

Compact hydraulic power pack type HC and HCW

Compact hydraulic power packs are a type of hydraulic power pack. They are characterised by a highly compact design, since the motor shaft of the electric motor also acts as the pump shaft.

The ready-for-connection compact hydraulic power pack type HC and HCW includes an electric motor which runs in oil. The stator is securely attached to the housing (tank). The compact hydraulic power pack is suitable for hydraulic systems with operating mode S2 or S3. The heat is dissipated via surface convection so that no external cooler is usually necessary.

Either single-circuit systems or dual-circuit systems can be selected. A radial piston pump or external gear pump can be used as a hydraulic pump.

The compact hydraulic power pack type type HC and HCW is suitable as a highly compact control system, since connection blocks and valve banks can be directly mounted.

Features and benefits:

- Long lifetime and excellent reliability achieved by using radial piston pumps
- Low oil fill volumes make it environmentally sound thanks to small amount of oil to be disposed of and low costs for hydraulic fluid
- Co-ordinated range of valves and accessories from modular system
- Suitable for vertical and horizontal installation

Intended applications:

- Clamping systems on machine tools and jigs
- Rivets and clinching equipment
- Welding robots
- Lubrication systems

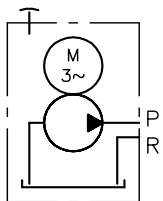


Nomenclature:	Radial piston pump with integrated electric motor (3-phase or 1-phase version)
Design:	Oil immersed hydraulic power pack for intermittent service (S3-service)
p <sub>max</sub> :	Radial piston pump 700 bar Gear pump 180 bar
Q <sub>max</sub> :	Radial piston pump approx. 4.4 lpm (V <sub>g</sub> = 1.6 cm <sup>3</sup> /rev) Gear pump approx. 3.4 lpm (V <sub>g</sub> = 1.3 cm <sup>3</sup> /rev)
V <sub>usable max</sub> :	8 l

Design and order coding example

HC24	/0,6	- A1/400	- BWH1F-HH-1-1-G24	- 400V 50 Hz
				<b>Motor voltage</b> 3 ~ 400V 50 Hz, 3 ~ 460V 60 Hz 1 ~ 230V 50 Hz, 1 ~ 110V 60 Hz (3~phase motor)
<b>Optional directly mounted directional valve bank</b>				
<b>Connection block</b>				
<b>Pump version</b>	<b>Single circuit pump</b> <ul style="list-style-type: none"><li>▪ Radial piston pump H (3-, 5- or 6-cylinders) or gear pump Z</li></ul> <b>Dual circuit pump</b> <ul style="list-style-type: none"><li>▪ Combinations:<ul style="list-style-type: none"><li>▪ Radial piston pump - gear pump</li><li>▪ Radial piston pump - radial piston pump</li></ul></li></ul>			
<b>Basic type, size</b>	Type HC (3-phase motor) and type HCW (single-phase-motor, power reduction of 30 ... 50% depending on size), size 1 to 2, type HCG (direct current motor), size 1 <ul style="list-style-type: none"><li>▪ Horizontal version with low profile (type HC..L) or vertical version</li><li>▪ Usable volume <math>V_{usable}</math> 0.5 l to 1.1 l</li><li>▪ With/without fluid level gauge</li><li>▪ With DC-motor (Type HCG) for short time operation</li></ul>			

## Function



## Example circuit:

### HC 24/0.64 -

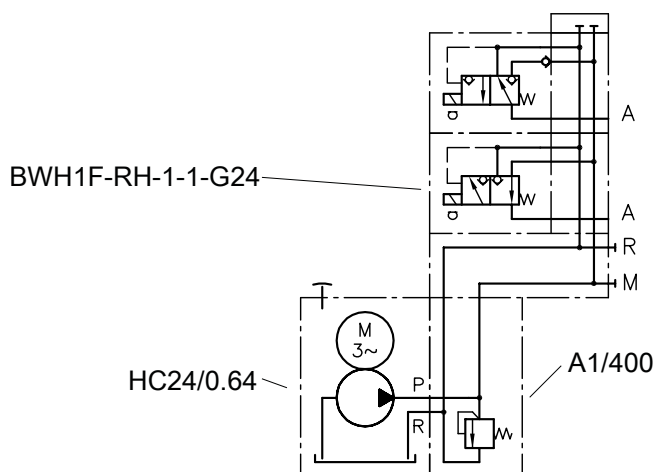
Hydraulic power pack type HC, size 24, pump delivery flow approx. 0.64 lpm

### - A1/400

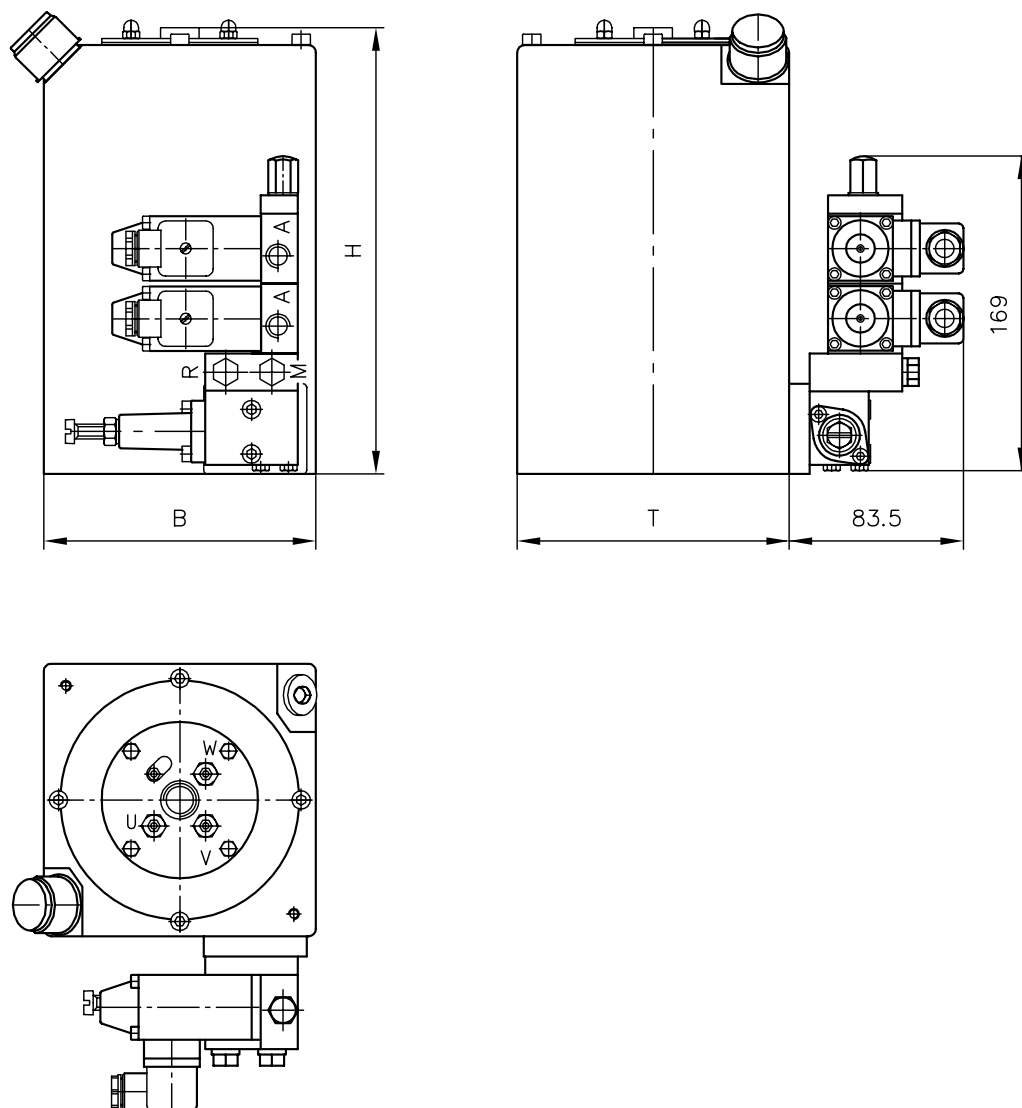
Connection block type A and pressure-limiting valve (400 bar)

### - BWH1F - RH1 - 1 - 1 - G 24

Directly mounted valve bank type BWH1



# General parameters and dimensions



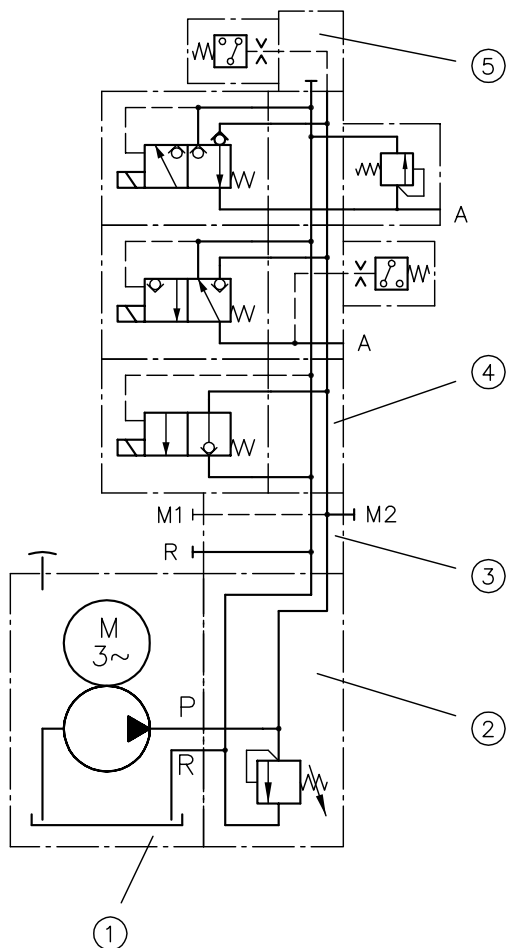
	Radial piston pump (3 cyl.)			Gear pump					Dimensions [mm]		
	Max. pressure	Delivery flow		Max. pressure	Delivery flow						
	p <sub>max</sub> [bar]	Q <sub>pu</sub> [lpm] 50 Hz	Q <sub>pu</sub> [lpm] 60 Hz	p <sub>max</sub> [bar]	Q <sub>pu</sub> [lpm] 50 Hz	Q <sub>pu</sub> [lpm] 60 Hz			P <sub>N</sub> [kW] <sup>1)</sup>	m [kg] <sup>2)</sup>	H
HC 14	700 - 160	0.2 - 1.05	0.2 - 1.2	-	-	-	0.18	6.3	197	120	120
HC 12	600 - 120	0.4 - 2.15	0.5 - 2.5	-	-	-	0.25				
HC 24	700 - 185	0.27 - 2.27	0.3 - 2.7	150	0.4 - 1.6	0.5 - 1.9	0.55	10.1	243	148	148
HC 22	700 - 140	0.52 - 4.41	0.6 - 5.3	150	0.9 - 3.4	1.1 - 4	0.55				

1) The actual power consumption depends on the respective operation pressure and can be up to  $1.5 \times P_N$

2) Without oil filling

### Example circuit:

HC 24/0.64 - A2/400  
- BWH 1 F 1-DH3 R/230-33-G24  
- 3x400V 50Hz



- 1 Compact hydraulic power pack
- 2 Connection block
- 3 Adapter plate
- 4 Valve section
- 5 End plate

#### Associated technical data sheets:

- [Compact hydraulic power pack type HC and HCW: D 7900](#)
- [Compact hydraulic power pack type HCG: D 7900 G](#)

#### Connection blocks:

- Types A, B and C: [D 6905 A/1](#), [D 6905 B](#), [D 6905 C](#)

#### Directly mountable valve banks:

- [Valve bank \(directional seated valve\) type VB: D 7302](#)
- [Valve bank \(directional seated valve\) type BWN and BWH: D 7470 B/1](#)

#### Directly mountable valve banks:

- Types SWR, SWS: [D 7451](#), [D 7951](#)
- [Valve bank \(nominal size 6\) type BA: D 7788](#)
- [Valve bank \(directional seated valve\) type BVH: D 7788 BV](#)