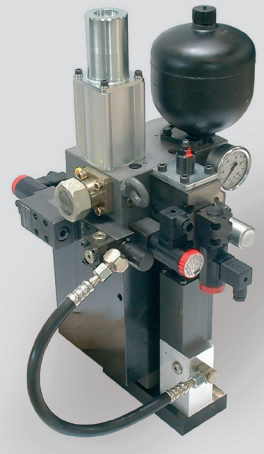
Punch System HKL
Technical Data Sheet



Design and Operating Principle

HKL is an integrated stroke unit, specially optimized for applications in punching, nibbling and forming. HKL offers a good balance between performance and cost for such machines.
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 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.

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

Specifications

- highly dynamic punch drive
- compact design
- predefined machine cycles with programmable stroke parameters
- high avalaibility
- robust valve technology
- process safety by feedback monitoring
- optimised power consumption with load-controlled active “two-pressure-system”

Scope of Supply

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

Options

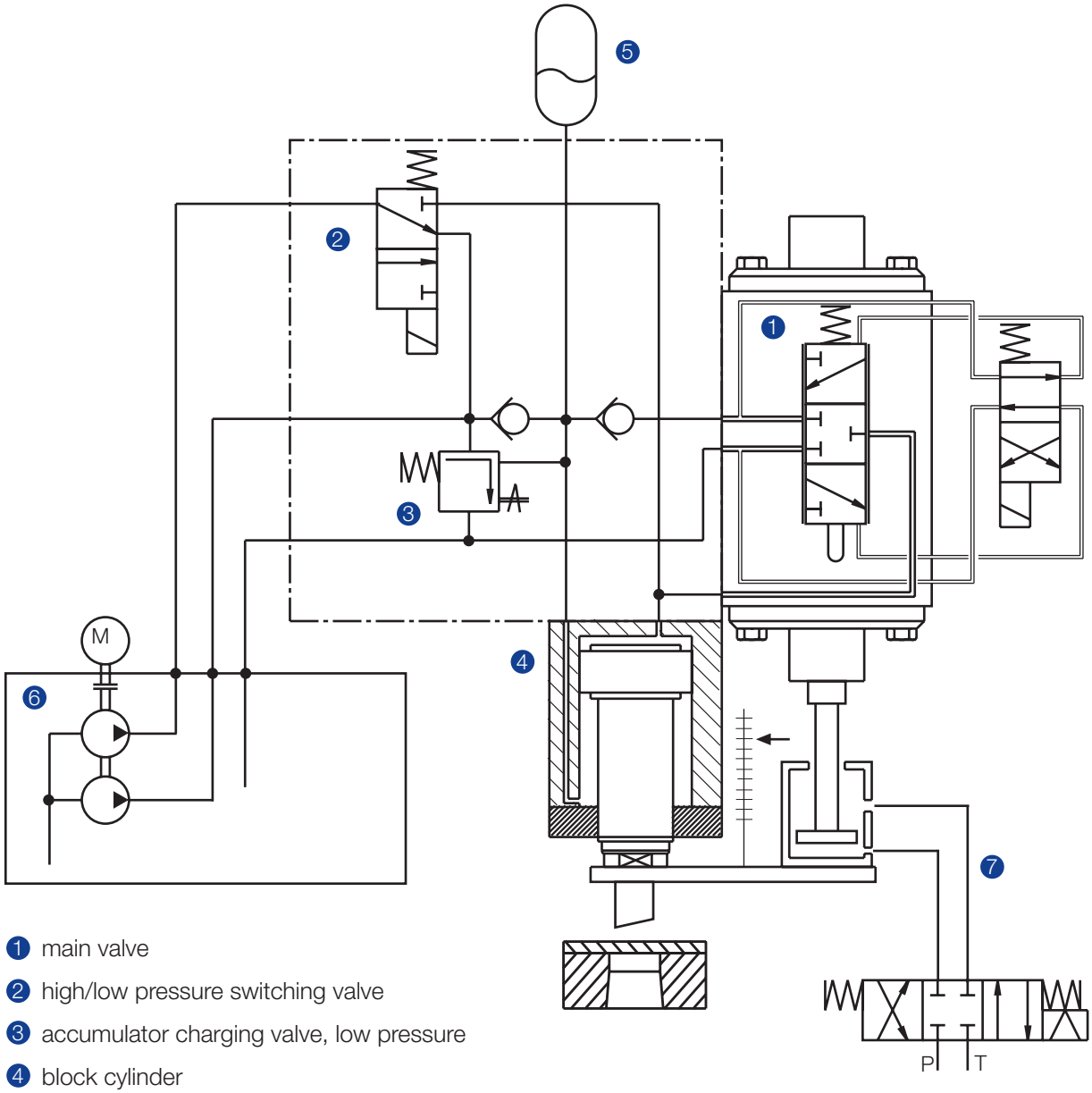
- additional sizes
- cylinder with alternative fastening possibility
- power packs in conformity to customer‘s requirement

Performance HKL

		HKL 20	HKL 30
operating pressure ND	[bar]	70	80
operating pressure HD	[bar]	285	285
max. effective force	[kN]	220	330
max. return traverse power	[kN]	25	50
effective power, partial load	[kN]	35	57
cylinder stroke (standard)	[mm]	40	40
installed electric motor power	[kW]	7.5	11
cycle time punch stroke 6 mm	[ms]	40	50
cycle time punch stroke 10 mm	[ms]	60	80

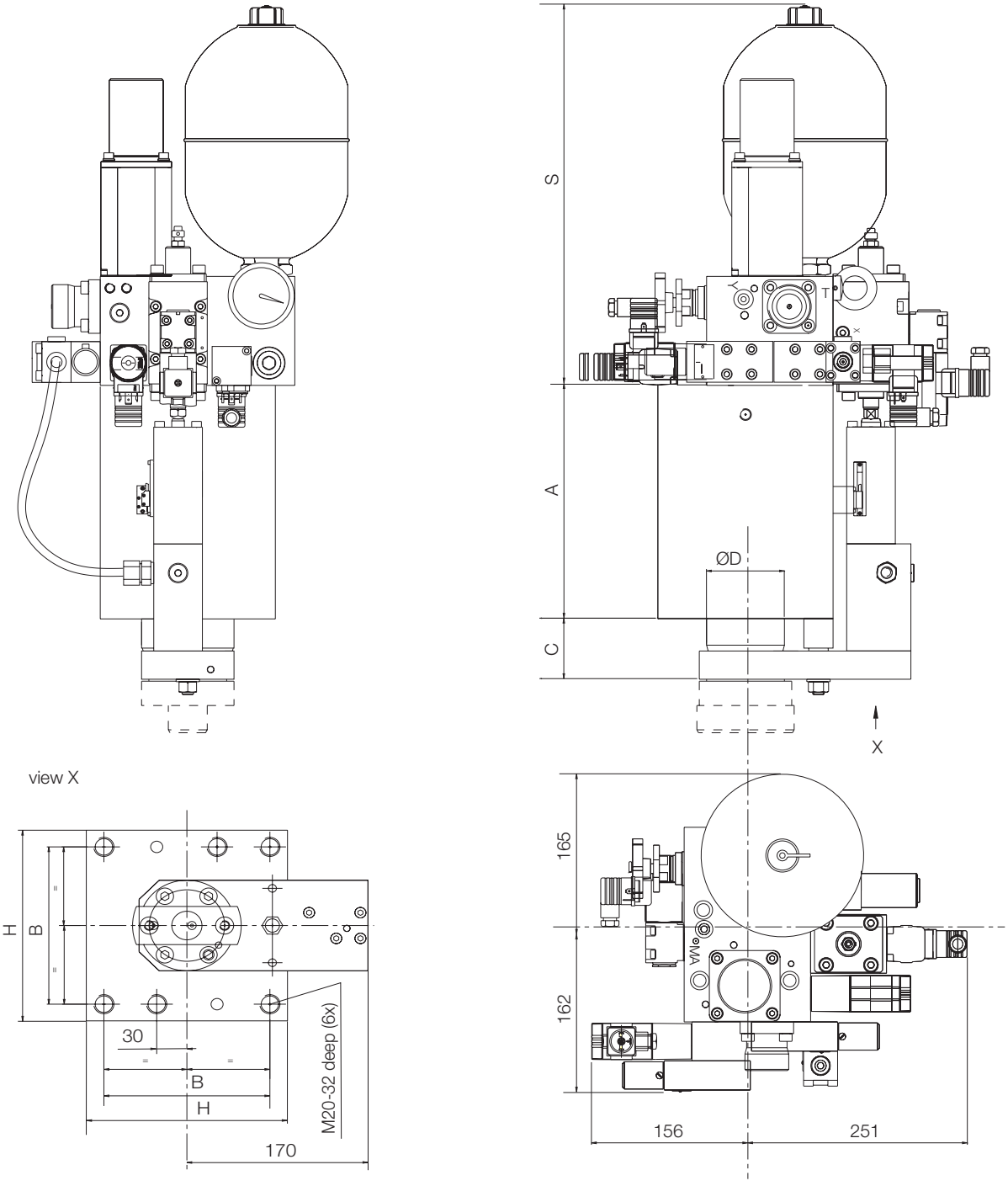
Additional data according to dimensioning protocol.

Functional Principle HKL



1. main valve
2. high/low pressure switching valve
3. accumulator charging valve, low pressure
4. block cylinder
5. accumulator
6. power pack
7. pilot system "tdc position / forming"

Basic Dimensional Drawing HKL

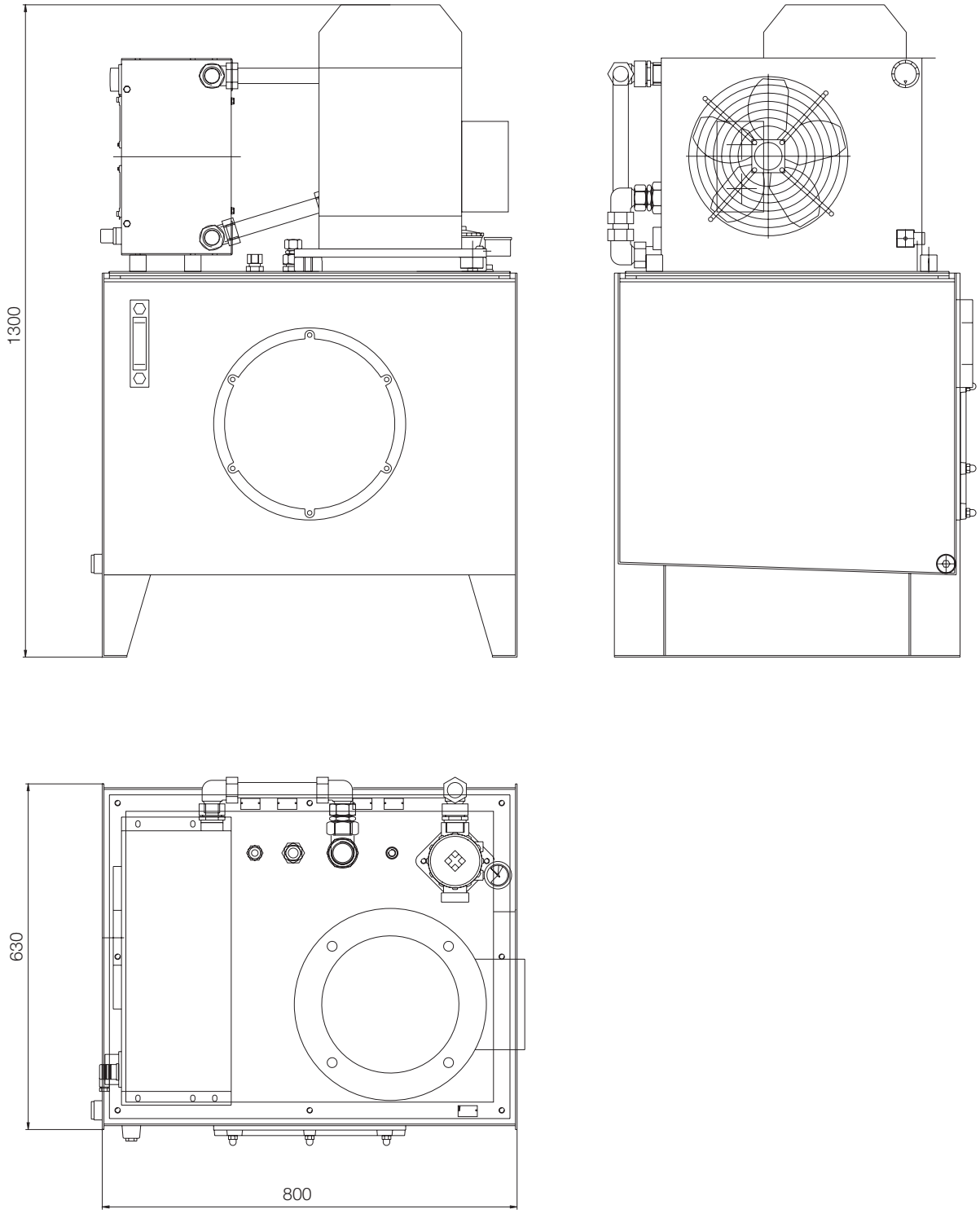


Dimensions

	A [mm]	B [mm]	C [mm]	D [mm]	H [mm]	S [mm]
HKL 20 t	240	145	62	80	180	390
HKL 30 t	250	165	62	95	200	390

all dimensions in mm

Basic Dimensional Drawing Power Pack



all dimensions in mm

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