

# SONOPULS

## Ultrasonic homogenisers series HD 4000

### ADVANCED

#### SONOPULS HD 4050

for volumes from 0,5 to 100 ml



##### Ready-to-use set:

for volumes from 0,5 to 20 ml  
ultrasonic nominal power max. 50 W

- Ultrasonic generator GM 4200
- Ultrasonic converter UW 50
- Probe TS 102, dia. 2 mm

Code no. 4050

#### SONOPULS HD 4100

for volumes from 2 to 200 ml



##### Ready-to-use set:

for volumes from 3 to 50 ml  
ultrasonic nominal power max. 100 W

- Ultrasonic generator GM 4200
- Ultrasonic converter UW 100
- Standard horn SH 100 G
- Probe TS 103, dia. 3 mm

Code no. 4100

#### SONOPULS HD 4200

for volumes from 5 to 1000 ml



##### Ready-to-use set:

for volumes from 20 to 900 ml  
ultrasonic nominal power max. 200 W

- Ultrasonic generator GM 4200
- Ultrasonic converter UW 200
- Booster horn SH 200 G
- Titanium flat tip TT 213, dia. 13 mm

Code no. 4200

#### SONOPULS HD 4400

for volumes from 100 to 3000 ml



##### Ready-to-use set:

for volumes from 500 to 2000 ml  
ultrasonic nominal power max. 400 W

- Ultrasonic generator GM 4400
- Ultrasonic converter UW 400
- Booster horn SH 400 G
- Probe TS 425, dia. 25 mm

Code no. 4400



	HD 4050	HD 4100	HD 4200	HD 4400
Ultrasonic generator	GM 4200	GM 4200	GM 4200	GM 4400
I × w × h [mm]	150 × 220 × 335	150 × 220 × 335	150 × 220 × 335	150 × 220 × 335
Ultrasonic converter	UW 50	UW 100	UW 200	UW 400
Dia. × l [mm]	45 × 175	70 × 150	70 × 150	86 × 180
Available probes dia. [mm]	2/3/4,5/6/9	2/3/4,5/6/9/13	3/4,5/6/9/13/16/19/25	13/16/19/25/32/38

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## Probes for series HD 4000



Type	TS 102	TS 103	TS 104	TS 106	TS 109	TT 213	TS 113	TS 216	TS 219	TS 225
Code no.	3740	3741	3742	3743	3744	3750	3745	3746	3747	3748
Diameter [mm]	2	3	4,5	6	9	13	13	16	19	25
Length* approx. [mm]	157	147	133	128	126	–	130	137	145	153
Standard horn for HD 4100	SH 100 G	SH 100 G	SH 100 G	SH 100 G	SH 100 G	SH 100 G	SH 100 G	–	–	–
Booster horn for HD 4200	–	SH 200 G	SH 200 G	SH 200 G	SH 200 G	SH 200 G	SH 200 G	SH 200 G	SH 200 G	SH 200 G
Amplitude HD 4050/4100/4200 (peak to peak) [µm]	125/260/–	118/245/280	90/195/235	70/155/210	58/130/185	–/80/128	–/82/132	–/–/90	–/–/68	–/–/50
Volume HD4050 [ml]	0,5–20	1–25	3–50	5–75	10–100	–	–	–	–	–
Volume HD 4100 [ml]	2–25	3–50	5–75	10–100	15–150	20–200	20–200	–	–	–
Volume HD 4200 [ml]	–	5–90	5–100	10–350	10–500	20–900	20–900	25–900	25–900	30–1000



Type	TS 413	TS 416	TS 419	TS 425	TS 432	TS 438
Code no.	3752	3753	3754	3755	3756	3757
Diameter [mm]	13	16	19	25	32	38
Length* ca. [mm]	139	132	129	130	136	144
Booster horn for HD 4400 [mm]	SH 400 G	SH 400 G	SH 400 G	SH 400 G	SH 400 G	SH 400 G
Amplitude HD 4400 (peak to peak) [µm]	242	196	142	82	59	42
Volume HD 4400 [ml]	100–750	250–1000	250–1500	500–2000	500–2500	500–3000

\* Probes are tuned to their working frequency. Lengths may vary slightly due to variations in the titanium alloy.