HAMPRO 70 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.

Adjustment

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

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

Features

- Power ratings up to 100 HP
- Vertical 3 cylinder design

Zero Emission

ZERO EMISSION® VDI 2440

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.

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 servomotor. 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

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

Technical data, series HAMPRO 70 V

Performance parameters (Standard design)

HAM PRO	Q* [gpm]	Required power rating [HP]			D [mm]	r.p.m.	
		40	60	100			
		Operating pressure [psig]				n1	n2
74 V	0 - 1,98	23932	2500	43511	12	750	750
	0 - 2,46	20306	30458			900	900
	0 - 3,67	15229	23206	29732	15	750	750
	0 - 4,25	12909	18855			900	900
	0 - 5,15	11313	16680	21755	17,5	750	750
	0 - 6,08	9428	14214			900	900
73 V	0 - 6,87	8702	13054	19580	20	750	750
72 V	0 - 8,2	7107	10733	16390	22	750	750
	0 - 9,8	6092	9138	13779	24	750	750
	0 - 11,9	5076	7687	11748	26	750	750
	0 - 16,1	3771	5802	8702	30	750	750
	0 - 21,9	2850	4350	6600	35	750	750
	0 - 28,8	2176	3191	4931	40	750	750
	0 - 36,7	1595	2466	3916	45	750	750
	0 - 45,2	1378	2031	3046	50	750	750
	0 - 54,4	870	1450	2175	55	750	750

Data

- Rod force: 9666 lbf
- Stroke: 0 – 1.57 mm
- Mean plunger speed at n2
  750 r.p.m. = 3.3 ft/sec
  900 r.p.m. = 3.9 ft/sec

Standards

- Machine directive 2006/42/EG
- ATEX 94/9/EG
- API 675 (with deviations)
- TA-Luft
- NORSOK M501
- NORSOK M650
- NACE MR0175

Certificates

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

ENERGY EFFICIENT

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.

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