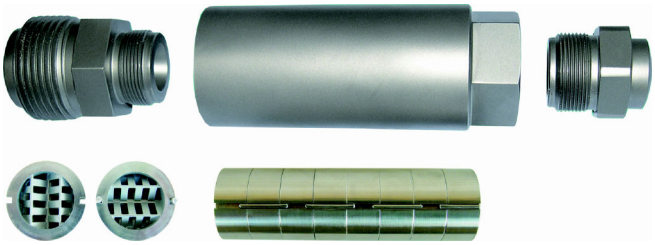
stamixco … mix it up

Injection Molding Mixing Nozzle

Better melt flow means …

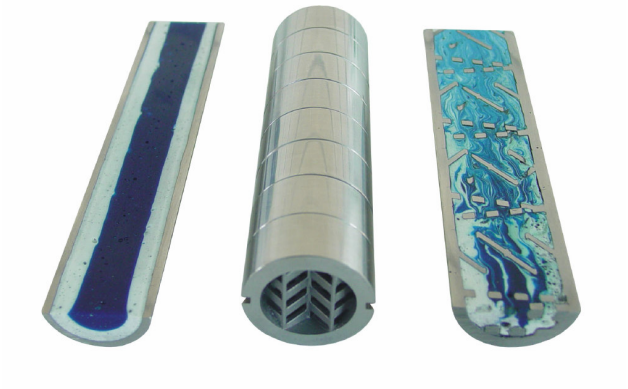
…better cash flow.



Stamixco Mixing Nozzle SMN with eight (8) Mixing Elements

The Stamixco Mixing Nozzle SMN contains eigtht (8) very efficient static mixing elements that homogenize the polymer melt during injection.

The mixing elements are virtually indestructible and create a low pressure drop.



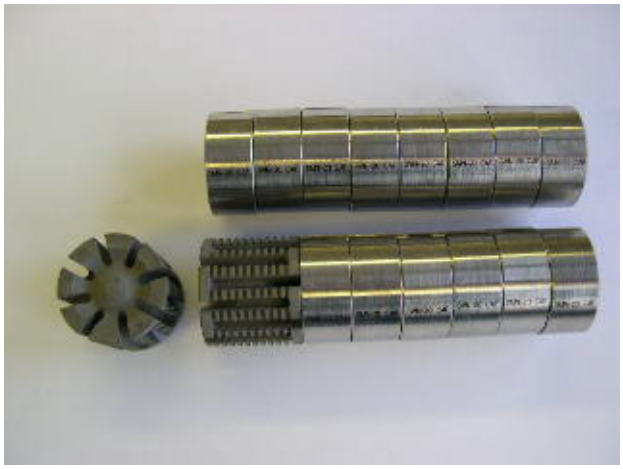
Mixing of blue and white epoxy resins. Empty tube (left) provides no mixing. Eight (8) SMN mixing elements (center and right) provide an almost perfect mix.

Outstanding mixing of the polymer melt prior to injection results in the following benefits:

BENEFITS:

- Reduced spots, streaks and clouds
- Reduced colorant usage (10% - 40%)
- Narrower part tolerance
- Reduced reject rates
- Less part distortion
- Less part weight variation
- Improved part quality when using regrind material
- Shorter cycle times
- Improved melt flow, uniform filling of multi-cavity dies

Payback of mixing nozzle within few weeks by savings achieved

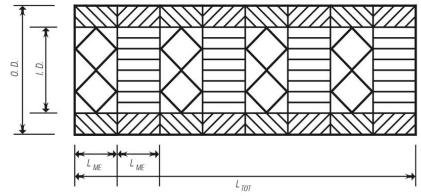


Eight (8) SMN mixing elements and six (6) elements combined with filter SMF.
The filter is useful e.g. for processing regrind material and can be installed as retrofit in a mixing nozzle without any modification (for filter see Stamixco technical data sheet E_TB006-R0).

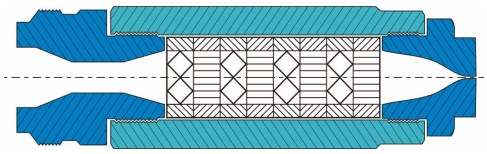
Nozzle Selection

The mixing Nozzle SMN contains eight (8) mixing elements (licensee of Bayer AG, Germany). The outside diameter and faces of the element are machined. They are made of high strength 17-4 PH stainless steel with all mixing fingers cast to the body of the ring.

Thus there are no unsupported fingers that can break off.
The correct mixing nozzle size is a function of injection flow rate and viscosity of the polymer melt. For approximate sizing see table below.



Dimensions of 8 mixing elements fitting inside the mixing nozzle SMN



Complete SMN mixing nozzle

	Injection Flow Rate			Mixing Elements				
Screw Size Range (mm)	Low Viscosity Polymer (cm^3/s)	High Viscosity Polymer (cm^3/s)	Mixing Nozzle Type	I.D. (mm)	O.D. (mm)	L_{ME} (mm)	8 Mixing Elements L_{TOT} (mm)	Nozzle Bore (mm)
20-50	**300**	**200**	**SMN-12-8**	**12**	**18**	**8.0**	**64.0**	**18**
40-75	**1,000**	**700**	**SMN-18-8**	**18**	**26**	**11.25**	**90.0**	**26**
50-90	**1,800**	**1,200**	**SMN-22-8**	**22**	**30**	**13.5**	**108.0**	**30**
70-120	**3,400**	**2,300**	**SMN-27-8**	**27**	**35**	**16.5**	**132.0**	**35**
80-140	**6,200**	**4,000**	**SMN-33-8**	**33**	**42**	**20.0**	**160.0**	**42**
100-180	**11,000**	**7,400**	**SMN-40-8**	**40**	**50**	**24.0**	**192.0**	**50**
Tolerances (category/mm):				**-**	**f7**	**0/-0.1**	**0/-0.8**	**H7**

For larger sizes, please contact us. Dimensions are approximate.
Tolerances are recommendations only and are depending from installation method and operating conditions.

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E_SMN_10.2004-5