

1.2 Compact hydraulic power pack type NPC

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 NPC is suitable for hydraulic systems with operating mode S2. Type NPC includes a DC motor. The power pack is available in a horizontal or vertical version. Either single-circuit systems or dual-circuit systems can be selected. A radial piston pump or an external gear pump can be used as a hydraulic pump.

The compact hydraulic power pack type NPC is suitable for use as a highly compact control system, since the pressure-limiting valve is integrated and valve banks can be directly mounted.

Features and benefits:

- Very low space requirements and easy to transport
- Supplied with direct current at 12V DC or 24V DC
- Particularly suited to mobile applications and construction site operation
- Long lifetime and excellent reliability achieved by using radial piston pumps
- Environmentally sound thanks to low oil fill volumes and minimum cost of disposal
- Low costs for hydraulic fluid
- Co-ordinated range of valves and accessories from the modular system

Intended applications:

- Riveting
- Brakes for wind power plants
- Hydraulic jigs
- Crimping
- Embossing



Nomenclature:	Radial piston pump with integrated electric motor (DC)
Design:	Oil immersed compact hydraulic power pack For short period operation
p_{max}:	750 bar
Q_{max}:	1.36 lpm (V _{g max} = 0.76 cm ³ /rev)

Design and order coding example

NPC 11 / 0,87 - 1/170 - R - G12 BWN 1 - NN - 35 - 1 - G12

Valve assembly

- BWN1, BWH1, VB01
- Can be directly assembled without connection blocks according to [D 7470 B/1](#), [D 7302](#)

Motor voltage 12V DC or 24V DC

Check valve With/without check valve

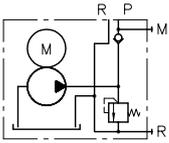
Pressure limiting valve and setting

- 1 = Fixed
- 2 = Manually adjustable

Delivery flow [lpm]

Basic type, size Type NPC, size 11 and 12

Function



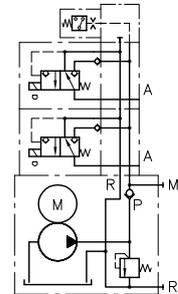
Circuit example:

NPC 11 / 0.87 - 1/170 - R - G 12

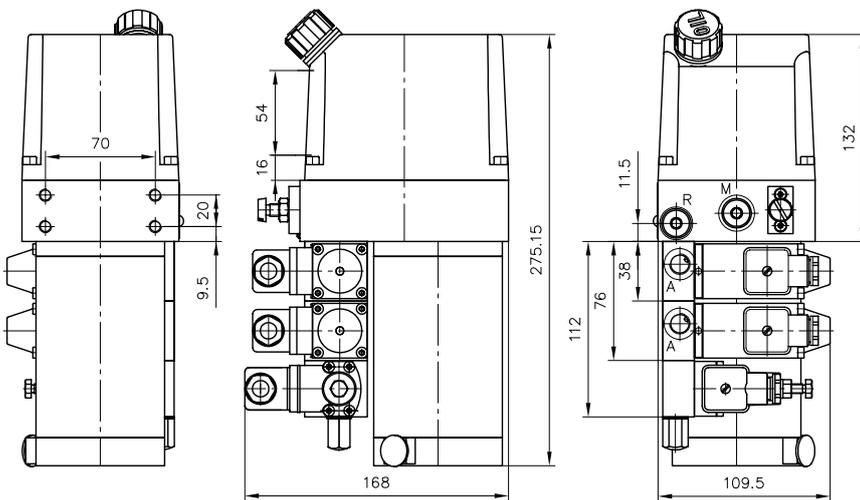
Compact hydraulic power pack type NPC
pump delivery flow approx. 0.87 lpm

BWN 1 - NN - 35 - 1 - G 12

Directly mounted valve bank type BWN with two valve sections and pressure switch in P gallery, solenoid voltage 12V DC



General parameters and dimensions



	Delivery flow						Max. pressure		P _N [kW]	m [kg]
	Q _{pu} [lpm]						p _{max} [bar]			
NPC 11 (24 V)	0.2	0.31	0.44	0.61	0.87	1.05	750		0.1/0.3	6
NPC 11 (12 V)									0.1/0.25	6
NPC 12 (24 V)	0.4	0.65	0.94	1.28	1.71	2.14	750		0.6	8
NPC 12 (12 V)									0.6	8

Associated technical data sheets:

- [Compact hydraulic power pack type NPC: D 7940](#)

Directly mountable valve banks:

- Type VB: [Page 114](#)
- Type BWH, BWN: [Page 120](#)
- Pressure switches type DG: [Page 262](#)
- Electronic pressure transducer type DT: [D 5440 T/1](#), [D 5440 T/2](#)

Compact hydraulic power packs

1.2 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 drive which runs in oil. The stator is securely attached to the housing (tank). The compact hydraulic power pack is suitable for hydraulic systems with the operating modes S2 or S3. The heat is dissipated via surface convection so that no external cooler is usually necessary.

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 high pressures thanks to use of 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



Nomenclature:	Radial piston or gear pump with integrated electric motor (three-phase or alternating current design)
Design:	Oil immersed hydraulic power pack for intermittent service (S3-service)
p_{max}:	Radial piston pump 700 bar Gear pump 180 bar
Q_{max}:	Radial piston pump 4.4 lpm (V _g = 1.6 cm ³ /rev) Gear pump approx. 3.4 lpm (V _g = 1.3 cm ³ /rev)
V_{usable max}:	8 l

Design and order coding example

HC24 /0,6 - A1/400 - BWH1F-HH-1-1-G24 - 400V 50 Hz

Motor voltage 3 ~ 400V 50 Hz, 3 ~ 460V 60 Hz
1 ~ 230V 50 Hz, 1 ~ 110V 60 Hz (3~phase motor)

Optional directly mounted directional valve bank

Connection block

Pump version

Single circuit pump

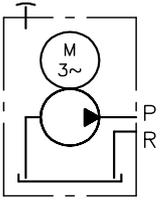
- Radial piston pump H (3-, 5- or 6-cylinders)
oder Gear pump Z

Basic type, size

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

- Lying at low installation Heights (Model HC..L)
- Alternative standing version
- Usable volume V_{usable} 0.5 l to 1.5 l
- With/without fluid level gauge
- With DC-motor (Type HCG) for short time operation

Function



Example circuit:

HC 24/0.64

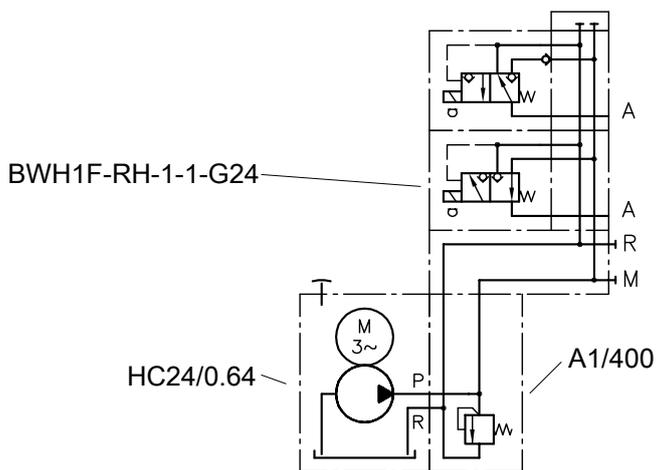
Pump unit type HC, size 24, pump delivery flow approx. 0.64 lpm

- A1/400

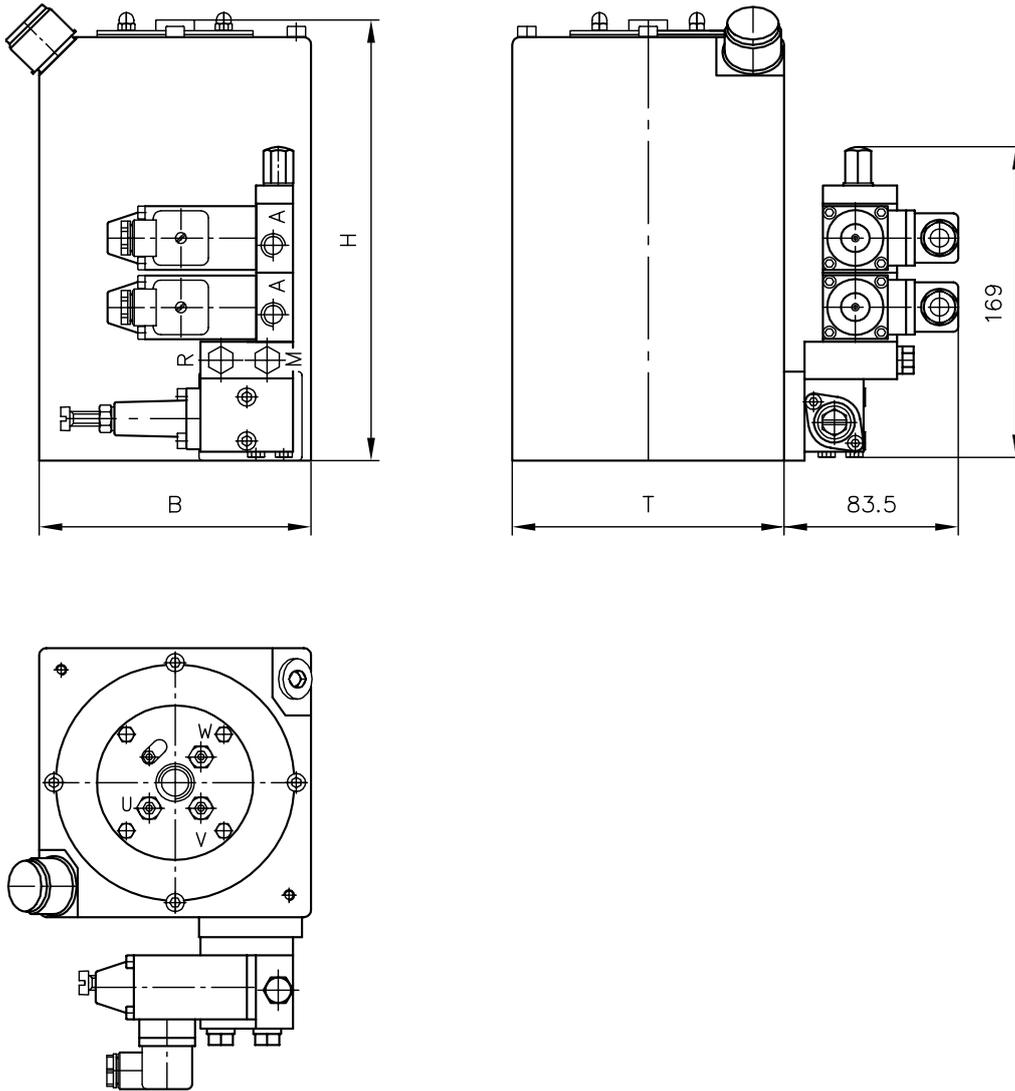
Connection block type A and pressure-limiting valve (400 bar)

- BWH1F - RH1 - 1 - 1 - G 24

Directly mounted valve bank type BWH 1



General parameters and dimensions



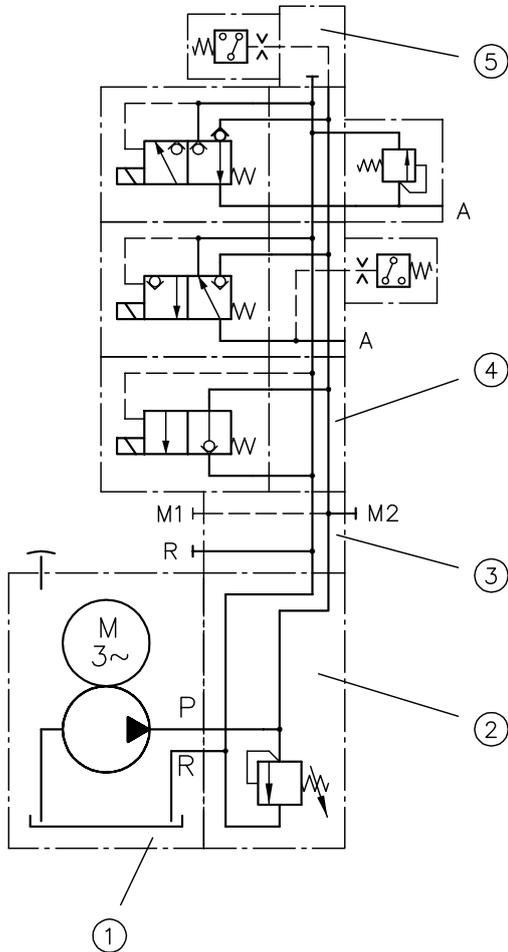
	Radial piston pump (3 cylinders)			Gear pump			P_N [kW] ¹⁾	m [kg] ²⁾	Dimensions [mm]		
	Max. pressure	Delivery flow		Max. pressure	Delivery flow				H	B	T
	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz					
HC 14	700 - 160	0.2 - 1.05	0.2 - 1.2	-	-	-	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

Circuit example:

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:

- Type A, B and C: [Page 62](#)

Directly mountable valve banks:

- Type VB: [Page 114](#)
- Type BWH, BWN: [Page 120](#)

Directly mountable valve banks:

- Type BA: [Page 144](#)
- Type BVH: [Page 124](#)

Compact hydraulic power packs

1.2 Compact hydraulic power pack type KA and KAW

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 KA and KAW includes an electric drive which runs in oil. The stator is securely attached to the housing (tank). The compact hydraulic power pack is suitable for hydraulic systems with the operating modes S2 or S3. The heat is dissipated via surface convection so that no external cooler is usually necessary.

For systems with high loads, an external fan that enables additional heat dissipation can be optionally mounted on the housing. The fan is powered by a separate motor independently of the pump motor. The type KA contains a 3-phase motor, the type KAW contains a single-phase-motor. The compact hydraulic power pack type KA and KAW is available in horizontal and vertical versions. Modules can be added to the tank so that different usable oil volumes are possible. 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 KA and KAW is suitable as a highly compact control system, since connection blocks and valve banks can be directly mounted.

Features and benefits:

- Additional separately driven fan for maximum utilisation of power
- Fill/usable volumes can be flexibly extended by modular tank extensions
- Long lifetime and excellent reliability achieved by using radial piston pumps
- Low oil fill volumes make it environmentally sound thanks to small cost of disposal and low costs for hydraulic fluid
- Co-ordinated range of valves and accessories from modular system
- Suitable for vertical and horizontal installation
- Optimum efficiency thanks to suboil motor cooling, direct transmission of force and cleverly designed heat dissipation

Intended applications:

- Brake and rotor adjustment modules on wind turbines
- Clamping systems on machine tools and appliances
- Hydraulic torque wrenches
- Rivets and clinching equipment
- Presses
- Handling systems



Nomenclature:	Radial piston or gear pump with integrated electric motor (3-phase or 1-phase version)
Design:	Oil immersed hydraulic power pack for intermittent or load/no load operation (S3-service)
p_{max}:	Radial piston pump 700 bar Gear pump 180 bar
Q_{max}:	Radial piston pump 7 lpm (V _g = 2.29 cm ³ /rev) Gear pump approx. 24.1 lpm (V _g = 7.9 cm ³ /rev)
V_{tank max}:	30 l

Design and order coding example

KA28 22 L1 KFTP /HZ0,59/8,8 - ... - 3x400V - G1/2x300

Oil drain hose

Motor voltage 3 ~ 400V 50 Hz, 3 ~ 460V 60 Hz, 3 ~ 690V 50 Hz,
1 ~ 230V 50 Hz, 1 ~ 110V 60 Hz (1~phase motor)

Valve design

Pump version

Single circuit pump

- Radial piston pump H or gear pump Z

Dual circuit pump

- with joint connection pedestal for pressure connections P1 and P3
- Combinations: Radial piston pump - radial piston pump (HH) and radial piston pump - gear pump (HZ)

Additional function

- Oil sight glass
- Level gauge with level switch
- Temperature switch
- Silica gel filter (instead of breather filter)
- Additional fans
- Various electrical connection variants

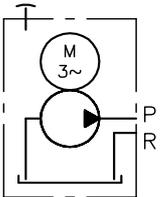
Installation position

Horizontal for low installation heights (type KA..L) or vertical (type KA..S)

Tank size

Basic type, size Type KA (3~phase motor) and KAW (1~phase motor, power reduction 30 ... 50% dep. on size), size 2 and 4

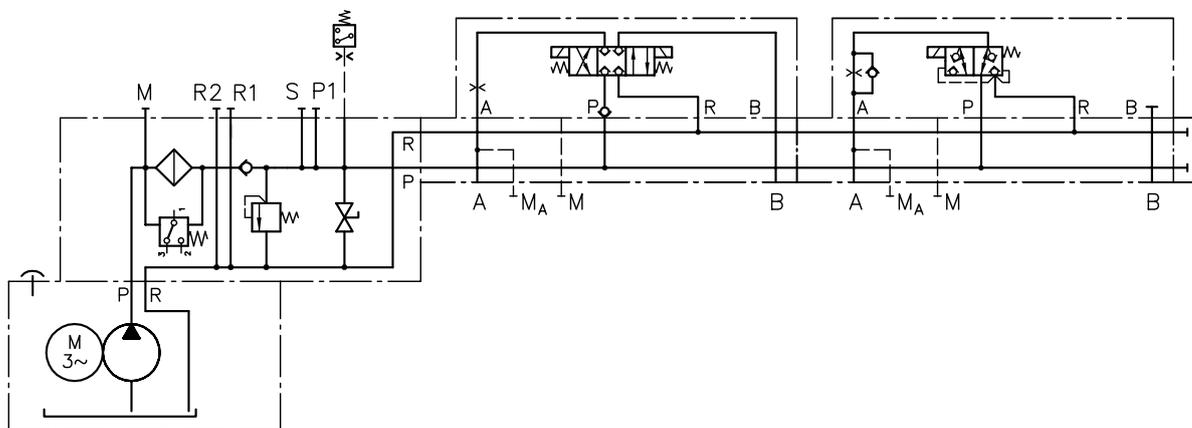
Function



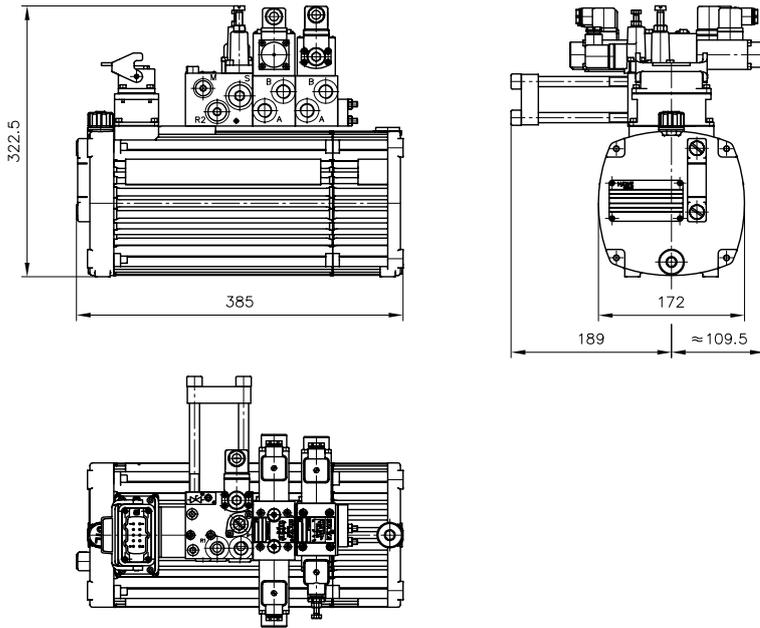
Circuit example:

KA 231 LKP/H 0.59 - AX 34 D101VE1B/400 - BA 2

- NBVP 16 G/R/AB 2.0 - M/O
- NBVP 16 Y/ABR 1.5/4 - M/O
- 1 - G 24



General parameters and dimensions

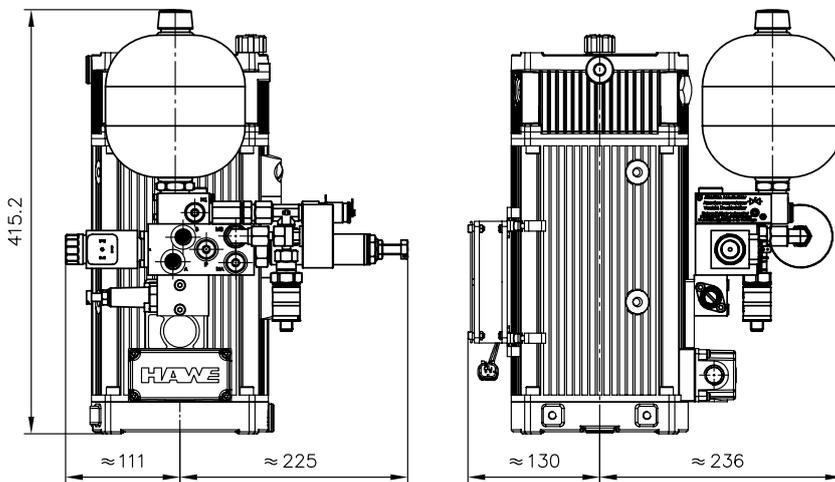
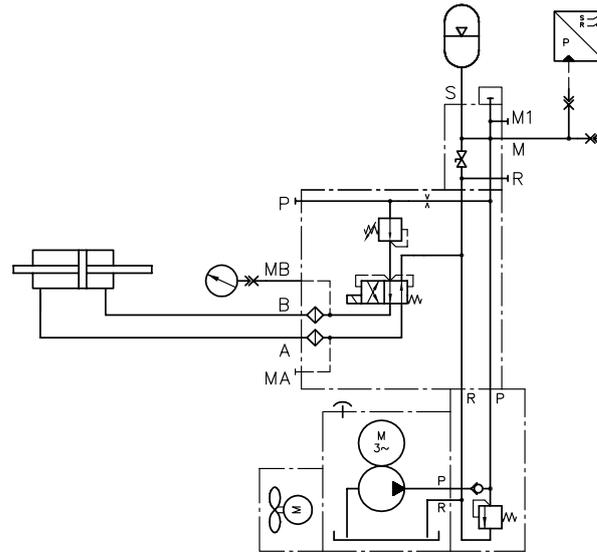


	3-cylinder radial piston pump			6-cylinder radial piston pump			Gear pump			P_N [kW]
	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	
KA 21	700 - 45	0,63 - 10,02	0,76 - 12,05	360 - 55	1,26 - 7,84	1,52 - 9,42	170 - 60	2,23 - 6,7	2,68 - 8,04	0,55
KA 22	700 - 140	0,63 - 0,02	0,76 - 12,05	700 - 180	1,26 - 7,84	1,52 - 9,42	170 - 55	2,23 - 22,04	2,68 - 26,47	1,1
KA 23	700 - 60	0,31 - 4,89	0,37 - 5,93	485 - 30	0,62 - 9,79	0,75 - 11,85	170 - 50	1,09 - 4,90	1,32 - 5,94	0,37
KA 24	700 - 160	0,31 - 4,89	0,37 - 5,93	700 - 80	0,62 - 9,79	0,75 - 11,85	170 - 65	1,09 - 10,74	1,32 - 13,04	0,75
KA 26	700 - 160	0,63 - 10,02	0,76 - 12,05	700 - 205	1,26 - 7,84	1,52 - 9,42	170 - 65	2,23 - 22,04	2,68 - 26,47	1,4
KA 28	700 - 185	0,31 - 4,89	0,37 - 5,93	700 - 90	0,62 - 9,79	0,75 - 11,85	170 - 75	1,09 - 10,74	1,32 - 13,04	1,2

	3-cylinder radial piston pump			6-cylinder radial piston pump			Gear pump			P_N [kW]
	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	p_{max} [bar]	Q_{max} [lpm] 50 Hz	Q_{max} [lpm] 60 Hz	
KA 42	700 - 220	0,84 - 11,8	2,0 - 14,4	700 - 110	3,3 - 23,8	4,0 - 28,9	200 - 130	1,6 - 18,0	2,0 - 22,0	- 2,6 - 3,9
KA 44	700 - 220	1,6 - 5,98	1,01 - 7,25	700 - 110	1,68 - 11,97	2,04 - 14,53	200 - 130	0,84 - 9,1	1,01 - 11,1	- 1,5 - 2,2 - 3,0

Circuit example:

KA 281 S16K/H3.61-FSHS-24VDC
 -A 14/230
 -BVH 11 W/CZ52/117GM/B3.5H
 -82 - AC1002/130/3A
 -XM 24
 3x400V 50Hz



Associated technical data sheets:

- Compact hydraulic power packs type KA: [D 8010](#), [D 8010-4](#)

Similar products:

- Type HC, HCG: [Page 42](#)

Suitable connection blocks:

- Type A, B and C: [Page 62](#)

Directly mountable valve banks:

- Type VB: [Page 114](#)
- Type BWH, BWN: [Page 120](#)
- Type SWR, SWS: [Page 76](#)
- Type BA: [Page 144](#)
- Type BVH: [Page 124](#)

Compact hydraulic power packs

1.2 Compact hydraulic power pack type MPN

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 MPN and MPNW includes an electric drive which runs in oil. The stator is securely attached to the housing (tank). The compact hydraulic power pack is suitable for hydraulic systems with the operating modes S2 or S3. The heat is dissipated via surface convection so that no external cooler is usually necessary.

The type MPN contains a 3-phase motor, the type MPNW contains a single-phase-motor. Different tank sizes enable different usable oil quantities. Either single-circuit systems or dual-circuit systems can be selected. A radial piston pump, an external gear pump or internal gear pump can be used as a hydraulic pump.

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

Features and benefits:

- Intermittent or load/no load operation (S2-/S3-/S6-service)
- Long lifetime and excellent reliability achieved by using radial piston pumps
- Low oil fill volumes make it environmentally sound thanks to small cost of disposal and low costs for hydraulic fluid
- Two-stage valves and switch units for press control systems can be directly flange mounted
- Co-ordinated range of valves and accessories from modular system
- Dual-circuit pumps available

Intended applications:

- Brake and rotor adjustment modules on wind turbines
- Counterbalance as well as machine tools
- Presses and other shaping machines
- Handling and clamping systems on machine tools and fixtures
- Lubrication systems



Nomenclature:	Radial piston and/or gear pump with integrated motor single or dual-circuit pump
Design:	Oil immersed hydraulic power pack for intermittent or load/no load operation (S2-/S3-/S6-service)
p_{max}:	Radial piston pump 700 bar (high pressure), gear pump 220 bar (low pressure)
Q_{max}:	12.4 lpm (high pressure) (V _g = 9.17 cm ³ /rev) 83 lpm (low pressure) (V _g = 61 cm ³ /rev)
V_{t max}:	100 l

Design and order coding example

MPN 44 - H 1,5 - B10.20 D - ... - 3 ~ 230V 50 Hz

Motor voltage 3 ~ 230/400V Δγ 50 Hz, 3 ~ 500V γ 50 Hz,
1 ~ 230V 50 Hz, 1 ~ 110V 60 Hz (single-phase-motor)

Valve mounting

- Additional options**
- Level gauge
 - Level switch
 - Temperature switch
 - Various means of electrical connection

- Design**
- For installation in self-made oil tanks: as single pump or cover plate version
 - With tank, usable volume V_{usable} 10 l to 75 l

Pump version

Single-circuit pump

- Radial piston pump H or gear pump Z
- Internal gear pump IZ

Dual-circuit pump

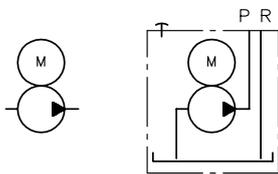
- Combinations:
 - Radial piston pump - radial piston pump (HH)
 - Radial piston pump - gear pump (HZ)

Basic type, size Type MPN (3-phase motor) and MPNW (single-phase motor)
Depending on the size, single-phase motor has 30 to 50% less power

Function

Single stage pump

(radial piston pump, gear pump)

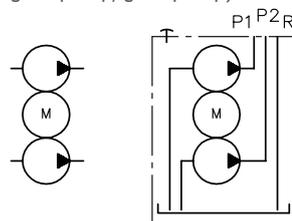


Installation pump

Hydraulic power pack (incl. tank)

Dual stage pump

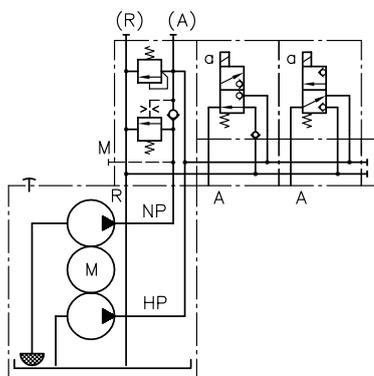
(radial piston/gear pump, gear pump/gear pump)



Installation pump

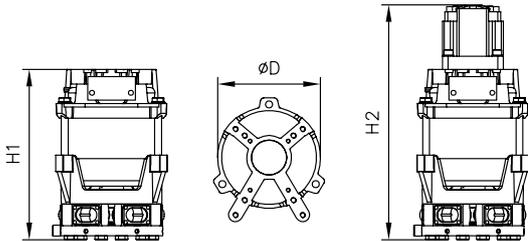
Hydraulic power pack (incl. tank)

Circuit example:

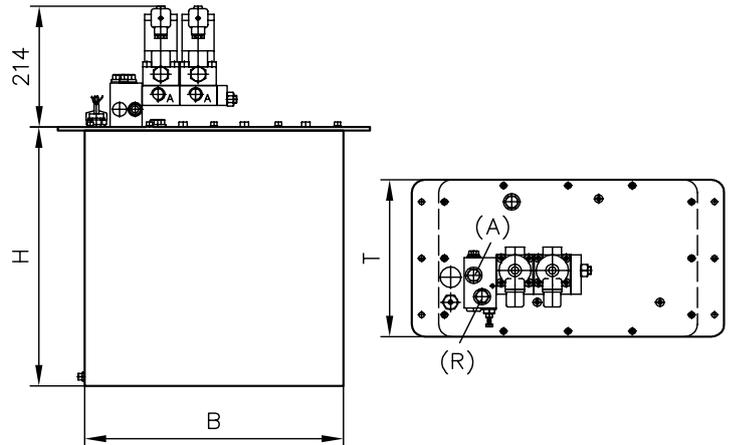


General parameters and dimensions

Single-circuit pump, dual-circuit pump (without tank)



Compact hydraulic power pack (tank with mounted valves)



	Radial piston pump (3 cyl.)			Gear pump			P_N [kW] ¹⁾	m [kg] ²⁾	Dimensions [mm]		
	Max. pressure	Delivery flow		Max. pressure	Delivery flow				H1 ²⁾	H2 _{max}	∅D
	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz					
MPN 42	700 - 250	2,39 - 7,33	2,87 - 8,8	200 - 60	8,46 - 30,02	10,2 - 36,02	2,1	12,9	251/258	431	165
MPN 44	700 - 250	1,53 - 5,37	1,84 - 6,44	200 - 55	5,37 - 25,99	6,4 - 31,19	2,1				
MPN 46	700 - 250	3,16 - 11,12	3,8 - 13,34	200 - 40	12,41 - 71,73	14,89 - 86,08	3,0	18,5	274/281	454	
MPN 48	700 - 330	2,36 - 4,06	2,83 - 4,87	220 - 60	4,16 - 34,91	4,99 - 41,89	3,0				
MPN 404	700 - 340	3,1 - 3,49	3,7 - 4,19	220 - 45	2,7 - 68,16	2,25 - 81,79	4,2	26,4	298/313	486	

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

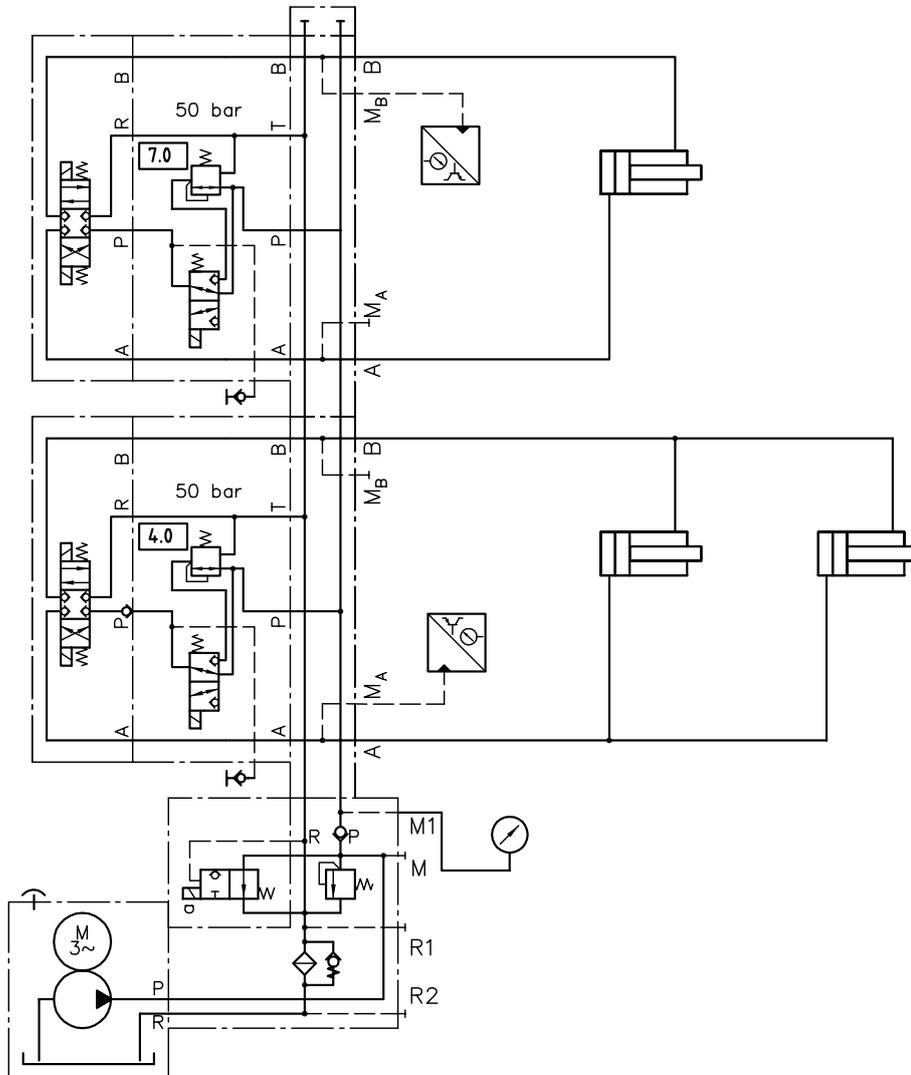
2) Values apply to radial piston pump/gear pump versions

Version with tank:

Size	Tank size	H [mm]	W [mm]	D [mm]
MPN 4.	B 25	458	402	250
	B 55	470	560	350
	B 110	495	560	350
	B 25 L	283	623	250
	B 55 L	305	560	350

Circuit example:

MPN 44-Z 8.8-B 10 KT -AS 1 F 3/160
 -BA 2
 -NBVP 16 G/R-GM/NZP 16 LZ 5/50-G 8 MA/GM/3-X 84 V-DG 5E-250-1/4
 -NBVP 16 G-GM/NZP 16 LZ 5/50-G 8 MA/GM/3-X 84 V-DG 62
 -1-G 24
 -X 84 V-9/250
 -3 x 400/230 V 50 Hz


Associated technical data sheets:

- [Compact hydraulic power pack type MPN and MPNW: D 7207](#)

Connection blocks:

- Type A, B and C: [Page 62](#)

Flange-mountable valve banks:

- Type VB: [Page 114](#)
- Type BWH, BWN: [Page 120](#)
- Type BA: [Page 144](#)
- Type BVH: [Page 124](#)

Compact hydraulic power packs

1.2 Compact hydraulic power pack type HK, HKF and HKL

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 HK, HKF, HKL and HKLW includes an electric drive which runs in oil. The stator is securely attached to the housing (tank). The compact hydraulic power pack is suitable for hydraulic systems with the operating modes S2, S3 or S6.

A fan, which effectively dissipates the heat from the hydraulic system, is mounted on the housing. In the case of type HKF, the fan is powered by a separate motor independently of the pump motor. In the case of type HK, the fan is securely attached to the motor shaft. An external cooler is not generally required. The type HK, HKF and HKL contains a 3-phase motor, the type HKLW contains a single-phase-motor. The compact hydraulic power pack type HK and HKF has a vertical housing, while type HKL and HKLW has a horizontal housing. Single-circuit, dual-circuit or triple-circuit systems can be selected. A radial piston pump, an external gear pump or internal gear pump can be used as a hydraulic pump.

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

Features and benefits:

- Suitable for continuous operation with intermittent load S6 and continuous operation S1
- Additional external fan for optimum use of power
- Wide range of applications, with three sizes available
- Long lifetime and excellent reliability thanks to use of radial piston pumps
- Environmentally friendly thanks to low oil filling volume; low cost of disposal and low hydraulic fluid costs
- Tailored range of valves and accessories from modular system
- One-circuit to three-circuit pumps available

Intended applications:

- Clamping systems on machine tools and turning centres
- Handling and clamping systems on machine tools and fixtures
- Welding machines, robots
- Endurance test bench construction
- Hydraulic torque wrenches



Nomenclature:	Radial piston pump and/or gear pump with integrated motor (version for 3-phase mains)
Design:	Oil immersed compact hydraulic power pack for permanent and intermittent operation (S1/S6 service)
p_{max}:	Radial piston pump 700 bar (high pressure) Gear pump 180 bar (low pressure)
Q_{max}:	Radial piston pump (high pressure) 13.0 lpm ($V_g = 9.17 \text{ cm}^3/\text{rev}$) Gear pump (low pressure) 24 lpm ($V_g = 17.0 \text{ cm}^3/\text{rev}$)
V_{usable max}:	11.1 l

Design and order coding example

HK 34 8 LST - H 3,6 3 x 400V 50Hz

Motor voltage 3 ~ 230/400V Δγ 50 Hz, 3 ~ 265/460V Δγ 60 Hz
1 ~ 230V 50 Hz, 1 ~ 115V 60 Hz (1~phase motor)

Pump version **Single circuit pump**

- Radial piston pump H, gear pump Z, internal gear pump IZ

Dual circuit pump with joint connection pedestal for pressure ports P1 and P3

- Combinations:
 - Radial piston pump - radial piston pump (HH)
 - Radial piston pump - gear pump (HZ)

Dual circuit pump with separate connection pedestals

- Radial piston pump H or gear pump Z

Additional functions

- Temperature and level switch, single or double version
- Additional leakage port (Type HK 4.L)

Tank size Type HK: Usable volume V_{usable} 0.85 l to 15.4 l, Type HKL: Usable volume V_{usable} 1.7 l to 9.1 l

- Various filler neck designs

Basic type, size

Type HK, size 2 to 4, type HKF (with auxiliary blower for increased cooling), size 4
Type HKL (3~phase motor) and HKLW (1~phase motor), size 3

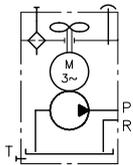
Additional versions:

- With molded motor
- With frequency-controlled drive

Function

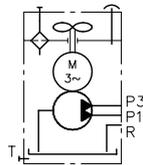
Single stage pump

(radial piston pump, or gear pump)

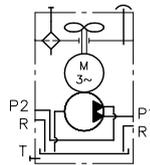


Dual stage pump

(radial piston/radial piston pump, or gear pump/gear pump, or radial piston pump/gear pump)



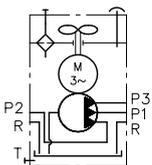
Joint pump pedestal



Separate pump pedestals

Triple-circuit pump

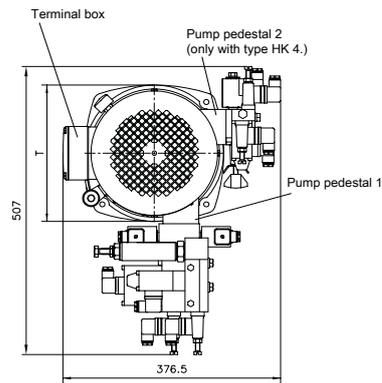
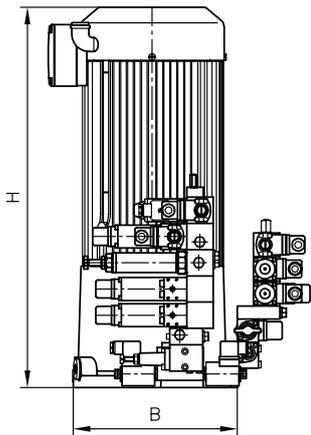
(only radial piston pump)



Separate pump pedestals

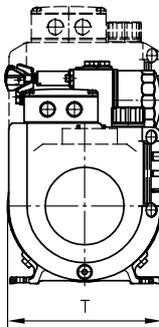
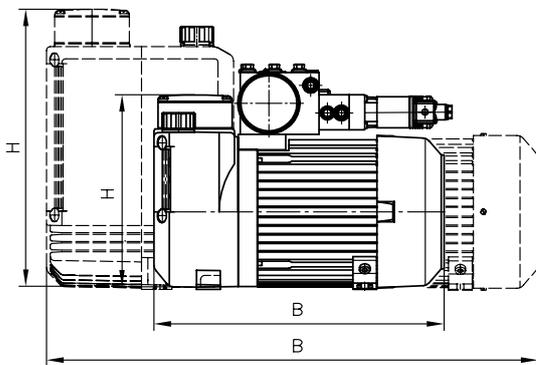
General parameters and dimensions

HK..



- 1 Terminal box
- 2 Pump pedestal 2 (only for type HK 4.)
- 3 Pump pedestal 1

HKL..



	Radial piston pump			Gear pump			Dimensions [mm]				
	Max. pressure	Delivery flow		Max. pressure	Delivery flow						
	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	P_N [kW] ¹⁾	H_{max}	B	T	m [kg]
HK 24	700 - 220	0.46 - 1.77	0.55 - 2.12	-	-	-	0.55	340	196	196	13
HK 33	560 - 100	1.25 - 6.5	1.5 - 7.8	170 - 100	2.7 - 6.9	3.24 - 8.28	0.8	405	212	212	20.5
HK 34	700 - 170	1.25 - 6.5	1.5 - 7.8	170 - 160	2.7 - 6.9	3.24 - 8.28	1.1	405	212	212	20.5
HK(F) 43	610 - 90	2.08 - 13.1	3.36 - 15.72	170 - 80	4.5 - 16	3.29 - 19.2	1.5	460	240	240	29
HK(F) 44	700 - 130	2.08 - 13.1	2.5 - 15.72	170 - 110	4.5 - 24	3.29 - 28.8	2.2	460	240	240	29
HK(F) 48							3	833	240	240	40
HKL(W) 32	700 - 220	1.65 - 8.7	1.98 - 10.44	170 - 130	2.7 - 11.3	3.24 - 13.56	1.8	358	617	196	19.2
HKL(W) 34											
HKL 38	700 - 220	1.65 - 8.7	1.98 - 10.44	170 - 130	2.7 - 11.3	3.24 - 13.56	2.2	358	617	196	22.2

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

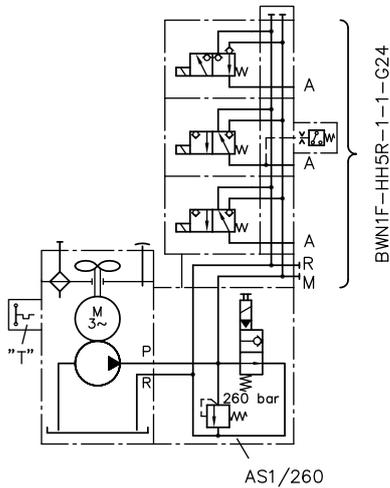
Circuit examples:
HKF 489 D-DT/1P1M-H2.6

-AS1/260

-BWN1F-HH5R-1-G24

-3x400/230V50Hz

Compact hydraulic power pack HKF 489 with level switch with two switch points (coding D-D); temperature switch (coding T) with Harting plug coding P1 and oil filler (coding M)

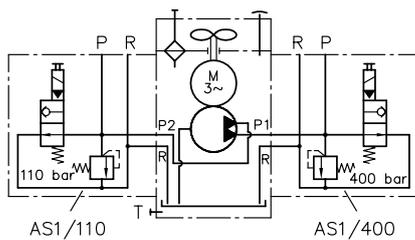

HK449/1P1-H 2.5-Z6.9

-AS1/400-G24

-AS1/110-G24

-3x400/230V50Hz

Compact hydraulic power pack HK 44 with radial piston pump H 2.5 and gear pump Z 6.9 on separate pump pedestals, two connection blocks (type AS1/..) with pressure limiting valve (400 bar and 110 bar) and idle circulation valve (mounting of valve banks possible)


Associated technical data sheets:

- [Compact hydraulic power pack type HK 4: D 7600-4](#)
- [Compact hydraulic power pack type HK 3: D 7600-3](#)
- [Compact hydraulic power pack type HK 2: D 7600-2](#)
- [Compact hydraulic power pack type HKL and HKLW: D 7600-3L](#)

Connection blocks:

- Type A, B and C: [Page 62](#)

Directly mountable valve banks:

- Type VB: [Page 114](#)
- Type BWH, BWN: [Page 120](#)
- Type BA: [Page 144](#)
- Type BVH: [Page 124](#)