

Fluitec Documentation No. 11.111 Rev. 1

Static mixers for turbulent flow

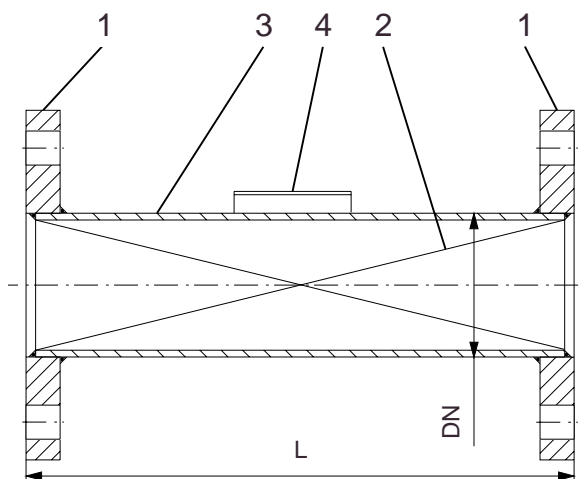
CSE-B[®] according to DIN 2501

Fluitec mixers CSE-B[®] with flanges according to DIN2501 type "T" are manufactured in diameters of DN80 to DN800. Their main field of application is found in the water technology. The CSE-B[®] mixer type "T" is especially suitable for mixing operations with aqueous solutions. High mixing quality is even achieved with flow ratios of additive/main stream of 1:10⁶.

CSE-B mixers: fields of application

The CSE-B mixer type "T" is particularly suitable for mixing tasks with aqueous solutions. Due to its unique geometry, the well known high mixing quality is even achieved at flow ratios of additive/main stream of up to 1:10⁶ and at ratios in viscosity of up to 1:600. For many years, CSE-B mixers are successfully used in the following fields of application:

- mixing of additives in turbulent flow
- mixing of flocculation agents
- mixing of flocculation aids
- adjusting of the pH
- mixing of gases
- gasification using O₃, air, CO₂ or O₂



Assembly

- Flanges according to DIN 2501
- CSE-B mixer (material 1.4571)
- Tube according to DIN 17457, PK1
- Name plate

Material of housing: 1.4404/35, 1.4306

Certifications according to EN10204-3.1B are supplied on request.

Fluitec mixer CSE-B type "T-1/2"

Mixing aqueous additives into an aqueous main stream, the Fluitec mixer CSE-B type "T-1/2" can be used for flow ratios of additive/main stream of 1:10'000. Depending on the application, a homogeneity from < 1% to 5% is achieved at low pressure drop. In any case, installation site and dosing technique should be discussed with your mixer specialist.

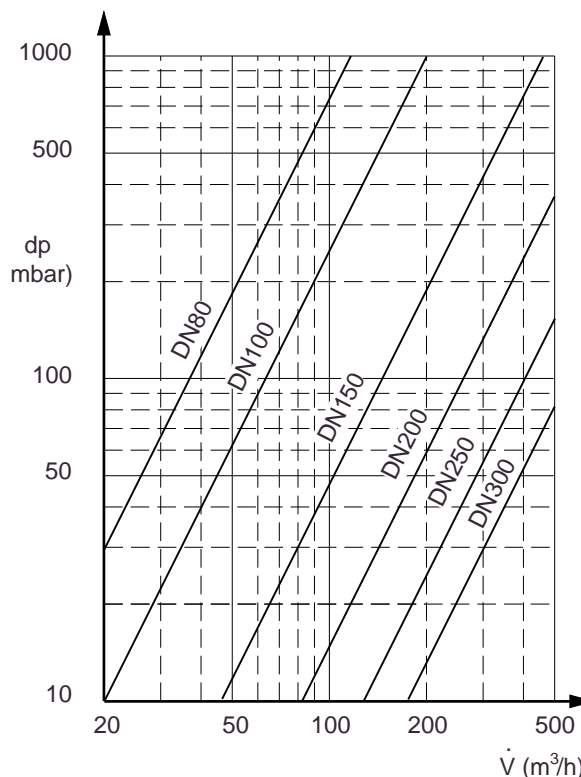


Fig. 2: Pressure drop of the type "T-1/2" (fluid: water)

The Fluitec mixer CSE-B type "T-1/2" can be supplied with an integrated feeding device, which is, on request, removable. Connections of the feeding devices are usually standard inch-threads, flanges or welding ends.

Fluitec mixer CSE-B type "T"

The Fluitec mixer CSE-B type "T" is used for sophisticated and complex mixing tasks in turbulent flow. Flow ratios of additive/main stream of 1:10⁶ are standard operations. Due to its unique geometry, the CSE-B mixer type "T" is successfully used for years for mixing tasks with a viscosity ratio of up to 1:400. Thereby, the mixed media obtain a homogeneity of < 1 to 5% at only little pressure drop. The most suitable site for installation and the appropriate dosing device should be evaluated with your mixer specialist.

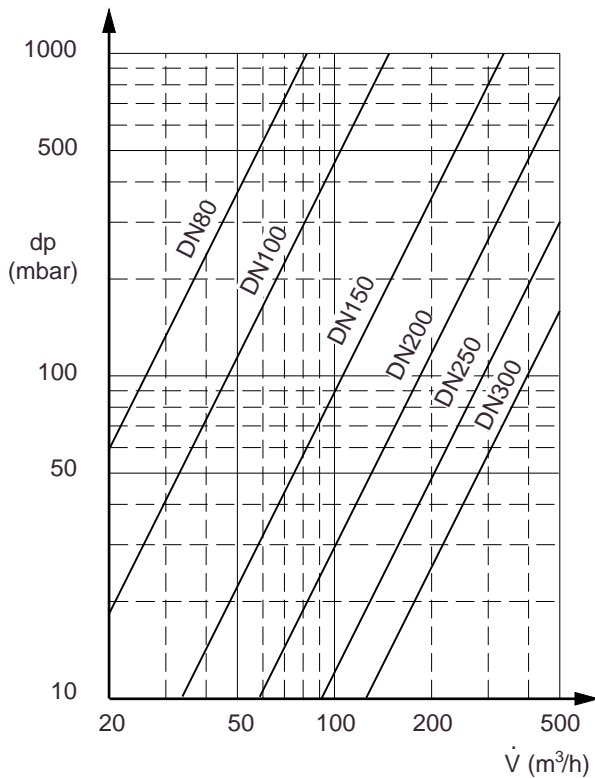


Fig. 3: Pressure drop of the mixer type "T" (water)

On request the Fluitec mixer CSE-X/2 type "T" can be equipped with an integrated dosage device. The connections of the feeding device are usually inch-threads, flanges or welding necks.

Dimensions of the CSE-B mixer type "T"

Standard dimensions of the Fluitec mixer CSE-B type "T" are listed in table 1. Special measurements are available on request. To achieve the desired homogeneity, it is of big importance to discuss your application thoroughly with your mixer specialist.

DN	type "T-1/2"	type "T"
(-)	L (mm)	L (mm)
80	360	450
100	460	580
150	680	850
200	880	1100
250	1100	1400
300	1300	1650

Tab. 1: Length of the CSE-B mixer type "T"



Fig. 4: CSE-B mixers with construction and pressure test

Fluitec mixer CSE-B type "T-3 "

The Fluitec mixer CSE-B type "T-3" is used in turbulent flow for mixing tasks with viscosity ratios greater than 1:400 as well as for flow ratios of additive/main stream greater than > 1:10⁶. Detailed pressure drop functions are available on request.

Special equipment

Fluitec CSE-B mixer with flanges according to 2633 PN16 (chemical industry) and DIN 2501 PN10 (water treatment) are the standard version. On request we provide all mixers with certifications according to EN10204-3.1b and with construction and pressure test certificate. The CE-Indication of the mixer is possible in most cases. Most mixers can be manufactured as removable parts. The mixer type "T", however, is normally designed as a fix installed device. Special materials such as Hastelloy, titanium, lined PTFE, glass, ceramic(s) or plastics such as PP, PVC, PE and PVDF are available on request.

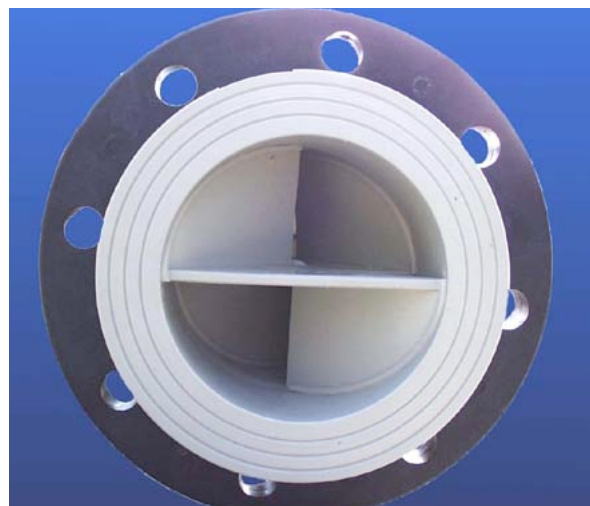


Fig. 4: Fluitec mixer CSE-B made of PP