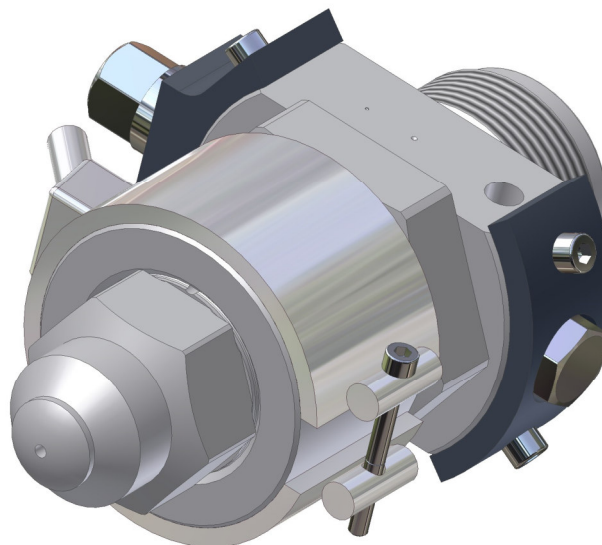


## Machine filter nozzle type F with purging capability



**Applications:**  
Thermoplastics (not applicable for PVC)

**Design variants:**  
Machine nozzle with purging system

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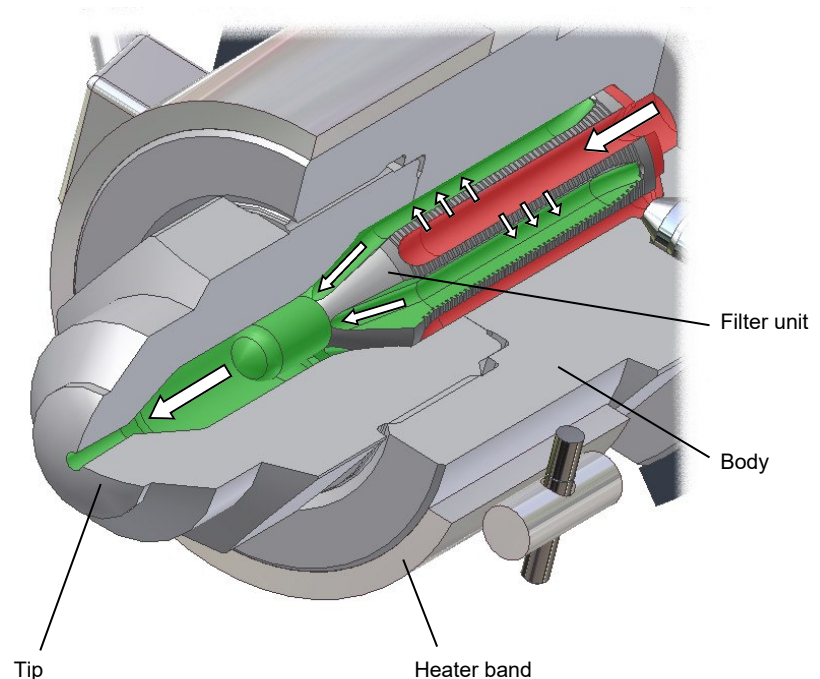
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## Technical description

Filter nozzles are being increasingly used for processing thermoplastics in injection moulding machines. Clean melts, free of foreign particles, are absolutely necessary for the trouble-free and economic production of molded parts. Herzog® has developed a melt filter which is characterised by its compact and simple design. The melt filter can be assembled and prepared for operation in the shortest possible time. The melt filter is based on the so-called "gap principle". The comb-type gap geometry prevents very thin and fairly long foreign particles from slipping through. The Herzog® machine nozzle type F is an optimization of the FN type filter nozzle. The type F has a unique purging system which allows cleaning of the filter without having to remove or dismantle any part of the nozzle. This advantage ensures production downtime is kept to a minimum.

## Function

The melt transported from the plasticizing unit to the filter nozzle is kept fluidic by the nozzle heating strip; fundamentally, we recommend control of the nozzle temperature. The melt is fed via generously dimensioned feed ducts (green) to the filter gaps and flows through them. Foreign particles which are larger than the gap depth are held back in the guide duct. The filtered melt flows on via outlet ducts to the injection mould.



## Advantages of the filter nozzle type F

- Trouble free injection molding
- No blockage due to foreign bodies in the mold
- Minimal machine downtime due to unique particle purging system
- Added homogenization benefit
- Good self-cleaning effects
- No material deposits in "dead corners".

## Nozzle design variants

The melt filter can be integrated into two design variants:

### Nozzle with flushing closure system

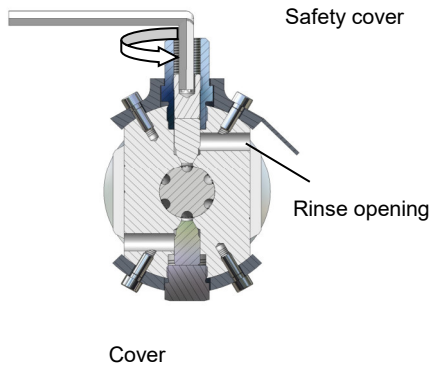
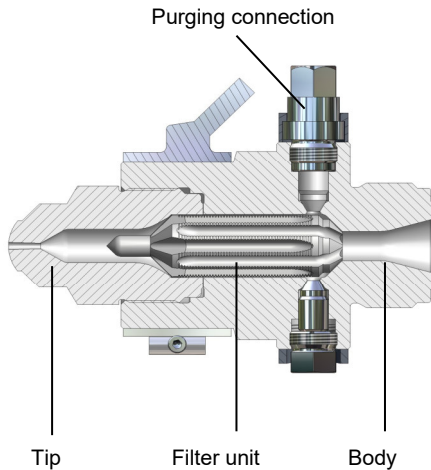
Where there are a large number of foreign particles, the nozzle with the flushing closure unit is used. Frequent cleaning is necessary.

The filter is cleaned between two injection cycles without removal or dismantling. A closure unit is opened with an Allen key. By spraying into the open air, or by normal injection with nozzle present, the melt flow in the filter is bypassed via the opened closure unit. The impurities are entrained and removed through the side flushing opening. The filter has been cleaned.

### Nozzle without flushing closure system (see nozzle type FN)

The nozzle without flushing closure unit is recommended where foreign bodies in the melt are only to be infrequently expected (preventive measures when hot duct is used).

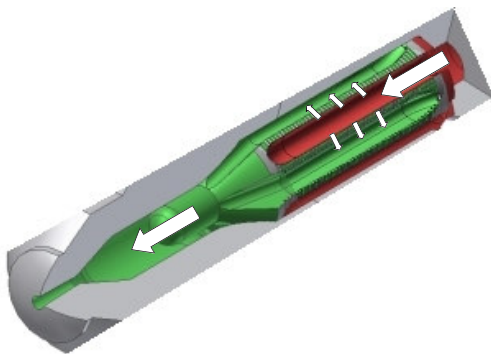
The filter is cleaned between two injection cycles by dismantling the nozzle head. With the expulsion of the plastic melt, the filter is also brought into the open. The filter and the hole in the nozzle can be cleaned by blowing the heated plastic with air while simultaneously pulling the plastic with tongs.



## Filter type

### Gap filter

The gap filter is ideally suited to preventing very thin or long particles from passing through. The melt flows through feed ducts, is fed through the filter gaps and onwards through outlet ducts. Larger particles are retained in the feed ducts. This filter type has a higher rate of pressure drop compared to the screen filter type (see nozzle type FN).



Dimension sheet for enquiries	or orders	Machine filter nozzle (gap principle) type F
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Company:
Street:
City/Zip:
Country:

Contact person:
Tel.:
Fax:
E-Mail:

### Operating data and standard dimensions

		F0		F1		F2	
max. injection rate cm <sup>3</sup> / s based on Polystyrene (PS)	Hohlraum, Volumen (cm <sup>3</sup> ) in der Düse	80 - 100	20	500	50	1600	130
approx. screw diameter in mm		20 - 25		25 - 50		50 - 100	
max. injection pressure at temperature		2000 bar at 400°C					
standard tip length (other dimensions on request)		25 mm		50 mm		55 mm	
Filter gap		0,3 mm		0,5 mm		0,8 mm	
body length; without thread and tip length		75 mm		105 mm		105 mm	
heater band dimensions (inside ø * max. length)		ø50 x 38 / 350 W		ø80 x 50 / 1250 W		ø90 x 70 / 1075 W	

★ Standard dimensions, Measurements in mm.

Temperature sensor bore (thread ø, thread pitch)

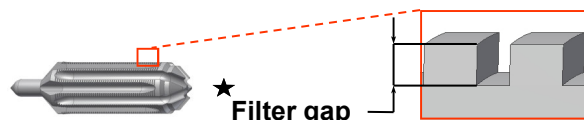

Temperature sensor bore (ø x depth)

★ Tip length (check standard dimensions)


Orifice

Tip contour (radial or angle)

--



★ Filter gap

Thread length (incl. centering)


Thread connection (thread ø, thread pitch)

--

Centering length


Centering ø

Immersion depth (screw head / angle)


Inlet ø

Body heater band (Option)

Nozzle size:

<input type="checkbox"/> F0	<input type="checkbox"/> F1	<input type="checkbox"/> F2
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Machine type (when known):

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### Options

Temperature sensor - type J (FeCuNi)	Yes	<input type="checkbox"/>
Body heater band	Yes	<input type="checkbox"/>

### Note:

- Technical modifications reserved.
- We need additional information for requirements, which vary from our standard range e.g. drawing sample. Our customer services will be pleased to help you.