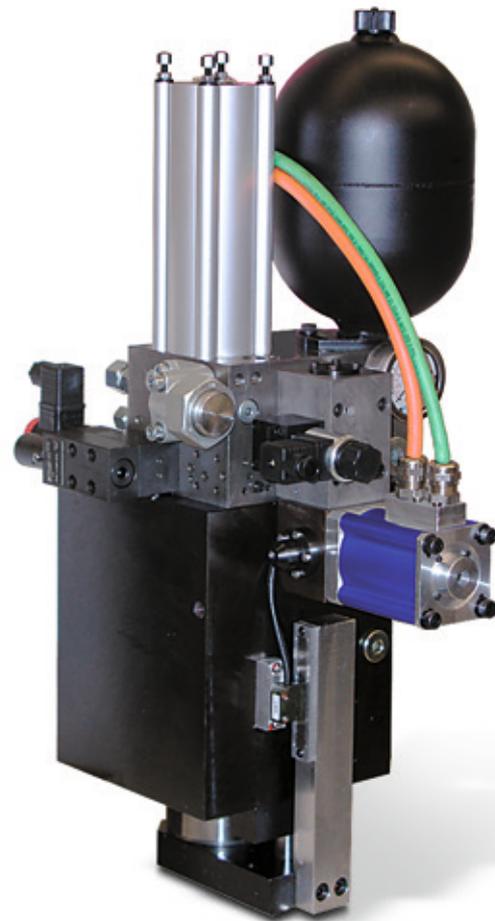


High performance punch system HDM Technical data sheet



Advantages

- + Highly dynamic punch drive
- + Directly operated valve
- + Process safety by feedback monitoring
- + Improved diagnostics
- + Optimized power consumption
- + Simple oil filtration

Design concept and operating principle

HDM is an integrated punch system, specially optimized for applications in punching, nibbling and forming. HDM offers high performance for such machines.

HS4 is the electronic link between HDM and machine control PLC/CNC. The machine control will communicate all parameters, like stroke positions and speed, using the data interface. After cycle starting, all management and monitoring of hydraulic actuators and sensors is done by HS4. A robust position feedback with digital interface is used to monitor the closed loop ram operation.

Highly efficient use of power is achieved using the load-controlled “two-pressure-system”. Accumulator charging for low pressure results in high speed cylinder operation for nibbling and high speed punching. For high pressure operation, the reduced cylinder speed results in a reduction of hydraulic power, noise and machine stress. In a compact design, all valves are placed on a manifold directly on the cylinder. The benefits of this are good hydraulic response together with simple installation and maintenance.

Scope of delivery

- Punch drive HDM
 - optimized punch cylinder
 - manifold with valves and accumulator charging
 - various damping elements
- Electronic control HS4-SV2
 - intelligent drive control and diagnostics
 - data interface: RS-232, CAN Bus, Profibus, Ethernet, USB
- Power Pack
 - application optimised dimensioning
 - integrated cooling and filtering circuit

Options

- additional sizes of max force
- cylinder with alternative fastening possibility
- cylinder with different stroke length (up to 100mm)
- customized power pack
- HL-BRIDGE for digital I/O based data interfacee

Product features

- highly dynamic punch drive with closed loop control
- new valve technology DECV: Direct Electronic Copy Valve
 - based on proven Voith H + L copy valve
 - rugged against mechanical stress
 - simple oil filtration is sufficient
 - directly operated, no hydraulic control circuit
 - very fast step response
 - very accurate proportional response
- predefined machine cycles with programmable stroke parameters
- process safety by feedback monitoring
- improved diagnostics by pressure sensors
- optimized power consumption with load-controlled active “two-pressure-system”

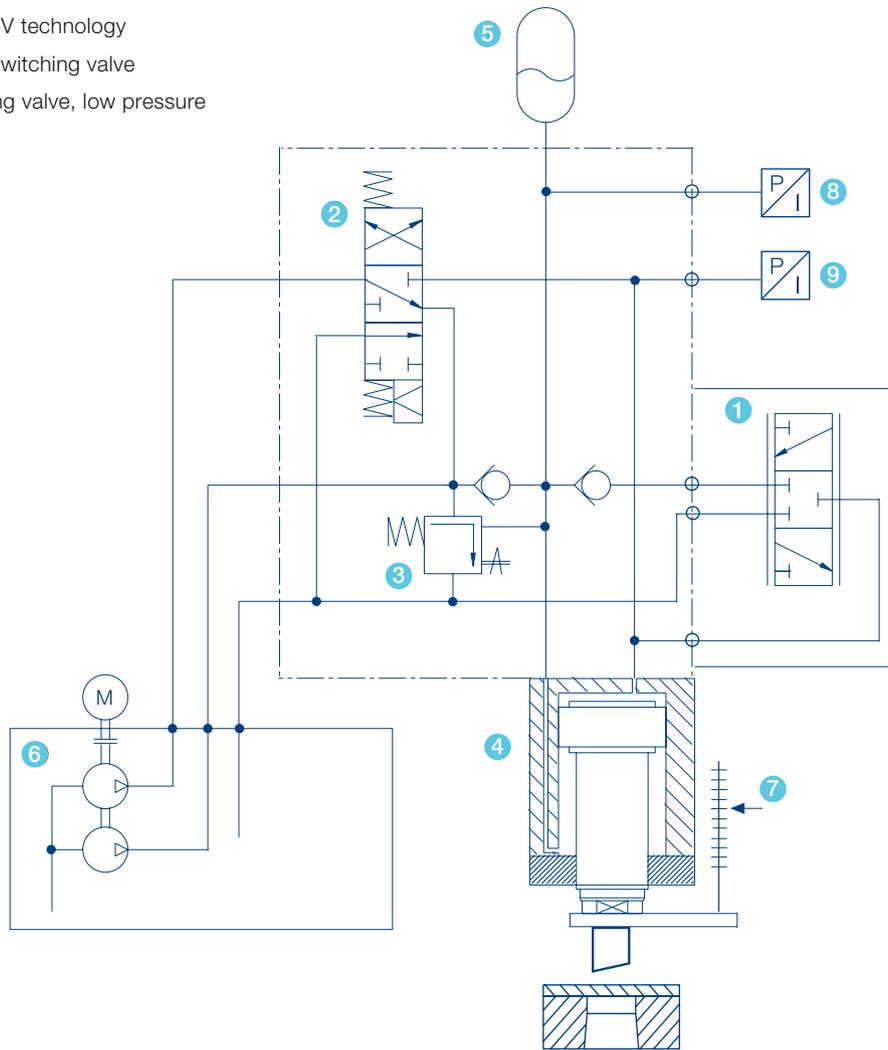
Key performance figures HDM

	HDM 20 to	HDM 30 to
operating pressure ND/HD	70/285 bar	70/285 bar
max. load force	220 kN	330 kN
max. return force	25 kN	45 kN
max. force in low pressure	35 kN	50 kN
cylinder stroke (standard)	40 mm	40 mm
motor rated power	7,5 kW	11 kW
cycle time punch stroke 4 mm	27 ms	32 ms
cycle time punch stroke 6 mm	38 ms	46 ms
cycle time punch stroke 8 mm	49 ms	60 ms
marking frequency	2800 strokes/min	2800 strokes/min

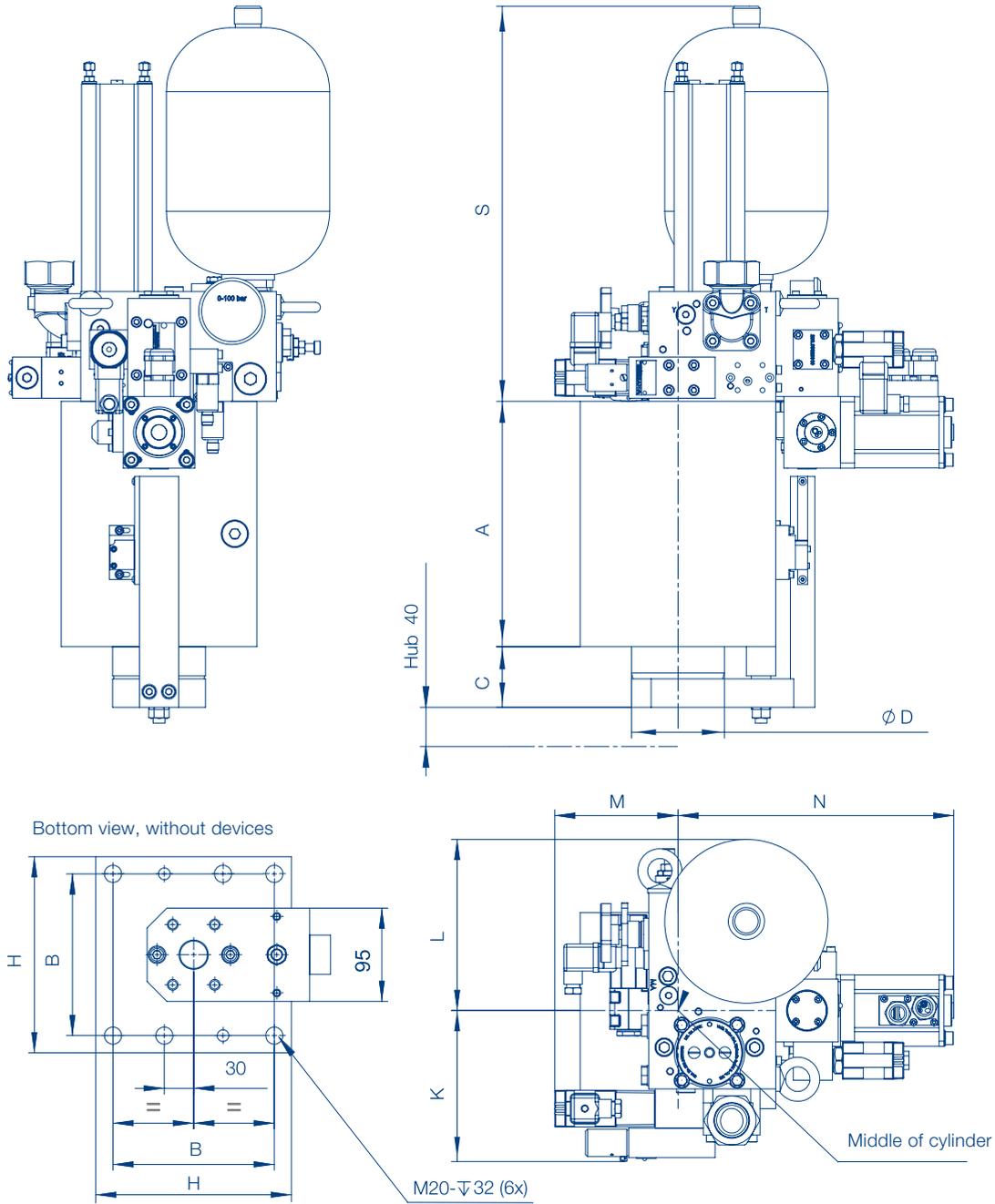
additional data according to dimensioning protocol

Functional diagram

- 1 Main valve with DECV technology
- 2 High/low pressure switching valve
- 3 Accumulator charging valve, low pressure
- 4 Block cylinder
- 5 Accumulator LP
- 6 Power pack
- 7 Position feedback
- 8 Pressure feedback
- 9 Process diagnosis



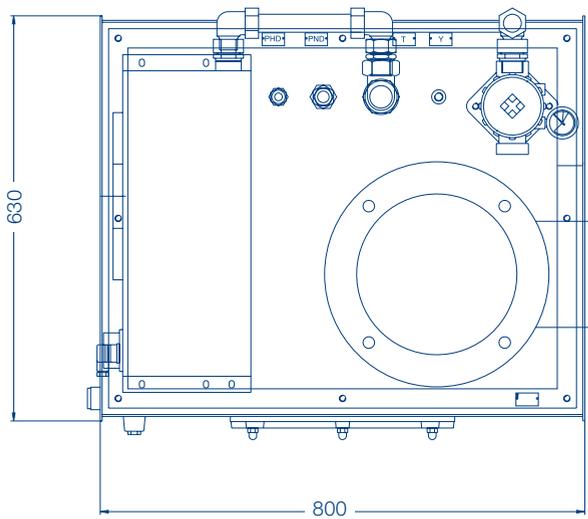
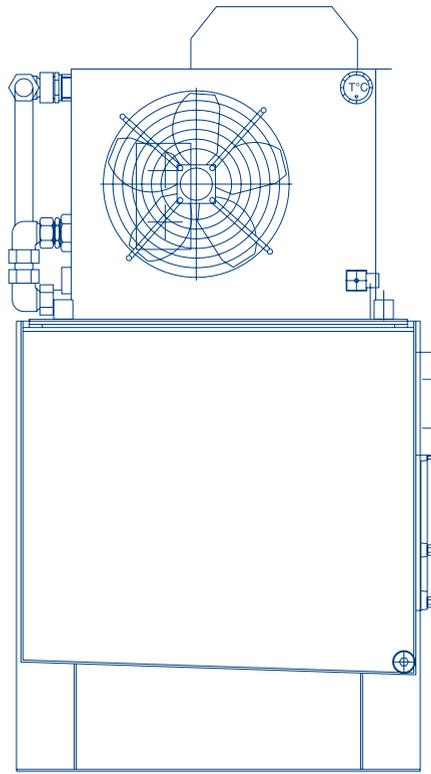
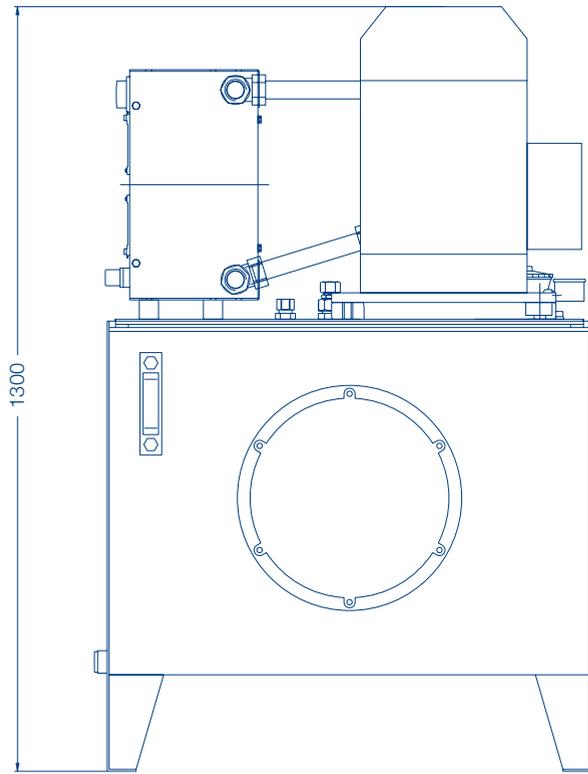
Basic dimensional drawing HDM 20t/30t



	A	B	C	D	H	S	K	L	M	N
HDM 20 to	240	145	62	80	180	390	162	164,5	135	272
HDM 30 to	250	165	62	95	200	390	152	174,5	125	282

All dimensions in mm

Basic dimensional drawing power pack HDM 20t/30t



All dimensions in mm

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