

# Hydraulic Power Units

Series KA and BA



PRECISION IN MOTION

# Hydraulic Power Units

Hydraulic power units supply the hydraulic system with the required energy.

A defined volume flow  $Q$  with a certain pressure  $P$  is generated, which is fed into the hydraulic system and is here used by the actuators for the corresponding task.

Hydraulic valves and electrical assemblies are integrated to realize hydraulic controls or control processes.

Important factors in the configuration include:

- Desired functions
- Required flow rate
- Required hydraulic pressure
- Drive power
- Necessary amount of hydraulic fluid
- External conditions at the installation site
- Spatial conditions
- Mounting conditions
- Safety requirements
- Sound protection requirements

At Hydropneu, we have used our years of experience to develop power unit series that can cover a wide range of applications. Our standardized compact unit (KA) series, available in five sizes, already covers many common applications and can be adapted quickly and cost-effectively to your requirements due to its modular design and numerous additional options (user-specific power units/BA).

## Technical data of the series KA

Designation	Construction Size 1	Construction Size 2	Construction Size 3	Construction Size 4	Construction Size 5
Max. flow rate $Q_{max}$ in l/min	2	4,5	11,5	15,5	21
Operating pressure $p_{max}$ in bar	250				
Engine power $p_{max}$ in kw	1,1	2,2	5,5	7,5	11
Oil reservoir size in l	13	30	44	70	100
Filtering	Return flow filter $\beta_{10} \geq 75$ ( $\mu m$ )				
Heat flow in kw emitted by the oil tank (free air circulation on all sides, temperature difference 40K)	0,17	0,32	0,46	0,6	0,8
Optional cooler max. cooling capacity in kw (together with heat radiation approx. 50% of the drive power)	0,5	1	2,5	3,5	5
Optional heating element max. heating power in kw (heating only possible in connection with steel tank)	not possible	not possible	Steel tank 40l 1	Steel tank 60l 1,25	1,45

# Features and Equipment

## Basic features

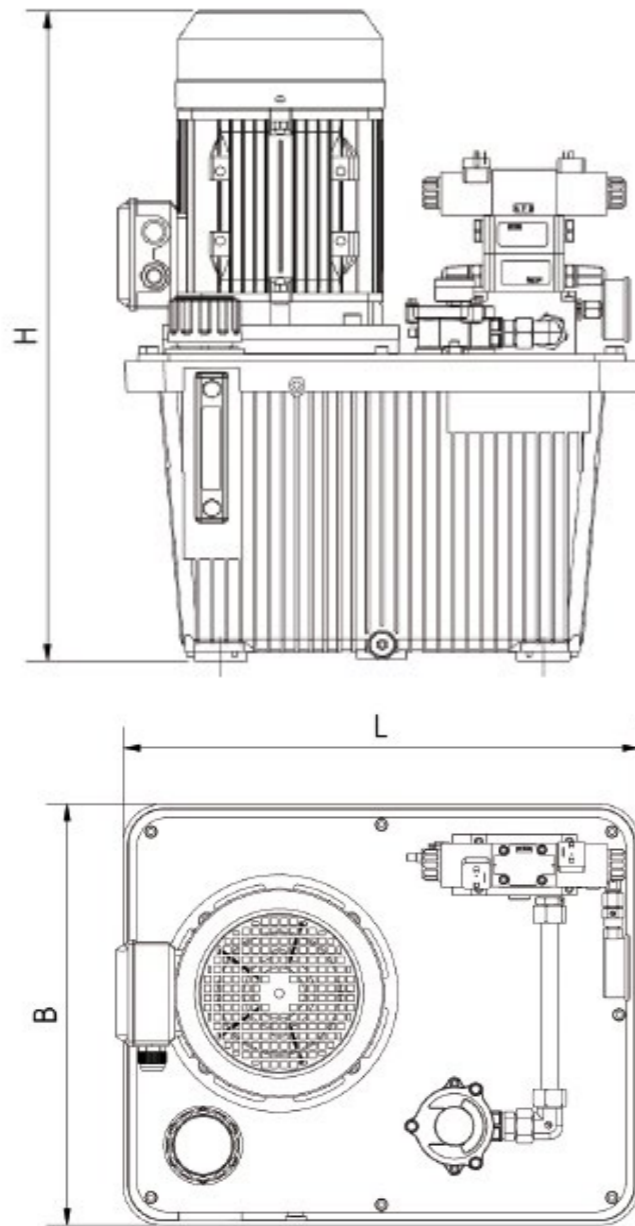
- Compact design for easy integration into your system
- For valve assembly of construction size NG6 (other sizes available on request)
- Oil tank made of aluminum with high radiating capacity (steel possible on request)
- Medium: hydraulic mineral oil HLP according to DIN 51524 part 2 (others possible on request)
- Ambient temperature range  $-20^{\circ}C$  to  $+40^{\circ}C$
- Degree of protection IP55 (others possible on request)
- Adjustable pressure relief valve as security element
- Pressure gauge for displaying the set pressure
- Sight glass for checking the fill level
- Return flow filter with optical contamination indicator
- Piping and electrical wiring up to the power unit limit

In addition to these basic equipment features, units of the Hydropneu compact series can be individually adapted to your requirements with additional options.

## Selectable equipment

- Number of valve positions and thus adaptation to the number of users to be operated
- Flexible valve assembly and thus realization of the desired function
  - Speed reduction of individual axes
  - Pressure reduction of individual axes
  - Load holding function
- Level monitoring via electric signal transmitters
- Temperature monitoring via electric signal transmitters
- Active cooling when used in a warm environment or operating in a different mode
  - Clutch cooling
  - Oil air cooling
  - Bypass flow cooling unit
- Tank heaters when used in cold environments (only possible in conjunction with steel tanks)
- Different interfaces to the operator possible
  - Terminal box
  - Control cabinet with controls
  - Complete control system including software
- Oil collection tray
- Pressure accumulator
- Various filter types
  - Suction filter
  - Pressure filter
  - Return flow filter
- Different sensor technology
- Also special versions possible such as "ATEX"
- Additional options available on request

# Dimensions and Weights



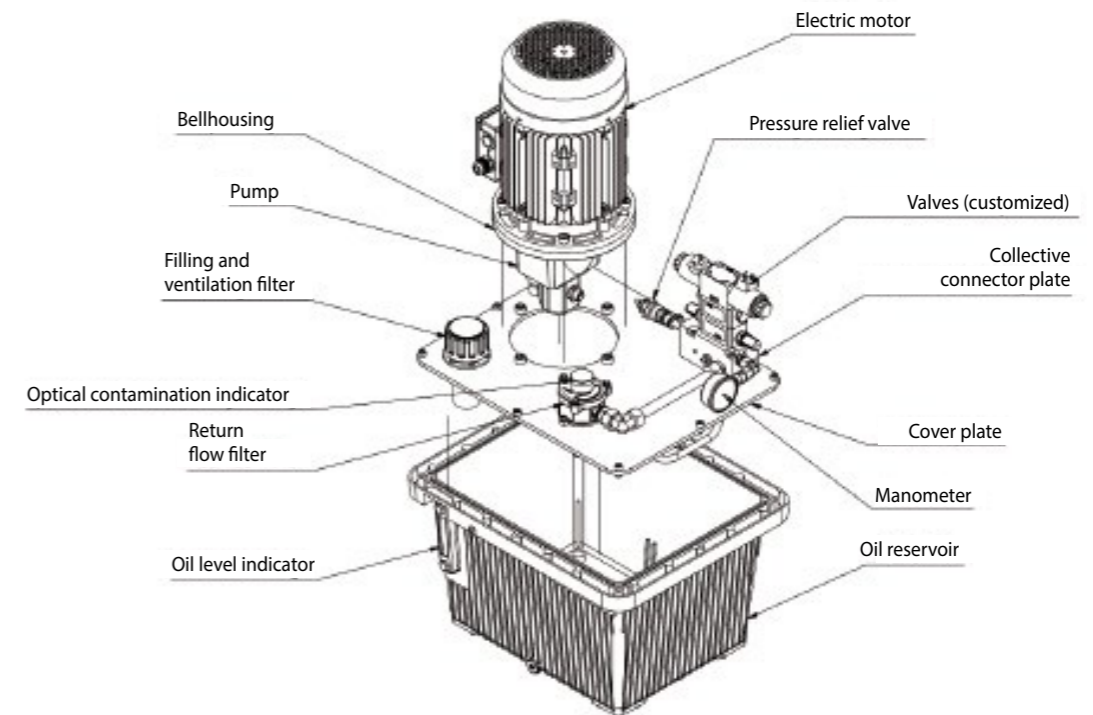
## Dimensions and weights of the series KA

Designation	Construction Size 1	Construction Size 2	Construction Size 3	Construction Size 4	Construction Size 5
Length L in mm	340	510	550	650	700
Width B in mm	270	360	450	510	540
Height H in mm	550	660	700	900	1050
Approx. weight in kg (without pressure fluid)	15	40	65	95	180

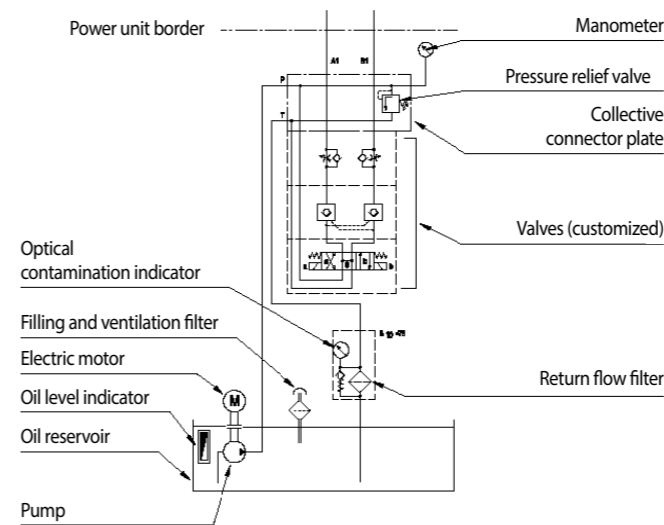


# Basic Structure

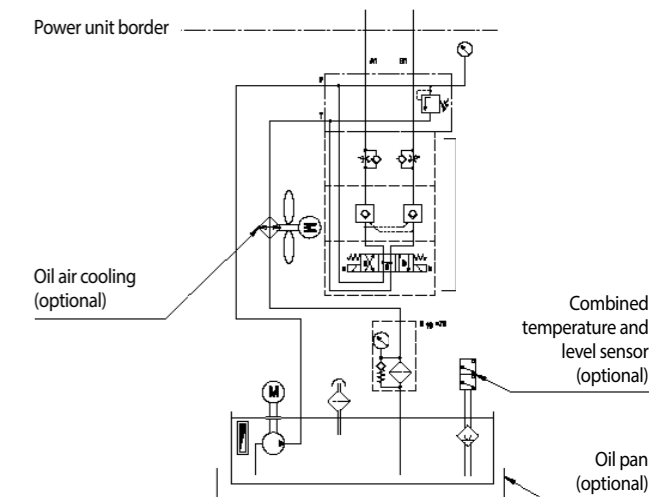
## Basic power unit without additional equipment



## Basic power unit without additional equipment



## Basic power unit with optional components



# Description

We base our hydraulic power units on the nominal operating modes of the international standard IEC 60034-1 for electrically driven machines, which complies with European standard EN 60034-1 and various national standards. The nominal operating mode is the basic description of the stress. It is defined to clearly identify both suitability for difficult conditions and a limitation to very light tasks. It is economically and energetically not reasonable to design all machines for every conceivable difficult task.

As standard S3, the power units of the Hydropneu compact series are designed for the operating mode S3 in the periodic intermittent operation with a proportional activation time of 20% (based on 10 min).

Our extensive documentation of the supplied systems rounds off the complete Hydropneu package. It includes:

- General description
- Construction and drawing in 3D format
- Hydraulic and electric circuit diagram
- Detailed commissioning and operating instructions
- Maintenance schedule
- List of useful inserts and wear parts
- Design drawings

If your requirements exceed the capabilities of our KA series, we will be pleased to help you find a solution tailored to your specific needs. As part of our user-specific BA series, we are happy to design and build an individual hydraulic unit according to your wishes and specifications.



# Model code for Hydraulic Power Units

Type designation/order number	TYP	BDR	FST	MOT	BG	AM	KP	RP	AV	LN	OPT
Example	KA	250	0115	00550	044	1	1	0	02	2132	LH . GR . OW
Example	BA	150	0130	00070	210	1	2	2	04	xxxx	DR . TS . DS . KK

Type	Code	Description
KA		Compact unit
BA		Customized power unit
If BDR to RP correspond to the predefined sizes KA, otherwise BA		

BDR	Code	Description
250		Standard
xxx		Customized

FST	Code	Description
0020		2 l/min standard size 1
0045		4,5 l/min standard size 2
0115		11,5 l/min standard size 3
0155		15,5 l/min standard size 4
0210		21 l/min standard size 5
xxx		Customized
For several pumps the summed delivery flow		

MOT	Code	Description
00110		1,1 kw standard size 1
00220		2,2 kw standard size 2
00550		5,5 kw standard size 3
00750		7,5 kw standard size 4
01100		11 kw standard size 5
xxx		Customized
For several engines the summed up power		

BG	Code	Description
13		Standard size 1
30		Standard size 2
44		Standard size 3
70		Standard size 4
100		Standard size 5
xxx		Customized

AM	Code	Description
1		Standard
x		Customized

KP	Code	Description
1		Standard
x		Customized

RP	Code	Description
0		Standard
x		Customized

AV	Code	Description
xx		Always customized
For multiple collective connector plates, the total number		

LN	Code	Description
xxxx		Number is assigned during construction

OPT	Code	Description
C5		Other valve size than CETOP3, here CETOP5 (NG10)
DF		Pressure filter
DR		Pressure reduction
DS		Pressure sensors
DU		Pressure-less circulation
E1		Terminal box
E2		Control cabinet (with controls)
E3		Complete control system
EX		Explosion-proof version
GR		Speed reduction
HB		All valves manually operated
KK		Clutch cooling
LH		Load holding function
LK		Oil air cooling
NK		Bypass flow cooling unit
NS		Level switch
NT		Combined temperature / level switch
OM		No manometer to SAP
OW		Oil collection tray
RS		Redundant system
SF		Suction filter
SP		Pressure accumulator
ST		Oil tank made of steel
TH		Tank heater
TS		Temperature switch
WK		Water cooling
...		

## General technical data\*

- Oil tank made of aluminum
- Filling and ventilation filter
- Optical oil level indicator on the oil reservoir
- Valve size NG6 (Cetop 3)

- Manometer on the collective connector plate
- Pressure relief valve on the collective connector plate
- Return flow filter with optical contamination indicator

\*Unless otherwise selected in "Additional Features and Options"



## PRECISION IN MOTION

For over 60 years, we have been developing and producing high quality hydraulic cylinders, hydraulic power units, and hydraulic control systems.

**HYDROPNEU** combines tradition with know-how.

Norm cylinders

Customized special cylinders

Standard cylinder

Hydraulic cylinders for  
pressure casting and injection molding

Hydraulic power units

Complete hydraulic system

Hydraulic configurations

Hydraulic service



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