



# Installation Instructions

## Fireplace Inserts





## PREFACE – QUALITY PHILOSOPHY

You have decided in favor of SPARTHERM fireplace inserts. Thank you very much for your trust in our company.

In a world of excess and mass production, our company stands for the values expressed by our owner, Mr. Gerhard Manfred Rokossa:

„High technical quality combined with contemporary design, and service to the satisfaction of our customers so they will recommend us to others.“

We provide you with excellent products that will reach your customers' emotions and speak to feelings such as security and comfort. In order to be successful, we recommend that you read these installation instructions carefully in order to quickly become thoroughly familiar with the product. In addition to information on how to install the product, these instructions also contain important operating notes regarding fireplace insert safety and maintenance and give valuable tips and suggestions. If you have more questions or problems, please contact us directly. We are always grateful for your feedback.

We hope you enjoy installing our fireplace inserts and may your fire keep burning beautifully.

Your SPARTHERM Team

G.M. Rokossa



# OVERVIEW INSTALLATION INSTRUCTIONS // SPARTHERM FIREPLACE INSERTS

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# 1. GENERAL NOTES

These installation instructions comply with the specifications in DIN EN 13229 „Fireplaces for Solid Fuel.“

You must also comply with national and regional specifications, standards, installation methods, and materials. Our fireplace inserts are for temporary fires and not for permanent heating. This means that the fire will burn as long as wood continues to be added to it. Of course our fireplace inserts are subject to our company quality criteria – from incoming shipment inspection to shipment release.

Young children, older or infirm adults:

As with all heaters, it makes sense to set up a protective device for this group of people because the viewing pane and the facing panels of the fireplace unit can become extremely hot.

## ➔ Risk of burning! ➔

Never leave this group of people near an active or recently extinguished fireplace insert without supervision. Inform this group of people that the fireplace insert is a source of potential danger.

Do not place or lay any combustible objects on the exposed surfaces of the fireplace unit. Do not place any pieces of clothing on the installation's heating tiles in order to dry them. Set up a laundry rack for drying clothing outside the area of radiation only!

The burning process releases heat energy that leads to the fireplace unit (surfaces, door handles and operating knobs, viewing pane, etc.). Do not touch or operate the active fireplace unit without suitable protection (e.g. the heat-resistant glove included).

Do not make any modifications to the fireplace insert. In particular, do not

place any mounting parts in the combustion chamber, flue or vent if these parts are not approved by SPARTHERM. Without express permission, any modification or change in the fireplace will render the guarantee and operating permit invalid.

Exhaust hoods, ventilation systems, etc. that are installed in the same room or ambient air network as fireplaces may adversely affect the functioning of the fireplace insert (including allowing smoke to escape into a room) and require suitable measures before they can be operated at the same time as the fireplace.

If several fireplaces are being operated in a room or an ambient air network, make sure that the combustion air supply is adequate.

This is a fireplace for temporary fires. The fireplace can only be used for heating by repeatedly adding wood to it and not removing the combustion air.

TRANSPORT DAMAGE: Inspect this product upon delivery (visual check). Be sure to note any damage on the delivery slip. Then inform your fireplace fitter. Protect the viewing pane of your fireplace insert against dirt and damage while the facing is being installed.

The TECHNICAL SPECIFICATIONS for your fireplace insert start on page 15.

## 1.1. CERTIFIED QUALITY

OUR FIREPLACE INSERTS HAVE BEEN TYPE-TESTED AND LABELLED AS PER DIN EN 13229. DECLARATION OF PERFORMANCE MAY BE VIEWED AND IS AVAILABLE FROM [WWW.SPARTHERM.COM](http://WWW.SPARTHERM.COM)

A = Fireplace door, manual closure

- Open operation may be possible
- Multiple use of chimney prohibited

We also recommend operating Type A devices with closed viewing panes. This improves the utilization of the wood energy and increased operational safety. When the fireplace door is open, air movement or weak/irregular chimney draft may quickly cause soot or odors to permeate the room. Valid for the following devices: multiple use of the chimney and open operation is prohibited for Type A with manually closing fireplace door!

Speedy MR/MRh/M/Mh

Varia Sh

Varia C-45h

A1 = Fireplace door, automatic closure

- Closed operation
- Multiple use of chimney possible

For Type A1, the fireplace door must always be locked in order to prevent combustion gas leakage (except when loading/unloading).

These fireplace inserts have automatically closing fireplace doors so that the doors are only opened when the fireplace has to be serviced (removing ashes, re-supplying with fuel, etc.). For this fireplace insert, multiple use of the chimney, etc., is possible. Modifying the closing mechanism of Type A1 is prohibited for safety reasons, and would render the guarantee and operating permit invalid. The guarantee and operating permit would also be rendered invalid if the customer modified the technology of any other area of the fireplace insert. You should discuss the required type with your customer or with the local building code inspector before ordering it.

## 1.2. INSTALLATION STEPS

1. The feet are included with the device for transport purposes.
2. Before unscrewing the locking screw for the counterweights (transport security for liftable fireplace inserts), carefully place the device on its „back“ so you can attach the feet.
3. As required, use the clamp included to attach the safety valve lugs to the adapter in the required position at this time.
4. The fireplace has to stand perfectly plumb-vertical and horizontal.
5. A horizontal connection to the chimney is possible by rotating the flue gas dome. To do this, open the clamp, put the flue gas dome in position and clamp it in place again.

## 2. BASIC REQUIREMENTS FOR SETTING UP AN OPEN FIREPLACE

Before installing the fireplace insert, you have to make sure that the air controls function perfectly and make them function if they do not. Consult the local building code inspector responsible as to whether the chimney and combustion air intake are suitable before beginning installation. Note and apply DIN 18160 and DIN 18896. Apply the relevant standards in DIN EN 13229 as well. Every open fireplace requires its own chimney. Multiple use is only permitted when the unit is to be operated closed (Type A1).

Perform the chimney calculation as per DIN 4705 T1, T2 or EN 13384-1 with the value sets specified in these instructions. The convection sheath in stock is not required for tiled fireplaces. Set up the combustion system according to the professional tile fireplace and ventilation engineer guidelines („TROL-Richtlinien für den Bau von Kachelöfen,“ available from Central Association for Sanitation, Heating and Air-conditioning (ZVSHK), Rathausallee 5, 53729 St. Augustin, Germany).



### 3. LOCATIONS AND COMBUSTION AIR SUPPLY

#### 3.1. BASIC REQUIREMENTS OF LOCATIONS FOR OPEN FIREPLACES AND PROHIBITED LOCATIONS

Open fireplaces may only be installed in rooms and places in which the location, construction situation and type of utilization do not lead to hazards. In particular, when the type is dependant on indoor air, sufficient combustion air must flow into the locations. The floor space of the location has to be designed for the proper operation of open fireplaces and has to be large enough.

#### 3.2. THE OPERATION OF OPEN FIREPLACES IS NOT HAZARDOUS IF

- the units have safety devices that automatically and reliably prevent a partial vacuum from forming in the location, or
- the total combustion air volume flow rates and the exhaust system air volume flow rates required for open fireplaces do not cause a partial vacuum greater than 0.04 mbar in the open fireplace location and the rooms of the ambient air network.

#### 3.3. OPEN FIREPLACES MAY NOT BE INSTALLED

- in stairways, unless they are in residential buildings with two apartments or less
- in hallways with general access
- in garages
- in room in which highly combustible or potentially explosive substances or mixtures are processed, stored or manufactured in quantities that would be hazardous in the event of ignition or
- explosion.

Open fireplaces may not be set up in rooms or apartments in which the ventilation system or forced-air heating system is ventilated with fans unless the open fireplace has been inspected and determined to function safely.

#### 3.4. COMBUSTION AIR SUPPLY

Open fireplaces may only be installed in rooms that have at least one door that leads to the outdoors or a window that can be opened, or are directly next to other rooms or indirectly part of an ambient air network. For installation in apartments or other facilities, only rooms in the same apartment or facilities may belong to the ambient air network.

Open fireplaces may only be set up or installed in the above-named rooms if at least 360 m<sup>3</sup> combustion air/hour and /m<sup>2</sup> of combustion chamber opening is able to flow into them. If other fireplaces are in the rooms where this one is to be installed or in rooms that are connected to it, according to technical regulations at least 540 m<sup>3</sup> combustion air/hour and /m<sup>2</sup> of combustion chamber opening is able to flow into all of the open fireplaces and at least 1.6 m<sup>3</sup> combustion air/hour and /kW total nominal heat capacity into all other fireplaces for a calculated pressure difference of 0.04 mbar to the outdoors. A flow speeds of 0.15 m/s is a valid guideline value for dimensioning the air supply ducts. For a fireplace with a door height of 52x60 cm, this equals an air supply channel of 175 cm<sup>2</sup>, therefore a diameter of approx. 15 cm.

If the combustion air is not allowed to be removed from the room (e.g. for buildings with ventilation systems), a coupling has to be connected to the combustion air lugs on the device. This coupling has to lead to a different room. (Make sure that this room has a sufficient supply of air: talk to the building code inspector responsible and observe DIN 18896 and the German Combustion Ordinance). If this duct for the combustion air leads out of the building, it required a cutoff device. The position of the cutoff device has to be obvious. For this design, the inlet duct should be insulated to prevent condensate from forming. And the duct should be positioned so that water and other substances are not able to penetrate it and any condensate that does form can run off.

**COMMENT**

For guidance on realizing a sufficient supply of combustion air, see the the German Sample Combustion Ordinance (May 1998 version) and the example of the standard operating procedure for the German Sample Combustion Ordinance (January 1980 version); the examples were published in the Institute for Construction Technology Bulletin no. 3/1980, 17th year (also see comments on DIN 18895).

### 3.5. COMBUSTION AIR FLUE

As per the specification of the German federal state construction ordinance that corresponds to § 37, para. 2 of the sample construction ordinance, combustion air flues in buildings with more than two full storeys and combustion air flues that bridge firewalls must be constructed to prevent them from transferring fire and smoke to other storeys or fire zones.

**COMMENT**

For information on how to comply with the above-mentioned specifications, see the fire inspection guidelines for the fire prevention requirements of ventilation systems (draft) – January 1984 version.

## 4. CUTOFF DEVICE IN THE VENT

Open fireplaces with SPARTHERM fireplace inserts may have a cutoff device in the vent. The cutoff device may not hinder the inspection and cleaning of connecting pieces and may not close automatically. The position the cutoff device is in must be obvious from the outside, e.g. from the position of the operating handle. Cutoff devices may only be installed in the exhaust manifold, the flue gas neck tube or in the connecting piece. Instead of cutoff devices, fireplace inserts with combustion chamber doors can have throttle devices.

### 4.1. THROTTLE DEVICE

Throttle devices may only be installed in the flue gas neck tube or in the connecting piece. Throttle devices have to be easy to operate. Their

openings have to be like the segment or section of a circle whose total area is not less than 3 % of the cross section area but has a size of at least 20 cm<sup>2</sup>. The position the throttle device is in has to be obvious from the setting of the operating handle.

## 5. FIRE PREVENTION IN FRONT OF THE COMBUSTION CHAMBER OPENING

### 5.1. FLOORS

In front of the firemouths of fireplaces with closed combustion chambers, floors made of combustible construction materials have to be protected by a covering of noncombustible construction materials. The covering has to protrude beyond the firemouth by at least 50 cm at the front and at least 30 cm at the sides.

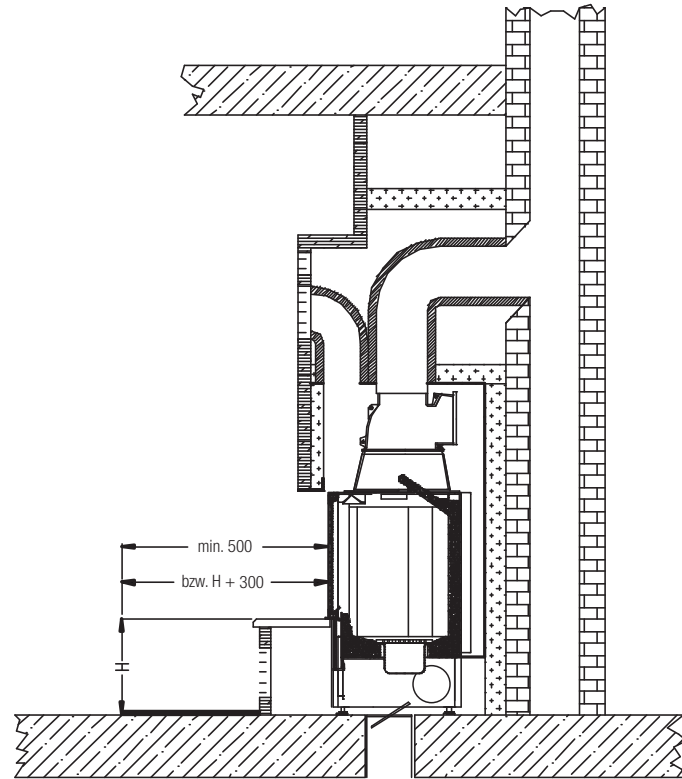
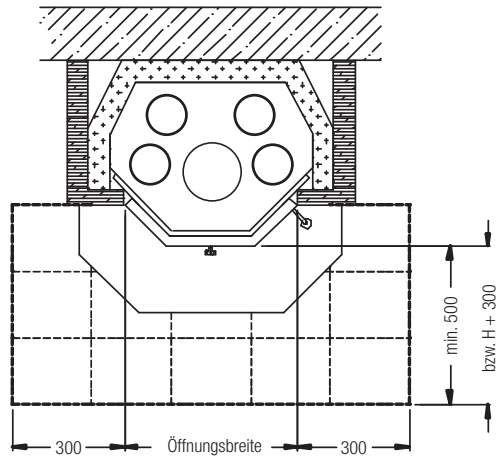
In front of fireplaces that can be operated open, floors made of combustible construction material must be protected at the front by a covering of non-combustible construction material equal to the height of the combustion chamber base or the fire dog above the floor plus 30 cm (but at least 50 cm), and at the sides equal to the height of the combustion chamber base or the fire dog above the floor plus 20 cm (but at least 30 cm). If a log guard with a height of at least 10 cm has been installed, fire protection of 50 cm at the front and 30 cm at the sides is sufficient.

The non-combustible covering can be made of ceramic (e.g. tiles), natural stone or other mineral construction materials (e.g. marble, granite, etc.), metal with a thickness of at least 1 mm or suitably treated glass. The covering must be fastened in a manner that makes it impossible to be pushed away.

If a log guard (not included) with a height of at least 10 cm has been installed, the minimum distances listed above are sufficient and can be measured from the log guard.

### 5.1.1. SPECIAL PRECAUTIONS FOR FIRE PROTECTION OF FLOOR COVERINGS NEAR THE FIREPLACE

A spark protection apron is required (e.g. to cover carpets, parquet...); a fireproof floor covering made of non-flammable material (natural stone...) must be put in place.





## 5.2. LOAD-BEARING STRUCTURAL ELEMENTS MADE OF CONCRETE AND REINFORCED CONCRETE

Open fireplaces must be installed to that no load-bearing structural elements made of concrete or reinforced concrete are located within 30 cm of the warm air exit points at the sides and lower than a height of 50 cm above the exit points.

## 5.3. WOODEN BEAMS

Wooden beams may not be installed within the radiation area of the fireplace insert. Air has to circulate around wooden beams above an open fireplace with a minimum distance of 1 cm. You are not allowed to directly anchor them with thermal bridges.

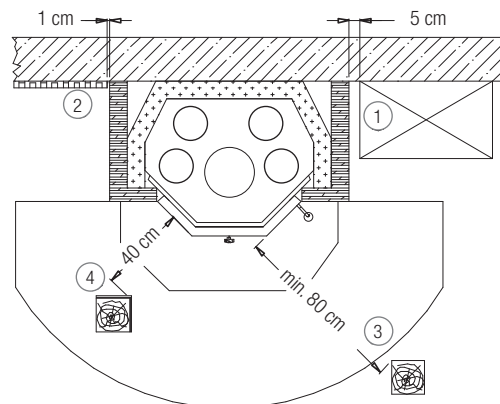
## 5.4. INSULATION LAYERS

(see fig. 6 + 7; page 13)

Due to the information of the testing institute and the applicable standards, all of our statements on insulation material are based on mineral wool as the reference insulation material, details as follows. Alternative, suitable insulation material can also be used. But it has to be certified by DIBt or have received a permit.

### 5.2.1. SPECIAL MEASURES FOR FIRE PREVENTION OR ADJACENT, COMBUSTIBLE STRUCTURAL ELEMENTS

- ① Between built-in furniture and the fireplace facing, a distance of at least 5 cm has to be maintained.
- ② For structural element that only abut on small areas (wall, floor or ceiling covering), we recommend a gap of 1 cm.
- ③ From the combustion chamber opening, there needs to be at least an 80 cm gap toward the front, the sides, and the ceiling between structural elements made of combustible construction materials or flammable components as well as between built-in furniture, unless the assembly and operation manual for the device does not contain any other specifications.
- ④ When installing a radiation guard that is ventilated on both sides, a distance of 40 cm is sufficient. The ventilated distance to the radiation guard has to be at least 2 cm.





#### 5.4.1. THERMAL INSULATION MATERIAL THICKNESS

For information on the thermal insulation material thickness relevant to your fireplace insert, see „Technical Data“ on page 15.

Use mats, sheets or shells of silica-based insulation material (stone or slag wool and ceramic fibers) in construction material class A1 as per DIN 4102, part 1 with an upper application limit temperature of at least 700 °C when measured as per DIN 52271 and a rated density of 80 kg/m<sup>3</sup> to produce the insulating layers. They need to have a corresponding insulation material code as per AGI-Q 132.

The insulation material code may not contain the number sequence „99“. If this insulating layer is not framed by walls, facing or adjacent sheets, use fasteners at a maximum distance of 33 cm to each other. Other insulation material, e.g. gas concrete or mineral construction materials, have to possess a general construction inspection permit from the German Institute of Construction Technology Berlin (DIBt). It has to be installed according to the manufacturer's instructions.

The other insulation materials all possess different heat transfer coefficients, so insulation material thickness will vary. The required insulation material thickness can be determined from the diagram provided by the insulation material manufacturer.

Some thermal insulation materials can be used as a stud wall and insulation at the same time. This reduces the installation depth significantly. Thermal insulation made of stone and slag wool require abrasion-resistant cladding so the circulation air volume flow does not transport insulation particles into the room. Other thermal insulation sheets leave the factory with added abrasion resistance as required. This insulation material may only be fastened with offset joints and end to end. If several layers are to be fastened, the edges have to overlap.

#### 5.4.2. STUD WALL FOR WALLS THAT NEED PROTECTION

- When installing the open fireplace on a wall that needs protection, a stud wall is required. The stud wall has to protrude at least 20 cm over the connecting piece.
- A stud wall is not necessary if the building wall:
  - is at least 11.5 cm thick
  - consists of non-combustible construction materials
  - is not a load-bearing concrete or reinforced concrete wall
- The stud wall can be built in a traditional manner, e.g. made of bricks, or can consist of thermal insulation sheets as mentioned above. This significantly reduces the overall construction depth, which consists of the stud wall and insulation.

#### 5.6. FLEXIBLE GROUTING BETWEEN FACING AND INSERT

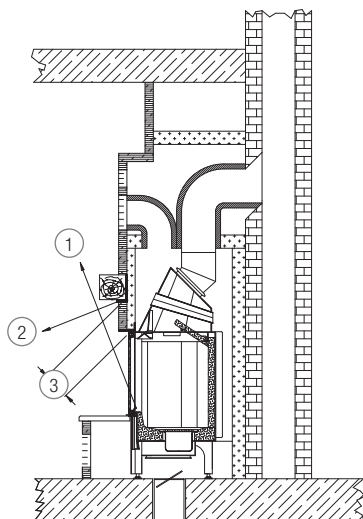
A direct link between the fireplace insert and the facing is not allowed. Plan to use flexible grouting that will be sealed by sealing band, for example. Please note: a minimum distance of 6 mm has to exist between the door frame and the fireplace hood or the installation frame, in order to disassemble the fireplace insert door as required (e.g. replacement viewing pane).

#### 5.7. FIREPLACE HOOD

A fireplace hood may never be directly connected to the fireplace insert. It must bear itself after being set up. See „Facing“ section for the additional requirements. Please note: a minimum distance of 6 mm has to exist between the door frame and the fireplace hood or the installation frame, in order to disassemble the fireplace insert door as required (e.g. replacement viewing pane).

## 5.5. SPECIAL MEASURE FOR FIRE PREVENTION FOR HARDWOOD MANTELS

- ① The beam has to be located outside of the radiation area.
- ② The ventilated distance must be 1 cm or a dimensionally stable insulation sheet with a thickness of approx. 2 cm has to be attached below the beam.
- ③ The gap between the inner edge of the combustion gas manifold and the mantel has to be at least 16.5 cm.



## 5.8. CONNECTION PIECE

The neck tube for the connecting piece is on the flue dome of the fireplace insert. Connect to the chimney directly if possible. The fireplace insert can be connected either vertically or horizontally. Use an enclosed wall lining to make the connection to the chimney or follow the instructions of the chimney manufacturer. Make the connecting piece out of molded firebrick for house chimneys or sheet iron pipes made of steel plate that is at least 2 mm thick as per DIN 623, DIN 1298, DIN EN 1856 and the corresponding molded parts.

Flue gas pipes inside the facing of the open fireplace have to be sheathed with class A1 stone wool mats that are at least 3 cm thick, dimensionally stable and non-combustible as per DIN 4102 part 1 and contain less than 1.2 % binder. The application limit temperature is at least 750 °C when tested as per DIN 52271. The thickness has to be 6 cm instead of 3 cm if the flue gas manifold is made of metal.

This does not apply if the connection piece is intended to be used for convective heating of the ambient air.

### COMMENT

Requirements of the connecting piece as per DIN 18160 part 2.

## 5.9. HEAT DISSIPATION

Since it is possible to use different fireplace unit construction types with our fireplace inserts, it is essential to consult a professional company when planning a fireplace unit. Make sure that the level of heat dissipation is sufficient. Implement this by using convection air ducts in the facing or heat dissipating facing elements.

### 5.9.1. WARM AIR HEATING SYSTEMS

For fireplace units that use convection to dissipate heat (wood-burning stove, tile oven, etc.), observe the following points (see instructions, „5.8. Connection piece“ on page 11)

- Please refer to the Technical Data (page 15 onwards) for the air inlet and air outlet opening cross-sections. Different cross-sections are possible if arithmetical proof is provided.
- It must not be possible to close the air inlet and air outlet openings more than 50%.
- All four pipe connections must be occupied if using the convection air housing. It must not be possible to close up the air inlet and air outlet openings.
- The air ducts may not be made of combustible, dimensionally stable construction material
- Do not place any combustible construction materials or objects such as wood ceilings or built-in furniture within an area of 30 cm next to and 50 cm above the warm air outlet grids.

### 5.9.2 CLOSED FIREPLACE UNITS

For fireplace units that are intended to dissipate heat via the outer fireplace facing (masonry heater, hypocaustic system, systems with closing convection air openings, etc.), and therefore dissipate heat into the room via the facing, it is essential to observe the following points:

- The fireplace unit must be dimensioned and built according to the relevant, professional tile fireplace and ventilation engineer guidelines (new: TR-OL 2006).
- We recommend using sufficient storage material (e.g. Magnetherm) to optimally use the heat and avoid the risk of overheating in temperature spikes.

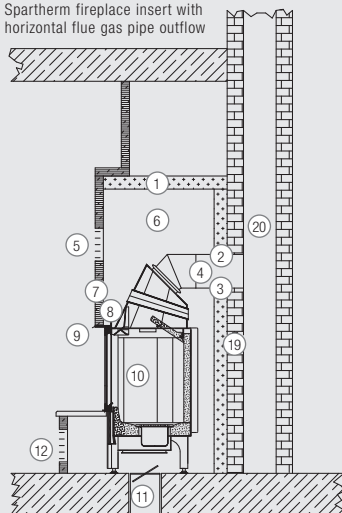
- The size of the oven, i.e. the size of the heat dissipating surface, should be determined depending on the heat output and heat requirement.
- The facing elements must be selected to meet the higher standards.
- The builder should provide written instructions on the special type/ means of operation to the operator if possible. The quantity of wood used has to correspond to the heat dissipation of the surface or the storage capacity of the storage medium, for example (in general, stoke no more than 2 – 3/day).
- We recommend protecting installation surfaces made of combustible construction materials with active rear ventilation in addition to the thermal insulation specified.
- The insulation thicknesses listed on page 11 apply to warm air heating systems only. For closed fireplace units, the insulation thicknesses have to be calculated as per TR-OL.
- For liftable combustion chamber doors, the temperature on the reverse or guiding rollers and the bearings must not exceed 270 °C. And areas of the insert that have movable mechanical parts require separate insulation.
- When installing accessory parts, observe their installation specification, especially the permissible operating or ambient temperatures and accessibility requirements, if any.

## 6. GENERAL INSTALLATION NOTES

For floors, ceilings and partition walls made of non-combustible construction materials.

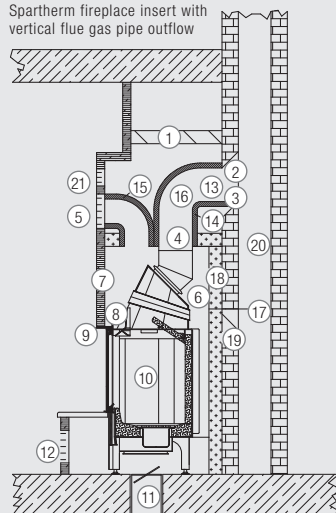
**Important note:** The fireplace insert may not be installed on floating screed. Install it on bonded screed only.

Spartherm fireplace insert with horizontal flue gas pipe outflow



- ① Complete insulation coverage of the air chamber, at least 8 cm thick (see page 10, Thermal insulation material thickness)
- ② Rope seal
- ③ Wall lining or sleeve
- ④ Flue gas pipe (connecting piece)
- ⑤ Air supply grid (warm air outlet)
- ⑥ Air chamber
- ⑦ Facing masonry (made of non-combustible construction materials)
- ⑧ Assembly frame (do not place directly on fireplace insert)
- ⑨ Insulation strips
- ⑩ Spartherm fireplace insert

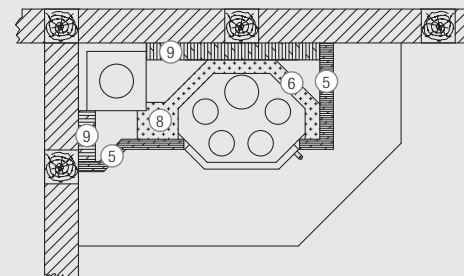
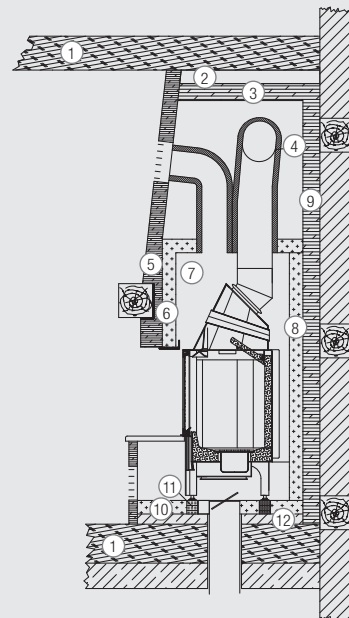
Spartherm fireplace insert with vertical flue gas pipe outflow



- ⑪ Fresh air flap
- ⑫ Air circulation grid (cold air intake)
- ⑬ Flue gas pipe extension
- ⑭ Insulation of the connecting pieces inside the facing with at least 3 cm thick, dimensionally stable mineral wool
- ⑮ Insulation of flexible air channel ducts
- ⑯ Flue gas elbow
- ⑰ Convection sheath
- ⑱ Insulation of convection sheath
- ⑲ Wall not to be protected to 10 cm
- ⑳ Chimney
- ㉑ Cleaning opening

## 7. SPECIAL FIRE PREVENTION MEASURES

For combustible construction materials, floor (wooden ceiling beams), ceiling and/or partition walls



- ① Construction elements made of combustible construction materials (or load-bearing walls made of reinforced concrete)
- ② Fill completely with dimensionally stable mineral wool, at least 8 cm thick
- ③ Mineral construction materials (e.g. gas concrete sheets), 10 cm thick
- ④ Insulation of connecting pieces with at least 3 cm thick, dimensionally stable mineral wool
- ⑤ Facing masonry made of non-combustible construction materials
- ⑥ Complete insulation coverage of the convection air sheath
- ⑦ Convection sheath made of steel plate
- ⑧ Insulation made of dimensionally stable mineral wool, approx. 8 cm thick (see page 10, Thermal insulation material thicknesses)
- ⑨ Wall made of mineral construction materials, 10 cm thick
- ⑩ Insulation made of dimensionally stable mineral wool, 8 cm thick
- ⑪ Small-area thermal bridge
- ⑫ Concrete sheet, at least 6 cm thick

## 8. CLEANING OPEN FIREPLACES

The open fireplace has to be designed and installed in a manner that allows the ambient air ducts to be cleaned easily, the space between the ceiling and walls and built-in furniture to be easily inspected and kept unobstructed, and facilitates the cleaning of the connecting pieces and the chimney.

## 9. SPECIAL NOTES FOR SPARTHERM FIREPLACE INSERTS

### 9.1. FLUE GAS NECK TUBE

The flue gas neck tube can be rotated. It can be connected to the chimney vertically or horizontally. For connection to the side, we carry a 90° flue gas dome and we can provide a 0° flue gas dome for flow-enhancing connection as well.

### 9.2. SPARTHERM FIREPLACE INSERT WITH SLIDING DOOR

Completely remove the transport safety device before installing. Check the sliding door before the fireplace insert facing is installed.

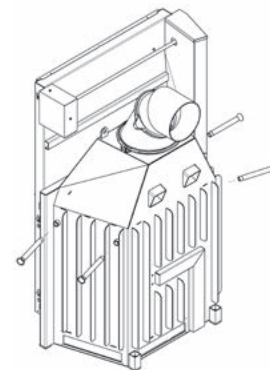
### 9.3. CARRYING AIDS

Specific models have been designed for the use of carrying aids

### TRANSPORT SECURITY



### 9.3. CARRYING AIDS



## 10. TECHNICAL DATA FOR FIREPLACE INSERT

		Mini R1V 51	Mini R1V 51 NSHF	Mini R1V / R1Vh 57	Mini R1V / R1Vh 57 NSHF	Mini Z1	Mini Z1 NSHF	Mini S / Sh	Speedy 1V / 1Vh 51
General data	Normal heat output (kW) (closed structure)	5,2	6,2	5,0	6,0	7,0	10,0	7,0	9,0
	Thermal output range (kW)	4,5 - 6,8	4,5 - 8,1	4,5 - 6,5	4,5 - 7,8	4,9 - 9,1	7,0 - 13,0	4,9 - 9,1	6,3 - 11,7
	Efficiency (%)	80	> 80	> 80	> 80	> 78	> 80	> 78	80
	Recommended flue diameter (mm)	160	160	160	160	180	180	180	200
	Flue outlet diameter (mm)	160	160	160	160	180	180	180	200
	Weight (kg) (approx.)	150	150	150	150	160	160	205	200
	required minimum cross section for circulating air with WAC	700	700	700	700	700	-	700	700
	required minimum cross section for circulating air	650 / 780	770 / 920	600 / 720	720 / 860	950 / 1140	1360 / 1640	810 / 890	1420 / 1710
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	-	-	-	-	20,9	-	17,8	-
	Exhaust gas temperature (°C)	-	-	-	-	240	-	230	-
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	-	-	-	-	12	-	12	-
	Recommended diameter in opening to secure sufficient air into the room (cm)	-	-	-	-	40	-	45	-
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	4,7	6	4	5	7,5	7,6	8,8	9,2
	Exhaust gas temperature (°C)	255	355	258	355	330	355	290	342
	Required manometric pressure (Pa)	12	12	12	12	14	14	14	12
	CO <sub>2</sub> (%)	9,8	8,0	11,3	10,0	8,6	11,1	7,9	12,2
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	15	15	15	15	15	15	15	15
	Combustion air requirement (m <sup>3</sup> /h)	16,2	21,4	13,4	16,6	25,5	25,2	27,6	21,1
Heat distribution	Convection (%)	62	62	60	60	68	74	58	64
	Glass window (%)	38	38	40	40	32	26	42	36
	Water (%)	-	-	-	-	-	-	-	-
Distances to convec- tion chamber	To the wall (cm)	9	11	9	10	10	10	9	10
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	12	12	12	12	8	8	9 / 8	16
	Floor (cm)	-	-	-	-	-	-	-	-
	Lateral wall (cm)	12	12	12	12	8	8	9 / 8	16
	Additional walling for wall protection (cm)	10	10	10	10	10	10	10	10
Tests and values	Type A - (no self-closing door)	✓	✓	✓	✓	✓	-	✓	✓
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓

		Speedy 1V / 1Vh 51 NSHF	Speedy 1V / 1Vh 51 (Export)	Speedy 1V / 1Vh 57	Speedy 1V / 1Vh 57 NSHF	Speedy 1V / 1Vh 57 (Export)	Varia 1V / 1Vh 51	Varia 1V / 1Vh 51 (Export)	Varia 1V / 1Vh 57
General data	Normal heat output (kW) (closed structure)	10,0	14,5	9,0	10,0	14,5	11,0	17,5	11,0
	Thermal output range (kW)	7,0 - 13,0	10,2 - 18,9	6,3 - 11,7	7,0 - 13,0	10,2 - 18,9	7,7 - 14,3	12,3 - 21,2	7,7 - 14,3
	Efficiency (%)	> 80	> 78	80	> 80	> 78	> 80	> 78	> 80
	Recommended flue diameter (mm)	200	200	200	200	200	200	200	200
	Flue outlet diameter (mm)	200	200	200	200	200	200	200	200
	Weight (kg) (approx.)	200	200	200	200	200	245	245	245
	required minimum cross section for circulating air with WAC	700	700	700	-	700	700	700	700
	required minimum cross section for circulating air	1420 / 1710	1420 / 1710	1420 / 1710	1420 / 1710	1420 / 1710	1420 / 1710	1420 / 1710	1420 / 1710
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	-	-	-	-	-	-	-	-
	Exhaust gas temperature (°C)	-	-	-	-	-	-	-	-
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	-	-	-	-	-	-	-	-
	Recommended diameter in opening to secure sufficient air into the room (cm)	-	-	-	-	-	-	-	-
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	8,8	10,2	7,5	8,8	10,2	9,6	13,1	9,0
	Exhaust gas temperature (°C)	391	346	288	392	327	288	330	305
	Required manometric pressure (Pa)	12	12	12	12	12	12	12	12
	CO <sub>2</sub> (%)	10,0	13,2	11,7	10,0	13,2	10,9	12,2	11,8
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	15	15	15	15	15	15	15	15
	Combustion air requirement (m³/h)	27,7	49,2	35,6	33,8	33,1	36,1	57,5	36,1
Heat distribution	Convection (%)	64	64	64	64	64	65	65	62
	Glass window (%)	36	36	36	36	36	35	35	38
	Water (%)	-	-	-	-	-	-	-	-
Distances to convec- tion chamber	To the wall (cm)	10	10	10	10	10	10	10	10
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	16	16	16	16	16	13	13	11
	Floor (cm)	-	-	-	-	-	-	-	-
	Lateral wall (cm)	16	16	16	16	16	13	13	13
	Additional walling for wall protection (cm)	10	10	10	10	10	10	10	10
Tests and values	Type A - (no self-closing door)	✓	✓	✓	-	✓	✓	✓	✓
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓



Varia 1V / 1Vh 57 (Export)	Varia 1V / 1Vh S	Varia 1Vh 45	Varia 1V 100h	Varia 1V 100h (Export)	Varia Sh	Varia SRh	Varia AS-2 / ASH-2	Varia AS-2 / ASH-2 NSHF	Varia AS-2 / ASH-2 (Export)	Varia Ah	Varia Ah-2	Varia Bh	Varia Bh S
17,5	7,0	11,0	10,4	17,0	11,0	11,0	7,0	11,0	11,0	10,4	9,0	10,4	9,0
12,3 - 21,2	4,9 - 9,1	7,7 - 14,3	7,3 - 13,5	11,9 - 21,2	7,7 - 14,3	7,7 - 14,3	4,9 - 9,1	7,7 - 14,3	7,7 - 14,3	7,3 - 13,5	6,3 - 11,7	7,3 - 13,5	6,3 - 11,7
> 78	> 80	> 78	80	80	80	> 78	> 80	> 80	> 80	> 80	> 80	> 78	> 78
200	200	200	250	250	200	200	180	180	180	200	200	200	200
200	200	200	250	250	200	200	180	180	180	200	200	250	250
245	245	245	350	350	270	280	171 / 212	171 / 212	171 / 212	300	320	350	350
700	700	700	700	700	700	700	700	700	700	700	700	700	700
1420 / 1710	900 / 1090	1420 / 1710	1200 / 1500	1200 / 1500	1250 / 1500	1300 / 1560	1000 / 1200	1000 / 1200	1000 / 1200	1410 / 1690	740 / 890	1190 / 1430	1190 / 1430
-	-	43,1	-	-	-	22,1	-	-	-	36,2	13,7	-	-
-	-	236	-	-	-	270	-	-	-	260	267	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	8	-	-	-	10	-	-	-	12	12	-	-
-	-	41	-	-	-	55	-	-	-	55	-	-	-
13,4	5,6	10,0	11,4	15,9	9,5	10	7,0	9,6	9,5	8,5	9,0	9,5	8,5
333	300	355	275	319	300	330	275	347	340	310	267	311	278
12	12	11	12	13	11	12	12	12	12	12	12	12	12
12,1	10,3	9,5	7,9	9,3	10,1	9,6	8,4	8,8	9,5	11,1	9	10,3	9,7
15	15	15	15	15	15	15	15	15	15	15	15	15	15
57,5	36,1	36,1	26,9	65,4	33,1	35,6	24,9	31,4	30,2	28,5	-	31,4	28,7
62	62	65	61	61	57	58	59	64	59	64	55	53	66
38	38	35	39	39	43	42	41	36	41	36	45	47	34
-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	6	12	10 **	10 **	12	11	10	10	10	8	8	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	13	13	12	12	11	8	13	13	13	13	13	13	13
-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	13	13	12	12	9	8	13	13	13	13	11	9	9
10	10	10	10	10	10	10	10	10	10	10	10	10	10
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		Varia B-120h	Varia M-60h	Varia M-80h	Varia M-100h	Varia M-60h GET	Varia M-60h GET + DH	Varia M-80h GET	Varia M-80h GET + DH
General data	Normal heat output (kW) (closed structure)	15,0	7,0	9,0	11,0	8,0	8,0	9,0	9,0
	Thermal output range (kW)	10,5 - 19,5	4,9 - 9,1	6,3 - 11,7	7,7 - 14,3	5,6 - 10,4	5,6 - 10,4	6,3 - 11,7	6,3 - 11,7
	Efficiency (%)	> 78	> 78	> 78	> 78	> 80	> 80	> 80	> 80
	Recommended flue diameter (mm)	250	200	200	200	180	180	180	180
	Flue outlet diameter (mm)	250	200	200	200	180	180	180	180
	Weight (kg) (approx.)	370	205	300	350	255	255	225	255
	required minimum cross section for circulating air with WAC	-	-	-	-	-	-	-	-
	required minimum cross section for circulating air	1600 / 1910	870 / 1050	1090 / 1310	1300 / 1560	960 / 1250	960 / 1250	860 / 1140	860 / 1140
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	-	22,8	21,7	45,8	-	-	-	-
	Exhaust gas temperature (°C)	-	250	230	320	-	-	-	-
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	-	10	10	10	-	-	-	-
	Recommended diameter in opening to secure sufficient air into the room (cm)	-	45	52	59	-	-	-	-
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	15,4	6,8	9,1	11,9	7,3	7,3	7,0	7,0
	Exhaust gas temperature (°C)	296	330	310	340	311	311	279	279
	Required manometric pressure (Pa)	12	12	12	14	12	12	12	12
	CO <sub>2</sub> (%)	8,9	9,9	8,9	8,5	9,3	9,3	11,4	11,4
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	2x15	15	15	15	15	15	15	15
Heat distribution	Combustion air requirement (m³/h)	52,5	22,1	31,6	40	26,2	26,2	23,7	23,7
	Convection (%)	53	62	60	59	57	57	53	53
	Glass window (%)	47	38	40	41	43	43	47	47
Distances to convec- tion chamber	Water (%)	-	-	-	-	-	-	-	-
	To the wall (cm)	10	7	8	9	6	6	6	6
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	To the floor (cm)	-	-	-	-	-	-	-	-
	Mounting wall (cm)	16	10	10	9	11,1	-	13,3	-
	Floor (cm)	12	-	-	-	-	-	-	-
	Lateral wall (cm)	16	10	10	9	6,2	-	8,6	-
	Additional walling for wall protection (cm)	10	10	10	10	-	-	-	-
Tests and values	Type A - (no self-closing door)	-	✓	✓	✓	-	-	✓	✓
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	-	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓

Varia M-100h GET	Varia M-100h GET + DH	Arte F-1V / F-1Vh	Arte F-1V / F-1Vh (Export)	Arte F 1V / F 1Vh NSHF	Arte 1Vh	Arte Bh	Arte Xh	Mini S-FDh	Varia FD / FDh	Varia AS-FD-2 / AS-FDh-2	Varia AS-FD-2 / AS-FDh-2 NSHF	Varia AS-FD-2 / AS-FDh-2 (Export)	Varia A-FDh
10,4	10,4	5,9	9,4	9,4	8,0	11,0	11,0	6,0	11,0	7,0	11,0	11,0	10,4
7,4 - 13,5	7,4 - 13,5	4,1 - 7,7	6,6 - 12,2	6,6 - 12,2	5,6 - 10,4	7,7 - 14,3	7,7 - 14,3	4,5 - 7,8	7,7 - 14,3	4,9 - 9,1	7,7 - 14,3	7,7 - 14,3	7,3 - 13,5
> 80	> 80	> 80	> 80	> 80	> 80	> 78	> 78	> 78	> 78	> 80	> 80	> 80	> 78
180	180	160	160	160	180	200	250	200	250	180	180	180	250
180	180	160	160	160	180	200	250	200	250	180	180	180	250
350	380	85 / 100	85 / 100	85 / 100	220	260	430	261	340	168 / 203	168 / 203	168 / 203	325
-	-	-	-	-	700	700	700	700	700	700	700	700	700
860 / 1415	860 / 1415	260 / 300	260 / 300	350 / 400	1030 / 1240	1230 / 1480	1320 / 1580	640 / 770	1110 / 1340	800 / 1000	800 / 1000	800 / 1000	1240 / 1030
-	-	-	-	-	18,8	22,4	28,5	23,8	43,1	-	-	-	21,4
-	-	-	-	-	230	260	250	280	236	-	-	-	240
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	10	10	10	9	8	-	-	-	12
-	-	-	-	-	47	60	68	68	71	-	-	-	69
8,7	8,7	5,1	7,8	8,1	7,1	10,7	11,6	5,4	10	6,1	9,9	6,8	8,9
308	308	318	353	400	300	350	300	360	355	290	272	320	300
12	12	12	12	12	12	12	12	12	11	12	12	12	12
11	11	10,0	10,7	10,0	9,9	9,7	8,6	10	9,5	9,2	8,4	13,0	10,2
15	15	15	15	15	15	15	15	15	15	15	15	15	15
28,8	28,8	17,8	26,8	27,6	24,3	35,2	39,8	18,7	36,1	24,9	35,3	24,9	30,5
51	51	61	61	66	65	56	60	53	51	59	42	59	47
49	49	39	39	34	35	44	40	47	49	41	58	41	53
-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	6	10	10	10	9	11	6	7	13	10	10	10	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-
13,3	-	11	11	11	8	11	10	-	-	-	-	-	-
-	-	-	-	-	-	-	5	4	-	-	-	-	-
8,6	-	11	11	11	8	11	10	11	13	13	11	11	11
-	10	10	10	10	10	10	10	10	10	10	10	10	10
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		Varia B-FDh	Arte F-FD / F-FDh	Arte F-FD / F-FDh NSHF	Arte F-FD / F-FDh (Export)	Arte X-FDh	Mini 2L / 2R	Mini 2LRh	Varia 2L-55 / 2R-55
General data	Normal heat output (kW) (closed structure)	11,0	5,9	9,4	9,4	11,0	7,0	7,0	7,0
	Thermal output range (kW)	7,7 - 14,3	4,1 - 7,7	6,6 - 12,2	6,6 - 12,2	7,7 - 14,3	4,9 - 9,1	4,9 - 9,1	4,9 - 9,1
	Efficiency (%)	> 79	> 80	> 80	> 80	> 78	> 78	> 78	> 80
	Recommended flue diameter (mm)	250	160	160	160	250	180	180	180
	Flue outlet diameter (mm)	250	160	160	160	250	180	180	180
	Weight (kg) (approx.)	350	95 / 110	95 / 110	95 / 110	430	160	160	240
	required minimum cross section for circulating air with WAC	-	-	-	-	700	700	700	-
	required minimum cross section for circulating air	1030 / 1230	240 / 290	340 / 390	240 / 390	1060 / 1270	750 / 900	750 / 900	860 / 985
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	23,8	-	-	-	28,5	20,1	20,1	36,8
	Exhaust gas temperature (°C)	240	-	-	-	250	220	220	170
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	10	-	-	-	10	10	10	12
	Recommended diameter in opening to secure sufficient air into the room (cm)	82	-	-	-	96	57	57	62
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	11,5	5,6	8,1	7,8	11,6	6,7	6,7	6,1
	Exhaust gas temperature (°C)	300	300	400	353	300	330	330	325
	Required manometric pressure (Pa)	12	12	12	12	12	12	12	12
	CO <sub>2</sub> (%)	8,4	8,7	8,7	10,7	8,6	9,2	9,2	10,8
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	2x15	15	15	15	15	15	15	15
Heat distribution	Combustion air requirement (m³/h)	40,3	18,1	28,4	26,1	39,8	23,7	23,7	19,7
	Convection (%)	47	61	65	50	48	54	54	42
	Glass window (%)	53	39	35	50	52	46	46	58
Distances to convec- tion chamber	Water (%)	-	-	-	-	-	-	-	-
	To the wall (cm)	11	10	10	10	10	10	10	10
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	-	-	-	-	-	8	8	13
	Floor (cm)	4	-	-	-	5	-	-	-
	Lateral wall (cm)	11	11	11	11	10	8	8	9
	Additional walling for wall protection (cm)	10	10	10	10	10	10	10	10
Tests and values	Type A - (no self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓

Varia 2L-55h / 2R-55h	Varia 2L / 2R	Varia 2L / 2R S	Varia 2L / 2R NSHF	Varia 2Lh / 2Rh	Varia 2Lh / 2Rh S	Varia 2Lh / 2Rh NSHF	Varia 2L-55h GET / 2R-55h GET	Varia 2L-55h GET+DH / 2R-55h GET+DH	Varia AS-2Lh / AS-2Rh	Varia AS-2Lh / AS-2Rh (Export)	Varia 2L-80h / 2R-80h	Varia 2L-80h / 2R-80h (Export)	Varia 2L-100h / 2R-100h
7,0	11,0	7,0	12,0	11,0	7,0	12,0	7,0	7,0	7,0	11,0	10,4	16,0	11,0
4,9 - 9,1	7,7 - 14,3	4,9 - 9,1	8,4 - 15,6	7,7 - 14,3	4,9 - 9,1	8,4 - 15,6	4,9 - 9,1	4,9 - 9,1	4,9 - 9,1	7,7 - 14,3	7,3 - 13,5	11,2 - 20,8	7,7 - 14,3
> 80	80	> 78	80	> 80	> 78	80	> 80	> 80	80	80	> 80	> 80	> 78
180	200	200	200	200	200	200	180	180	180	180	200	200	250
180	200	200	200	200	200	200	180	180	180	180	200	200	250
240	270	270	270	270	270	270	245	270	181	181	275	275	280
-	700	-	700	700	-	700	-	-	700	700	700	700	700
860 / 985	1250 / 1500	750 / 900	1280 / 1540	1250 / 1500	750 / 900	1280 / 1540	810 / 970	810 / 970	1200 / 1400	1200 / 1400	1200 / 1400	1200 - 1400	1140 / 1330
36,8	21,2	-	-	21,2	-	-	-	-	-	-	-	-	20,2
170	270	-	-	270	-	-	-	-	-	-	-	-	210
-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	14	-	-	14	-	-	-	-	-	-	-	-	10
62	64	-	-	64	-	-	-	-	-	-	-	-	-
6,1	9,6	7,7	10	9,6	7,7	10	6,5	6,5	6,6	8,7	9,5	12,9	12
325	330	245	350	330	245	350	276	276	311	349	283	305	280
12	12	12	12	12	12	12	12	12	12	12	12	12	12
10,8	10	8,3	10	10	8,3	10	9,7	9,7	11,2	9,7	10,1	10,9	8,2
15	15	15	15	15	15	15	15	15	15	15	15	15	15
19,7	36,5	33,5	36,5	33,5	33,5	36,5	22,6	22,6	19,0	34,5	31,3	44,7	41,1
42	53	51	53	53	51	53	50	95	72	72	53	53	49
58	47	49	47	47	49	47	50	5	28	28	47	47	51
-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	12	8	12	12	8	13	7	7	10	10	10	10	10
-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	7	13	7	7	13	7	15,5	-	11	11	16	16	10
-	-	-	-	-	-	-	-	-	-	-	-	-	5
9	7	11	7	7	11	7	6,2	-	11	11	16	16	10
10	10	10	10	10	10	10	10	-	10	10	10	10	10
✓	✓	-	✓	✓	-	✓	-	-	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		Varia 2LR-55h / 2RR-55h	Varia 2LR-55h / 2RR-55h GET	Varia 2LR-55h / 2RR-55h GET + DH	Varia 2LRh / 2RRh	Varia 2LRh / 2RRh S	Varia 2LRh / 2RRh NSHF	Varia C-45h	Varia Ch
General data	Normal heat output (kW) (closed structure)	7,0	7,0	7,0	11,0	7,0	12,0	8,0	9,0
	Thermal output range (kW)	4,9 - 9,1	4,9 - 9,1	4,9 - 9,1	7,7 - 14,3	4,9 - 9,1	8,4 - 15,6	5,6 - 10,4	6,3 - 11,7
	Efficiency (%)	> 80	> 80	> 80	80	> 78	80	> 80	> 78
	Recommended flue diameter (mm)	180	180	180	200	200	200	180	250
	Flue outlet diameter (mm)	180	180	180	200	200	200	180	250
	Weight (kg) (approx.)	240	245	245	270	270	270	230	250
	required minimum cross section for circulating air with WAC	-	-	-	700	-	700	700	700
	required minimum cross section for circulating air	860 / 985	810 / 970	810 / 970	1250 / 1500	750 / 900	1280 / 1540	1220 / 1470	890 / 1070
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	36,8	-	-	21,2	-	-	-	18,4
	Exhaust gas temperature (°C)	170	-	-	270	-	-	-	240
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	12	-	-	14	-	-	-	10
	Recommended diameter in opening to secure sufficient air into the room (cm)	-	-	-	64	-	-	-	69
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	6,1	6,5	6,5	9,6	7,7	10	7,5	8,8
	Exhaust gas temperature (°C)	325	276	276	350	245	218	255	340
	Required manometric pressure (Pa)	12	12	12	12	12	12	12	12
	CO <sub>2</sub> (%)	10,8	9,7	9,7	10	8,3	10	9,2	9,7
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	15	15	15	15	15	15	15	15
Heat distribution	Combustion air requirement (m³/h)	19,7	22,6	22,6	36,5	33,5	36,5	25,8	28,4
	Convection (%)	42	50	95	53	51	53	56	52
	Glass window (%)	58	50	5	47	49	47	44	48
Distances to convec- tion chamber	Water (%)	-	-	-	-	-	-	-	-
	To the wall (cm)	10	7	7	12	8	13	12	9
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	13	15,5	-	7	13	7	11	8
	Floor (cm)	-	-	-	-	-	-	-	-
	Lateral wall (cm)	9	6,2	-	7	11	7	9	8
	Additional walling for wall protection (cm)	10	10	-	10	10	10	10	10
Tests and values	Type A - (no self-closing door)	✓	-	-	✓	-	✓	-	✓
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓

Arte U-50h	Arte U-70h	Arte U-90h	Arte 3RL-60h	Arte 3RL-80h	Arte 3RL-100h	Speedy MR / MRh	Speedy MR / MRh S	Speedy R / Rh 51	Speedy R / Rh NSHF	Speedy Ph	Magic	Speedy MDRh	Speedy RDRh
9,0	11,0	13,0	7,5	9,0	11,0	9,0	7,0	9,0	10,0	7,0	12,0	9,0	11,0
6,3 - 11,7	7,7 - 14,3	9,1 - 16,9	5,3 - 9,8	6,3 - 11,7	7,7 - 14,3	6,3 - 11,7	4,9 - 9,1	6,3 - 11,7	7,0 - 13,0	4,9 - 9,1	8,4 - 15,6	6,3 - 11,7	7,7 - 14,3
> 78	> 78	> 78	> 80	> 80	> 78	> 80	> 80	> 78	> 80	> 80	> 80	> 78	> 78
200	200	200	250	250	250	180	180	200	200	160	180	200	200
200/250	200/250	200/250	200/250	200/250	250	180	180	200	200	160	180	200	200
240	375	464	250	280	300	200 / 235	200 / 235	210 / 220	210	175	295	220	270
-	-	-	-	-	-	700	700	700	-	530	700	700	700
930 / 1120	630 / 760	810 / 970	940 / 1130	630 / 760	720 / 920	930 / 1110	1000 / 1200	780 / 930	1060 / 1270	630 / 750	260 / 430	810 / 980	860 / 1030
-	-	-	23,7	26,5	40	-	-	26,4	-	-	-	28,4	26,2
-	-	-	140	155	180	-	-	257	-	-	-	210	240
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	7	7	12	-	-	12	-	-	-	10	10
-	-	-	65	76	86	-	-	53	-	-	-	62	64
8,6	11,3	13,4	7,0	7,3	10,3	7,1	6,9	9,2	10,7	5,7	9,0	9,4	12,7
310	310	310	310	335	360	360	341	336	430	290	370	310	266
12	12	12	12	12	12	12	12	12	12	12	11	12	12
9,3	9,2	9,2	9,3	10,1	9,8	11,7	9,9	9,2	7,5	10,5	11,6	9,2	7,4
15	15	15	15	15	15	15	15	15	15	15	15	15	15
29,6	37,1	44	23,4	26,8	35	23,3	21,6	30,6	34	25,7	29	30,4	46,2
35	37	36	42	43	42	46	46	52	63	40	47	45	39
65	63	64	58	57	58	54	54	48	37	60	53	55	61
-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9	10	5	4	10	12	9	11	11	9	16	12	16
-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9	9	9	9	11	9	9	6	6	8	11	10	13
-	5	5	-	-	4	-	-	4	4	-	-	10	-
6	6	6	9	9	11	9	9	6	6	8	-	10	13
10	10	10	10	10	10	10	10	10	10	10	10	10	10
-	-	-	✓	✓	✓	✓	-	✓	-	✓	-	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-

		Varia Eh	Varia BEh	Arte BRh	Speedy M / Mh	Speedy M / Mh NSHF	Speedy K / Kh	Speedy K / Kh NSHF	Mini Z1 H <sub>2</sub> O
General data	Normal heat output (kW) (closed structure)	11,0	11,0	11,0	8,0	9,0	9,0	10,0	7,0 / water output 5,5
	Thermal output range (kW)	7,7 - 14,3	7,7 - 14,3	7,7 - 14,3	5,6 - 10,4	6,3 - 11,7	6,3 - 11,7	7,0 - 13,0	4,9 - 9,1
	Efficiency (%)	> 78	> 78	> 78	> 80	> 80	> 78	> 80	> 80
	Recommended flue diameter (mm)	200	250	200	180	180	200	200	180
	Flue outlet diameter (mm)	200	250	200	180	180	200	200	180
	Weight (kg) (approx.)	240	350	260	190	190	220	220	250
	required minimum cross section for circulating air with WAC	700	700	700	700	-	700	-	-
	required minimum cross section for circulating air	1330 / 1600	1270 / 1520	1110 / 1330	820 / 990	960 / 1150	1100 / 1320	1230 / 1470	80 / 100
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	22,1	45,8	22,4	-	-	26,4	-	-
	Exhaust gas temperature (°C)	270	230	260	-	-	257	-	-
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	10	10	10	-	-	12	-	-
	Recommended diameter in opening to secure sufficient air into the room (cm)	50	60	65	-	-	54	-	-
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	10	11,9	10,7	5,4	8,8	9,2	10,7	6
	Exhaust gas temperature (°C)	330	340	350	324	330	336	330	235
	Required manometric pressure (Pa)	12	14	12	12	12	12	12	12
	CO <sub>2</sub> (%)	9,6	8,5	9,7	13,1	9,1	9,2	7,5	9,6
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	15	2x15	15	15	15	15	15	15
Heat distribution	Combustion air requirement (m³/h)	35,6	40	35,2	18,2	29,3	30,6	39,6	20,8
	Convection (%)	61	58	51	51	60	60	69	6
	Glass window (%)	39	42	49	49	40	40	31	16
Distances to convec- tion chamber	Water (%)	-	-	-	-	-	-	-	78
	To the wall (cm)	12	10	7	12	12	13	13	3
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	8	8	11	12	8	6	6	5
	Floor (cm)	-	-	-	-	-	4	4	5
	Lateral wall (cm)	8	8	11	12	8	6	6	5
	Additional walling for wall protection (cm)	10	10	10	10	10	10	10	10
Tests and values	Type A - (no self-closing door)	✓	✓	✓	✓	-	✓	-	-
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	-	-	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓



Mini Z1 H <sub>2</sub> O XL	Mini Z1h H <sub>2</sub> O XL	Varia 1V H <sub>2</sub> O / 1Vh H <sub>2</sub> O	Varia 1V H <sub>2</sub> O / 1Vh H <sub>2</sub> O (Export)	Varia 1V H <sub>2</sub> O XL / 1Vh H <sub>2</sub> O XL	Varia 1V H <sub>2</sub> O XL / 1Vh H <sub>2</sub> O XL (Export)	Varia 1V H <sub>2</sub> O XXL / 1Vh H <sub>2</sub> O XXL	Varia 1V H <sub>2</sub> O XXL / 1Vh H <sub>2</sub> O XXL (Export)	Varia Ah H <sub>2</sub> O	Varia Ah H <sub>2</sub> O Export	Varia A-FDh H <sub>2</sub> O	Varia A-FDh H <sub>2</sub> O (Export)	Varia 2L-55h H <sub>2</sub> O 2R-55h H <sub>2</sub> O	Varia 2L-55h H <sub>2</sub> O 2R-55h H <sub>2</sub> O (Export)
10,0 / water output 8,0	10,0 / water output 8,0	8,0 / water output 5,0	11,0 / water output 6,0	9,0 / water output 6,0	12,0 / water output 8,5	15,0 / water output 11,0	22,0 / water output 15,6	10,4 / water output 7,7	14,0 / water output 9,8	10,4 / water output 7,8	15,0 / water output 9,0	7,0 / water output 4,2	12,0 / water output 7,2
7,0 - 13,0	7,0 - 13,0	5,6 - 10,4	7,7 - 14,3	6,3 - 11,7	8,4 - 15,6	10,5 - 19,5	15,4 - 21,2	7,3 - 13,5	9,8 - 18,2	7,3 - 13,5	10,5 - 19,5	4,9 - 9,1	8,4 - 15,6
> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80
180	180	180	180	200	200	200	200	200	200	200	200	180	180
180	180	180	180	200	200	200	200	200	200	200	200	180	180
250	250	320	320	325	325	330	330	395	395	396	396	204	204
-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 / 100	80 / 100	800 / 1000	800 / 1000	800 / 1000	800 / 1000	800 / 1000	800 / 1000	190 / 230	510 / 560	220 / 260	220 / 260	270 / 320	270 / 320
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,5	7,5	6,7	10,4	7,5	10,8	13,1	14,8	8,0	13,3	12,2	13,0	7,4	11,0
245	245	240	250	220	235	225	240	230	250	210	240	230	235
12	12	12	12	12	12	12	12	12	12	12	12	12	12
11,1	11,1	9,6	8,6	9,7	9,1	8,9	10,9	11,1	9,2	7,8	10,3	7,9	8,5
15	15	15	15	15	15	15	15	15	15	15	15	15	15
25,6	25,6	24,0	34,0	26,3	38,0	48,2	55,0	48,6	49,8	37,9	56,1	25,3	40,5
4	4	3	10	15	12	9	10	14	14	19	19	28	11
16	16	35	35	18	18	18	18	16	16	21	21	25	25
80	80	62	55	67	70	73	72	70	70	60	60	47	64
3	3	6	6	6	6	6	6	3	3	3	3	3	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	5	9	9	9	9	9	9	8	8	9	9	6	6
5	5	-	-	-	-	-	-	-	-	-	-	-	-
5	5	9	9	9	9	9	9	8	8	9	9	6	6
10	10	10	10	10	10	10	10	10	10	10	10	10	10
-	-	-	-	-	-	-	-	-	-	-	-	-	-
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		Varia 2Lh H <sub>2</sub> O / 2Rh H <sub>2</sub> O	Varia 2Lh H <sub>2</sub> O / 2Rh H <sub>2</sub> O (Export)	Nova E H <sub>2</sub> O	Nova F-Air	Renova A H <sub>2</sub> O	Renova B-Air	Renova C-Air (split logs)	Renova C-Air (Lignite)
General data	Normal heat output (kW) (closed structure)	10,4 / water output 6,0	14,7 / water output 8,4	14,0 / water output 9,0	10,1	13,4 / water output 6,9	8,8	8,5	7,8
	Thermal output range (kW)	7,3 - 13,5	10,3 - 19,1	9,8 - 18,2	7,1 - 13,1	9,4 - 17,4	6,2 - 11,4	6,0 - 11,1	5,5 - 10,1
	Efficiency (%)	> 80	> 80	> 80	> 80	> 80	> 80	> 80	> 80
	Recommended flue diameter (mm)	200	200	180	180	180	180	150	150
	Flue outlet diameter (mm)	200	200	180	180	180	180	150 / 160 / 180	150 / 160 / 180
	Weight (kg) (approx.)	380	380	290	190	200	140	110	110
	required minimum cross section for circulating air with WAC	-	-	-	-	-	-	-	-
	required minimum cross section for circulating air	260 / 280	260 / 280	370 / 450	1580 / 1900	690 / 830	1420 / 1700	1030 / 1240	1030 / 1240
Operation with open door (multiple usage of the chimney not permitted)	Exhaust mass flow (g/s)	-	-	-	-	-	-	-	-
	Exhaust gas temperature (°C)	-	-	-	-	-	-	-	-
	Exhaust gas temperature behind NSHF (°C)	-	-	-	-	-	-	-	-
	Required manometric pressure (Pa)	-	-	-	-	-	-	-	-
	Recommended diameter in opening to secure sufficient air into the room (cm)	-	-	-	-	-	-	-	-
Operation with closed door (multiple usage of the chimney permitted)	Exhaust mass flow (g/s)	10,8	12,2	12,7	9,5	12,8	9,4	8,2	8,2
	Exhaust gas temperature (°C)	285	285	400	355	396	357	495	483
	Required manometric pressure (Pa)	12	12	12	12	12	12	12	12
	CO <sub>2</sub> (%)	8,2	8,2	8,2	8,1	7,7	7	7,7	7,7
	Necessary area to secure air balance in the room (M-FeuVO) (cm)	15	15	15	15	15	15	15	15
	Combustion air requirement (m³/h)	49,8	53,4	46,3	34,1	47,3	34,7	30,3	30,3
Heat distribution	Convection (%)	6	6	14	78	24	81	66	66
	Glass window (%)	37	37	22	22	23	19	34	34
	Water (%)	57	57	64	-	53	-	-	-
Distances to convec- tion chamber	To the wall (cm)	3	3	6	10	6	10	10	10
	To the floor (cm)	-	-	-	-	-	-	-	-
Thermal insulation* (Example rock wool mats in acc. with AGI-132 Q)	Mounting wall (cm)	5	5	10	13	12	13	15	15
	Floor (cm)	-	-	-	-	-	-	-	-
	Lateral wall (cm)	5	5	10	13	12	13	15	15
	Additional walling for wall protection (cm)	10	10	6	6	6	6	6	6
Tests and values	Type A - (no self-closing door)	-	-	-	-	-	-	-	-
	Type A1 - (self-closing door)	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 1st level	✓	✓	✓	✓	✓	✓	✓	✓
	BlmSCHV. 2nd level	✓	✓	✓	✓	✓	✓	✓	✓
	15a BVG	✓	✓	✓	✓	✓	✓	✓	✓

## NOTES

NOTES

A blank sheet of graph paper with a grid pattern. The top-left corner contains the word "NOTES". The rest of the page is covered by a uniform grid of small squares.

[illegible]