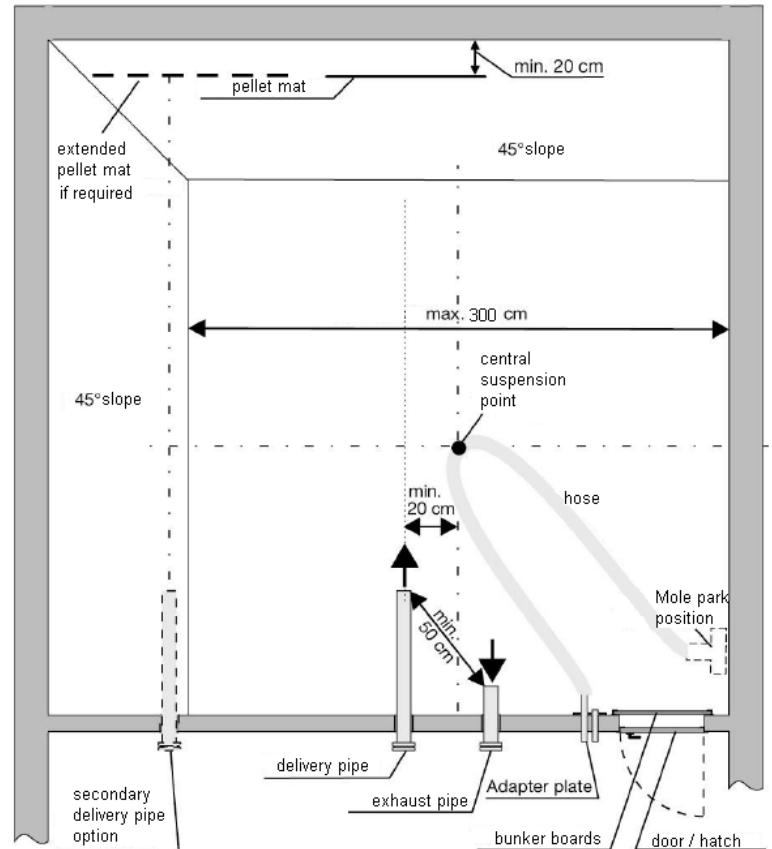


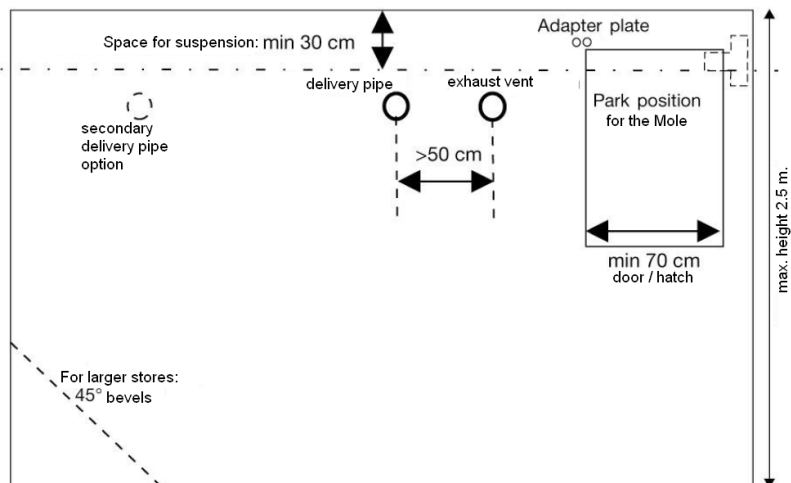
1. General information

- The Pellet Mole is an innovative and patented extraction technology for wood pellets.
- The system is tested and approved for 6 mm wood pellets, in accordance with current standards DINplus or ENplus.
- The Mole is compatible with the leading pellet boilers using vacuum feed systems. The control parameters for the vacuum are set on the boiler.
- The Mole must be placed in the park position before filling the store and placed in the work position after pellet delivery (**see 7**).
- The working area of the Mole up to a max. 3 m in diameter. The system is proven at 1.8 to 2.5 m.
- In larger areas 45 ° bevels can be used to create a square of 3 m. (see diagram)
- For larger or much higher storage rooms please consult with Schellinger on design.
- Depending on storage space geometry and parameter settings 90% of the store can be recovered.

**2. Store design**

In the planning and construction of a Mole pellet store the following instructions must be followed:

- The footprint of the store should be as round or square as possible.
- The Mole suspension point should be central to the swept floor area.
- The built-in components (Mole and hose) must not hang in the incoming stream of pellets.
- A park position for the Mole must be available in a dead space of the store. This space should be a max. 40 cm below the ceiling. Ideally, in the corner closest to the filling point (i.e. out of the line of fire) and within easy reach of the access hatch.
- The pellet store must be accessible at all times.



The impact protection mat should not be positioned in front of the door.

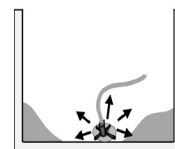
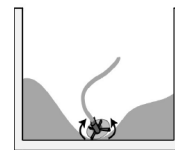
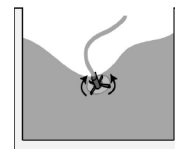
- The access (door / hatch, min. 80x80 cm) should be made in the wall perpendicular to the filling connection.
- The park location must be accessible so that the Mole can be placed in the work position after pellet delivery.
- The adapter plate (wall penetration) can be mounted flush with the ceiling, near the door.

3. Boiler settings

- The vacuum must have a lead and over-run time such that the hose is cleared of pellets between each run of the Mole. The active Mole duration should be 60 - 120 s.
- It is important that at the end of each suction cycle the hose is completely emptied.
- The length of the Mole run time determines the area covered by the Mole. The rotation of the Mole foot changes with each start.

4. Operation

- The ideal starting position for the Mole is 'nested' in a funnel shaped depression in the pellets as centrally as possible.
- The housing can be half-covered with pellets.
- The rotating "foot" doses the suction port with pellets.
- The Mole digs in, tunnels down and usually works within the central starting position.
- On reaching the ground the Mole is led by the hose over the empty areas until the slope of pellets is reached and the pellets recovered.



5. Vacuum suction

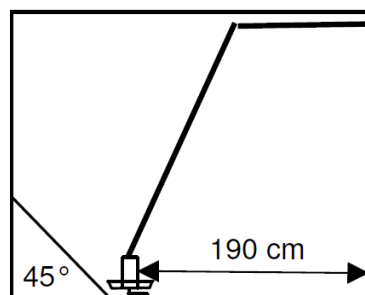
Good suction power moves the pellets in the hose very rapidly – faster than the eye can see. For example, a 10 m length of hose is completely emptied after 3 to 5 seconds. If pellets remain in the hose after a feeding cycle (often above the Mole or in pipe bends), this indicates too short a vacuum over-run time or too little suction. The following should be examined:

- Utilize short, straight, hose routes.
- Depending on the type of boiler: a max. 15 to 20 m suction hose plus 5 m Mole-hose.
- Seal all hose connections and joints properly (avoid leakage).
- Clean any filters or gates in the vacuum system regularly.

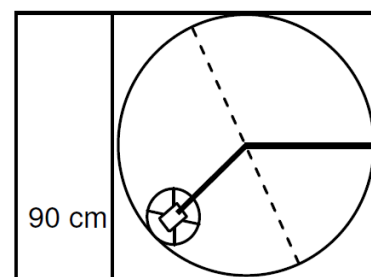
6. Mole hose

- The length of the suction hose between the Mole and the pellet store ceiling must be adjusted correctly.
- The factory setting is ideal for storage space of 2.5 x 2.5 m area and a height of 2.3 meters.
- For different store sizes, the length from the ceiling suspension to the Mole should be adjusted. Excessive hose will cause problems but bring no benefit.
- Stores with low ceilings will have a consequential reduction in Mole working area.
- For rectangular storage rooms the hose length should be adjusted to account for the shorter of the two wall lengths. The hose length should allow the Mole to just miss the wall at its narrowest point. The work area is reduced in this case.
- A second suspension point can be used to increase recoverable volume. In this case, the adapter plate should be roughly in the centre of the longest wall.

Pellet store : 190 x 280 cm, H: 220 cm
free hose length : 200 – 210 cm



elevation



plan

7. Start position

After pellets are delivered the Mole must be placed in the correct starting position.

- Push pellets into corners and flatten any steep slopes (<math><20^\circ</math>).
- Create a small depression in the centre of the store, c. 30 cm deep.
- With the pellet intake hole toward the centre of the store, push the Mole gently in to the pellets until around half the body is submerged.

8. Fault finding

In the event of performance problems please check:

- The foot is rotating in both directions (after each start it should change direction; anticlockwise /clockwise).
- The foot rotates with some resistance.

If the Mole is tilted/slanted the following might apply:

- Pellets are in the hose above the Mole. The increased weight tips the Mole over.
→ action: Find the cause of the blockage.
- The hose is too long to influence the Mole.
→ action: Check the hose length, push the Mole as low as possible into the pellets.
- Mole is 'stranded', operating on the floor, the foot rotates freely but is not feeding pellets.
→ action: accumulate the pellets in a corner, as far as possible flatten the top and place the Mole in a pit at the centre. The aim is to re-create the starting position and that the Mole reaches the ground before running in to the wall.