

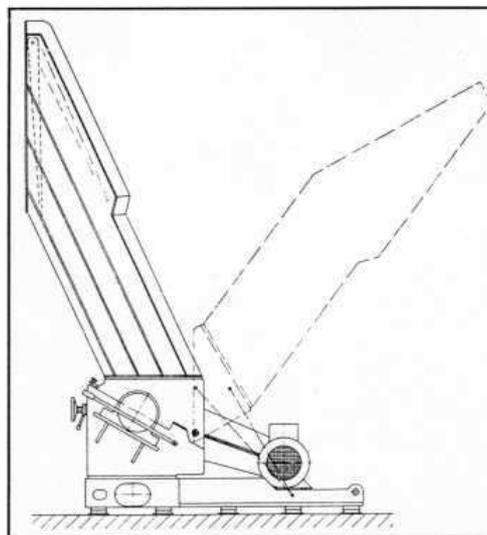
## Size Reduction of Tubes



There is a number of detailed questions that have to be considered when choosing the ideal size reduction system for tubes:

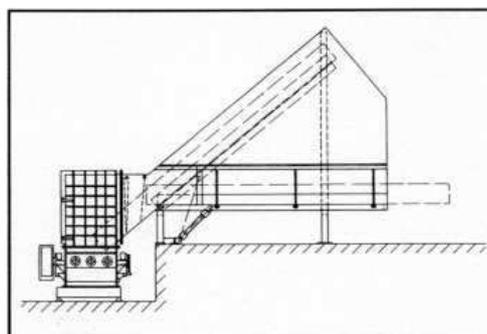
- the location of the unit: Is it to be integrated into the extrusion line or to be situated in a separate granulating room?
- the number of cleaning intervals for colour or material changes
- the desired degree of automation of the system
- the available capital

Since it is not possible to satisfy all the requirements with one single type of machine, HERBOLD offers a variety of solutions for the size reduction of tubes which are shortly outlined below:



### 1. Standard granulator with vertical feed ([SMS-SML Brochure](#))

The standard granulator equipped with a feed hopper is the most economically priced solution. The feeding of this type of machine cannot be regulated. To prevent over-feeding and jamming it is necessary to pre-cut thick-walled tubing to a length of approximately 2 m (8") prior to feeding into the granulator. A platform or a pit is absolutely essential for this unit.

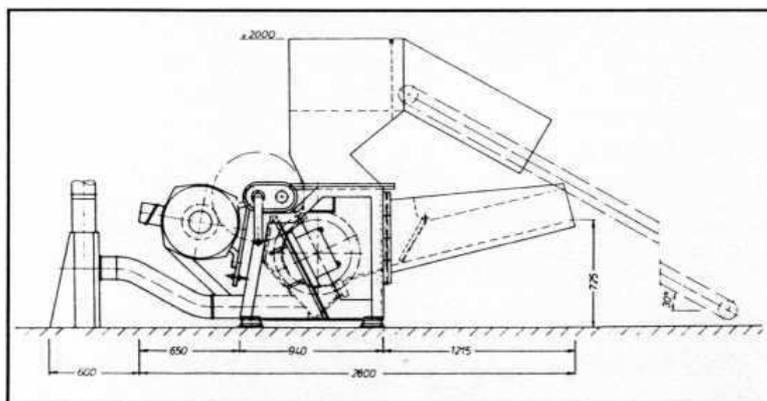


### 2. Standard granulator with horizontal feed

To simplify handling it is possible to equip a standard granulator with a widened feed opening of approx. 1000 mm (39.5"). The tubes are now being fed parallel to the rotor shaft at an angle that eases the feeding process. A feed hopper with a tipping device can be supplied for this unit. In this case the plant's room height must be suitably dimensioned to accept the machine height.

### 3. Profile granulator SMP (See [special brochure](#))

For light tubes of small diameter (approx. 250 mm/9.75") it is possible to use a granulator originally developed for processing profiles, which automatically draws in the material to be treated using an almost horizontal feeding system. The feed material is gripped by the specially designed cutting rotor and is automatically drawn into the unit for processing. Using an additional opening on the hopper shorter pieces and fittings can also be fed into the unit. This particular unit is especially recommended for drainage and sewage tubes.

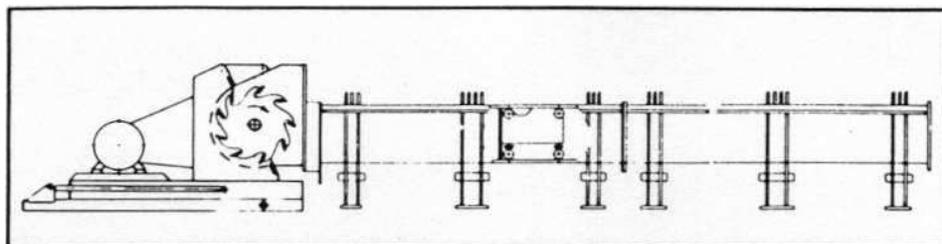


#### 4. Granulators for tubes SMR

(See [special brochure](#))

HERBOLD granulators for tubes are special granulators equipped with a feed channel and a mechanical feeding device. These units do not require an additional operator when they are installed directly in the extrusion line. Noise reduction down to 80 dB(A) can easily and effectively be achieved by using appropriate sound insulation equipment. These units have been designed to ensure safety for the operators at all times.

The feed opening has been designed in a way that no material can be ejected back through the opening. A photo-electric barrier can be fitted in the feeder to prevent accidents. The tubes to be granulated are placed in the feed channel. When processing small diameter tubes, the tubes can be placed next to each other in the channel. Using a force feed ram the feeding of the material to the cutter is controlled by the weight of the material. During the loading interval the cutting-rotor is closed off from the feed channel by means of a safety gate. This gate is hydraulically connected to the cover of the feed channel which can only be opened if the safety gate is closed. For fully automatic operation a storage trough can be loaded while the granulator is operating. The trough can be installed parallel to the force feed trough which tips and dumps material into the feed channel of the granulator.



#### Interesting features of the HERBOLD Tubes Granulators:

- A special unbendable chain which can work under high pressure is used for operating the force feed ram. It is mounted at the rear of the pressure plate and is driven by a 2-speed motor. The use of this special chain makes it possible for the transport mechanism, i.e. chain and gears, to remain outside of the feed channel. The danger of plastic particles getting jammed inside the mechanism has been eliminated, thus providing complete safety during operation. In addition, grease from the force feed ram is kept away from the material to be reduced.
- A further advantage of this feed system: the force feed ram moves very near towards the cutting rotor which results in a complete emptying of the trough. This also prevents material from getting jammed when closing the safety gate. The adjustment of the cutters can take place outside of the granulator by using the adjustment device provided. This reduces down-times considerably, particularly when using a second set of cutters that can be adjusted while the granulator is running.

#### Advantages of all the HERBOLD granulators mentioned above

The pre-adjustment of the cutters can be performed at some clean and quiet place, e.g. next to the granulator or in the workshop. Experience has shown that an adjustment outside the granulator is usually being done with more accuracy which improves the throughput capacity of the machine as well as the working lives of the cutters. This procedure also reduces the danger of accidents.

We would be pleased to hear from you with regard to your specific size reduction requirements. In our testing facility we will run tests with your material at our expense without any obligation on your behalf to find a solution which is best suited to your special needs.

#### Our product range

- Granulators
- Pulverizing Systems
- Shredders
- Hammer Mills
- HOG Shredders
- Guillotines
- Washing Systems
- Plastcompactors

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