

Flow-through vessels

Flow-through vessels are used e.g. for the dispersing or homogenising of larger quantities of liquid media. The transfer of parasitic oscillations from the standard / booster / flow-through horn onto the sonication vessel is prevented through use of a special damping structure (1).

Description	DG 4 G	DZ 300 E
Order No.	3608	3822
Figure		
Length L1 [mm]	95	307
Internal diameter D1 [mm]	32	53
External diameter D2 [mm]	50	60
Stationary volume [ml]	Approx. 25	Up to 300
Max. flow rate [l/h]	50	130
Max. permissible pressure [bar]	–	4
Use with HD...	2070.2/2200.2 4100/4200	4400
Compatible with	SH 70/213 G with TT 13 SH 100/200 G with TT 213 TH 100/200 G	SH 400 G with TS 413/416/419/425/432
Diameter adapter [mm]	–	70
Thread [in]	1/8	1/2
Cooling jacket	Yes	No

Flow-through vessels

Description	DG 4 G	DZ 300 E
Order No.	3608	3822
Material	Stainless steel	Stainless steel
Accessories kit	3 replacement O-rings, 1 flow stopper DS 4, 1 orifice plate PP 4 L, 1 hexagonal cap with gasket, 4 push-in connectors, 5 m plastic hose, 1 LOCTITE thread sealant, 1 sickle spanner HS 40/42	1 adapter, 1 rubber seal 1 O-ring

Mounting

DG 4 G

- For mounting purposes, use the included sickle spanner HS 40/42.
- Place the orifice plate PP 4 L in the flow-through stopper DS 4 (2) and screw into the cooling jacket (3) from below.
- The distance ring located inside the housing and both O-rings (4) must be correctly positioned in the housing.
- Hand-tighten the flow-through vessel to the external thread of the standard / booster / flow-through horn, and then loosen by one rotation.
- Screw the supply lines for the flow of the liquid to be sonicated to the respective pipe sockets (5).

DZ 300 E

- Fasten the flow-through vessel to booster horn SH 400 G using the mounted adapter (6).
- Screw the supply lines for the flow of the liquid to be sonicated to the respective pipe sockets (5).

Notes

- When the Internal pressure of the vessel increases, the probe is increasingly damped such that the available output must be increased in order to maintain the desired amplitude. If the maximum permissible output is reached and the Internal pressure continues to increase, the amplitude drops and can thus deviate from the set value.
- If the probe is immersed more deeply in the medium, it will also be more heavily damped, resulting in an effect that is similar to that caused by an increasing Internal pressure. An increase in the level of liquid in the vessel due to a non-adjusted speed of flow must thus be avoided.

Flow-through vessels

DG 4 G

- The damping structure (1) in the upper section of the cooling jacket (3) may not be mechanically stressed, neither through pressure nor force.
- The ultrasonic converter must be affixed into a suitable stand vertically and securely.
- The cavitation erosion on the flat tip and orifice plate must be regularly controlled. If there is wear, the orifice plate may be turned over.
- In order to maintain the media temperature constant in flow mode, approx. 100 W cooling power must be applied through a cooling thermostat or a cooling aggregate.
- Cooling through a potable water connection limits the temperature increase of the medium to approx. 10 K in flow mode.
- The combination of flow-through horn (FZ 5 G/FZ 7 G) and sonication vessel allows for the simultaneous sonication of two not premixed media directly in the cavitation field.
- A commercial 2-channel lab pump must be made available.

DZ 300 E

- A commercial lab pump must be made available.