

SMF Filter for SMN Mixing Nozzle

The SMF Filter is designed to be used with the SMN Injection Molding Mixing Nozzle. The purpose and functionality of the SMF filter are numerous:

- Protects hot runner system and mold by avoiding clogging and/or damage caused by metal pieces accidentally introduced with the feed pellets to the injection molding machine (metal chips, staples, paper clips, etc).
- Retains semi-molten polymer pellets until melted for incorporation into the polymer melt.
- For customer with poor thermal control systems, the SMF Filter acts as an upstream breaker-plate to prevent “cold-start” crushing of the mixing elements.
- Designed to retrofit into the SMN Injection Molding Mixing Nozzle without nozzle modification
- O.D. of SMF Filter = O.D. of SMN Mixing Elements
- Length of one (1) SMF Filter = Length of two (2) SMN Mixing Elements..



Figure #1: SMF Filter in sizes SMF-12 to SMF-40

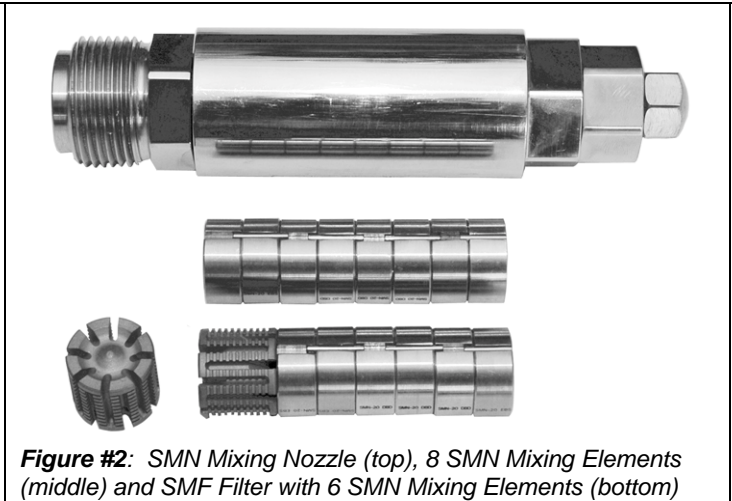


Figure #2: SMN Mixing Nozzle (top), 8 SMN Mixing Elements (middle) and SMF Filter with 6 SMN Mixing Elements (bottom)

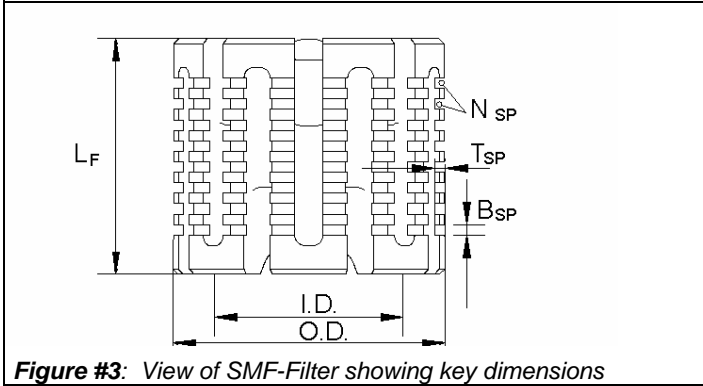


Figure #3: View of SMF-Filter showing key dimensions

L_F: LENGTH OF FILTER
L_{ME}: LENGTH OF SMN MIXING ELEMENT
I.D.: INSIDE DIAMETER
O.D.: OUTSIDE DIAMETER
B_{SP}: WIDTH OF SLOTS OF FILTER
T_{SP}: DEPTH OF SLOTS OF FILTER
N_{SP}: NUMBER OF SLOTS IN PARALLEL

Table #1: Key dimensions of the SMF filter (see Figure #3)

Model Number	I.D. (mm)	O.D. (mm)	N _{SP} (with B _{SP} =1 mm)	B _{SP} ¹⁾ (mm)	L _F (mm)	L _F / L _{ME} ²⁾	Fits SMN Mixing Nozzle
SMF-12	12	18	6	1	16.0	2	SMN-12
SMF-18	18	26	8	1	22.5	2	SMN-18
SMF-22	22	30	11	1	27.0	2	SMN-22
SMF-27	27	35	13	1	33.0	2	SMN-27
SMF-33	33	42	15	1	40.0	2	SMN-33
SMF-40	40	50	19	1	48.0	2	SMN-40

Table #1 Notes:

¹⁾ B_{SP} can be adjusted in the range of 0.7 to 1.5 mm with a minimum order quantity of 5 pieces

²⁾ SMF-12 can be delivered with L_F/L_{ME} = 3.0

Material: DIN 1.2344 (X40CrMoV51), nitrided

Flow direction: bi-directional (installed and operated with flow in either direction)

*****Brooklyn, New York, USA*****Dinhard, Switzerland*****

Note: We believe the information contained in this product bulletin is correct. However, the information is not to be construed as implying any warranty or guarantee of performance. We reserve the right to modify the design and construction of our products based on new findings and developments.