ 78 W DS with LT3	160.00	

Optional accessories		€	
1004-00764	ZAE Central Heating Connection Device for KS04	1100.00	 ³ p.256
1004-00731	Drain funnel	60.00	 ³ p.266
1004-00732	Microbubble deaerators (air valve), vertical	190.00	
1004-00733	Microbubble deaerators (air valve), horizontal	140.00	
1004-00971	Backflow preventer BA-BM020, 3/4"	410.00	
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	


¹ LT3 WiFi without display which can be ordered optionally (1004-00542)

The 2nd Door contact trigger for 55/ 78 DS models has to be ordered separately (1004-00531)

² The LEDATHERM KS04 is essential to ensure safety, correct function and optimum efficiency of the system.

³ ZAE for the simple and direct connection to the KS04

Type VIDA W		55 W		78 W	
		F	DS	F	DS
Applicable certification (acc. Regulation (EU) 305/2011)		Declaration of performance (DoP) & CE-marking acc. EN 13229			
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A+	A+	A+	A+
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250			
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40			
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120			
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200			
Efficiency	[%]	≥ 81	≥ 81	≥ 81	≥ 81
Flue gas temperature	[°C]	193	194	199	223

I. Operation with direct connection to the chimney ²⁾					
Performance data					
Nominal heat output, \dot{Q}_N	[kW]	10.0	10.0	13.0	13.0
Water-side output, \dot{Q}_{ZUS}	[kW]	6.0	5.0	7.5	6.5
Direct radiation and convection output	[kW]	2.3	1.8	3.7	2.4
Heat output over the front surface(s) and glass pane(s)	[kW]	1.7	3.2	1.8	4.1
Chimney dimensioning data according to EN 13384 part 1 and 2					
Flue gas temperature (at the spigot of insert)	[°C]	218	232	221	244
Flue gas mass flow	[g/s]	9.7	11.6	15.3	14.0
Minimum required chimney draft ¹⁾	[Pa]	12	13	14	13
Required combustion air flow rate	[m ³ /h]	27.3	33.2	43.8	39.7
Admissible fuels and feeding rate					
Admissible fuels		wood logs (preferred) and wood briquettes			
Fuel quantity, wood logs	[kg]	2.3	2.3	2.9	3.5
Feeding rate, wood logs	[kg/h]	3.0	3.0	3.9	4.0
Fuel quantity, wood briquettes	[kg]	2.2	2.2	2.8	3.3
Feeding rate, wood briquettes	[kg/h]	2.9	2.9	3.7	3.8
Air cross-sections ³⁾					
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	393	276	667	384
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	494	399	829	531
Convection air outlet ³⁾	[cm ²]	471	331	800	460
Inner gaps in the convection chamber ³⁾					
inner gaps between insert and thermal insulation or cladding	[cm]	3	3	4	4
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)					

II. Specifications regarding fire protection and thermal insulation ⁶⁾					
Insulation thickness for the fire protection of installation walls containing combustible / inflammable materialp.					
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾ (insulation thickness additional required to the required 10 cm pre-wallings)					
to the setup floor	[cm]	1	1	1	1
to the side	[cm]	3	3	3	3
to the rear	[cm]	4	--	4	--
to the ceiling ⁷⁾	[cm]	3	3	3	3
Required inner gaps between insert and combustible / inflammable materials resp. the front of thermal insulation					
to the setup floor (without installed base frame)	[cm]	3	3	3	3
to the setup floor (with installed base frame)	[cm]	25	25	25	25
to the front of thermal insulation to the side	[cm]	4	4	4	6
to the front of thermal insulation to the rear	[cm]	6	--	6	--
to the front of thermal insulation to the ceiling ⁷⁾	[cm]	20	20	20	20

Type VIDA W		55 W		78 W	
		F	DS	F	DS
Required air cross-sections for convection air inlet and outlet (for the fire protection)					
Minimum convection air outlet, non-closable	[cm ²]	125	125	125	125
Minimum convection air inlet, non-closable	[cm ²]	200	200	200	200
Required distance in the radiation area of the front (with no additional radiation protection)					
Required distance	[cm]	100	100	120	120

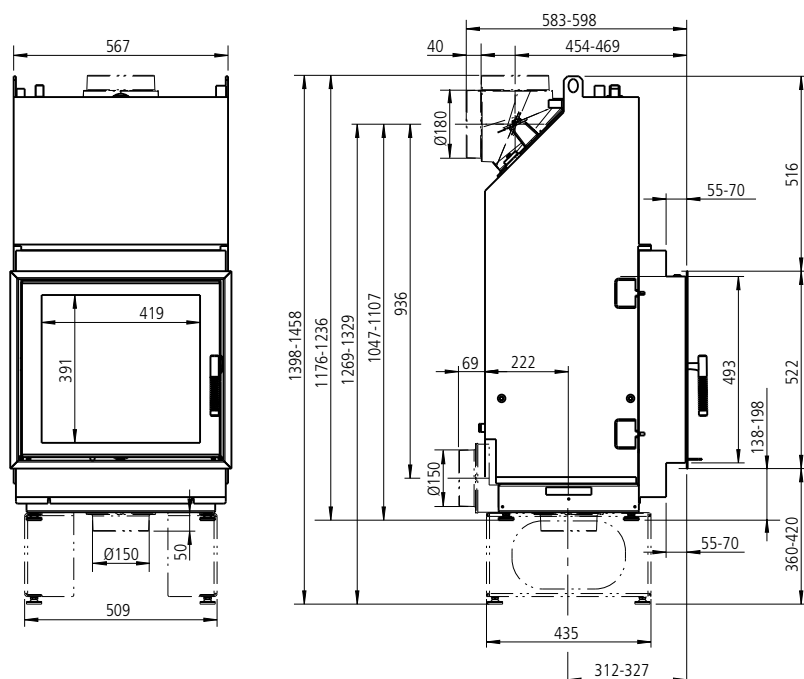
III. Measurements, weights and miscellaneous					
External air connector	Ø [mm]	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180	180	180	180
Preadjustment of the LT-3 combustion air valve (optional)	%	45	45	45	45
Static valve position of the LT-3 combustion air valve (test mode)	%	32	45	45	45
Smallest valve position of the LT-3 combustion air valve (dynamic test mode)	%	15	23	23	23
Maximum log size	[cm]	33	33	33	33
admissible operating pressure of the water heat exchanger	[bar]	2.5	2.5	2.5	2.5
Maximum of supply / flow temperatur at normal operation ¹⁰⁾	[°C]	95	95	95	95
Maximum of supply / flow temperatur at failure situation ¹⁰⁾	[°C]	110	110	110	110
Water content of the water heat exchanger	[l]	40	32	42	42
Dimension of coupling - supply / flow		3/4" - ext.thr.			
Dimension of coupling - return flow		3/4" - ext.thr.			
Dimension of coupling - over pressure safety device		1/2" - ext.thr.			
Dimension of coupling - thermal discharge safety exchanger		1/2" - ext.thr.			
Dimension of coupling - drain		1/2" - int.thr.			
Dimension of coupling - air valve		3/8" - int.thr.			
Weight of insert with inner lining	approx. [kg]	250	240	285	295
Weight of insert with inner lining and filled water heat exchanger	approx. [kg]	290	272	327	337

- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast an heavy staining of glass panep.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 3.4 m² (55 W F), approx. 4.2 m² (55 W DS), approx. 3.5 m² (68 W F), approx. 4.5 m² (68 W DS), approx. 3.7 m² (78 W F), approx. 4.8 m² (78 W DS).) - with direct connection to the chimney.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) Each model of SERA W can only be used with direct connection to the chimney.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute materialp. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not bei necessary with an adequate distance between the cladding of fireplace an the wall.
- 10) The LEDATHERM Complete Circulation and Mixing Unit KS04 provides a safety shut down function at to high flow temperature. Due to this safety function the temperature of supply / flow is terminated at 95°C (factory settings). If other components are used instead of LEDATHERM Complete Unit KS04, adequate safety devices are absolutely necessary to ensure the required termination of the flow temperature.

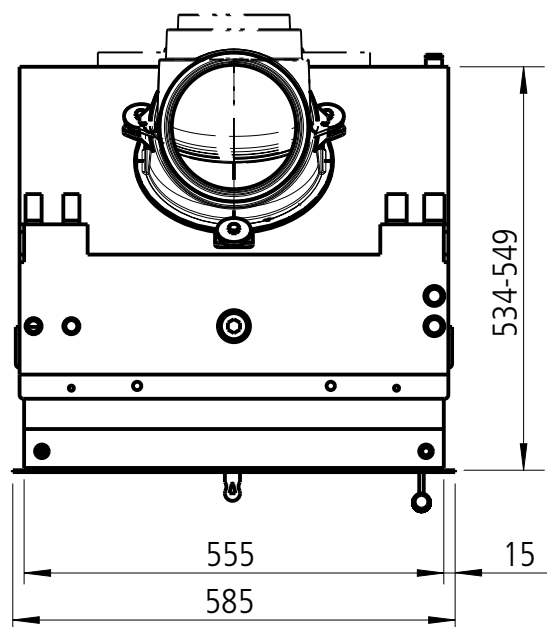


Each model of VIDA W (with water heat exchanger) is only for use at direct connection to the chimney.

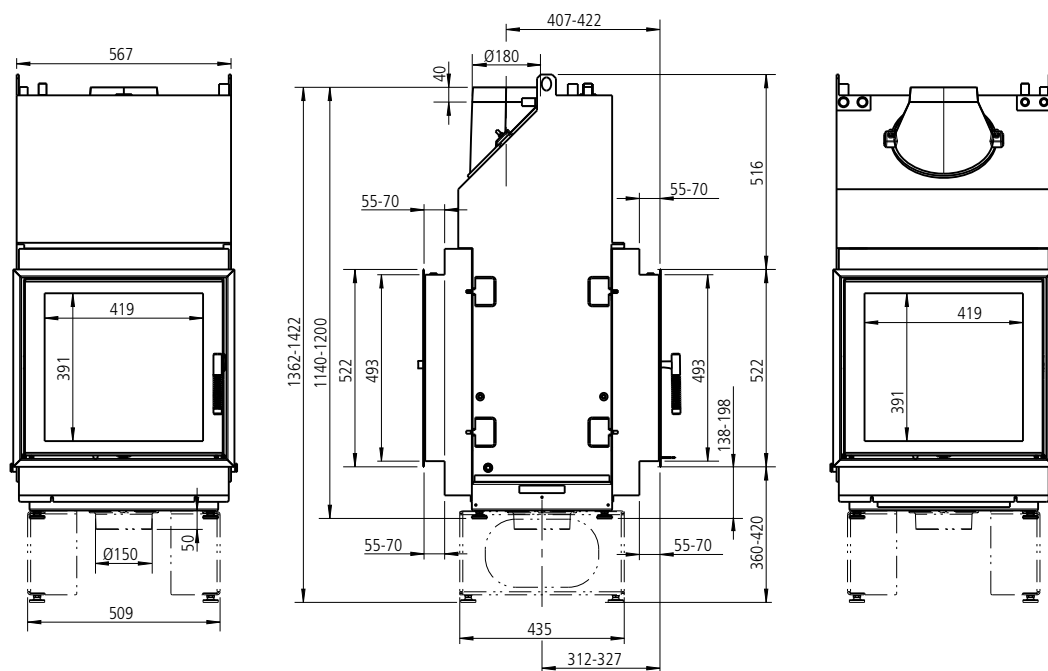
VIDA 55 W F (straight) / M1:20



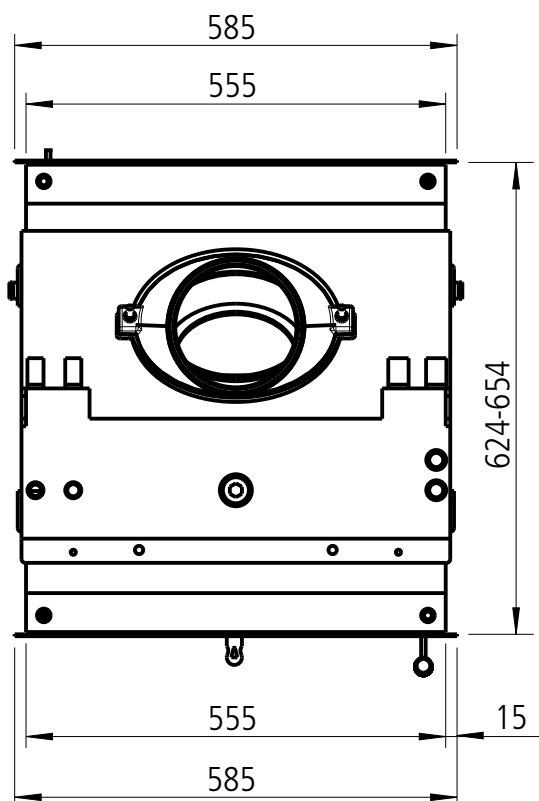
VIDA 55 W F
top view / M1:10

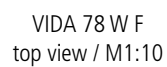


VIDA 55 W DS (top view) / M1:20

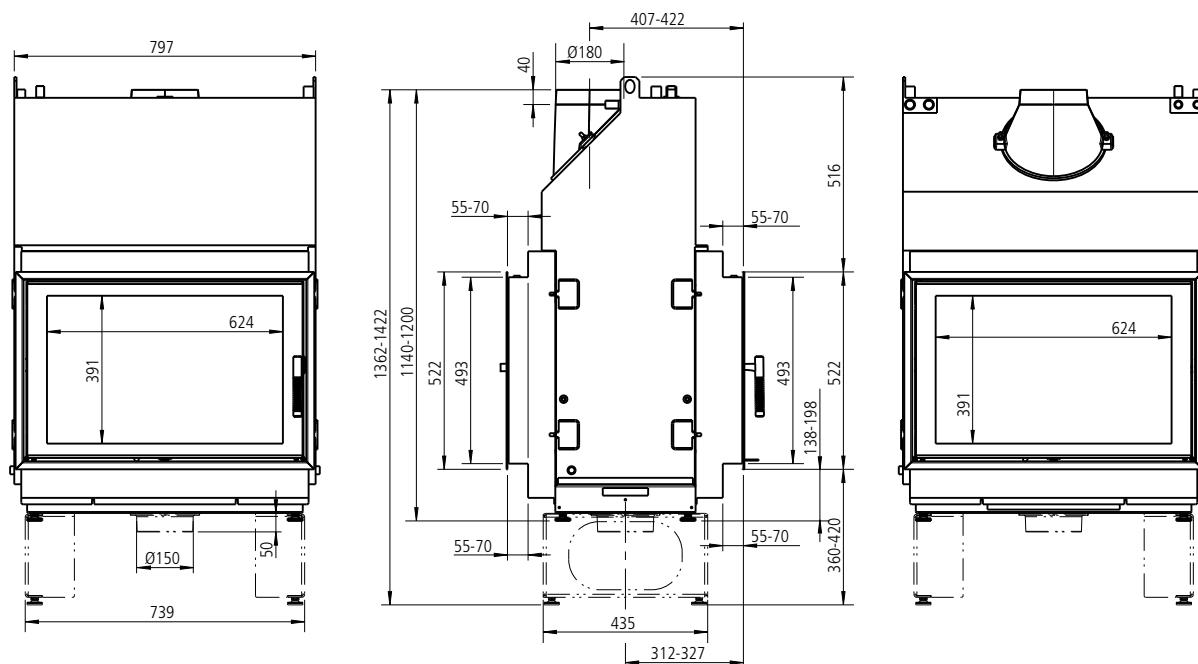


VIDA 55 W DS
top view / M1:10

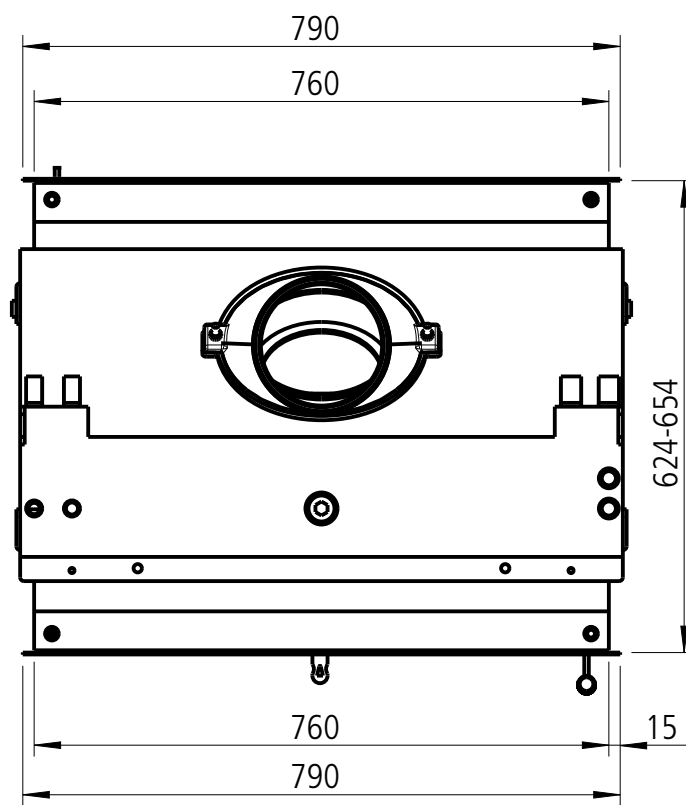




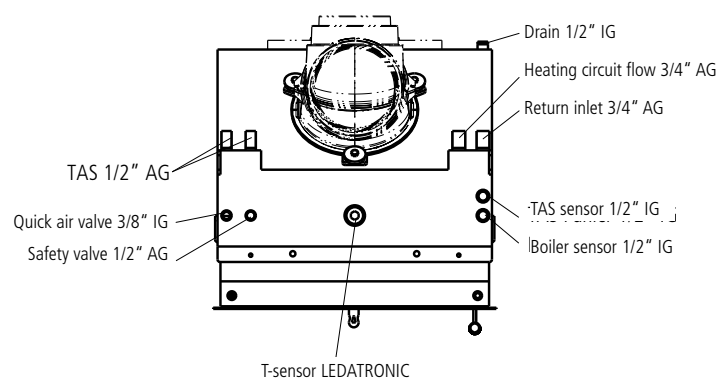
VIDA 78 W DS (double sided) / M1:20



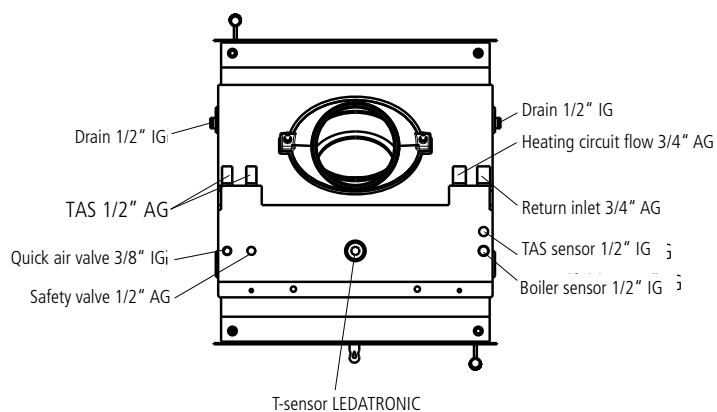
VIDA 78 W DS
top view / M1:10



VIDA 55/ 78 W F Water connections



VIDA 55/ 78 DS Water connections





TURMA W (standard model)
displayed: with installation frame, inox (1004-00761)



TURMA W DS (double sided)
displayed: with installation frame, inox (1004-00763), glass-front panel set (1004-00757)



TURMA W HL (with rear fuel-door)
displayed: with installation frame, black (1004-00760)



TURMA W

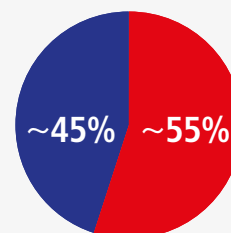
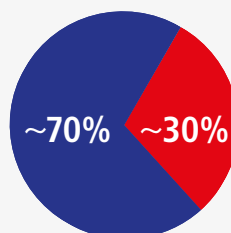
Tiled stove insert with hot water heat exchanger appropriated for hot air systems, with additional ceramic heat storage integrated to a central heating and domestic hot water system:

Versions:

- 2 sizes:
 - TURMA W with 12 kW nominal output (for logs of 33 cm length)
 - TURMA XL W with 13 kW nominal output (for logs of 50 cm length)
- 3 different versions:
 - TURMA/ TURMA XL (standard model)
 - TURMA DS/ TURMA XL DS (double sided)
 - TURMA HL/ TURMA XL HL (with rear fuel-door)
- 3 possible front versions:
 - with installation frame (black powder coated/ stainless steel (polished), different versions,
 - with front frame (black powder coated/ stainless steel (polished) and black glass front panel set
 - with one-piece steel front panel (black laquered), flush with the installation floor (no overhang), can be retrofitted (plug-in)

Product benefit at a glance:

- High efficient hydronic cast iron insert with a large glass pane for a great view to the fire for direct connection to the chimney
- to be connected to additional heat storage surface
- high quality appliance
- with boiler steel hot water exchanger,
- cast iron door, furnace bottom and interior combustion chamber parts
- with modern all-glass door and inox handle
- with integrated safety heat exchanger for the thermal discharge safety device
- double glazing
- optional door hinge (factory setting left)
- TURMA W (XL) DS with two equal-sized sides (equal doors, door handle firm mounted, (different frames for each side can be chosen)



Compliance with the following environmental standards

- German 1. BImSchV (level 1 and 2)
- Austrian § 15a-B-VG, Swiss Clean Air Act (LRV)
- Energy class: A (TURMA W), A+ (TURMA W DS/ HL)

...with direct connection to the chimney

TURMA W
TURMA XL W

TURMA W DS/ HL
TURMA XL W DS/ HL

Output ratio: ■ direct emission ■ to the water



Rear cast iron fuel door

TURMA (W) HL
(displayed: with base frame (1004-00304))



Rear cast iron fuel door

TURMA (W) HL with chamotte door
interior lining
(displayed: with base frame (1004-00304))



Laterally rotating handle

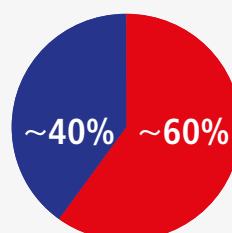
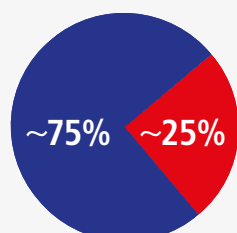
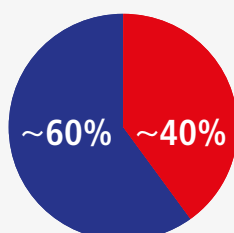
of the rear cast iron fuel door
TURMA (W) HL
allows comfortable opening

- TURMA W (XL) HL with rear cast iron fuel door without glass pane (with interior lining and laterally rotating handle) and depth-adjustable wall sleeve
- fuels: wood logs and wood briquettes
- comfortable one-hand lever for the combustion air adjustment
- high quality precise fit chamotte inner lining of the combustion chamber which can be positioned loosely through the front door (aesthetic set-up through continuous, large size stones)
- combustion chamber and inner lining accessible through the stove door
- detachable front frame
- adjustable feet (with rubber pads) 6 cm height regulation
- high efficiency
- external combustion air connection
- particularly eco-friendly combustion
- with 2 transport rollers for easier installation (only on TURMA W with

- front panel set)
- suitable for the connection to one chimney with multiple stoves
- Water pipe connections on top
- Flue gas spigot optionally on top or rear

Scope of delivery

Hydronic tiled stove insert including chamotte inner lining of combustion chamber, two part flue gas spigot, installation and operating manual for hydronic solid fuel fireplaces, vermiculite baffle plates, stove pass, combustion air connector Ø 150 mm, heat-protective glove, cleaning brush, full-metall safety valve 2,5 bar, automatic air valve, thermal discharge safety device (TAS) with 4 m capillary line (not prolongable), built-in sensor pocket, mini ball-valve for the drain, plug, fitting kit for the safety heat exchanger



... with additional cast iron heat storage box

TURMA W

TURMA XL W

**TURMA W DS/ HL
TURMA XL W DS/ HL**

Output ratio: ■ direct emission ■ to the water



Installation frame
black powder coated
(1004-00760)



Installation frame
inox
(1004-00761)



Front panel set and frame
Front panel set, black glass
(1004-00757) + Front panel black
powder coated (1004-00762)



Front panel set and frame
Front panel set, black glass
(1004-00757) + Front panel inox
(1004-00763)



TURMA W

Ident-No.	Description - without frames	€	
TURMA W			
1003-01755	TURMA H80 W (standard model)	4290.00	¹
1003-01758	TURMA H80 W (standard model) for LEDATRONIC LT3	4390.00	^{1,2} p.260
1003-01835	TURMA H80 XL W (standard model)	4610.00	¹
1003-01838	TURMA H80 XL W (standard model) for LEDATRONIC LT3	4710.00	^{1,2} p.260
TURMA W DS two-sided model			
1003-01756	TURMA H80 W DS	5100.00	^{1,3}
1003-01759	TURMA H80 W DS for LEDATRONIC LT3	5300.00	^{1,2,3} p.260
1003-01836	TURMA H80 XL W DS	5500.00	^{1,3}
1003-01839	TURMA H80 XL W DS for LEDATRONIC LT3	5700.00	^{1,2,3} p.260
TURMA W HL with rear fuel-door			
1003-01757	TURMA H80 W HL	5100.00	¹
1003-01760	TURMA H80 W HL for LEDATRONIC LT3	5300.00	^{1,2} p.260
1003-01837	TURMA H80 XL W HL	5500.00	¹
1003-01840	TURMA H80 XL W HL for LEDATRONIC LT3	5700.00	^{1,2} p.260

Checkbox: What do I need to order?

- ☐ Fireplace: TURMA W Hydronic fireplace insert
- ☐ Frame or front panel set (optional)
- ☐ LEDATRONIC (for devices for LEDATRONIC)
- ☐ LEDATHERM Complete Circulation and Mixing Unit KS04
- + optional accessories

Essential accessories - if requested LEDATRONIC LT3 has to be ordered separately!

		€	
1004-00678	LEDATHERM Complete Circulation and Mixing Unit KS04 with high-efficiency circulation pump	1430.00	^{7,8} p.252
1003-01976	LEDATRONIC LT3 WiFi electronic combustion air control device for tiled stove inserts with Ø 150 mm motorised combustion air supply, complete kit for TURMA ▶ LT3 retrofitting set see	1260.00	⁴ p.260 p. 300
1004-00760	Installation frame, black (powder coated), 480 x 593 mm	190.00	
1004-00761	Installation frame, inox 480 x 593 mm	290.00	
1004-00801	Deep installation frame, black (powder coated), 480 x 593 mm	210.00	
1004-00802	Deep installation frame, black, inox 480 x 593 mm	320.00	


Diagonal installation frame






 black, powder coated
(1004-01035)

Diagonal installation frame

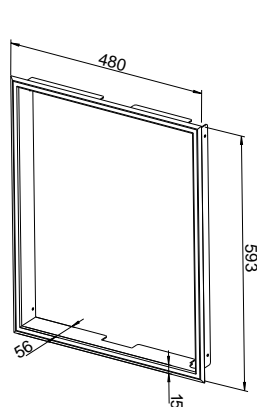
 inox
(1004-01036)

Steel front panel

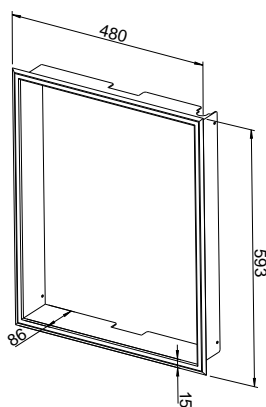
 black, powder coated
(1004-01081 / 1004-01105)

Essential accessories - if requested LEDATRONIC LT3 has to be ordered separately!		€	
1004-01035	Diagonal installation frame, black, powder coated 548 x 661 mm	220.00	
1004-01036	Diagonal installation frame, inox 548 x 661 mm	330.00	
1004-00762	Front frame for front panel set, black, powder coated 480 x 890 mm	230.00	 5
1004-00763	Front frame for front panel set, inox 480 x 890 mm	380.00	 5
1004-00757	Glass-front panel set, black incl. two transport rollers	400.00	 5
1004-01081	Steel front panel H892 x B480 mm (6 mm), black, powder coated	300.00	 6
1004-01105	Steel front panel H835 x B480 mm (6 mm), black, powder coated	320.00	 6

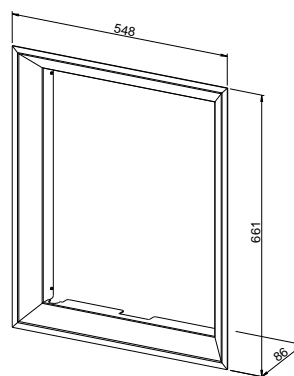
Optional accessories		€	
1004-01106	LEDA Service surcharge: change of door hinge in the factory	90.00	
1004-01042	Glass holding strip set for TURMA doors, black, powder coated	80.00	
1004-00304	Base frame	200.00	
1004-00606	Removable door handle for TURMA W DS	70.00	
1004-00789	Supporting angle frame for TURMA W	50.00	
	Flue gas spigot		p.326
1004-00310	MFS Double flue gas outlet with cleaning cover	300.00	
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	
1004-00994	Support base T3 for TURMA W, 9,3kg	250.00	
1004-00995	Support base T4 for TURMA XL W, 9,3kg	260.00	
1004-00996	Support base extension	160.00	
1003-01494	GSK Cast iron heat exchanger box with soap stone inlay	810.00	p.298
	LHK Cast Iron heat exchanger		p.304
1003-00561	LHK 320 Cast Iron heat exchanger	1210.00	
1003-01832	LHK 695 Cast Iron heat exchanger	530.00	
1003-01722	LHK 745 Cast Iron heat exchanger	540.00	
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	p.306



Installation frame
(1004-00760 / 1004-00761)



Deep Installation frame
(1004-00801 / 1004-00802)



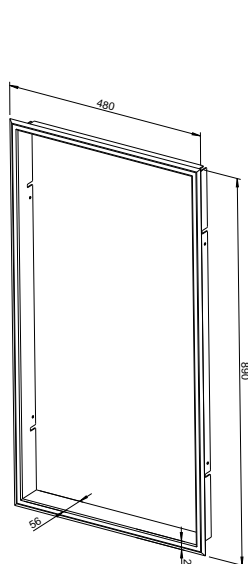
Diagonal installation frame
(1004-01035 / 1004-01036)



TURMA W

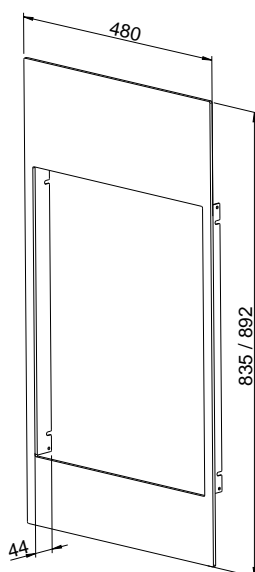
Optional accessories		€	
	LWS Heat Accumulation System		p.278
1004-00952	LWS Set 1, nine elements	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper, eleven elements	1440.00	
1004-00953	LWS Set 2, twelve elements	1470.00	
1004-00987	LWS Set 2.1 with heat-up damper, fourteen elements	1780.00	
1004-01104	LWS Set 3, seven elements	980.00	
	LWS single elements for customised composition	opt.	
1004-00764	ZAE Central Heating Connection Device for KS04	1100.00	⁸ p.256
1004-00731	Drain funnel	60.00	
1004-00732	Microbubble deaerators (air valve), vertical	190.00	
1004-00733	Microbubble deaerators (air valve), horizontal	140.00	
1004-00971	Backflow preventer BA-BM020, 3/4"	410.00	

Optional accessories		€	
1003-01720	LUC Draft Monitoring Device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266
¹ without installation frame, front panel set and frame ² Fireplace inserts „for LT3“ can only be used in conjunction with the LEDATRONIC. ³ For two fronts of the TURMA DS, order two trim or front frames, if necessary. ⁴ LT3 WiFi without display, opt. order a graphic display (1004-00542) ⁵ Order front frame and glass-front panel set! ⁶ Steel front panels suitable for all TURMA from serial no. A-317814 / production date: 02.07.2018 ⁷ The LEDATHERM KS04 is essential to ensure safety, correct function and optimum efficiency of the system. ⁸ ZAE for simple, direct connection to the KS04			



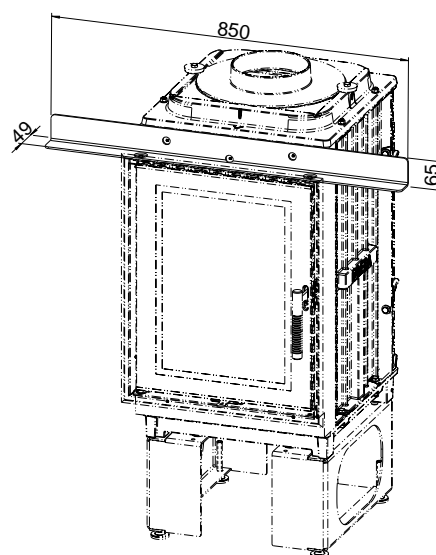
Front frame

for glass-front panel set
(1004-00762 / 1004-00763)



Steel front panel

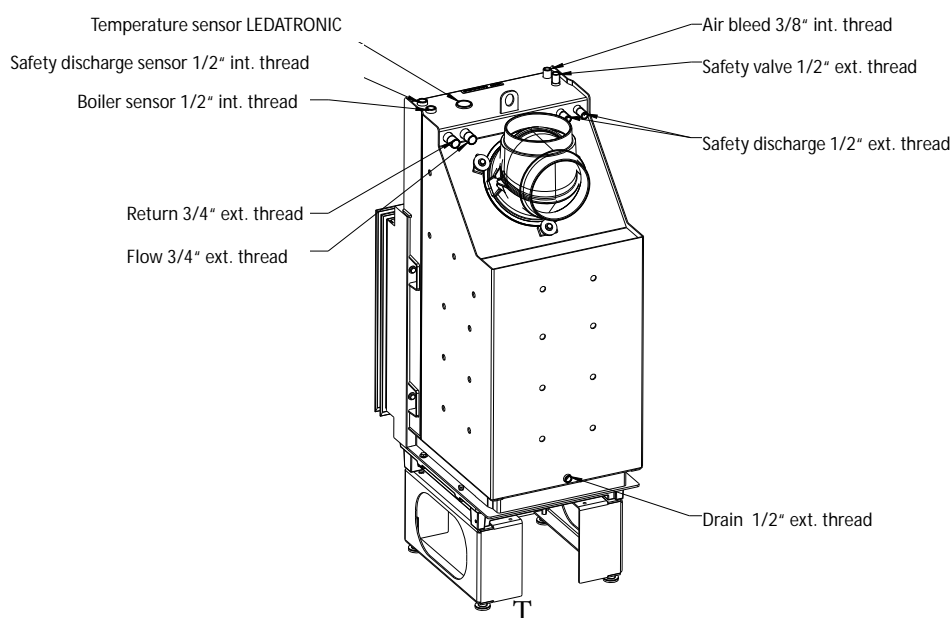
(1004-01081 / 1004-01105)



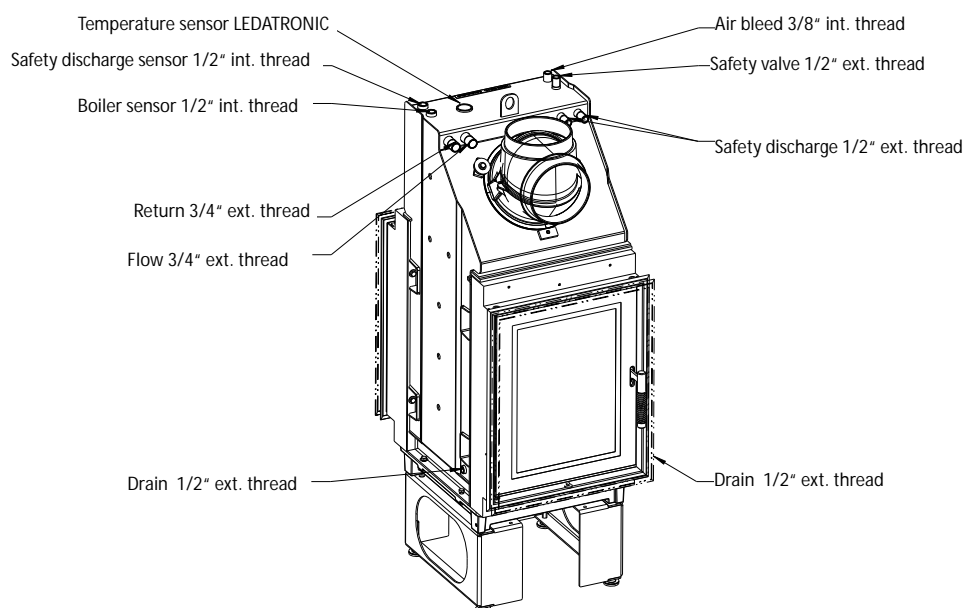
Supporting angle frame

(1004-00789)

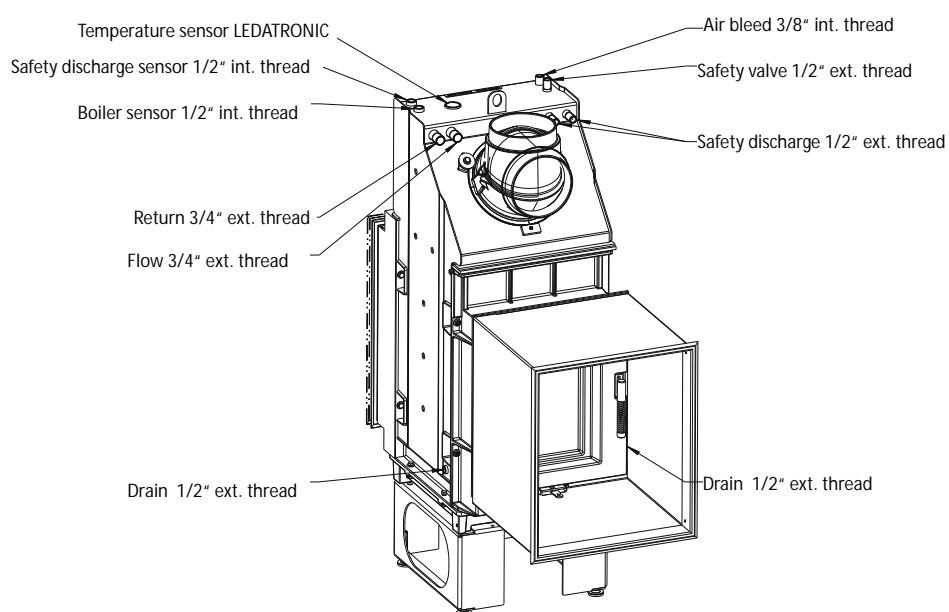
TURMA W Connections




TURMA W DS Connections




TURMA W HL Connections




Type TURMA W		H80			H80 XL		
		W	W HL	W DS	W	W HL	W DS
Applicable certification (acc. Regulation (EU) 305/2011)		CE-Kennzeichnung gem. EN 13229					
Energy efficiency class (acc. Regulation (EU) 2015/1186)		A	A+ ¹¹⁾	A+ ¹¹⁾	A	A+ ¹¹⁾	A+ ¹¹⁾
CO emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 1250					
Dust emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 40					
OGC emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 120					
NO _x emissions - related to 13% O ₂	[mg/m ³ _N]	≤ 200					
Efficiency ¹⁾	[%]	≥ 80	≥ 81	≥ 81	≥ 80	≥ 81	≥ 81
Flue gas temperature, with direct connection to the chimney	[°C]	260	262	262	268	248	248
Flue gas temperature, with cast iron heat exchanger box	[°C]	240	197	197	220	165	165

I. Operation with direct connection to the chimney							
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	12.0	12.0	12.0	13.0	13.0	13.0
Heat output to the water	[kW]	8.5	5.5	5.5	9.5	5.5	5.5
Direct radiation and convection output	[kW]	1.3	4.5	3.7	1.7	3.8	3.8
Heat output over the front surface(s) and glass pane(s)	[kW]	2.2	2.0	2.8	1.8	3.7	3.7
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of insert)	[°C]	312	314	314	322	297	297
Flue gas mass flow	[g/s]	10.6	11.3	11.3	12.8	13.6	13.6
Minimum required chimney draft ¹⁾	[Pa]	12	12	12	12	12	12
Required combustion air flow rate	[m ³ /h]	29.7	31.8	31.8	35.8	38.3	38.3
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	3.5	3.5	3.5	4.0	3.9	3.9
Feeding rate, wood logs	[kg/h]	3.5	3.6	3.6	4.3	4.3	4.3
Fuel quantity, wood briquettes	[kg]	3.3	3.3	3.3	3.8	3.7	3.7
Feeding rate, wood briquettes	[kg/h]	3.3	3.4	3.4	4.1	4.1	4.1
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	192	834	672	260	682	680
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	302	951	790	393	823	822
Convection air outlet ³⁾	[cm ²]	230	1000	807	312	818	816
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	3	9	7	3	5	5
 Note: There might be required larger inner gaps to walls with combustible materials (gaps between insert and the front of the thermal insulation at the wall)							

II. Operation with cast iron heat exchanger box ^{2,3,4)}							
Cast iron heat exchanger box							
Admissible heat exchanger box ⁴⁾		LHK 320, LHK 695, LHK 745 or GSK					
Performance data							
Nominal heat output, \dot{Q}_N	[kW]	16.0	16.0	16.0	17.0	17.0	17.0
Heat output to the water	[kW]	9.5	6.0	6.0	12.5	8.0	8.0
Direct radiation and convection output	[kW]	4.2	6.8	5.4	2.8	5.9	4.7
Heat output over the front surface(s) and glass pane(s)	[kW]	2.3	3.2	4.6	1.7	3.1	4.3
Chimney dimensioning data according to EN 13384 part 1 and 2							
Flue gas temperature (at the spigot of insert)	[°C]	289	237	237	264	198	198
Flue gas mass flow	[g/s]	16.0	14.6	14.6	19.6	16.7	16.7
Minimum required chimney draft ¹⁾	[Pa]	12	12	12	12	12	12
Required combustion air flow rate	[m³/h]	45.2	40.9	40.9	56.1	47.1	47.1

Type TURMA W		H80			H80 XL		
		W	W HL	W DS	W	W HL	W DS
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	4.7	4.7	4.7	5.0	5.0	5.0
Feeding rate, wood logs	[kg/h]	4.8	4.8	4.8	5.1	5.1	5.1
Fuel quantity, wood briquettes	[kg]	4.5	4.5	4.5	4.8	4.8	4.8
Feeding rate, wood briquettes	[kg/h]	4.6	4.6	4.6	4.9	4.9	4.9
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm ²]	755	1277	996	464	1085	844
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm ²]	923	1429	1147	672	1260	1018
Convection air outlet ³⁾	[cm ²]	906	1532	1195	557	1302	1013
Inner gaps in the convection chamber ³⁾							
inner gaps between insert and thermal insulation or cladding	[cm]	3	7	4	3	4	3
inner gaps between insert and radiation plate in front of heat exchanger box	[cm]	3	7	4	3	4	3
inner gaps between heat exchanger box and thermal insulation or cladding	[cm]	5	5	5	5	5	5
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert or heat exchanger box and the front of the thermal insulation at the wall)							

III. Operation with LWS / ceramic heat storage ⁴⁾							
Performance data							
combustion capacity – heat input, \dot{Q}_f	[kW]	25.0	22.0	22.0	28.0	28.0	28.0
heat output of insert	[kW]	14.6	15.5	15.5	17.9	17.9	17.9
Heat load of heating gas at spigot of insert	[kW]	9.7	6.6	6.6	8.7	8.7	8.7
Heat output to the water	[kW]	6.4	5.8	5.8	6.9	6.3	6.3
Usable heat load of heating gas at spigot of insert	[kW]	5.0	2.4	2.4	3.5	3.5	3.5
Heat output over the front surface(s) and glass pane(s)	[kW]	2.2	4.1	5.6	1.8	2.8	2.8
Direct radiation and convection output (without heat storage)	[kW]	8.1	9.0	9.0	12.0	12.6	12.6
Data for planning of ceramic heat storage and chimney dimensioning according to EN 13384 part 1 and 2							
Heating gas temperature (at the spigot of insert)	[°C]	355	335	335	273	273	273
Flue gas mass flow	[g/s]	20.4	15.0	15.0	25.6	25.6	25.6
Minimum required chimney draft ¹⁾ (only for the insert)	[Pa]	15	15	15	15	15	15
Required combustion air flow rate	[m ³ /h]	58.0	42.6	42.6	73.5	73.5	73.5
Admissible fuels and feeding rate							
Admissible fuels		wood logs (preferred) and wood briquettes					
Fuel quantity, wood logs	[kg]	4.7	4.7	4.7	5.1	5.1	5.1
Feeding rate, wood logs	[kg/h]	5.7	5.2	5.2	6.4	6.4	6.4
Fuel quantity, wood briquettes	[kg]	4.5	4.5	4.5	4.9	4.9	4.9
Feeding rate, wood briquettes	[kg/h]	5.4	5.0	5.0	6.1	6.1	6.1
Operation with LWS, heat accumulation system							
Admissible LWS sets		Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3	Set 1, Set 2, Set 3
Recommended number of LWS elements (25/25/25 cm)		10	9	9	11	11	11
Flue gas temperature (at output spigot of LWS, at recommended number of LWS elements)	[°C]	173	167	167	171	171	171
Minimum required chimney draft for each 90° bend	[Pa]	0.93	0.48	0.48	1.34	1.34	1.34
Minimum required chimney draft for each 45° bend	[Pa]	0.42	0.22	0.22	0.61	0.61	0.61
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 1)							
Flue gas temperature (at output spigot of LWS set 1/1.1)	[°C]	183	167	167	178	178	178
Minimum required chimney draft ¹⁾ (insert and LWS set 1/1.1)	[Pa]	21	18	18	23	23	23
Flue gas mass flow	[g/s]	20.4	15.0	15.0	25.6	25.6	25.6

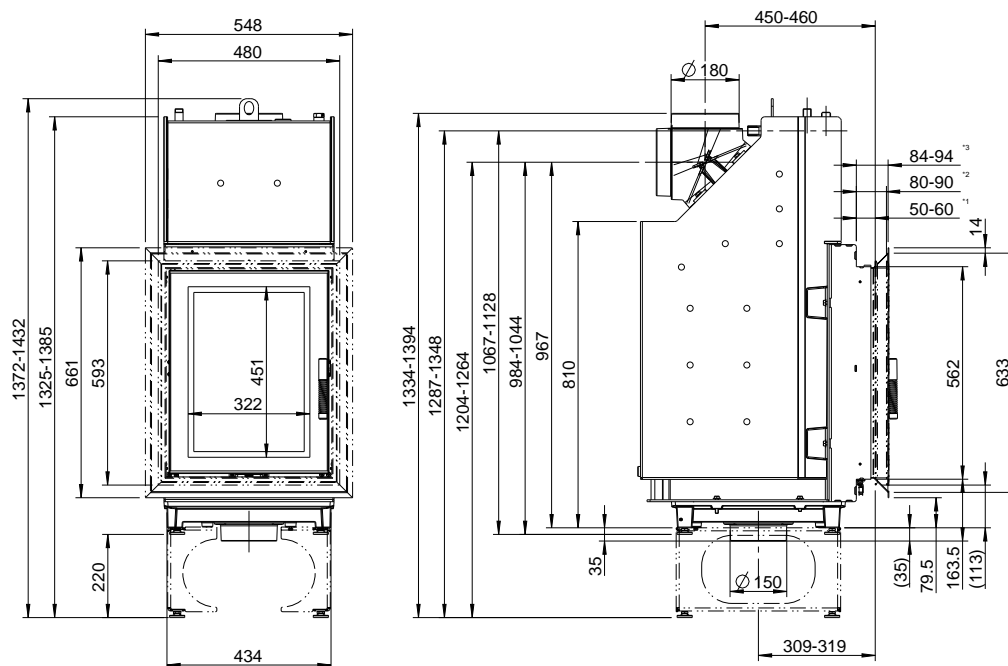
Type TURMA W		H80			H80 XL		
		W	W HL	W DS	W	W HL	W DS
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 2)							
Flue gas temperature (at output spigot of LWS set 2/2.1)	[°C]	156	147	147	167	167	167
Minimum required chimney draft ¹⁾ (insert and LWS set 2/2.1)	[Pa]	20	18	18	23	23	23
Flue gas mass flow	[g/s]	20.4	15.0	15.0	25.6	25.6	25.6
Chimney dimensioning data according to EN 13384 part 1 and 2 (operation with LWS set 3)							
Flue gas temperature (at output spigot of LWS set 3)	[°C]	205	185	185	187	187	187
Minimum required chimney draft ¹⁾ (insert and LWS set 3)	[Pa]	21	18	18	23	23	23
Flue gas mass flow	[g/s]	20.4	15.0	15.0	25.6	25.6	25.6
Air cross-sections ³⁾							
Convection air inlet ³⁾ (with external combustion air connection)	[cm²]	1305	1232	931	2084	2005	2004
Convection air inlet ³⁾ (combustion air is taken from the room)	[cm²]	1520	1390	1089	2356	2277	2276
Convection air outlet ³⁾	[cm²]	1566	1478	1117	2501	2406	2405
Inner gaps in the convection chamber ³⁾							
Inner gaps between insert and thermal insulation or cladding	[cm]	9	12	9	12	15	15
 Note: There might be required larger inner gaps to walls with combustibile materials (gaps between insert and the front of the thermal insulation at the wall)							

IV. Specifications regarding fire protection and thermal insulation ⁶⁾							
Insulation thickness for the fire protection of installation walls containing combustibile / inflammable materialp.							
Insulation thickness in cm of the reference material (rock wool or slag fibres) ⁶⁾							
(insulation thickness additional required to the required 10 cm pre-wallling)							
to the setup floor	[cm]	0	0	0	0	0	0
to the side	[cm]	3	3	3			
to the side - insert	[cm]				4	4	4
to the side - heat exchanger box	[cm]				12	12	12
to the rear	[cm]	3	3	3			
to the rear - insert	[cm]				4	4	4
to the rear - heat exchanger box	[cm]				12	12	12
to the ceiling ⁷⁾	[cm]				24	24	24
Required inner gaps between insert and combustibile / inflammable materials resp. the front of thermal insulation							
between insert and the setup floor	[cm]	7	7	7	8	8	8
between heat exchanger box and the setup floor	[cm]	20	20	20	20	20	20
between insert and the front of thermal insulation to the side	[cm]	4	4	4	6	6	6
between heat exchanger box and the front of thermal insulation to the side	[cm]	6	6	6	7	7	7
between insert and the front of thermal insulation to the rear - with direct connection to the chimney	[cm]	4	--	--	6	--	--
between insert and the front of thermal insulation to the rear - with heat exchanger box	[cm]	6	--	--	6	--	--
between flue gas pipe and the bottom of thermal insulation to the ceiling ⁷⁾	[cm]	--	--	--	20	20	20
Required air cross-sections for convection air inlet and outlet (for the fire protection)							
Minimum convection air outlet, non-closable - with direct connection to the chimney	[cm²]	1200	1050	1050	550	821	821
Minimum convection air inlet, non-closable - with direct connection to the chimney	[cm²]	800	750	750	440	738	738
Minimum convection air outlet, non-closable - with heat exchanger box	[cm²]	1490	1275	1275	1400	1035	1035
Minimum convection air inlet, non-closable - with heat exchanger box	[cm²]	1440	1260	1260	1200	1078	1078
Required distance in the radiation area of the front (with no additional radiation protection)							
Required distance	[cm]	80	80	80	100	100	100

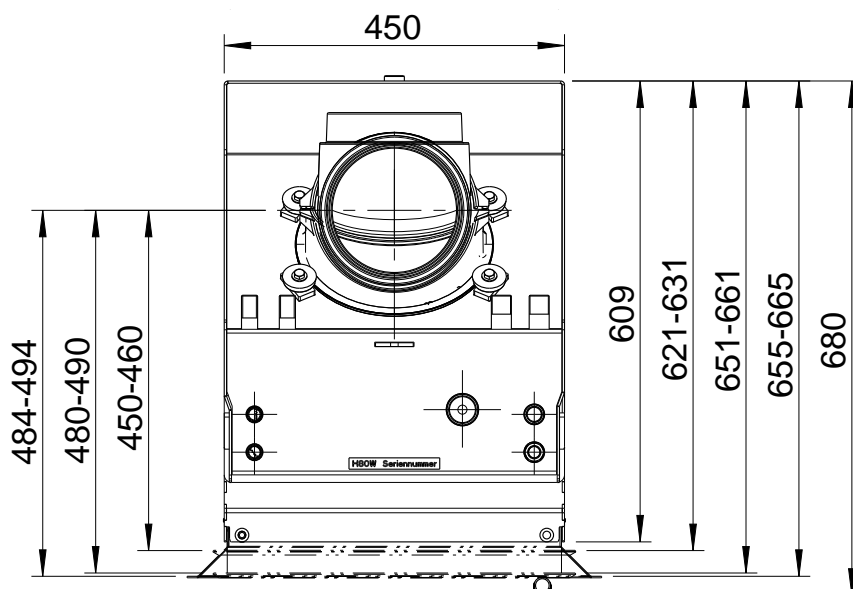
Type TURMA W		H80			H80 XL		
		W	W HL	W DS	W	W HL	W DS
VI. Measurements, weights and miscellaneous							
External air connector	Ø [mm]	150	150	150	150	150	150
Flue gas spigot resp. connector piece	Ø [mm]	180/200	180/200	180/200	180/200	180/200	180/200
Preadjustment for direct connection to the chimney							
Preadjustment of the LT-3 combustion air valve (optional)	%	74	74	74	74	74	74
Static valve position of the LT-3 combustion air valve (test mode) - with direct connection to the chimney	%	47	47	47	47	47	47
Smallest valve position of the LT-3 combustion air valve (dynamic test mode) - with direct connection to the chimney	%	24	24	24	24	24	24
Preadjustment for heat exchange box or ceramic heating gas flues							
Preadjustment of the LT-3 combustion air valve (optional)	%	74	74	74	74	74	74
Static valve position of the LT-3 combustion air valve (test mode) - with heat exchanger box	%	74	74	74	67	67	67
Smallest valve position of the LT-3 combustion air valve (dynamic test mode) - with heat exchanger box	%	42	42	42	34	34	34
Maximum log size	[cm]	33	33	33	50	50	50
admissible operating pressure of the water heat exchanger	[bar]	2.5	2.5	2.5	2.5	2.5	2.5
Maximum of supply / flow temperatur at normal operation ¹⁰⁾	[°C]	95	95	95	95	95	95
Maximum of supply / flow temperatur at failure situation ¹⁰⁾	[°C]	110	110	110	110	110	110
Water content of the water heat exchanger	[l]	40	32	32	49	40	40
Dimension of coupling - supply / flow		3/4" - ext.thr.					
Dimension of coupling - return flow		3/4" - ext.thr.					
Dimension of coupling - over pressure safety device		1/2" - ext.thr.					
Dimension of coupling - thermal discharge safety exchanger		1/2" - ext.thr.					
Dimension of coupling - drain		1/2" - int.thr.					
Dimension of coupling - air valve		3/8" - int.thr.					
Weight of insert with inner lining	approx. [kg]	266	328	276	321	383	332
Weight of insert with inner lining and filled water heat exchanger	approx. [kg]	306	360	308	370	423	372
Weight of cast iron heat exchanger box LHK 320 / 695 / 745	approx. [kg]	92 / 62 / 66					
Weight of cast iron heat exchanger box GSK (with soap stone inlay)	approx. [kg]	130					

Type TURMA W	H80			H80 XL		
	W	W HL	W DS	W	W HL	W DS

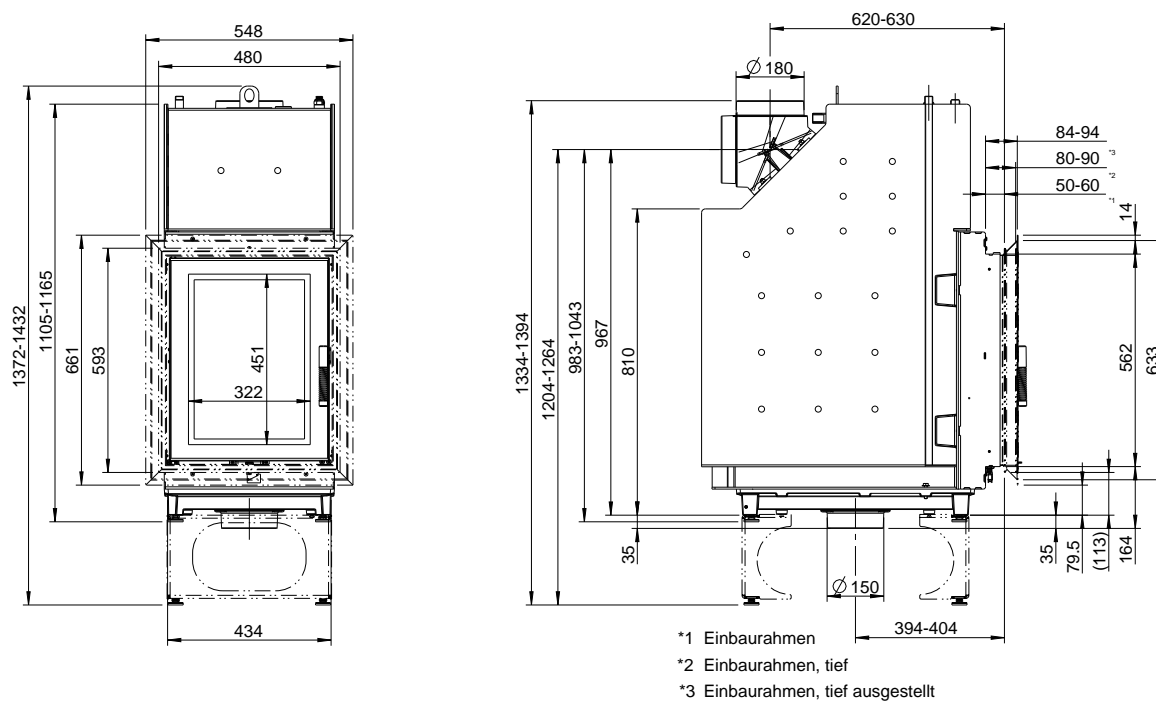
- 1) For an optimum of efficiency the required chimney draft should comply with the given value. The optimal operation of the fireplace only can be achieved within a range of chimney draft between the minimum chimney draft and about 10 Pa above.
Operation of the fireplace at average chimney draft conditions over the recommended range will cause less efficiency, high exhaust emissions and further disadvantages e.g. higher abrasion of wear parts, defects, malfunctions, odour, fast and heavy staining of glass panes.
- 2) Each model has been tested with cast iron heat exchanger box (LHK650), spigot up, double-90°-elbow between insert and heat exchanger box, 90°-elbow and a heating/flue pipe length of 50 cm at output spigot of heat exchanger box.
The insert can be used with cast iron heat exchanger box GSK, LHK 320, LHK 650, LHK 695 or LHK 745.
- 3) Planning recommendation according to the German TROL with a convection chamber surface of approx. 3.4 m² (H80 W), approx. 1.9 m² (H80 W HL or DS) - with direct connection to the chimney, approx. 4.2 m² (H80 W), approx. 3.3 m² (H80 W HL or DS) - with heat exchanger box, approx. 2.4 m² (H80 W), approx. 1.5 m² (H80 W HL or DS) - with LWS / ceramic heat storage, approx. 3.8 m² (H80 XL W), approx. 2.2 m² (H80 XL W HL or DS) - with direct connection to the chimney, approx. 4.8 m² (H80 XL W), approx. 3.8 m² (H80 XL W HL or DS) - with heat exchanger box, approx. 2.8 m² (H80 XL W), approx. 1.8 m² (H80 XL W HL or DS) - with LWS / ceramic heat storage.
Other types of construction can be performed according to local regulations or the German TROL.
- 4) The insert can be used with direct connection to the chimney, with cast iron heat exchanger box or with ceramic heat storage or LWP. See installation manual for additional information.
- 5) Ceramic heat storage can be planned and dimensioned according to local regulations or the German TROL.
- 6) Alternatively other substitute materials (e.g. calcium-silicate/Promat or SILCA, vermiculite/Thermax, etc.) might be used. Follow local / national regulations for usage of adequate substitute material. Maybe the pre-walling can be omitted with substitute materials, maybe the required insulation thickness can be reduced.
- 7) Thermal insulation as fire protection to the ceiling will not be necessary with an open distance of 50 cm between the upper surface of the cladding of fireplace. In this area there has to be the possibility of free circulation of air. To the sides thermal insulation will not be necessary with an adequate distance between the cladding of fireplace and the wall.
- 10) The LEDATHERM Complete Circulation and Mixing Unit KS04 provides a safety shut down function at high flow temperature. Due to this safety function the temperature of supply / flow is terminated at 95°C (factory settings). If other components are used instead of LEDATHERM Complete Unit KS04, adequate safety devices are absolutely necessary to ensure the required termination of the flow temperature.
- 11) The efficiency A+ will be achieved with cast iron heat exchanger box, the efficiency A will be achieved with direct connection to the chimney.



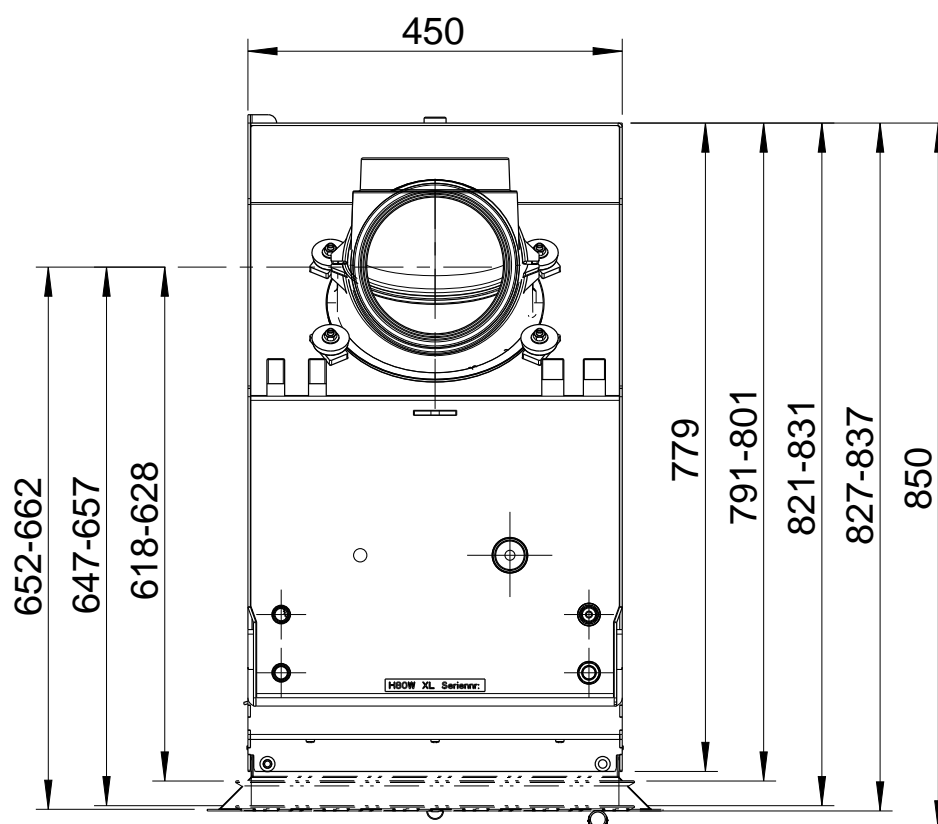
TURMA W
top view / M1:10



TURMA XL W (standard model) / M1:20

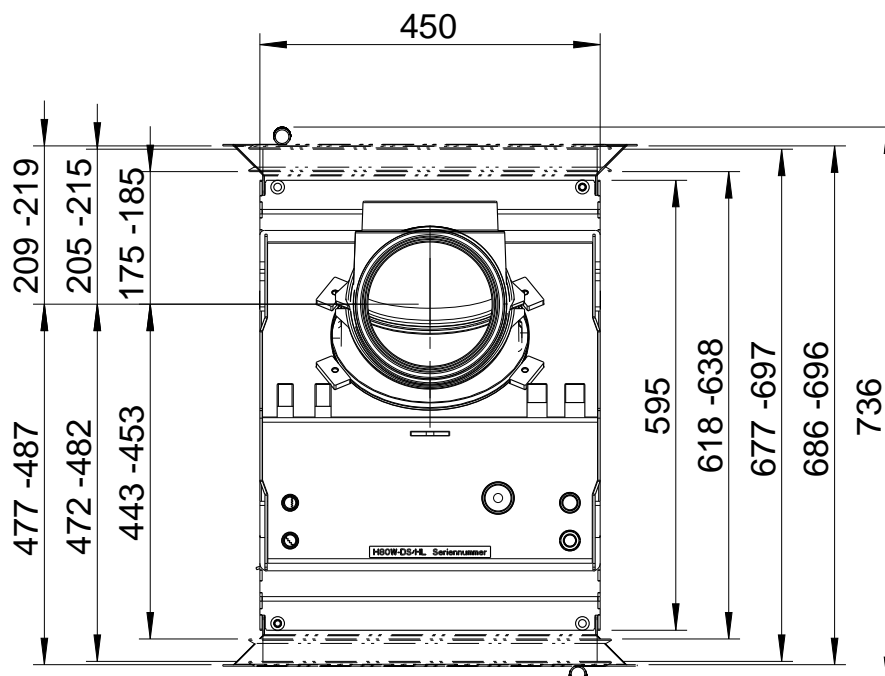


TURMA XL W
top view / M1:10

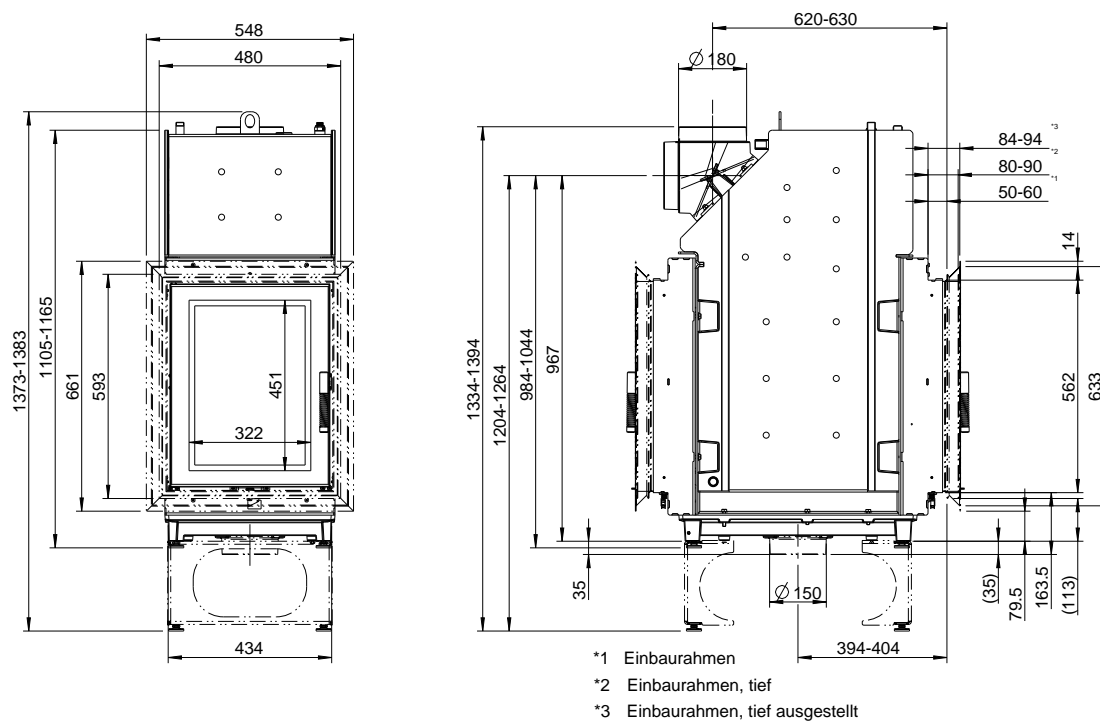


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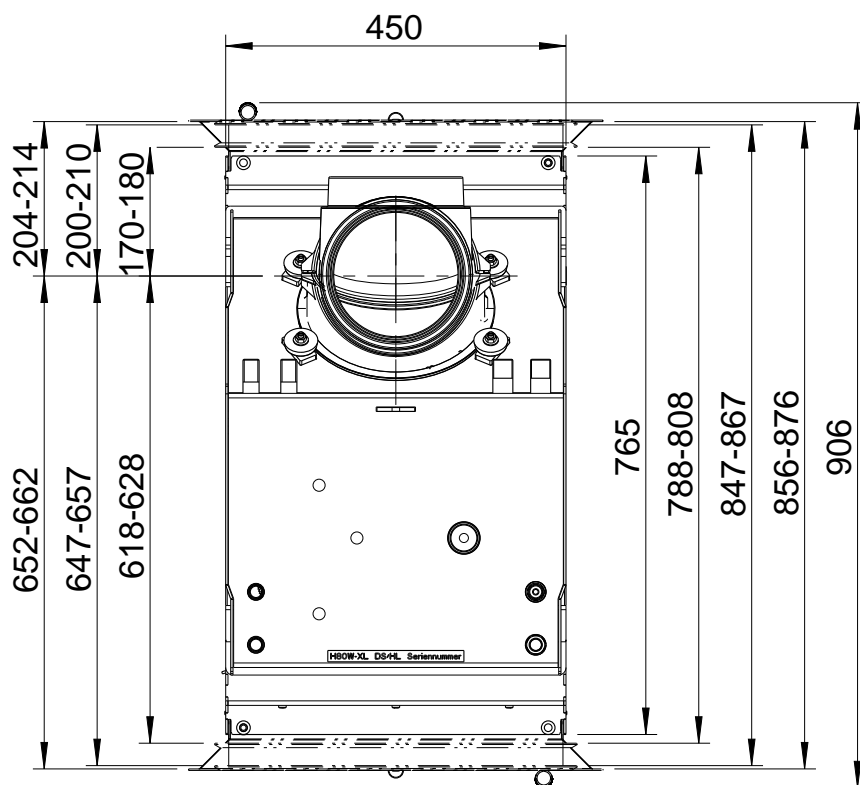
TURMA W DS
top view / M1:10



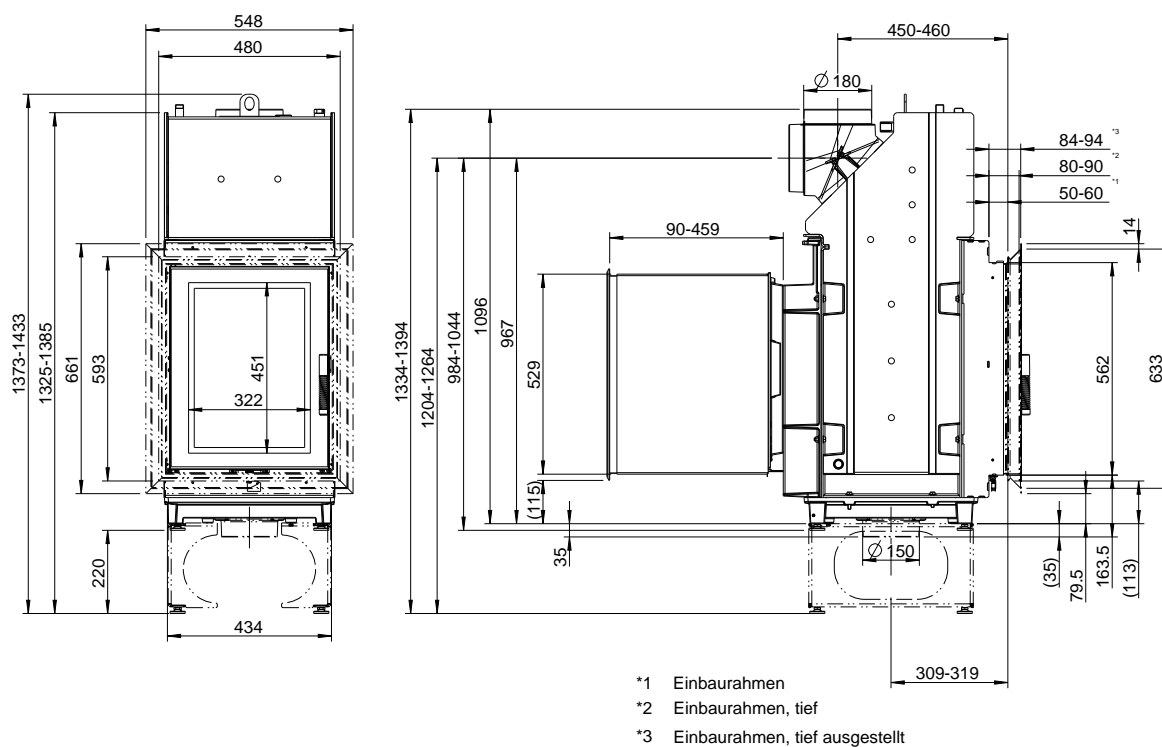
TURMA XL W DS (double sided) / M1:20



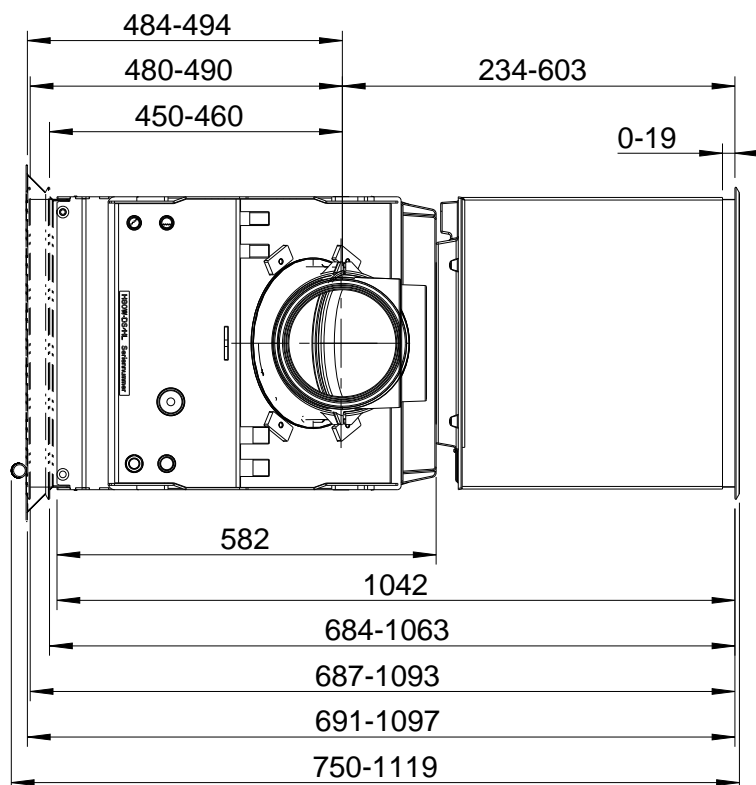
TURMA XL W DS
top view / M1:10



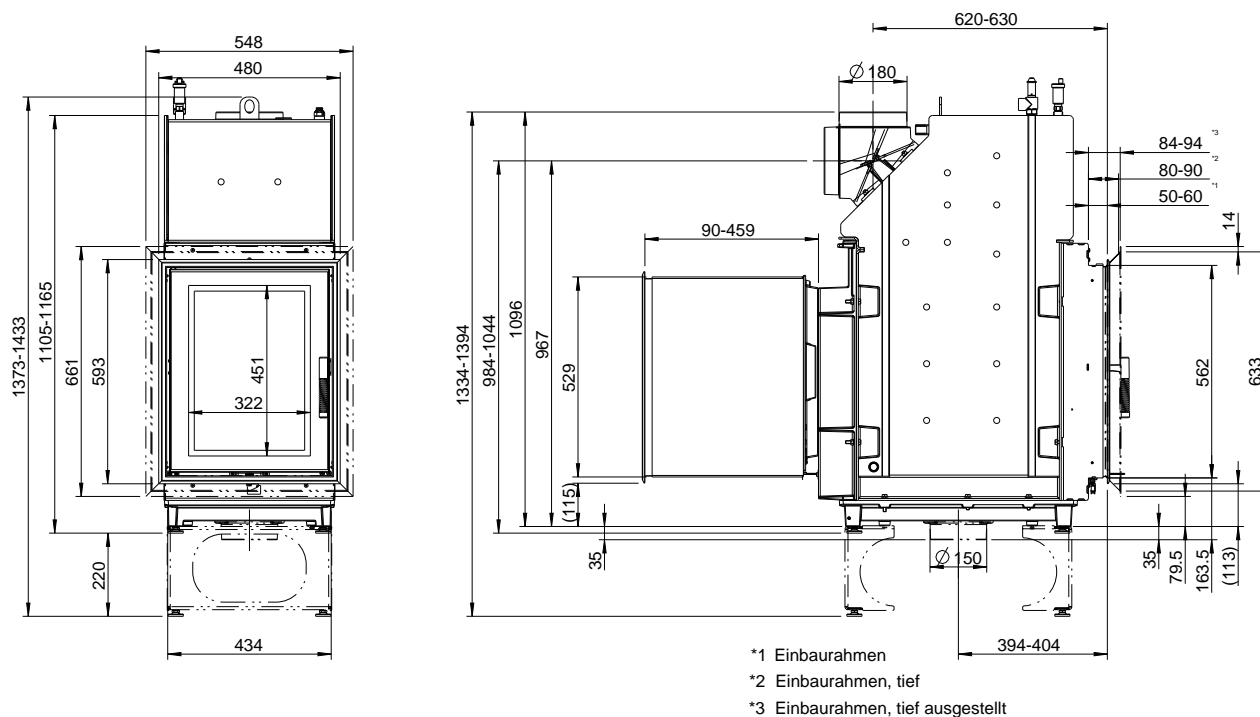
TURMA W HL (with rear fuel-door) / M1:20



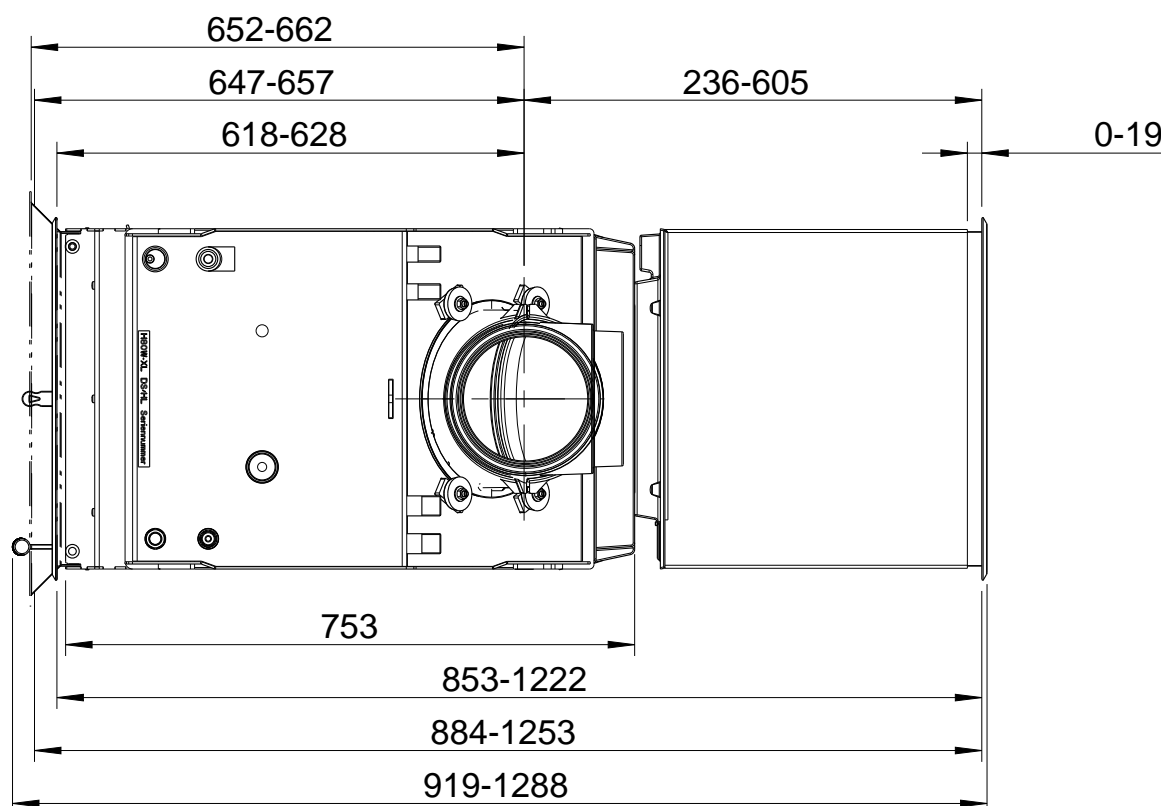
TURMA W HL
top view / M1:10



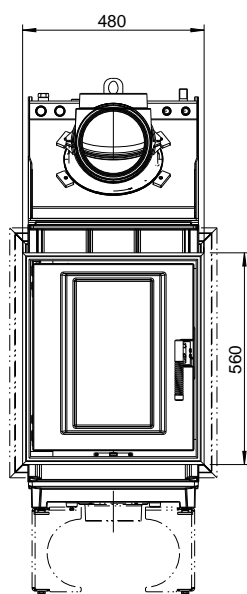
TURMA XL W HL (with rear fuel-door) / M1:20



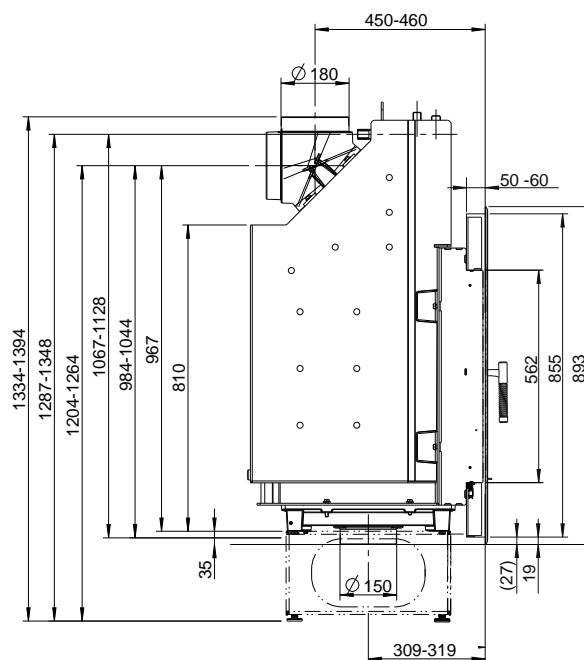
TURMA XL W HL
top view / M1:10



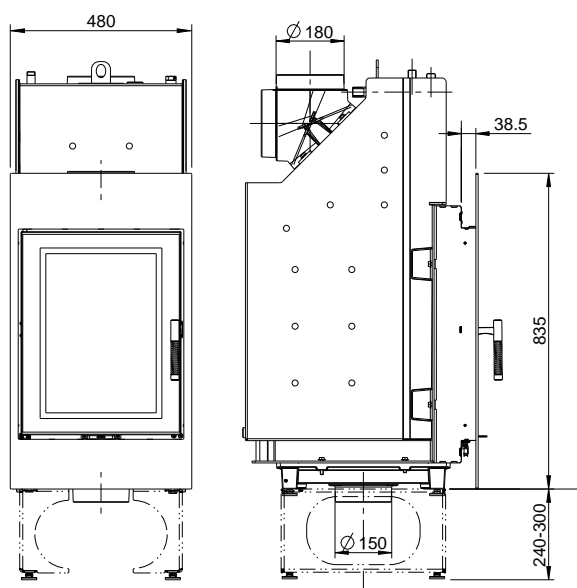
Back TURMA HL / M1:20



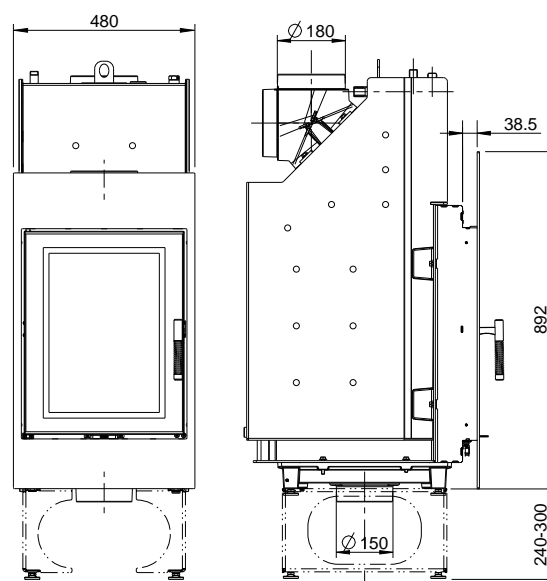
Front frame (1004-00762/ 1004-00763) and glass front panel set (1004-00757) / M1:20



TURMA with steel front panel / M1:20



Steel front panel H835 x W480 mm (1004-01105)



Steel front panel H892 x W480 mm (1004-01081)



KS04



Complete Circulation Unit

Circulation and mixing unit KS04

The LEDATHERM Complete Circulation Unit KS04 is a control device to be integrated with a hydronic fireplace within a central heating system which automatically collect and analyses all the measured parameters. The integrated thermostatic mixing valve in combination with a stepless regulated high-efficiency circulation pump controls the return temperature in order to optimise the best possible heat contribution from the hydronic fireplace.

Product benefits at a glance

- energy-saving, high-efficiency pump
- ready to work
- complete
- combinable with the LEDATRONIC 3

The set contains all you will need:

Contains all the components and fittings to integrate a hydronic fireplace with a central heating system:

- Stepless regulated high-efficiency circulation pump which ensures the most efficient circulation flow in the primary circuit, between the hydronic heat generator and the buffer tank, depending on the boiler temperature. The protective function avoids the pump blockage.
- Thermostatic 3-way mixing valve for the return temperature increase which ensures a quick heating of the water content in the heat exchanger of the hydronic fireplace, avoiding condensation of the flue gas on the exchange surface.
- Differential temperature control, turns the pump on when the temperature of the water inside the heat exchanger is higher than the same in









the buffer. In the opposite case the pump stops to avoid the discharge of the buffer tank.

- Safety shut down, protects the installation in case of excessive temperature.
- Shut-off valves according to the installation regulation for maintenance and replacement.
- Integrated temperature indication (for boiler and buffer top and bottom) as quick function check and prescribed indirect safety equipment.
- Non-return valve to prevent water back flow (gravity circulation) when the system is on stand by or turned off.
- High class insulation shell
- All required temperature sensors
- ready pre-assembled on a fixing console
- CAN-Bus port for the connection of the graphic display or the combination with the LEDATRONIC LT3.




KS04

open

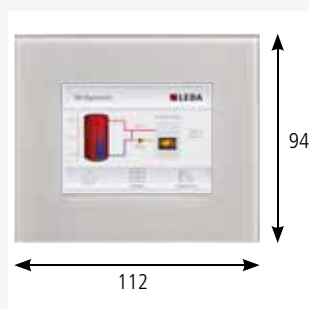
Ident-No.	Description	€	
1004-00678	LEDATHERM KS04 Complete Circulation Unit	1430.00	 ¹ p.252
Optional accessories			
1004-00764	ZAE Central Heating Connection Device for Complete Circulation Unit KS04	1100.00	 ¹ p.256
1004-00542	Graphic Display (including flush mounting socket and 6 m data bus cable)	420.00	
1004-00476	5 m data bus cable	40.00	 ²
1004-00477	10 m data bus cable	50.00	 ²
1004-00546	15 m data bus cable	60.00	 ²
1004-00835	20 m data bus cable	70.00	 ²
1004-00836	25 m data bus cable	90.00	 ²
1004-00855	30 m data bus cable	100.00	 ²
1004-00533	Bus multi-socket to connect the KS04 Complet Circulation Unit with the LEDATRONIC LT3	30.00	

¹ ZAE for the easy direct connection to the KS04

² High quality data bus cable: highly recommended to avoid power loss

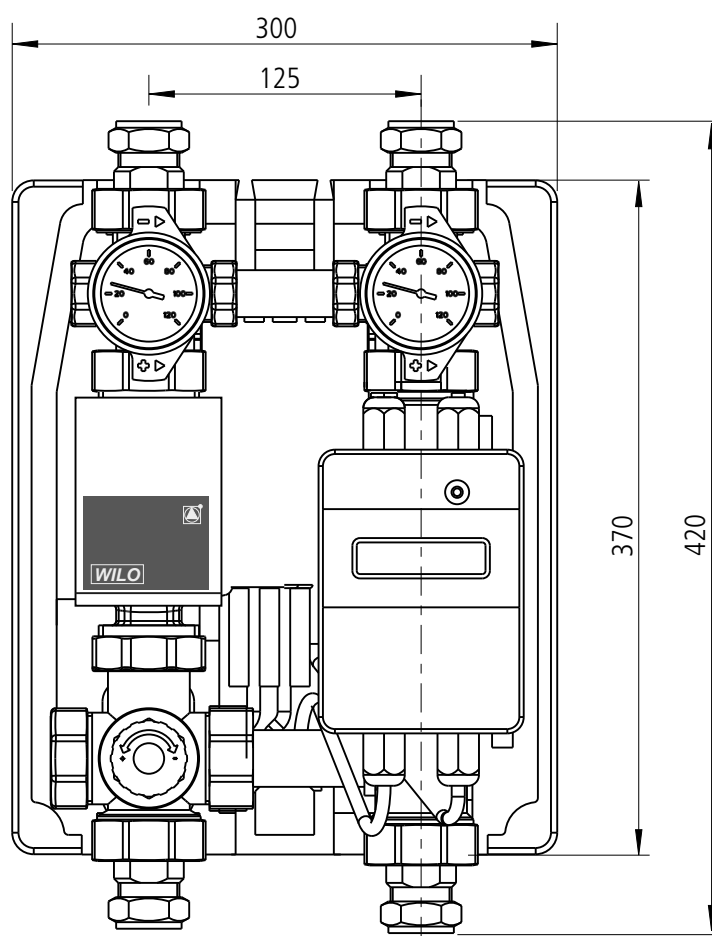
Scope of delivery

Installation and operating manual, Circulating and Mixing Unit (pre-assembled in an two-part insulating shell), control unit (pre-assembled with the Circulating and Mixing Unit), temperature sensor for boiler with silicone-coated cable (PT 1000), 3 temperature sensors for the buffer tank with silicone coated wires (PT1000, sensor pocket for the boiler sensor, connection fittings, set of screws and wall plug).



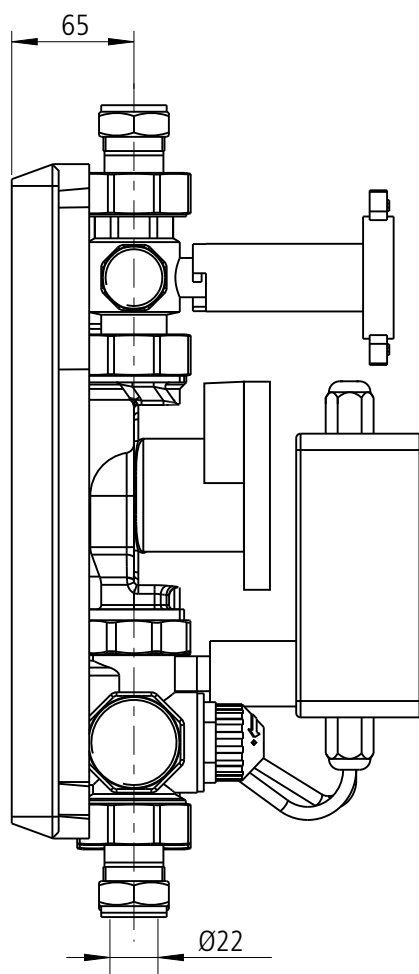
Graphic display
(1004-00542)

KS04 Complete Circulation Unit



Accessory for hydronic tiled stoves
KS04

KS04 Complete Circulation Unit





ZAE



ZAE
open



ZAE

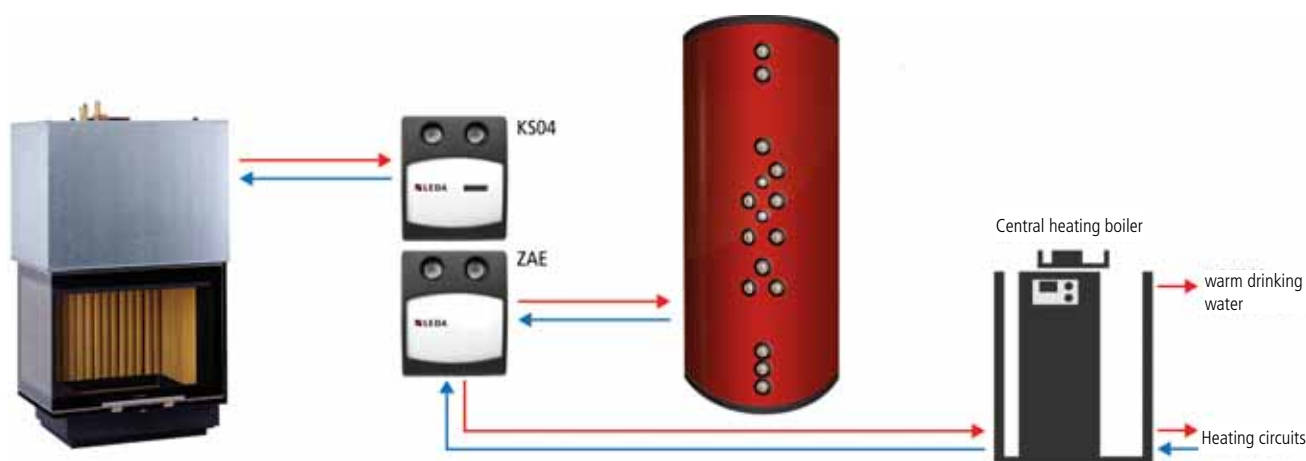
Central Heating Connection Device for the optimised connection of a hydronic fireplace with a central heating system

The ZAE device makes the combination of a hydronic fireplace, buffer tank and central heating system very simple and clear. The ZAE controls with the integrated changeover valve, the heat distribution from the hydronic fireplace to the buffer respectively to the central heating boiler according to the heat requirement. A perfect complement to the KS04.

The ZAE includes pre-assembled all the required components which are needed for a boiler circuit in order to run a complete system efficient and correct connected. The ZAE comprises a return temperature management and a priority function based on 3 precise measurements of temperature. Furthermore the end user has the option to adjust the priority of the automatic heat supply towards the boiler circuit or the buffer tank.

Benefits:

- The ZAE covers the monitoring of the return temperature of heating systems equipped with a buffer tank.
- The end user can choose between normal heating operation (buffer tank will be loaded subsequently) respectively with priority to the buffer tank. This adjustment can be done in the KS04 or directly in the LEDATRONIC LT3, if connected.
- When the max. temperature of the buffer tank is reached, this adjustment will be automatically overridden to subsequently loading of the buffer tank.
- The integrated air valve enables easily the bleed of possible air in the water piping.
- Universal applicable with any heating boiler:
 - can be connected to modern central heating boilers with a separate and controlled flow inlet
 - can be modified to be connected to older central heating boilers where the transfer of heating fluid has to be done over the return fitting
- Bus communication with the LT3 :
 - Data transfer of temperatures and adjustments
- Largely dimensioned manual shut-off valves with the ZAE and KS04 enable to change the circulating and mixing valve
- Universal applicable with all the different buffer tanks because only two fitting connectors are needed:
 - for the transfer of heating fluid toward the central heating system to charge the buffer tank from the stove /fireplace



Optimised connection of an hydronic fireplace with a central heating system with ZAE and KS04

Benefits at a glance

- Connection device for a complementary heating system consisting of a hydronic-tiled stove insert, fireplace insert or free standing stove
- Complete set, with bus compatible control unit for the direct connection to the KS04 and
 - LEDATRONIC LT3
 - LUC
- 100% pre-assembled
- 3 precise measurements of temperature make the return temperature controller dispensable
- integrated deaerator with bleeder screw, connected temperature sensors, shut-off valves in the flow and return pipes
- Quiet an efficient actuator for the 3-way changeover valve
- wall bracket, connection fittings and insulating shell (same as with KS04)
- Simple installation through a direct connection to the buffer tank (flow/return) boiler (flow/return) and stove (flow and return) with only one flow and return pipe each.

Ident-No.	Description	€	
1004-00764	ZAE Zentral Heating Connection Device for KS04 Complete Circulation Unit	1100.00	¹

¹ ZAE can only be used in combination with the KS04

Scope of delivery

Pre-assembled control device, motoric changeover valve, flow and return piping, 2 shut-off valves, 2 insertion thermometer, 1 Non-return valve, connection fittings, built-in deaerator (air valve), power supply cable, wall bracket and fixing, insulating shell, 2 temperature sensors for buffer and return, T-piece fitting, sensor pocket for return sensor, 1 m data bus cable, screws and plugs for wall mounting (common installation and operating manual which is included in the scope of delivery of the KS04).



Drain funnel
(1004-00731)



**Microbubble Deaerator
(air valve), vertically**
for vertical pipes
(1004-00732)



**Microbubble Deaerator
(air valve), vertically**
for horizontal pipes
(1004-00733)



Backflow preventer, type BA
(1004-00971)



Other accessories

Drain funnel

open drain point for the visual check of the safety valve according to EN 12828.

- Temperature resistant in full metal for the installation in the convection chamber of the tiled stove or fireplaces angled version, two part component, to be screws on twistable against each other
- Recommended accessory to built in at the end of the discharge pipe of the security valve for hydronic tiled stoves and fireplaces.
- Inlet thread connection 3/4" ext.thr.
- Outlet thread connection 3/4" int.thr.

Ident-No.	Description	€	i
1004-00731	Drain funnel	60.00	

Automatic Microbubble deaerators

according to EN 12828.

- Removes circulating air and micro bubbles from the heating water
- Inlet thread connection 3/4" int.thr.
- Outlet thread connection 3/4" int.thr.

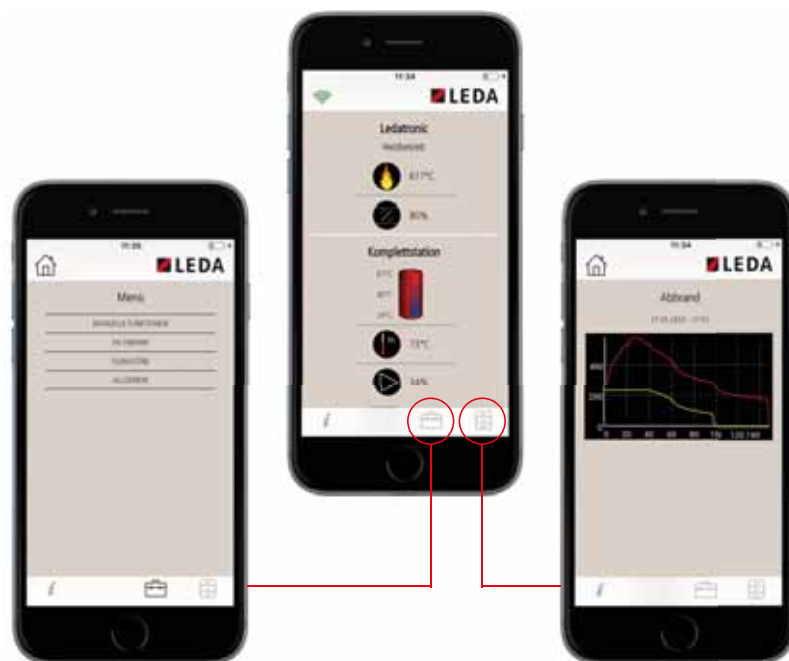
Ident-No.	Description	€	i
1004-00732	Microbubble deaerators (air valve), vertical	190.00	
1004-00733	Microbubble deaerators (air valve), horizontal	140.00	

Backflow preventer

for the connection to the supply line of the thermal discharge valve. As safe separation of standing water pipes and the potable water system, according to the drinking water regulation, EN 1717 and EN 12828.

- Straight version with screw connections
- Recommended accessory for the installation of hydronic tiled stoves or fireplaces
- Inlet/outlet thread connection 3/4" int.thr., with cap nut screw connection and flat gasket

Ident-No.	Description	€	i
1004-00971	Backflow preventer type BA-BM020, 3/4"	410.00	



LEDATRONIC App
Functions

LEDATRONIC

Electronic combustion air control device

Modern fireplaces are designed for an particularly particularly eco-friendly operation and a low fuel consumption. For this reason the correct adjustment of the air supply in each stage of the combustion plays an important role.

The LEDATRONIC is able to steer the combustion process of your fireplace more environmental friendly, efficient and perfect than a human being can do this manually. Heating with wood in combination with the LEDATRONIC is particularly comfortable and can help to avoid most of the handling error.

- Particularly particularly eco-friendly combustion:
Lowest emissions thanks to a continous adjustment of the combustion air supply in dependance of each stage during the combustion cycle.
- Energy saving:
The high efficiency generated by the LEDATRONIC and the accurate closing of the air at the end of the combustion cycle leads to a reduced wood consumption.
- Comfort and safety:
Most of the handling errors are eliminated by the automatic functions of the LEDATRONIC. That makes the use of your fireplace easy and very comfortable. A safe operation is ensured also in case of an electricity cut.

Product benefit: LEDATRONIC Control unit

- Compact unit with wifi module for the communication with smart phones / tablets via App
- Simple plug in assembly of the sensors and the damper drive
- Optional: connection of a graphic touch screen
- Operating status is indicated by acoustic signals
- Switch output for the connection of the relay module (opt. Accessory), 24 V
- Dimensions: 160 x 80 x 38 mm

LEDATRONIC App

- Clear representation of the information and functions of the LEDATRONIC and the the LUC (draft monitoring device)
(All the components have to be connected with the LT3 Wifi)
- All the settings can be made in the App
- Data memory for the functional analysis
- Connection to the WLAN:
 - The end consumer uses his own WLAN
 - The technician uses for the service settings an independant LT3-wlan, not necessary to log in to the customer's WLAN
- Requirements: Apple/ Android Smartphones und Tablets running on iOS 10/11 or Android 5.0



LEDATRONIC App-Icon

Free download:
App-Store, Google Playstore



Temperature module

(1004-00543)



Graphic display

with touch screen
(1004-00542)



Set wireless transmitter module FM-1

(1004-00885)



Relay module

(1004-00532)



Flush mounted socket

for the graphic display
(1004-00534)

Accessories

- Modern graphic touch screen and discreet glass frame
- Functions can be accessed via the display or app:
 - simple and clear user interface
 - selfexplanatory menu navigation with icons
 - background color: optionally white or black
 - Power-saving mode
 - Further displays can be connected
 - Data memory for functional analysis
 - Dimensions: W 112 x H 94 mm
- LED Status Signal for LEDATRONIC:

Discreet, coloured LED-Light (separated component) shows the current combustion and status of LT3:

GREEN - proper heating operation

RED - open door

BLUE - error message

(for a visual sign at the fireplace even without graphic display)
- Transmitter module set FM-1 for wireless data transmission within the data bus line, e. g.
 - LT3 Control unit -> graphic display
 - LT3 Control unit -> KS04
 - KS04 and graphic display

Equipped for top-hat rail assembly e.g. with an electric switch-board, width: 4 divisionp. Depending on the assembly situation a separate standard power supply, 12 V and data bus line will be requi

LT3 for pre-assembled tiled stoves (= LT3-models)

LT3-basic package with all required components for the equipment of pre-assembled tiled stovep. Depending on the model the door switch is already built-in or with the package included.

LT3 to retrofit tiles stoves

LT3- basic package with all required components including door switch for the retrofitting of tiled stovep. Depending on the model, the appropriate retrofit kit has to be selected.

LT3 for fireplace inserts

LT3-basic package with all required components for the equipment of new fireplace inserts or retrofitting.

LT3 for pre-assembled freestanding stoves/room heater and heat storage systems (=LT3-models)

LT3-basic package with all required components for the equipment. Door switch and thermal sensor are factory assembled.

LT3 for heat storage system doors

LT3-basic package with all required components for the equipment of heat storage stove doors or systems as new installation or for retrofitting.



Graphic touch for LEDATRONIC







Features (1004-00542)

LEDATRONIC

Scope of delivery

installation and operating manual, control unit, thermosensor with cable (approx. 3m plug-in wired, depending on the model factory assembled) power supply 24 V DC with cable (length approx. 1.5m), motordriven combustion air damper or VSR-Box with connection cable (approx. 1 m length, plug-in assembled), diameter of the damper DN 100 mm, DN 125, DN 150 or DN 160mm, depending on the appliance (partially already built-in). AluFlex-pipe: for the tilestoves and fireplace inserts (approx. 30 cm, extendable up to 1 m, DN 125, 150 or 160 mm), 2 pipe clamps, Door contact trigger (device-specific) with connection cable (2 m length and plug-in wired).

► Depending on the model and LT3 set, the Door contact trigger is already factory assembled or separately packed as a part of the delivery scope.

Ident-No.	Description - without graphic display	€	
Basic packages			
1004-01264	LEDATRONIC LT3 WiFi with VSR-box for FINA/ FINA go	1380.00	 ¹
1004-01265	LEDATRONIC LT3 WiFi with VSR-box for KALA	1380.00	 ¹
1003-02018	LEDATRONIC LT3 WiFi for LAVA D/ N/ W	1380.00	 ¹
1003-01977	LEDATRONIC LT3 WiFi for SERA/ SERA W	1380.00	 ¹
1003-02043	LEDATRONIC LT3 WiFi for VIDA/ VIDA W	1380.00	
1003-02021	LEDATRONIC LT3 WiFi for FERRA/ LGT 2001 (Ø 160 mm)	1380.00	 ¹

LEDATRONIC for Airflow Volume Regulator (VSR)

Fireplaces with VSR (Innovative air valve installed in the furnace bottom) are installed with a VSR-Box instead of a motordriven combustion air damper, where the VSR of the fireplace will be mounted. Therefore all advantages of the VSR come to effect also with LEDATRONIC:

- Improved installation possibilities of the fireplace with excessive chimney draft* without additional draught regulator
- Optimisation of the complete combustion cycle through adequate airflow volume of the combustion air
- Simple adjustment on site according to the chimney calculation
- Lighting booster

*It. EN 13384



Scope of delivery

LEDATRONIC WiFi



Scope of delivery

LEDATRONIC WiFi with VSR-box
for fireplaces with airflow volume regulator

Ident-No.	Description - without graphic display	€	
Basic packages for tiled stoves without graphic display			
1003-01984	LEDATRONIC LT3 WiFi for tiled stoves with Ø 125 mm combustion air connector, complete package for: DIAMANT, JUWEL H1	1260.00	^{1,2}
1003-01976	LEDATRONIC LT3 WiFi for tiled stoves with Ø 150 mm combustion air connector, complete package for: BRILLANT, BRILLANT W, DIAMANT W, GOURMET, TURMA H80/ H85	1260.00	^{1,2}
1004-01269	LEDATRONIC LT3 WiFi with VSR-box for TURMA H75	1380.00	^{1,2}



VSR-Box

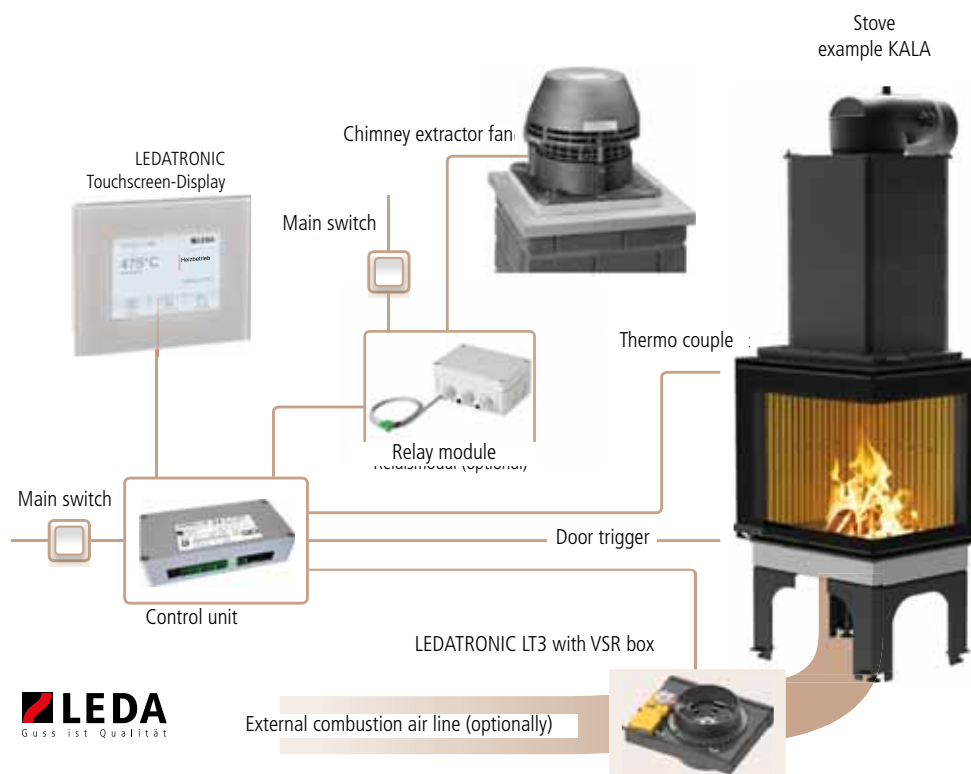
with installed air vent



VSR-Box

with installed air vent (open)

Ident-No.	Description - without graphic display	€	
Retrofit package for tiled stoves			
1003-02022	Retrofit package for DIAMANT H100 W/ H200 W/ H300 W, BRILLANT H2/ H4/ H2 W/ H4 W	1380.00	¹
1003-02024	Retrofit package for DIAMANT H10/ 13/ 20	1380.00	¹
1003-02027	Retrofit package for JUWEL H1	1380.00	¹
1003-02029	Retrofit package for JUWEL H1E incl. diagonal front frame	1380.00	¹
1003-02033	Retrofit package for TURMA H80/ H85	1380.00	¹
1003-02034	Retrofit package for TURMA H80/ H85 DS/ HL	1480.00	¹
1003-02038	Retrofit package for TURMA H80 W/ H85 W	1380.00	¹
1003-02039	Retrofit package for TURMA H80 W DS/ HL, TURMA H85 W DS/ HL	1590.00	¹
Optional accessories		€	
1004-00542	Graphic display (including flush mounting socket and 6 m data bus cable)	420.00	
1004-01283	LED Status Signal for LEDATRONIC, ready-for-connection (LED light, 2m cable and mounting material)	45.00	
1004-00885	Transmitter module set FM-1 for wireless data transmission (2 units: 1x plug-in power supply, 2x data bus(0.5 m and 6 m))	630.00	



Optional accessories		€	
1004-00534	Flush mounted socket for the graphic display	70.00	
1004-00815	Cavity-wall socket	110.00	³
1004-00476	5 m data bus cable	40.00	³
1004-00477	10 m data bus cable	50.00	³
1004-00546	15 m data bus cable	60.00	³
1004-00835	20 m data bus cable	70.00	³
1004-00836	25 m data bus cable	90.00	³
1004-00855	30 m data bus cable	100.00	³
1005-03968	Einsteck-Thermoelement LT3, inkl. Kabel ohne Stecker, Gesamtlänge: 165mm	119.00	
1004-00533	Bus multi-socket to connect the KS04 Complet Circulation unit with the LEDATRONIC LT3	30.00	⁴
1004-00540	3 m extension cord for motor drive with connecting terminals	60.00	
1004-00541	3 m extension cord for Door contact trigger/ thermoline with connecting terminals	60.00	
1004-00816	Cable adapter kit (adapter, socket, data bus cable, cable tie)	70.00	⁵
1004-00532	Relay module for the connection of further control components with 2 m connection cable	140.00	

Optional accessories		€	
1004-01024	RS232-module as serial interface for output of measured values and operating stages of LT3, LUC and KS04	290.00	
1004-00193	Assembly package start-up damper with motor drive, bowden cable and mounting material for the motor-controlled actuation of a start-up damper	660.00	⁶
1004-00543	Temperature module incl. 3 sensors with 3 m connection cable and Bus multi-socket W137 x H62 x D32 mm	310.00	^{7,8}

¹ LT3 WiFi display is not included, it can be ordered optionally (1004-00542)

² LEDATRONIC for LT3-tiled stoves is only combinable with the pre-assembled models of this category - cannot be used with fireplace inserts and other appliances or as retrofit package!

³ High quality data bus cable: highly recommended to avoid power loss

⁴ the data bus cable has to be ordered separately!

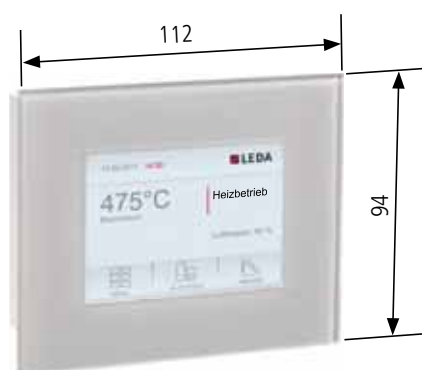
⁵ Cable adapter kit for connection of NYM-cables – also for more length (Mind resistance!)

⁶ Relay module LT3 the start-up damper has to be ordered separately if applicable

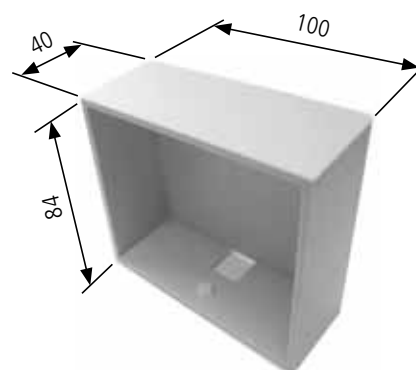
⁷ Only in combination with LEDATRONIC or LUC - Data bus cable has to be ordered separately!

⁸ Only necessary, if there is no KS04 implemented.

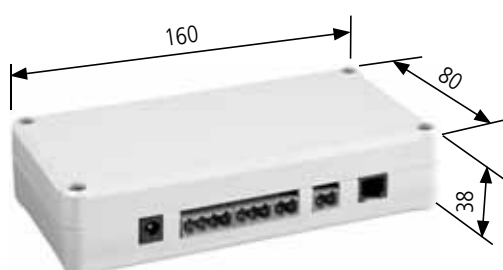
Graphic display, front frame dimensions (1004-00542)



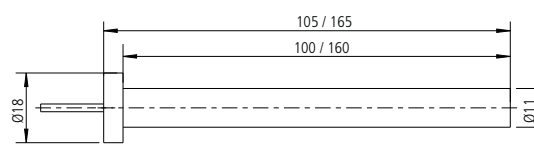
Flush mounted socket box, dimensions (1004,00534)



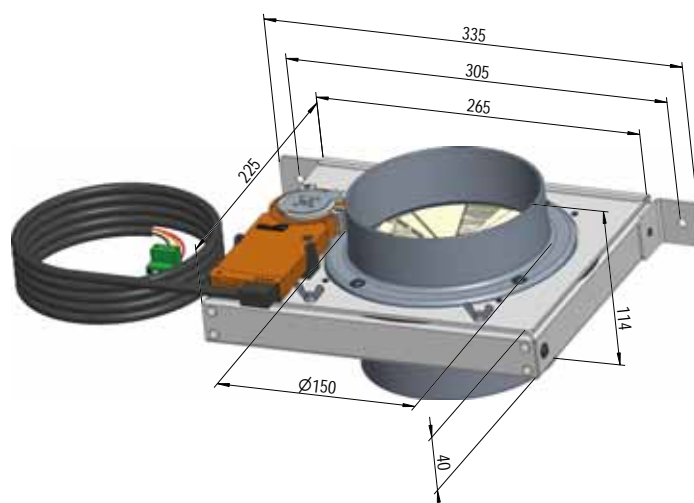
Controller unit, dimensions (1005-01878)



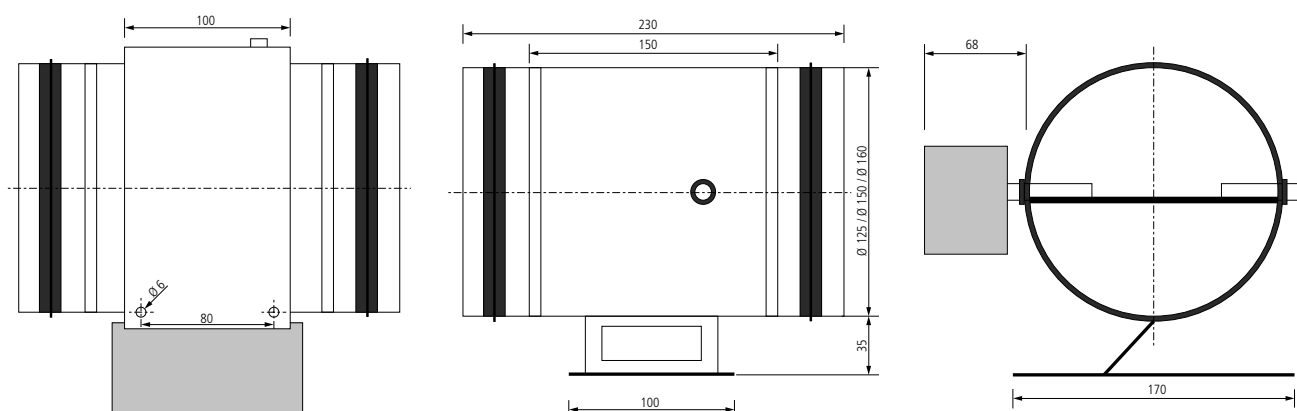
**Thermo element, 100 mm insertion depth (1005-01425)
160 mm insertion depth (1005-03968)**



VSR-Box, dimensions (incl. air ventil)



Dimensions of the motor driven combustion air damper (1005-03168)





LUC Graphic display

LUC

Electronic Draft Monitoring Device

Safe technology for the joint operation of a fireplace and a domestic ventilation system.

Ventilation systems operate wie negative pressure - same as tiled stoves and fireplace systems, which evacuate their Flue gas through a chimney conduct to outdoor. The risk: both systems can interfere each other in there undisturbed operation. A powerful or faulty ventilation system could e.g. provoke that the flue gas would penetrate in the setup room of the fireplace system - a possibly unpleasant, serious respectively harmful situation.

An innovative and TÜV-tested measuring procedure is monitoring the operational status of both system. The intelligent process control supplies detailed information to the display and supervises the operational safety. In case of a malfunction the LUC activates the automatic shut-down of the ventilation system preventing the possible hazard.

Product benefit at a glance

- Safe operation of a ventilation system (e.g. extractor hood, domestic ventilation system) in combination with a fireplace system).
- **conformity and certification: TÜV, CE, general DIBT approval**
- universally usable, device and manufacturer independent
- tested and approved by the building authorities.
- effective as well in locations where Appliances for „room air sealed operation“ are not more allowed.
- the ventilation system will be only shut down if there is a confirmed failure.
- can be used with custom made installations (e.g. with stoves/fireplaces with ceramic heat storage flues).
- no special request to the chimney pipe execution or the setup of the combustion air supply.
- automatically active and operative when the fireplace is lighted.
- easy installation: Display and measuring unit (both in the flush mounted socket) and the separate switch unit (top-hat rail assembly) in the distribution or meterbox.
- connection via data bus cable
- LUC is combinable with
 - LEDATRONIC LT3 (joint display panel)
 - LEDATRONIC LT3 + Complete Circulation Unit KS04 (joint display panel)
 - complete Circulation Unit KS04
 - switching capacity up to 10 A
 - periodical selftest without disconnection
- automatic restart of the ventilation system when the chimney draught has returned to normal conditions
- pressure measuring tube up to 10 m length



Adapter set

Schematic representation of the system



Set wireless transmitter module FM-1

(1004-00885)



Cable adapter

(1004-00816)



Small distribution box

(1004-00822)



Cavity-wall socket

(1004-00815)

LUC Display

- Modern graphic display with touch surface and discreet glass frame
- simple and clear interface
- intuitive menu navigation
- background color: optionally white or black
- power saving mode
- dimensions: W 112 x H 94 mm

Scope of delivery

Display and measuring unit (both in the flush mounted socket), switch-board in the top rail housing, installation and operating manual, 5 m resistance thermometer cable, (7m with cavity-wall set), 15 m data bus cable (25m with cavity-wall set), 5 m silicone pressure measuring tube, Ø 7mm (7m with the cavity-wall set), pressure gauge adapter with 2 fixing screws and ceramic felt gasket, pressure measuring pipe (Ø 6 mm), 4,8m flexible empty conduit (except with cavity-wall set), small distribution box (only with cavity-wall set)



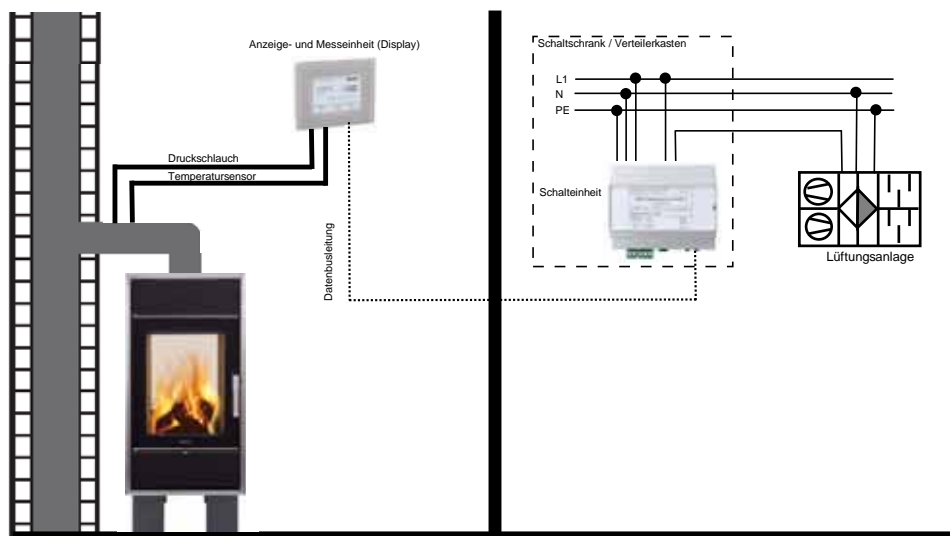
Scope of delivery

LUC Set



Scope of delivery

LUC cavity-wall set


LUC Installation schema

Standing alone solution

LUC

Ident-No.	Description	€	
1003-01720	LUC Set	1100.00	¹
1003-01738	LUC cavity-wall Set for the cavity or drywall installation	1210.00	¹
Optional accessories		€	
1004-00885	Transmitter module set FM-1 for wireless data transmission (2 units: 1x plug-in power supply, 2x data bus(0.5 m and 6 m))	630.00	²
1004-00783	Flush mounted socket box for graphic display	100.00	
1004-00815	Cavity wall socket	110.00	
1004-01024	RS232-Module as serial interface for output of measured values and operating stages of LT3, LUC and KS04	290.00	
1004-00784	10 m silicon tube	60.00	
1004-00822	Small distribution box	50.00	


Adapterset

Scope of delivery

Optional accessories		€	
1004-00816	Cable adapter kit (adapter, socket, data bus cable, cable tie)	70.00	³
LUC adapter kits (Cover flange, flange fixing, pressure measuring pipe)			
1004-00445	LUC Adapter kit for flue pipe Ø 120 mm	130.00	
1004-00440	LUC Adapter kit for flue pipe Ø 130 mm	130.00	
1004-00446	LUC Adapter kit for flue pipe Ø 150 mm	130.00	
1004-00585	LUC Adapter kit for flue pipe Ø 180 mm	130.00	
1004-01136	LUC Adapter kit for flue pipe Ø 200 mm	150.00	
1004-00546	15 m Data bus cable	60.00	⁴
1004-00835	20 m Data bus cable	70.00	⁴
1004-00836	25 m Data bus cable	90.00	⁴
1004-00855	30 m Data bus cable	100.00	⁴

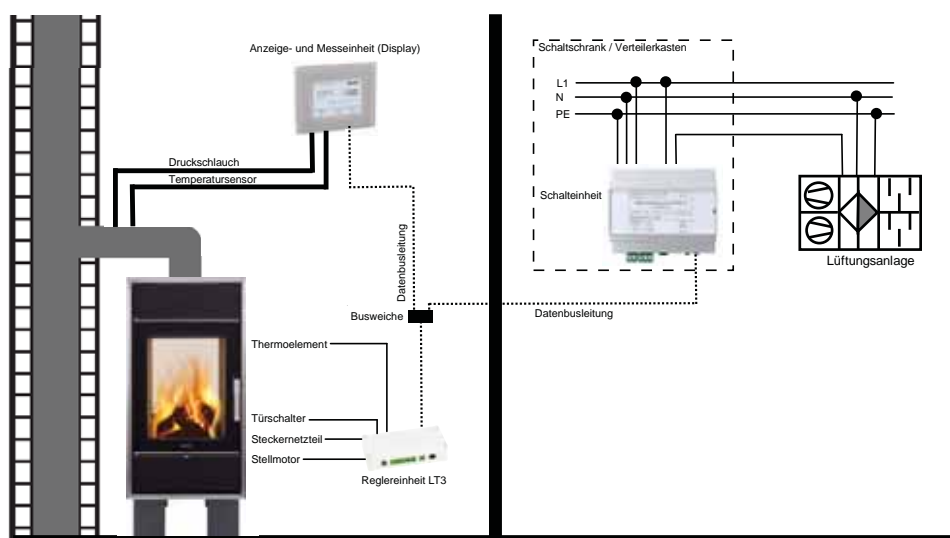
¹ For the connection of the LUC display with the LEDATRONiC LT3 WiFi a Bus multi-socket and a data cable are necessary.

² Depending on the assembly situation a separate standard power supply, 12 V and data bus line will be required.

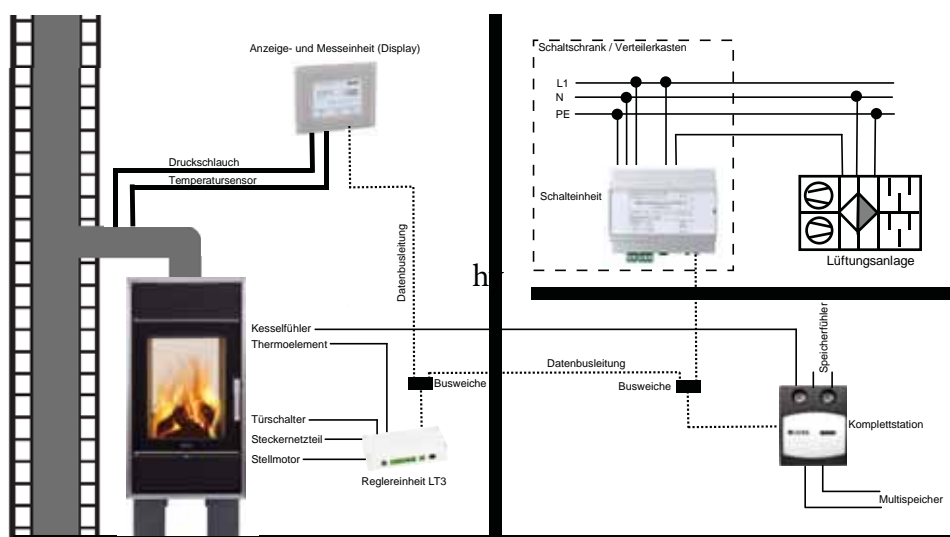
³ Cable adapter kit for connection of NYM-cables – also for more length (Mind resistance!)

⁴ High quality data bus cable: highly recommended to avoid power loss

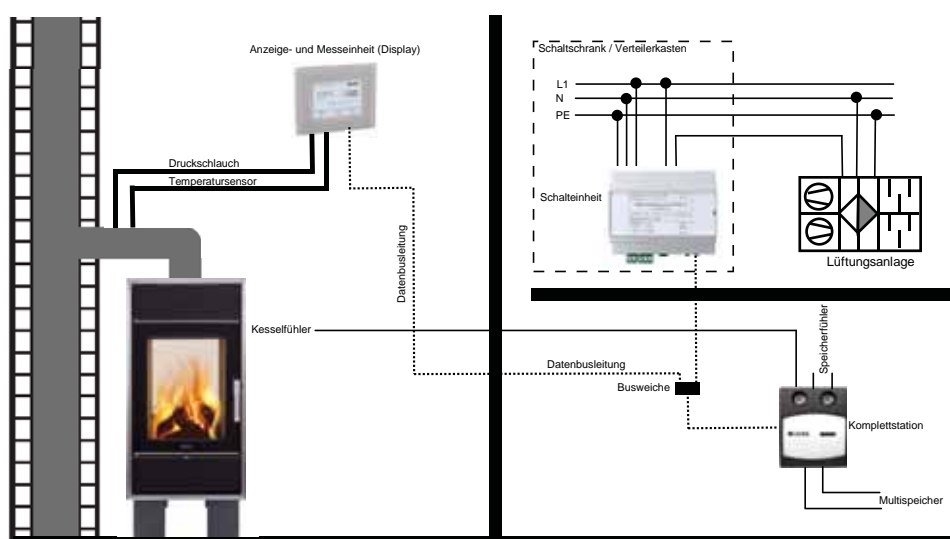
LUC + LT3 Installation diagram (LUC combined with combustion air control device)



LUC + LT3 + KS04 Installation schema (LUC combined with combustion air control device and hydronic fireplaces)



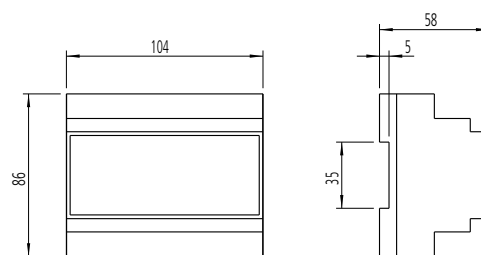
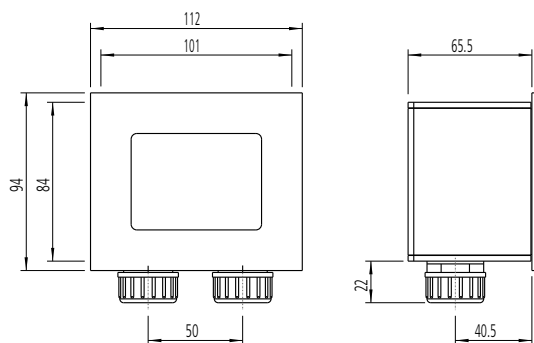
LUC + KS04 Installation schema (LUC combined with hydronic fireplaces)



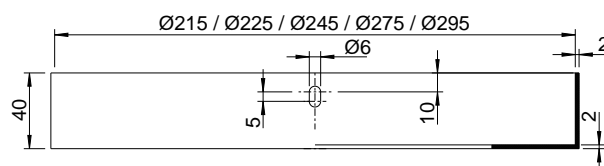
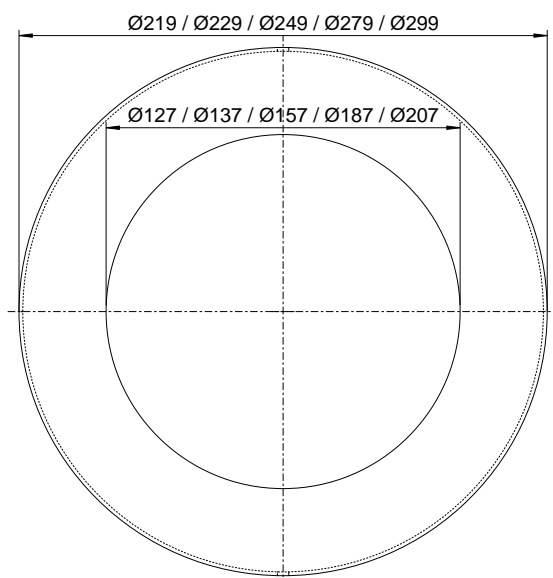
-> Explanation of terms, see following pages

Graphic display incorporated in the flush mounting housing

Switch unit



Adapter set, dimensions



Explanation of+ terms

Anzeige- und Messeinheit	Display
Druckschlauch	Pressure measuring tube
Temperatursensor	Temperature sensor
Datenbusleitung	Data bus cable
Schaltschrank/Verteilerkasten	Control cabinet / distribution box
Schalteinheit	Switching unit
Busweiche	Bus multi-socket
Thermoelement	Thermo couple
Türschalter	Door trigger
Steckernetzteil	Plug-in power supply
Reglereinheit LT3	Control unit LT3
Lüftungsanlage	Ventilation system
Kesselfühler	Boiler sensor
Speicherfühler	Storage sensor
Stellmotor	Servomotor
Multispeicher	Multi storage



FERRA 47 x 47 cm

FERRA 53 x 35 cm

FERRA 53 x 47 cm

FERRA 47 x 67 cm

FERRA

Heat storage stove door systems




High quality door system for handcrafted heat storage stoves consisting of cast iron door frame, steel airbox and door front.


Models:

- FERRA 47 x 47
- FERRA 53 x 35
- FERRA 53 x 47
- FERRA 47 x 67

Product benefit at a glance

- all-glass optic with high quality cast iron door frame
- optimum air supply through the door frame and steel airbox
- slim installation depth
- double glazing
- compact high quality door handle
- variable installation dimensions through a push-on-frame
- optional door hinge, factory setting left
- comfortable single-lever operation. Adjustment over an incorporated, polished cast iron air slide
- for greater convenience: combinable with the electronic combustion air control device LEDATRONIC
- floor bracket, 40 mm height adjustable for levelling the door vertically and horizontally
- combustion air connector Ø 160 mm to be connected optionally to the front or to the rear

Ident-No.	Description	€	
1003-01371	FERRA 47 x 47, black laquered	1730.00	
1003-01387	FERRA 53 x 35, black laquered	1680.00	
1003-01392	FERRA 53 x 47, black laquered	1830.00	
1003-01398	FERRA 47 x 67, black laquered	1920.00	
Optional accessories		€	
1004-00322	Floor bracket, 2-piece, 40 mm height adjustable, including fixing screws	110.00	
1003-02021	LEDATRONIC LT3 electronic combustion air control device, complete package for FERRA	1380.00	 ¹ p.260
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

 ¹ LT3 WiFi without display which can be ordered optionally (1004-00542)

Scope of delivery

Fire door with frame, steel airbox and mounted door front, installation and operating manual



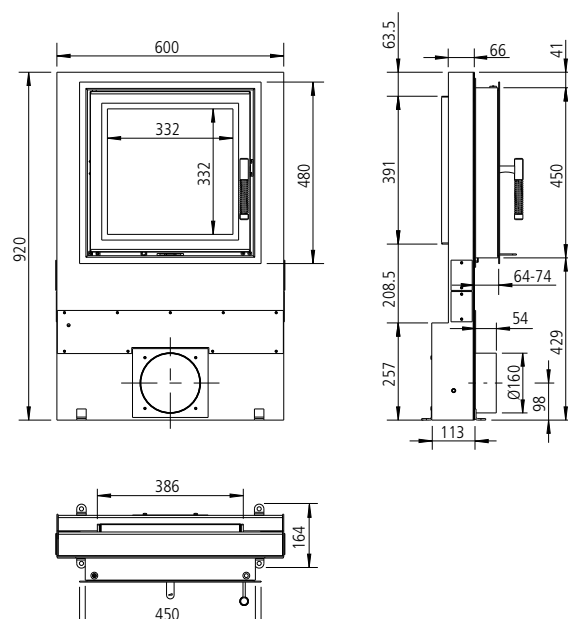
Floor bracket
(1004-00322)



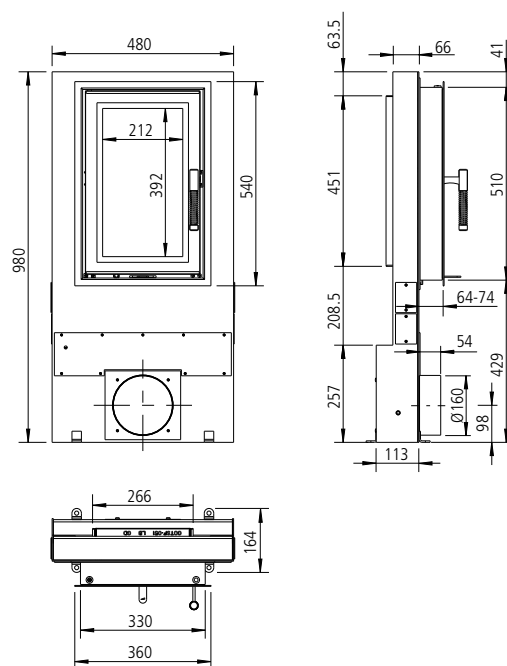
Door frame

Technical data FERRA		47 x 47	53 x 35	53 x 47	47 x 67
Fuelling door (width x height)	[mm]	370 x 345	430 x 225	430 x 345	370 x 545
Door window (double glazed)	[mm]	332 x 332	392 x 212	392 x 332	332 x 532
Weight without floor bracket	[kg]	70	62	73	85
Centred external combustion air connector	[mm]	Ø160	Ø160	Ø160	Ø160
Primary air laterally / horizontal	[cm²]	100	100	100	100
Primary air above / vertical	[cm²]	78	51	78	78
Total air inlets without reduction plates	[cm²]	178	151	178	178
Total air inlets with 2 reduction plates (delivery status)	[cm²]	151	124	151	151
Total air inlets with 4 reduction plates	[cm²]	124	91	124	124
Specific pressure drop p_{spez}	[Pa/(kg/h)²]	0,190	0,190	0,190	0,190

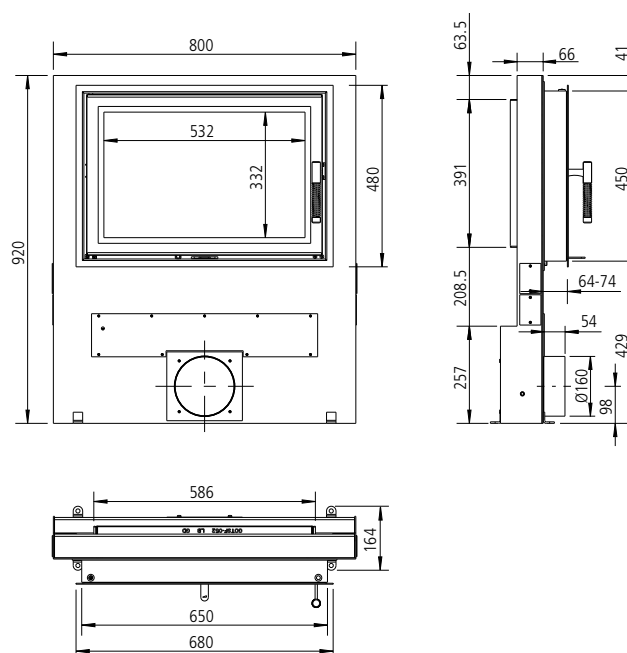
FERRA 47 x 47 cm



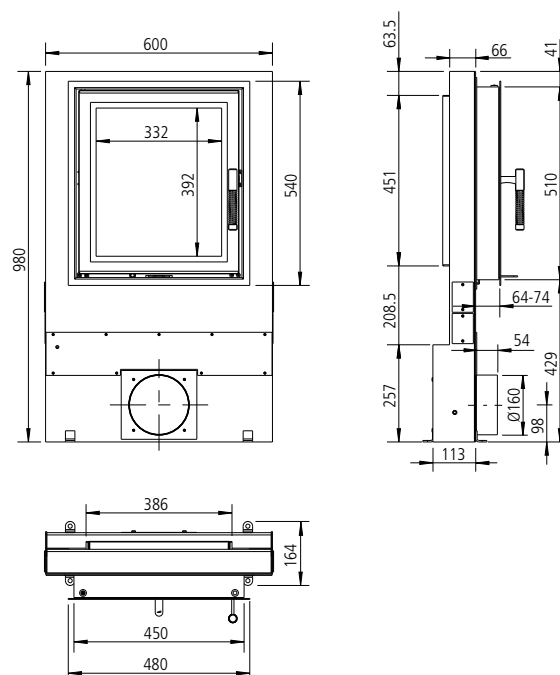
FERRA 53 x 35 cm



FERRA 47 x 67 cm



FERRA 53 x 47 cm





LGT 2001 straight




LGT


Heat storage stove door systems

High quality door system for handcrafted heat storage stoves consisting of cast iron door frame, steel airbox and door front.

Product benefit at a glance:

- Cast iron door and frame
- Optimum air supply through the door frame and steel airbox
- Compact high quality door handle
- Door hinge right
- Comfortable single-lever operation. Adjustment over a combustion air damper
- For greater convenience: combinable with the electronic combustion air control device LEDATRONIC
- Combustion air connector Ø 160 mm to be connected optionally to the front or to the rear.

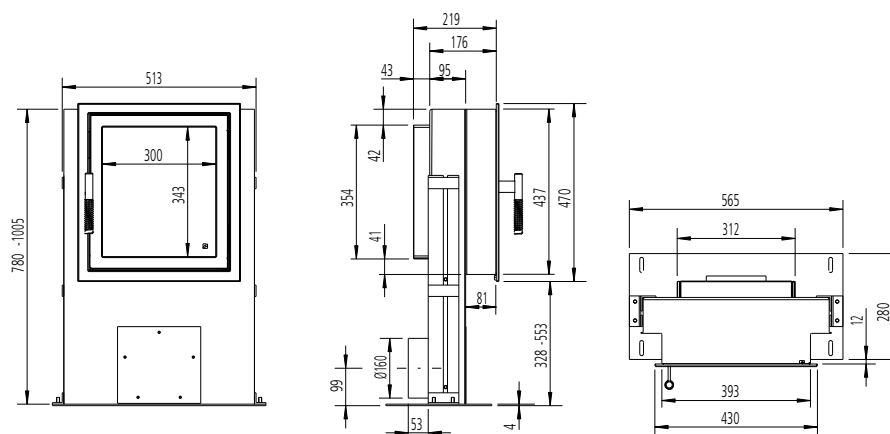
Ident-No.	Description	€	
1003-00934	LGT 2001, straight	1190.00	
Optional accessories		€	
1004-00154	Combustion air damper Ø 160 mm for manual operation with bowden cable (approx. 1,2 m, flexible)	210.00	
1004-00229	cast iron door panel (instead of glass pane)	290.00	
1003-02021	LEDATRONIC LT3 WiFi electronic combustion air control device, complete package for LGT 2001	1380.00	 ¹ p.260
1003-01720	LUC Draft monitoring device Safety device for the operation of a solid fuel fireplace with a domestic ventilation system	1100.00	p.266

¹ LT3 WiFi without display which can be ordered optionally (1004-00542)

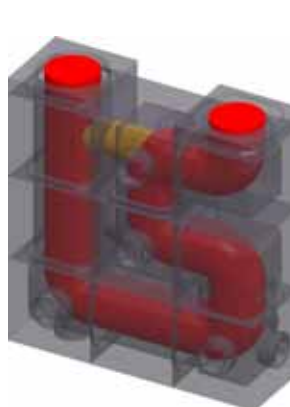
Scope of delivery

Fire door with frame, steel airbox and mounted door front, installation and operating manual

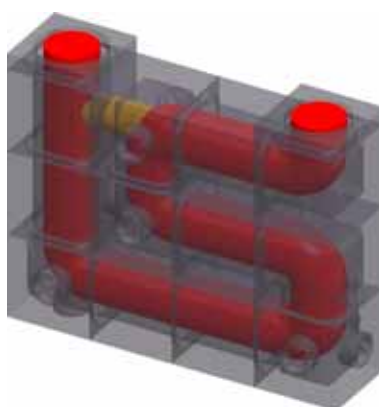
LGT 2001 straight



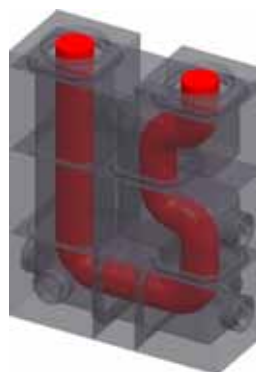
Heat storage stove door model LGT		LGT 2001 -straight
Combustion air cross section	max. [cm ²]	190
Combustion air damper	Ø [mm]	160
Weight	approx. [kg]	42
Specific pressure drop p_{spez}	[Pa/(kg/h) ²]	0,200



LWS Set 1
nine elements (1004-00952)



LWS Set 2
twelve elements (1004-00953)



LWS Set 3
seven elements (1004-01104)

LWS

LWS Heat Accumulation System







Flexible, high quality heat accumulation system of ceramic heat storage material for appropriated tiled stove- and fireplace insert. Compact material with high heat absorption capacity, quick and easy to set up.


Product benefit at a glance


- high quality heat accumulation system with modular structure for for individually planned heat storage flue systems:
 - very rigid material with a high density
 - high compressive strength
- quick heat absorption with prolonged storage capacity thanks to a high density and a very good thermal conductivity
- shorter but very effective flue lengths because of a high thermal conductivity and heat absorption across all temperature ranges enables a space-saving structure
- quick and easy to set up:
 - assembly of the components through tongue and groove connection
 - bonding with special high temperature mortar
- straight forward handling at the setup site through appropriated dimensions and weight of 25 x 25 x 25 cm with approx. 25 kg
- continuous pipe cross section of approx. 277 cm²
- wall thickness: approx. 4 cm
- individual arrangement of the flue gas way and storage capacity through handcrafted second chamotte wall in the requested thickness with or without clearance to the LWS

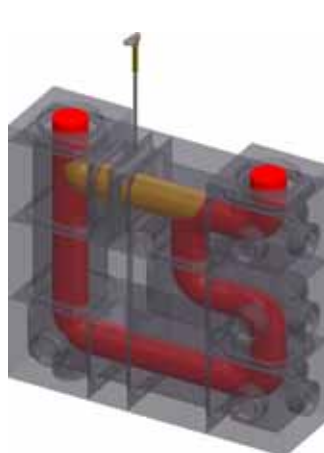
Technical data: Ceramic heat storage material with high proportion of hematite

- complies also with the German Technical Rules for planing and dimensioning of materials for heat storage flues (TROL)
- max. admissible operating temperature $\geq 1150^{\circ}\text{C}$
- compressive strength: min. 20 MPa
- density: min. 2.6 kg/dm³
- porosity: max. 22 Vol.-%
- heat expansion with operating temperature: 0,10%
- hydraulically / chemically bonded, thermally hardened

Ident-No.	Description	€	
1004-00952	LWS Set 1, nine elements, down and horizontal flue with variable adjustable bypass, approx. 240 kg	1150.00	
1004-00986	LWS Set 1.1 with heat-up damper, eleven elements, down and horizontal flue, approx. 270 kg	1440.00	
1004-00953	LWS Set 2, twelve elements, down and horizontal flue with variable adjustable bypass, approx. 315 kg	1470.00	
1004-00987	LWS Set 2.1 with heat-up damper, fourteen elements, down and horizontal flue, approx. 345 kg	1780.00	
1004-01104	LWS Set 3, seven elements, down and horizontal flue with variable adjustable bypass, approx. 190 kg	980.00	

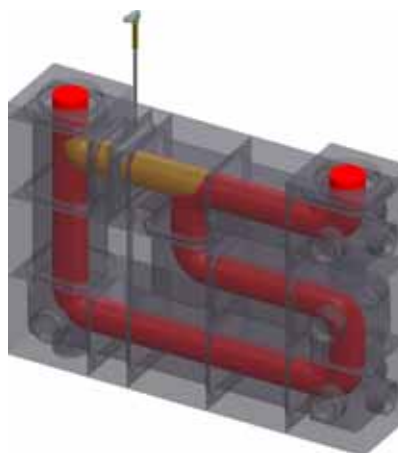
 ¹ florpanel has to be ordered separately if requested

VAT excluded ·  Material price surcharges possible · Valid: July 2022 · Subject to changes.



LWS Set 1.1

eleven elements with heat-up damper
(1004-00986)



LWS Set 2.1

fourteen elements with heat-up damper (1004-00987)

Application description:


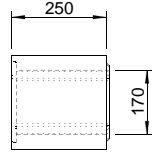


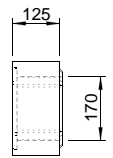


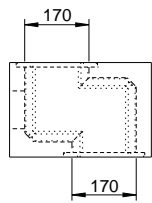

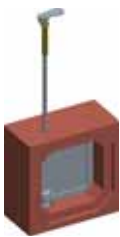
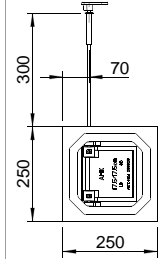

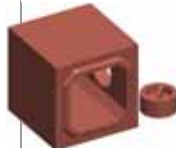
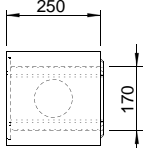


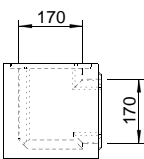

- LWS Set 1:
9 elements down and horizontal flue with heat-up section, specially designed for tiled/heat storage stoves or fireplaces with small exhaust mass flow, extensible with single elements
- LWS Set 1.1:
9.5 elements down and horizontal flue with heat-up section and heat-up damper, specially designed for tiled/ heat storage stoves or fireplaces with small exhaust mass flow, extensible with single elements
- LWS Set 2:
12 elements down and horizontal flue with heat-up section, specially designed for tiled/ heat storage stoves or fireplaces with greater exhaust mass flow, extensible with single elements
- LWS Set 2.1:
12.5 elements down and horizontal flue with heat-up section and heat-up damper, specially designed for storage stoves or fireplaces with greater exhaust mass flow, extensible with single elements
- LWS Set 3:
7 elements down and horizontal flue with heat-up section, specially designed for tiled/heat storage stoves or fireplaces with small exhaust mass flow, extensible with single elements
- LWS single elements for customised composition or extension of the LWS Sets


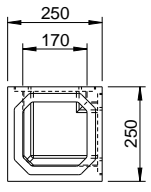


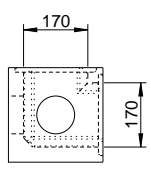


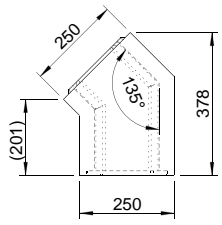


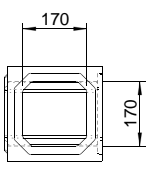


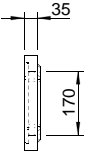


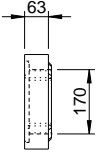


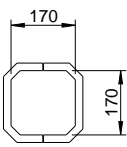

Scope of delivery: LWS Sets


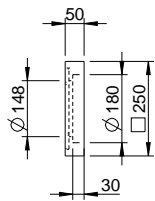

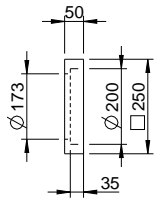

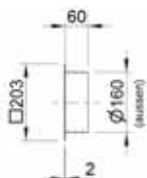

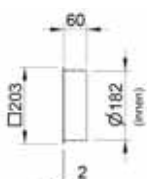

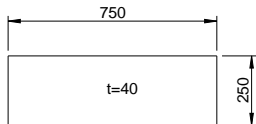

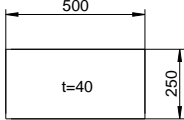
1	1.1	2	2.1	3	Set
–	2	–	2	–	T-piece
4	4	4	4	2	90° bend with 2 cleaning openings
2	1	2	1	–	90° bend
–	1	–	1	1	1/2 intermediate piece
–	1	–	1	–	1/2 intermediate piece with heat-up damper
2	2	5	5	1	intermediate piece
1	–	1	–	1	Intermediate piece with cleaning opening
–	–	–	–	2	1 1/2 intermediate piece
1	1	1	1	1	connector stones 160mm
1	1	1	1	1	connector stones 180mm
5	7	5	7	5	Inlays (two part)
1	1	1	1	1	High temperature mortar 7 kg
2	2	2	2	2	Ceramic sealing cord, 20 mm, L 56
–	–	–	–	1	Bypass piece

Comparison: LWS and refractory clay

- 3 times higher thermal conductivity
- 1.4 times higher density
- 1.4-higher heat absorption capacity with the same volume

Ident-No.	Description	€	
LWS Individual components			
1004-00940	  <p>LWS intermediate piece, 25 x 25 x 25 cm, 25 kg</p>	120.00	
1004-00941	  <p>LWS 1/2 intermediate piece, 12,5 x 25 x 25 cm, 12,5 kg</p>	70.00	
1004-01108	  <p>LWS 1 1/2 intermediate piece, 38 x 25 x 25 cm, 37 kg</p>	180.00	
1004-00951	  <p>LWS 1/2 intermediate piece with heat-up damper, incl. inlay, 12,5 x 25 x 25 cm, approx. 15 kg</p>	190.00	
1004-00957	  <p>LWS intermediate piece with cleaning opening, 25 x 25 x 25 cm, 25 kg</p>	120.00	
1004-00942	  <p>LWS intermediate piece with two cleaning opening, 25 x 25 x 25 cm, 25 kg</p>	120.00	

Ident-No.	Description	€	
1004-01184	  <p>LWS corner piece with three exits, 25 x 25 x 25 cm, 25 kg</p>	120.00	
1004-01109	  <p>LWS 90° bend with 2 cleaning openings (left/front), 25 x 25 x 25 cm, 25 kg</p>	120.00	
1004-00944	  <p>LWS 45° bend, 20 x 38 x 25 cm, 33 kg</p>	140.00	
1004-00945	  <p>LWS T-piece, 25 x 25 x 25 cm, 22 kg</p>	200.00	
1004-00946	  <p>LWS spacer, 3,5 x 25 x 25 cm, 3,5 kg</p>	40.00	
1004-00947	  <p>LWS spacer, 6,3 x 25 x 25 cm, 6,2 kg</p>	40.00	
1004-00948	  <p>LWS inlay, 1 kg</p>	20.00	

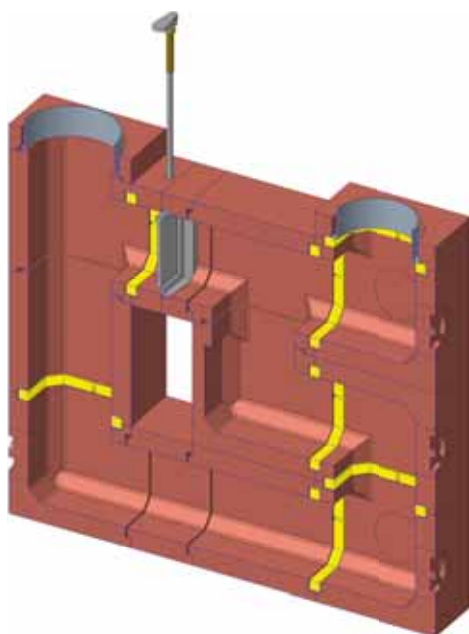
Ident-No.	Description	€	
1004-00949	  LWS connector stone 160 mm, 5 x 25 x 25 cm, 4,5 kg	50.00	²
1004-00950	  LWS connector stone 180 mm, 5 x 25 x 25 cm, 4,5 kg	50.00	²
1004-01186	  LWS spigot piece 160 mm (steel sheet)	30.00	²
1004-01187	  LWS spigot piece 180 mm (steel sheet)	30.00	²
Ident-No.	Description	€	
1004-00959	  LWS large floorpanel, 75 x 25 x 4 cm	30.00	^{2,3}
1004-00958	  LWS small floorpanel, 50 x 25 x 4 cm	30.00	^{2,3}
1004-00954	high temperature mortar, 7 kg bucket	50.00	
1004-00980	high temperature mortar, 24 kg bucket	100.00	
1004-00955	ceramic dealing cord, 20 mm, L 56 cm	10.00	
Optional accessories			
1004-00311	MFS Double flue gas outlet with diverter damper	330.00	⁴

² plus packaging surcharge of 25 € per order
(except if ordered together with an LWS set)

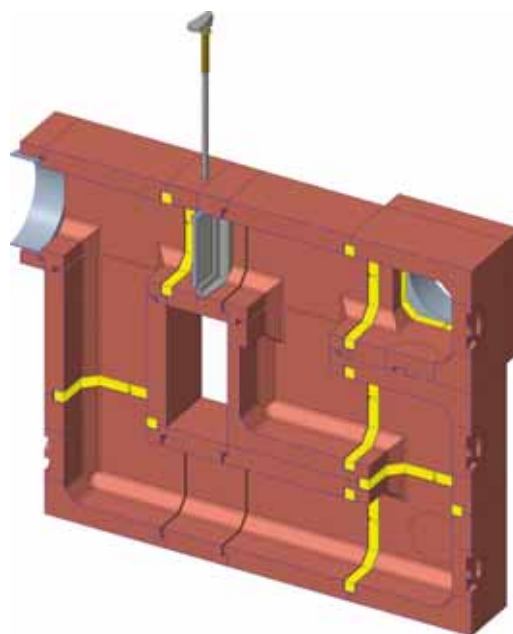
³ for the second connector stone an inlay 1004-00948 will be
needed

⁴ for LAVA, SERA, VIDA and TURMA

LWS Set 1.1 with heat-up damper (sectional drawing) (1004-00986)

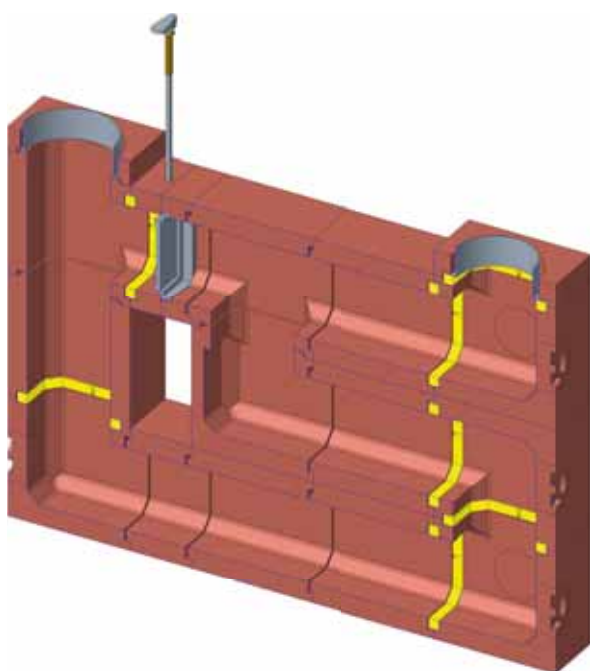


Top connection,
with two spigot pieces (160 mm - 1004-01186/ 180 mm - 1004-01187)

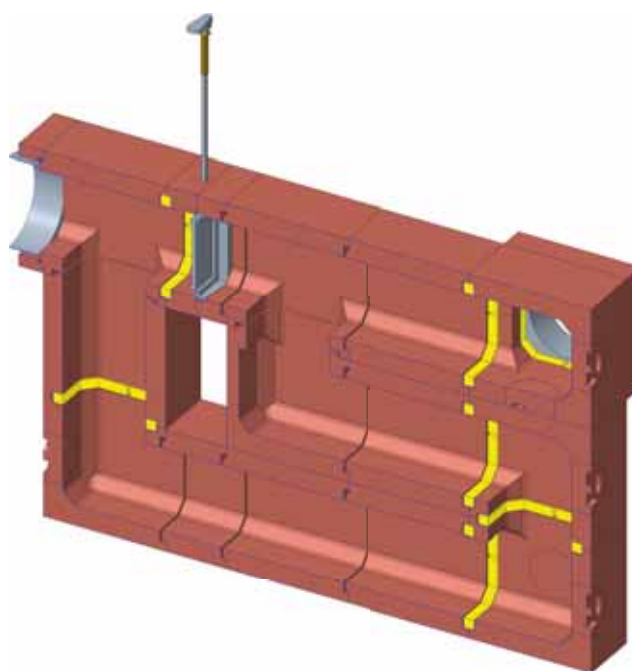


Lateral connection,
with two spigot pieces (160 mm - 1004-01186/ 180 mm - 1004-01187)

LWS Set 2.1 with heat-up damper (sectional drawing) (1004-00987)

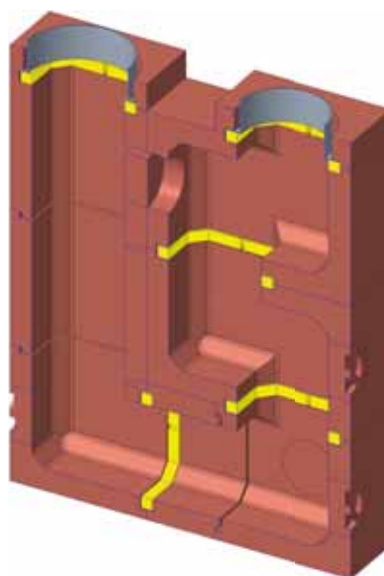


Top connection,
with two spigot pieces (160 mm - 1004-01186/ 180 mm - 1004-01187)



Lateral connection,
with two spigot pieces (160 mm - 1004-01186/ 180 mm - 1004-01187)

LWS Set 3 (sectional drawing) (1004-01104)



Top connection,
with two spigot pieces (160 mm - 1004-01186/ 180 mm - 1004-01187)

Dimensioning of LWS for LEDA heat storage stoves and fireplace inserts

LEDA Model/ Type		BRILLANT H2	BRILLANT H4	DIAMANT H10	DIAMANT H20	DIAMANT H13	DIAMANT H100 W	DIAMANT H200 W	
Flue gas spigot	[mm]	Ø 180	Ø 180	Ø 145	Ø 180	Ø 145 Ø 180	Ø 180	Ø 180	Ø 180
Technical data of the insert									
Flue gas temperature in operation with heat storage flue	[°C]	605	630	525	590	605	620	410	430
Flue gas mass flow with heat storage flue (g/s)	[g/s]	14.2	22.5	10.5	12.6	15.1	17.5	19.0	24.0
Min. required draught for the operation (without heat storage flue)	[Pa]	15	15	15	15	15	15	15	15
Fuel loading quantity, wood logs	[kg]	8.0	12.0	5.0	7.0	8.5	10.0	6.5	7.0
Fuel consumption, wood logs	[kg/h]	5.5	7.5	3.8	5.4	6.6	7.7	5.2	6.7
Flue gas triple value for the chimney calculation according to EN 13384 - with set 1 and 1.1									
Exhaust temperature after LWS set 1 / 1.1	[°C]	183	261	145	166	192	217	186	210
Min. required draught for the operation with LWS Set 1 / 1.1, 6x 90° bends	[Pa]	18	24	17	18	19	20	20	24
Flue gas mass flow	[g/s]	14.2	22.5	10.5	12.6	15.1	17.5	19.0	24.0
Flue gas triple value for the chimney calculation according to EN 13384 - with set 2 and 2.1									
Flue gas exit temperature after LWS set 2 / 2.1	[°C]	--	185	--	--	--	--	149	168
Min. required draught for the operation with LWS set 2/2.1, 6 x 90° bends	[Pa]	--	24	--	--	--	--	20	23
Flue gas mass flow	[g/s]	--	22.5	--	--	--	--	19.0	24.0
Flue gas triple value for the chimney calculation acc. to EN 13384 - with set 3									
Flue gas exit temperature after LWS Set 3	[°C]	244	322	194	225	253	279	217	243
Min. required draught for the operation with LWS set 3, 6x 90° bends	[Pa]	19	25	17	18	19	21	20	24
Flue gas mass flow	[g/s]	14.2	22.5	10.5	12.6	15.1	17.5	19.0	24.0
Dimensioning for LWS custom made - semi-heavy structure									
Recommended number of LWS elements (25/25/25cm)	[element]	9	13	8	9	10	11	10	12
Recommended number of LWS elements (25/25/25cm) precise	[element]	9.5	12.7	7.9	8.9	9.8	10.8	10.2	11.9
Weight of the LWS (without 2nd shell)	[kg]	225	318	202	225	248	272	248	295
Required heat-up time until basic heat is achieved	[approx. h]	0.23	0.20	0.34	0.27	0.24	0.22	0.35	0.30
Required wood quantity until basic heat is achieved	[approx. kg]	1.27	1.46	1.31	1.46	1.58	1.69	1.80	2.01
Required heating time to heat up (to 300 K)	[approx. h]	2.32	1.95	3.44	2.70	2.40	2.19	3.46	3.00
Required wood quantity to heat up (to 300 K)	[approx. kg]	12.73	14.63	13.08	14.59	15.85	16.86	17.99	20.10
Possible output over 8 hours (depending on the second shell)	[approx.kW]	1.78	2.52	1.60	1.78	1.96	2.15	1.96	2.33
Exhaust temperature after LWS (with recomm. number of LWS modules)	[°C]	183	162	168	166	165	164	172	168
Exhaust temperature after LWS + 1 additional element	[°C]	156	142	145	140	140	140	160	156
Exhaust temperature after LWS + 2 additional elements	[°C]	132	122	124	117	118	119	149	145
Exhaust temperature after LWS + 3 additional elements	[°C]	110	104	105	96	98	99	138	135
Exhaust temperature after LWS - 1 element less	[°C]	212	185	194	194	192	189	186	181
Exhaust temperature after LWS - 2 elements less	[°C]	244	208	223	225	221	217	201	195
Exhaust temperature after LWS - 3 elements less	[°C]	279	234	256	259	253	247	217	210
Additional required draught per bend of 90°	[Pa]	0.56	1.44	0.28	0.43	0.63	0.86	0.85	1.39
Additional required draught per bend of 45°	[Pa]	0.25	0.66	0.13	0.20	0.29	0.39	0.39	0.64
Additional required draught with LWS with (4 bends of 90°)	[Pa]	17.2	20.8	16.1	16.7	17.5	18.4	18.4	20.5
Additional required draught with LWS with (5 bends of 90°)	[Pa]	17.8	22.2	16.4	17.2	18.2	19.3	19.2	21.9
Additional required draught with LWS with (6 bends of 90°)	[Pa]	18.3	23.6	16.7	17.6	18.8	20.2	20.1	23.3
Additional required draught with LWS with (7 bends of 90°)	[Pa]	18.9	25.1	17.0	18.0	19.4	21.0	20.9	24.7
Additional required draught with LWS with (8 bends of 90°)	[Pa]	19.4	26.5	17.3	18.4	20.0	21.9	21.8	26.1
All values are based on arithmetic averagep.									

	DIAMANT H300 W	FINA plus 65 F	FINA plus 65 DS	FINA plus 65 ES	GOURMET H71	JUWEL H1		KALA F 55	KALA DS 55	KALA ES 45	KALA ES 55	KALA QS	KALA PS	KALA US	LAVA N
	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 145	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180
	450	554	669	554	600	510	525	520	530	610	584	546	618	618	490
	28.0	16.9	14.4	16.9	16.5	10.5	12.0	13.7	14.5	12.4	13.6	12.9	14.4	14.4	14.9
	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	8.0	5.1	5.1	5.1	8.0	5.0	5.3	4.0	4.0	4.0	5.0	4.0	5.0	5.0	5.0
	8.0	5.3	5.4	5.3	5.5	4.0	4.5	4.1	4.1	4.1	4.8	4.1	4.9	4.9	4.4
	231	198	195	198	203	145	157	170	177	165	175	165	187	187	175
	27	20	19	20	20	17	17	18	18	18	18	18	19	19	18
	28.0	16.9	14.4	16.9	16.5	10.5	12.0	13.7	14.5	12.4	13.6	12.9	14.4	14.4	14.9
	186	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	28.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	265	251	265	251	263	192	206	218	226	227	233	217	250	250	219
	28	20	19	20	20	17	17	18	18	18	18	18	19	19	18
	28.0	16.9	14.4	16.9	16.5	10.5	12.0	13.7	14.5	12.4	13.6	12.9	14.4	14.4	14.9
	13	10	10	10	10	8	8	9	9	9	9	9	10	10	9
	13.3	10.2	9.8	10.2	10.3	7.9	8.5	9.0	9.3	8.9	9.2	8.8	9.6	9.6	9.3
	318	248	248	248	248	202	202	225	225	225	225	225	248	248	225
	0.26	0.24	0.22	0.24	0.22	0.36	0.30	0.30	0.27	0.26	0.25	0.29	0.24	0.24	0,30
	2.06	1.29	1.19	1.29	1.22	1.44	1.35	1.22	1.12	1.07	1.22	1.21	1.20	1.20	1.32
	2.58	2.43	2.20	2.43	2.22	3.59	3.01	2.98	2.74	2.62	2.54	2.95	2.45	2.45	3.00
	20.61	12.88	11.85	12.88	12.23	14.37	13.55	12.23	11.23	10.75	12.19	12.09	11.98	11.98	13.20
	2.52	1.96	1.96	1.96	1.96	1.60	1.60	1.78	1.78	1.78	1.78	1.78	1.96	1.96	1.78
	173	175	164	175	177	167	180	170	177	165	175	165	159	159	175
	161	153	135	153	153	145	157	139	155	138	150	143	134	134	156
	149	134	109	134	131	125	136	130	135	114	127	123	111	111	139
	138	116	86	116	110	107	118	113	117	92	106	104	90	90	124
	186	198	195	198	203	192	206	193	200	195	202	190	187	187	196
	200	223	228	223	232	220	234	218	226	227	233	217	217	217	219
	215	251	265	251	263	251	265	245	255	263	266	248	250	250	244
	1.93	0.76	0.60	0.76	0.75	0.28	0.37	0.48	0.55	0.42	0.50	0.44	0.58	0.58	0.56
	0.88	0.35	0.28	0.35	0.34	0.13	0.17	0.22	0.25	0.19	0.23	0.20	0.26	0.26	0.26
	22.7	18.0	17.4	18.0	18.0	16.1	16.5	16.9	17.2	16.7	17.0	16.7	17.3	17.3	17.2
	24.6	18.8	18.0	18.8	18.8	16.4	16.8	17.4	17.7	17.1	17.5	17.2	17.9	17.9	17.8
	26.6	19.6	18.6	19.6	19.5	16.7	17.2	17.9	18.3	17.5	18.0	17.6	18.5	18.5	18.3
	28.5	20.3	19.2	20.3	20.3	17.0	17.6	18.4	18.8	18.0	18.5	18.1	19.0	19.0	18.9
	30.4	21.1	19.8	21.1	21.0	17.2	18.0	18.9	19.4	18.4	19.0	18.5	19.6	19.6	19.5

Dimensioning of LWS for LEDA heat storage stoves and fireplace inserts

LEDA Model/ Type		RUBIN K15	RUBIN K16 / K17	RUBIN K18	RUBIN K19	RUBIN K20	RUBIN K21	
Flue gas spigot	[mm]	Ø 130 Ø 145	Ø 145 Ø 180	Ø 145 Ø 180	Ø 180	Ø 180	Ø 145 Ø 160 Ø 180	
Technical data of the insert								
Flue gas temperature in operation with heat storage flue	[°C]	600	550	570	575	590	595	575
Flue gas mass flow with heat storage flue (g/s)	[g/s]	9.0	9.8	10.2	10.5	11.5	16.9	14.1
Min. required draught for the operation (without heat storage flue)	[Pa]	15	15	15	15	15	15	15
Fuel loading quantity, wood logs	[kg]	3.5	4.0	5.0	5.0	6.0	10.0	7.6
Fuel consumption, wood logs	[kg/h]	3.2	3.5	3.9	3.9	4.7	7.2	5.7
Flue gas triple value for the chimney calculation according to EN 13384 - with set 1 and 1.1								
Exhaust temperature after LWS set 1 / 1.1	[°C]	--	--	--	144	155	206	178
Min. required draught for the operation with LWS Set 1 / 1.1, 6x 90° bends	[Pa]	--	--	--	17	17	20	18
Flue gas mass flow	[g/s]	--	--	--	10.5	11.5	16.9	14.1
Flue gas triple value for the chimney calculation according to EN 13384 - with set 2 and 2.1								
Flue gas exit temperature after LWS set 2 /2.1	[°C]	--	--	--	--	--	--	--
Min. required draught for the operation with LWS set 2/2.1, 6 x 90° bends	[Pa]	--	--	--	--	--	--	--
Flue gas mass flow	[g/s]	--	--	--	--	--	--	--
Flue gas triple value for the chimney calculation acc. to EN 13384 - with set 3								
Flue gas exit temperature after LWS Set 3	[°C]	189	191	197	202	214	265	235
Min. required draught for the operation with LWS set 3, 6x 90° bends	[Pa]	16	17	17	17	17	20	18
Flue gas mass flow	[g/s]	9.0	9.8	10.2	10.5	11.5	16.9	14.1
Dimensioning for LWS custom made - semi-heavy structure								
Recommended number of LWS elements (25/25/25cm)	[element]	8	8	8	8	8	10	9
Recommended number of LWS elements (25/25/25cm) precise	[element]	7.6	7.8	8.0	8.1	8.5	10.4	9.3
Weight of the LWS (without 2nd shell)	[kg]	202	202	202	202	202	248	225
Required heat-up time until basic heat is achieved	[approx. h]	0.33	0.34	0.31	0.30	0.27	0.22	0.25
Required wood quantity until basic heat is achieved	[approx. kg]	1.06	1.21	1.23	1.18	1.25	1.58	1.43
Required heating time to heat up (to 300 K)	[h]	3.31	3.44	3.14	3.02	2.66	2.20	2.50
Required wood quantity to heat up (to 300 K)	[approx. kg]	10.61	12.06	12.26	11.76	12.48	15.81	14.27
Possible output over 8 hours (depending on the second shell)	[approx.kW]	1.60	1.60	1.60	1.60	1.60	1.96	1.78
Exhaust temperature after LWS (with recomm. number of LWS modules)	[°C]	157	163	168	171	183	180	178
Exhaust temperature after LWS + 1 additional element	[°C]	128	138	142	144	155	156	154
Exhaust temperature after LWS + 2 additional elements	[°C]	102	115	119	120	130	134	131
Exhaust temperature after LWS + 3 additional elements	[°C]	79	95	98	98	107	114	111
Exhaust temperature after LWS - 1 element less	[°C]	189	191	197	202	214	206	205
Exhaust temperature after LWS - 2 elements less	[°C]	225	223	230	236	248	234	229
Exhaust temperature after LWS - 3 elements less	[°C]	266	258	266	274	286	265	267
Additional required draught per bend of 90°	[Pa]	0.22	0.25	0.28	0.30	0.36	0.79	0.54
Additional required draught per bend of 45°	[Pa]	0.10	0.12	0.13	0.14	0.16	0.36	0.25
Additional required draught with LWS with (4 bends of 90°)	[Pa]	15.9	16.0	16.1	16.2	16.4	18.1	17.1
Additional required draught with LWS with (5 bends of 90°)	[Pa]	16.1	16.3	16.4	16.5	16.8	18.9	17.7
Additional required draught with LWS with (6 bends of 90°)	[Pa]	16.3	16.5	16.7	16.8	17.1	19.7	18.2
Additional required draught with LWS with (7 bends of 90°)	[Pa]	16.5	16.8	16.9	17.1	17.5	20.5	18.7
Additional required draught with LWS with (8 bends of 90°)	[Pa]	16.8	17.0	17.2	17.4	17.9	21.3	19.3
All values are based on arithmetic averagep.								

	SERA 55 F	SERA 78 F	TURMA H75	TURMA H75 DS	TURMA H80		TURMA H80 HL		TURMA H80 DS		TURMA H85	TURMA H85 HL	TURMA H85 DS	TURMA H80 XL	TURMA H80 XL HL	TURMA H80 XL DS
	Ø 180	Ø 180	Ø 180	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180
	420	430	370	370	476	504	476	504	543	547	456	456	521	469	469	469
	22.4	24.8	9.6	9.6	16.4	18.8	16.4	18.8	18.2	18.4	20.6	20.6	23.3	19.0	19.0	19.0
	15	15	15	15	15	15	15	15	16	15	15	15	15	15	15	15
	4.0	5.0	2.4	2.4	5.0	6.1	5.0	6.1	5.0	6.1	10.0	10.0	10.0	7.2	7.2	7.2
	4.0	5.0	2.8	2.8	5.5	7.1	5.5	7.1	5.8	5.8	6.5	6.5	7.3	6.6	6.6	6.6
	201	213	153	153	183	201	183	201	206	208	201	201	232	196	196	196
	22	24	16	16	19	21	19	21	21	21	21	21	24	20	20	20
	22.4	24.8	9.6	9.6	16.4	18.8	16.4	18.8	18.2	18.4	20.6	20.6	23.3	19.0	19.0	19.0
	161	171	--	--	--	146	--	146	--	145	155	155	174	147	147	147
	22	24	--	--	--	20	--	20	--	20	21	21	24	20	20	20
	22.4	24.8	--	--	--	18.8	--	18.8	--	18.4	20.6	20.6	23.3	19.0	19.0	19.0
	233	246	173	173	225	246	225	246	258	259	239	239	278	236	236	236
	23	24	16	16	19	21	19	21	22	21	22	22	24	21	21	21
	22.4	24.8	9.6	9.6	16.4	18.8	16.4	18.8	18.2	18.4	20.6	20.6	23.3	19.0	19.0	19.0
	11	12	7	7	10	11	10	11	11	11	11	11	12	11	11	11
	11.3	12.1	7.3	7.3	9.7	10.6	9.7	10.6	10.6	10.7	11.0	11.0	12.3	10.5	10.5	10.5
	272	295	179	179	248	272	248	272	272	272	272	272	295	272	272	272
	0.31	0.29	0.59	0.59	0.31	0.27	0.31	0.27	0.25	0.25	0.29	0.29	0.23	0.30	0.30	0.30
	1.23	1.45	1.66	1.66	1.73	1.95	1.73	1.95	1.47	1.44	1.90	1.90	1.67	2.00	2.00	2.00
	3.08	2.90	5.91	5.91	3.14	2.75	3.14	2.75	2.54	2.49	2.93	2.93	2.29	3.04	3.04	3.04
	12.32	14.52	16.56	16.56	17.29	19.50	17.29	19.50	14.74	14.42	19.03	19.03	16.71	20.04	20.04	20.04
	2.15	2.33	1.41	1.41	1.96	2.15	1.96	2.15	2.15	2.15	2.15	2.15	2.33	2.15	2.15	2.15
	173	171	173	173	165	163	165	163	162	164	169	169	174	162	162	162
	161	159	162	162	148	146	148	146	143	145	155	155	157	147	147	147
	150	148	153	153	132	131	132	131	125	127	142	142	142	133	133	133
	139	137	145	145	118	116	118	116	108	110	129	129	127	121	121	121
	187	184	185	185	183	182	183	182	183	185	184	184	192	178	178	178
	201	198	198	198	203	201	203	201	206	208	201	201	211	196	196	196
	216	213	213	213	225	223	225	223	231	232	219	219	232	215	215	215
	1.19	1.48	0.20	0.20	0.67	0.90	0.67	0.90	0.88	0.90	1.04	1.04	1.42	0.89	0.89	0.89
	0.55	0.68	0.09	0.09	0.31	0.41	0.31	0.41	0.40	0.41	0.48	0.48	0.65	0.41	0.41	0.41
	19.8	20.9	15.8	15.8	17.7	18.6	17.7	18.6	19.5	18.6	19.2	19.2	20.7	18.6	18.6	18.6
	21.0	22.4	16.0	16.0	18.4	19.5	18.4	19.5	20.4	19.5	20.2	20.2	22.1	19.5	19.5	19.5
	22.2	23.9	16.2	16.2	19.0	20.4	19.0	20.4	21.3	20.4	21.3	21.3	23.5	20.4	20.4	20.4
	23.4	25.4	16.4	16.4	19.7	21.3	19.7	21.3	22.2	21.3	22.3	22.3	24.9	21.3	21.3	21.3
	24.6	26.9	16.6	16.6	20.4	22.2	20.4	22.2	23.0	22.2	23.3	23.3	26.3	22.2	22.2	22.2

Dimensioning of LWS for LEDA heat storage stoves and fireplace inserts

LEDA Model/ Type		TURMA H85 XL	TURMA H85 XL HL	TURMA H85 XL DS	TURMA H80 W	TURMA H80 W HL	TURMA H80 W DS	TURMA H80 XL W	TURMA H80 XL W HL	
Flue gas spigot	[mm]	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	Ø 180	
Technical data of the insert										
Flue gas temperature in operation with heat storage flue	[°C]	546	546	587	355	335	335	273	273	
Flue gas mass flow with heat storage flue (g/s)	[g/s]	21.5	21.5	26.7	20.4	15.0	15.0	25.6	25.6	
Min. required draught for the operation (without heat storage flue)	[Pa]	15	15	15	15	15	15	15	15	
Fuel loading quantity, wood logs	[kg]	15.1	15.1	15.0	4.7	4.7	4.7	5.1	5.1	
Fuel consumption, wood logs	[kg/h]	7.7	7.7	9.9	5.7	5.2	5.2	6.4	6.4	
Flue gas triple value for the chimney calculation according to EN 13384 - with set 1 and 1.1										
Exhaust temperature after LWS set 1 / 1.1	[°C]	228	228	274	183	167	167	178	178	
Min. required draught for the operation with LWS Set 1 / 1.1, 6x 90° bends	[Pa]	23	23	28	21	18	18	23	23	
Flue gas mass flow	[g/s]	21.5	21.5	26.7	20.4	15.0	15.0	25.6	25.6	
Flue gas triple value for the chimney calculation according to EN 13384 - with set 2 and 2.1										
Flue gas exit temperature after LWS set 2 / 2.1	[°C]	166	166	206	156	147	147	167	167	
Min. required draught for the operation with LWS set 2/2.1, 6 x 90° bends	[Pa]	22	22	27	20	18	18	23	23	
Flue gas mass flow	[g/s]	21.5	21.5	26.7	20.4	15.0	15.0	25.6	25.6	
Flue gas triple value for the chimney calculation acc. to EN 13384 - with set 3										
Flue gas exit temperature after LWS Set 3	[°C]	278	278	326	205	185	185	187	187	
Min. required draught for the operation with LWS set 3, 6x 90° bends	[Pa]	23	23	28	21	18	18	23	23	
Flue gas mass flow	[g/s]	21.5	21.5	26.7	20.4	15.0	15.0	25.6	25.6	
Dimensioning for LWS custom made - semi-heavy structure										
Recommended number of LWS elements (25/25/25cm)	[element]	12	12	14	10	9	9	11	11	
Recommended number of LWS elements (25/25/25cm) precise	[element]	11.8	11.8	13.9	10.3	8.7	8.7	11.2	11.2	
Weight of the LWS (without 2nd shell)	[kg]	295	295	341	248	225	225	272	272	
Required heat-up time until basic heat is achieved	[approx. h]	0.23	0.23	0.19	0.42	0.58	0.58	0.65	0.65	
Required wood quantity until basic heat is achieved	[approx. kg]	1.78	1.78	1.93	2.38	3.00	3.00	4.19	4.19	
Required heating time to heat up (to 300 K)	[approx. h]	2.32	2.32	1.95	4.18	5.78	5.78	6.54	6.54	
Required wood quantity to heat up (to 300 K)	[approx. kg]	17.83	17.83	19.27	23.82	30.05	30.05	41.86	41.86	
Possible output over 8 hours (depending on the second shell)	[approx.kW]	2.33	2.,33	2.70	1.96	1.78	1.78	2.15	2.15	
Exhaust temperature after LWS (with recomm. number of LWS modules)	[°C]	166	166	168	173	167	167	171	171	
Exhaust temperature after LWS + 1 additional element	[°C]	148	148	150	164	160	160	167	167	
Exhaust temperature after LWS + 2 additional elements	[°C]	131	131	134	156	153	153	164	164	
Exhaust temperature after LWS + 3 additional elements	[°C]	115	115	118	148	147	147	161	161	
Exhaust temperature after LWS - 1 element less	[°C]	185	185	186	183	176	176	174	174	
Exhaust temperature after LWS - 2 elements less	[°C]	206	206	206	193	185	185	178	178	
Exhaust temperature after LWS - 3 elements less	[°C]	228	228	228	205	195	195	183	183	
Additional required draught per bend of 90°	[Pa]	1.23	1.23	1.97	0.93	0.48	0.48	1.34	1.34	
Additional required draught per bend of 45°	[Pa]	0.56	0.56	0.90	0.42	0.22	0.22	0.61	0.61	
Additional required draught with LWS with (4 bends of 90°)	[Pa]	19.9	19.9	22.9	18.7	16.9	16.9	20.3	20.3	
Additional required draught with LWS with (5 bends of 90°)	[Pa]	21.1	21.1	24.8	19.6	17.4	17.4	21.7	21.7	
Additional required draught with LWS with (6 bends of 90°)	[Pa]	22.4	22.4	26.8	20.6	17.9	17.9	23.0	23.0	
Additional required draught with LWS with (7 bends of 90°)	[Pa]	23.6	23.6	28.8	21.5	18.4	18.4	24.4	24.4	
Additional required draught with LWS with (8 bends of 90°)	[Pa]	24.8	24.8	30.7	22.4	18.9	18.9	25.7	25.7	
All values are based on arithmetic averagep.										

	TURMA H80 XL W DS	TURMA GS H80 XL	TURMA GS H80 XL HL	TURMA GS H80 XL DS	VIDA 55F	VIDA 68F	VIDA 78F	
	Ø 180	Ø 180	Ø 180	Ø 180	Ø 145	Ø 180	Ø 180	
	273	312	312	312	420	380	430	
	25.6	19.5	19.5	19.5	22.4	24.9	24.8	
	15	15	15	15	15	15	15	
	5.1	7.2	7.2	7.2	4.0	4.5	5.0	
	6.4	6.6	6.6	6.6	4.0	4.5	5.0	
	178	175	175	175	201	200	213	
	23	20	20	20	22	24	24	
	25.6	19.5	19.5	19.5	22.4	24.9	24.8	
	167	157	157	157	161	168	171	
	23	20	20	20	22	24	24	
	25.6	19.5	19.5	19.5	22.4	24.9	24.8	
	187	190	190	190	233	226	246	
	23	20	20	20	23	24	24	
	25.6	19.5	19.5	19.5	22.4	24.9	24.8	
	11	10	10	10	11	12	12	
	11.2	9.8	9.8	9.8	11.3	11.8	12.1	
	272	248	248	248	272	295	295	
	0.65	0.57	0.57	0.57	0.31	0.36	0.29	
	4.19	3.76	3.76	3.76	1.23	1.61	1.45	
	6.54	5.70	5.70	5.70	3.08	3.58	2.90	
	41.86	37.60	37.60	37.60	12.32	16.11	14.52	
	2.15	1.96	1.96	1.96	2.15	2.33	2.33	
	171	169	169	169	173	168	171	
	167	163	163	163	161	158	159	
	164	157	157	157	150	150	148	
	161	153	153	153	139	142	137	
	174	175	175	175	187	178	184	
	178	182	182	182	201	188	198	
	183	190	190	190	216	200	213	
	1.34	0.80	0.80	0.80	1.19	1.42	1.48	
	0.61	0.37	0.37	0.37	0.55	0.65	0.68	
	20.3	18.2	18.2	18.2	19.8	20.7	20.9	
	21.7	19.0	19.0	19.0	21.0	22.1	22.4	
	23.0	19.8	19.8	19.8	22.2	23.5	23.9	
	24.4	20.6	20.6	20.6	23.4	25.0	25.4	
	25.7	21.4	21.4	21.4	24.6	26.4	26.9	

Technical data of the LWS sets

		LWS Set 1	LWS Set 1.1	LWS Set 2	LWS Set 2.1	LWS Set 3
Numbere of elements	[pcp.]	9.0	9.5	12.0	12.5	7.5
Number of 90° bends	[pcp.]	6	6	6	6	6
Diameter of the flue conduct	[cm²]	277	277	277	277	277
Length of the flue conduct	[m]	2.4	2.5	3.2	3.3	1.9
Interior surface of the heat storage flue	[m²]	1.6	1.7	2.1	2.2	1.3
Weight of LWS (without 2. shell)	[appr. kg]	240	270	315	345	200
Required thermal input during heat-up time to achieve basic heat	[appr. kWh]	2.0	2.0	2.6	2.6	1.7
Required thermal input during heating time to heat up (to 300 K)	[appr. kWh]	19.6	19.6	25.6	25.6	16.3
Possible output over 8 hours (depending on the second shell)	[appr. kW]	3.0	3.0	3.9	3.9	2.5
Surface of the 2. shell consisting of 6 cm refractory board without clearance to the LWS	[approx. m²]	1.7	1.7	2.1	2.1	1.4
Surface of the 2nd shell consisting of 6 cm refractory board without clearance to the LWS	[appr. m²]	3.4	3.4	4.3	4.3	2.8
Required thermal input during heat-up time to achieve basic heat	[appr. kWh]	5.2	5.2	6.6	6.6	4.3
Required thermal input during heating time to heat up (to 300 K)	[appr. kWh]	36.8	36.8	60.2	60.2	30.7
Possible output over 8 hours with a second shell of 6 cm refractory board	[appr. kW]	3.2	3.2	4.1	4.1	2.6

Dimensioning of individually customised heat storage flue systems

with known exhaust mass flow and flue gas temperature at the spigot of the heat storage stove or fireplace insert operated as heat storage appliance.

With diagram 1 (on the following page) the appropriate number of LWS elements (25/25/25cm) corresponding to the flue gas output at the spigot can be defined. The average outlet temperature using the correct number of LWS elements should be approx. 180°C. If a higher or lower number of LWS elements installed, leads to a lower respectively higher average outlet temperature (see following table).

Average flue gas temperature after LWS

Exhaust temperature after LWS with the recommended number of elements (diagram)	[°C]	180
Exhaust temperature after LWS + 1 additional element	[°C]	166
Exhaust temperature after LWS + 2 additional elements	[°C]	154
Exhaust temperature after LWS + 3 additional elements	[°C]	145
Exhaust temperature after LWS - 1 element less	[°C]	208
Exhaust temperature after LWS - 2 elements less	[°C]	246
Exhaust temperature after LWS - 3 elements less	[°C]	298

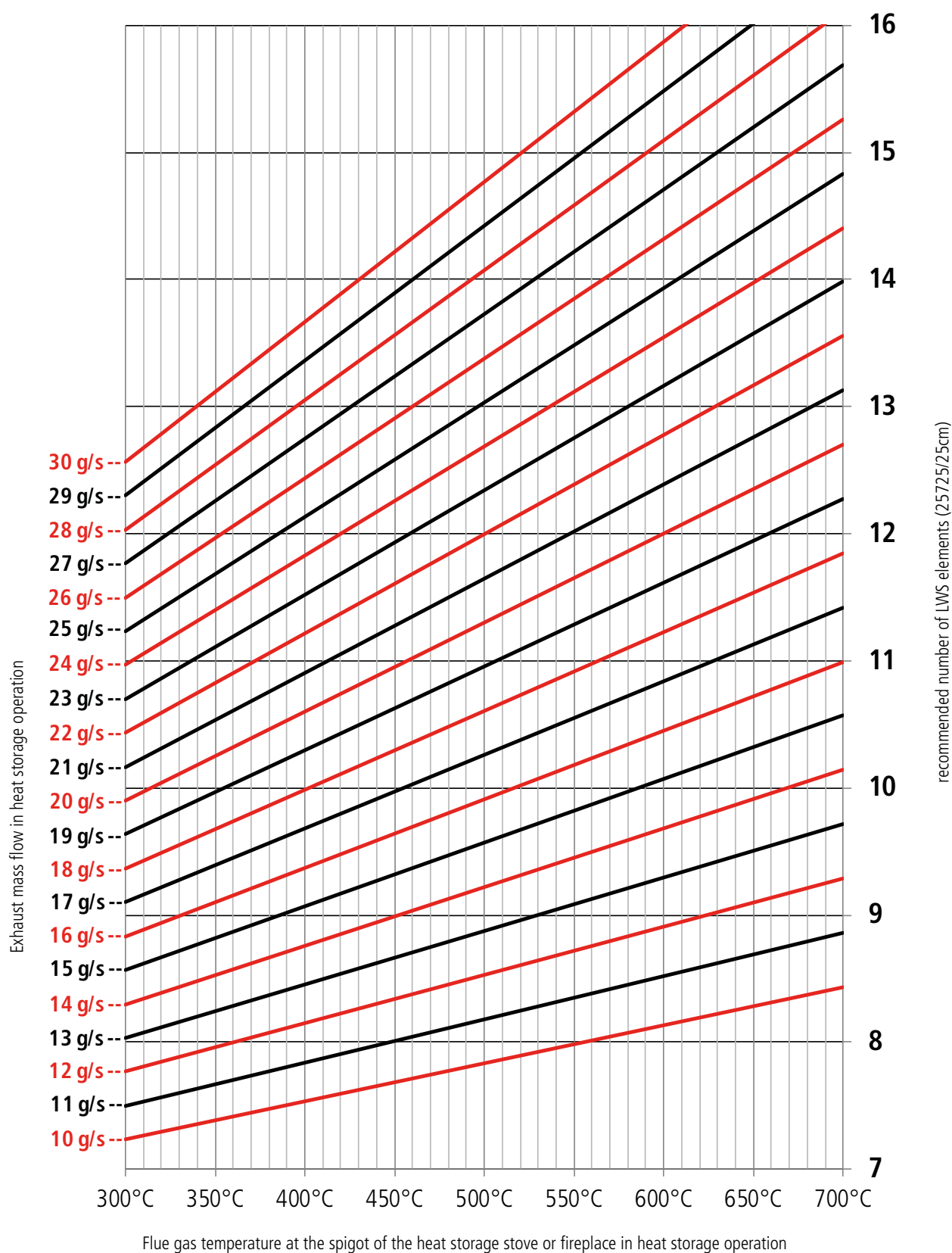
The outlet temperatures are in function of the inlet temperatures of the flue gas, the exhaust mass flow, i.e. the flue gas output at the spigot. - all information in the table are approximate. For more precise values see the documentation for the LWS and the further dimensioning diagrams and tablep.

The required draught for the complete heat storage system results mainly from the number of 45° or 90° bends installed, in function of the of flue gas output at the spigot (flue gas temperature and mass flow) described in diagram 2 and 3.

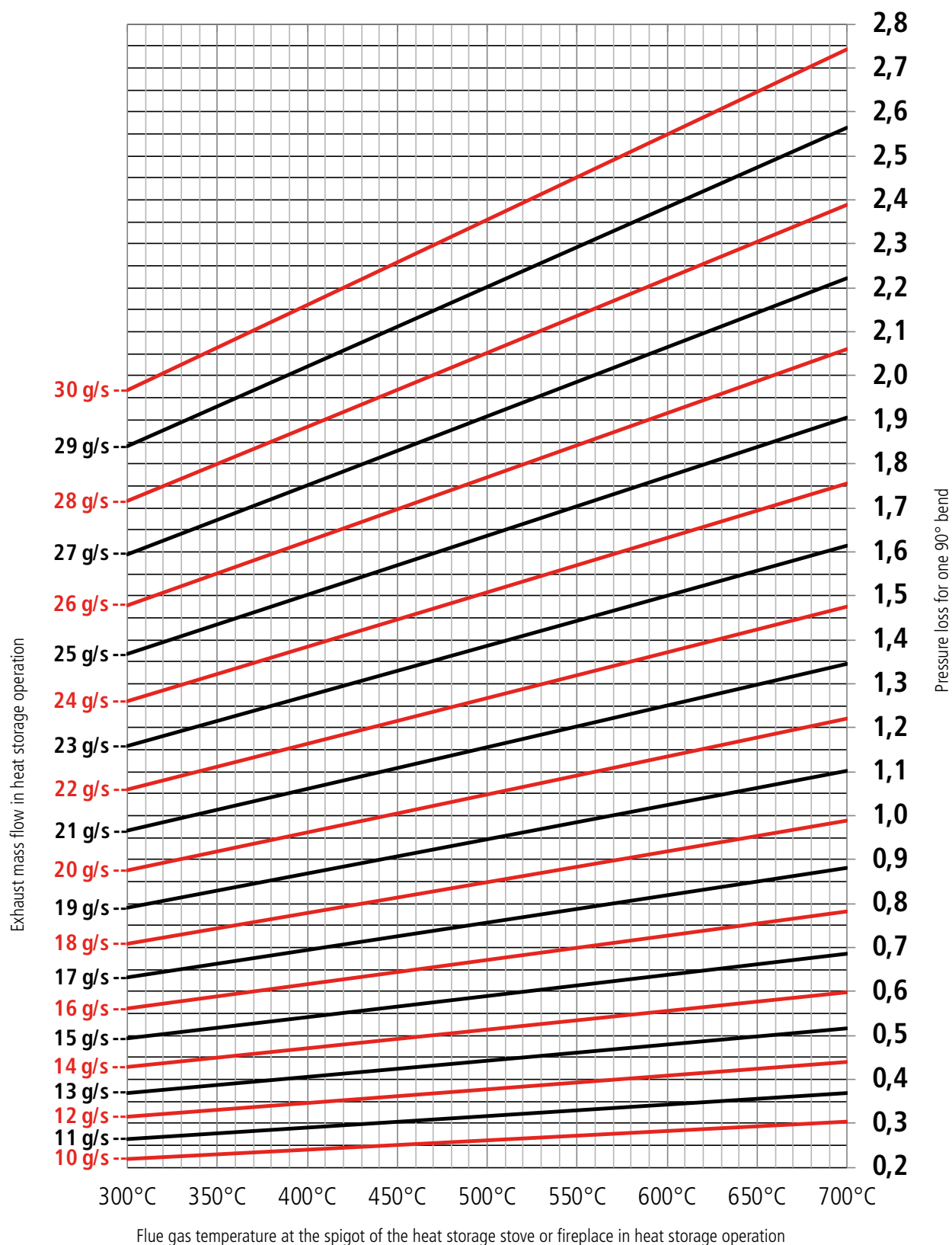
The pressure lost for the complete heat storage system corresponds to the total of the losses of each included in the calculation of the system.

The required draught for the heat storage stove or fireplace insert, operated as heat storage system has to be considered additionally (to the total draught losses of the LWS bends) for the chimney calculation (acc. EN 13384).

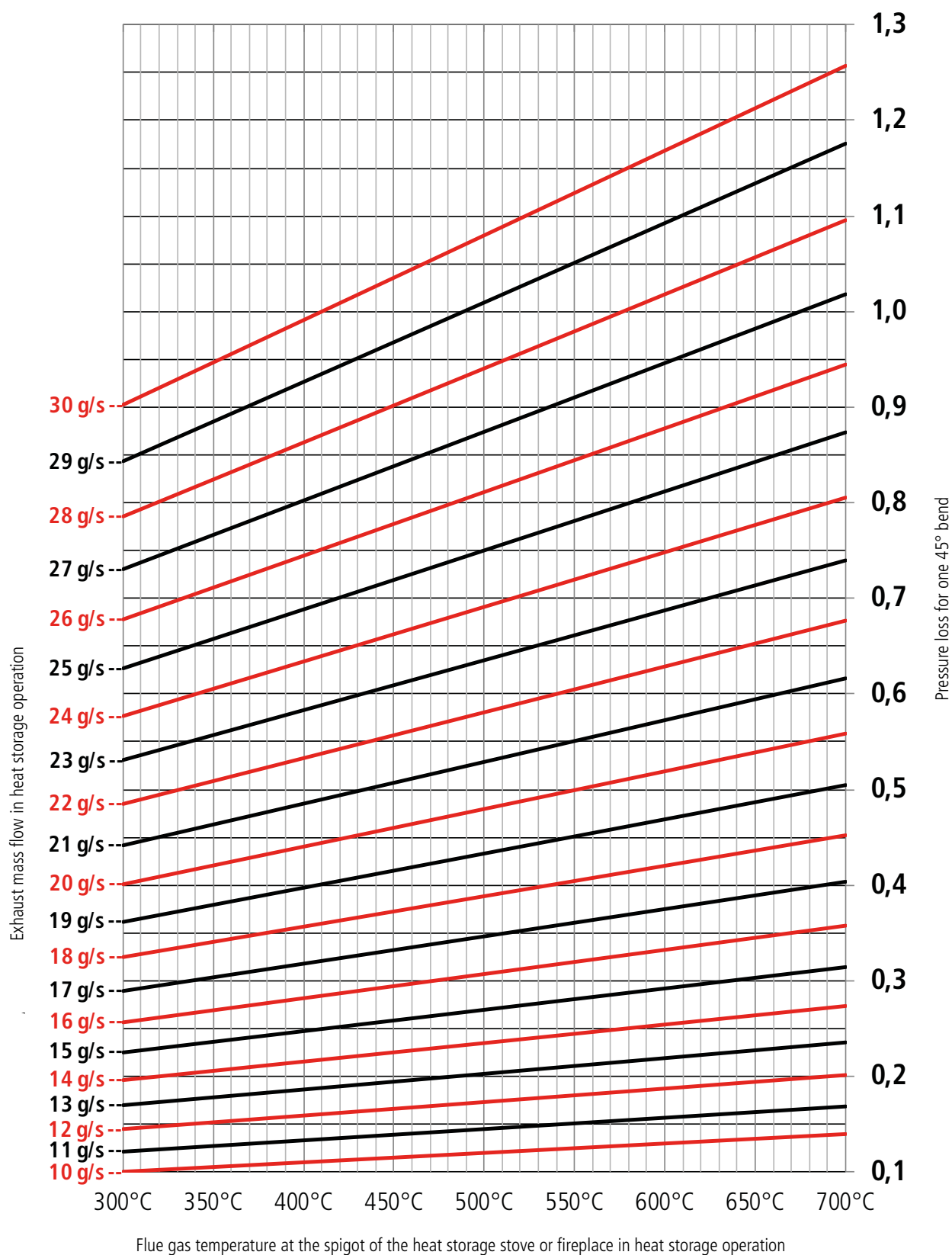
Number of LWS elements dependent on the flue gas output at the spigot
(depending on the flue gas temperature and the mass flow)



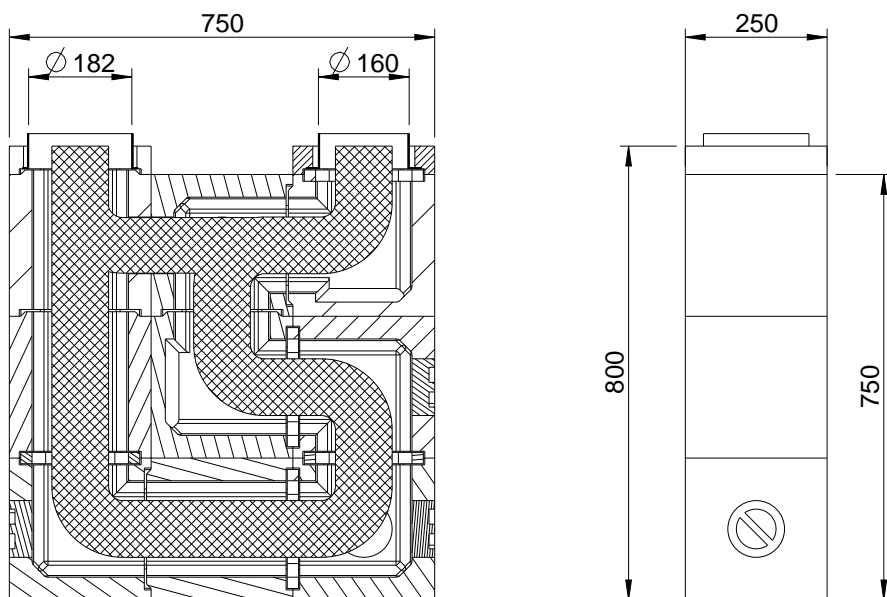
Pressure loss for one 90° bend of the LWS (90° bend or T-piece) dependent of the flue gas output at the spigot
(depending on the flue gas temperature and the mass flow)



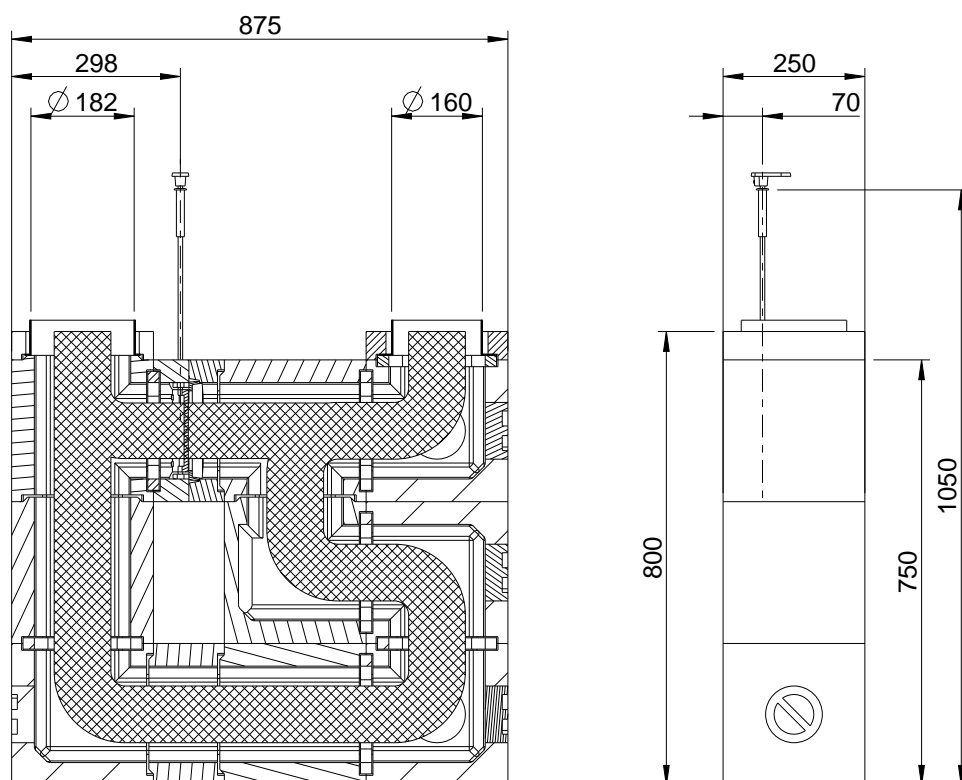
Pressure loss for one 45° bend of the LWS (45° bend or T-piece) dependent of the flue gas output at the spigot
(depending on the flue gas temperature and the mass flowm)



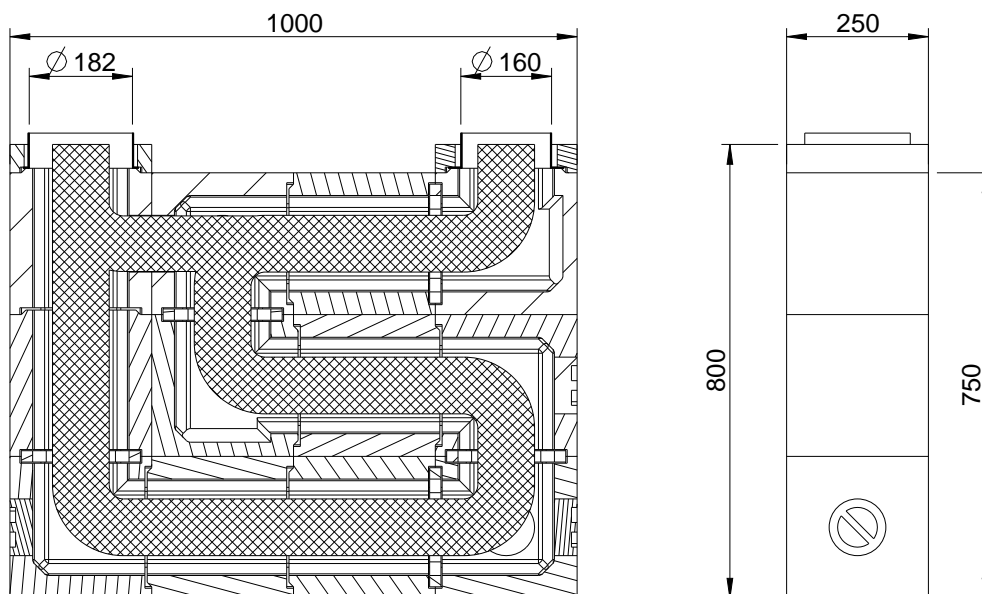
LWS Set 1 (1004-00952)



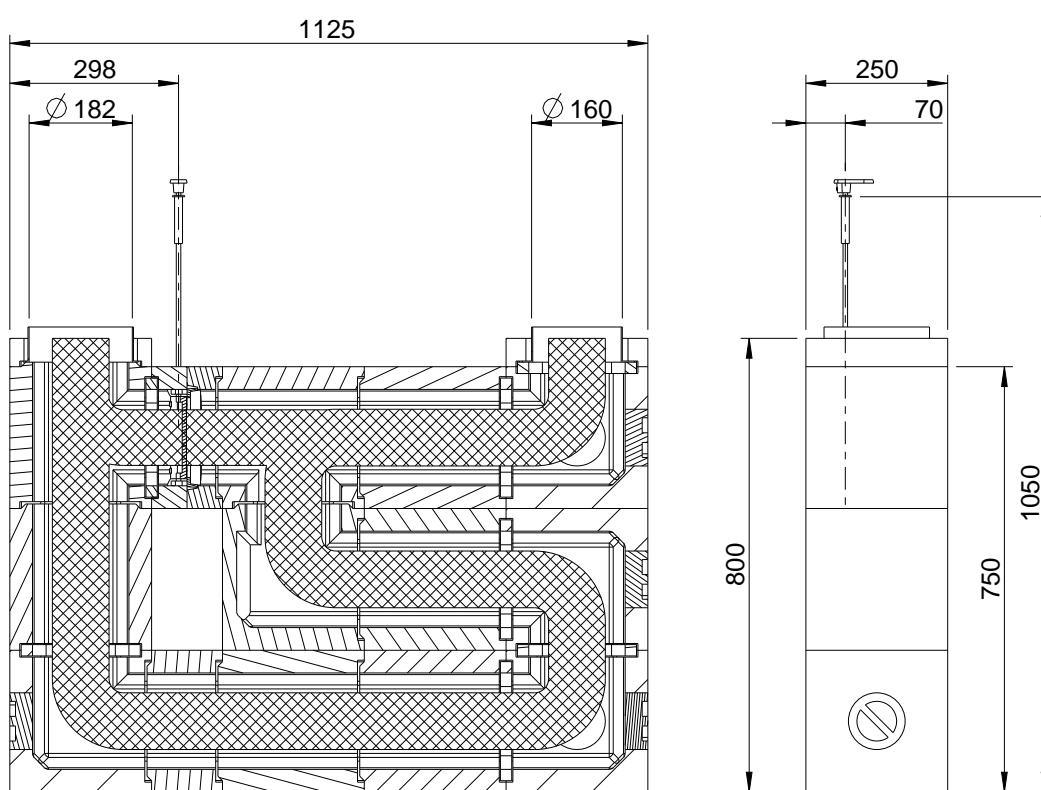
LWS Set 1.1 with heat-up damper (1004-00986)

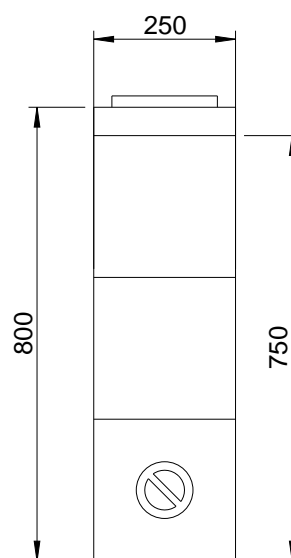
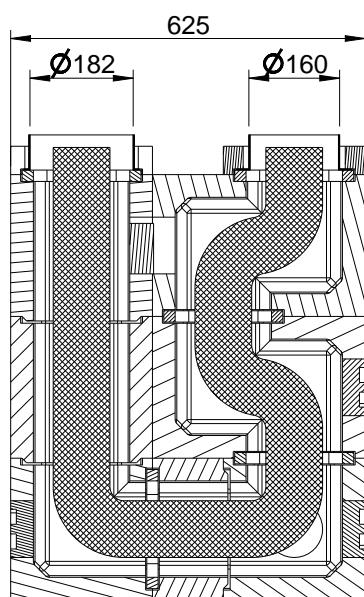


LWS Set 2 (1004-00953)



LWS Set 2.1 with heat-up damper (1004-00987)






GSA

Connection kit f + cast iron rings
+ chamotte heat storage inlay
(sectional view)

LAVA N with GSA

(1004-00283)


Start-up

Low resistance


Heating phase

High heat transmission rate

GSA

Cast iron top mounted heat exchanger

Twin wall heat storage module system for heat storage stoves with a high quality refractory inlay and outer jacket fo cast iron. Through the cast iron casing of the GSA a durable leak tightness of the top mounted heat exchanger is secured. The twin-wall construction complies with regulations of the German Association of Tiled Stove and Hot-Air Heating System Builders for heat storage flueup.

The heat storage appliance is characterized by a very high heat storage capacity and heat transfer capability. The special hot gas guidance in the interior of the GSA provides an optimum heat transfer from the Flue gas to the not storage areas influencing negatively the flow proprieties.

Product benefits at a glance:

- Twin wall heat storage module system for heat storage stoves/fire-places:
 - 3 to 6 rings with heat storage inlay attachable
 - adapter plates (top and bottom)
- Suitable for the following LEDA fireplace inserts: LAVA N, VIDA, SERA 55/ 78 F/ DS
- Excentric bottom adapter plate enables flexible installation:
 - front, nearly flush to the rear wall, for space-saving installation
 - rear, flush front installation
- Endurable leak tightness
- Safe operation
- Easy lightning
- Easy fitting
- Each ring can easily placed on to top of the other and sealed with ceramic sealing cord or stove putty.
- The refractory inlays can be placed dry without mortar.
- Upper and bottom plates to be screwed
- Complies with technical regulations without extra cladding

Ident-No.	Description	€	
1004-00283	GSA connectiion kit for LAVA N	290.00	
1004-00837	GSA connection kit for SERA 55/ 78, VIDA, TURMA/ TURMA XL	280.00	
Essential accessories		€	
1004-00282	GSA Cast iron ring with chamotte heat storage inlay	250.00	
Optional accessories		€	
1004-00310	MFS Multi-functional flue gas connector Double flue gas outlet with cleaning cover	300.00	

¹ for weight reasons, the steel feet must always be assembled

² for weight reasons, the cast iron foot must always be assembled additionally

Scope of delivery of the GSA connection kits

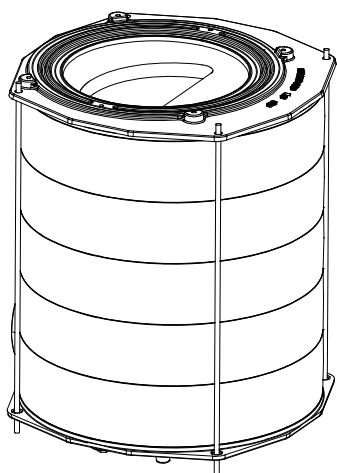
Upper connection adapter, bottom connection adapter, accessories bag, 4 threaded rods, cast iron base, installation manual

Scope of delivery: Cast iron (top mounted) ring

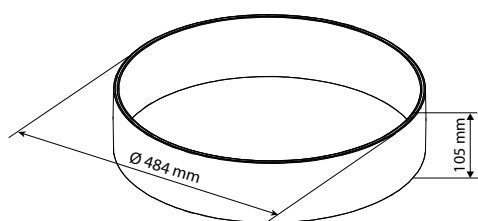
Cast iron casing, refractory heat storage inlay

GSA Set (1004-00283/ 1004-00837)

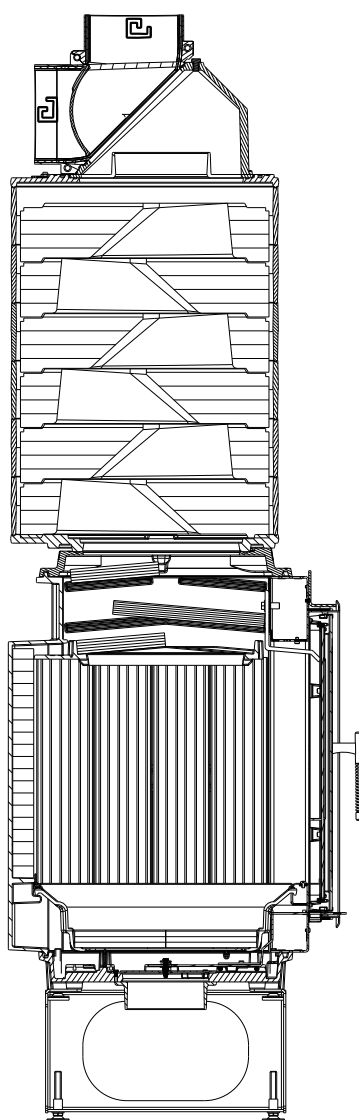
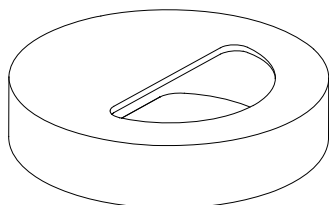
Assembly example: TURMA with GSA




GSA Cast iron ring (1004-00282 part 1 of 2)




GSA Refractory heat storage inlay 1004-00828 part 2 of 2)



Dimensions, weight and miscellaneous		
Weight per GSA cast iron ring	[kg]	10
Weight per GSA refractory heat storage inlay	[kg]	20.5
Weight per GSA ring plus refractory inlay	[kg]	30.5
Height of GSA Ring	approx. [cm]	10.5
Diameter outside	approx. [cm]	49
Heat storage capacity of each GSA ring (at medium temp.=300K)	[kWh]	2.4
Required draught per GSA ring (depending on the Flue gas volume flow of each appliance)	[Pa]	0.2 ... 2.1
Total height of the GSA exchanger incl. top an bottom adapter plate (plus height of the fireplace insert)		
GSA with 3 rings	approx. [cm]	35
GSA with 4 rings	approx. [cm]	45
GSA with 5 rings	approx. [cm]	56
GSA with 6 rings	approx. [cm]	66

Fireplace insert type LAVA		LAVA N
front type		straight or rounded shape
Use of LEDA GSA		
possible number of cast rings with heat storage inlay		3 to 6
Min. required draught for the operation with LAVA with 3 heat storage inlays	[Pa]	17
Min. required draught for the operation with LAVA with 4 heat storage inlays	[Pa]	18
Min. required draught for the operation with LAVA with 5 heat storage inlays	[Pa]	19
Min. required draught for the operation with LAVA with 6 heat storage inlays	[Pa]	20
Weight of LAVA with 3 heat storage inlays	approx. [kg]	282
Weight of LAVA with 4 heat storage inlays	approx. [kg]	314
Weight of LAVA with 5 heat storage inlays	approx. [kg]	346
Weight of LAVA with 6 heat storage inlays	approx. [kg]	378
<div> Operation with GSA is only possible with LAVA N - be sure to refer to the assembly instructions for LAVA heating fireplace insert. Devices with water technology LAVA W and the LAVA D can only be connected directly.</div>		

Fireplace insert type SERA		F		DS	
Wide		55	78	55	78
Use of LEDA GSA					
possible number of cast rings with heat storage inlay		4	4	3	3
Min. required draught for the operation with SERA with 3 heat storage inlays	[Pa]	17	17	17	17
Min. required draught for the operation with SERA with 4 heat storage inlays	[Pa]	25	25	--	--
Weight of SERA with 3 heat storage inlays	approx. [kg]	352	402	342	387
Weight of SERA with 4 heat storage inlays	approx. [kg]	384	434	--	--

Fireplace insert type VIDA		front type		F		DS	
Wide		55	68	78	55	68	78
Use of LEDA GSA							
possible number of cast rings with heat storage inlay		4	4	4	3	3	3
Min. required draught for the operation with VIDA with 3 heat storage inlays	[Pa]	17	17	17	17	17	17
Min. required draught for the operation with VIDA with 4 heat storage inlays	[Pa]	18	18	18	--	--	--
Weight of VIDA with 3 heat storage inlays	approx. [kg]	342	417	387	332	417	372
Weight of VIDA with 4 heat storage inlays	approx. [kg]	373	448	418	--	--	--
<div> Operation with GSA is only possible with VIDA units without water technology - be sure to refer to the VIDA heating fireplace insert assembly instructions. Devices with VIDA W water technology can only be connected directly.</div>							

Tiled stove insert type TURMA H80 (except XL)		H80		H80 HL		H80 DS	
spigot diameter		Ø 145	Ø 180	Ø 145	Ø 180	Ø 145	Ø 180
Use of LEDA GSA							
possible number of cast rings with heat storage inlay		3 to 6					
Min. required draught for the operation with TURMA with 3 heat storage inlays	[Pa]	17	17	17	17	17	17
Min. required draught for the operation with TURMA with 4 heat storage inlays	[Pa]	18	18	18	18	18	18
Min. required draught for the operation with TURMA with 5 heat storage inlays	[Pa]	19	19	19	19	19	19
Min. required draught for the operation with TURMA with 6 heat storage inlays	[Pa]	20	20	20	20	20	20
Weight of TURMA with 3 heat storage inlays	approx. [kg]	389	389	400	400	349	349
Weight of TURMA with 4 heat storage inlays	approx. [kg]	421	421	432	432	381	381
Weight of TURMA with 5 heat storage inlays	approx. [kg]	453	453	464	464	413	413
Weight of TURMA with 6 heat storage inlays	approx. [kg]	485	485	496	496	445	445

Tiled stove insert type TURMA H85 (except XL)		H85		H85 HL		H85 DS	
Use of LEDA GSA							
possible number of cast rings with heat storage inlay		3 to 6					
Min. required draught for the operation with TURMA with 3 heat storage inlays	[Pa]	17		17		17	
Min. required draught for the operation with TURMA with 4 heat storage inlays	[Pa]	15		15		15	
Min. required draught for the operation with TURMA with 5 heat storage inlays	[Pa]	19		19		19	
Min. required draught for the operation with TURMA with 6 heat storage inlays	[Pa]	20		20		20	
Weight of TURMA with 3 heat storage inlays	approx. [kg]	389		400		349	
Weight of TURMA with 4 heat storage inlays	approx. [kg]	421		432		381	
Weight of TURMA with 5 heat storage inlays	approx. [kg]	453		464		413	
Weight of TURMA with 6 heat storage inlays	approx. [kg]	485		496		445	


GSK

Cast iron heat exchanger box

Assembly example

RUBIN K17 with GSK


Soap stone core in the GSK

Top view through the spigot

GSK

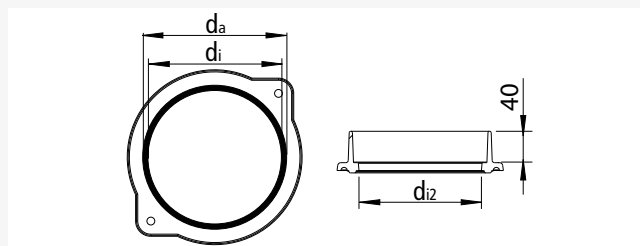
Cast iron heat exchanger box

High quality cast iron heat exchanger box with soap stone inlay as additional metallic heat exchanger for tiled stoves and fireplace insertp.

Product benefits at a glance

- Prolonged heat emission of approx. 3 hours more (in comparison with other standard cast iron heat exchanger)
- better heat efficiency
- fast heat emission over the cast iron outside surfaces (in comparison with ceramic heat storage flues)
- less chimney heat losses
- applicable with
 - all tiled stove models without water technology
 - and appropriated fireplace inserts (i): FINA, LAVA N, SERA 55/ 78 F, VIDA F

i: only in combination with MFS 1004-00311 (except for FINA)



Cast iron spigot

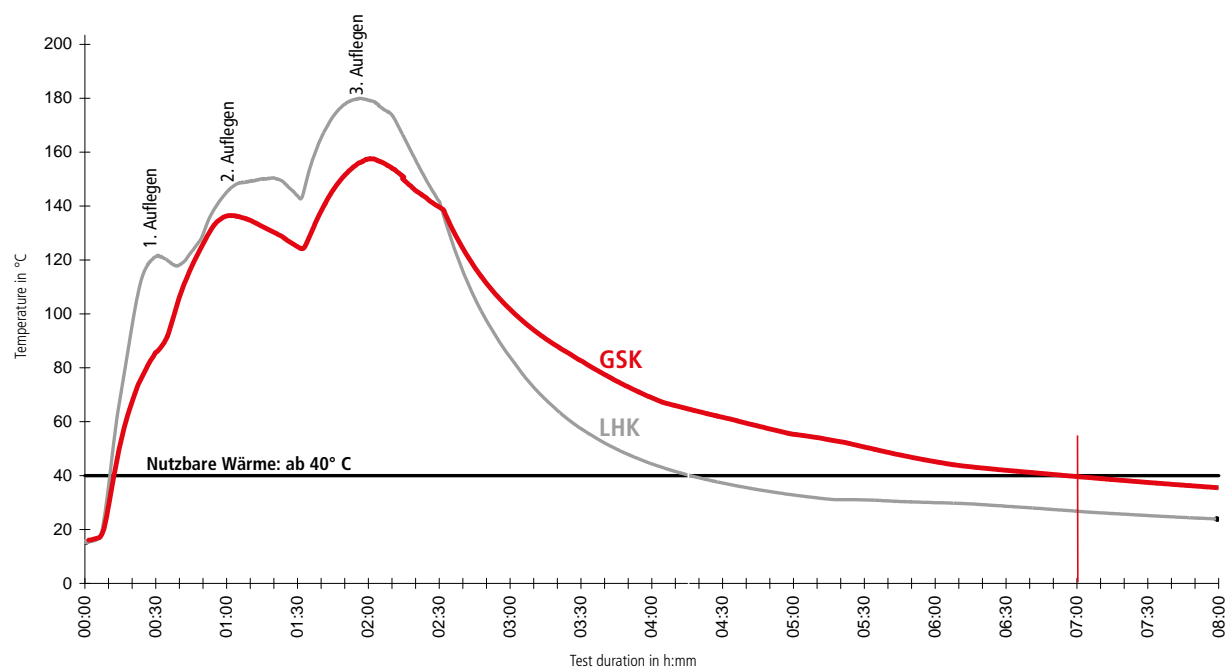
Dimensions

Ident-No.	Description - without spigot	€	i
1003-01494	GSK Cast iron heat exchanger box	810.00	
Essential accessory - Spigot has to be ordered separately!		€	i
1004-01262	Cast iron inlet spigot, collar diameter, Ø 130 mm/ outlet, Ø 145 mm, d _i 127 mm/ d _a 145 mm	50.00	
1004-00778	Cast iron inlet spigot, collar diameter, Ø 145 mm/ outlet, Ø 160 mm, d _i 147 mm/ d _{i2} 143 mm/ d _a 157 mm	50.00	
1004-00779	Cast iron inlet spigot, collar diameter, Ø 168 mm, d _i 171 mm/ d _{i2} 165 mm/ d _a 181 mm	50.00	
1004-00780	Cast iron outlet spigot, collar diameter, Ø 180 mm, d _i 167 mm/ d _{i2} 167 mm/ d _a 177 mm	50.00	
1004-00781	Cast iron inlet spigot, collar diameter, Ø 180 mm, d _i 178 mm/ d _{i2} 164 mm/ d _a 188 mm	50.00	
Optional accessory		€	i
1004-00183	Set adjustable feet, 4 pc.	130.00	

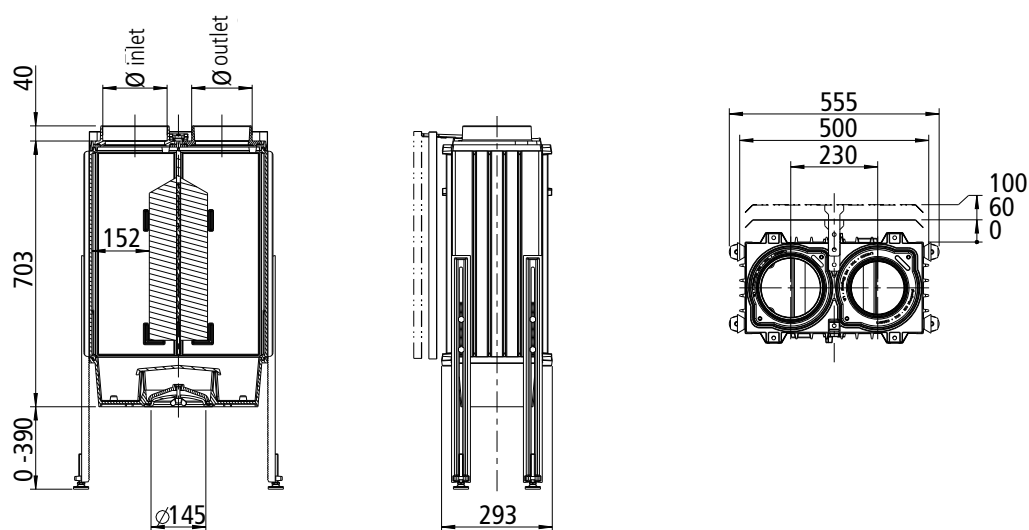
Scope of delivery

GSK Cast iron heat exchanger box, soap stone inlay and radiation shield

Comparison chart of the surface temperatures GSK / LHK



GSK




LHK 695

Cast iron heat exchanger box
Height: 695 mm

LHK 745

Cast iron heat exchanger box
Height: 745 mm


LHK 320

Cast iron heat exchanger box with control
Height: 655 mm

LHK

Cast iron heat exchanger box

High quality cast iron heat exchanger box (without inlay) as additional metallic heat exchanger for tiled stoves and fireplace insertp.

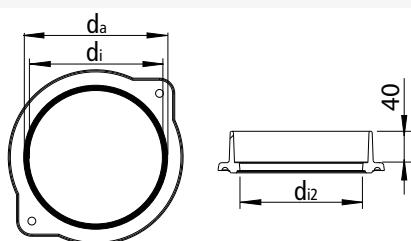
Models:

- LHK 320 including adjustable feet and start-up damper with bowden cable control
- LHK 695 (ideal complement to RUBIN und DIAMANT H10)
- LHK 745 (ideal complement to RUBIN und DIAMANT H10)

Product benefits at a glance

- Quick convection heat emission over the cast iron surfaces (in comparison with ceramic heat storage flues)
- applicable with
 - all tiled stove models without water technology (i)
 - and appropriated fireplace inserts (i): FINA, LAVA N, SERA 55/ 78 F, VIDA F.

i: BRILLANT W can be combined with LHK 320


Cast iron spigot

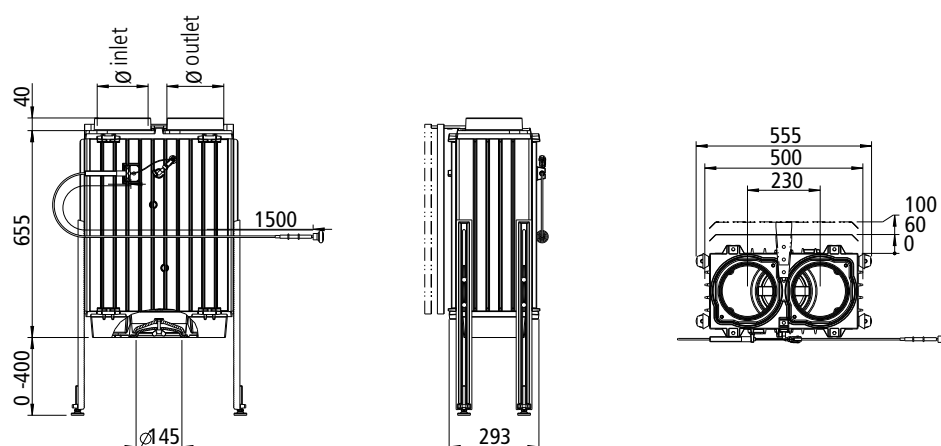
Dimensions

Scope of delivery

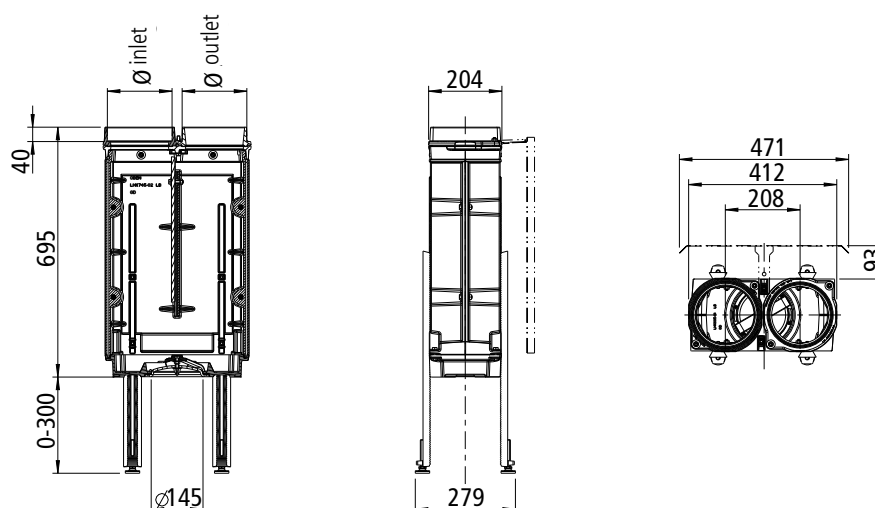
- LHK 695 Cast iron heat exchanger box
- LHK 745 Cast iron heat exchanger box
- LHK 320 cast iron heat exchanger box, radiation plate , adjustable feet, heat-up damper with bowdencable control

Ident-No.	Description - without spigot	€	i
LHK			
1003-00561	LHK 320 cast iron heat exchanger box, approx. 92 kg	1210.00	
1003-01832	LHK 695 cast iron heat exchanger box, approx. 62 kg	530.00	
1003-01722	LHK 745 cast iron heat exchanger box, approx. 66 kg	540.00	
Essential accessory - Spigot has to be ordered separately!		€	i
1004-01262	Cast iron inlet spigot, collar diameter, Ø 130 mm/ outlet, Ø 145 mm, d _i 127 mm/ d _a 145 mm	50.00	
1004-00778	Cast iron inlet spigot, collar diameter, Ø 145 mm/ outlet, Ø 160 mm, d _i 147 mm/ d _{i2} 143 mm/ d _a 157 mm	50.00	
1004-00779	Cast iron inlet spigot, collar diameter, Ø 168 mm, d _i 171 mm/ d _{i2} 165 mm/ d _a 181 mm	50.00	
1004-00780	Cast iron outlet spigot, collar diameter, Ø 180 mm, d _i 167 mm/ d _{i2} 167 mm/ d _a 177 mm	50.00	
1004-00781	Cast iron inlet spigot, collar diameter, Ø 180 mm, d _i 178 mm/ d _{i2} 164 mm/ d _a 188 mm	50.00	
Optional accessory		€	i
1004-00183	Adjustable feet set, 4 pcp.	130.00	
1004-00182	Radiation plate LHK 695/ 745	70.00	

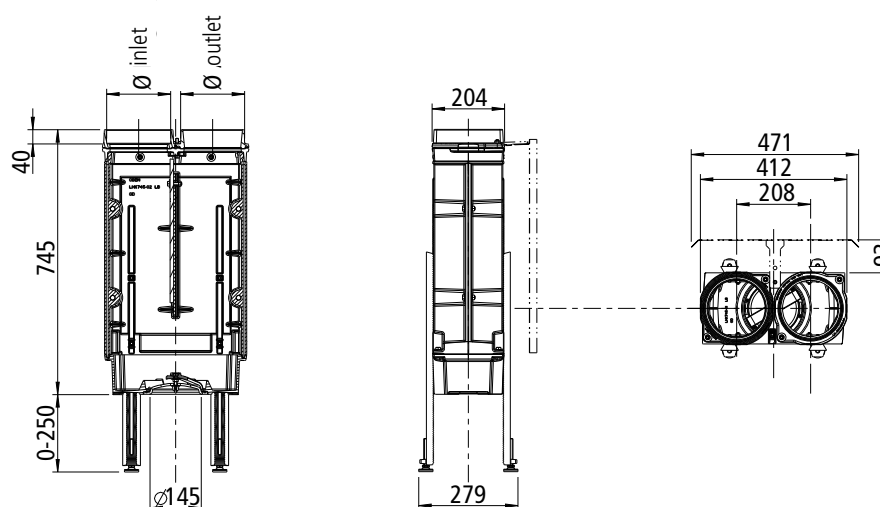
LHK 320



LHK 695



LHK 745

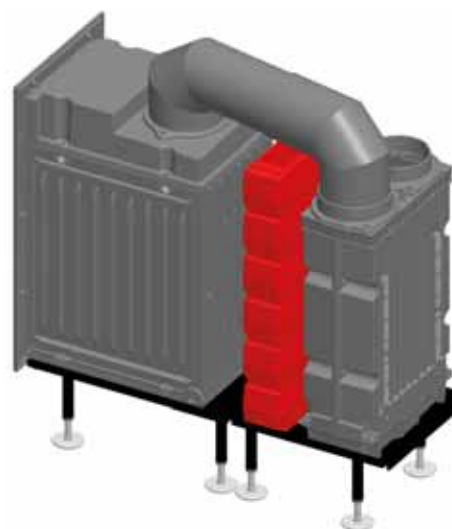




LSB Cast iron heat storage block
Single element (stackable) (1004-00988)



LSB Heat storage blocks
stacked



Application example

Tiled stove with LHK and 6 LSB cast iron heat storage blocks in an unexploited gap


LSB

Cast iron heat storage block

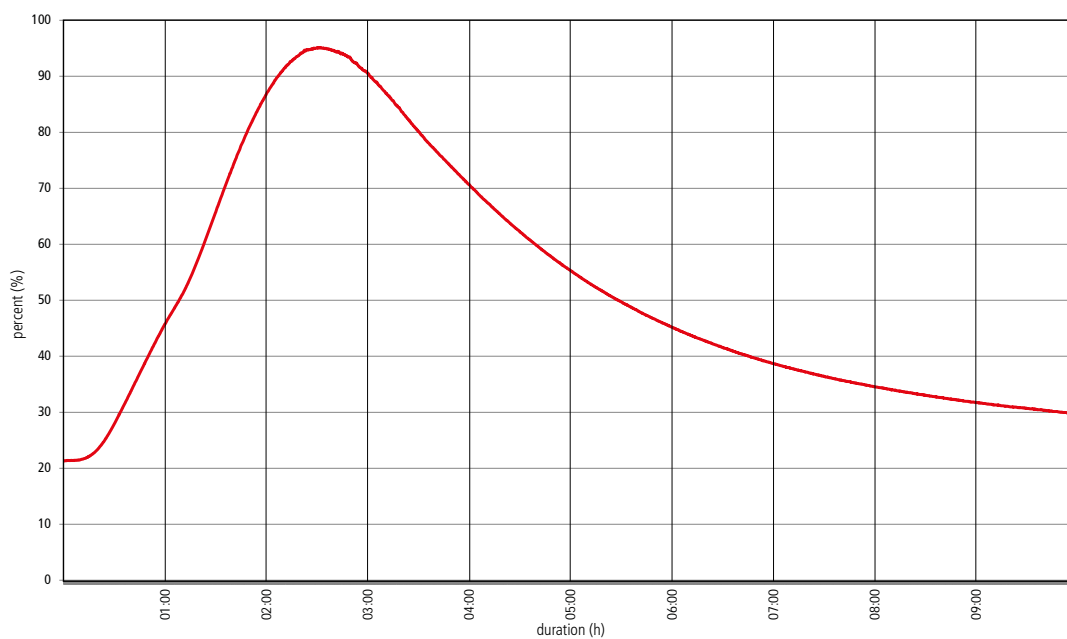
Additional, high quality accumulator for the convection space between the tiled stove insert and the heat storage box, consisting of approx. 20 kg cast iron each element which provides approx. 3 to 5 hours prolonged and effective heat emission.

Product benefits at a glance

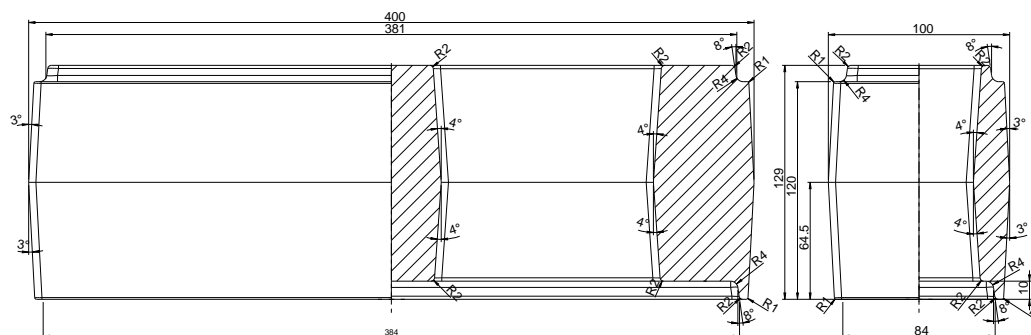
- Stackable cast iron heat storage elements with internal convection air guidance
- useful utilisation of free space between the tiled stove insert and the heat exchange box
- assumes the function as radiation plate

Ident-No.	Description	€	
1004-00988	LSB Cast iron heat storage block, 1 element	100.00	

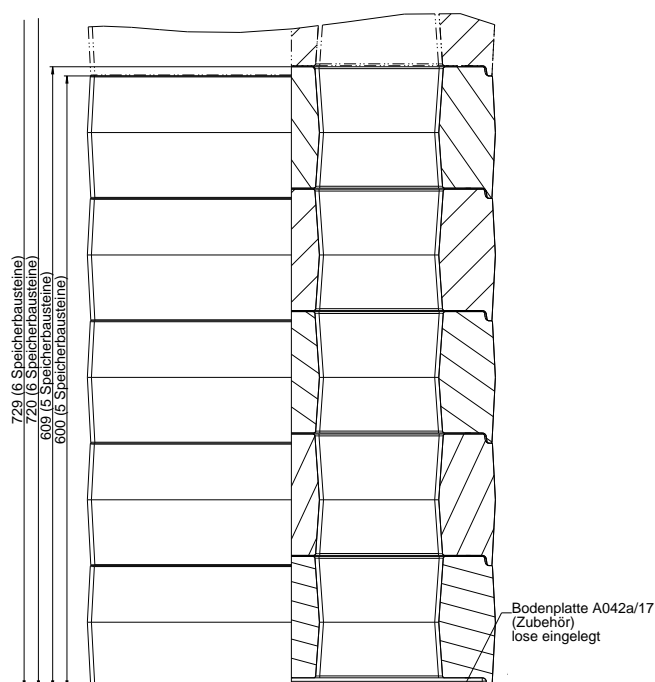
Heat emission from the LSB

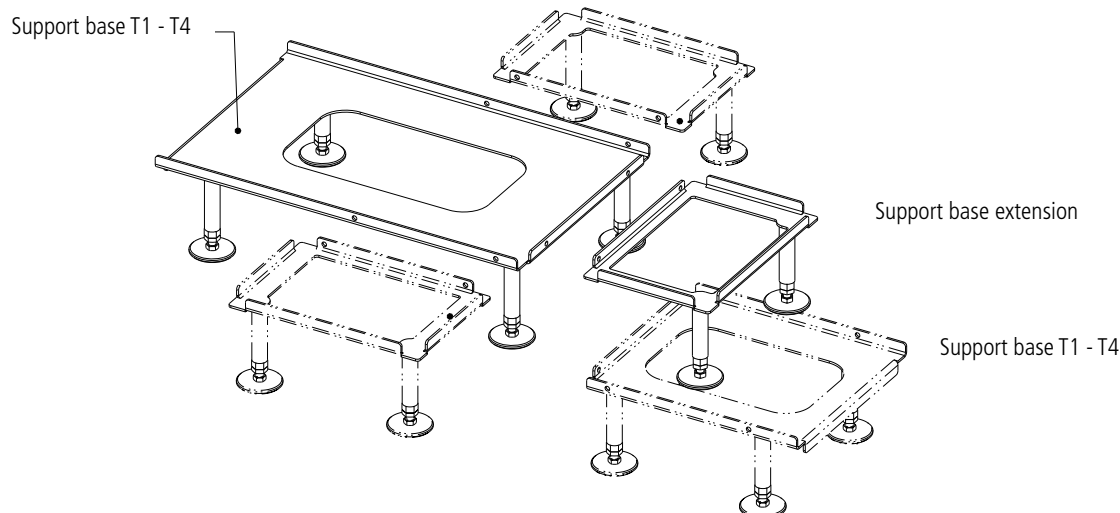


LSB Cast iron heat storage block (1004-00988)



LSB Cast iron heat storage blocks, stacked





Support base

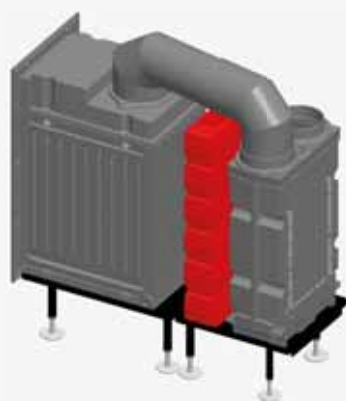
Application and combination possibilities of the Support base T1-T4 and extension

Support base

High-quality, functional support base for tiled stove inserts of different dimensions




Product benefits at a glance

- Material: steel
- Adjustable height up to 10 cm
- Rubber coated adjustable feet enable a precise positioning without shifting
- The folded edges serve to position the insert accurately without overhanging.



Application example

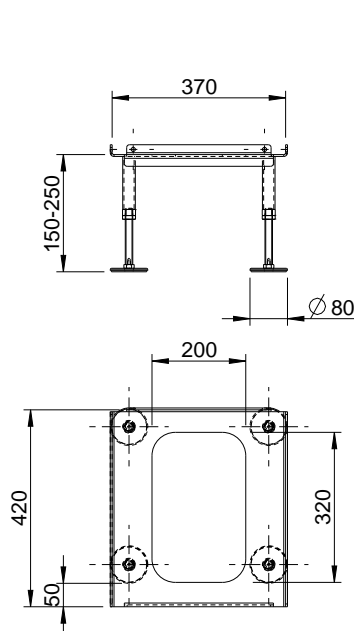
Tiled stove insert with LHK and 6 LSB Cast iron heat storage blocks on 2 support base

Ident-No.	Description	€	
1004-00992	Support base T1 for RUBIN K15 / K16 / K17, 7,0 kg	240.00	
1004-00993	Support base T2 for RUBIN K18, DIAMANT H10, TURMA H75 and JUWEL H1, 8,6 kg	240.00	
1004-00994	Support base T3 for RUBIN K20, BRILLANT H2, DIAMANT H100 W, RUBIN K21, TURMA/ TURMA W, 9,3 kg	250.00	
1004-00995	Support base T4 for RUBIN K19, DIAMANT H13/ H20, BRILLANT H4, GOURM. H71, DIAM. H200/300 W, TURMA XL, 12,5 kg	260.00	
Optional accessory		€	
1004-00996	Support base extension	160.00	

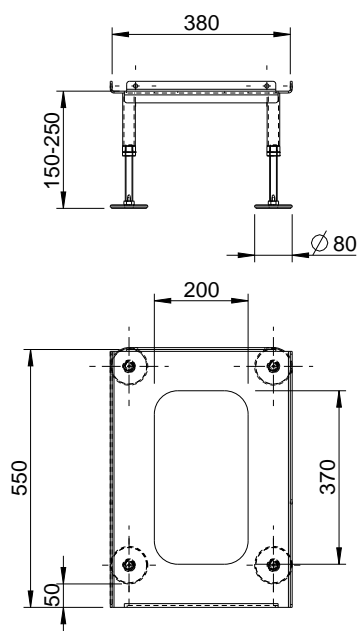


Support base

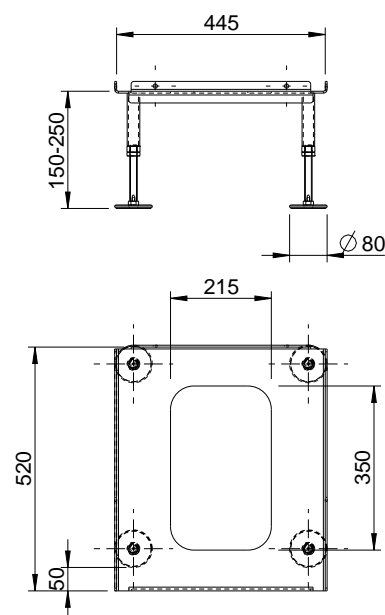
with extension (1004-00992 + 1004-00996)

Support base T1 (1004-00992)


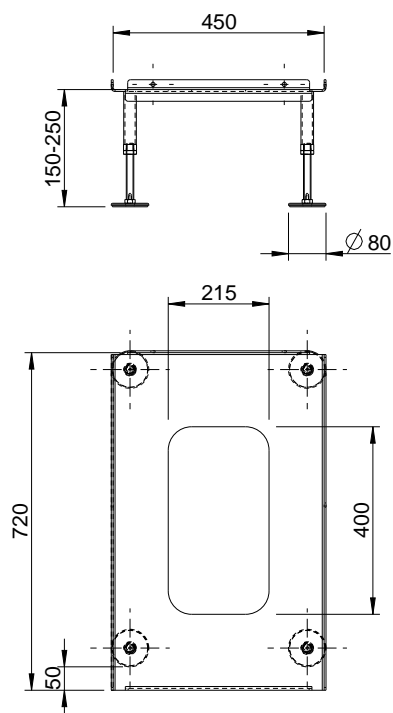
for RUBIN K15/K16/ K17

Support base T2 (1004-00993)


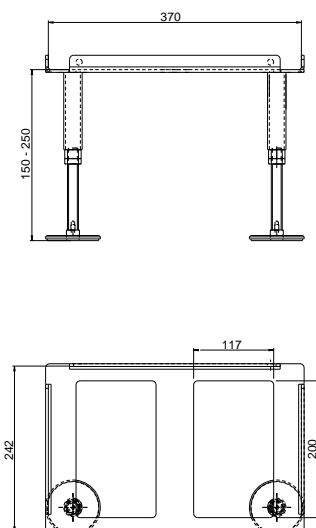
for RUBIN K18, DIAMANT H10, TURMA H75,
JUWEL H1

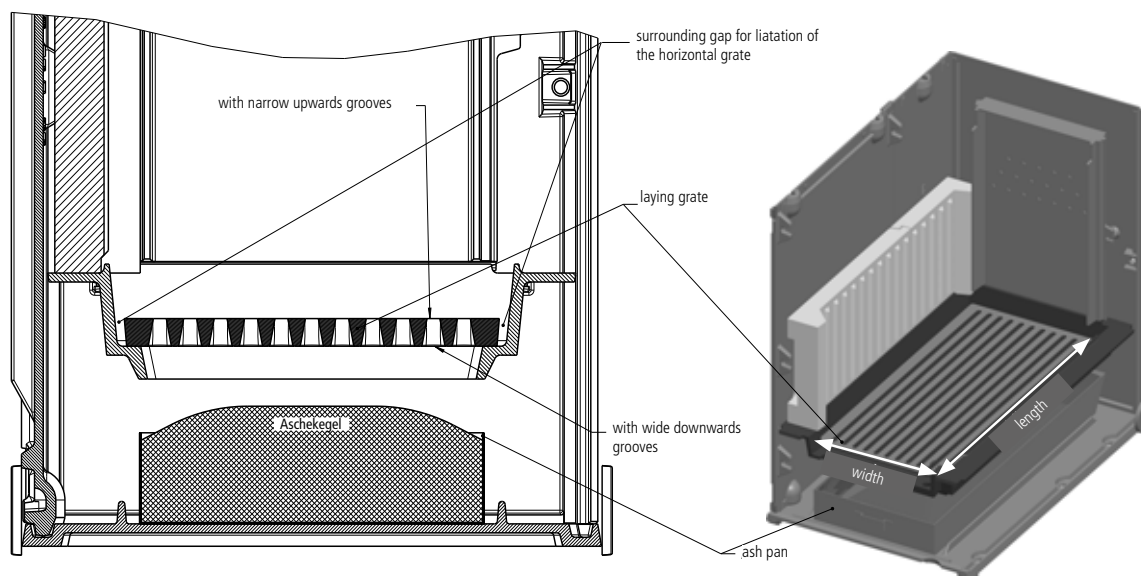
Support base T3 (1004-00994)


for RUBIN K20, BRILLANT H2, DIAMANT H100 W

Support base T4 (1004-00995)


for RUBIN K19, DIAMANT H13, BRILLANT H4,
GOURMET H71 und DIAMANT H200 W/ H300 W

Support base extension (1004-00996)




Installation and usage instructions

see infobox

Miscellaneous

Ident-No.	Description	€	
Cast iron round grates			
1000-01256	Cast iron round grate, Ø 18 cm	30.00	
1000-02187	Cast iron round grate, Ø 20 cm	30.00	
1000-02657	Cast iron round grate, Ø 22 cm	40.00	
1000-02869	Cast iron round grate, Ø 24 cm	50.00	
1000-02934	Cast iron round grate, Ø 26 cm	50.00	
Grate bars			
1000-02188	Cast iron grate bar, 31 cm	20.00	
1000-01903	Cast iron grate bar, 34 cm	20.00	
1000-00377	Cast iron grate bar, 36 cm	30.00	
1000-01415	Cast iron grate bar, 41 cm	30.00	
1000-01228	Cast iron grate bar, 43 cm	30.00	
1000-02660	Cast iron grate bar, 46 cm	30.00	
1000-01155	Cast iron grate bar, 50 cm	30.00	

Ident-No.	Description	€	
Cast iron horizontal grates (length x width)			
1000-01370	Cast iron horizontal grate, 20 x 14 cm	20.00	
1000-11780	Cast iron horizontal grate, 22 x 15 cm	30.00	
1000-02866	Cast iron horizontal grate, 20 x 16 cm	30.00	
1000-02185	Cast iron horizontal grate, 22 x 14 cm	30.00	
1000-01364	Cast iron horizontal grate, 22 x 16 cm	30.00	
1000-02184	Cast iron horizontal grate, 22 x 18 cm	30.00	
1000-11781	Cast iron horizontal grate, 22 x 19 cm	30.00	
1000-11782	Cast iron horizontal grate, 22 x 22 cm	40.00	
1000-02183	Cast iron horizontal grate, 24 x 14 cm	30.00	
1000-02895	Cast iron horizontal grate, 24 x 16 cm	30.00	
1000-01273	Cast iron horizontal grate, 24 x 18 cm	40.00	
1000-01365	Cast iron horizontal grate, 26 x 16 cm	30.00	
1000-01227	Cast iron horizontal grate, 26 x 18 cm	40.00	
1000-02311	Cast iron horizontal grate, 28 x 16 cm	40.00	
1000-01301	Cast iron horizontal grate, 28 x 18 cm	40.00	
1000-00965	Cast iron horizontal grate, 28 x 20 cm	50.00	
1000-02181	Cast iron horizontal grate, 30 x 18 cm	50.00	
1000-02865	Cast iron horizontal grate, 30 x 20 cm	50.00	
1000-02180	Cast iron horizontal grate, 30 x 22 cm	60.00	
1000-02221	Cast iron horizontal grate, 30 x 24 cm	60.00	
1000-01368	Cast iron horizontal grate, 32 x 16 cm	50.00	

Important note:

- The cinder cone should not rise up to the grate, ensure free airflow from below
- Please make sure that the dilatation groove is free all around.
- Pay attention to the correct position of the grate, top and bottom side. The conic spaces have to be oriented downward.



Inspection door
15 x 15 cm



Start up sliding damper
15,8 x 15,8 cm



Start up damper
Ø 120 mm



Start up damper
17,5 x 17,5 cm

Ident-Nr.	Artikel	€	
	Cast iron horizontal grates (length x width)		
1000-02653	Cast iron horizontal grate, 32 x 18 cm	50.00	
1000-02899	Cast iron horizontal grate, 32 x 20 cm	60.00	
1000-02077	Cast iron horizontal grate, 32 x 24 cm	70.00	
1000-02903	Cast iron horizontal grate, 34 x 20 cm	60.00	
1000-02654	Cast iron horizontal grate, 34 x 22 cm	60.00	
1000-02179	Cast iron horizontal grate, 36 x 18 cm	60.00	
1000-01369	Cast iron horizontal grate, 36 x 24 cm	80.00	
1000-02177	Cast iron horizontal grate, 36 x 26 cm	80.00	
1000-01978	Cast iron horizontal grate, 40 x 20 cm	80.00	
1000-00895	Cast iron horizontal grate, 40 x 30 cm	120.00	

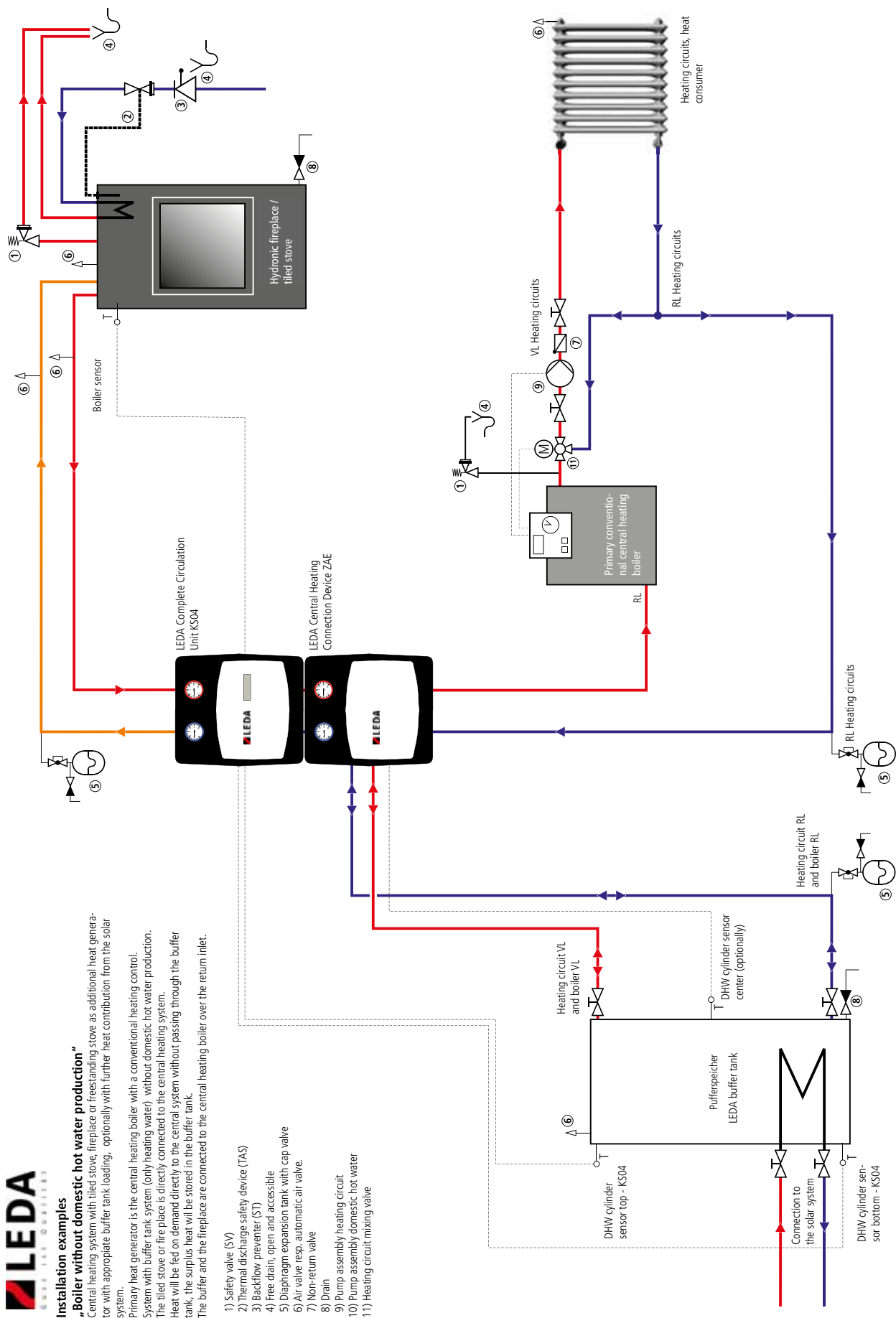
¹ suitable for room heater, such as tiles stoves, fireplace systems and freestanding stoves heat resistant up to approx. 600/ 700 °C (not usable for fan-assisted burners and heating appliances)

Ident-No.	Description	€	
	Inspection/cleaning door		
1003-00142	Inspection door, 15 x 15 cm, black laquered, overall frame dimensions: 19 x 19 cm	80.00	
1003-00691	Cleaning door, 16 x 14 cm, black laquered, overall frame dimensions: 15,8 x 13,8 cm	110.00	

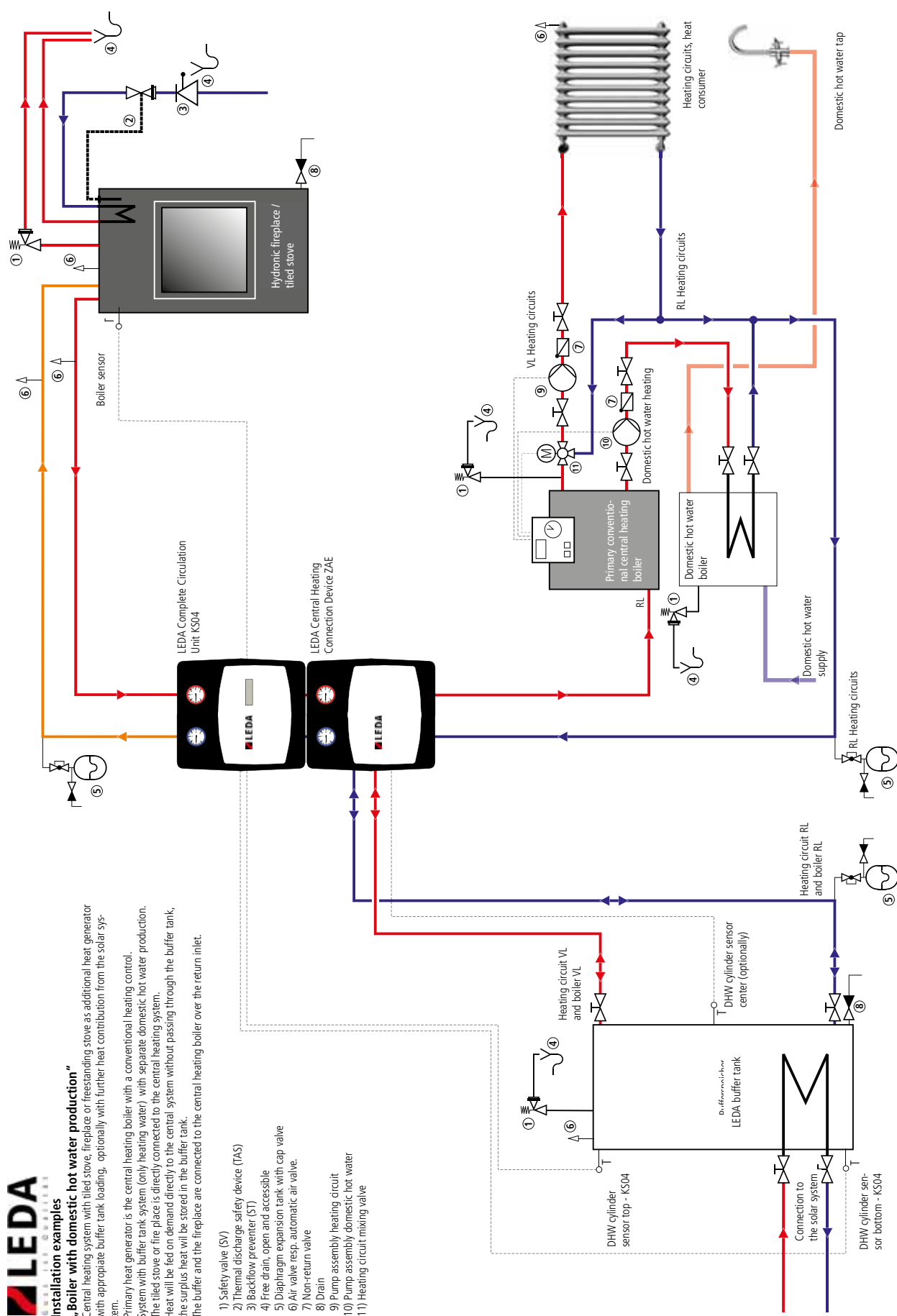
Ident-No.	Description	€	
	Start up sliding damper/start up damper		
1003-00152	Cast iron start up sliding damper with Ø 120 mm pipe connectors on both sides, with 37 cm length operating rod	80.00	
1003-00153	Cast iron start up sliding damper, 15,8 x 15,8 cm, with 61 cm length operating rod and lever	160.00	
1003-00154	Cast iron start up damper, Ø 120 mm, with 40 cm length operating rod and lever	100.00	
1003-00155	Cast iron start up damper, 17,5 x 17,5 cm, clear aperture 11,5 x 12,5 cm (143,8 cm ²)	90.00	
1003-00156	Cast iron start up damper, 28 x 25 cm, clear aperture 20 x 20 cm (400 cm ²)	120.00	
1003-00648	Special steel casting start up damper, 20 x 20 cm, clear aperture 16,5 x 13 cm, with 40 cm length operating rod and lever	210.00	

¹ The special start up damper can be installed immediately after the firebox. It is temperature resistant up to 1250 °C.

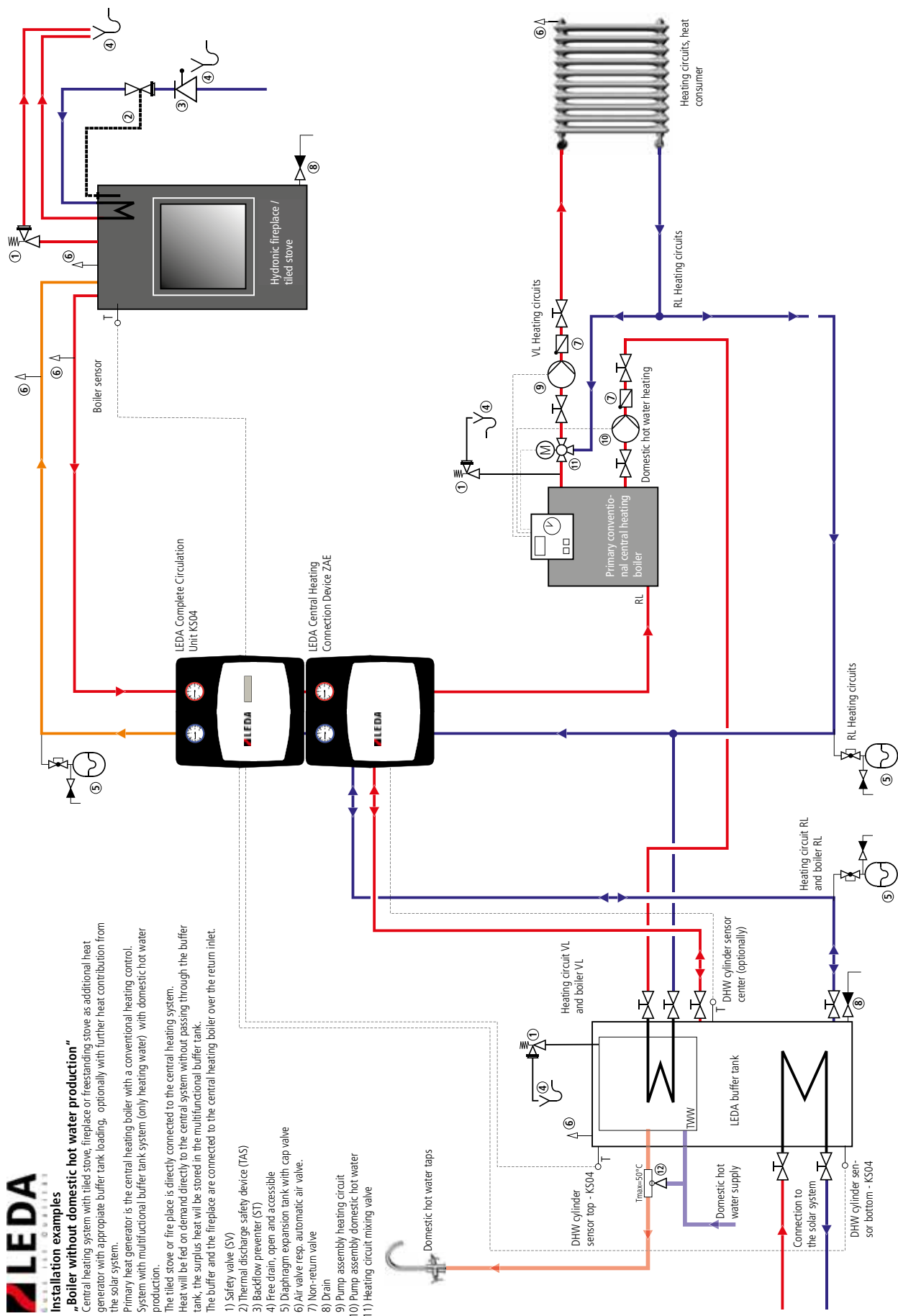
Installation example: Boiler without domestic hot water production



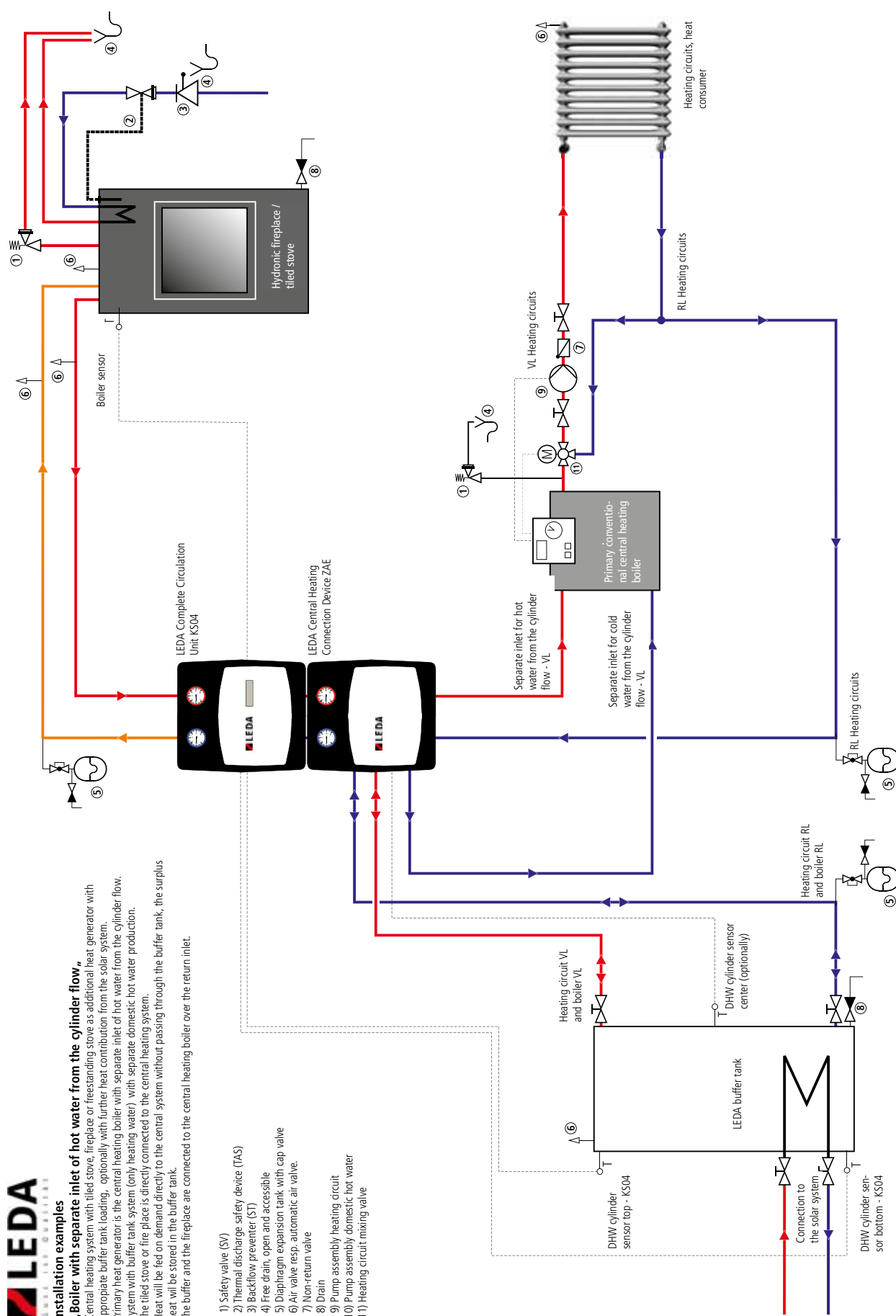
Installation example: Boiler with domestic hot water production in a separate domestic water boiler



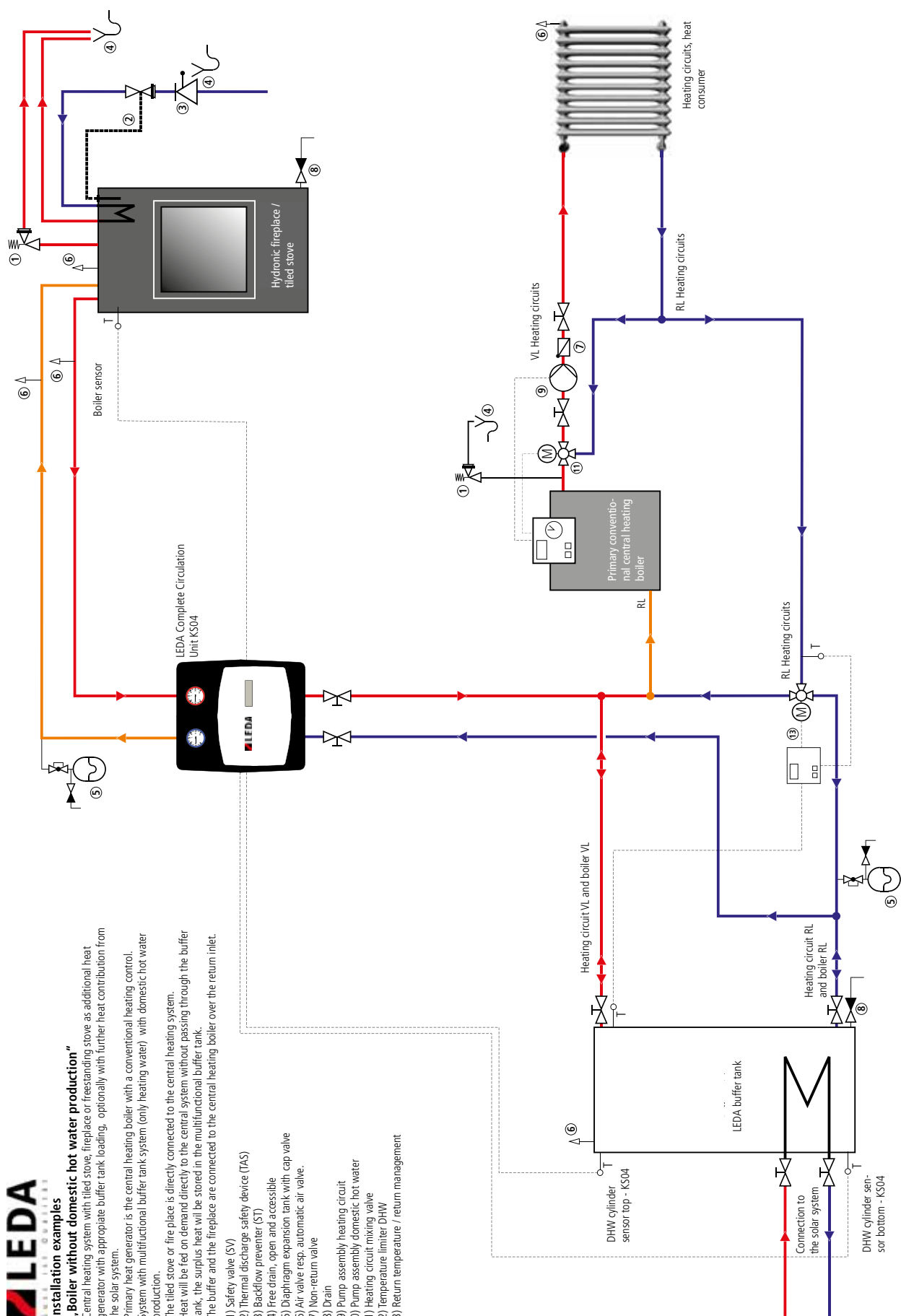
Installation example: Boiler with domestic hot water production with multifunctional buffer tank system



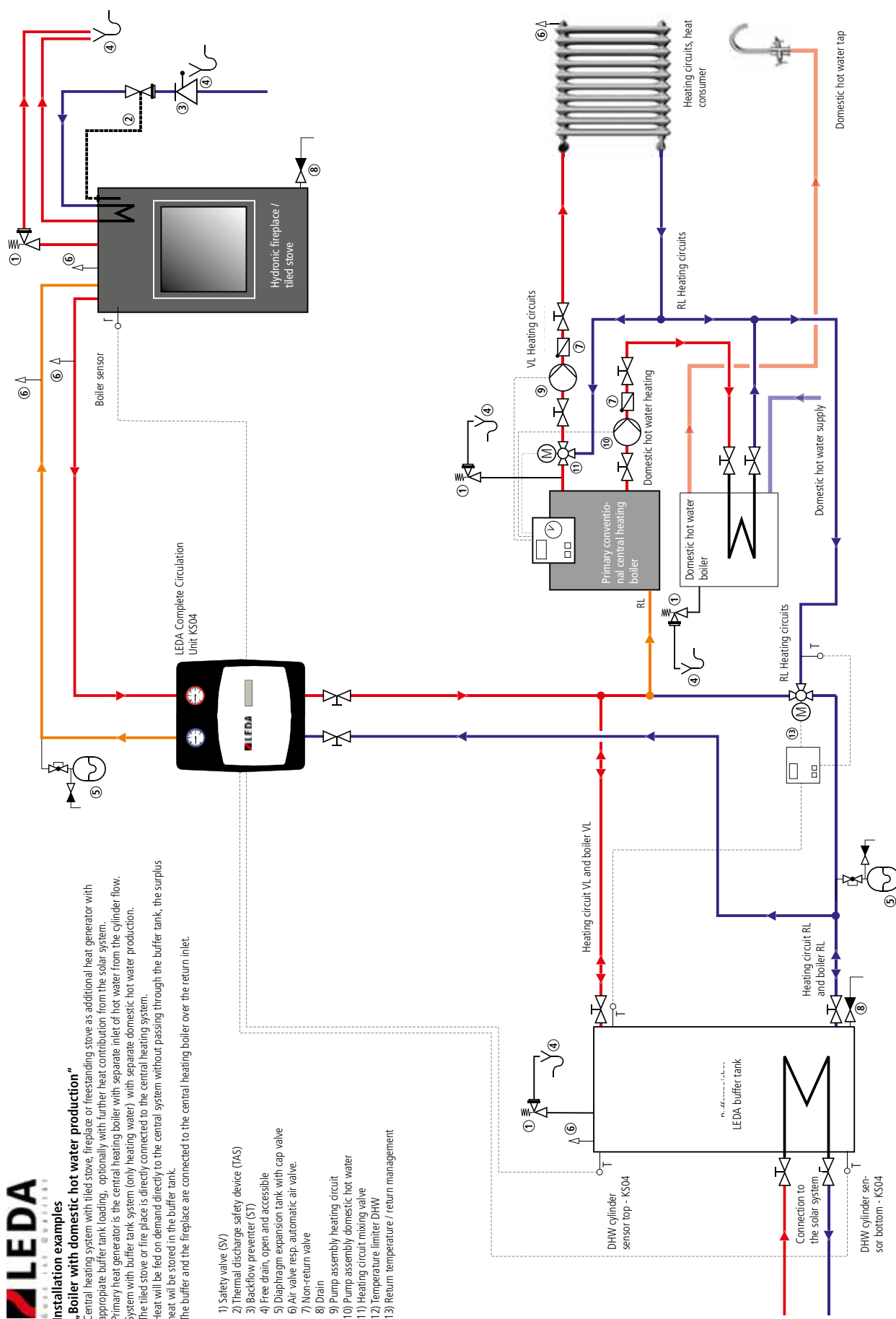
Installation example: Boiler with separate inlet of hot water from the cylinder flow



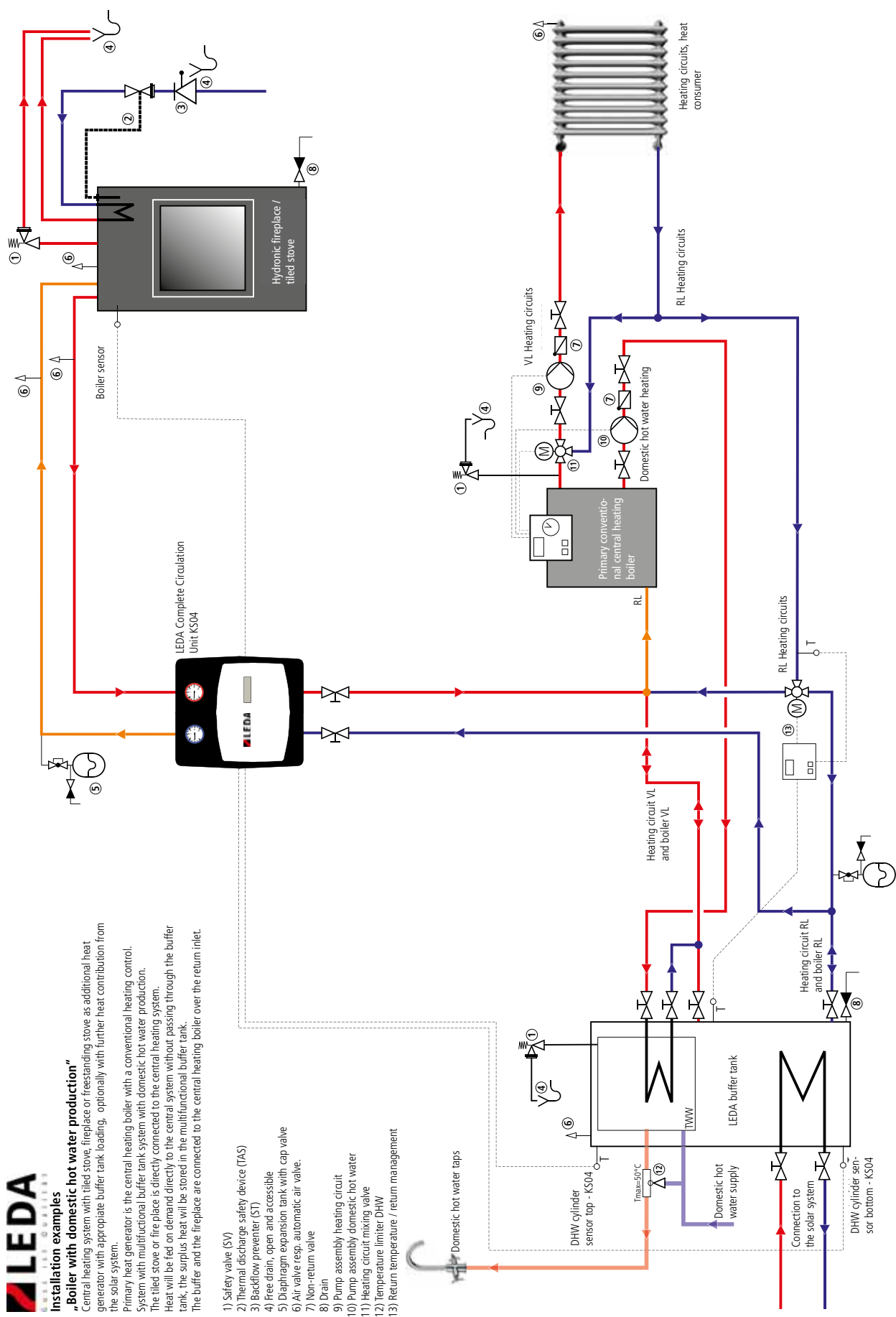
Installation example: Boiler without domestic hot water production (without ZAE)



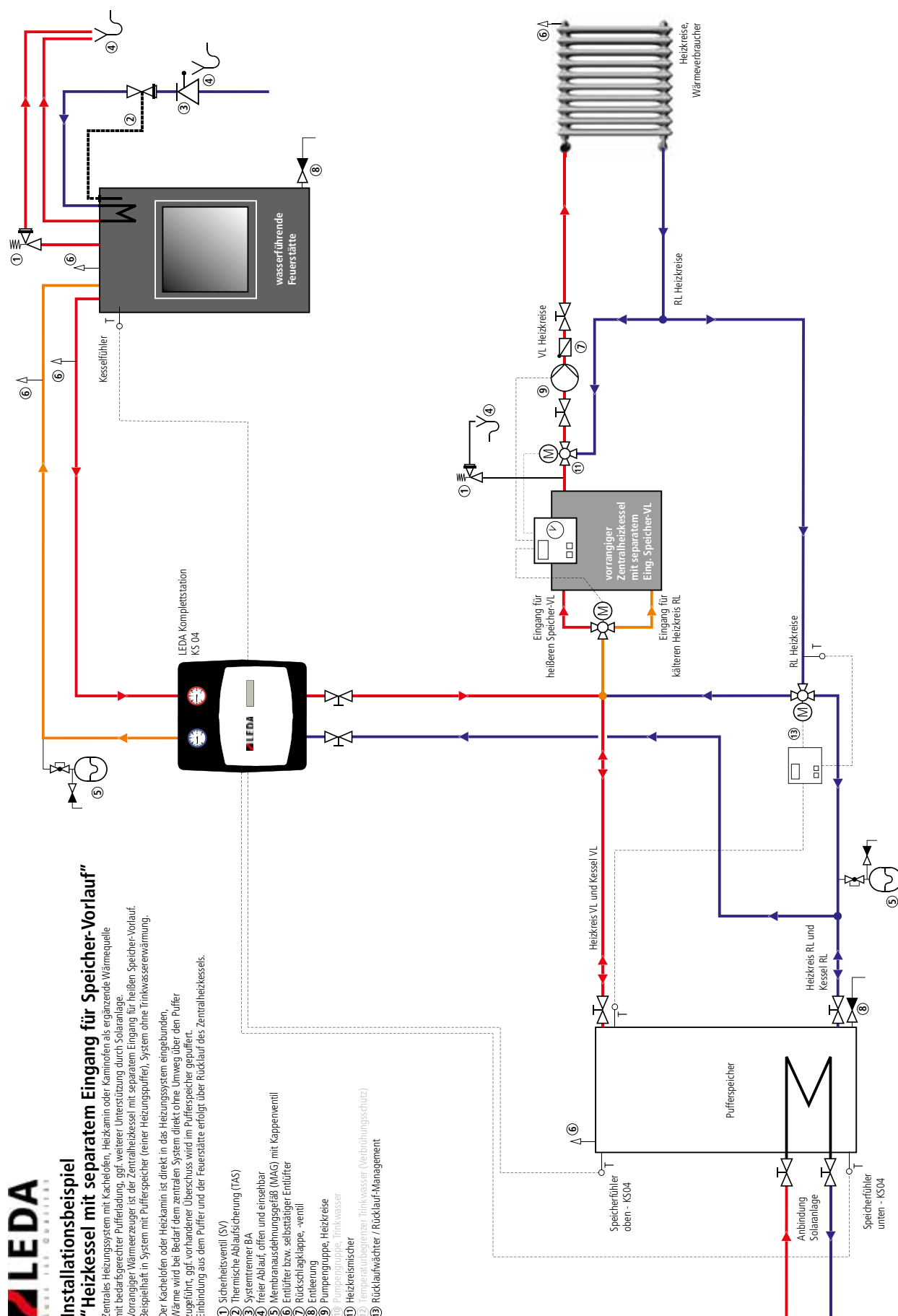
Installation example: Boiler with domestic hot water production (without ZAE)



Installation example: Boiler with domestic hot water production in a multifunctional buffer tank (without ZAE)



Wassertechnik-Installationsbeispiel: Heizkessel mit separatem Eingang für Speicher-Vorlauf (ohne ZAE)



Installationsbeispiele Wassertechnik Y11 0920

Combustion Air

Definition of the insulation for the external combustion air piping

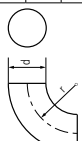
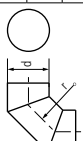
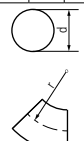
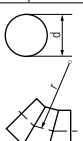
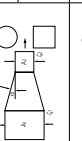
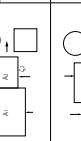
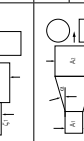
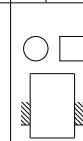
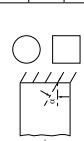


The minimum insulation thickness (in cm) to prevent condensation with insulation material type WLG 400 can be seen in the following table.

Room temperature in °C	Average relative humidity							
	Pantry, dry stores, heating rooms			Living rooms			Wet rooms	
	20%	30%	40%	50%	60%	70%	80%	90%
2								4.8
4							2.6	5.4
6						1.6	2.8	6.1
8					1.1	1.8	3.1	6.8
10		0.3	0.5	0.8	1.2	1.9	3.3	7.5
12		0.3	0.5	0.8	1.3	2.0	3.6	8.0
14		0.4	0.6	0.9	1.4	2.2	3.8	8.6
16		0.4	0.6	1.0	1.5	2.3	4.1	9.2
18		0.4	0.7	1.1	1.6	2.5	4.2	9.8
20		0.5	0.8	1.1	1.7	2.6	4.4	10.4
22		0.5	0.8	1.2	1.8	2.7	4.6	11.1
24		0.5	0.9	1.3	1.9	2.9	4.8	11.7
26	0.3	0.6	0.9	1.3	1.9	3.0	5.0	12.3

Combustion Air Piping - Determination of the required supply pressure of the combustion air duct

The required supply pressure of the combustion air duct can be calculated according EN 13384 or defined with the following work tables:

- The table corresponding to the type of fireplace/tiled stove has to be chosen.
- In the column you will find for the duct sizes the corresponding pressure losses for the bends and resistancecp.
- To define the supply pressure for the entire duct, the partial values of the table of any of the planned components have to be added.

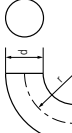
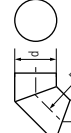


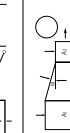
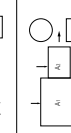
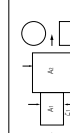
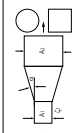
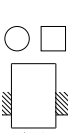
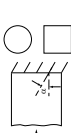
Combustion air demand up to 40 m³/h				Duct type		Round duct 1)										Rectangular duct 2)									
Single resistances						Ø 100	Ø 125	Ø 150	Ø 160	Ø 180	Ø 200	2ltg. 3)	3ltg. 3)	250/100	100/100	100/160	100/315	160/160	160/200	160/250	160/315	150/150 4)			
	90°-bend, narrow	Pa		1.23	0.50	0.24	0.19	0.12	0.08	0.22	0.04	0.14	0.82	0.33	0.09	0.13	0.08	0.05	0.03	0.16					
	90°-bend, medium	Pa		0.33	0.13	0.06	0.05	0.03	0.02	0.06	0.01	0.04	0.22	0.09	0.03	0.03	0.02	0.01	0.01	0.04					
	90°-bend, wide	Pa		0.20	0.08	0.04	0.03	0.02	0.01	0.04	0.01	0.04	0.14	0.05	0.02	0.02	0.01	0.01	0.01	0.03					
	90°-segmental bend, narrow	Pa		1.77	0.73	0.35	0.27	0.17	0.11	0.31	0.06	0.21	1.19	0.47	0.14	0.18	0.12	0.08	0.05	0.23					
	90°-segmental bend, medium	Pa		0.68	0.28	0.13	0.10	0.07	0.04	0.12	0.02	0.08	0.46	0.18	0.05	0.07	0.04	0.03	0.02	0.09					
	90°-segmental bend, wide	Pa		0.34	0.14	0.07	0.05	0.03	0.02	0.06	0.01	0.04	0.23	0.09	0.03	0.03	0.02	0.01	0.01	0.05					
	45°-elbow, narrow	Pa		0.12	0.05	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.08	0.03	0.01	0.01	0.01	0.01	0.00	0.02					
	45°-elbow, medium	Pa		0.07	0.03	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.05	0.02	0.01	0.01	0.00	0.00	0.00	0.01					
	45°-elbow, wide	Pa		0.05	0.02	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.04	0.01	0.00	0.01	0.00	0.00	0.00	0.01					
	45°-segmental bend	Pa		0.27	0.11	0.05	0.04	0.03	0.02	0.05	0.01	0.03	0.18	0.07	0.02	0.03	0.02	0.01	0.01	0.04					
	45°-segmental bend	Pa		0.41	0.17	0.08	0.06	0.04	0.03	0.07	0.01	0.05	0.27	0.11	0.03	0.04	0.03	0.02	0.01	0.05					
	slight gradual reduction	Pa		0.07	0.03	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.05	0.02	0.01	0.01	0.00	0.00	0.00	0.01					
	strong gradual reduction	Pa		0.40	0.16	0.08	0.06	0.04	0.02	0.07	0.01	0.05	0.26	0.11	0.03	0.04	0.03	0.02	0.01	0.05					
	slight spontaneous reduction	Pa		0.27	0.11	0.05	0.04	0.03	0.02	0.05	0.01	0.03	0.18	0.07	0.02	0.03	0.02	0.01	0.01	0.04					
	strong spontaneous reduction	Pa		1.09	0.45	0.22	0.17	0.10	0.07	0.19	0.04	0.13	0.73	0.29	0.08	0.11	0.07	0.05	0.03	0.14					
	slight spontaneous expansion	Pa		0.04	0.02	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01					
	strong spontaneous expansion	Pa		0.61	0.25	0.12	0.09	0.06	0.04	0.11	0.02	0.07	0.41	0.16	0.05	0.06	0.04	0.03	0.02	0.08					
	slight gradual expansion	Pa		0.07	0.03	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.05	0.02	0.01	0.01	0.00	0.00	0.00	0.01					
	strong gradual expansion	Pa		0.20	0.08	0.04	0.03	0.02	0.01	0.04	0.01	0.02	0.14	0.05	0.02	0.02	0.01	0.01	0.01	0.03					
	Air entrance, grid, box and transition	Pa		2.59	1.06	0.51	0.40	0.25	0.16	0.45	0.09	0.30	1.74	0.69	0.20	0.26	0.17	0.11	0.07	0.34					
	Air entrance, with open end (lightwell, dome)	Pa		0.96	0.39	0.19	0.15	0.09	0.06	0.17	0.03	0.11	0.64	0.26	0.07	0.10	0.06	0.04	0.03	0.13					
	Air outlet with lamella grid 30°	Pa		2.05	0.84	0.40	0.31	0.20	0.13	0.36	0.07	0.24	1.37	0.55	0.16	0.21	0.13	0.09	0.06	0.27					
	Air outlet free into the room	Pa		1.37	0.56	0.27	0.21	0.13	0.09	0.24	0.05	0.16	0.91	0.36	0.10	0.14	0.09	0.06	0.04	0.18					
	Air damper (with open duct) completely opened	Pa		0.46	0.19	0.09	0.07	0.04	0.03	0.08	0.02	0.05	0.31	0.12	0.04	0.05	0.03	0.02	0.01	0.06					
Friction drag																									
	Pressure lost with smooth pipe interior	Pa/m		0.07	0.03	0.01	0.01	0.01	0.00	0.02	0.00	0.01									0.01				
	Pressure lost with rough pipe interior	Pa/m		0.17	0.07	0.03	0.03	0.02	0.01				0.14	0.06	0.02	0.02	0.01	0.01	0.01						
	Pressure lost with corrugated pipe interior	Pa/m		0.25	0.10	0.05	0.04	0.02	0.02																

- 1) Round pipes: always clear interior diameter in mm
- 2) Rectangular pipes: always clear interior diameter in mm
- 3) Mini-Air-Ducts, 50 x 100mm each pipe. 2-3 single pipes are required to build the complete combustion air supply
- 4) 150/150: e.g. Thermal air ducting

Combustion Air Piping - Determination of the required supply pressure of the combustion air duct

The required supply pressure of the combustion air duct can be calculated according EN 13384 or defined with the following work tables:

- The table corresponding to the type of fireplace/tiled stove has to be chosen.
- In the column you will find for the duct sizes the corresponding pressure losses for the bends and resistancecp.
- To define the supply pressure for the entire duct, the partial values of the table of any of the planned components have to be added.

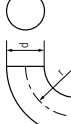
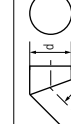

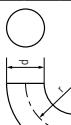
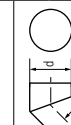

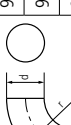
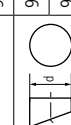

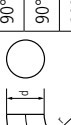




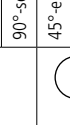


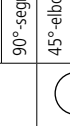
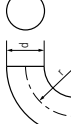
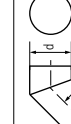

Combustion air demand up to 50 m³/h			Duct type		Round duct ¹⁾										Rectangular duct ²⁾									
Single resistances			Ø 100	Ø 125	Ø 150	Ø 160	Ø 180	Ø 200	2ltg. ³⁾	3ltg. ³⁾	250/100	100/100	100/160	100/315	160/160	160/200	160/250	160/315	150/150 ⁴⁾					
	90°-bend, narrow	Pa	1.92	0.79	0.38	0.29	0.18	0.12	0.34	0.07	0.22	1.28	0.51	0.15	0.2	0.13	0.08	0.05	0.25					
	90°-bend, medium	Pa	0.51	0.21	0.1	0.08	0.05	0.03	0.09	0.02	0.06	0.34	0.14	0.04	0.05	0.03	0.02	0.01	0.07					
	90°-bend, wide	Pa	0.32	0.13	0.06	0.05	0.03	0.02	0.06	0.01	0.04	0.21	0.09	0.02	0.03	0.02	0.01	0.01	0.04					
	90°-segmental bend, narrow	Pa	2.77	1.14	0.55	0.42	0.26	0.17	0.49	0.1	0.32	1.86	0.74	0.21	0.28	0.18	0.12	0.08	0.37					
	90°-segmental bend, medium	Pa	1.07	0.44	0.21	0.16	0.1	0.07	0.19	0.04	0.12	0.71	0.28	0.08	0.11	0.07	0.05	0.03	0.14					
	90°-segmental bend, wide	Pa	0.53	0.22	0.11	0.08	0.05	0.03	0.09	0.02	0.06	0.36	0.14	0.04	0.05	0.04	0.02	0.01	0.07					
	45°-elbow, narrow	Pa	0.19	0.08	0.04	0.03	0.02	0.01	0.03	0.01	0.02	0.13	0.05	0.01	0.02	0.01	0.01	0.01	0.03					
	45°-elbow, medium	Pa	0.11	0.04	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.07	0.03	0.01	0.01	0.01	0.00	0.00	0.01					
	45°-elbow, wide	Pa	0.09	0.03	0.02	0.01	0.01	0.01	0.01	0.00	0.01	0.06	0.02	0.01	0.01	0.01	0.00	0.00	0.01					
	45°-segmental bend	Pa	0.43	0.17	0.08	0.07	0.04	0.03	0.07	0.01	0.05	0.29	0.11	0.03	0.04	0.03	0.02	0.01	0.06					
	45°-segmental bend	Pa	0.64	0.26	0.13	0.1	0.06	0.04	0.11	0.02	0.07	0.43	0.17	0.05	0.07	0.04	0.03	0.02	0.08					
	slight gradual reduction	Pa	0.11	0.04	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.07	0.03	0.01	0.01	0.01	0.00	0.00	0.01					
	strong gradual reduction	Pa	0.62	0.25	0.12	0.09	0.06	0.04	0.11	0.02	0.07	0.41	0.17	0.05	0.06	0.04	0.03	0.02	0.08					
	slight spontaneous reduction	Pa	0.43	0.17	0.08	0.07	0.04	0.03	0.07	0.01	0.05	0.29	0.11	0.03	0.04	0.03	0.02	0.01	0.06					
	strong spontaneous reduction	Pa	1.71	0.70	0.34	0.26	0.16	0.11	0.30	0.06	0.2	1.14	0.46	0.13	0.17	0.11	0.07	0.05	0.23					
	slight spontaneous expansion	Pa	0.06	0.03	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.04	0.02	0.00	0.01	0.00	0.00	0.00	0.01					
	strong spontaneous expansion	Pa	0.96	0.39	0.19	0.15	0.09	0.06	0.17	0.03	0.11	0.64	0.26	0.07	0.1	0.06	0.04	0.03	0.13					
	slight gradual expansion	Pa	0.11	0.04	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.07	0.03	0.01	0.01	0.01	0.00	0.00	0.01					
	strong gradual expansion	Pa	0.32	0.13	0.06	0.05	0.03	0.02	0.06	0.01	0.04	0.21	0.09	0.02	0.03	0.02	0.01	0.01	0.04					
	Air entrance, grid, box and transition	Pa	4.05	1.66	0.80	0.62	0.39	0.25	0.71	0.14	0.47	2.71	1.08	0.31	0.41	0.27	0.17	0.11	0.54					
	Air entrance, with open end (lightwell, dome)	Pa	1.49	0.61	0.29	0.23	0.14	0.09	0.26	0.05	0.17	1.00	0.4	0.11	0.15	0.10	0.06	0.04	0.20					
	Air outlet with lamella grid 30°	Pa	3.2	1.31	0.63	0.49	0.3	0.2	0.56	0.11	0.37	2.14	0.85	0.24	0.33	0.21	0.14	0.09	0.42					
	Air outlet free into the room	Pa	2.13	0.87	0.42	0.33	0.2	0.13	0.37	0.07	0.25	1.43	0.57	0.16	0.22	0.14	0.09	0.06	0.28					
	Air damper (with open duct) completely opened	Pa	0.73	0.30	0.14	0.11	0.07	0.05	0.13	0.03	0.08	0.49	0.19	0.06	0.07	0.05	0.03	0.02	0.10					
Friction drag																								
	Pressure lost with smooth pipe interior	Pa/m	0.09	0.04	0.02	0.01	0.01	0.01	0.02	0.00	0.01								0.01					
	Pressure lost with rough pipe interior	Pa/m	0.21	0.09	0.04	0.03	0.02	0.01				0.17	0.07	0.03	0.03	0.02	0.01	0.01						
	Pressure lost with corrugated pipe interior	Pa/m	0.31	0.13	0.06	0.05	0.03	0.02																

- 1) Round pipes: always clear interior diameter in mm
- 2) Rectangular pipes: always clear interior diameter in mm
- 3) Mini-Air-Ducts, 50 x 100mm each pipe. 2-3 single pipes are required to build the complete combustion air supply
- 4) 150/150: e.g. Thermal air ducting

Combustion Air Piping - Determination of the required supply pressure of the combustion air duct

The required supply pressure of the combustion air duct can be calculated according EN 13384 or defined with the following work tables:

- The table corresponding to the type of fireplace/tiled stove has to be chosen.
- In the column you will find for the duct sizes the corresponding pressure losses for the bends and resistancecp.
- To define the supply pressure for the entire duct, the partial values of the table of any of the planned components have to be added.

Combustion air demand up to 60 m ³ /h					Duct type		Round duct ¹⁾										Rectangular duct ²⁾									
Single resistances						Ø 100	Ø 125	Ø 150	Ø 160	Ø 180	Ø 200	2ltg. ³⁾	3ltg. ³⁾	250/100	100/100	100/160	100/315	160/160	160/200	160/250	160/315	150/150 ⁴⁾				
			90°-bend, narrow	Pa	2.76	1.13	0.55	0.42	0.26	0.17	0.48	0.10	0.32	1.85	0.74	0.21	0.28	0.18	0.12	0.08	0.37					
			90°-bend, medium	Pa	0.74	0.30	0.15	0.11	0.07	0.05	0.13	0.03	0.09	0.49	0.20	0.06	0.08	0.05	0.03	0.02	0.10					
			90°-bend, wide	Pa	0.46	0.19	0.09	0.07	0.04	0.03	0.08	0.02	0.05	0.31	0.12	0.04	0.05	0.03	0.02	0.01	0.06					
			90°-segmental bend, narrow	Pa	3.99	1.64	0.79	0.61	0.38	0.25	0.70	0.14	0.46	2.67	1.07	0.31	0.41	0.26	0.17	0.11	0.53					
			90°-segmental bend, medium	Pa	1.54	0.63	0.30	0.23	0.15	0.10	0.27	0.05	0.18	1.03	0.41	0.12	0.16	0.10	0.07	0.04	0.20					
			90°-segmental bend, wide	Pa	0.77	0.31	0.15	0.12	0.07	0.05	0.13	0.03	0.09	0.51	0.21	0.06	0.08	0.05	0.03	0.02	0.10					
			45°-elbow, narrow	Pa	0.28	0.11	0.05	0.04	0.03	0.02	0.05	0.01	0.03	0.19	0.07	0.02	0.03	0.02	0.01	0.01	0.04					
			45°-elbow, medium	Pa	0.15	0.06	0.03	0.02	0.01	0.01	0.03	0.01	0.02	0.10	0.04	0.01	0.02	0.01	0.01	0.00	0.02					
			45°-elbow, wide	Pa	0.12	0.05	0.02	0.02	0.01	0.01	0.02	0.00	0.01	0.08	0.03	0.01	0.01	0.01	0.01	0.00	0.02					
			45°-segmental bend	Pa	0.61	0.25	0.12	0.09	0.06	0.04	0.11	0.02	0.07	0.41	0.16	0.05	0.06	0.04	0.03	0.02	0.08					
			45°-segmental bend	Pa	0.92	0.38	0.18	0.14	0.09	0.06	0.16	0.03	0.11	0.62	0.25	0.07	0.09	0.06	0.04	0.03	0.12					
			slight gradual reduction	Pa	0.15	0.06	0.03	0.02	0.01	0.01	0.03	0.01	0.02	0.10	0.04	0.01	0.02	0.01	0.01	0.00	0.02					
			strong gradual reduction	Pa	0.89	0.36	0.18	0.14	0.08	0.06	0.16	0.03	0.10	0.60	0.24	0.07	0.09	0.06	0.04	0.02	0.12					
			slight spontaneous reduction	Pa	0.61	0.25	0.12	0.09	0.06	0.04	0.11	0.02	0.07	0.41	0.16	0.05	0.06	0.04	0.03	0.02	0.08					
			strong spontaneous reduction	Pa	2.46	1.01	0.49	0.37	0.23	0.15	0.43	0.09	0.29	1.64	0.66	0.19	0.25	0.16	0.10	0.07	0.32					
			slight-spontaneous expansion	Pa	0.09	0.04	0.02	0.01	0.01	0.01	0.02	0.01	0.02	0.00	0.01	0.06	0.02	0.01	0.01	0.01	0.00	0.01				
			strong spontaneous expansion	Pa	1.38	0.57	0.27	0.21	0.13	0.09	0.24	0.05	0.16	0.93	0.37	0.11	0.14	0.09	0.06	0.04	0.18					
			slight gradual expansion	Pa	0.15	0.06	0.03	0.02	0.01	0.01	0.03	0.01	0.02	0.10	0.04	0.01	0.02	0.01	0.01	0.00	0.02					
			strong gradual expansion	Pa	0.46	0.19	0.09	0.07	0.04	0.03	0.08	0.02	0.05	0.31	0.12	0.04	0.05	0.03	0.02	0.01	0.06					
			Air entrance, grid, box and transition	Pa	5.84	2.39	1.15	0.89	0.56	0.36	1.02	0.20	0.68	3.91	1.56	0.45	0.60	0.38	0.25	0.16	0.77					
			Air entrance, with open end (lightwell, dome)	Pa	2.15	0.88	0.42	0.33	0.20	0.13	0.38	0.07	0.25	1.44	0.57	0.16	0.22	0.14	0.09	0.06	0.28					
			Air outlet with lamella grid 30°	Pa	4.61	1.89	0.91	0.70	0.44	0.29	0.81	0.16	0.54	3.08	1.23	0.35	0.47	0.30	0.20	0.13	0.61					
			Air outlet free into the room	Pa	3.07	1.26	0.61	0.47	0.29	0.19	0.54	0.11	0.36	2.06	0.82	0.23	0.31	0.20	0.13	0.08	0.41					
			Air damper (with open duct) completely opened	Pa	1.04	0.43	0.21	0.16	0.10	0.07	0.18	0.04	0.12	0.70	0.28	0.08	0.11	0.07	0.04	0.03	0.14					
Friction drag																										
			Pressure lost with smooth pipe interior	Pa/m	0.11	0.04	0.02	0.02	0.01	0.01	0.03	0.00	0.02								0.02					
			Pressure lost with rough pipe interior	Pa/m	0.25	0.10	0.05	0.04	0.02	0.02				0.21	0.09	0.03	0.03	0.02	0.01	0.01						
			Pressure lost with corrugated pipe interior	Pa/m	0.37	0.15	0.07	0.06	0.04	0.02																

- 1) Round pipes: always clear interior diameter in mm
- 2) Rectangular pipes: always clear interior diameter in mm
- 3) Mini-Air-Ducts, 50 x 100mm each pipe. 2-3 single pipes are required to build the complete combustion air supply
- 4) 150/150: e.g. Thermal air ducting

Door hinge / mechanism

Tiled Stove Insert	Door mechanism	Standard door hinge	Reversible on site
BRILLANT	Hinged door	right (handle left)	yes
DIAMANT	Hinged door	right (handle left)	yes
DIAMANT W	Hinged door	right (handle left)	yes
GOURMET	Hinged door	right (handle left)	yes
JUWEL	Hinged door	right (handle left)	no
RUBIN	Hinged door	right (handle left)	yes
TURMA	Hinged door	left (handle right)	yes*
TURMA W	Hinged door	left (handle right)	yes*

*Rear cast iron fuel door not exchangeable

Het Storage Door	Door mechanism	Standard door hinge	Reversible on site
FERRA	Hinged door	left (handle right)	yes
LGT 2001	Hinged door	right (handle left)	no

Fireplace Insert	Door mechanism	Standard door hinge	Reversible on site
FINA	Hinged door	left (handle right)	yes
KALA S	Hinged door	right or left on demand	no
KALA H	Guillotine door	—	—
LAVA	Hinged door	left (handle right)	yes
LAVA W	Hinged door	left (handle right)	yes
SERA	Guillotine door	—	—
SERA W	Guillotine door	—	—
VIDA	Hinged door	left (handle right)	yes
VIDA W	Hinged door	left (handle right)	ja

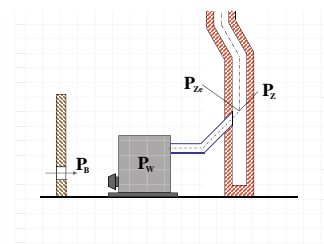
Airflow Volume Regulator

Air supply control with draught adjustment

Innovative air valve installed in the furnace bottom (KALA Fireplace Series)

- Improved installation possibilities of the fireplace with excessive chimney draft* without additional draught regulator
- Optimisation of the complete combustion cycle through adequate airflow volume of the combustion air
- Simple adjustment on site according to the chimney calculation
- Lighting booster

Chimney calculation



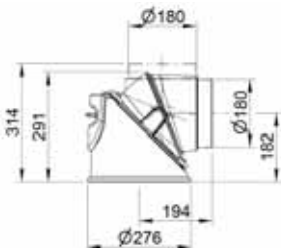

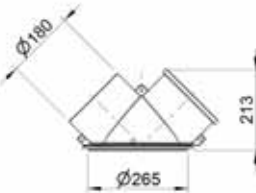
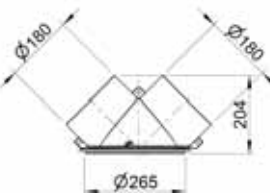
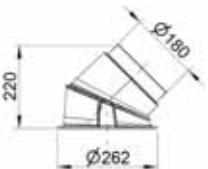
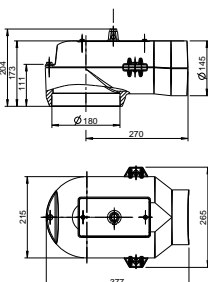
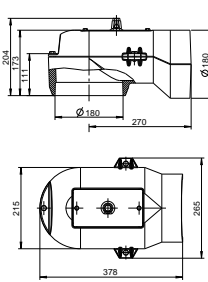
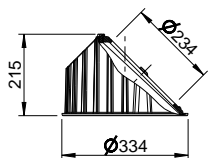
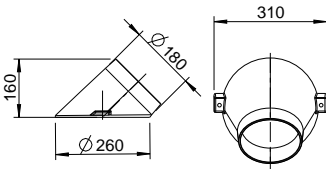
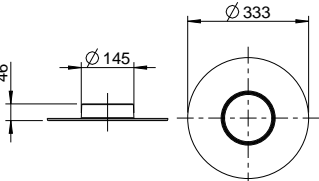
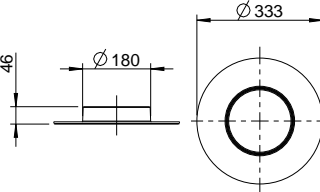
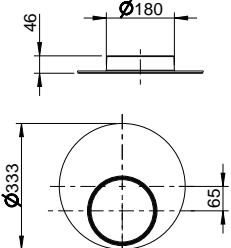
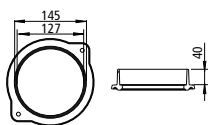
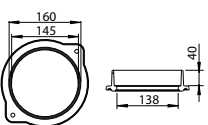
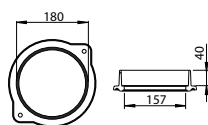
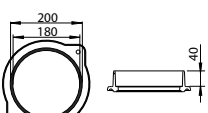

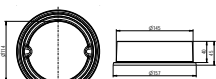
Excessive chimney draught










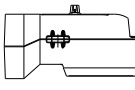


Optimised combustion

Simple adjustment of the draught



Overview: Flue gas spigots & Co.

1004-01140	1004-01395	1004-00310	1004-00311
 <p>Three-part flue gas spigot with inspection opening</p>	 <p>NEW Connecting piece with inspection opening for combination with MFS double st.</p>	 <p>MFS Double flue gas outlet with cleaning cover</p>	 <p>MFS Double flue gas outlet with diverter damper</p>
1004-01057	1004-00078	1004-00077	1004-00796
 <p>Steel flue gas spigot Ø 180/ 200 mm</p>	 <p>Horizontal cast iron flue gas spigot Ø 145 mm, endless (360°) rotatable</p>	 <p>Horizontal cast iron flue gas spigot Ø 180 mm, endless (360°) rotatable</p>	 <p>Cast iron flue gas dome, endless (360°) rotatable</p>
1004-00797	1004-00758	1004-00759	
 <p>Cast iron flue gas spigot for dome Ø 180 mm</p>	 <p>Cast iron flue gas connector Ø 145 mm</p>	 <p>Cast iron flue gas connector Ø 180 mm</p>	
1004-001182	1004-01262	1004-00778	1004-00780
 <p>Excentric flue gas connector Ø 180 mm</p>	 <p>Flue gas connector Ø 145 mm</p>	 <p>Flue gas connector Ø 160 mm</p>	 <p>Flue gas connector Ø 180 mm</p>
1004-00093	1004-01249	1004-01250	
 <p>Flue gas connector Ø 200 mm</p>	 <p>Flue gas connector Ø 130 mm</p>	 <p>Flue gas connector Ø 145 mm</p>	

<div><div></div>Accessory</div> <div><div></div>included in the scope of delivery</div>	Description	FINA	FINA with top mounted heat exchanger	FINA plus	KALA	LAVA	LAVA W	SERA	SERA W	VIDA	VIDA W	JUWEL	RUBIN K15	RUBIN K16-21	TURMA H75	TURMA H80/85	TURMA H80/85 XL	TURMA Culinary set	TURMA W
	1004-01140 Three-part flue gas spigot with inspection opening	<div></div>	<div></div>	-	<div></div>	-	-	-	-	-	-	-	-	-	<div></div>	-	-	-	-
	1004-01395 Connecting piece with inspection opening	-	-	<div></div>	-	-	-	-	-	-	-	-	-	-	<div></div>	-	-	-	-
	1004-00310 MFS Double flue gas outlet with cleaning cover	<div></div>	<div></div>	-	<div></div>	<div></div>	-	<div></div>	-	<div></div>	-	-	-	-	<div></div>	<div>*1</div>	<div>*1</div>	-	<div></div>
	1004-00311 MFS Double flue gas outlet with diverter damper	<div></div>	<div></div>	-	<div></div>	<div></div>	-	<div></div>	-	<div></div>	-	-	-	-	<div></div>	<div>*1</div>	<div>*1</div>	-	<div></div>
	1004-01057 Steel flue gas spigot Ø180/ 200 mm	-	-	-	-	<div></div>	-	<div></div>	-	<div></div>	-	-	-	-	-	<div>*1</div>	<div>*1</div>	-	<div></div>
	1004-00796 Cast iron flue gas dome, endless (360°) rotatable	-	-	-	-	<div></div>	-	<div></div>	-	<div></div>	-	-	-	-	-	<div></div>	<div></div>	-	-
	1004-00797 Cast iron flue gas spigot for dome Ø180 mm	-	-	-	-	<div>*2</div>	-	-	<div>*3</div>	-	<div>*3</div>	-	-	-	-	<div>*1</div>	<div>*1</div>	-	-
	1004-00758 Flue gas connector Ø145 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<div></div>	-	-	-
	1004-00759 Flue gas connector Ø180 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<div></div>	<div></div>	-	-
	1004-01182 Excentric flue gas connector Ø180 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<div></div>	<div></div>	<div></div>	-
	1004-01252 Horizontal cast iron flue gas spigot Ø145/145 mm	-	-	-	-	-	-	-	-	-	-	<div>*10</div>	<div>*11</div>	<div>*10</div>	<div>*10</div>	<div>*12</div>	-	-	-
	1004-00078 Horizontal cast iron flue gas spigot Ø145 mm	-	-	-	-	-	-	-	-	-	-	<div>*4</div>	-	<div>*4</div>	<div>*4</div> <div>*13</div>	<div>*5</div>	-	-	-
	1004-00077 Horizontal cast iron flue gas spigot Ø180 mm	-	<div>*4</div>	<div>*4</div>	<div>*4</div>	-	-	-	-	-	-	-	<div>*4</div>	-	<div>*4</div>	<div>*4</div>	<div>*5</div>	<div>*5</div>	<div>*7</div>
	1004-01262 Flue gas connector Ø145 mm	-	-	-	<div>*13</div>	-	-	-	-	-	-	<div>*8</div>	-	<div>*8</div>	<div>*13</div>	-	-	-	-
	1004-00778 Flue gas connector Ø160 mm	-	-	-	<div>*13</div>	-	-	-	-	-	-	-	-	<div>*9</div>	<div>*13</div>	-	-	-	-
	1004-00780 Flue gas connector Ø180 mm	-	<div></div>	<div></div>	<div></div>	-	-	-	-	-	-	<div>*8</div>	-	<div>*8</div>	<div></div>	-	-	-	-
	1004-00093 Flue gas connector Ø200 mm	-	-	<div></div>	<div>*13</div>	-	-	-	-	-	-	-	-	-	<div>*13</div>	-	-	-	-
	1004-01249 Flue gas connector Ø130 mm	-	-	-	-	-	-	-	-	-	-	-	<div></div>	-	-	-	-	-	-
	1004-01250 Flue gas connector Ø145 mm	-	-	-	-	-	-	-	-	-	-	-	<div></div>	-	-	-	-	-	-

*1 combinable with cast iron flue gas dome 1004-00796

*2 similar connector is in the scope of delivery included

*3 only for SERA W DS/ VIDA W DS

*4 only combinable with connector 1004-00780

*5 combinable with connector 1004-00759

*6 combinable with spigot 1004-00797

*7 use with excentric flue gas connector 1004-01182

*8 not for all models

*9 only for RUBIN K21

*10 with flue gas spigot 1004-00777 only for H10/ K16-18/ H1

*11 only with flue gas spigot 1004-01250

*12 only with flue gas spigot 1004-00758

*13 only for ceramic flue gas storage systems

*1 combinable with cast iron flue gas dome 1004-00796
 *2 similar connector is in the scope of delivery included
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 *7 use with excentric flue gas connector 1004-01182
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