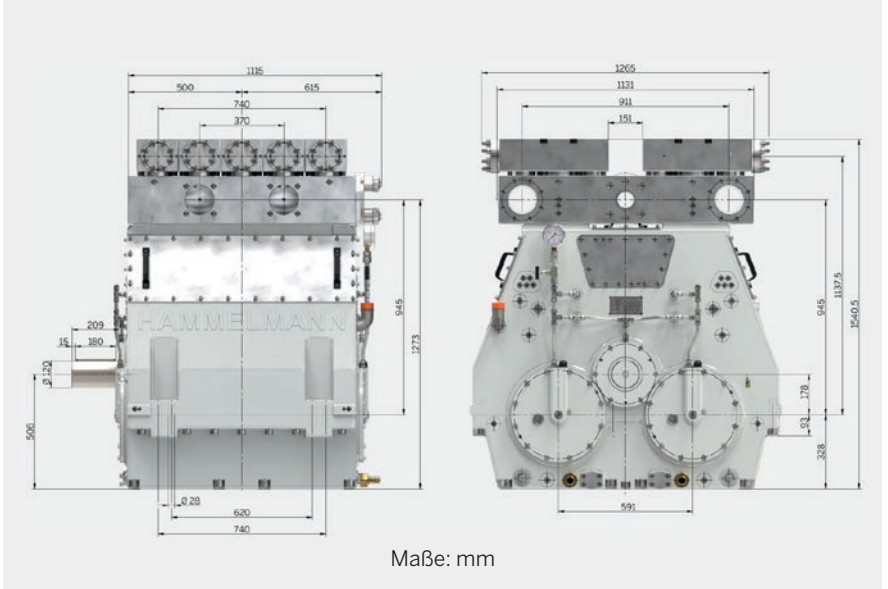
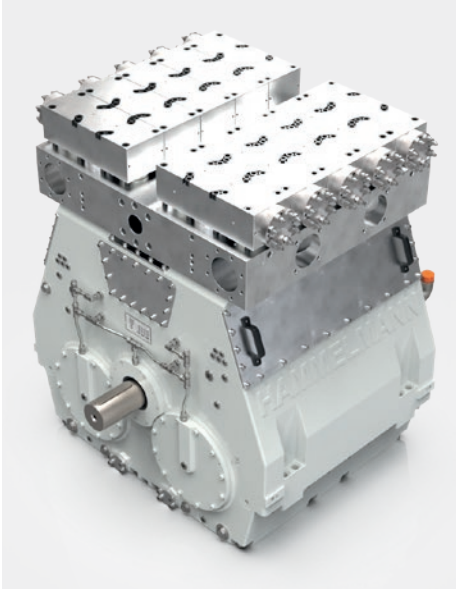


# HAMPRO® 1600 Process plunger pump



Hammelmann process pumps are built to operate at the continuous maximum duty stated in the performance parameters. Just compare the crankshaft speed, average plunger speed, plunger diameter and power rating.



## Quality and reliability

- Crank section calculation by 'Finite element method' ensures long working life under continuous load
- Stainless steel pump head free of alternating stress
- Integral speed reduction gear
- Pressurised oil lubrication system with oil cooler/filter
- Bellows form hermetic seal between the suction chamber and crank section
- Large selection of materials available for different fluids
- Minimum crankshaft speed with external oilpump 50 r.p.m.

## Features

- Power ratings up to 1600 kW
- Vertical 10 cylinder design

## Technical details HAMPRO® 1600

Operating pressure	Flow rate
up to 3000 bar	up to 256 m <sup>3</sup> /h
Design	Weight
Vertical 10 cylinder design	~ 8000 kg

Weight and dimensions refer to the pump only, without accessories. Detailed dimensional drawings and weights on request.

The bellow system is gastight.



## Zero Emission



TA-Luft, (Clean Air) certified to VDI 2440

In the Zero Emission design the pumped fluid is hermetically sealed within the pump preventing leakage to atmosphere during operation.

**HAMMELMANN®**

## Technical data, series HAMPRO® 1600: Performance parameters (standard design)

HAM PRO®	Q** [l/min]	Q** [m³/h]	Required power rating [kW]			D [mm]	r.p.m.	
			1000	1260	1600		n1	n2
			Operating pressure [bar]					
1604	174	10,4	3000			28	1500	315
	170	10,2	2600	3000			1362/1660	*350
	258	15,4	2100	2600	3000		1800	465
	228	13,6	2250			32	1500	315
	234	14	2000	2550	2600		1362/1660	*350
	336	20,2	1520	1920	2440		1800	465
	278	16,6	1850	2200		35	1500	315
	288	17,2	1650	2100	2150		1362/1660	*350
406	24,4	1250	1600	2100	1800		465	

1603	376	22,6	1430	1670		40	1500	315
	390	23,4	1250	1630	1670		1362/1660	*350
	554	33,2	980	1230	1570		1800	465
	476	28,6	1130	1320		45	1500	315
	500	30	1000	1290	1320		1362/1660	*350
	706	42,4	770	970	1240		1800	465

1602	594	35,6	920	1070		50	1500	315
	628	37,6	820	1040	1060		1362/1660	*350
	874	52,4	630	790	1000		1800	465
	714	42,8	760	880		55	1500	315
	770	46,2	680	860	880		1362/1660	*350
	1044	62,6	520	650	830		1800	465
	860	51,6	640	740		60	1500	315
	926	55,6	570	720	740		1362/1660	*350
	1256	75,4	430	550	690		1800	465
	1018	62	540	630		65	1500	315
	1092	66	490	610	630		1362/1660	*350
	1490	90	370	470	590		1800	465
	1182	70	470	540		70	1500	315
	1276	76	420	530	540		1362/1660	*350
	1728	104	320	400	510		1800	465
	1350	82	410	470		75	1500	315
	1466	88	360	460	470		1362/1660	*350
	1984	120	280	350	440		1800	465
	1496	90	360	410		80	1500	315
	1680	100	320	400	410		1362/1660	*350
2188	132	240	310	390	1800		465	

1601 High flow	1496	90	360	410		80	1500	315
	1680	100	320	400	410		1362/1660	*350
	2188	132	240	310	390		1800	465
	1688	102	310	370		85	1500	315
	1900	114	280	360	370		1362/1660	*350
	2482	148	210	270	340		1800	465
	1914	114	280	330		90	1500	315
	2140	128	250	320	330		1362/1660	*350
	2798	168	190	240	310		1800	465
	2386	144	230	260		100	1500	315
	2650	160	200	260			1362/1660	*350
	3490	210	150	190	250		1800	465
	2918	176	190	220		110	1500	315
	3216	192	170	210	220		1362/1660	*350
	4266	256	130	160	200		1800	465

### Data

- Rod force: 210 kN
- Stroke: 100 mm
- Mean plunger speed at n2:

315 r.p.m. = 1,06 m/sec

350 r.p.m. = 1,17 m/sec

465 r.p.m. = 1,54 m/sec

### Certificates

- Machine directive 2006/42/EG
- ATEX 2014/34/EG
- API 674
- TA-Luft (Clean Air)
- NORSOK M501
- NORSOK M650
- NACE MR0175

### Standards

- DIN EN ISO 9001
- DIN EN ISO 14001
- DIN EN ISO 50001
- BS OHSAS 18001
- ASME-U
- Achilles
- EAC



Hammelmann plunger pumps convert 93 to 98 % of the shaft power to hydraulic energy.

\*\*Data refer to the medium water (compressibility considered)

\* Speed limit for continuous service according to API 674 – 6.3.1

D = Plunger diameter

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.