

PROMIX Filter Tip and Filter Nozzle – Maximum protection at minimal pressure drop

Promix filter systems securely and effectively withhold foreign particles and unmelted polymer thanks to the proven bore technology. An enormous number of tiny bores of 0.7 or even 0.4 mm ensure reliable withholding of smallest foreign particles at very low additional pressure drop. A “passing through” of flat foreign particles as it might happen when using edge filters is not possible. Thanks to its large filter capacity, Promix filters are suitable even when processing regrinds with high amounts of foreign particles. Customized Promix Filter Tips and filter nozzles can be easily implemented in any injection molding machine. The design allows a fast change of the filter which saves time and money during production.



Advantages

- Maximum protection of die and hot runner system
- Holds back foreign particles and unmelted polymer safely and effectively
- Minimal pressure drop due to very large filter surface
- Large filter capacity and therefore suitable when processing regrind
- Fast change of filter and easy cleaning
- Good self-cleaning when effecting colour changes

Promix filter nozzles are designed for injection moulding machines with clamping force from 10 to 2000 tons and can be used with any nozzle tip, machine nozzle or hot runner system.

Filter Tip concept

Promix filter tips are replacing current nozzle tips and can be installed very easily. A filter tip is an economic option to effectively protect your mold and hot runner. The extremely short installation length does not require any separate heating and the filter can be changed quickly and easily without dismantling of heaterband and thermocouple. The filter tip is only available for the smallest filter types 14x45 and 14x45 micro.

Filter Nozzle Concept

For filters >14x45 or if replacement of the complete nozzle is required, Promix is usually offering two-part nozzles. The connections will be manufactured according to customer specification in order to ensure a perfect fit of the filter nozzle in place of the standard machine nozzle. The two-part nozzle concept allows an easy and quick change of the filter without dismantling of heaterbands and thermocouple. Customized designs which can for example be combined with existing nozzle tips are available on request. This is useful when you have to change your molds frequently. For an additional homogenization of the melt the filters can be combined with Promix static mixers.

The pressure consumption of the empty filter is approx. 5 – 10 bar. The filter should be changed at the latest, if the pressure increase compared to the initial pressure is > 50 bar. The cleaning cycle depends on the degree of fouling. If strongly “contaminated”, cleaning in the vacuum pyrolysis followed by corundum blasting is recommended.

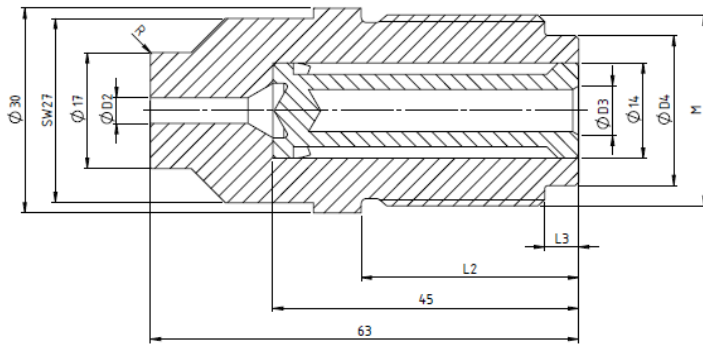
Delivery time

All Promix standard filters are available from stock within 1 week after receipt of order. The delivery time for complete filter tips and filter nozzles is 2 to 3 weeks after receipt of order. Filters with other dimensions or bore diameters are available on request.

The following installations are possible:

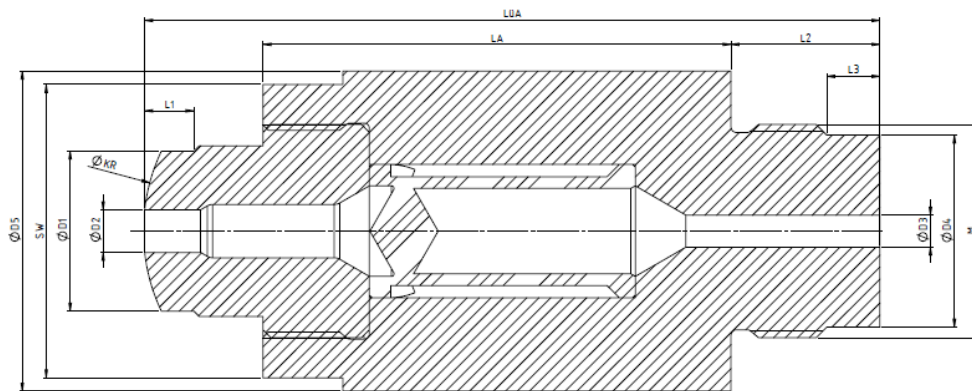
Example of installation: Promix Filter Tip for filter type 14x45 and 14x45 micro

Shortest installation length, no special length, without heater band

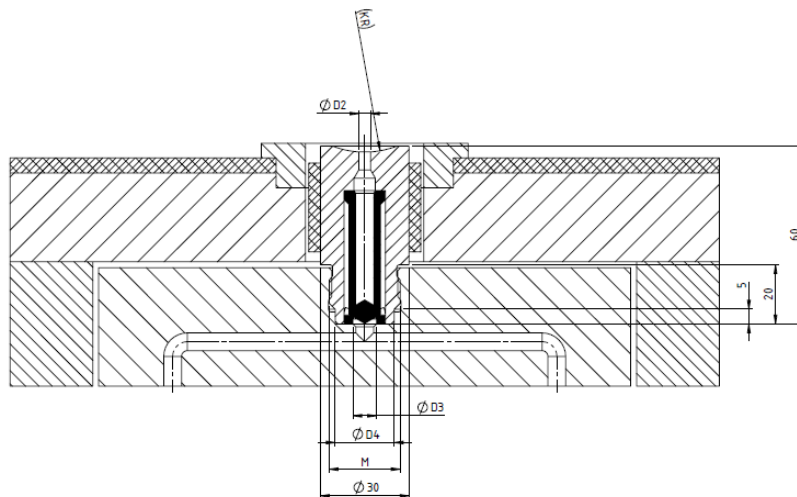


Max pressure drop [bar]	200
Max. allowable processing temperature	350

Example of installation: Promix Filter Nozzle for filter type 20x45, 25x50 and 30x90



Installation in hot runner

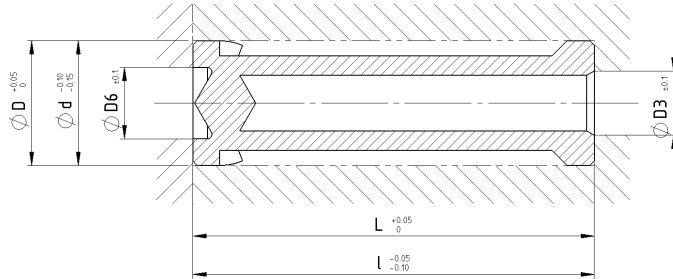


Customer specific dimensions Promix Filter Tip / Filter Nozzle → pls. specify your dimensions in the table below

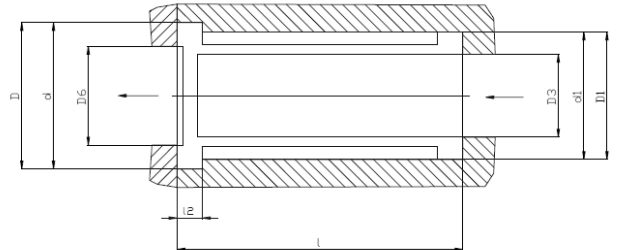
Maschinentyp	ø D [mm]	ø D1 [mm]	ø D2 [mm]	ø D4 [mm]	ø D5 [mm]	La [mm]	L [mm]	L2 [mm]	L3 [mm]	KR [mm]	M [mm]	SW [mm]
Tolerances	+0.05/0			f7			+0.05/0					

Dimensions and specification filter

Promix Filter 14x45, 20x45, 25x50



Promix Filter 30x90



Filter Type	Outside- "d" [mm]	Length "L" [mm]	Inlet "D3" [mm]	Outlet "D6" [mm]	No. of bores	Bore \varnothing [mm]	Filter surface [mm ²]
Promix Filter 14x45 micro	14	45	7.2	8	980	0.4	123
Promix Filter 14x45	14	45	7.2	8	480	0.7	185
Promix Filter 20x45	20	45	12	12.5	600	0.7	231
Promix Filter 25x50	25	50	17	17	900	0.7	346
Tolerances	-0.1/-0.15	-0.05/-0.1	+0.1/-0.1	+0.1/-0.1	-	-	-
Promix Filter 30x90	46/40	90	26	31.5	408	1.5 / 2.0	721
Tolerances	+0.1	+0.2	+/-0.2	+/-0.1	-	-	-

Filter Tips and filters with other dimensions or bore diameters are available on request.

Clamping force machine	Suitable filter size	Installation Filter Tip	Installation Filter Nozzle
< 100 t	Promix Filter 14x45 mikro	✓	✓
	Promix Filter 14x45	✓	✓
100 – 200 t	Promix Filter 20x45		✓
200 – 500 t	Promix Filter 25x50		✓
500 – 2000 t	Promix Filter 30x90		✓

Pressure drop depending on polymer type, shot weight, viscosity and temperature to be considered

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