

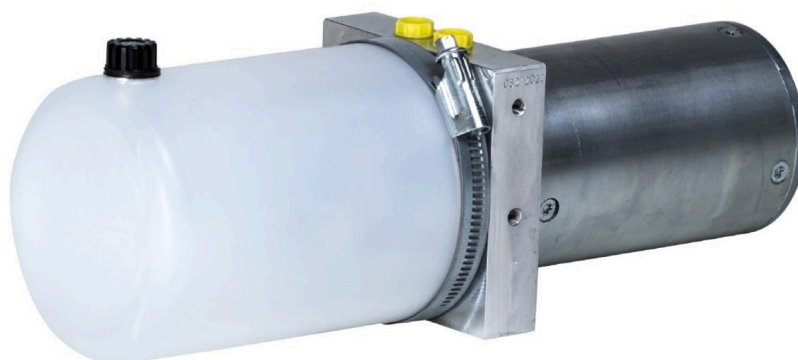
# Mini hydraulic power pack type A

## Product documentation



operating pressure  $p_{\max}$ :  
effective volume (tank):

210 bar  
0.2 to 0.8 L



## Product characteristics

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

The Type-A compact hydraulic power pack is characterised by a modular design. An external gear pump is flange-mounted onto the equipment rack in the hydraulic power pack. The oil tank is a round, plastic tank with an M 14x1.5 filling screw.

Version A 100 comes with a choice of two equipment racks (Q and H), which can be used to mount a range of motors, pumps and tanks. The Type-TLC and SL valve banks in the modular system can be used to build ready-for-connection complete solutions.

### Features and benefits

- DC and AC power supply
- suitable for short period operation
- can be installed flat or upright
- quiet running

### Intended applications

- floor-lock systems
- automotive technology
- aviation
- local hydraulic control systems

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# 1 Technical data

## General

weight without hydraulic fluid		with motor	Q	H
	A 065	-C2D	1.8 kg	-
	A 100	-F2E	4.7 kg	5.2 kg
	A 100	-A4D	4.3 kg	-
	A 100	-B2D	4.3 kg	-
	A 100	-A4B	5.4 kg	-
	A 100	-R2E	5.4 kg	6 kg
ambient temperature	A 065	-15 bis + 80 °C		
	A 100	-30 bis + 80 °C		
sound pressure level (distance 1 m, decoupled fastening)		with motor		
	A 065	-C2D	57 dB(A)	
	A 100	-F2E	57 dB(A)	
	A 100	-A4D	55 dB(A)	
	A 100	-B2D	55 dB(A)	
	A 100	-A4B	55 dB(A)	
	A 100	-R2E	60 dB(A)	
tank capacity		A 100	A 065	
	tank volume	tank size 1:	0.4 L	0.23 L
		tank size 2:	0.8 L	0.3 L
		tank size 3:	1.2 L	0.43 L
	effective volume (flat)	tank size 1:	0.2 L	
		tank size 2:	0.4 L	
tank size 3:		0.6 L		
effective volume (upright)	tank size 1:	0.3 L	0.18 L	
	tank size 2:	0.5 L	0.25 L	
	tank size 3:	0.8 L	0.38 L	

## Hydraulic parameters

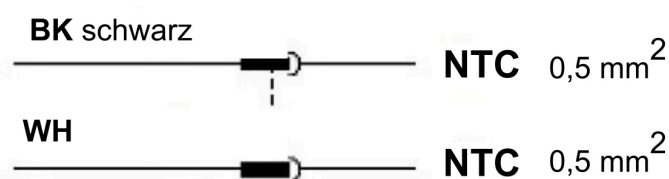
Hydraulic fluid: mineral oil according to DIN 51524, other media on request

pump design	external gear pump	
temperature hydraulic fluid	A 065	+10 to +40 °C
	A 100	-15 to +80 °C
viscosity	10 - 500 mm <sup>2</sup> /s	
maximum operating pressure	A 065	150 bar (depends on use)
	A 100	210 bar (depends on use)
permissible degree of pollution	according to ISO 4406 -20/18/15	
filter retention rate	$\beta_{25} > 75$	

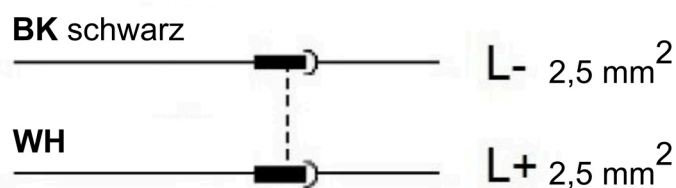
## Electrical parameters

### motor C2D: 24 V DC 250 W

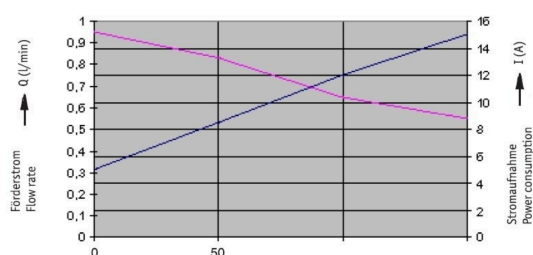
temperature



motor The rotation direction of the motor is left, looking at the shaft.

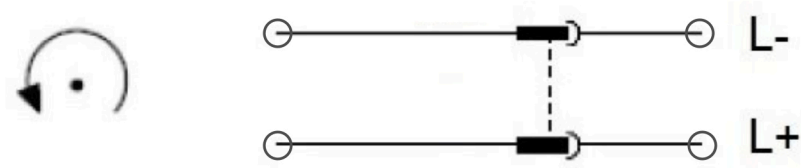


voltage	24 V (DC)
rated output	250 W
duty cycle	S3 - 20 % ED
electrical connection	2 x flex
protection class	IP50 concerning to DIN 40050



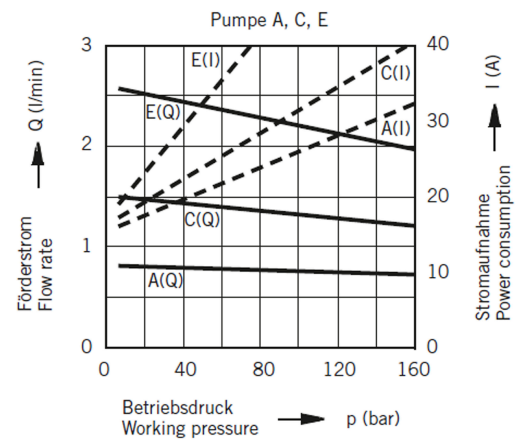
**motor F2E: 12 V DC 350 W**

The rotation direction of the motor is left, looking at the shaft.



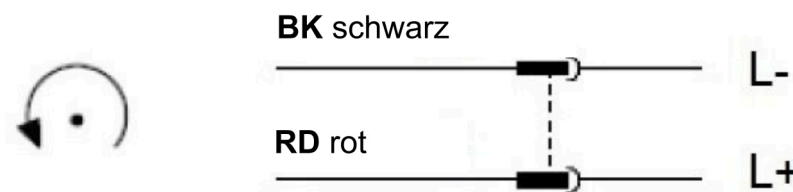
voltage	12 V (DC)
rated output	350 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	2 x M6 (eyelet)
protection class	IP54 concerning to DIN 40050

\* based on one work cycle engine



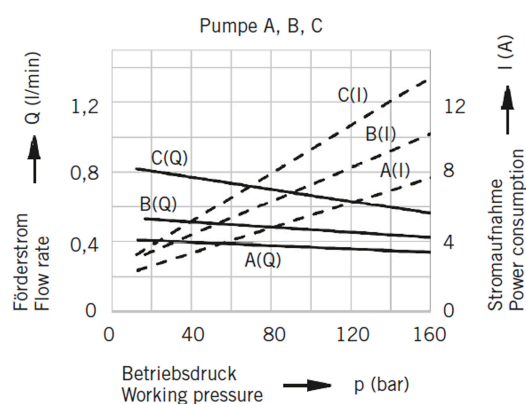
**motor A4D: 24 V DC 100 W**

The rotation of the motor is left, looking at the shaft.



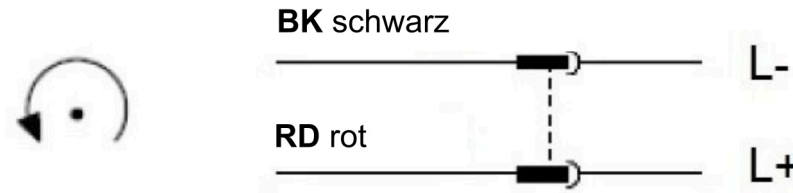
voltage	24 V (DC)
rated output	100 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	2 x eyelet AWG 16 (1100 mm) red +, black -
protection class	IP50 concerning to DIN 40050

\* based on one work cycle engine (10 min)



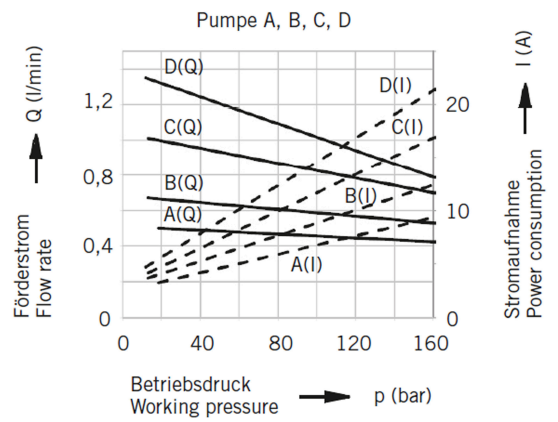
**motor B2D: 24 V DC 200 W**

Drehrichtung der Motorwelle: links (auf die Welle gesehen)



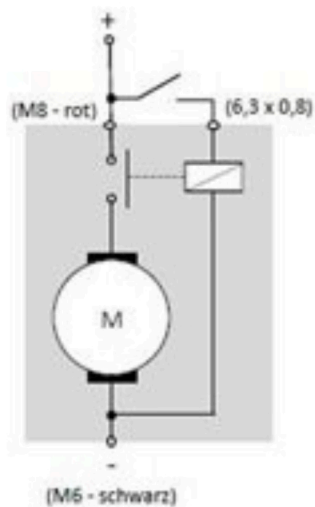
voltage	24 V (DC)
rated output	200 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	2 x eyelet AWG 16 (1000 mm) red +, black -
protection class	IP50 concerning to DIN 40050

\* based on one work cycle engine (10 min)



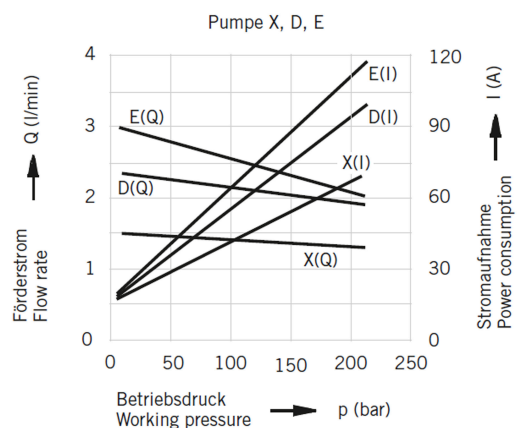


**motor R2E: 12 V DC, 700 W**

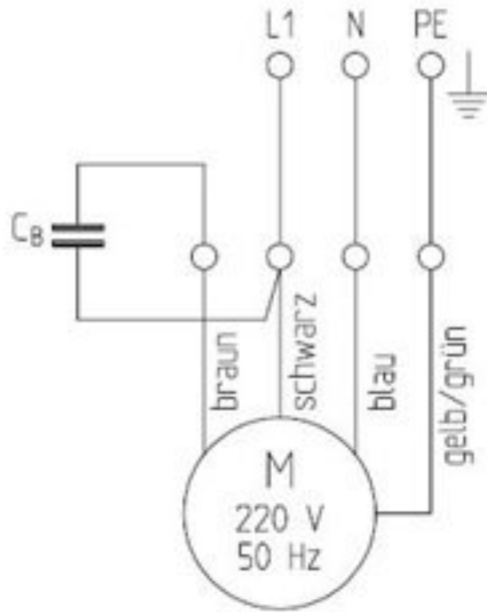


<b>voltage</b>	12 V (DC)
<b>rated output</b>	700 W
<b>duty cycle*</b>	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
<b>electrical connection</b>	eyelet: 1 x M6 and 1 x M8 1 x 6.3 x 0.8 für flat push-in sleeve
<b>protection class</b>	IP54 concerning to DIN 40050
<b>rotation direction</b>	left (looking at the shaft)

\* based on one work cycle engine (10 min)

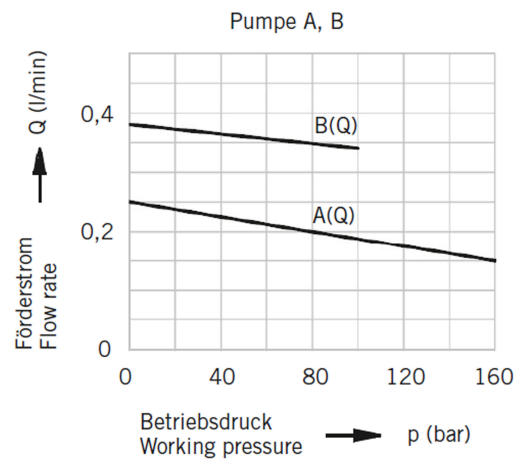


**Motor A4B: 230 V AC, 1-phasig 120 W**

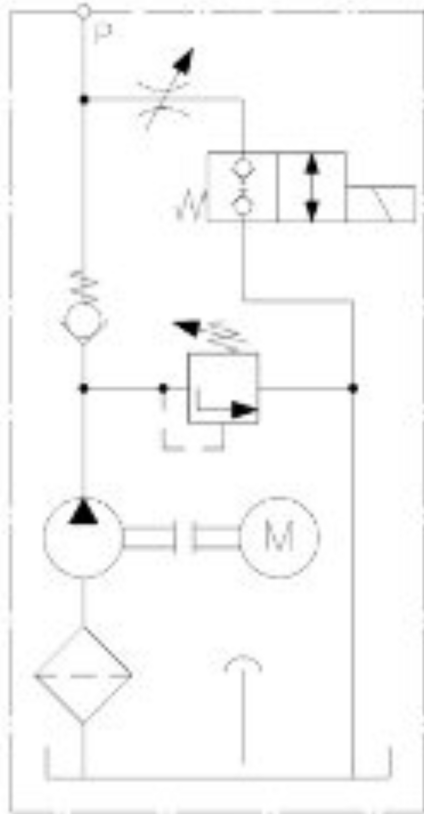


<b>voltage</b>	230 V (AC)
<b>rated output</b>	120 W
<b>duty cycle*</b>	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
<b>electrical connection</b>	cables with ferrules
<b>protection class</b>	IP44 concerning to DIN 40050
<b>rotation direction</b>	left (looking at the shaft)

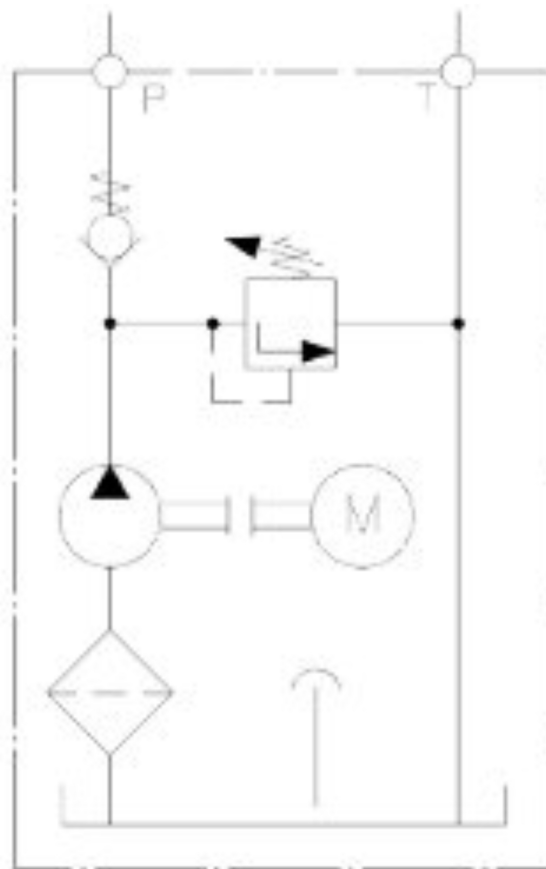
\* based on one work cycle engine (10 min)



**2** Circuit diagram



design H



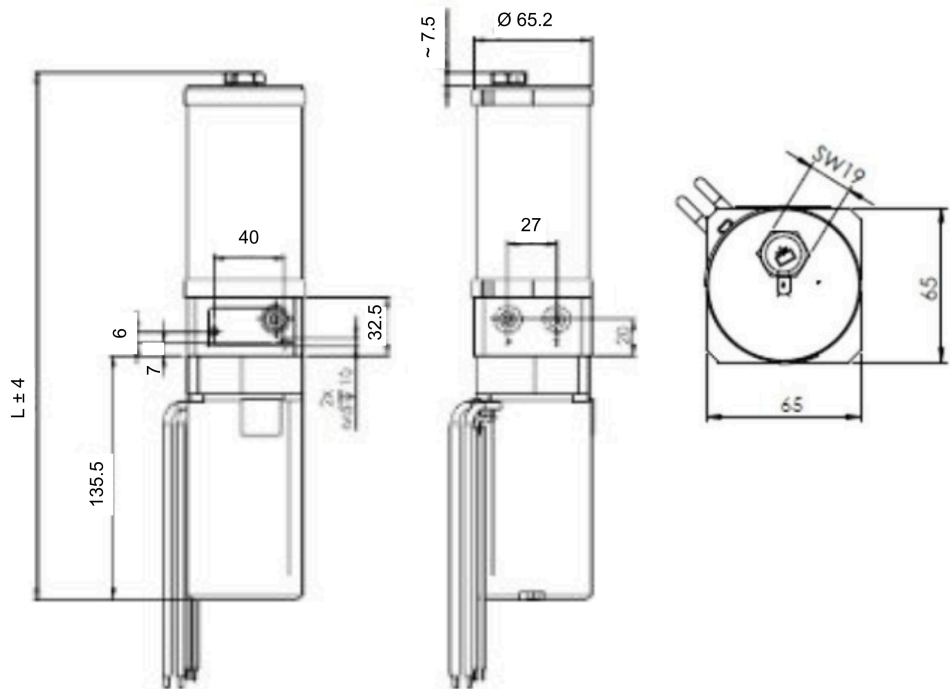
design Q

### 3 Dimensions and connections

Dimensions are given in mm.

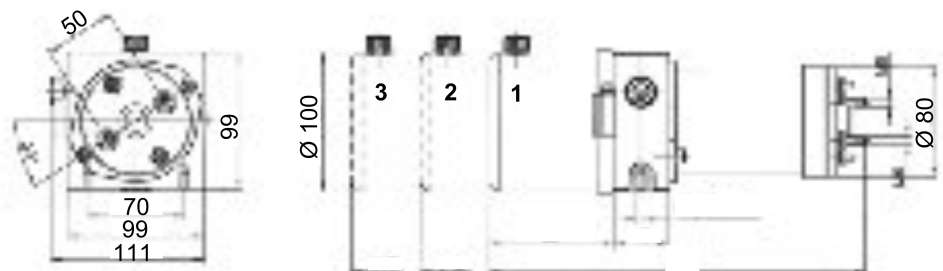
**mechanical connection** - 2 x M6 (pump mount)  
- preferably suspension elastical

#### A 065-Q-C2D



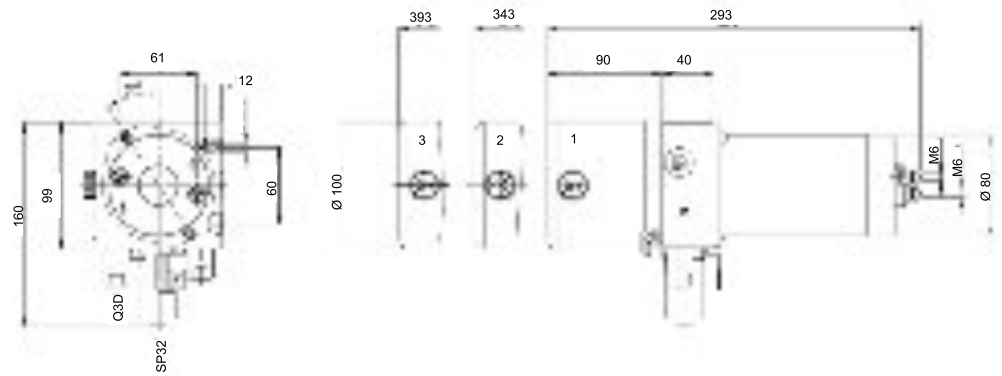
hydraulic connection: 2 x M10 x 1

#### A 100-Q-F2E



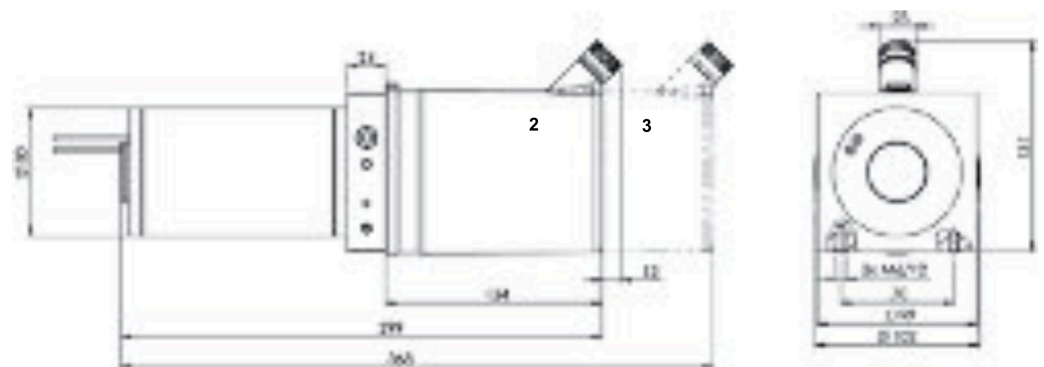
hydraulic connection: 2 x M10 or flange

**A 100-H-F2E**



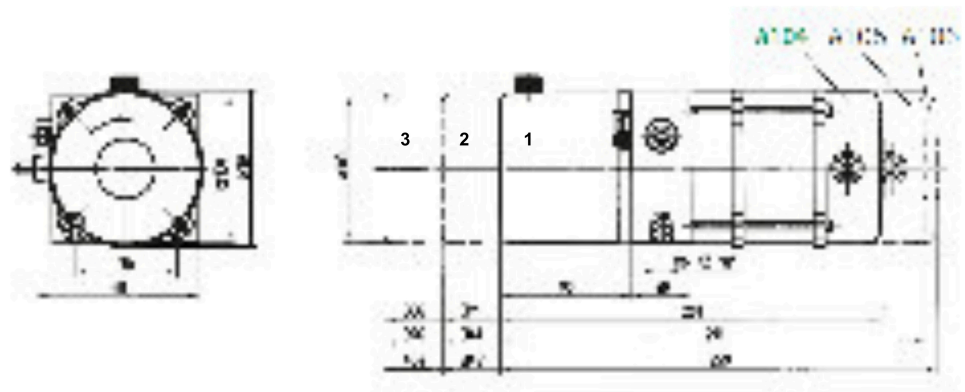
hydraulic connection: 1 x M14 x 1.5

**A 100-Q-A4D and A 100-Q-B2D**



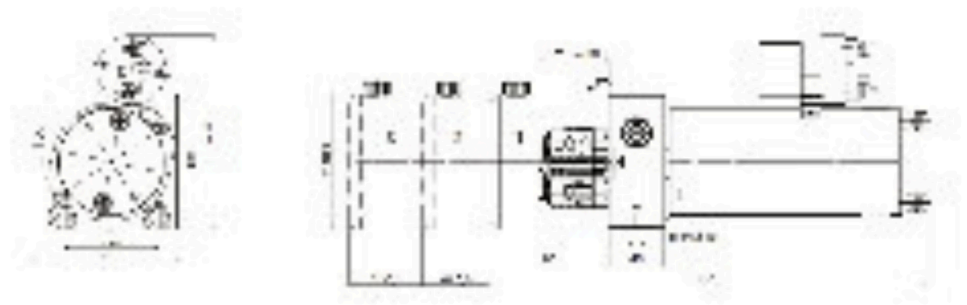
hydraulic connection: 2 x M10 x 1 or flange

**A 100-Q-A4B, A 100-Q-D4B und  
A 100-Q-J2B**



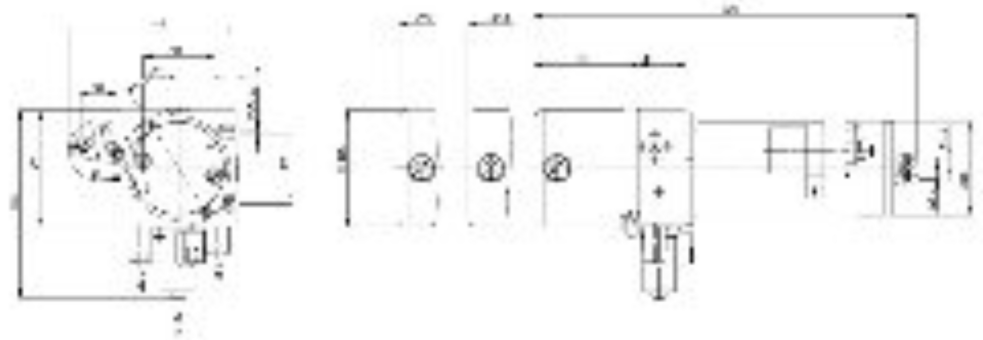
hydraulic connection: 2 x M10 x 1 or flange

**A 100-Q-R2E**



hydraulic connection: 2 x M10 x 1 or flange

**A 100-H-R2E**



hydraulic connection: 1 x M14 x 1.5

# 4 Order information

## Type code

A	100	Q	1	A	F	2	E	1	-	
								<b>Drossel*</b>	1	throttle valve Q3D00
								<b>2/2-poppet bypass valve*</b>	1	2/2-poppet bypass valve 24 V = (DC) SP32 CMD
									2	2/2-poppet bypass valve 12V = (DC) SP32 CME
										* design H only (obligatory); not used in design Q
				<b>motor size</b>	A 065	C2D	24 V DC	0.25 kW	> 2000 1/min	
					A 100	F2E	12 V DC	0.35 kW	> 2000 1/min	
						A4D	24 V DC	0.10 kW	< 2000 1/min	
						B2D	24 V DC	0.20 kW	> 2000 1/min	
						A4B	230 V AC	0.12 kW	= 1500 1/min	
						R2E*	12 V DC	0.70 kW	> 2000 1/min	
										* auf Anfrage
				<b>pump size</b>	A 065 and A 100	A	0.19 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
					A 100	B	0.26 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
						X	0.32 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
						C	0.38 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
						D	0.5 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
						E	0.63 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
						F	0.88 cm <sup>3</sup> /U cm <sup>3</sup> /rev.			
				<b>tank size</b>	<b>A 100</b>	<b>A 065</b>				
					1	0.4 L	0.23 L			
					2	0.8 L	0.3 L			
					3	1.2 L	0.43 L			
				<b>design</b>	Q; H					
	<b>size</b>	100								
		065								
<b>type</b>	A									mini hydraulic power unit

**design**

<b>H</b>	V DC	A 100	motor F2E: 0.35 kW; 12 V DC	tank size: 1, 2 or 3
			motor R2E: 0.7 kW; 12 V DC	tank size: 1, 2 or 3
<b>Q</b>	V DC	A 065	motor C2D: 0.25 kW; 24 V DC	tank size: 1, 2 or 3
			A 100	motor F2E: 0.35 kW; 12 V DC
			motor A4D: 0.1 kW; 24 V DC	tank size: 2 or 3
			motor B2D: 0.2 kW; 24 V DC	tank size: 2 or 3
			motor R2E: 0.7 kW; 12 V DC	tank size: 1, 2 or 3
	V AC	A 100	motor A4B: 0.12 kW; 230 V AC	tank size: 1, 2 or 3