

## INJECTION AND EXTRACTION NOZZLES

If possible, the store should be situated with an outer wall on the narrow side as the injection and extraction nozzles must be accessible from outside. If the store is in an inner-lying room, the injection and extraction pipes (made of metal) must be extended out to an external wall.

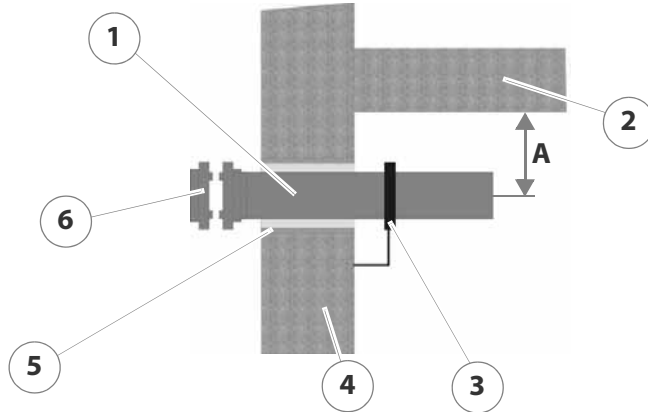


Figure 4/1 - Injection and extraction nozzles

- 1 Injection or extraction nozzle
- 2 Ceiling
- 3 Earth cable
- 4 Outer wall
- 5 PVC pipe Ø 150 mm (supplied by customer)
- 6 Coupling nozzle Storz "A" system, Ø 100 mm with cap
- A) Clearance to ceiling approx. 20 cm

Both nozzles must be properly earthed (equipotential bonding).

The injection and extraction nozzles are installed on the narrow side, just underneath the ceiling.

The injection nozzle should be in the middle of the room to ensure even filling.

The passages through the wall for the nozzles must be watertight.

## PELLET ANTI-SHATTER PROTECTIVE MAT

Pellets are blown into the store at high pressure. To prevent damage to the pellets and to the wall, a protective mat must be installed opposite the injection nozzle. This must be made of a durable material which will not deteriorate with age, e.g. rubber or plastic. The minimum clearance between protective mat and wall must be 30 cm.

ALTERNATIVE INSTALLATIONS

- **Spacing between injection/extraction nozzles over 50 cm:**

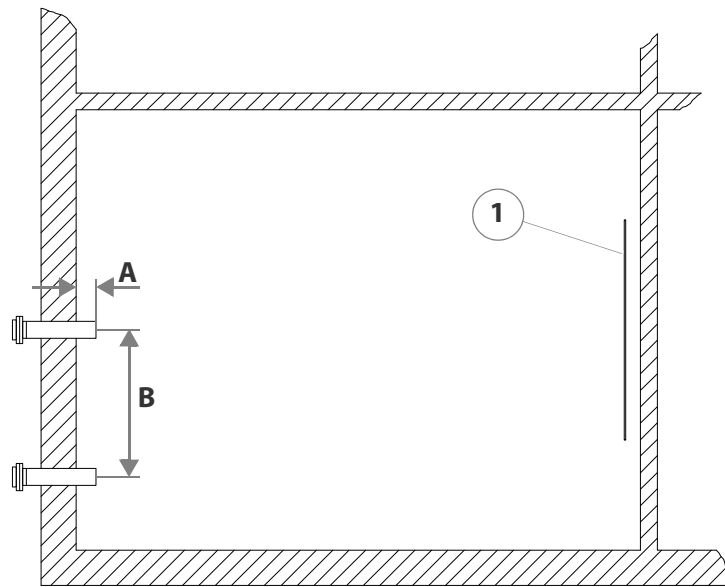


Figure 4/2 - Injection and extraction nozzles, version 1

1 Pellet anti-shatter protective mat

A) approx. 10 cm

B) over 50 cm

- **Spacing between injection/extraction nozzles under 50 cm:**

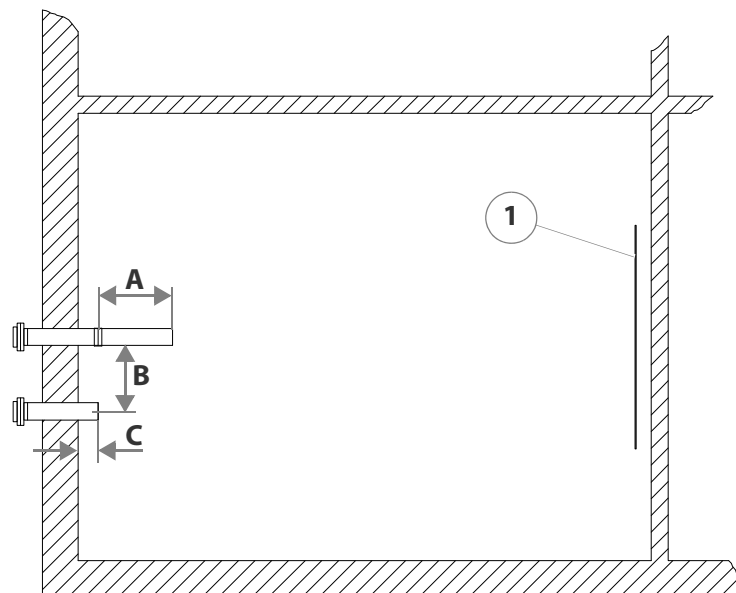


Figure 4/3 - Injection and extraction nozzles, version 2

1 Pellet anti-shatter protective mat

A) min. 50 cm

B) under 50 cm

C) approx. 10 cm

- **Injection and extraction nozzles for filling on alternating sides:**

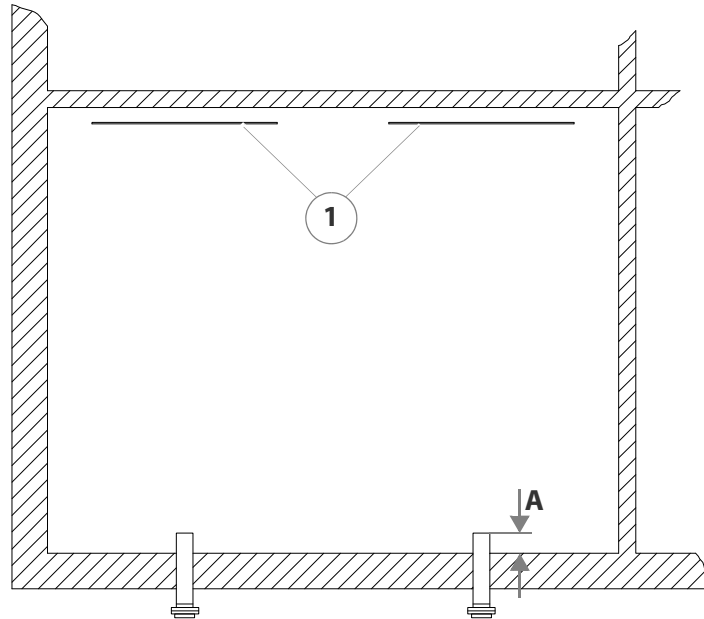


Figure 4/4 - Injection and extraction nozzles, version 3

1 Pellet anti-shatter protective mat

A) approx. 10 cm

If the injection and extraction nozzles on the long side of the pellet store are used for filling from alternating sides, the existing space can be better utilised.

A protective mat must then be installed for both nozzles.



Position the pipes as high as possible in the store so as to be able to fill to the maximum. The minimum clearance to the ceiling should be approx. 20 cm so that the pellets do not hit it. Plaster ceilings will need a protective panel.

#### PASSAGE THROUGH THE WALL

The passage through the wall normally must be made in the wall between the furnace or boiler room and the pellet store. Its position should be as central as possible.

The feed opening for the delivery between fuel store and furnace/boiler room must be 0.50 m x 0.50 m.

#### CEILINGS, WALLS AND ACCESS POINTS

The walls and ceiling must be dry. Make sure the store is air tight owing to the dust generated and the danger of condensation on cold winter days.

The surrounding walls must be able to bear the weight and pressure produced by the pellets (density 650 kg/m<sup>3</sup>).

In practice, the following wall thicknesses have proved adequate:

- Medium weight vertically perforated brick:
  - 11.5 cm plastered on both sides

- Solid concrete:
  - 10 cm (steel reinforced)
- Aerated concrete:
  - 11.5 cm plastered on both sides
- Wooden framed wall:
  - approx. 12 cm thick beams
  - with planking on both sides made of 15 - 20 mm wood-based material
  - Beam spacing approx. 62.5 cm

The conditions for proper design include a wall length of max. 5 m and a height of max. 2.5 m, with a well-designed connection between the walls and ceiling on all sides.

### ACCESS HATCH

The fuel store must be provided with a suitable access hatch for entering it, e.g. to perform maintenance work.



#### **Important!**

Each entry point to the pellet store must, for reasons of safety, be equipped with a limit switch so that the heating system switches off as soon as the door is opened.

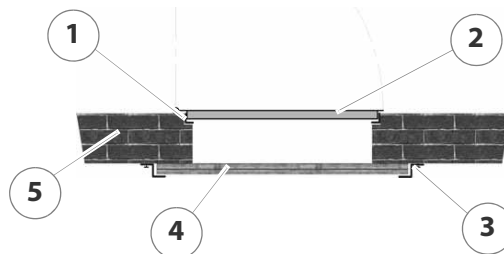


Figure 4/5 - Access hatch for pellet store

- 1 Seal
- 2 Access hatch
- 3 Z-shaped retainer
- 4 Wooden boards (supplied by customer)
- 5 Separating wall

Doors and access hatches must have a seal to prevent dust from escaping when pellets are being blown in. On the door to the pellet store, wooden boards must be fitted on the inside (at least 3 cm, tongue & groove design if possible), so that the pellets cannot press against the door.

### ELECTRICAL SYSTEM

The directives of 2006/95/EC (low voltage guidelines) must be followed for the electrical connections to the system.