Compact hydraulic power packs type HK, HKF, HKL

Because of the unique integrated fan configuration, the "ready for connection" hydraulic power packs are ideal for continuous operation. Another version for temperature sensitive applications features an auxiliary blower, thereby gaining improved cooling (approx. 25%). This type is available for single circuit operation (radial piston or gear pump), dual circuit operation (radial piston and/or gear pump) or triple circuit operation (radial piston pump only). Both single and dual circuit pumps are also available as a horizontal version (type HKL). Complete hydraulic control systems can be created by directly mounting various combinations of connection blocks and valve banks to the hydraulic power pack. These hydraulic power packs are used for machine tools (lathes and milling machines), jigs or general machine applications, making a commonly used external radiator superfluous.

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}:	**700 bar (radial piston pump) 180 bar (gear pump)**
Q_{max}:	**Radial piston pump (high pressure) approx. 13 lpm (V_g = 9.15 cm³/rev) Gear pump (low pressure) 24 lpm (V_g = 17.0 cm³/rev)**
$V_{usable\ max}$:	**approx. 11.1 l**

Features and benefits:

- Suited for permanent and intermittent operation (S1/S6 service)
- Additional separately driven fan for maximum utilisation of power
- 3 sizes enable wide field of application
- Radial piston pumps ensure long service life and high reliability
- Small filling volume minimize costs for fluid and fluid disposal
- Matching valve and accessories from a modular system
- Available as single to triple circuit pump

Intended applications:

- Supply of clamping pressure for lathe chucks, tail stocks, steady rests at machine tools and machining centers
- Welding machines, roboter
- Endurance test benches
- Endurance test bench construction
- Torque wrench

Design and order coding example

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

Motor voltage
3 ~ 230/400V ΔY 50 Hz, 3 ~ 265/460V ΔY 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 fluid level switch
- Additional leakage port (Type HK 4.L)

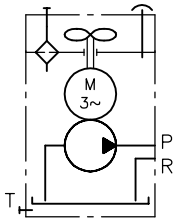
Tank size
Type HK: Usable volume V_{usable} 0.85 l to15.4 l, Type HKL: Usable volume V_{usable} 1.7 l to 9.1 l
- Various filler neck designs

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

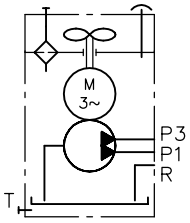
Additional versions:
- With molded motor

Function

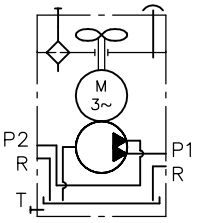
Single stage pump
(radial piston pump, or gear pump)



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

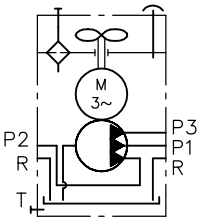


Joint pump pedestal



Separate pump pedestals

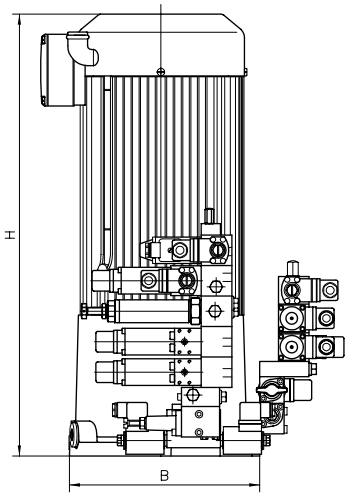
Triple circuit pump
(only radial piston pump)

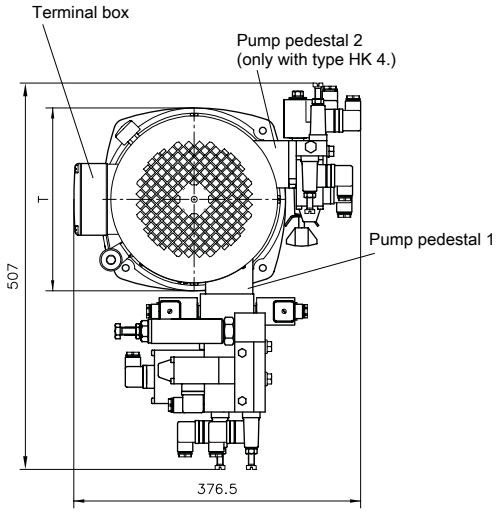


Separate pump pedestals

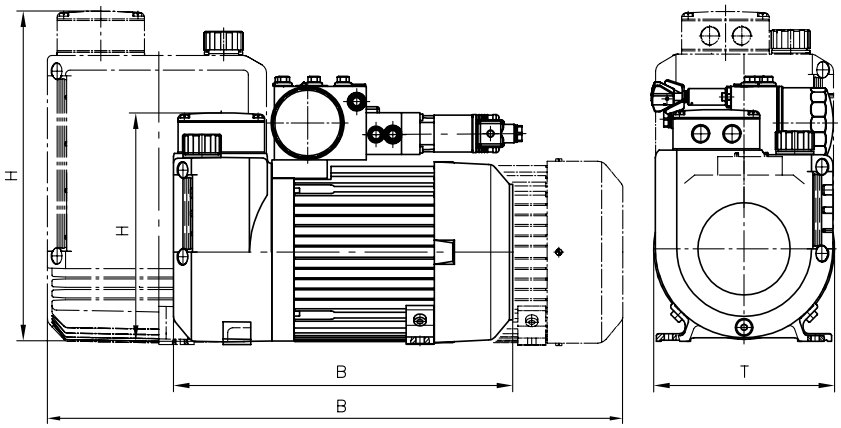
General parameters and dimensions

HK..





HKL..



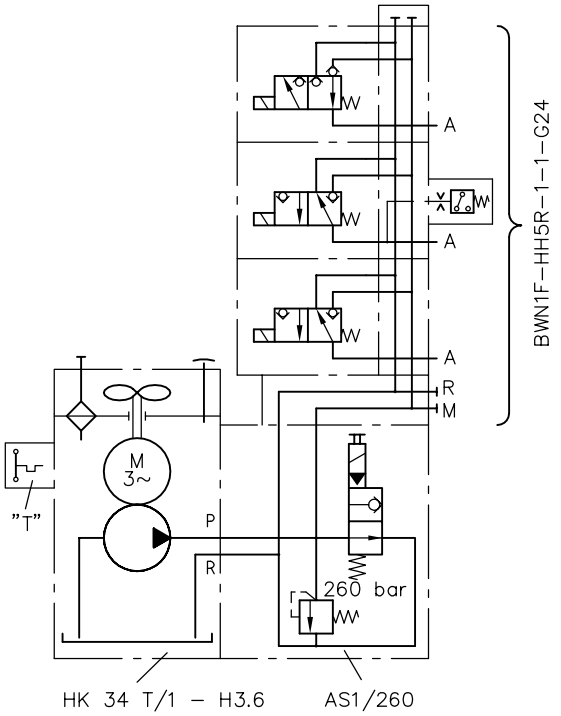
	Radial piston pump			Gear pump				Dimensions [mm]			
	Max. pressure	Delivery flow		Max. pressure	Delivery flow						
	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	p_{max} [bar]	Q_{pu} [lpm] 50 Hz	Q_{pu} [lpm] 60 Hz	P_N [kW][1)]	H_{max}	B	T	m [kg]
HK 24	700 - 220	0.46 - 1.77	0.55 - 2.12	-	-	-	0.55	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 input is depends on the respective operation pressure and can be up to 1.5 x P_N

Example circuits:

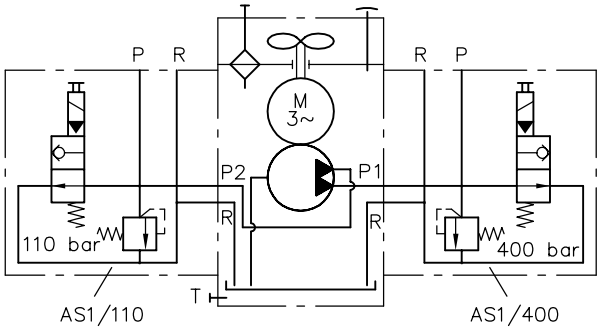
HK34T/1-H 3.6-AS1/260-BWN1F-H H5 R-1-1-G24

Compact hydraulic power pack type HK 34 with temperature switch (coding T), radial piston pump H 3.6, connection block (type AS 1/260) with pressure-limiting valve (260 bar) and idle circulation valve as well as directly mounted valve bank type BWN 1



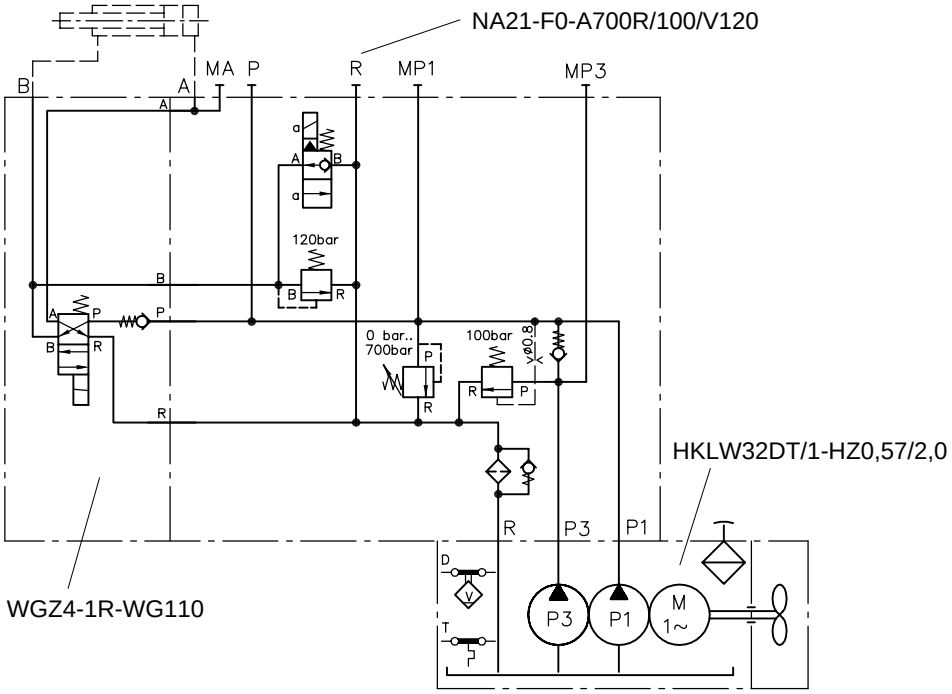
HK44 /1-H 2.5-Z 6.9-AS1/400-AS1/110-G24

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



Example circuit:

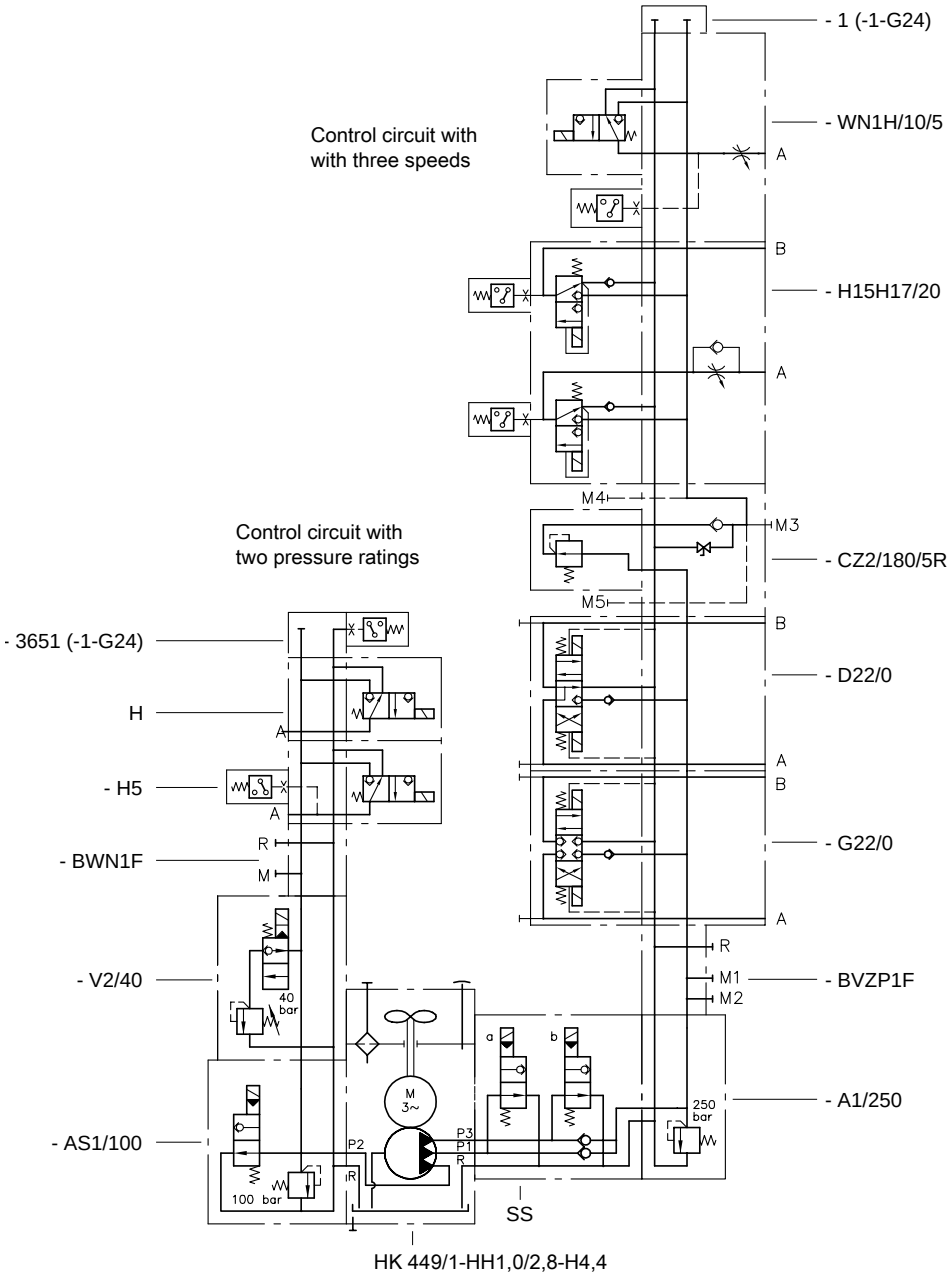
HKLW32DT/1-HZ0.57/2.0 **- NA21F0-A700R/100/V120**
- WGZ4-1R-WG110
1 ~ 110V 60 Hz



Example circuit:

HK449/1-HH1.0/2.8-H4.4 -SS
- **A1/250**
- **BVZP1F -G22/0 -D22/0 -CZ2/180/5R**
- **H15H17/20 -WN1H/10/5 -1-1**
- **AS1/100 -V2/40**
- **BWN1F-H5H-3651-1-G24**

3 ~ 400/230V ⅄Δ 50 Hz



Associated technical data sheets:

- Compact hydraulic power packs type HK 4, HKF 4: D 7600-4
- Type HK 3: D 7600-3
- Type HK 2: D 7600-2
- Type HKL 3, HKLW 3: D 7600-3L

Connection blocks:

- Type A, B and C: D 6905 A/1, D 6905 B, D 6905 C

Directly mountable valve banks:

- Type VB: D 7302
- Type BWH, BWN: D 7470 B/1, Type BVZP 1: D 7785 B
- Type SWR, SWS: D 7450, D 7451, D 7951
- Type BA: D 7788
- Type BVH: D 7788 BV