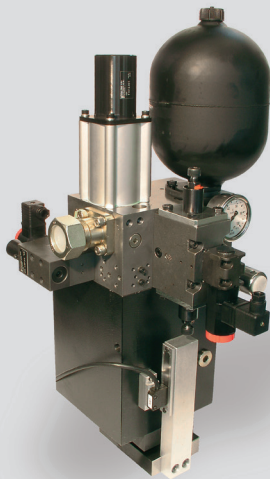


# Punch System HBL

## Technical Data Sheet



### Design Concept and Operating Principle

HBL is an integrated stroke unit, specially optimized for applications in punching, nibbling and forming. HBL offers a good balance between performance and cost for such machines. HS4 is the electronic link between HBL 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 are used to monitor the hydromechanical closed loop.

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.

### Specifications

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

### Scope of Supply

- Punch Drive HBL
  - optimized punch cylinder
  - manifold with valves and accumulator charging
  - various damping elements
- Electronic Control HS4-B4
  - intelligent drive control
- Power Pack
  - application optimized dimensioning
  - integrated cooling and filtering circuit

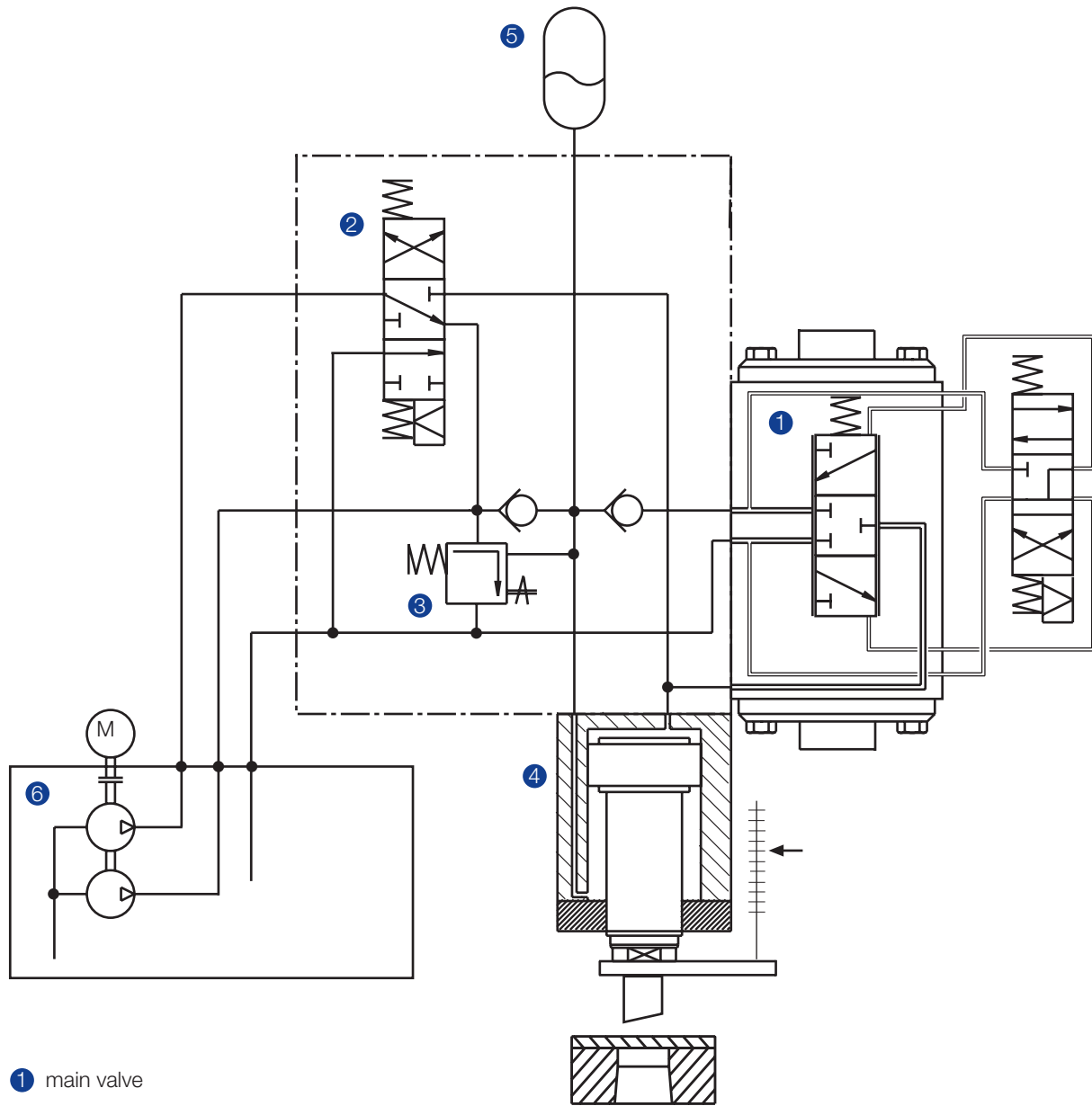
### Options

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

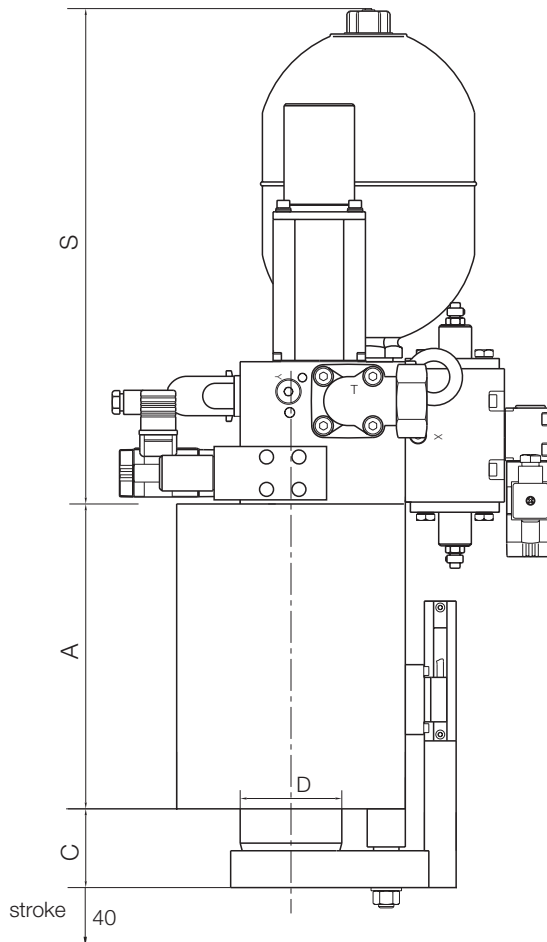
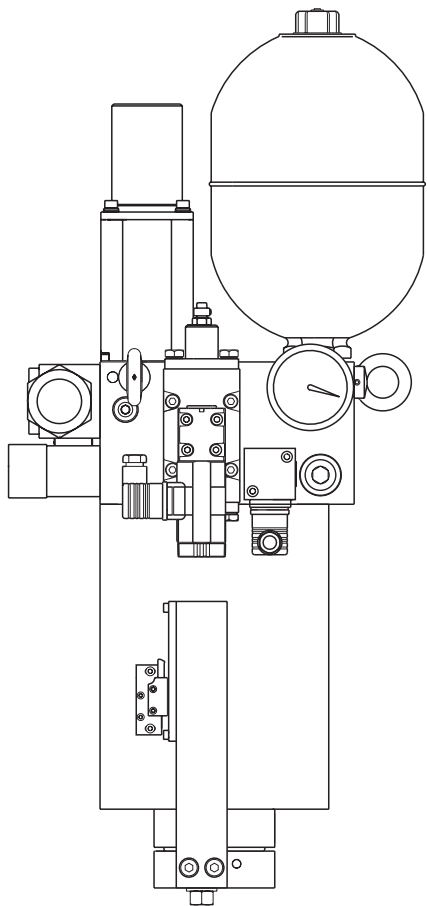
### Performance HBL

		HKL 20	HKL 30
operating pressure ND	[bar]	70	80
operating pressure HD	[bar]	280	280
max. effective force	[kN]	220	330
max. return traverse power	[kN]	25	45
effective power, partial load	[kN]	35	50
cylinder stroke (standard)	[mm]	40	40
installed electric motor power	[kW]	7.5	11
cycle time punch stroke 6 mm	[ms]	55	60
cycle time punch stroke 10 mm	[ms]	85	90

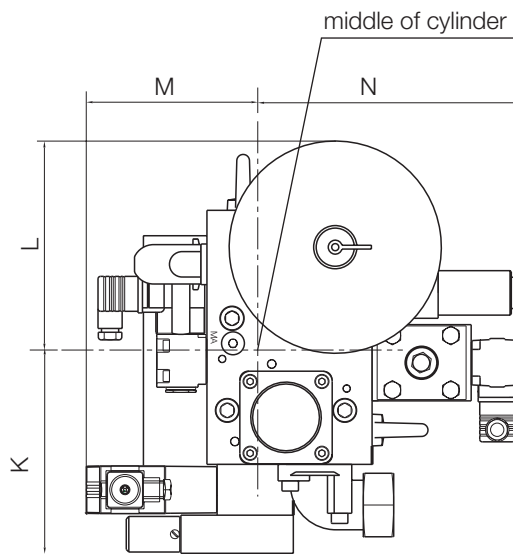
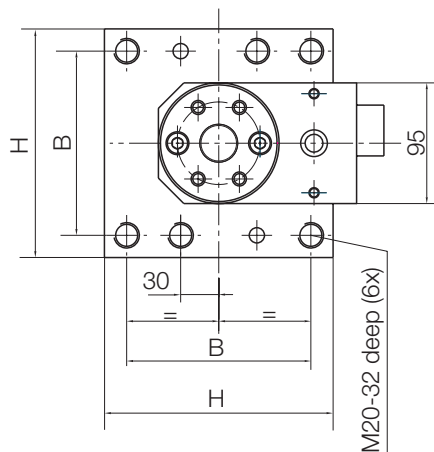
Additional data according to dimensioning protocol.



- ① main valve
- ② high/low pressure switching valve
- ③ accumulator charging valve, low pressure
- ④ block cylinder
- ⑤ accumulator
- ⑥ power pack



bottom view, without devices

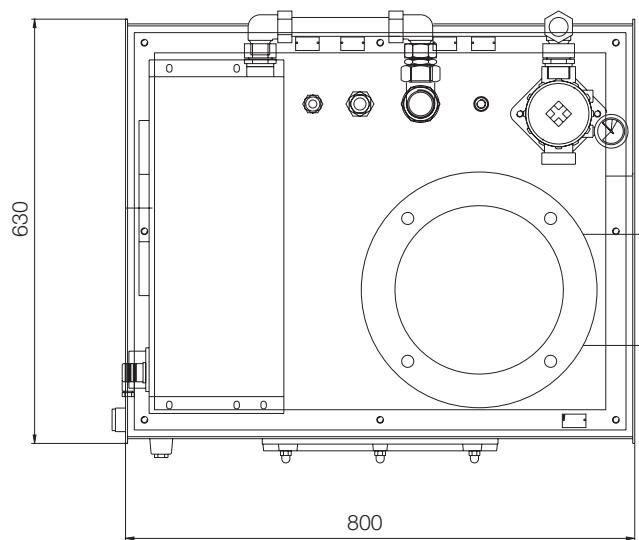
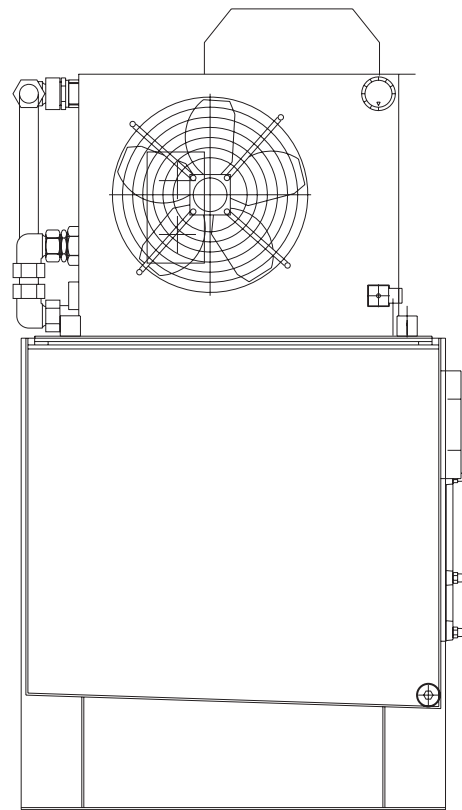
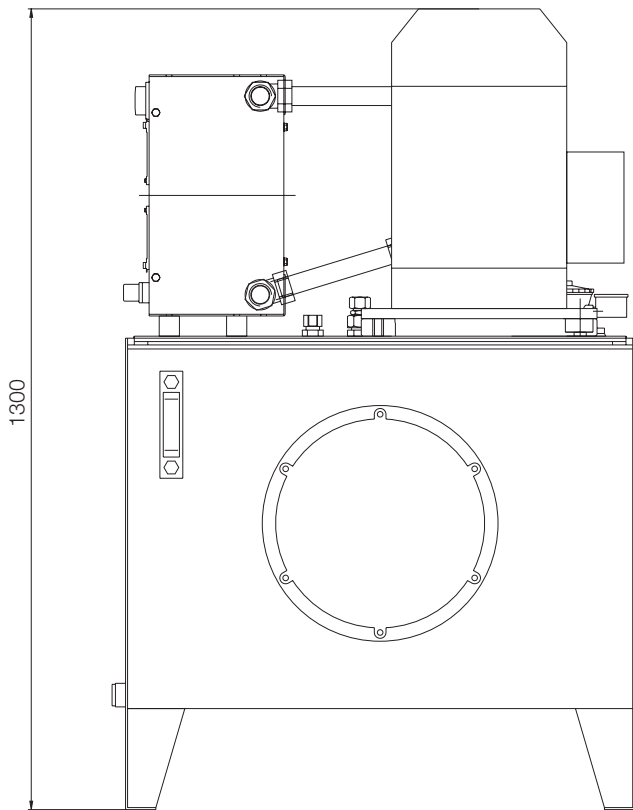


all dimensions in mm

Dimensions

	A [mm]	B [mm]	C [mm]	D [mm]	H [mm]	S [mm]	K [mm]	L [mm]	M [mm]	N [mm]
<b>HBL 20 t</b>	240	145	62	80	180	390	162	164,5	135	207,5
<b>HBL 30 t</b>	250	165	62	95	200	390	152	174,5	125	217,5

# Basic Dimensional Drawing Power Pack



all dimensions in mm

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