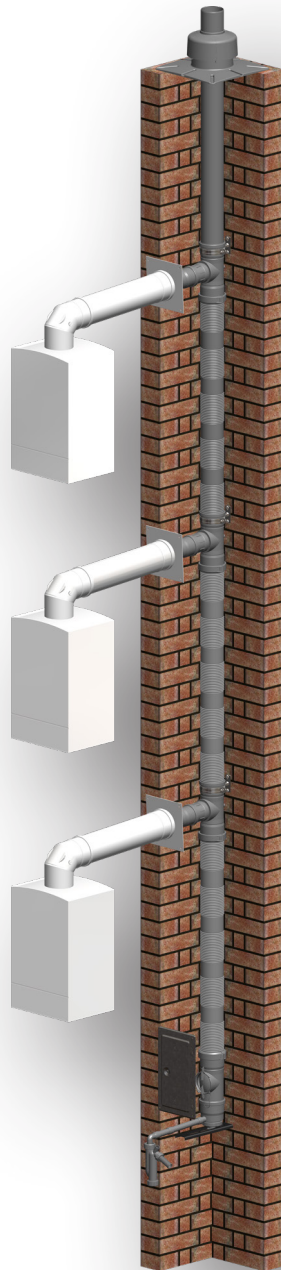


# Planning and installation notes

CE 0036 CPD 91265-001  
Certification Z-7.5-3356



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Connection up to 10 gas condensing boilers, set on different floors, to a communal flue system.  
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COMMUNAL FLUE SYSTEMS

# Communal flue systems

## 1. Product description

Installation shafts, for the single connections to the appliances, often lack in buildings with decentralized heating. The PolyTop communal flue system offers a solution to this problem thanks to a connection of many appliances to the same flue gas system. The flues are conveyed in overpressure operation. Mode.

## 2. Intended use

The typical use is the connection of many gas-fired condensing appliances to a communal PolyTop flue gas system. The heaters must be approved for this operating system by their producers and secured against the flue gas return. The maximum number of appliances, allowed to be connected, depends on the indication given by the producers and on design tests.

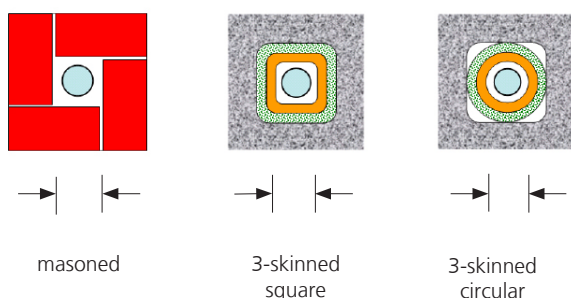
- ☞ note the certification Z-7.5-3356
- ☞ room-sealed operating system in overpressure connection to appliances with PolyClassic flue gas system in DN 60/100 or DN 80/125
- ☞ a room air dependent operating system is not permitted!

## 3. General information

For the construction of the flue system please refer to the building regulations and guidelines like DIN 18160.1, EN 13384, TRGI, the Firing Installations Order of the lands as well as the installation instructions of the heaters to be connected. We recommend you involve the district master chimneysweeper during the planning.

## 4. Shaft dimensions

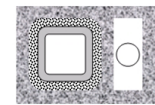
When planning, minimum cross sections, depending on shaft geometry, must be observed. The following shaft dimensions are reference values. For the execution, a fluidic calculation according to EN 13384 is necessary. The specification of the heater producers must be observed as well.



Tab. 1: Minimum shaft dimensions- they can be even smaller by calculation.

| PolyTop DN | masoned in mm | 3-skinned square in mm | 3-skinned circular in mm |
|------------|---------------|------------------------|--------------------------|
| 80         | 160 x 160     | 160 x 160              | 180                      |
| 100        | 180 x 180     | 180 x 180              | 200                      |
| 110        | 200 x 200     | 200 x 200              | 200                      |
| 125        | 200 x 200     | 200 x 200              | 220                      |
| 160        | 220 x 220     | 220 x 220              | 250                      |

The flue systems may be also installed in equivalent rectangular shafts.



Schornsteingruppe mit Luftschaft

## 5. Flue gas systems near to solid fuel draft

Should a solid fuel draft be near the flue system, then it is necessary to install a stainless steel chimney cover kit.

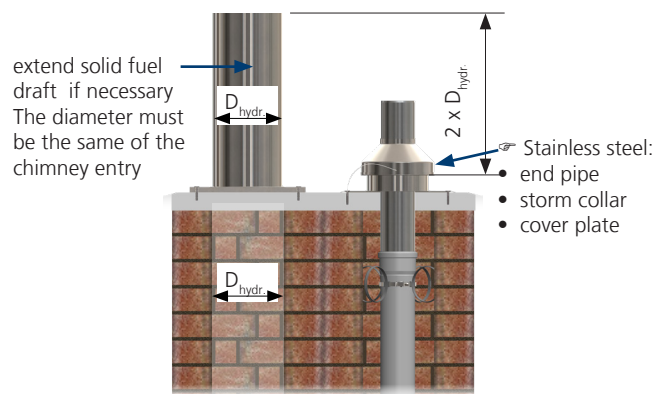


Fig. 1: Stainless steel chimney cover kit for chimney group with solid fuel draft

## 6. Chimney heights over the roof

The height of the chimney of the flue system over the roof must be adjusted with the responsible chimneysweeper. Reference value s. Fig. 2. In single cases it may be necessary to make further arrangements.

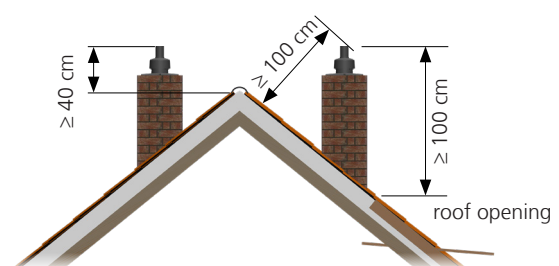


Fig. 2: Chimney height over roof, if roof pitch  $\geq 20$  degrees

# Communal flue systems

## 7. Accident prevention

Observe the accident prevention and safety regulation of the institution for statutory accident insurance and prevention in building trade.

In case of installation on the roofs or at high heights safety, retention and catching devices as well as scaffolds must be employed. Wear protective goggles during drilling and cutting works as well as protective gloves when installing steel parts.

## 8. Tools and devices

For the installation common handcraft tools of the heating fitters are necessary:

- mortise equipment and if necessary core drill, boring machine for the shaft opening as well as for placing the dowels of the wall cover and of the chimney cover kit
- pipe cutting and chamfer tool to cut the PolyTop flue gas ducting pipes.
- angle grinder with circular saw for steel sheet
- rasp/abrasive paper for the trimming of the air pipes
- spatula and trowel for the mortar fixing of the wall bushing and the sealing of the wall cover with fire protection glue
- lowering rope or a lowering device in case of high flue gas system

Tab. 2: Weights of the PolyTop pipes

| PolyTop | 80   | 100  | 110  | 125  | 160  |
|---------|------|------|------|------|------|
| kg/m    | 0,46 | 0,64 | 0,76 | 1,19 | 1,62 |

## 9. General assembly instruction

- ☞ do not mix and assembly pipeline sections with different component and seals
- ☞ always coat the lower part of the pipe with lubricating grease (fig. 3).
- ☞ check if each component has a perfect seal seam

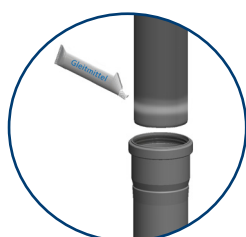


Fig. 3: grease the lower nipple of the flue

## 10. Installation of the lower pipe section

For the first connection to the appliance, make an installation hole at the height of the T-piece and as large as the clear cross-section.

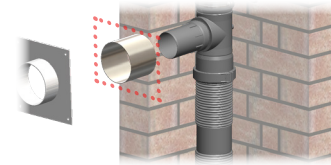


Fig. 4: make an installation hole for the connection to the appliance

Make also the other installation openings for the T-piece.

On the same way make the holes for the condensate discharge (only necessary if the appliances in the room cannot be connected with the wastewater sewage).

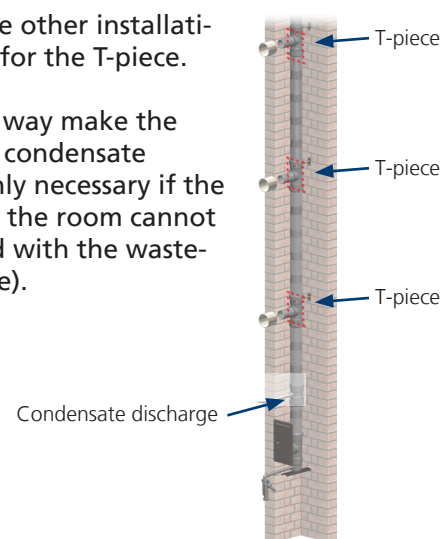


Fig. 5: installation opening for further appliances and for condensate discharge

All the inspection pipes, T-pieces and condensate discharges must be fixed to the shaft with a couple of dowels 8 x 36 or similar (Fig. 6 - 8). The fixing elements must be coordinated on site to the building material.

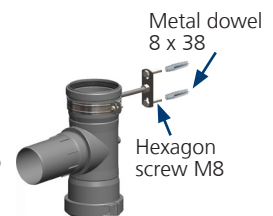


Fig. 6: T-piece fixing

Seal the shaft parting wall with fire protection glue

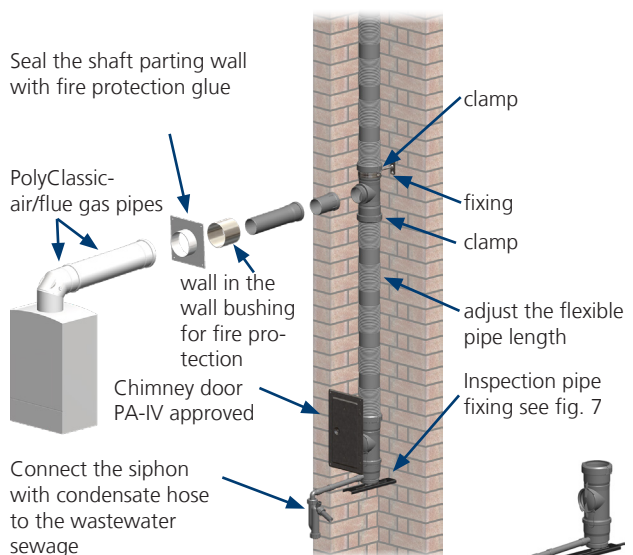


Fig. 8: lower pipe section with the 1 connection to the appliance



Fig. 7: Inspection pipe

# Communal flue systems

## 11. Installation of further connections for the appliances

The second connection as well as all the other ones are installed as described in chapter 10. Between the lowest and the topmost connection, only flexible pipe can be employed.

The distance among the connections must be  $\geq 2,5\text{m}$ !

A lower distance among the connections must be verified through a type examination by the boiler producer

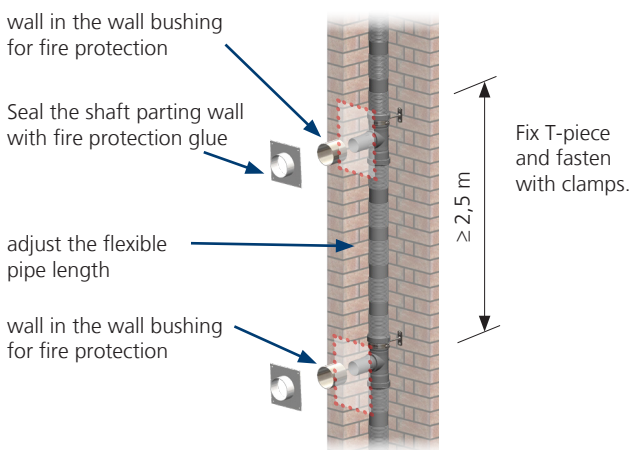


Fig. 9: installation of further connections for appliances

## 12. PolyTop component fasten with clamps

The flexible pipe segment must be assembled with the inspection pipe, with the appliances and if necessary with the condensate discharged as explained in chapter 8-9 and then fastened with clamps.

Coat the nipple end of the flex. pipe with lubricating grease and insert it into the socket. Then fasten the connection with clamps.

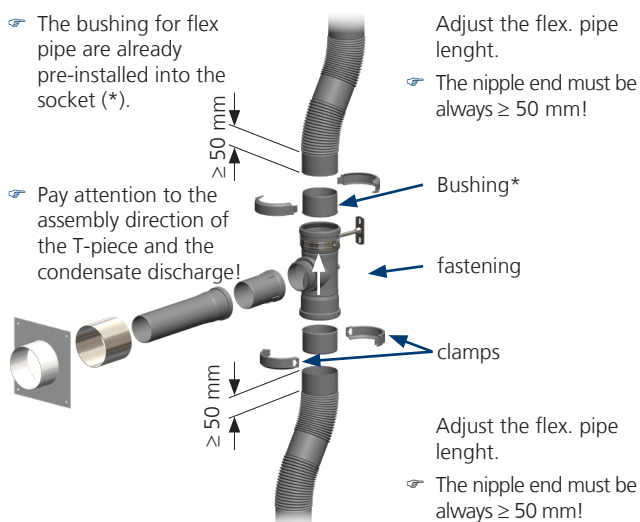


Fig. 10: Example : T-piece fastening with clamps

## 13. Installation of the pipe elements over the last connection

Rigid PolyTop pipes are employed in the upper pipe section of the duct.

The pipe elements must be assembled with brackets at  $\leq 2\text{ m}$  distance ( Fig. 11).

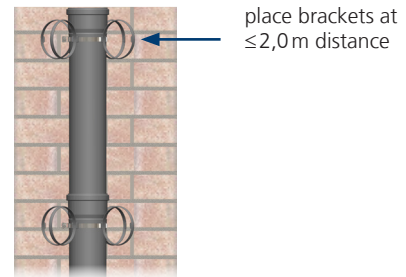
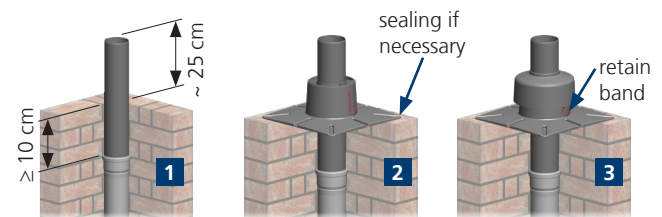


Fig. 11: pipe element sinking in the shaft

## 14. Plastic chimney cover kit assembly

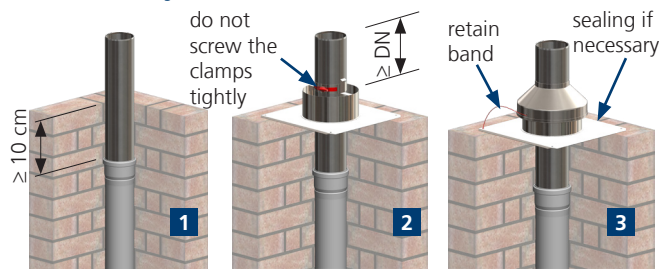


Cut the chimney end pipe at 25 cm height over the upper edge of the chimney. The distance between the last socket and the upper edge of the chimney must be  $\geq 10\text{ cm}$ !

Mount the cover plate of the shaft with the included attachment set. In case of chimney end without slope, arrange a sealing.

Push the chimney cap over the chimney end piece and fix it to the cover plate with the retaining band enclosed.

## 15. Alternative: stainless steel chimney cover kit assembly



The distance between the last socket and the upper edge of the chimney must be  $\geq 10\text{ cm}$ ! Insert the stainless steel end pipe

Mount the cover plate of the shaft with the included attachment set. In case of chimney end without slope, arrange a sealing

Push the chimney cap over the chimney end piece up to the spacer on the end pipe and fix it to the cover plate with the retaining band enclosed