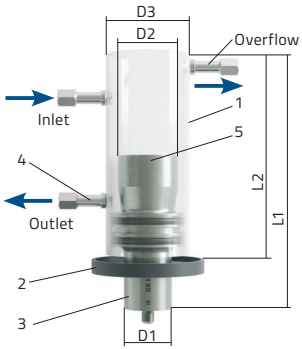
# *SONOPULS* Product information
# Supplement to instructions for use

BANDELIN
Ultraschall seit 1955

## Cup horn

The cup horn (1) allows for indirect, intensive sonication of the smallest sample quantities, such as bacteria, in sample vessels (microtubes). Indirect sonication prevents both a contamination of the samples through probe erosion as well as cross contamination. The ultrasonic power is transmitted through contact liquid into the respective microtubes. In addition, the cup horn possesses inlet, outlet, and overflow connections for realising the required sample temperature. For stationary operation, the inlet and outlet can be closed using the accompanying screw caps. The fill level must be kept constant and used contact liquid must be replenished when needed. In cooling mode, the inlet and outlet are connected through suitable hoses to a hose pump with a low output. If needed, a hose can be connected to the overflow.

| Description | BB 6 |
|---|---|
| Order No. | 3605 |
| Figure |  |
| Length L1 [mm] | 210 |
| Length L2 [mm] | 167 |
| Diameter D1 [mm] | 40 |
| Diameter D2 [mm] | 50 |
| Internal diameter D3 [mm] | 64 |
| Torque [Nm] | 70 |
| Reservoir volume [ml] | 200 |
| Use with HD... | 2200.2/3200/4200 |
| Compatible with UW... | 2200/3200/200 |
| Material (cylinder horn) | TiAl6V4 (3.7165) |
| Material (sonication cylinder) | Makrolon |
| Accessories kit | 2 push-in fittings for inlet and outlet G 1/8",<br>3 suitable replacement O-rings,<br>2 sickle spanners HS 40/42, long |

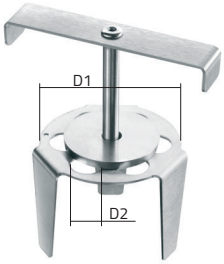
## Cup horn

### Mounting

- Moisten the O-ring in the splash shield TB 30 (2) slightly.
- From below, slide the splash shield (2) onto the cylinder horn (3) as much as possible, using a rotating motion.
- Mount the cylinder horn (3) onto the ultrasonic converter using suitable sickle spanners, see instructions for use.
- Affix the ultrasonic converter to a stand, e.g. HG 40, with mounted cylinder horn pointing upward.
- If needed, position the assembly in a sound proof box, e.g. LS 40.
- Tightly screw the hose couplings (4) with accompanying sealing rings into the threaded bores provided for this purpose; to do so, use a spanner with a width of SW 8.
- Moisten the O-rings on the cylinder horn (3).
- Slide the sonication cylinder (5) onto the cylinder horn (3) using a rotating motion (overflow on top). Here, the bottom O-ring should be at a distance of approx. 15 mm from the bottom edge of the sonication cylinder (5).

### Accessories

The microtube holder can accommodate up to 6 microtubes (1.5 / 2 ml). It is placed on the sonication cylinder (5) using its curved handle. The microtubes must be submerged in the contact liquid inside the cup horn. A cover plate prevents the microtubes from floating during operation.

| Description | EH 6 |
|---|---|
| Order No. | 7503 |
| Figure |  |
| Diameter D1 [mm] | 52 |
| Hole diameter D2 [mm] | 11.5 |
| Material | Stainless steel |

## Cup horn

**Notes**

- Do not load the inlet, outlet or overflow during assembly!
- The pressure marks of both O-rings between cylinder horn (3) and sonication cylinder (5) must be fully visible.
- A consistently uniform fill level in the cup horn allows for reproducible results.
- Sample vessels may not come into contact with the cylinder horn (3).
- No liquid should seep inside the ultrasonic converter housing.



**BANDELIN electronic GmbH & Co. KG**
Heinrichstraße 3 – 4
12207 Berlin
Deutschland

www.bandelin.com
info@bandelin.com
☏ +49 30 768 80-0
🖷 +49 30 773 46 99