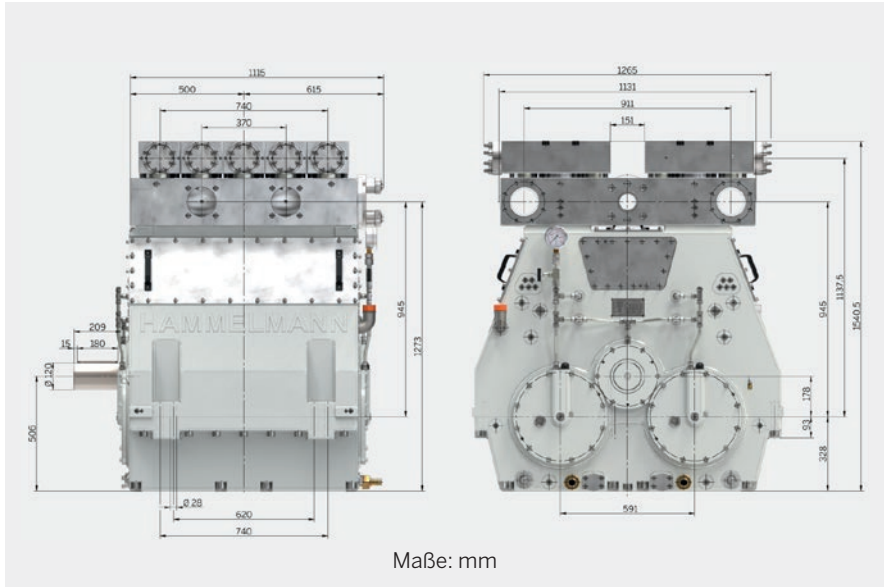
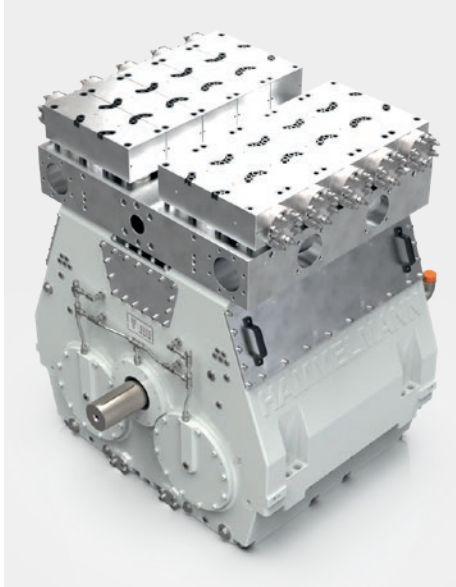


HAMPRO® 1600 Process plunger pump

HAMMELMANN®

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 1127 gpm
Design	Weight
Vertical 10 cylinder design	17 637 lbs

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.

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

HAM PRO®	Q** [gpm]	Required power rating [kW]			D [mm]	r.p.m.	
		1000	1260	1600		n1	n2
		Operating pressure [bar]					
1604	46	43511			28	1500	315
	45	37710	43511			1362/1660	*350
	68	30458	37710	43511		1800	465
	60	32633			32	1500	315
	62	29008	36985	37710		1362/1660	*350
	89	22046	27847	35389		1800	465
	73	26832	31908		35	1500	315
	76	23931	30458	31183		1362/1660	*350
	107	18130	23206	30458		1800	465

1603	100	20740	24221		40	1500	315
	103	18130	23641	24221		1362/1660	*350
	146	14214	17840	22771		1800	465
	126	16389	19145		45	1500	315
	132	14504	18710	19145		1362/1660	*350
	187	11168	14069	17985		1800	465

1602	157	13343	15519		50	1500	315
	166	11893	15084	15374		1362/1660	*350
	231	9137	11458	14504		1800	465
	188	11023	12763		55	1500	315
	203	9863	12473	12763		1362/1660	*350
	276	7542	9427	12038		1800	465
	227	9282	10733		60	1500	315
	245	8267	10443	10733		1362/1660	*350
	332	6237	7977	10008		1800	465
	273	7832	9137		65	1500	315
	291	7107	8847	9137		1362/1660	*350
	396	5366	6817	8557		1800	465
	308	6817	7832		70	1500	315
	335	6092	7687	7832		1362/1660	*350
	458	4641	5802	7397		1800	465
	361	5947	6817		75	1500	315
	387	5221	6672	6817		1362/1660	*350
	528	4061	5076	6382		1800	465
	396	5221	5947		80	1500	315
	440	4641	5802	5947		1362/1660	*350
	581	3481	4496	5656		1800	465

1601 High flow	396	5221	5947		80	1500	315
	440	4641	5802	5947		1362/1660	*350
	581	3481	4496	5656		1800	465
	449	4496	5366		85	1500	315
	502	4061	5221	5366		1362/1660	*350
	652	3046	3916	4931		1800	465
	502	4061	4786		90	1500	315
	564	3626	4641	4786		1362/1660	*350
	740	2756	3481	4496		1800	465
	634	3336	3771		100	1500	315
	704	2901	3771			1362/1660	*350
	925	2176	2756	3626		1800	465
	775	2756	3191		110	1500	315
	845	2466	3046	3191		1362/1660	*350
	1127	1885	2321	2901		1800	465

Data

- Rod force: 47,209 lbf
- Stroke: 3,9 inch
- Mean plunger speed at n2:

315 r.p.m. = 3.5 ft/sec

350 r.p.m. = 3.8 ft/sec

465 r.p.m. = 5,1 ft/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.