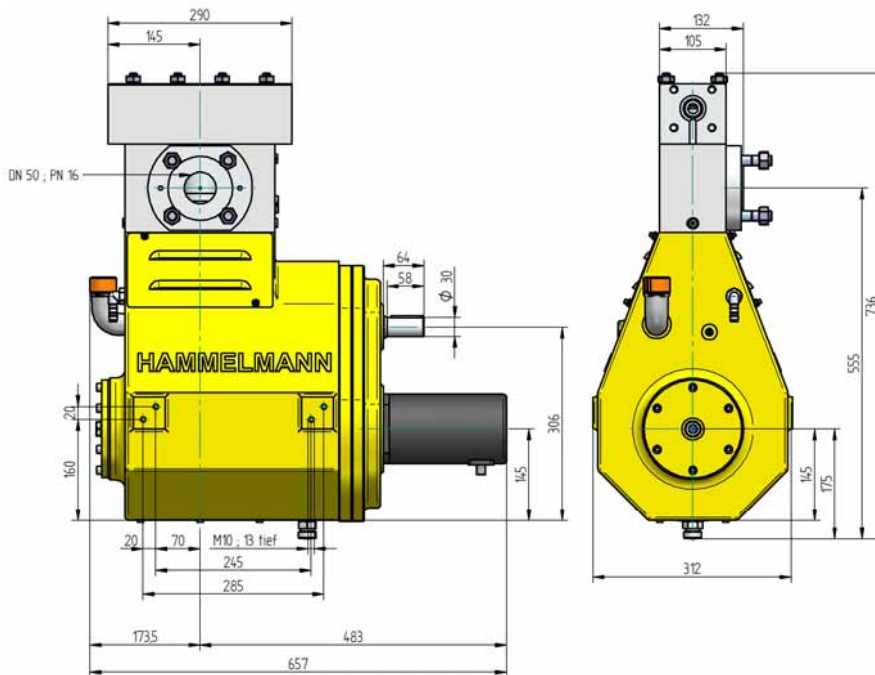


HDP 20 V high pressure pump

with smoothly adjustable stroke length



- 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

Stroke adjustment operation

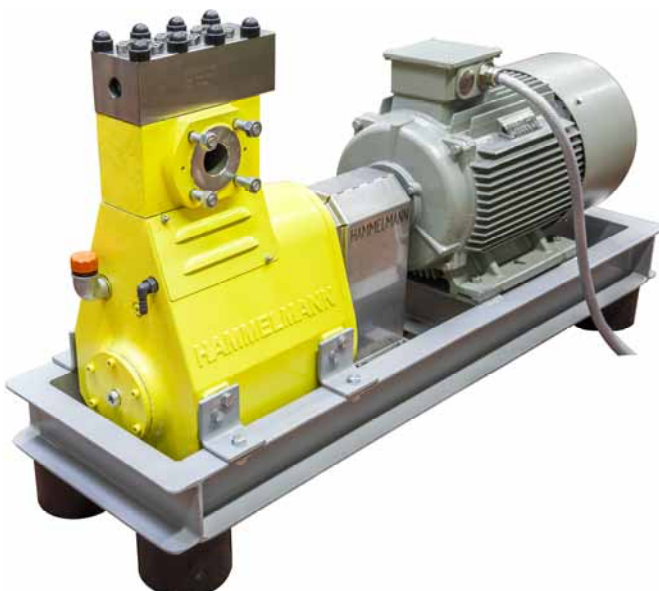
The stroke length is altered by turning the variator shaft. This can be achieved when the pump is not running as well as during operation. Once the adjustment has been made the variator shaft is held in position by the stepper motor. The system then runs with the newly adjusted stroke length providing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

Adjustment

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

Adjustment options

- Hand wheel
- Servomotor also available for hazardous and explosive areas:
 - > EX de II C T4
- 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



HDP 20 V, technical data

Performance parameters

HDP	Q [l/min]*	Required power rating [kW]			D	r.p.m.	
		11	15	18,5		n1	n2
		Operating pressure [bar]					

24 V	0 to 2,4	1950	2650	3270	8	1500/1800	675
	0 to 2,9	1620	2210	2730			810
	0 to 3,9	1240	1700	2090	10	1500/1800	675
	0 to 4,8	1040	1410	1740			810

* At pressures over 2000 bar there is 5% pressure loss due to the compressibility of mediums

23 V	0 to 3,9	1240	1700	2090	10	1500/1800	675
	0 to 4,8	1040	1410	1740			810
	0 to 6,2	860	1180	1450	12	1500/1800	675
	0 to 7,5	720	980	1210			810

22 V	0 to 9,7	550	750	930	15	1500/1800	675
	0 to 11,9	460	630	780			810
	0 to 13,0	410	550	680	17,5	1500/1800	675
	0 to 16,2	340	460	570			810
	0 to 17,3	310	420	520	20	1500/1800	675
	0 to 21,6	260	350	440			810
	0 to 27,0	200	270	340	25	1500/1800	675
	0 to 33,5	170	230	280			810
	0 to 40,0	140	190	230	30	1500/1800	675
	0 to 48,6	120	160	190			810
	0 to 55,1	100	140	170	35	1500/1800	675
	0 to 67,0	80	120	140			810
	0 to 71,3	80	110	130	40	1500/1800	675
	0 to 88,6	60	90	110			810
	0 to 90,7	60	80	100	45	1500/1800	675
	0 to 111,2	50	70	90			810

Conversion table

Rating 1 kW = 1.34 HP

Op. pressure 1 bar = 14.5 psi

Flow rate 1 l = 0.264 US gallon

1 l = 0.22 Imp. gallon

D = Piston/Plunger dia. [mm]

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.

HDP	Seal*	Sealing system
24 V	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger** / packing
23 V	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
22 V	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramik plunger / packing

* The dynamic high pressure sealing extends the advantages of the labyrinth design with further increased efficiency.

** Special ceramic plungers up to max. 2500 bar

- Rod force: 17,6 kN
- Stroke: 0 to 30 mm

Features

- Power ratings up to 18,5 kW
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

- Stainless steel pump head free of alternating stress
- Bellows form hermetic seal between the suction chamber and crank section
- Choice of application specific seal assemblies
- Solid ceramic or tungsten carbide plungers
- Choice of bronze (standard) or stainless steel suction chamber
- Crank section calculation by 'Finite element method' ensures long working life under continuous load
- Pressurised oil lubrication system

Energy efficient →

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

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