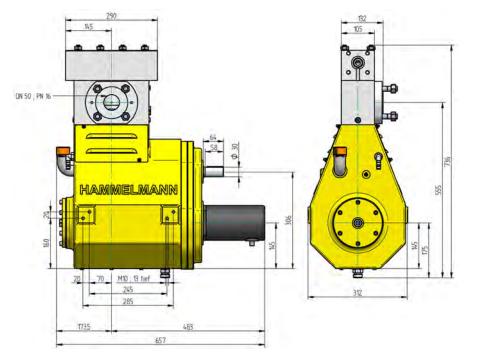
CALDER

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

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	HDP	Q [l/min]*	Required power rating [kW]111518,5			D	r.p.m.		
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No 0 to 2,9 1660 2300 2800 100 810 0 to 4,0 0 to 4,0 1270 1740 2100 10 675 810 At pressures over 2000 bar there is 5% pressure loss due to the compressibility of mediums 0 to 4,0 120 1740 1800 10 675 810 No 0 to 4,0 0 to 4,8 1060 1450 1780 10 675 810 O to 4,0 0 to 4,8 1060 1450 1780 10 1500/1800 675 O to 6,2 0 to 6,2 880 1210 1500 12 675 O to 12,0 740 1000 1240 15 810 675 O to 13,0 420 570 700 17,5 810 675 O to 14,0 320 430 540 20 675 810 O to 28,0 0 to 40,0 140 200 240 30 675 810 O to 28,0 0 to 40,0 1		0 to 2,4	2000	2700	3300		4.500/4000	675	
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		0 to 28,0	200	280	340	25		675	
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0 to 67,0 100 120 150 810 0 to 73,0 80 110 130 675 0 to 87,0 70 100 110 40 810 0 to 92,0 60 100 110 40 675		0 to 56,0	100	140	170	35		675	
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0 to 87,0 70 100 110 810 0 to 92,0 60 100 110 675		0 to 73,0	80	110	130	40		675	
		0 to 87,0	70	100	110			810	
0 to 110,0 50 70 100 ⁴⁵ 810		0 to 92,0	60	100	110	45		675	
		0 to 110,0	50	70	100	45		810	

Conversion table

Rating 1 kW = 1.34 HP Op. pressure 1 bar = 14.5 psi

Flow rate 1 I = 0.264 US gallon

11 = 0.224 0.03 gallon11 = 0.22 Imp. gallon

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

+44 1905 751790 sales@calder.co.uk www.calderltd.com Calder Ltd Prescott Drive Worcester WR4 9NE United Kingdom



- 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



D = Piston/Plunger dia. [mm]

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.

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

