Installation Manual

Fireplace-boiler

BRUNNER®
made in germany.

CONTENTS

1 BASIC INFORMATIONS

All instructions delivered with products must be observed. We do not accept any warranty claim or liability for damage resulting from failure to observe these installation instructions!
Improper installation can cause injury and material damage!

The installation may only be carried out by a registered specialist.

Fireplaces equipped with a water boiler must be pressure-tested after hydraulic connection to the heating system. Masonry work may follow only after this pressure test. Ulrich Brunner GmbH does not cover any costs incurred by necessary dismantling of masonry for rework at water boiler installation or replacement of the boiler.

The floor space of the room must have a suitable structure and sufficient dimensions to ensure proper functioning of the fireplace.

Please note that other installation and assembly instructions are included in other packaging units!

Dimensioning of downstream heat accumulator must be according to valid stove-setting rules.

During installation of the fireplace, all dimensions and minimal clearances of the fireplace casing must be held as specified by the manufacturer.

Fireplaces that meet the requirements of DIN EN 13240 or DIN EN 13229 and that can only be operated as intended with closed combustion chamber door or that have a self-closing firebox door are suitable for multiple occupancy.

All binding national or EU standards and local regulations for the installation of fireplaces must be observed.

All valid stove fitting rules and regulations of local construction law must be observed and followed.

Please follow the relevant regulations of your country.

When these instructions are followed and all works are done properly, this will ensure a safe, energy-saving and environmentally friendly operation of the stove. Pictures shown are not to be considered as complete representations of any kind.

Subject to technical and assortment changes.

Please notify your supplier of any damage which might have occurred during transport.

Please keep these instructions.

2 SAFETY PRECAUTIONS

Fireplaces may be set up only in rooms or areas with no risk of danger due to their location, structure or intended use.

Working on the stove	Installation, commissioning, servicing and maintenance works on the product may be carried out only by an authorized stove-fitter. Safety and efficiency of the system depend on this!

Working with electronics	Switch off the emergency switch or circuit breaker, and secure them against switching on again.

Fireplaces with external air supply are not independent from room air supply and must be considered and designed as roomsealed fireplaces. In connection with a ventilation or extraction system, we recommend the use of a negative pressure safety device USA.

If additional parts are installed on the fireplace which are not approved for this appliance by Ulrich Brunner GmbH (for example, an external control unit), it is a customized product that meets customer requirements. The resulting fireplace insert is not type-tested; the declaration of performance of this fireplace insert will be no longer valid.

The CE mark must be removed from the heating insert!

The responsibility for installation (according to TROL) and operation lies exclusively with the specialist craftsman!

Installation must be carried out by an authorized stove-fitter, because safety and efficiency of the system depend mostly on proper installation of the product. All valid stove fitting rules and regulations of building law must be observed and followed. Make sure to instruct the owner or user about the functions and controls of the system and possibly installed safety devices.

Fireplaces must be built to ensure safe operation and fire safety in order to eliminate possible risks and unacceptable loads. They have to be ready for use over an adequate period of time.

Make sure to instruct the owner or user about the functions and controls of the system and possibly installed safety devices.

Remember to use only genuine replacement parts.

Stoves with water boilers are ready for use only with a fully functional boiler section.

3 DESCRIPTION

Fireplace inserts for hot water production are a combination of fireplace and a water-carrying tank construction tested to EN 13229.

The boiler design itself is correct to TRD 702 hotwater generators of the group II and are made of quality steel S235JR (St 37-2) or according to DIN 17100, the exchanger tubes manufactured according to DIN 1626/DIN 1629th All boiler constructions are available as a heat source for hot waterheating systems with permissible flow temperatures suitable and approved up to 100 ° C. The devices can be operated as a sole heating and in conjunction with other heat sources. This can be done in open systems to DIN 4751 Part 1 as well as in closed, thermostatically secure systems to DIN4751 part 2.

Avoid overheating the device! If the fireplace boiler is overheated, it can cause discoloration, especially in the variants with stainless steel diaphragm. These discolorations are no reason for reclamation.

The fireplace-boiler has to be suppressed after the hydraulic connections to the heating system. A wall surrounding the device is possible only after this pressure test. Costs that arise due to the necessary removal of the surrounding wall of the boiler unit or for reworking or replacement of the boiler are not covered by Ulrich Brunner GmbH.

4 DELIVERY CONTENT

- Fireplace-boiler (the fireplace-boiler AK Tunnel 38/86, 45/101 and Stil 51/67 will be delivered separately. Please assemble corpus and boiler parts at side).
- Combustion chamber lining
- Cleaning brush
- Thermal drain protection (TAS) 3/4 "with immersion sleeve 1/2" and 4 m long capillary

Safety valve (to be provided by the customer) and thermal protection (TAS) must be installed outside the tile stove or fireplace casing! The maximum permissible ambient temperature for the safety valve is 60 ° C, for the TAS 70 ° C.

As a fitting accessory, we offer:

Art.Nr.:	00717.1	Pump group tiled stove. Pre-assembled unit consisting of: high efficiency circulating pump with gravity brake, thermometer and return lift.
Art.Nr.:	00719.1	Pump control tile stove Differential temperature control with minimum temperature limitation and two immersion sensors.
Art.Nr.:	00721	Backflow lifting - thermal valve (If the pump group is not used, item 00717.1)

5 DESCRIPTION OF CONNECTIONS

VL	Flow line	E	Drain pipe coupling
RL	Return line	FTAS	Thermal probe coupling
SVL	Safety device supply	TF1	Temp. sensor coupling
SRL	Safety device return	TF2	Temp. sensor coupling
AE	Automatic breather	T1	Temp. sensor for EAS/EOS

Caution: Unused connections must be closed tight with plugs! At delivery, the pipe couplings and connecting pieces are secured by plastic caps or plugs. Remove them just before connecting. Those caps and plugs are not water-tight and cannot remain on the boiler connections.

6 REQUIREMENTS FOR LOCATION

Possible locations for a wood-burning stove or fireplace are only such rooms, where no danger can occur, if only the instructions for use are being followed and the system is properly used. The state, structure and intended use of the room must be considered, when choosing the location.

Please consider the massive weight of the system. If the floor is not strong enough to bear such load, it has to be distributed by suitable means.

A heating device **may not be located** in the following rooms:

1. Where sufficient volume of combustion air is not guaranteed.
2. Where flammable materials or explosives are stored, manufactured or processed.
3. Which are commonly accessible. Stairways in residential buildings with access from only two flats are not considered as commonly accessible rooms.
4. Where exhaust fans of ventilation or air heating systems are running, unless safe operation of the fireplace is ensured. This is ensured, when:
   - The systems are causing only circulation of air within the room.
   - The systems are equipped with safety devices, which automatically and securely prevent negative pressure in this room.
   - If simultaneous operation of fireplace and ventilation systems is prevented by safety devices.
   - If the total negative pressure level caused by the stream of combustion air of the fireplace and the airflow volume of the ventilation systems in this room and other rooms included in one ventilation system does not exceed 0.04 mbar. This must be ensured even if easily accessible controls of the ventilation system are being manipulated or removed.
   - If exhaust gas flow is being monitored by special safety devices.
   - If the construction type or dimensioning of the systems are excluding the possibility of dangerous negative pressure.

Please consult the location of your fireplace, chimney connection and combustion air supply with your local chimney sweep.

7 COMBUSTION AIR

Sufficient combustion air supply

A fireplace may be installed only in rooms, where sufficient combustion air supply is guaranteed. Normal operation requires sufficient air supply using a separate **combustion air connection** for the fireplace.

Sufficient combustion air supply is present, when by natural means or using technical equipment a combustion air volume of 12,5 m^3 per 1 kg fuel throughput can stream into a room with wood-burning fireplace over a period of 1 hour at calculated negative pressure below 0,04 mbar (4 Pa) against outside air pressure. This is equivalent to a speculative heating power (PLF) of 8 kW per 1 kg fuel throughput.

When other fireplaces are in operation in the same room or different rooms included in one room combination, these fireplaces require at least 1.6 m^3 of combustion air per hour for each kW of their total rated heating power. When a room combination contains only a small volume of air and the building is relatively airtight, a separate combustion air supply from outdoors is required.

Combustion air supply is ensured in rooms with at least one window or one door which can be opened to outside of the building, or when these rooms are directly connected or interconnected with other rooms of such type. Rooms considered as directly connected or interconnected, can be only parts of one apartment or one facility of other kind. Particular attention to combustion air supply is to be paid, when exhaust fans and other heat generators in the same room combination are operated, or when multiple heating devices are connected to one single chimney.

Ventilation systems in this room combination cannot create negative pressure, which could affect the functioning of the fireplace. Exhaust ventilation systems operating in the same room or room combination together with fireplaces, can cause many problems.

When the fireplace allows for open door use, the volume of required combustion air is significantly increased (see technical data).

Combustion air ducts

If external combustion air supply is necessary, it must be connected directly to the air supply connecting piece of the fireplace, to prevent possible air drafts.

The combustion air duct must have sufficient cross-section. It must be laid using the shortest way and without unnecessary bends, to reduce flow resistance. Combustion air duct dimensioning must be according to EN13884; flow resistance has to be estimated by calculation and must be taken into account!

Components of combustion air duct must be made of non-flammable, dimensionally stable and abrasion resistant materials (DIN 4102 A1 or Class A1(B2) according to DIN EN 13501-1); they must ensure tightness und be accessible for inspection and cleaning.

Thermal insulation is necessary from the fire-protection point of view, if air temperatures >85°C are possible.

Temperatures below dew point can cause water condensation, therefore appropriate insulation must be used.

For buildings with more than two storeys and when crossing fire protection walls, the construction of these ducts must prevent fire and smoke from penetrating other fire protection zones (their components must have a fire resistance rating of >90 minutes (F90)). See also national building law.

If the external air supply duct has a separate flap for closing, the position of this flap must be recognizable. It must be ensured, that the external air supply flap is open until the fire is burning. Air suction grilles or flaps cannot narrow the free cross section.

Remember about noise protection!

8 ASSEMBLY

CAUTION: It is absolutely necessary to observe fire safety guidelines regarding thermal insulation and vent openings. When to much wood is loaded into a Kamin-Kessel fireplace, the chimney and/or surrounding structures/furniture may become overheated. **Fire hazard!**

Set the Kamin-Kessel vertically in the desired location. The Kamin-Kessel boiler must be placed on a suitable surface with sufficient carrying capacity. If the surface is not strong enough, it should be adapted to the required extent by appropriate means (e.g. weight distribution).

Before you start with construction works, please check the self-closing door function first and then secure the lifting door in the highest position. Hint: Cover the glass and door frame with cling film (do not use self-adhesive films) to prevent dirt deposits. Remember to remove the cling film before lighting a fire!

Kamin-Kessel without integrated combustion air flap: The combustion air flap is provided with a flexible hose and the necessary hose clamps in a separate accessory pack. The combustion air flap is connected with the flexible hose to the Kamin-Kessel body.

CAUTION: If the combustion air flap is not tight and stable, the Kamin-Kessel boiler cannot be operated! The provided combustion air nozzle can be installed on both sides or on the back of Kamin-Kessel boiler. The unused openings for combustion air connection are closed with a blind cover, or they have to be closed again after the connection has been moved to another side.

CAUTION: Do not forget to install the blind cover after the combustion air connection is moved!

Mounting of combustion chamber

For optimal heat transfer between the combustion chamber walls and boiler case, the fireclay linings must be set on fire-resistant mortar to ensure perfect contact with boiler case on entire surface.

AK 45/101, AK 38/86 and Stil-Kessel 51/67

The AK 45/101, AK 38/86 and Stil-Kessel 51/67 boilers are delivered with separate fireplace body and boiler attachment. The boiler attachment must be placed on top of the fireplace body and attached with screws on site.

Please note, that the mounting bracket on the lifting door side must be removed before the boiler attachment is placed on fireplace body. Otherwise it will collide with other fireplace body components.

Put the boiler attachment in place carefully!

Do not move the boiler attachment on top of the fireplace body, because it will damage the sealing ropes.

After assembly, attach the mounting bracket again and affix the boiler attachment with screws to the fireplace body. Tighten the screws diagonally with equal strength. Remember to check, if the boiler attachment is aligned to level.

The boiler attachment must lie with its sealing rope on the fireplace body; metal to metal contact is not allowed!

Illustration 1: Mounting bracket removal

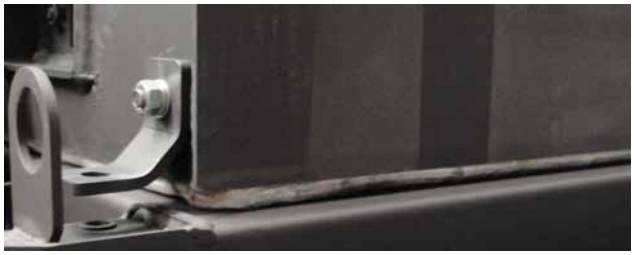


Illustration 2: Boiler attachment on fireplace body

9 CHIMNEY AND SMOKE PIPE CONNECTION

Chimney and smoke pipe connection design must be in accordance with DIN 18160.1 or DIN EN 15287-1; dimensions must be calculated according to DIN EN 13384.

Connection of multiple fireplaces to the same chimney is possible, when it can be proven that the chimney is suitable, even if the design of these fireplaces is different (calculation of flow and thermal balance and approval from chimney sweep are necessary). However, it is not possible for fireplaces designed for open door use. Remember to use a separate chimney connection in this case.

If the connecting pipe between additional reheating devices (radiators, storage mass) and chimney is a steel flue gas pipe, it must be suitable for this application, it must conform to DIN EN 1856-2 standard and have a CE mark. The connecting pipe must be connected directly to the chimney.

A soot fire resistant chimney of T400 type is necessary for safe operation.

All smoke pipe connections must be sealed tightly! Remember to provide access for cleaning!

10 MOUNTING INSTRUCTIONS FOR EAS / EOS VARIANTS

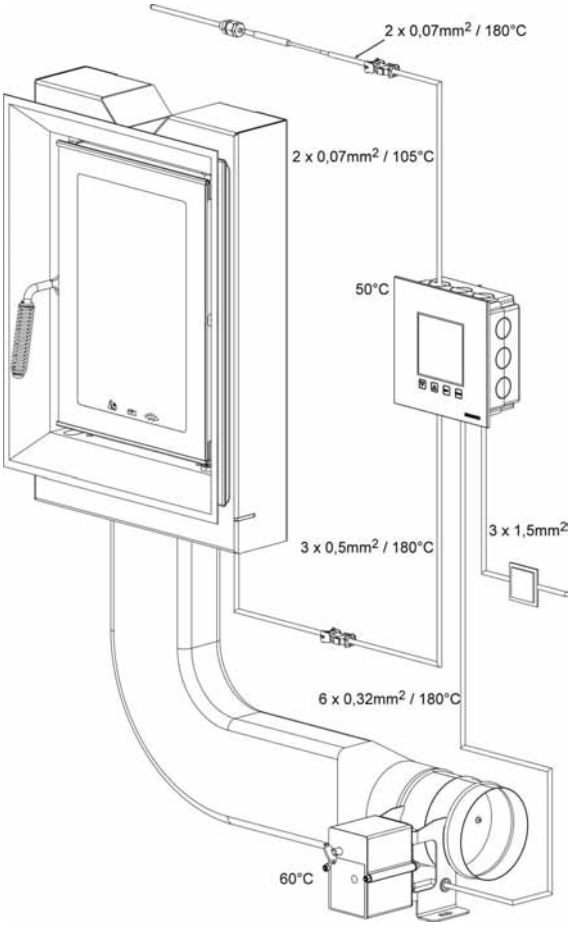


Illustration 3: Schematic layout of EAS

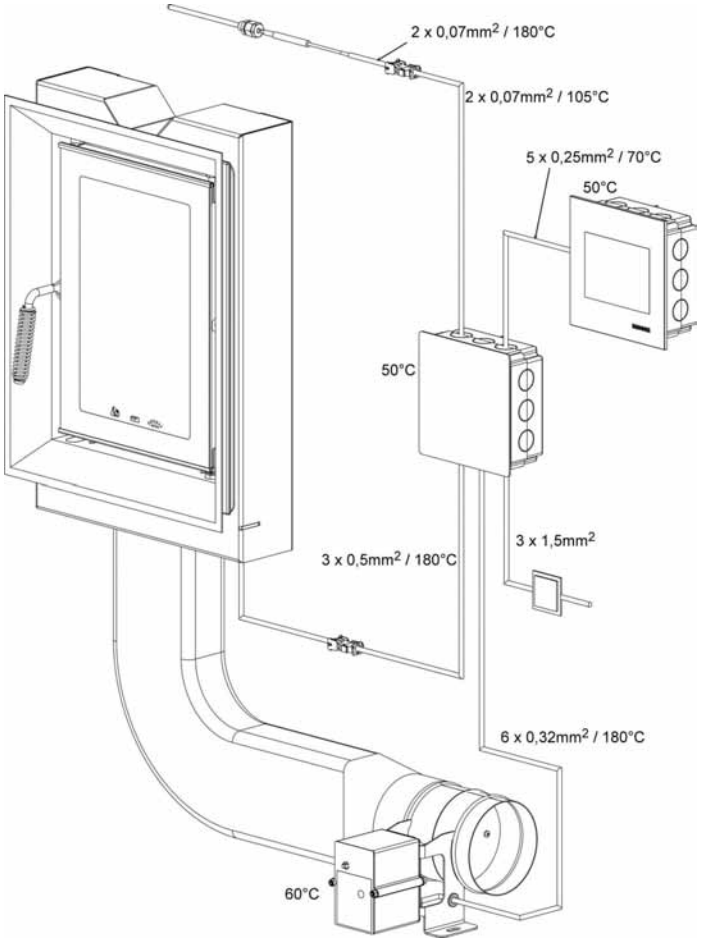


Illustration 4: Schematic layout of EOS

The indicated temperatures are maximal permissible temperatures of components!
The indicated cable dimensions are minimal dimensions!

Installation of electronic components must be prepared and performed carefully. Please pay attention to the following points:

• The flush-mounting box must be fitted in level and clean, to ensure easy, tension-free installation of electronics.

• Prevent any physical contact with electronic components - possible electrostatic discharge can damage them.

• Humidity can affect electronic components. Therefore, it is very important to ensure clean and dry installation of electronics.

• If possible, avoid installation of electronic components in exterior walls to prevent risk of corrosion at temperatures below dew point.

• The control unit must not be installed in hot parts of the tiled stove casing.

• The selected type of installation must ensure that temperatures do not exceed +40# (140°F) and the unit is not exposed to direct heat radiation.

For units with external air supply, the motorized combustion air flap assembly cannot be installed in such way that the motor is located under the flap. Condensate could penetrate the motor and destroy it.

To avoid risk of damage, all cable conduits leading from electronics into the heating chamber must enter at the bottom of the stove casing. Cable conduits cannot end in upper parts of the heating chamber due to excessive temperature.

All electronic components must be accessible after installation for revision and replacement. When selecting place of installation, keep in mind the max. permitted temperature for the component. Components cannot be installed in closed spaces; proper ventilation must ensure sufficient heat discharge.

11 OVERVIEW OF FIRE SAFETY AND PROTECTION OF OTHER STRUCTURES AGAINST HEAT

Fireplace without convection casing

(shown on the example of an Eck-Kamin fireplace)

Installation in front of or next to an adjacent wall (U value ≥0.4W/m²K):

Installation in front of or next to a flammable wall (U value ≤0.4W/m²K):

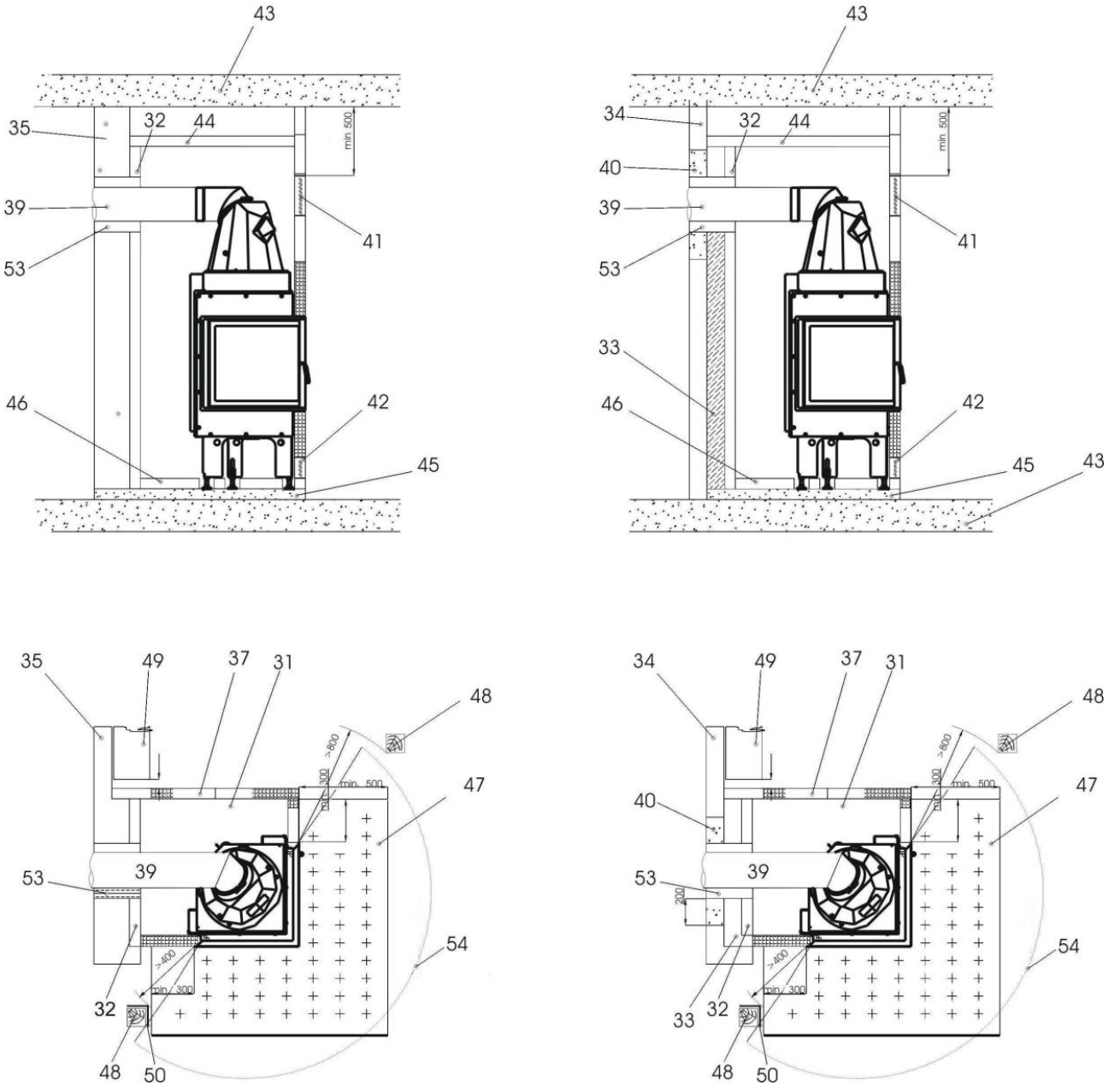


Illustration 5: Basic principles of fire safety and heat insulation

Number reference:

21	Heating gas pipe
31	Convection space, distance between fireplace surface and external cladding / thermal insulation
32	Thermal insulation; see "Approved insulation materials"
33	Brick lining, at least 10 cm, mineral building materials, such as bricks according to DIN 105 or sand-lime bricks according to DIN 106
34	Protected wall: these are walls from flammable materials or containing flammable materials, main walls from reinforced concrete, as well as all walls with built-in furniture or wooden panels behind them (heat accumulation).
35	Adjacent walls: walls from mineral building materials, such as aerated concrete, bricks, sand-lime bricks, without flammable objects behind them.
36	Convection space, distance between reheating surface and thermal insulation
37	Active (heat-transferring) trim made of non-flammable materials (A1 class according to DIN EN 13501-1), such as ceramic stove tiles, fireclay bricks or plates.
39	Smoke pipe connecting piece
40	Fire protection on smoke pipe entrance
41	Warm air grating/opening
42	Circulating air grating/opening
43	Room ceiling
44	Thermal insulation for protection of room ceiling
45	Concrete slab, at least 6 cm thick, with sufficient reinforcement for weight distribution.
46	Thermal insulation for protection of floor
47	Non-flammable floor covering
48	Structure made of flammable materials
49	Furniture or flammable objects on adjacent wall
50	Air cooled heat protection
51	Distance between floor insulation and air intake
52	Decorative beam over fireplace door
53	Thermal insulation of the smoke pipe connecting piece
54	Heat radiation range
	Fireplace
	Reheating surface
	Heating gas pipe
	Convection casing
	Convection air duct

12 BUILDING PROTECTION

All building areas and (adjacent) walls which are in contact with the heating chamber must be protected against overheating. Fire protection and static considerations must be taken into account. From a static point of view, the admissible temperatures must be lower than specified by fire protection requirements.

Adjacent walls cannot be exposed to temperatures above 85°C (fire protection requirement). The same is valid for built-in furniture. Required insulation measures depend on the type and design of the surface. The load bearing capacity of the mounting surface must be checked; appropriate means for load distribution must be taken if necessary.

Heat insulation

Heat insulation layers (32/44/46/54) must be laid smoothly and overlapping. The surface must be clean and resistant to abrasion. Their planned position must be permanently stable and durable. Insulation layers from abrasive materials must have an appropriate covering (for example, using steel panels). Only approved insulation materials must be used (see "Approved insulation materials"). The insulation thicknesses specified in Technical Data for flammable materials or other materials including flammable components are valid only for components with a heat transfer coefficient (U value) ≥ 0,4W/m²K. For U value < 0,4W/m²K, additional measures for thermal insulation must be taken (see DIN 18896:2013-12).

Protection of building walls

There are two types of building walls: "protected walls" and (other) "adjacent walls". For protected walls, a thermal insulation layer (32) and a brick lining (33) must be used. The brick lining must reach up to the insulation of ceiling or to the height of external casing, and must extend at least **20 cm (7.87 in)** above the smoke pipe connecting piece (39).

- protected walls are Walls from flammable materials or containing flammable materials, and all walls with flammable objects behind them (e.g. built-in furniture, wooden panels).

- other walls (35), these are: Walls from mineral building materials, such as aerated concrete, bricks, sand-lime bricks, with thickness of more than **10 cm (3.94 in)**. For these walls, the insulation layer (32) is enough; a brick lining (33) is not necessary.

Protection of ceiling above the fireplace

If the stove casing reaches up to the ceiling (43), it must be protected by a sufficient insulation layer (44), if only the ceiling is made from flammable materials or includes supporting elements of the building structure.

Floor protection

Floors without sufficient load distribution must be provided with a reinforced concrete slab (45) of at least 6 cm (2.36 in) thickness. The mounting surface must be protected against excessive temperatures by sufficient insulation layer (46).

Firewood storage

The surface temperature of the walls surrounding a recessed firewood storage must not exceed **85 °C**. This must be ensured by appropriate construction or insulation of walls.

Warm air vents/gratings

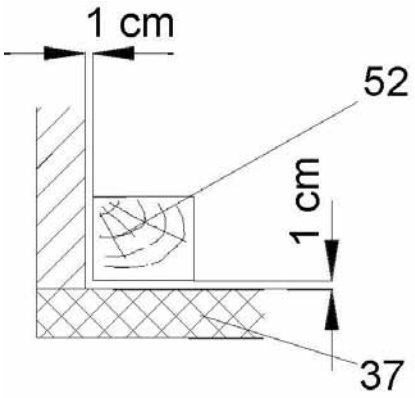
Warm air vents (41) must be situated at least 50 cm (19.69 in) below ceiling level and 30 cm (11.81 in) away from lateral built-in furniture, flammable materials or supporting concrete walls. Air gratings or vents must be located possibly high, to prevent heat accumulation within the external fireplace casing. Air gratings or vents must allow for easy cleaning. The required unobstructed area of air gratings depends on the type of reheating device. The air gratings or air vents must be arranged to avoid clogging up.

Active air cooling

Active air cooling is a permanently open, non-closing shaft, gap or empty space, where part of the heat projected by the fireplace is dissipated by convection to protect the building or flammable components in adjacent walls or mounting surface.

Decorative beam over fireplace door

Decorative beams (52) are allowed with **1 cm** clearance between the beam and the wall of the fireplace casing (37), only outside the heat radiation range. The clearance must not allow for heat accumulation between the beam and the fireplace wall. Decorative beams cannot be parts of the building structure.



Floor before fireplace door

Floors from flammable materials must be protected by a cover (47) from non-flammable materials or replaced by non-flammable materials with the following dimensions:
- in front of the fireplace = at least **50 cm (19.69 in)**
- on both sides of the fireplace = at least **30 cm (11.81 in)**

above the fireplace door opening

Within heat radiation range of the fireplace

Structures from flammable building materials or including flammable components (48), as well as built-in furniture (49) must be separated from the combustion chamber opening in front, to the sides and above the fireplace by at least **80 cm** air clearance. If these parts are protected by a heat protecting screen cooled by air on both sides, a distance of 40 cm must be kept.

Outside the heat radiation range

Structures from flammable materials (48) or with flammable components, as well as built-in furniture (49) must have at least **5 cm** air clearance to the outside walls of the fireplace. In this clearance, the room air must be able to circulate without any obstacles. Heat accumulation must be avoided. Structures covering only small areas of the fireplace casing walls, like flooring, adjoining wall coverings and insulation layers on ceiling and building walls, can be led right up to the fireplace casing.

Electric lines

Mounting surface must be free from typical electrical wiring, unless it is protected by special measures against permanent influence of temperatures >30°C (86°F). Special wiring with higher heat resistance is permitted (see TROL).

13 APPROVED INSULATION MATERIALS

Thermal insulation materials used must fulfil the following requirements according to AGI-Q 132 standard:

Material:	Group 12, 13	Rock wool or slag wool
Delivered as:	Group 06, 07, 08	slabs, stitched mats or shells
Thermal conductivity:	Group 01 - 21	
Upper temperature limit:	Group 70 - 76	equivalent to 700 °C - 760 °C
Nominal density kg/m³:	Group 08 - 18	equivalent to 80 kg/m³ - 180 kg/m³

Thermal insulation materials used must be at least equivalent to class A1 building materials according to DIN 4102, Part 1. The temperature limit for use must exceed 700°C and the density must be greater than 80 kg/m³ for these materials. The insulation material rating (heat index) must be known. In addition, insulation materials inside convection space must be abrasion-resistant and covered with non-reflecting material. Instead of brick lining and insulation materials according to AGI-Q 132, any other insulation materials approved for the given purpose by DIBt (Deutsches Institut für Bautechnik) might be used. For necessary insulation thicknesses please refer to the manufacturer's specifications.

Insulation material rating for mineral wool according to AGI Worksheet Q 132:

Insulation materials		**Delivered as**		**Thermal conductivity**		**Upper temperature limit**		**Nominal density**	
Gr.	Type	Gr.	Form	Gr.	Delivered as	Gr.	°C	Gr.	kg/m³
11	Glass wool	04	Felts	01	Mats, stitched, Limit 1	10	100	02	20
12	Rock wool	05	Lamella mats		Mats, stitched, Limit 2	12	120	03	30
13	Slag wool		Mats, stitched	02	Shells, Limit 1	14	140	04	40
		06	Slabs		Shells, Limit 2	16	160	05	50
			Shells	10	Slabs, Limit 1	.	.	06	60
		07	Segments	11	Slabs, Limit 2	.	.	.	.
		08	Braids	20	*)	72	720	.	.
		09	Panels	21		74	740	18	180
		10		99		76	760	99	**)
		11							

*) 99 is valid only for delivery forms in column 2, which have no declared limits.

**) 99 is valid only for shells.

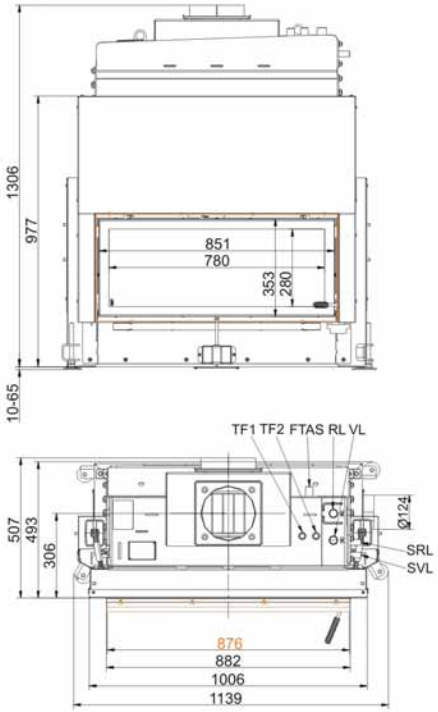
14 DIRECTIVES

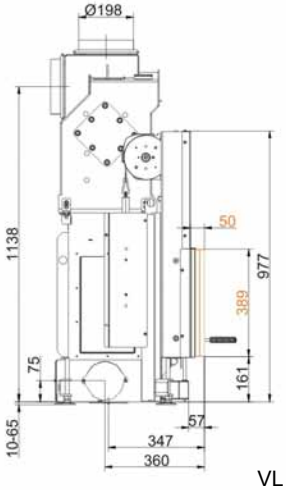
The following standards and directives must be respected when setting up or using a heating system:

TROL	Stove fitting rules and regulations for warm air heating systems
FeuVo	"Feuerungsverordnung" (Fireplace Act; relevant for German Federal Lands)
EnEV	Energy Saving Regulation
LBO	Regional building codes
VDE	electronic installation instructions
	List of technical building regulations
DIN EN 12831	Calculation of the standard heating load
DIN EN 12828	Heating systems in buildings
DIN EN 14597	Temperature control devices and limiters for heat generating systems
TRD 721 oder DIN EN ISO 4126	Safety devices against excessive pressure - safety valves Safety devices against impermissible overpressure - safety valves
DIN V 18160-1	Exhaust systems
DIN EN13384	Exhaust systems: Thermal and fluidic calculation methods - Part 1: exhaust systems with a fireplace - Part 2: exhaust systems with several fireplaces
DVGW-Worksheet W551	Technical rules for drinking water installations
In addition, it is necessary to observe the local building law and regulations for heating systems valid in your country.	

The listing does not claim to be complete!

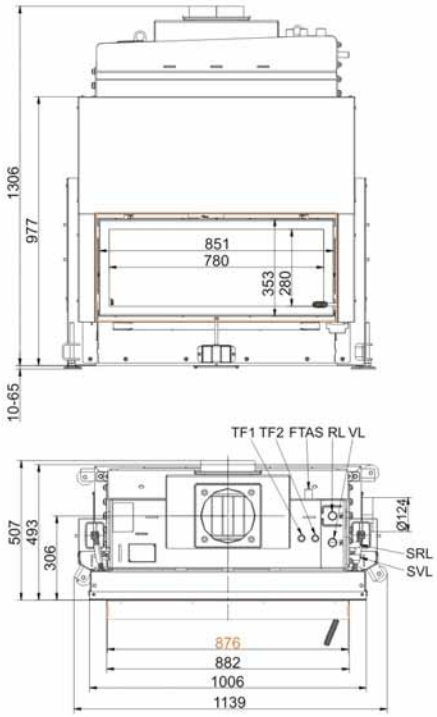
Dimension sheets - Architektur 38/86 with top-mount boiler lifting door (easy-lift)

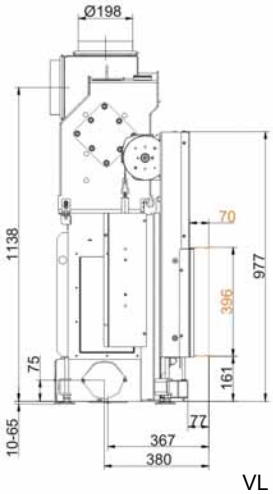




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 50 mm





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SVL	supply cooling pipe outlet ext.th.
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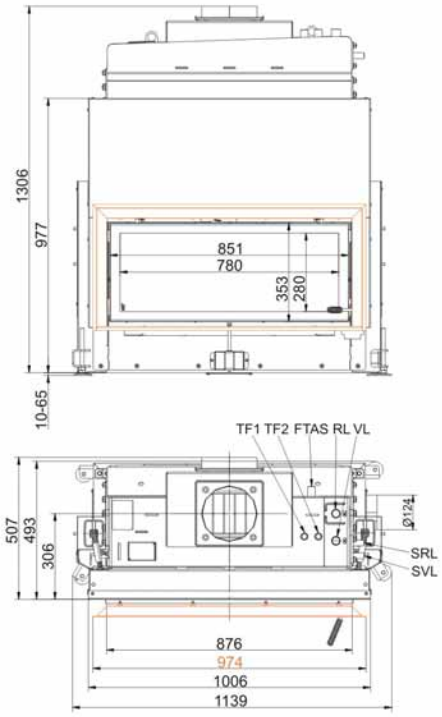
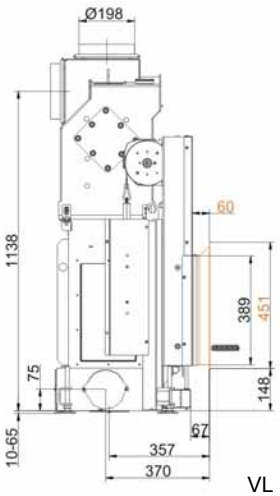
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 70 mm

Dimension sheets - Architektur 38/86 with top-mount boiler **lifting door (easy-lift)**





VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with door frame

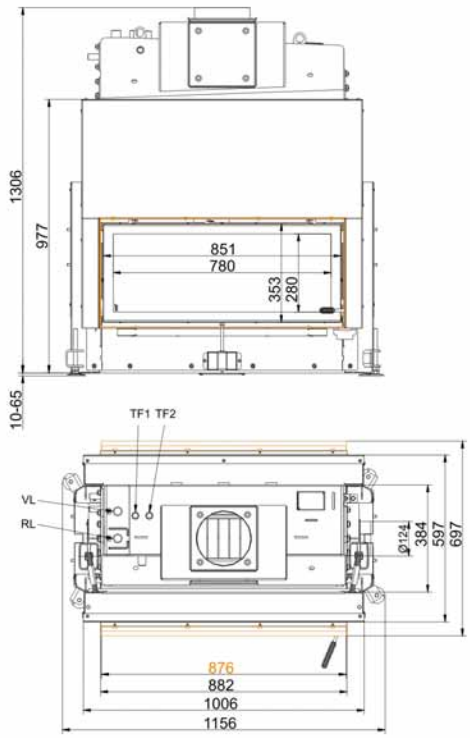
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

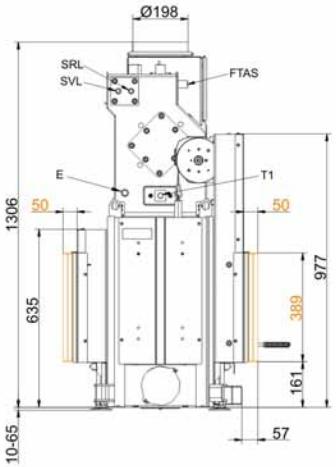
Planning and installation - Architektur 38/86 with top-mount boiler lifting door (easy-lift)

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		120.3	120.3
Data for functional demonstration			
Rated heat power	kW	14	-
Fire wood volume	kg/h	4	5.1
Combustion performance	kW	15.8	20.4
Flue gas mass flow	g/s	11.9	20.1
Flue gas temperature after:			
boiler	°C	142	149
Necessary supply pressure	Pa	12	12
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	20 - 25 / -	20 - 25 / -
Glass pane (single / double)	%	30 / 25	30 / 25
Boiler	%	50	50
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	43	43
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [3]	kg	(160 + 142) / 64	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting
3) Fireplace insert = body + top mounted exchanger

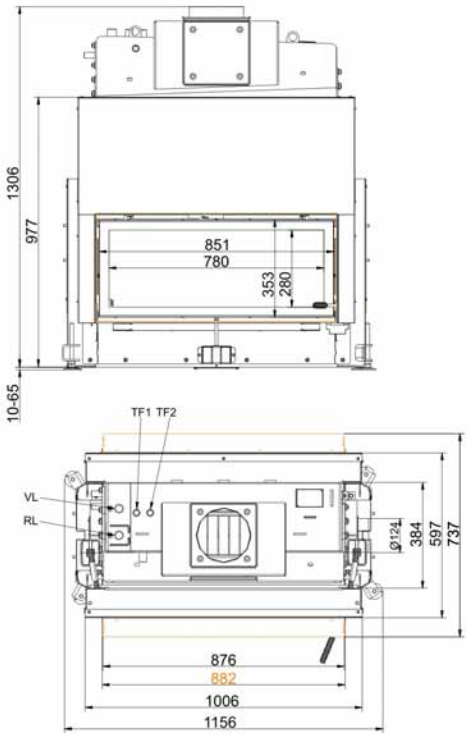
Dimension sheets - Architektur Tunnel 38/86 with top-mount boiler lifting door (easy-lift)

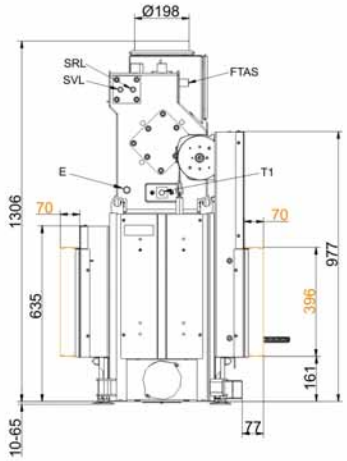




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… /tilting door with mounting frame 50 mm

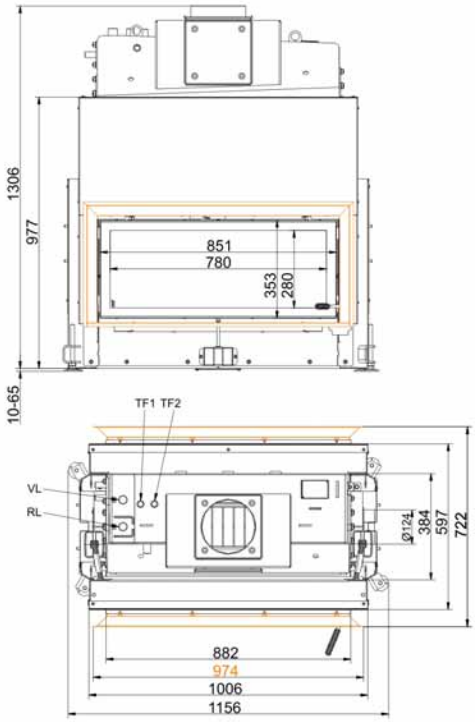


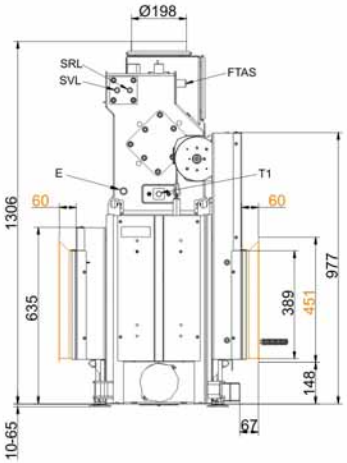


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… /tilting door with mounting frame 70 mm

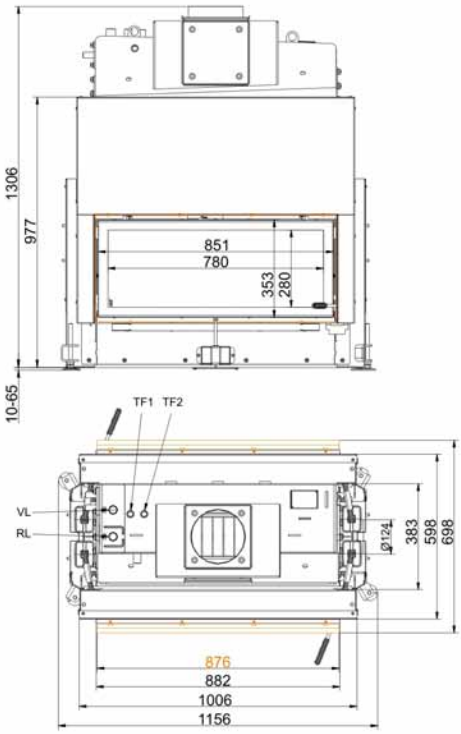
Dimension sheets - Architektur Tunnel 38/86 with top-mount boiler lifting door (easy-lift)

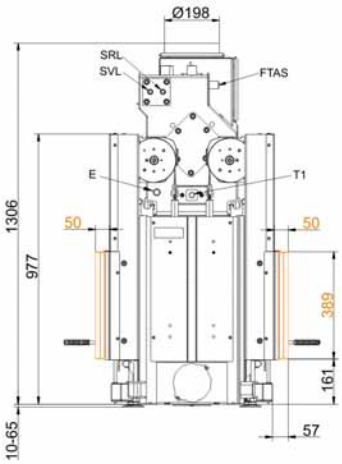




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… /tilting door with door frame





VL	supply 1"ext. th.
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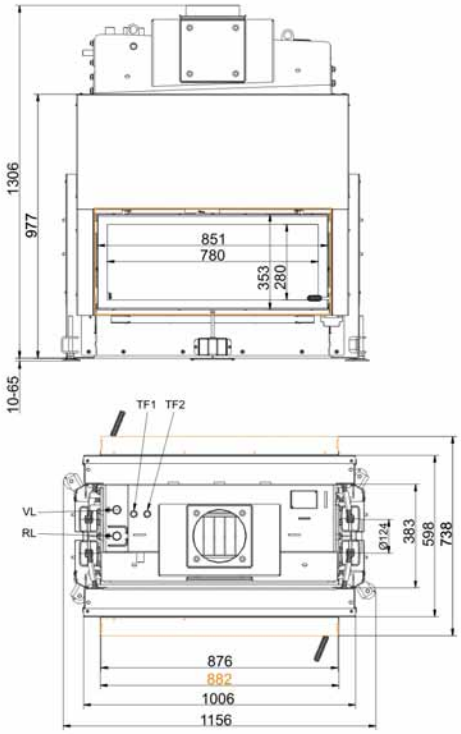
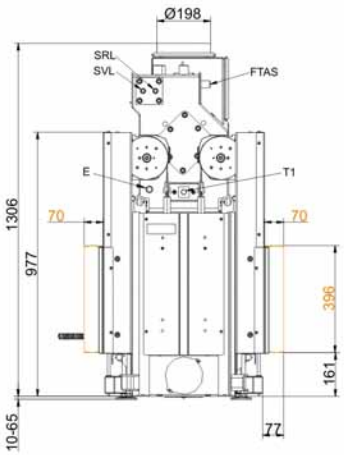
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 50 mm

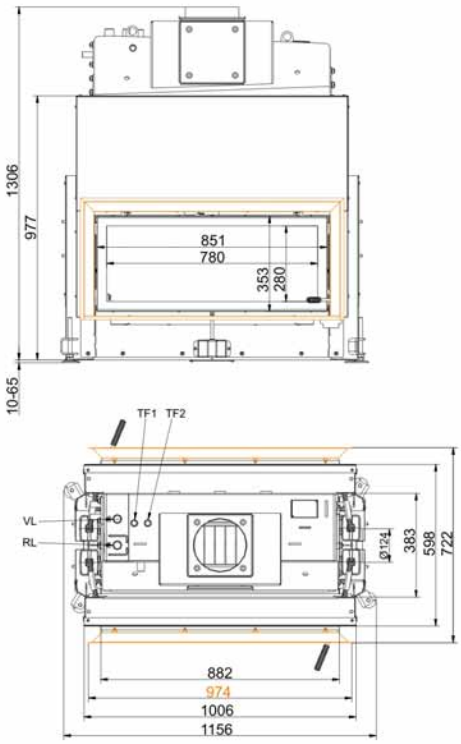
Dimension sheets - Architektur Tunnel 38/86 with top-mount boiler lifting door (easy-lift)

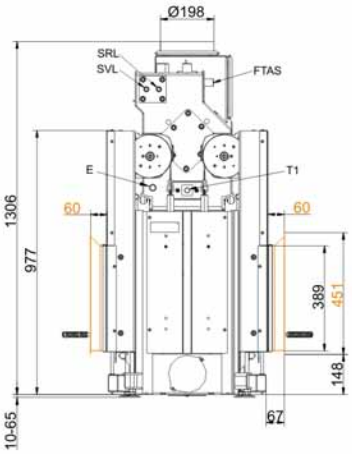




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 70 mm





VL	supply 1"ext. th.
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SVL	supply cooling pipe outlet ext.th.
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FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with door frame

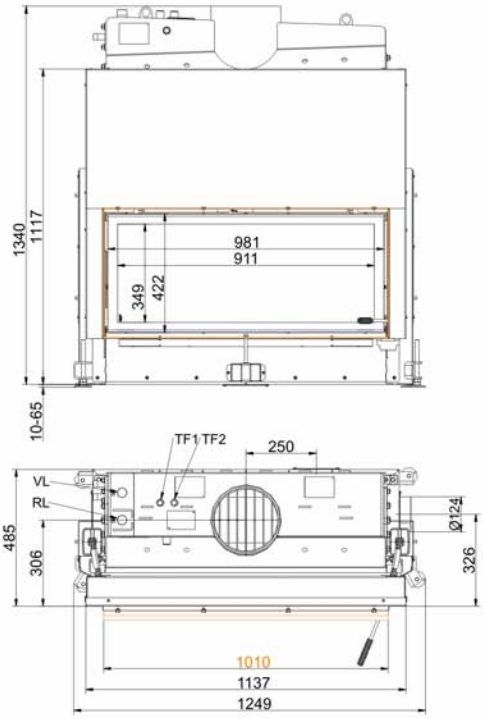
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

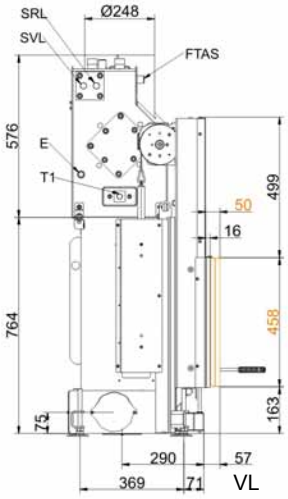
Planning and installation - Architektur Tunnel 38/86 with top-mount boiler **lifting door (easy-lift)**

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		120.3	120.3
Data for functional demonstration			
Rated heat power	kW	14	-
Fire wood volume	kg/h	4	5.1
Combustion performance	kW	15.8	20.4
Flue gas mass flow	g/s	11.9	20.1
Flue gas temperature after:			
boiler	°C	142	149
Necessary supply pressure	Pa	12	12
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	10 - 15 / -	10 - 15 / -
Glass pane (single / double)	%	40 / 35	40 / 35
Boiler	%	50	50
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	43	43
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [3]	kg	(200 + 142) / 50	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting
3) Fireplace insert = body + top mounted exchanger

Dimension sheets - Architektur 45/101 with top-mount boiler lifting door (easy-lift)





VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
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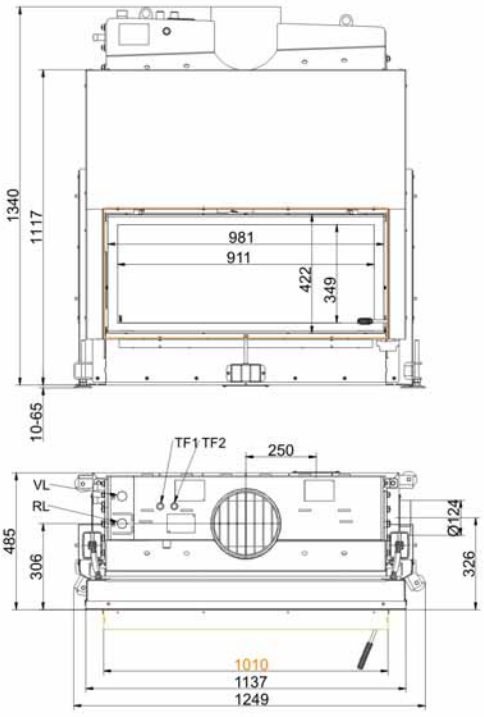
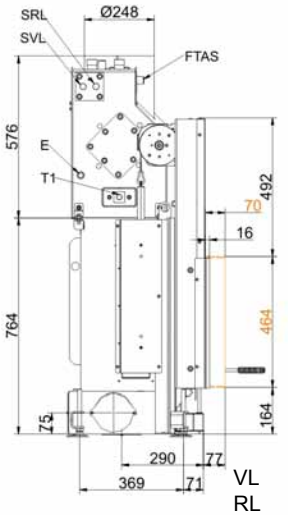
… with mounting frame 50 mm





VL	supply 1"ext. th.
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SVL	supply cooling pipe outlet ext.th.
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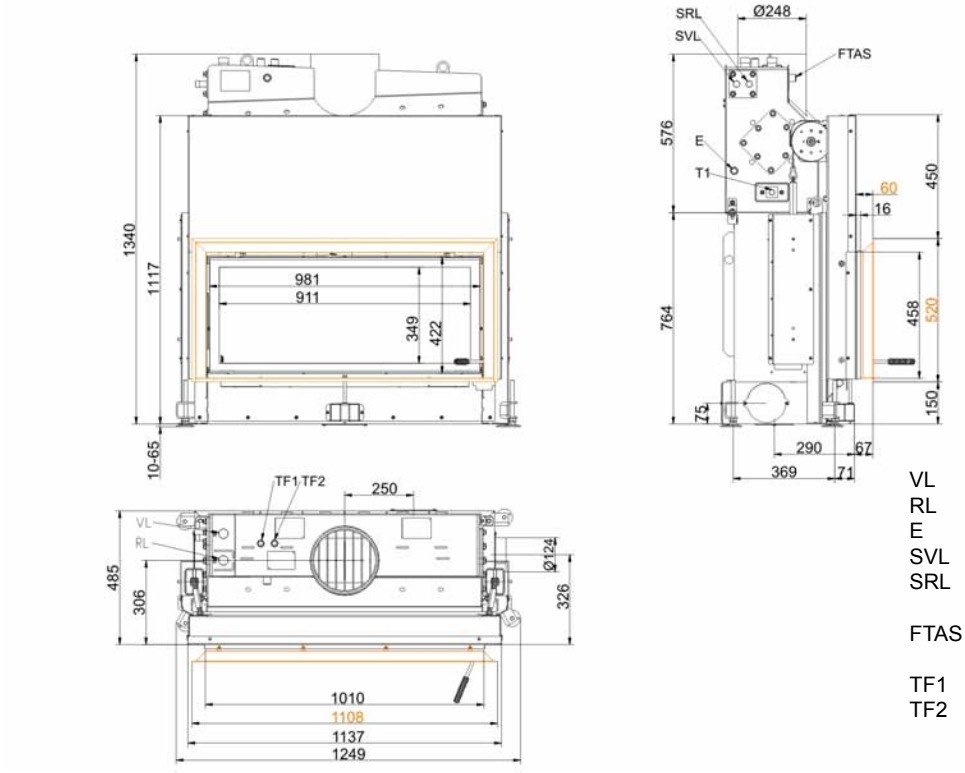
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 70 mm

Dimension sheets - Architektur 45/101 with top-mount boiler lifting door (easy-lift)



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with door frame

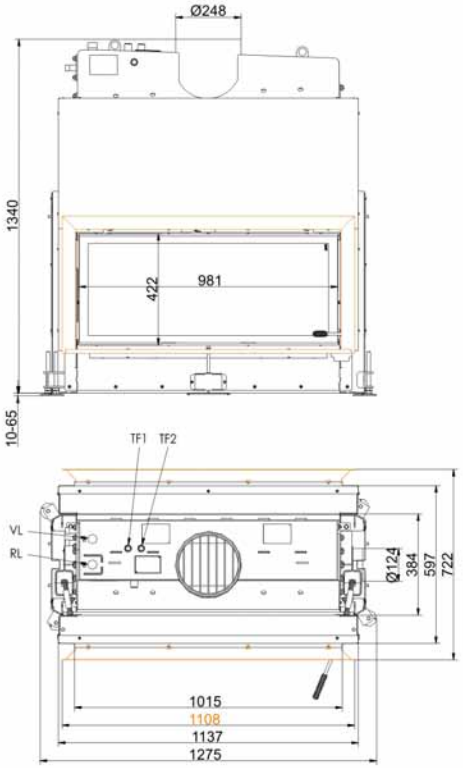
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

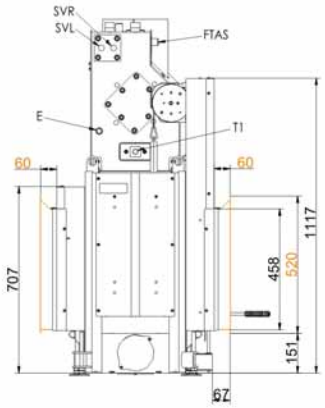
Planning and installation - Architektur 45/101 with top-mount boiler lifting door (easy-lift)

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		120.3	120.3
Data for functional demonstration			
Rated heat power	kW	14	-
Fire wood volume	kg/h	4	5.1
Combustion performance	kW	15.8	20.4
Flue gas mass flow	g/s	11.9	20.1
Flue gas temperature after:			
boiler	°C	142	149
Necessary supply pressure	Pa	12	12
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	10 - 15 / -	10 - 15 / -
Glass pane (single / double)	%	35 / 30	35 / 30
Boiler	%	55	55
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	55	55
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [2]	kg	(200 + 159) / 80	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Fireplace insert = body + top mounted exchanger

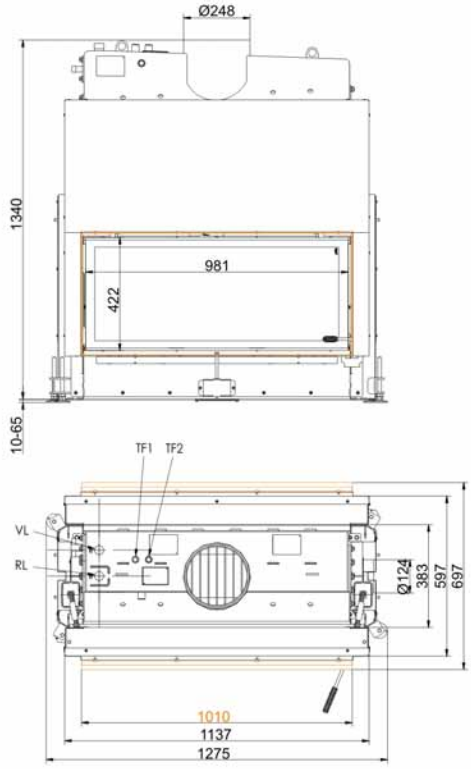
Dimension sheets - Architektur Tunnel 45/101 with top-mount boiler lifting door (easy-lift)

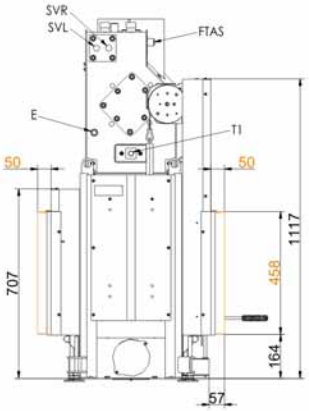




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… /tilting door with door frame





VL	supply 1"ext. th.
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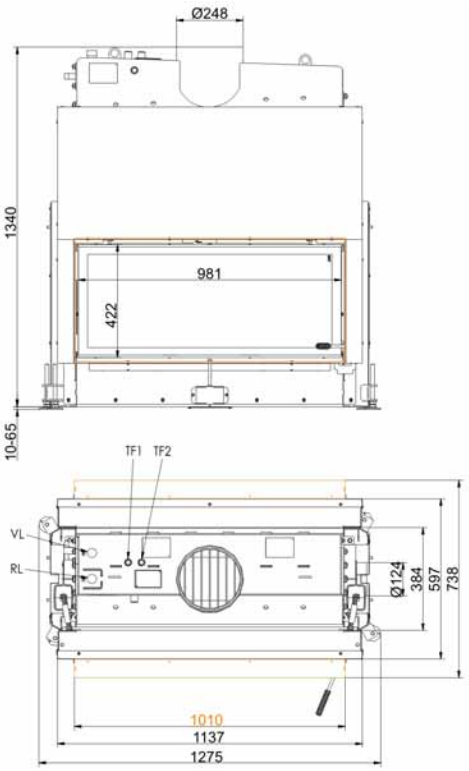
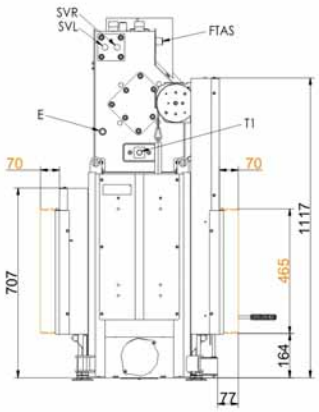
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… /tilting door with mounting frame 50 mm

Dimension sheets - Architektur Tunnel 45/101 with top-mount boiler lifting door (easy-lift)





VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
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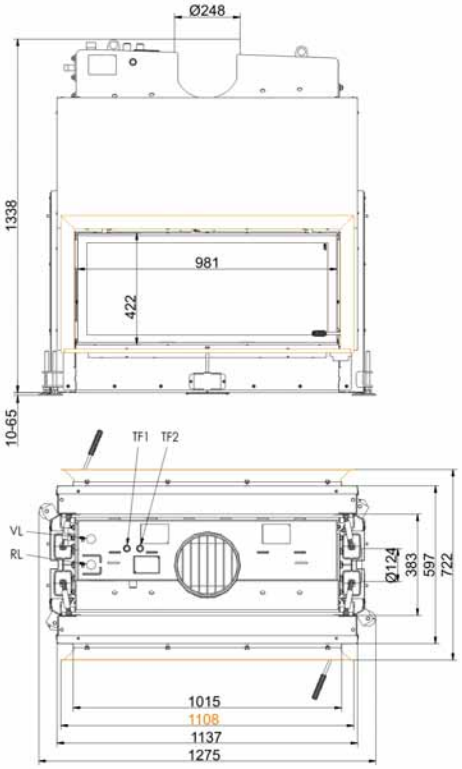
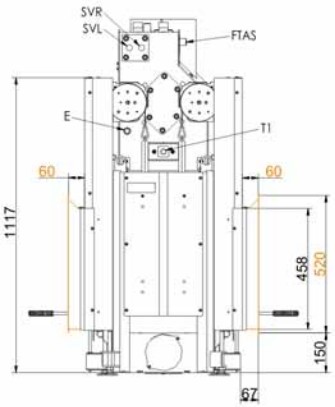
… /tilting door with mounting frame 70 mm





VL	supply 1"ext. th.
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FTAS	socket for thermal safety sensor int.th.
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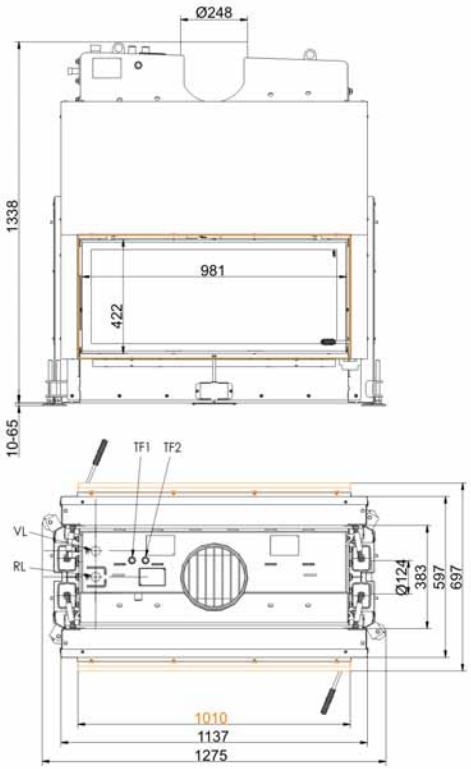
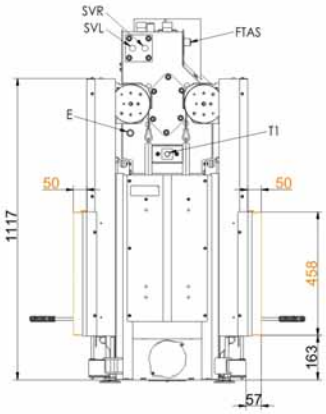
TF2	socket 1/2" for sensor int.th.

… with door frame

Dimension sheets - Architektur Tunnel 45/101 with top-mount boiler lifting door (easy-lift)





VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
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SVL	supply cooling pipe outlet ext.th.
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FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
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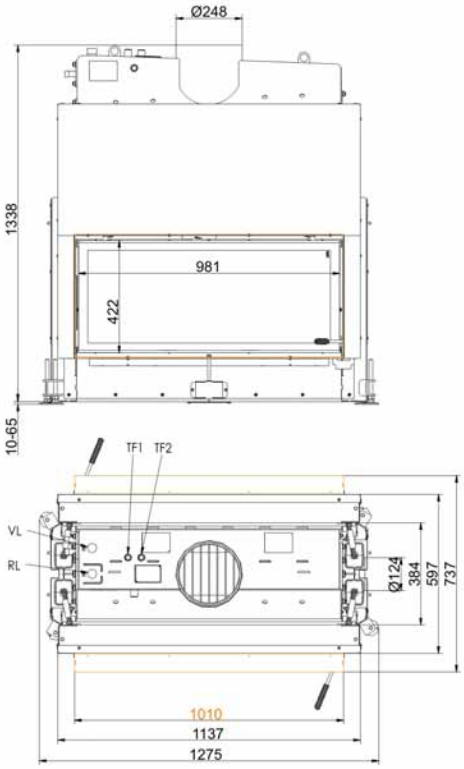
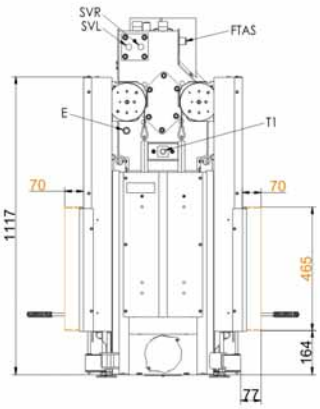
… with mounting frame 50 mm





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RL	return boiler 1"ext.th.
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SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… with mounting frame 70 mm

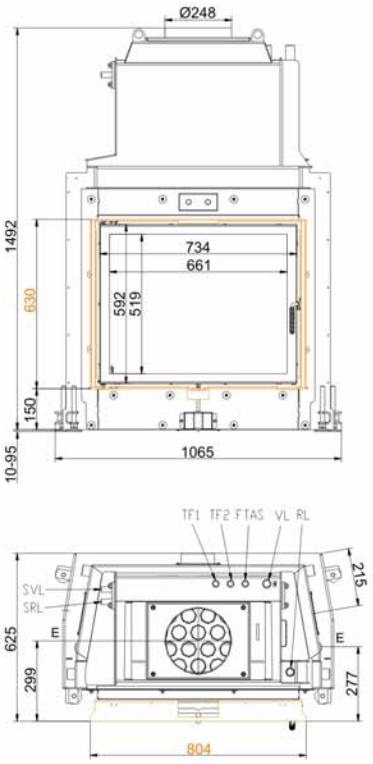
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

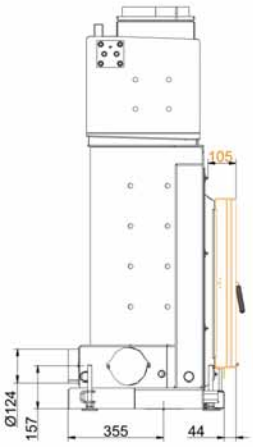
Planning and installation - Architektur Tunnel 45/101 with top-mount boiler lifting door (easy-lift)

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		120.3	120.3
Data for functional demonstration			
Rated heat power	kW	14	-
Fire wood volume	kg/h	4	5.1
Combustion performance	kW	15.8	20.4
Flue gas mass flow	g/s	11.9	20.1
Flue gas temperature after:			
boiler	°C	142	149
Necessary supply pressure	Pa	12	12
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	5 - 10 / -	5 - 10 / -
Glass pane (single / double)	%	40 / 35	40 / 35
Boiler	%	55	55
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	55	55
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [3]	kg	(231 + 159) / 59	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting
3) Fireplace insert = body + top mounted exchanger

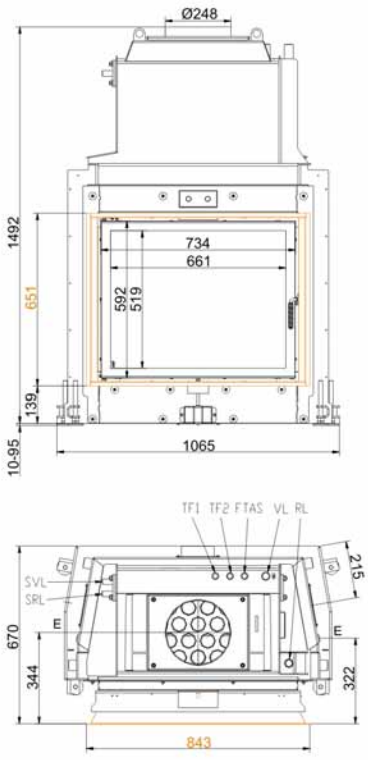
Dimension sheets - Kamin-Kessel 62/76

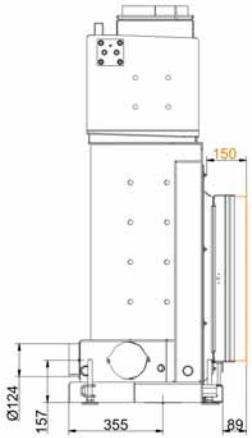




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side-opening, without thermo isolation and mounting frame

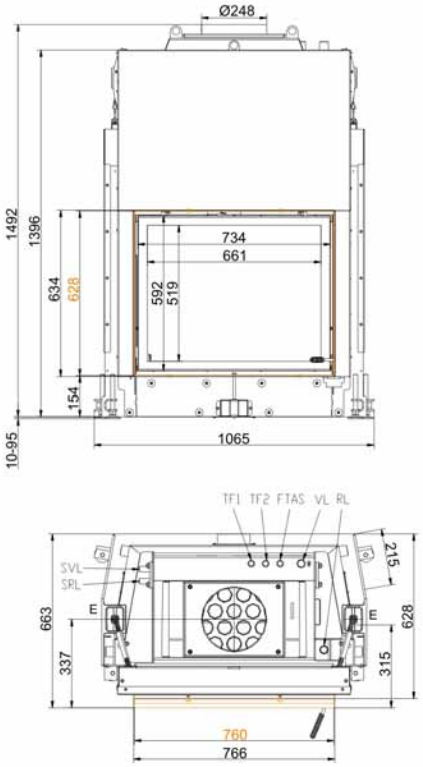


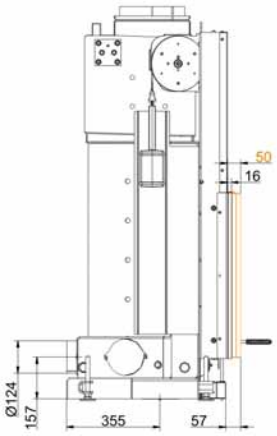


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side-opening, without thermo isolation and door frame

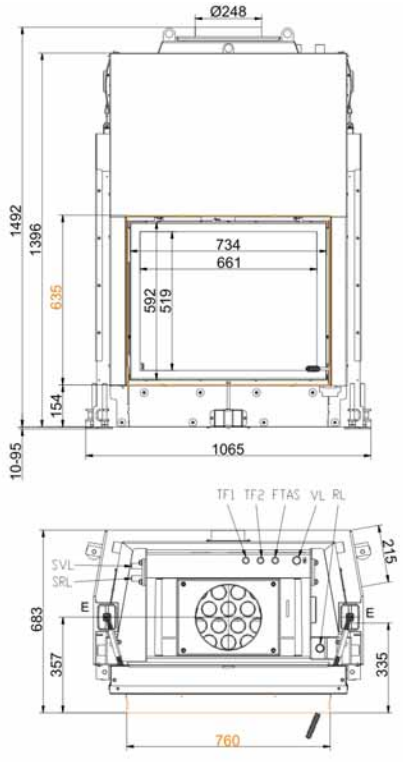
Dimension sheets - Kamin-Kessel 62/76

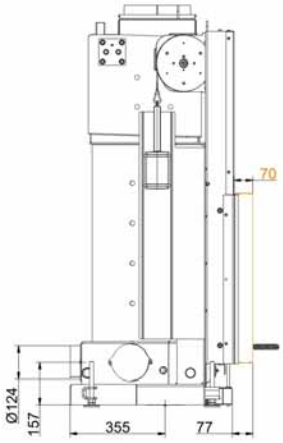




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting doors without thermo isolation and mounting frame 50 mm

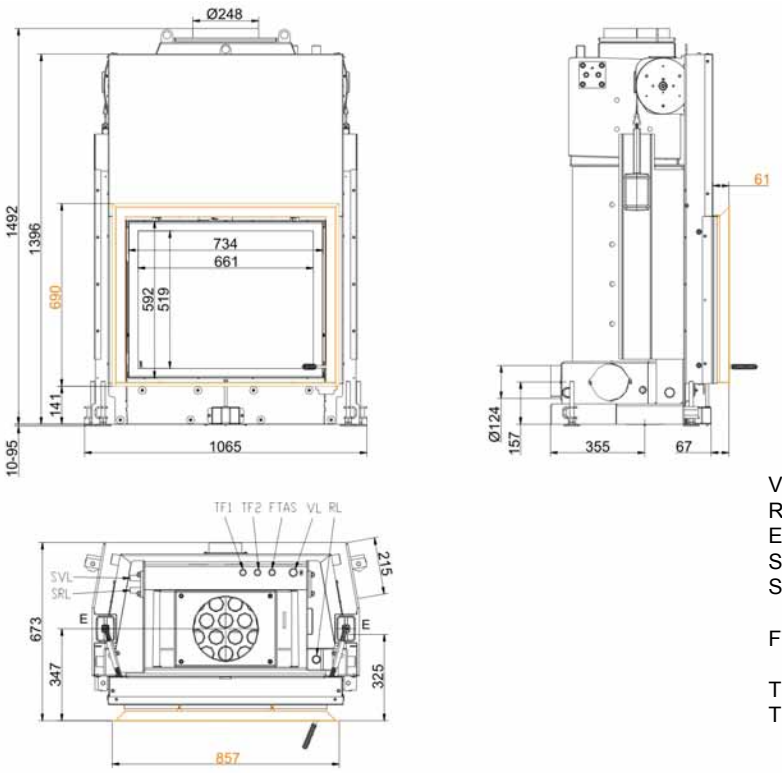




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting door without insulation and mounting frame 70 mm

Dimension sheets - Kamin-Kessel 62/76



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting doors without thermo isolation and door frame

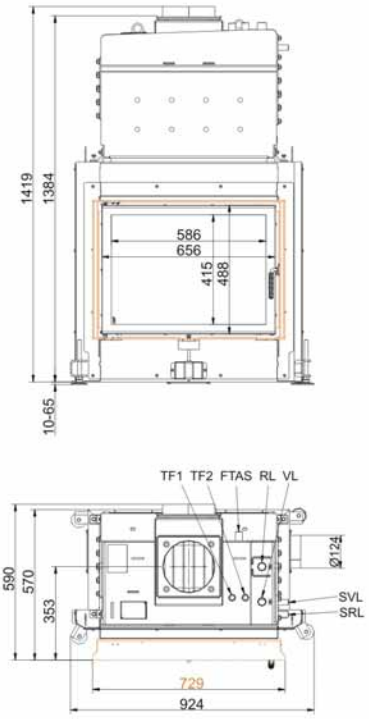
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

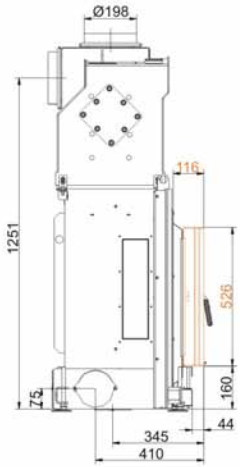
Planning and installation - Kamin-Kessel 62/76

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		115.9	115.9
Data for functional demonstration			
Rated heat power	kW	14	-
Fire wood volume	kg/h	3.8	6.5
Combustion performance	kW	14.5	32
Flue gas mass flow	g/s	13	20
Flue gas temperature after:			
boiler	°C	180	250
Necessary supply pressure	Pa	12	15
Combustion air consumption	m^3/h	35	80
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	13 - 16 / -	13 - 16 / -
Glass pane (single / double)	%	- / 35	- / 35
Boiler	%	49 - 52	49 - 52
Cross-section of gratings [1]			
Convection air	cm^2	500 / - / -	500 / - / -
Supply air	cm^2	500 / - / -	500 / - / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	15	15
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 7	10 / 7
Floor	cm	0	0
Ceiling	cm	13 / 10	13 / 10
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	99	99
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber	kg	max 350 / 93	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting

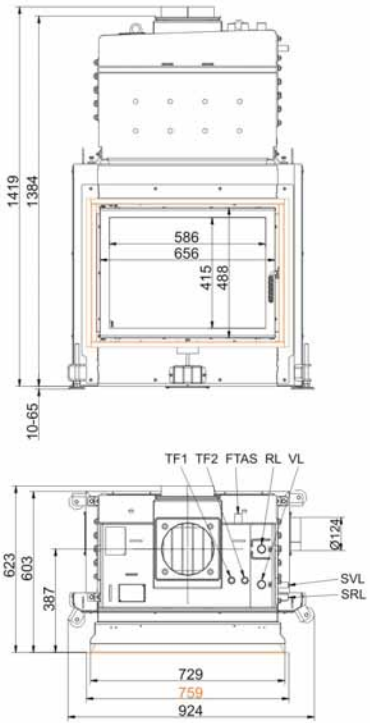
Dimension sheets - Stil-Kamin 51/67
with top-mount boiler

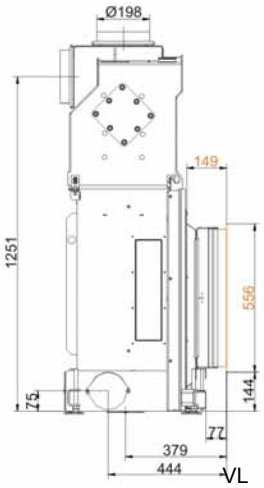




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side opening with mounting frame

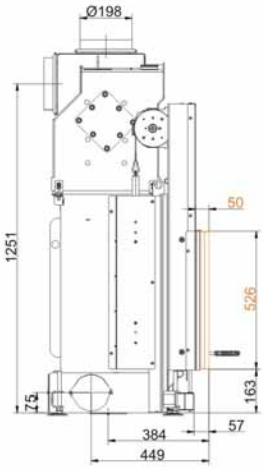


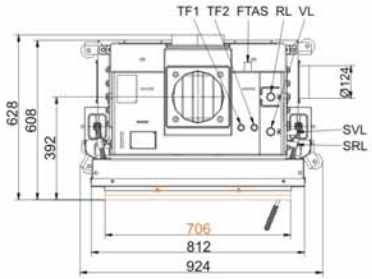


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side opening with door frame

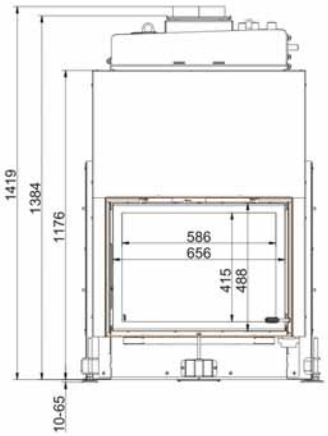
Dimension sheets - Stil-Kamin 51/67
with top-mount boiler

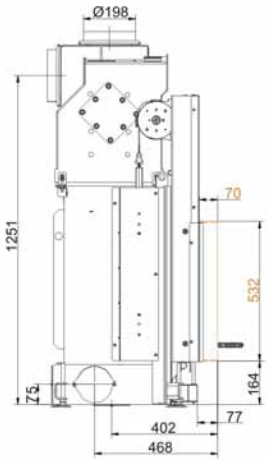


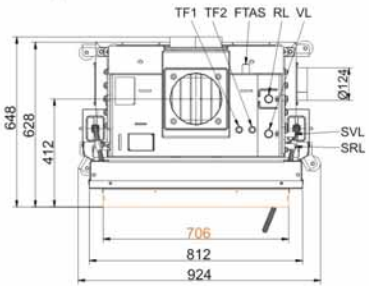


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting door with mounting frame 50 mm



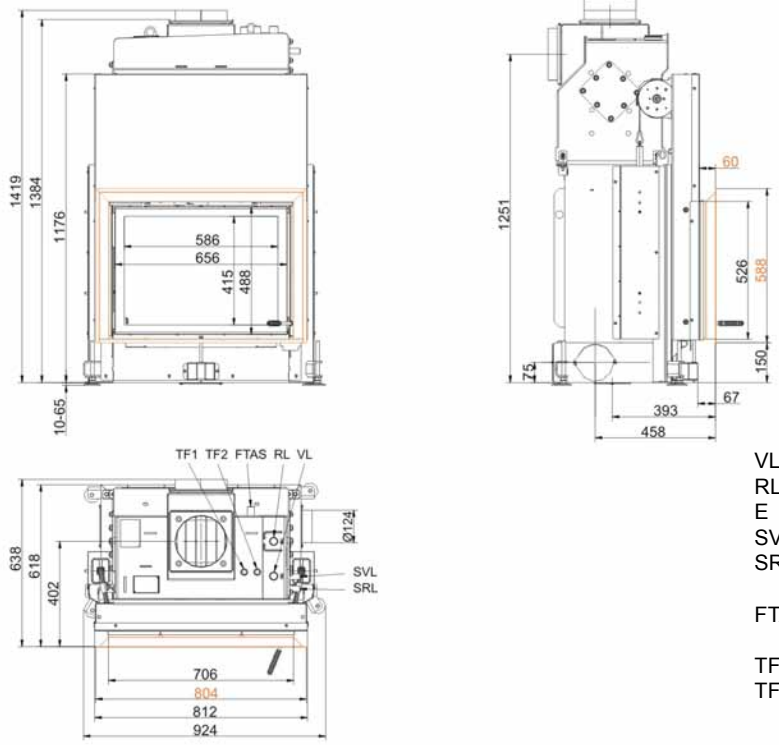




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting door with mounting frame 70 mm

Dimension sheets - Stil-Kamin 51/67
with top-mount boiler



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… lifting door with door frame

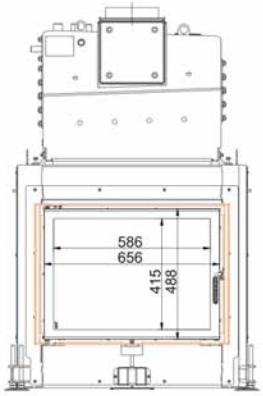
We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

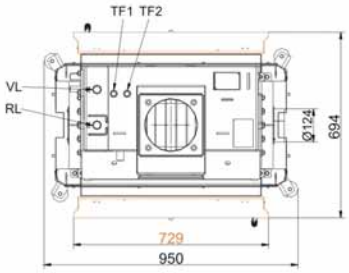
Planning and installation - Stil-Kamin 51/67 with top-mount boiler

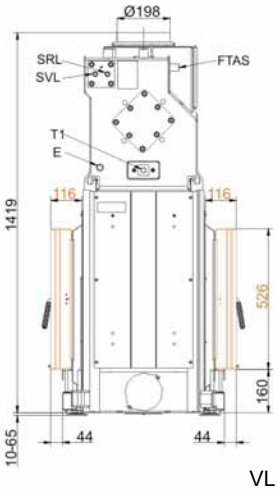
Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		117.4	117.4
Data for functional demonstration			
Rated heat power	kW	13.5	-
Fire wood volume	kg/h	3.9	5.1
Combustion performance	kW	15.6	20.5
Flue gas mass flow	g/s	10.9	25
Flue gas temperature after:			
boiler	°C	180	244
Necessary supply pressure	Pa	11	16
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	15 - 20 / -	15 - 20 / -
Glass pane (single / double)	%	40 / 35	40 / 35
Boiler	%	45	45
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	43	43
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [3]	kg	(123 + 118) / 79	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting
3) Fireplace insert = body + top mounted exchanger

Dimension sheets - Stil-Tunnel 51/67
with top-mount boiler

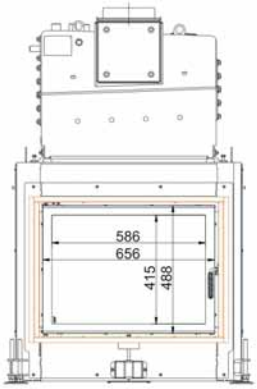


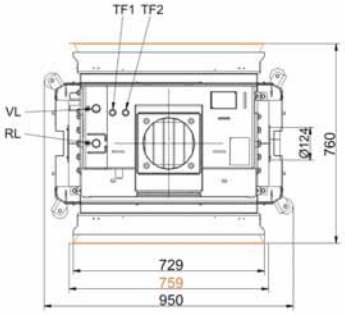


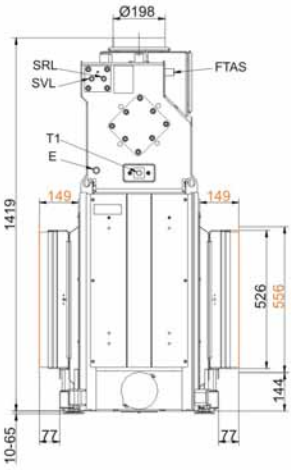


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side opening/side opening with mounting frame



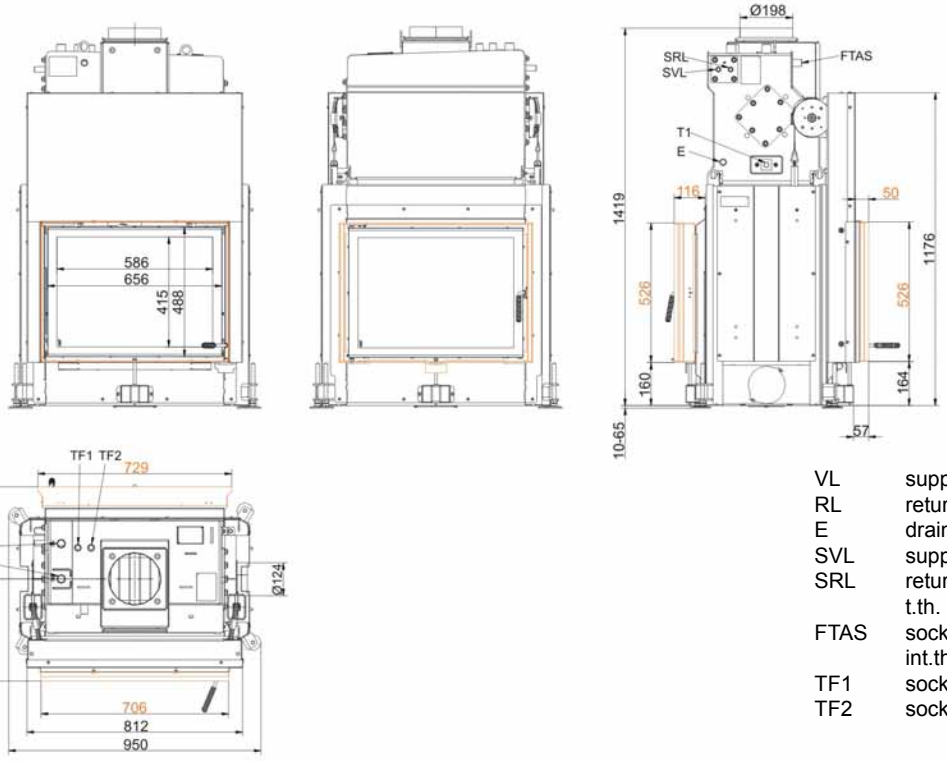




VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

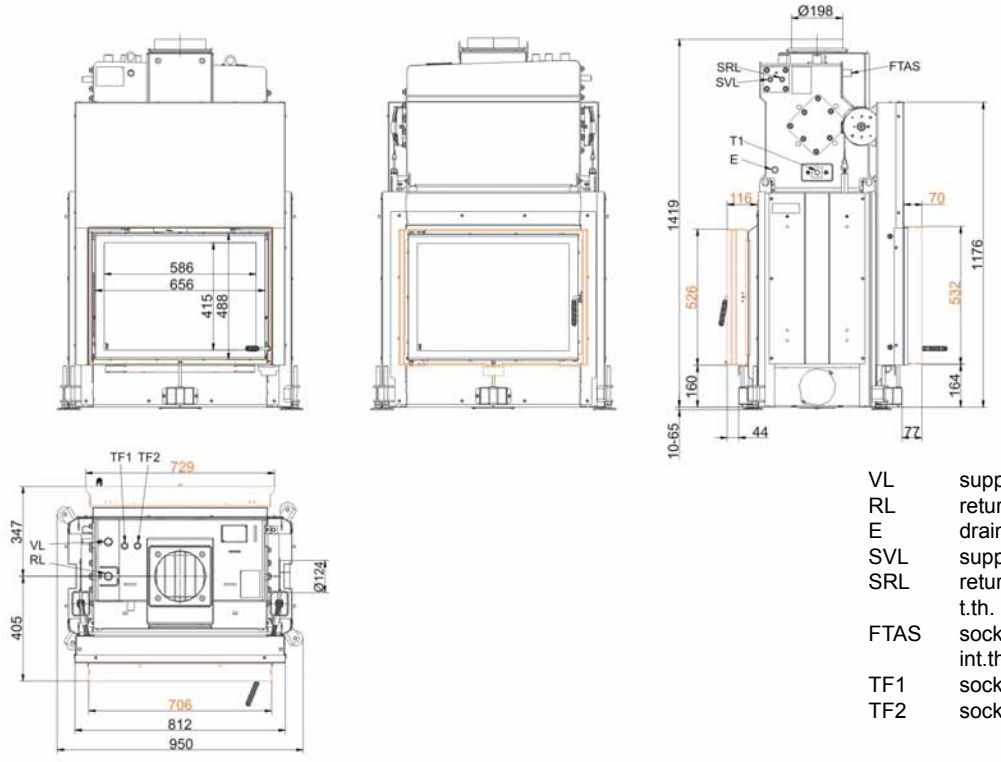
… side opening/side opening with door frame

Dimension sheets - Stil-Tunnel 51/67
with top-mount boiler



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

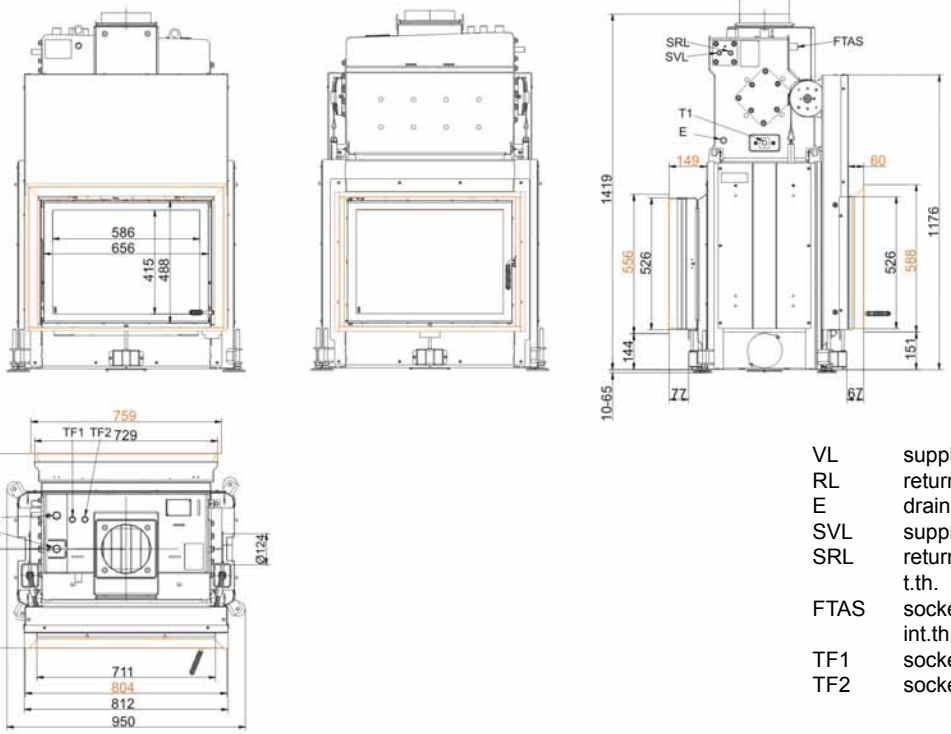
… lifting door/side opening with mounting frame 50 mm/mounting frame



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

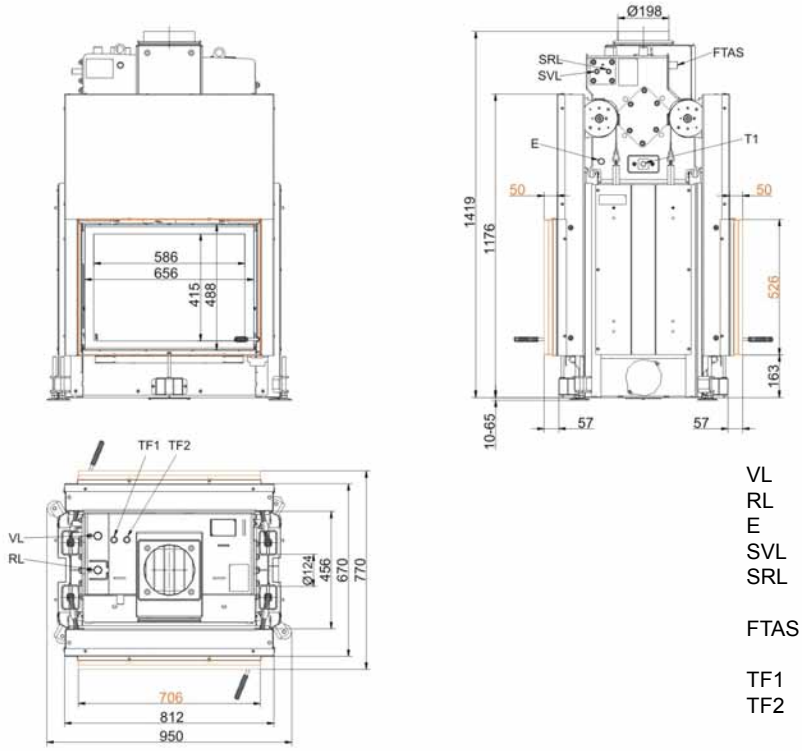
… lifting door/side opening with mounting frame 70 mm/mounting frame

Dimension sheets - Stil-Tunnel 51/67
with top-mount boiler



VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

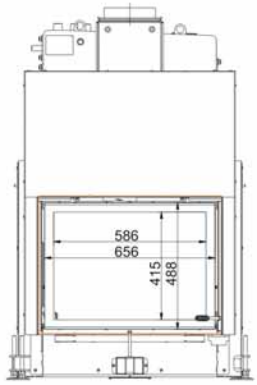
… lifting door/side opening with door frame

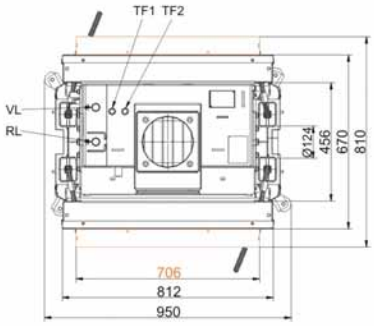


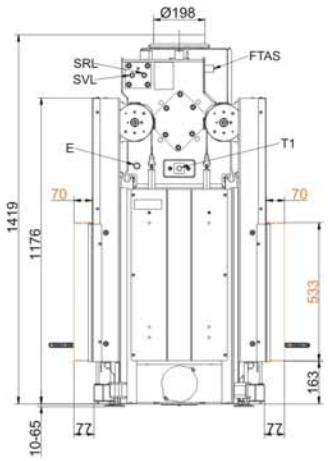
VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ex-t.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side opening/side opening with mounting frame 50 mm

Dimension sheets - Stil-Tunnel 51/67
with top-mount boiler

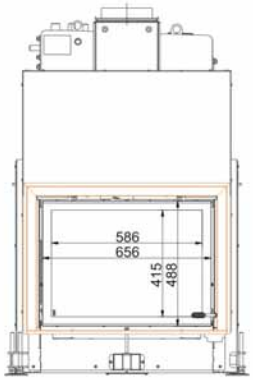


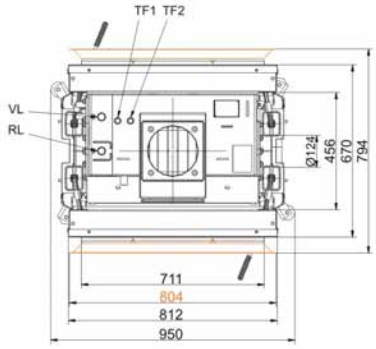


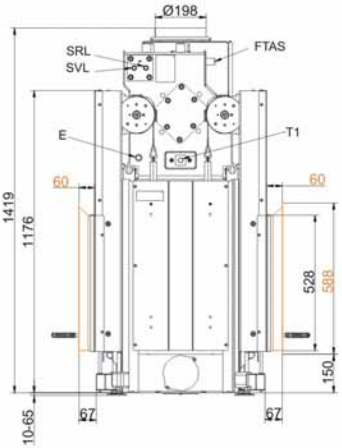


VL	supply 1"ext. th.
RL	return boiler 1"ext.th.
E	drain 1/2"int. th.
SVL	supply cooling pipe outlet ext.th.
SRL	return cooling pipe outlet 1/2"ext.th.
FTAS	socket for thermal safety sensor int.th.
TF1	socket 1/2" for sensor int.th.
TF2	socket 1/2" for sensor int.th.

… side opening/side opening with mounting frame 70 mm







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… lifting door with door frame

We suggest for CAD planning Palette CAD. Permanent updated drawings: www.brunner.de
Frames /flue gas outlet connection/ combustion air supply connection/ front variants are marked in color.

Planning and installation - Stil-Tunnel 51/67 with top-mount boiler

Tested according to		EN 13229 W	EN 13229 W
Values measured at		Rated capacity	Practical avg.
EEI		117.4	117.4
Data for functional demonstration			
Rated heat power	kW	13.5	-
Fire wood volume	kg/h	3.9	5.1
Combustion performance	kW	15.6	20.5
Flue gas mass flow	g/s	10.9	25
Flue gas temperature after:			
boiler	°C	180	244
Necessary supply pressure	Pa	11	16
Combustion air consumption	m^3/h	40	50
Combustion air connection Ø	mm	125	125
Heat distribution			
Insert / reheating surface	%	5 - 10 / -	5 - 10 / -
Glass pane (single / double)	%	50 / 45	50 / 45
Boiler	%	45	45
Cross-section of gratings [1]			
Convection air	cm^2	300 / 200 / -	300 / 200 / -
Supply air	cm^2	300 / 200 / -	300 / 200 / -
Minimal distances of the fireplace			
to insulation layer	cm	6	6
to mounting floor	cm	1	1
Thermal insulation without / with air gratings [2]			
Mounting wall	cm	10 / 8	10 / 8
Floor	cm	0 / 0	0 / 0
Ceiling	cm	10 / 8	10 / 8
Brick lining for combustible wall	cm	10	10
Water boiler data			
Max. operating pressure	bar	3	3
Max. flow temperature	°C	100	100
Water volume	liter	43	43
Connections flow / return	inches	1	1
Weight			
Fireplace / combustion chamber [3]	kg	(199 + 118) / 67	
Meets requirement/limit values for:			
Germany/ Austria / Switzerland / Norway		1.BImSchV (Stufe 2) / 15a BVG (2015) / LRV / -	

1) for fireplace inserts / flue gas pipe / metallic reheating surface
2) Values determined with upper air sections; stove cladding is heat emitting
3) Fireplace insert = body + top mounted exchanger

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