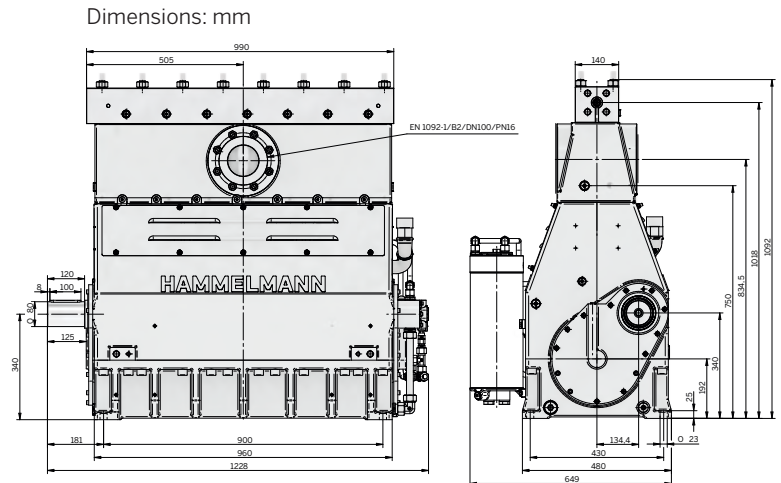
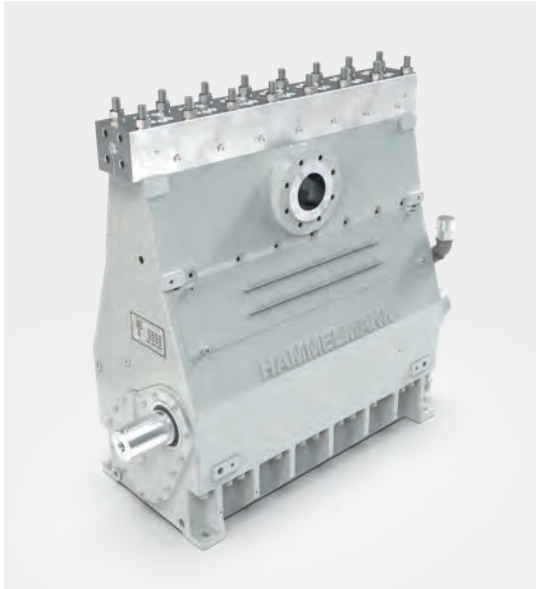


HAMPRO® 470 Process plunger pump



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 32 r.p.m.

Features

- Power ratings up to 470 kW
- Vertical 7 cylinder design

Technical details HAMPRO® 470

Operating pressure	Flow rate
bis 3200 bar	bis 90 m ³ /h
Design	Weight
7 Zylinder, stehend	~ 1620 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® 470: Performance parameters (standard design)

HDP	Q** [l/min]	Q** [m³/h]	Required power rating [kW]						D [mm]	r.p.m.	
			200	250	300	350	400	470			
			Operating pressure [bar]							n1	n2

474	46	2,76	2200	2800	3200	-	-	-	17,5	1500	411
	55	3,3	1830	2300	2800	3200	-	-		1500 / 1800	493
	66	3,96	1530	1910	2300	2700	3100	3200		1800 / 2150	591
	56	3,36	1810	2300	2700	3000	-	-	19,3	1500	411
	67	4,02	1510	1880	2300	2600	3000	-		1500 / 1800	493
	81	4,86	1260	1570	1880	2200	2500	3000		1800 / 2150	591
	60	3,6	1680	2100	2500	2800	-	-	20	1500	411
	72	4,32	1400	1750	2100	2500	2800	-		1500 / 1800	493
	86	5,16	1170	1460	1750	2100	2300	2800		1800 / 2150	591

473	101	6,06	1080	1350	1610	1800	-	-	25	1500	411
	121	7,26	900	1120	1350	1570	1800	-		1500 / 1800	493
	145	8,7	750	940	1120	1310	1500	1760		1800 / 2150	591
	125	7,5	860	1070	1300	1430	-	-	28	1500	411
	150	9	720	900	1070	1250	1430	-		1500 / 1800	493
	180	10,8	600	750	900	1040	1200	1400		1800 / 2150	591

472	142	8,52	750	930	1120	1240	-	-	30	1500	411
	170	10,2	620	780	930	1100	1240	-		1500 / 1800	493
	204	12,24	520	650	780	910	1040	1220		1800 / 2150	591
	177	10,62	620	770	930	1030	-	-	33	1500	411
	213	12,78	510	640	770	900	1030	-		1500 / 1800	493
	255	15,3	430	540	640	750	860	1010		1800 / 2150	591
	195	11,7	550	700	820	910	-	-	35	1500	411
	234	14,04	460	570	700	800	910	-		1500 / 1800	493
	281	16,86	380	480	570	670	760	900		1800 / 2150	591
	258	15,48	420	530	630	700	-	-	40	1500	411
	309	18,54	350	440	530	610	700	-		1500 / 1800	493
	370	22,2	300	370	440	510	580	700		1800 / 2150	591
	329	19,74	330	420	500	550	-	-	45	1500	411
	395	23,7	280	350	420	480	550	-		1500 / 1800	493
	474	28,44	230	300	350	400	460	540		1800 / 2150	591
	411	24,66	270	340	400	450	-	-	50	1500	411
	493	29,58	220	280	340	400	450	-		1500 / 1800	493
	591	35,46	200	230	280	330	370	440		1800 / 2150	591
	497	29,82	220	280	330	370	-	-	55	1500	411
	596	35,76	200	230	280	320	370	-		1500 / 1800	493
	715	42,9	150	200	230	270	310	360		1800 / 2150	591
	586	35,16	200	230	280	310	-	-	60	1500	411
	703	42,18	160	200	230	270	310	-		1500 / 1800	493
	842	50,52	130	160	200	230	260	310		1800 / 2150	591
	687	41,22	160	200	240	270	-	-	65	1500	411
	825	49,5	130	170	200	230	270	-		1500 / 1800	493
	988	59,28	110	140	170	200	220	260		1800 / 2150	591
	797	47,82	140	170	210	230	-	-	70	1500	411
	956	57,36	110	140	170	200	230	-		1500 / 1800	493
	1146	68,76	100	120	140	170	200	220		1800 / 2150	591
	1041	62,46	110	130	160	180	-	-	80	1500	411
	1249	74,94	100	110	130	150	180	-		1500 / 1800	493
	1497	89,82	70	100	110	130	150	170		1800 / 2150	591

Data

- Rod force: 88 kN
- Stroke: 75 mm
- Mean plunger speed at n2:

400 1/min. = 1,00 m/sek

493 1/min. = 1,23 m/sek

591 1/min. = 1,48 m/sek

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
- 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.