

## Plastic Disposable Static Mixers

### Availability of STAMIXCO Static Mixers

STAMIXCO proposes you a wide variety of plastic disposable static mixers to best suit your technical mixing requirements:

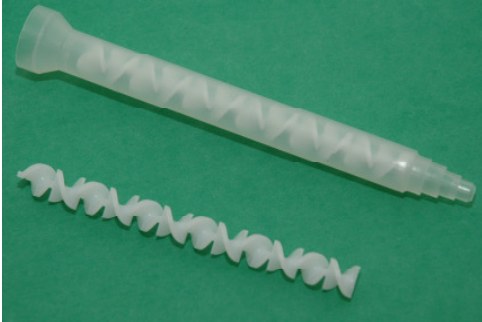


Fig. #1

#### Helical Plastic Disposable Static Mixers

The industry standard helical plastic disposable 2K static mixer is available in a very wide range of diameters, number of mixing elements, configurations and materials. It is most suitable for easy to moderate difficulty meter-mix-dispense applications.

Also mixing elements available in PP with  $D_{ME}=24\text{mm}$  and  $D_{ME}=35\text{mm}$ .



Fig. #2

#### Foldable Disposable Static Mixers

The GXF plastic disposable static mixer is available in a 10 mm diameter size with 6, 9 and 12 mixing elements. It is used for processing small flow rates in difficult meter-mix-dispense applications such as adhesives, varnishes, urethanes, sealants, liquid silicone rubber (LSR), etc



Fig. #3

#### GXP Disposable Static Mixers

The GXP plastic disposable static mixer is available in a 9.4 mm diameter in 50% glass filled PA66 and PP construction. It is used for processing small flow rates in difficult meter-mix-dispense applications such as adhesives, varnishes, urethanes, sealants, liquid silicone rubber (LSR), etc

Pipe made of PA66+50% GF for 6 ME with a max. operating pressure of 100 bar is also available. A combination of the pipes is illustrated at the bottom of Fig.#3 (cutting ring fittings, M18x1.5mm)



Fig. #4

#### GXR-P Disposable Static Mixers

The GXR-P plastic static mixer is available in a 30.1 mm diameter in 50% glass filled PA66. It is used for processing large flow rates in difficult meter-mix-dispense applications such as adhesives, varnishes, urethanes, sealants, liquid silicone rubber (LSR), etc

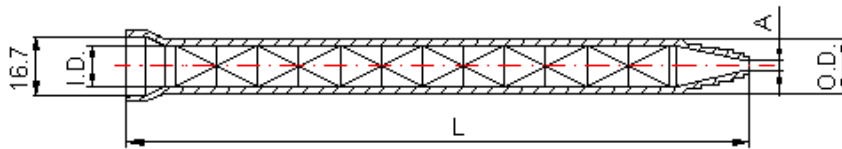
**Availability of X-Grid Family of Static Mixers**

**Static Mixing Elements GXF (see Figure #2)**



The basic GXF part consists of 8-rings, which are hinged. Each ring contains a part of the mixer grid structure. By folding the 8 rings together, a 2-mixing element structure is created (8 rings GXF = 1 ME GXF = 2 ME GX). GXF mixing elements (Figure #5-3 from top and Figure #6) are fitted into a housing made of PP with standard bell connection and stepped tip. These disposable mixers are available in several standard lengths. GXF mixing elements are also available in loose form for fitting into steel pipes and tubes for high pressure applications.

The following loose GXF mixing elements are available (additional sizes are in various development stages)  
- GXF-10/6 O.D.<sub>ME</sub> : = 11.7 mm I.D.: = 10.0 mm L (folded double-ME GXF = 2 ME GX): = 26.3 mm



**Figure #6**

Plastic Disposable GXF Static Mixer in a plastic housing

Part	D <sub>inside</sub> I.D. mm	No. of ME GXF	D <sub>outside</sub> O.D. mm	Length L mm	D <sub>Nozzle</sub> A mm	Net vol. ca. ml
GXF-10/6-6	10.0	3 x 2 = 6	15.2	115	3	5.0
GXF-10/6-9	10.0	4.5 x 2 = 9	15.2	155	3	7.5
GXF-10/6-12	10.0	6 x 2 = 12	15.2	192	3	9.9

**Comparison of GXF-Mixer with Helix-Mixer (approximate values):**

- Mixing efficiency: 1 GXF Mixing Element = 4 – 6 HME, 6 GXF = ~15 HME; 9 GXF = ~24 HME, 12 GXF = ~32 HME
- Mixer length: With identical I.D.: The length of a GXF mixer is ~50 % shorter than the length of the HME mixer and with identical pressure drop the length of a GXF is ~20 -30 % shorter than the HME mixer.
- Pressure drop: Comparing Pressure Drop of the GXF and Helical Mixing Element (HME): To achieve a similar pressure drop with the GXF and HME (at identical throughput, viscosity and mixing efficiency), the I.D. of the GXF mixer must be approximately 25% larger than the I.D. of the corresponding HME mixer.

**GX-P Static Mixing Elements (see Figure #3)**

The following GXP mixing elements are available:

- GXP-9.4-PP OD = 9.3 mm Length = 9.3 – 9.4 mm Max Pressure Drop = ~80 bar
- GXP-9.4-PA66 OD = 9.4 mm Length = 9.4 – 9.5 mm Max. Pressure Drop = ~250 bar

Larger and smaller sizes of the GXP mixing element and their corresponding tubes (similar to Fig. #6) are under development.



New STAMIXCO disposable static mixer containing 20 ME GXP in orange & white PP to facilitate installation and correct orientation. L<sub>tot</sub> = 215mm

**GXR-P Static Mixing Elements (see Figure #4)**



GXR-P-21 mixing elements can be installed inside metal pipes with an I.D. of 30 mm e.g. ERMETO/PARKER pipe (35 X 2.5 or 38 x 4 mm) with fittings. They can also be fit into inexpensive plastic pipe and/or rod material which have been machined to 30 mm I.D. Such mixers are suitable for mixing 2-component systems such as Liquid Silicone Rubber (LSR).

The following GXR-P mixing elements are available:

- GXR-P-21-PA66 Dao = 29.7 mm Di = 20.9 mm L = 6.7 mm
- 4 singlets are assembled to form a GXR-P mixing element (see Figure #4) (= 1 ME GX).

**Helical Plastic Disposable Static Mixer**

STAMIXCO AG supplies a range, which is extended continuously, of plastic disposable static mixer to best suit your technical mixing requirements.

The industry standard helical plastic disposable 2K static mixer is available in a very wide range of diameters, number of mixing elements (ME) and configurations. Standard materials of construction are Acetal (POM) for the mixing elements and PP for the housing; other materials are available on request. It is most suitable for easy to moderate difficulty meter-mix dispense applications.

For difficult meter-mix dispense applications, please refer to our technical information sheet on page 1 Fig.#2,#3 and #4.

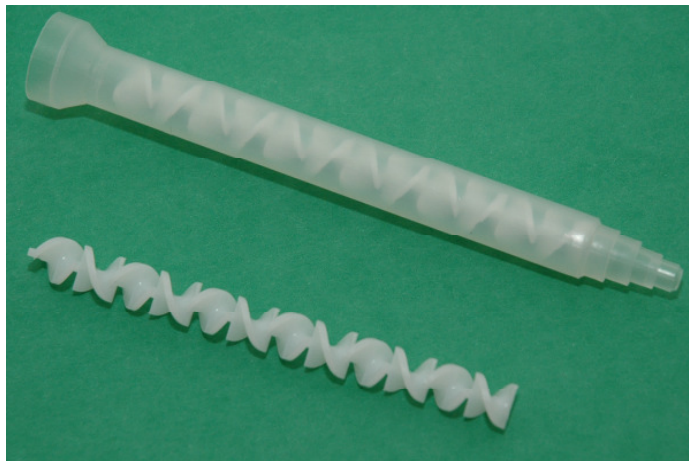


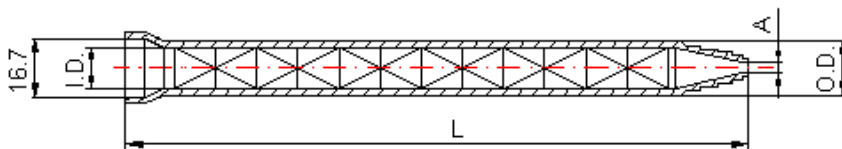
Figure #6 Helical Plastic Disposable Static Mixer with/without housing.

**Helical Mixer – Dimensions**

Part	Material Housing / Mixer	O.D. mm	No. of ME	L/D of Helical Elements
Rod of Helical Mixing elements	PP/POM	3 to 12.7 mm	12-24-48	Approx. 1

**Because the range of diameters is expanded continuously, please ask us for actually available sizes.**

**Helical Mixer – Tube Dimension**



**Figure #7:**  
Disposable STAMIXCO Tube in Polypropylene

Figure #7 Cross Cut through a Standard housing for Disposable Static Mixer

Part	D <sub>inside</sub> I.D. mm	No. of ME n	D <sub>outside</sub> O.D. mm	Length L mm	D <sub>Nozzle</sub> A mm
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**Because the range of diameters is expanded continuously, please contact us and ask for the actually available sizes.**

**Special dimensions can/will be made on request within a few weeks, if the number of mixers to be ordered/needed is sufficiently large.**