

HAMPRO® 20 V 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.



Stroke adjustment operation

The stroke length is altered by turning the variator shaft. This can be achieved when the pump is not running as well as during operation. Once the adjustment has been made the variator shaft is held in position by the stepper motor. The system then runs with the newly adjusted stroke length providing the required flow rate.

- Smooth, automatic adjustment of the flow rate
- Compact design with small footprint
- Highly energy efficient, Flow rate adjustment without energy loss also under partial load
- Possible to control the flow rate down to zero

Adjustment

- The stroke alters in relation to the middle position.
- Very precise adjustment possible (API 675)

Adjustment options

- Hand wheel
- Servomotor also available for hazardous areas
- Nominal power = up to 900 [W]
- Nominal supply voltage = 115/230 or 400/480 [V]
- Net frequency = 50/60Hz

Communication interface

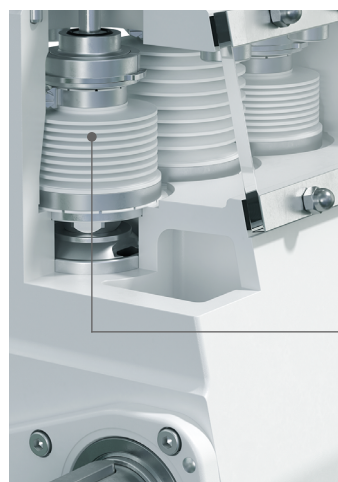
Modbus / CANopen / CANmoiton / Maschinenbus / DeviceNet / EtherNet | IP / Profibus DP / Ether CAT

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

Features

- Power ratings up to 25 hp
- Vertical 3 cylinder design



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.

The bellow system is gastight.

Technical data, series HAMPRO® 20 V: Performance parameters (standard design)

HAM PRO®	Q* [gpm]	Required power rating [hp]			D [mm]	r.p.m.	
		15	20	25		n1	n2
		Operating pressure [psi]					
24 V	0 - 0.37	42787	47428		8	1000	450
	0 - 0.50	35535	47428			1200	540
	0 - 0.63	28283	38436	47428		1500	675
	0 - 0.77	23496	32054	39596		1800	810
	0 - 0.66	26832	31909		10	1000	450
	0 - 0.79	22481	30458	31909		1200	540
	0 - 1.03	17985	24657	30313		1500	675
	0 - 1.27	15084	20451	25237		1800	810

23 V	0 - 0.66	26832	31909		10	1000	450
	0 - 0.79	22481	30313			1200	540
	0 - 1.03	17985	24657	30313		1500	675
	0 - 1.27	15084	20451	25237		1800	810
	0 - 0.98	18855	22481		12	1000	450
	0 - 1.19	15229	21466	22481		1200	540
	0 - 1.64	12473	17115	21031		1500	675
	0 - 1.98	10443	14214	17550		1800	810

22 V	0 - 1.61	12038	14359		15	1000	450
	0 - 1.93	10008	13489			1200	540
	0 - 2.56	7977	10878	13489		1500	675
	0 - 3.14	6672	9138	11313		1800	810
	0 - 2.25	8847	10588		17.5	1000	450
	0 - 2.67	7397	10153	10443		1200	540
	0 - 3.43	5947	7977	9863		1500	675
	0 - 4.28	4931	6672	8267		1800	810
	0 - 2.96	6817	8122		20	1000	450
	0 - 3.57	5657	7687	7977		1200	540
	0 - 4.57	4496	6092	7542		1500	675
	0 - 5.71	3771	5076	6382		1800	810
	0 - 4.68	4351	5076		25	1000	450
	0 - 5.63	3626	4931	5076		1200	540
	0 - 7.13	2901	3916	4931		1500	675
	0 - 8.85	2466	3336	4061		1800	810
	0 - 6.82	2901	3481		30	1000	450
	0 - 8.19	2466	3336	3481		1200	540
	0 - 10.57	2031	2756	3336		1500	675
	0 - 12.84	1740	2321	2756		1800	810
	0 - 9.30	2176	2611		35	1000	450
	0 - 11.15	1740	2466	2611		1200	540
	0 - 14.56	1450	2031	2466		1500	675
	0 - 17.70	1160	1740	2031		1800	810
	0 - 12.18	1595	2031		40	1000	450
	0 - 14.61	1305	1886	2031		1200	540
	0 - 18.84	1160	1595	1886		1500	675
	0 - 23.41	870	1305	1595		1800	810
	0 - 15.45	1305	1595		45	1000	450
	0 - 18.55	1015	1450	1595		1200	540
	0 - 23.96	870	1160	1450		1500	675
	0 - 29.38	725	1015	1305		1800	810

Data

- Rod force: 3,956 lbf
- Stroke: 0 - 1.2 inch

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)

D = Plunger diameter

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.