Mini hydraulic power pack type A

Product documentation

operating pressure p_{max}:	210 bar
effective volume (tank):	0.2 to 0.8 l

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HAWE HYDRAULIK

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1 Overview of mini hydraulic power pack type A

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. Compact hydraulic power packs are used to supply hydraulic oil in hydraulic systems.

The mini hydraulic power pack type A is characterised by its 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 M14x1.5 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.

Mini hydraulic power pack type A

Features and advantages

- DC and AC power supply
- Suitable for short period operation
- Vertical and horizontal installation possible
- Quiet operation

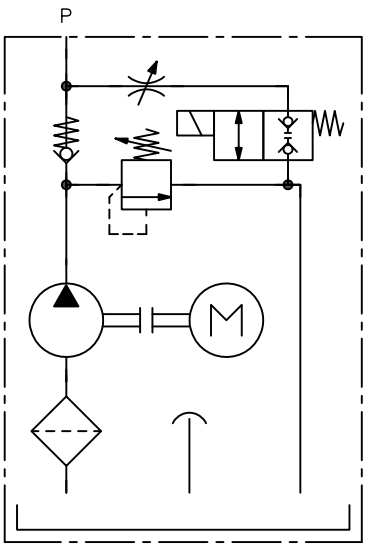
Intended applications

- Floor-lock systems
- Automotive technology
- Aviation
- Decentralised hydraulic controls

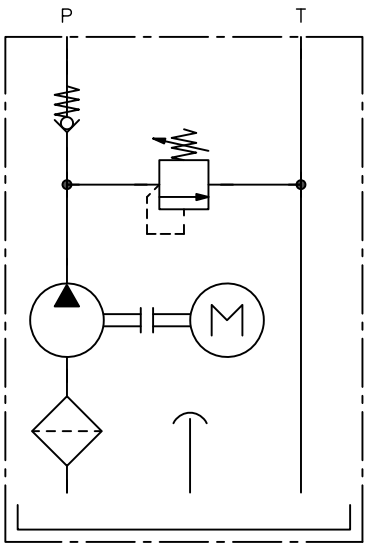
2 Available versions

Circuit symbol

Lifting version (H)



One flow direction (Q)



Ordering example

A 100 A 065	H Q	1 2	A A	F2E C2D	1	1	/... /...

Pressure setting (bar)

Throttle *
- 1: Return throttle Q3D00

Lowering valve *
- 1: Lowering valve 2/2-poppet bypass valve 24 V (DC) = SP32 CMD
- 2: Lowering valve 2/2-poppet bypass valve 12 V (DC) = SP32 CME

* Throttle valve and lowering valve required for version H; not available for version Q

2.5 "Motor"

2.4 "Pump"

2.3 "Tank size"

2.2 "design"

2.1 "Basic type and size"

2.1 Basic type and size

Type	Description
A 065	exclusively with DC motor
A 080	
A 100	with DC and AC motor

2.2 design

Coding	For type	Description	For motor code
H	A 100	Lifting version, with DC motor	F2E R2E
Q	A 065	one flow direction, with DC motor	C2D
	A 080		A2D
	A 100	one flow direction, with DC or single-phase-motor	F2E A4D B2D R2E A4B (single-phase-motor)

2.3 Tank size

Coding	Fill volume (l)			Usable volume (l)					
				Horizontal			Vertical		
	A 065	A 080	A 100	A 065	A 080	A 100	A 065	A 080	A 100
1	0.23	--	0.4	--	--	0.2	0.18	--	0.3
2	0.3	0.5	0.8	--	0.3	0.4	0.25	--	0.5
3	0.43	--	1.2	--	--	0.6	0.38	--	0.8

2.4 Pump

Miniature external gear pump

Coding	Displacement volume V_g (cm³/rev)	A 065	A 080	A 100
A	0.19	●	●	●
B	0.26			●
X	0.32			●
C	0.38			●
D	0.50			●
E	0.63			●
F	0.88			●

2.5 Motor

Coding	For type	Nominal voltage	Nominal power (kW)	Rated speed (min^{-1})
C2D	A 065	24 V DC	0.25	> 2000
A2D	A 080	24 V DC	0.1	> 2000
F2E	A 100	12 V DC	0.35	> 2000
A4D		24 V DC	0.1	< 2000
B2D		24 V DC	0.2	> 2000
A4B		230 V AC	0.12	= 1500
R2E *		12 V DC	0.7	> 2000

* On request

INFORMATION

For A4D and B2D: Combination with tank size 1 not possible.

3 Parameters

3.1 General data

Installation position	A 065	Vertical (tank on top)	
	A 080	Horizontal	
	A 100	Horizontal or vertical (tank on top)	
Attachment	▪ firmly screwed ▪ A 065: 2x M5 on the equipment rack A 080, A 100: 2x M6 on the equipment rack ▪ preferably elastic suspension		
Pump design	External gear pump		
Typical noise level (distance 1 m, decoupled attachment)		Motor	
	A 065	C2D	57 dB(A)
	A 080	A2D	56 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)
Hydraulic fluid	Hydraulic fluid, according to DIN 51 524 Parts 1 to 3; ISO VG 10 to 68 according to DIN ISO 3448 Viscosity range: 10 - 500 mm²/s Other media on request		
Cleanliness level	**ISO 4406** 20/18/15		
Temperatures	▪ A 065: Environment: approx. -15 to +80°C, hydraulic fluid: -10 to +40°C, ensure the correct viscosity range. ▪ A 080, A 100: Environment: approx. -30 to +80°C, hydraulic fluid: -15 to +80°C, ensure the correct viscosity range.		
Service life	10 years with max. 10,000 cycles		

3.2 Pressure and volumetric flow

max. Operating pressure	A 065	150 bar (depending on the application)
	A 080, A 100	210 bar (depending on the application)
max. Flow rate	3 l/min	
Filter retention rate	$\beta_{25} > 75$	

3.3 Weight

Weight without hydraulic fluid		**with motor**	**Q**	**H**
	A 065	C2D	1.8 kg	--
	A 080	A2D	2.8 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

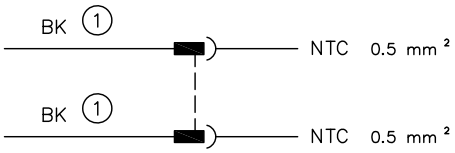
3.4 Electrical data

Motor C2D

Voltage	24 V direct current
Nominal power	250 W
Duty cycle	S3 - 20 % ED
Electrical connection	2x flex (2x)
Protection class	IP 50 according to DIN 40050
Interference suppression	2L3C (variants on request)

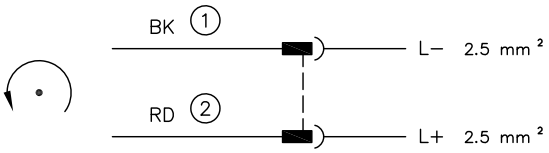
Terminal assignment

Temperature measurement



1 black

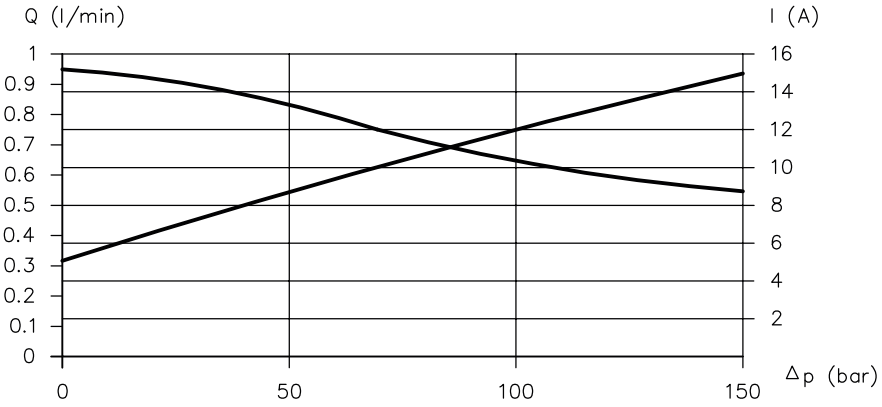
Motor



Rotation direction of the motor shaft: left (looking at the shaft)

1 black
2 red

Characteristic line

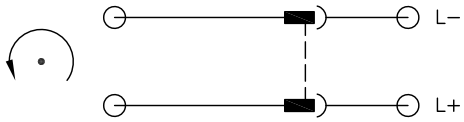


Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

Motor F2E

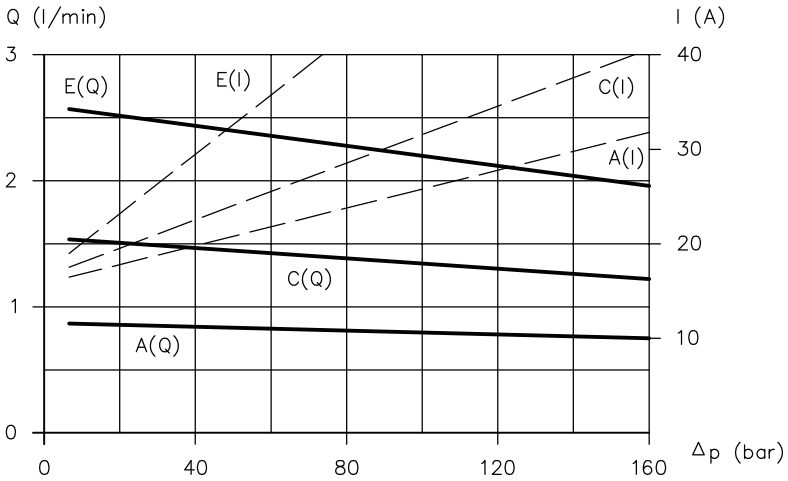
Voltage	12 V (DC)
Nominal power	350 W
Duty cycle	up to 40% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	2x M6 for eyelet
Protection class	IP 54 according to DIN 40050
Interference suppression	-- (variants on request)

Terminal assignment



Rotation direction of the motor shaft: left (looking at the shaft)

Characteristic line pump A, C, E



Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

Motor A4D

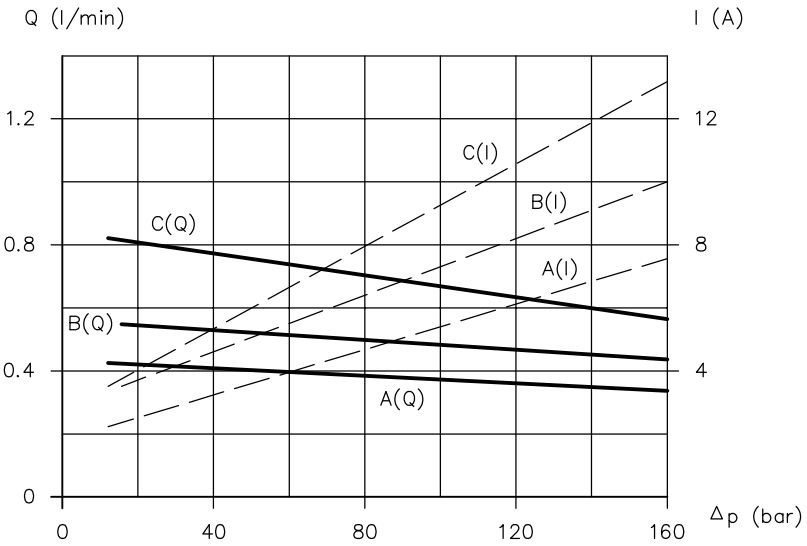
Voltage	24 V (DC)
Nominal power	100 W
Duty cycle	up to 40% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	2x flex AWG 16 (1100 mm) red +, black -
Protection class	IP 50 according to DIN 40050
Other	▪ with thermal switch ▪ motor UL-listed
Interference suppression	-- (variants on request)

Terminal assignment

Rotation direction of the motor shaft: left (looking at the shaft)

1 black
2 red

Characteristic line pump A, B, C



Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

Motor A2D

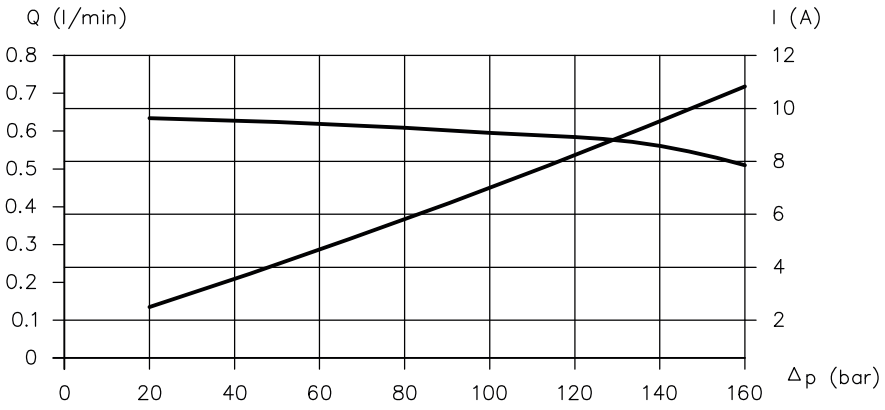
Voltage	24 V direct current
Nominal power	100 W
Duty cycle	up to 30% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	2x flex AWG 18 (500 mm) red +, black -
Protection class	IP 54 according to DIN 40050
Other	motor UL-listed
Interference suppression	2L3C (variants on request)

Terminal assignment

Rotation direction of the motor shaft: left (looking at the shaft)

1 black
2 red

Characteristic line



Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

Motor B2D

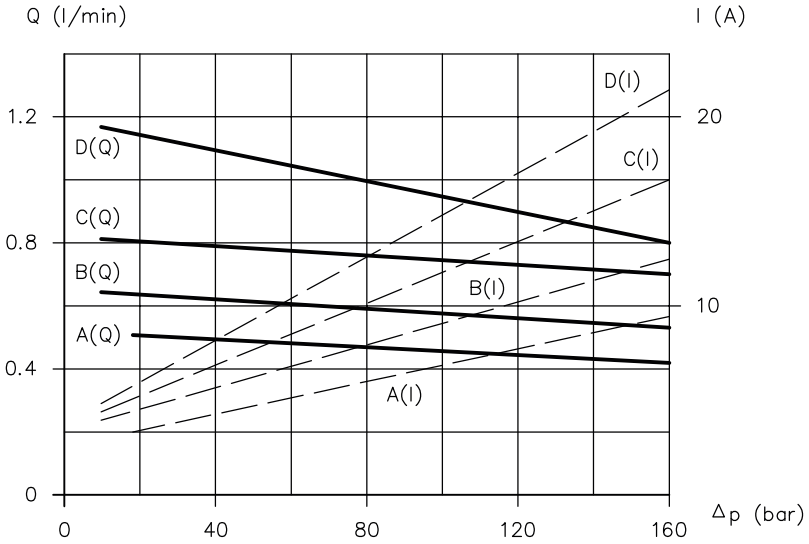
Voltage	24 V (DC)
Nominal power	200 W
Duty cycle	up to 40% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	2x flex AWG 16 (1000 mm) red +, black -
Protection class	IP 50 according to DIN 40050
Other	▪ with thermal switch ▪ motor UL-listed
Interference suppression	-- (variants on request)

Terminal assignment

Rotation direction of the motor shaft: left (looking at the shaft)

1 black
2 red

Characteristic line pump A, B, C, D

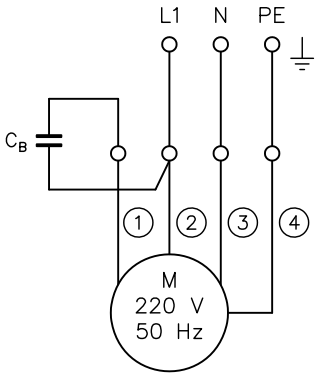


Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

Motor A4B

Voltage	1x 230 V alternating voltage
Nominal power	120 W
Duty cycle	up to 40% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	cables with ferrules
Protection class	IP 44 according to DIN 40050

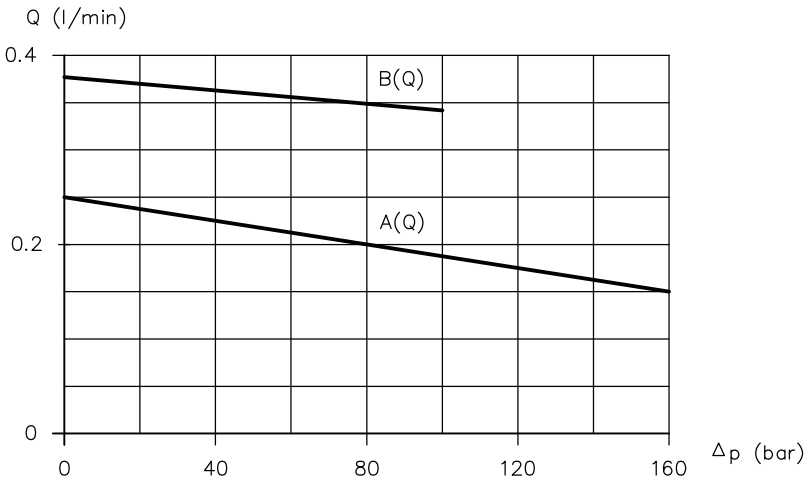
Terminal assignment



Rotation direction of the motor shaft: left (looking at the shaft)

1 brown
2 black
3 blue
4 yellow/green

Characteristic line pump A, B

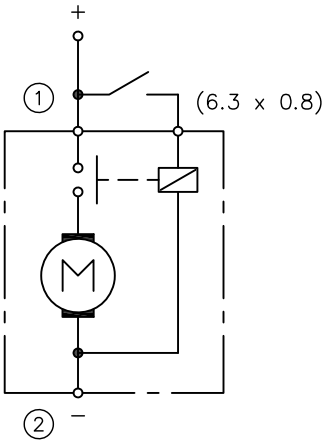


Δp operating pressure (bar); Q delivery flow (l/min)

Motor R2E (on request for series applications)

Voltage	12 V (DC)
Nominal power	700 W
Duty cycle	up to 40% depending on delivery flow, pressure and environmental conditions (in relation to 1 operating cycle 10 min)
Electrical connection	1x M6 and 1x M8 for eyelet, 1x6.3x0.8 for flat push-in receptacle
Protection class	IP 54 according to DIN 40050

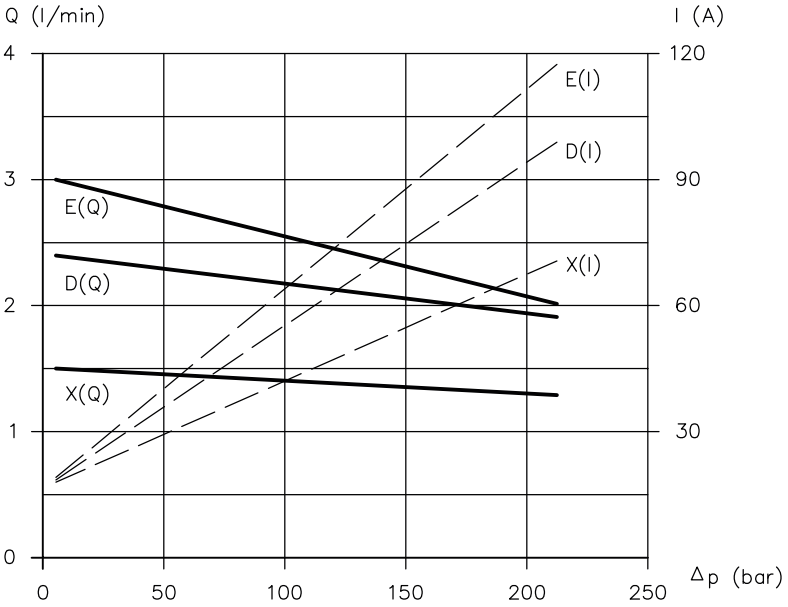
Terminal assignment



Rotation direction of the motor shaft: left (looking at the shaft)

1 M8 - red
2 M6 - black

Characteristic line pump X, D, E

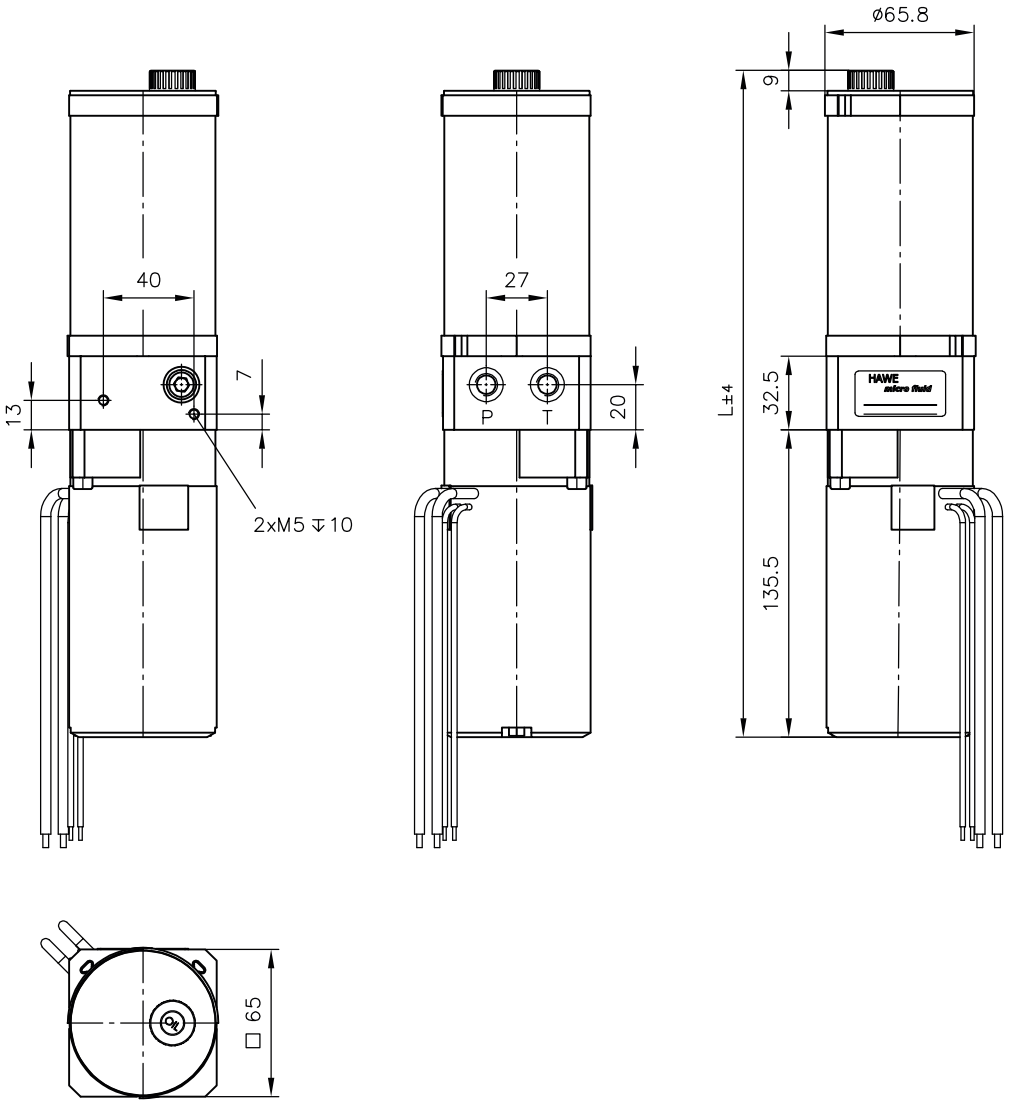


Δp operating pressure (bar); Q delivery flow (l/min); I current consumption (A)

4 Dimensions

All dimensions in mm, subject to change.

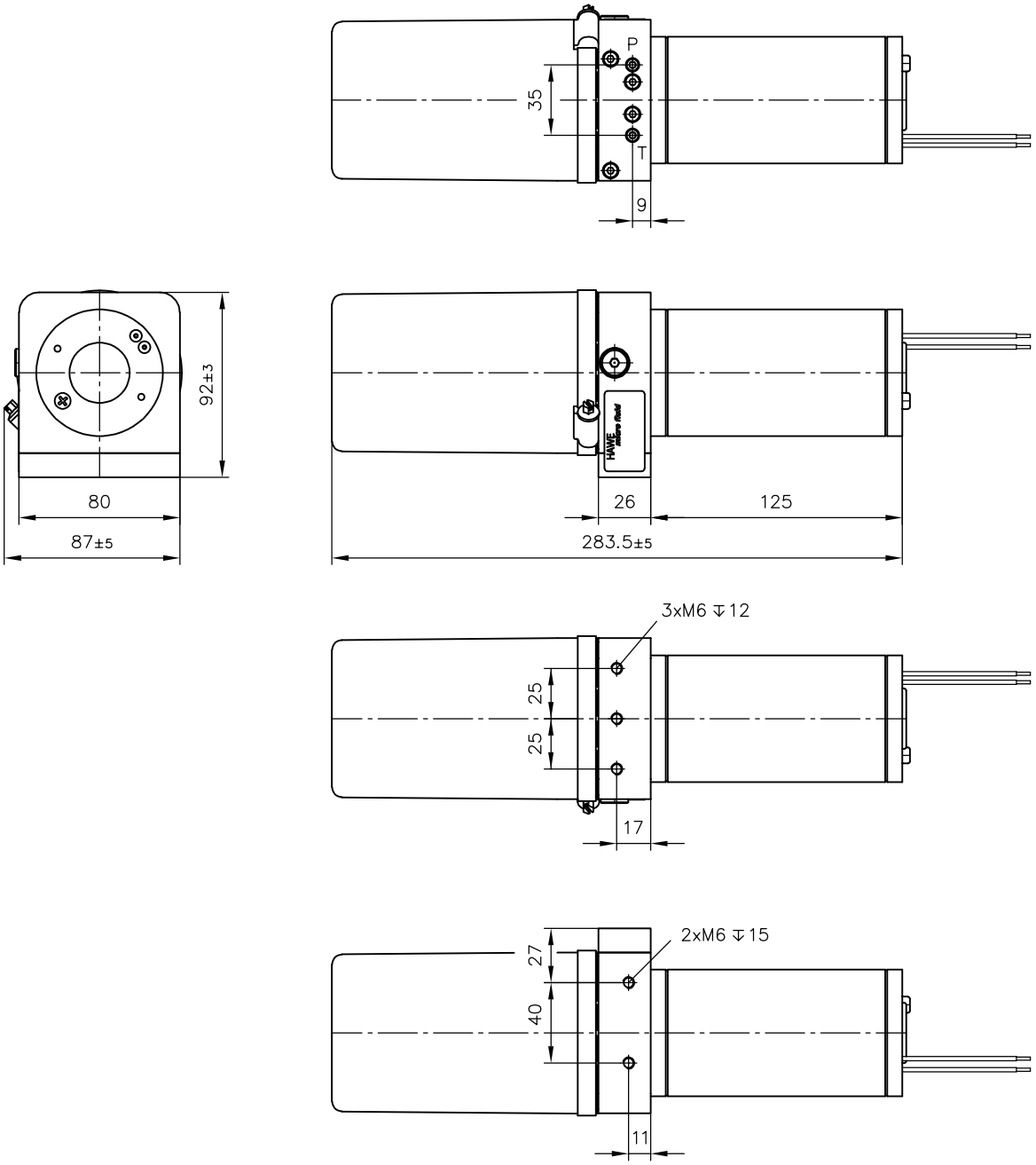
A 065 - Q ... C2D



hydraulic connections P and T: 2x M10x1

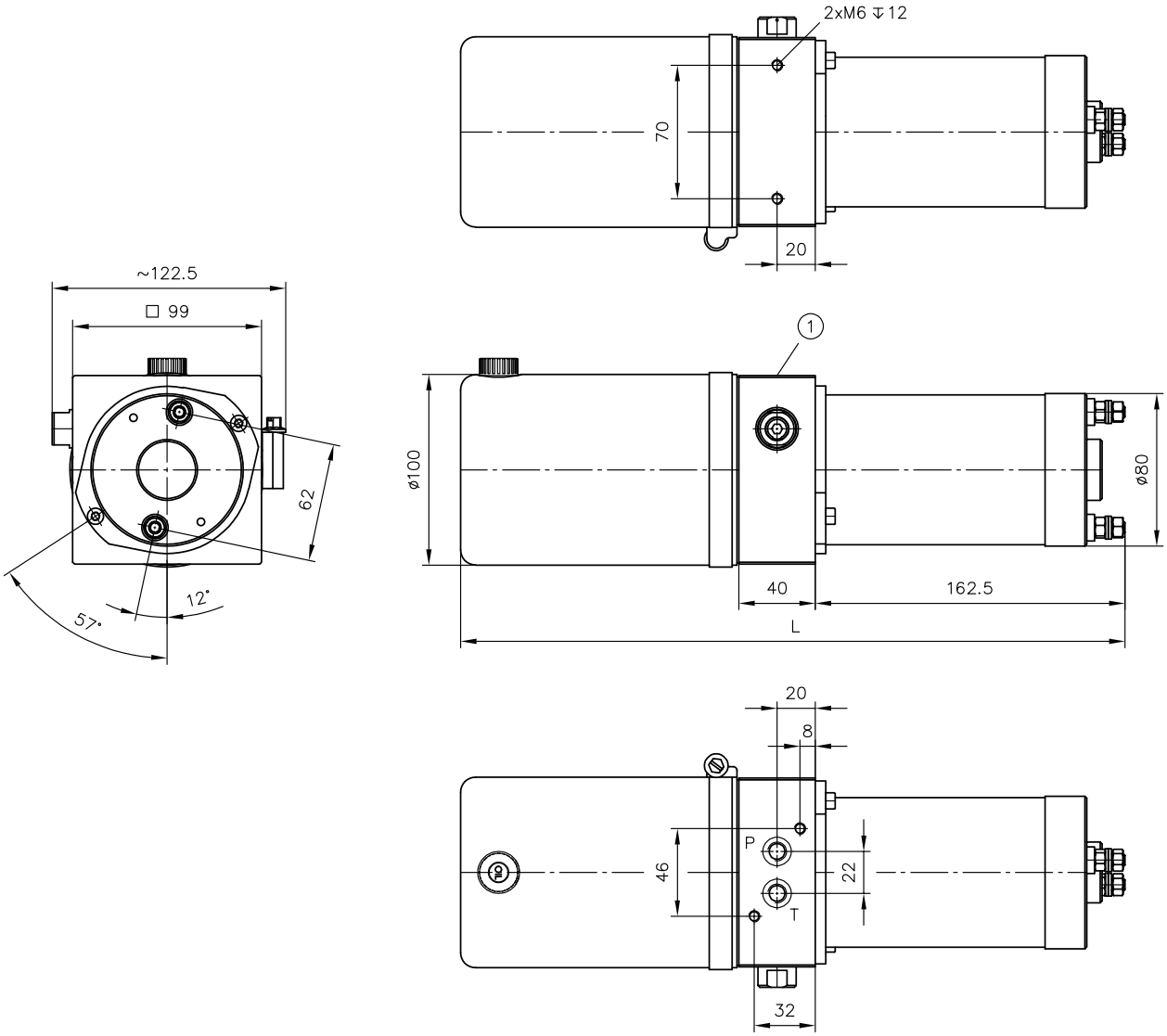
Coding Tank size	L
1	265
2	292
3	337

A 080 - Q ... A2D



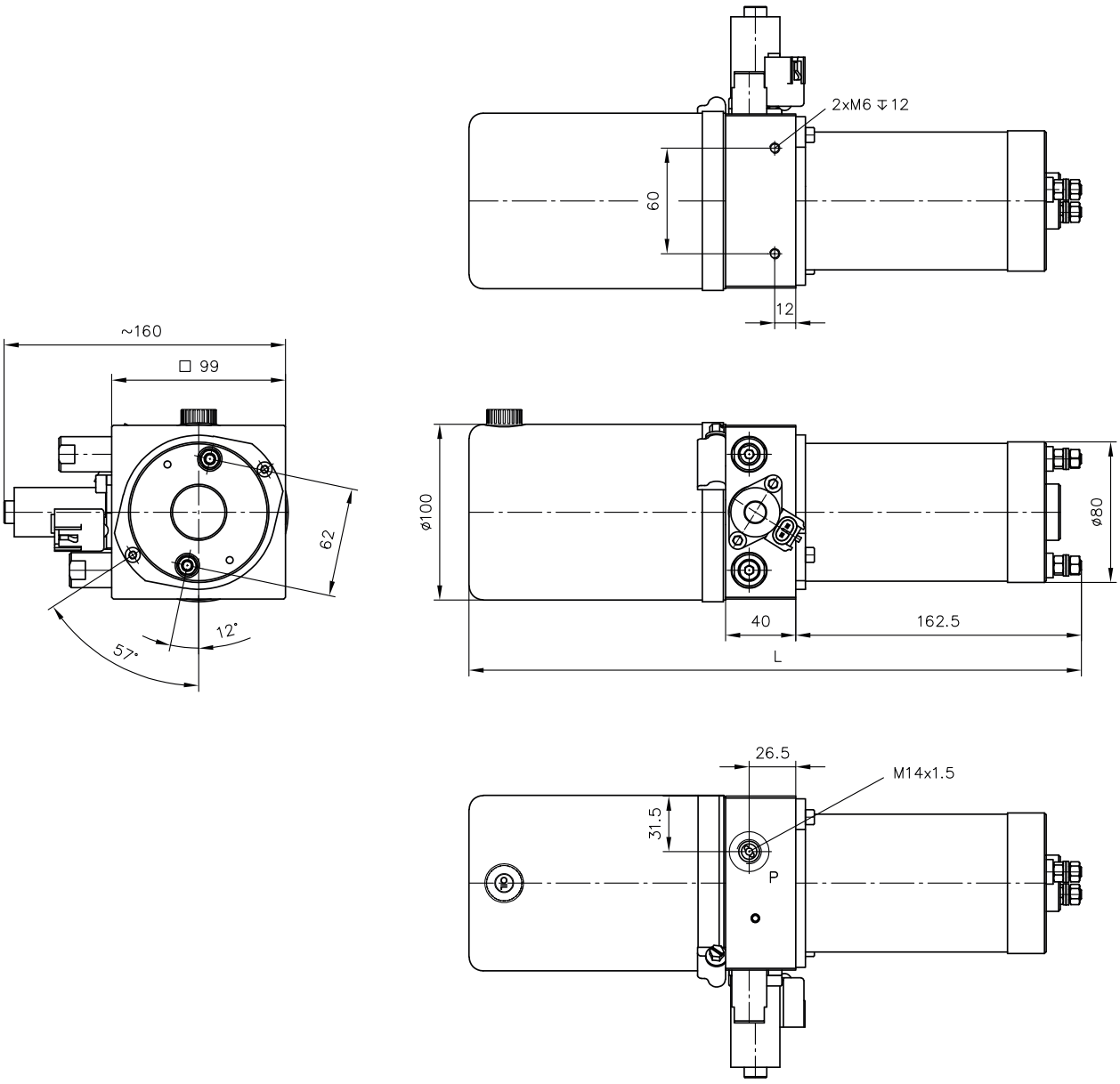
hydraulic connections P and T = plug connection

A 100 - Q ... F2E



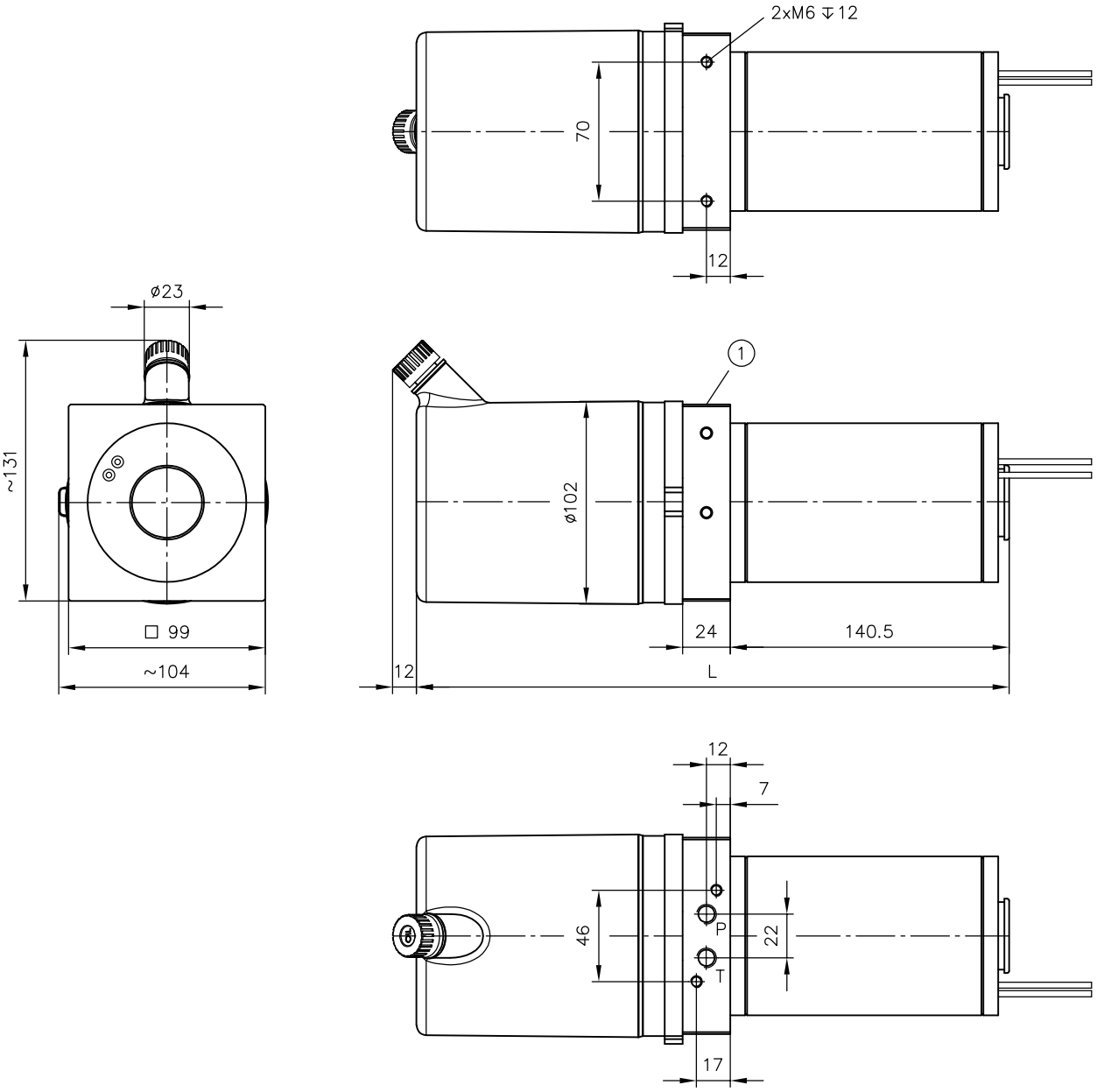
1 hydraulic connections P and T: 2x M10x1 or flange port

Coding Tank size	L
1	292.5
2	342.5
3	392.5



Coding Tank size	L
1	292.5
2	342.5
3	392.5

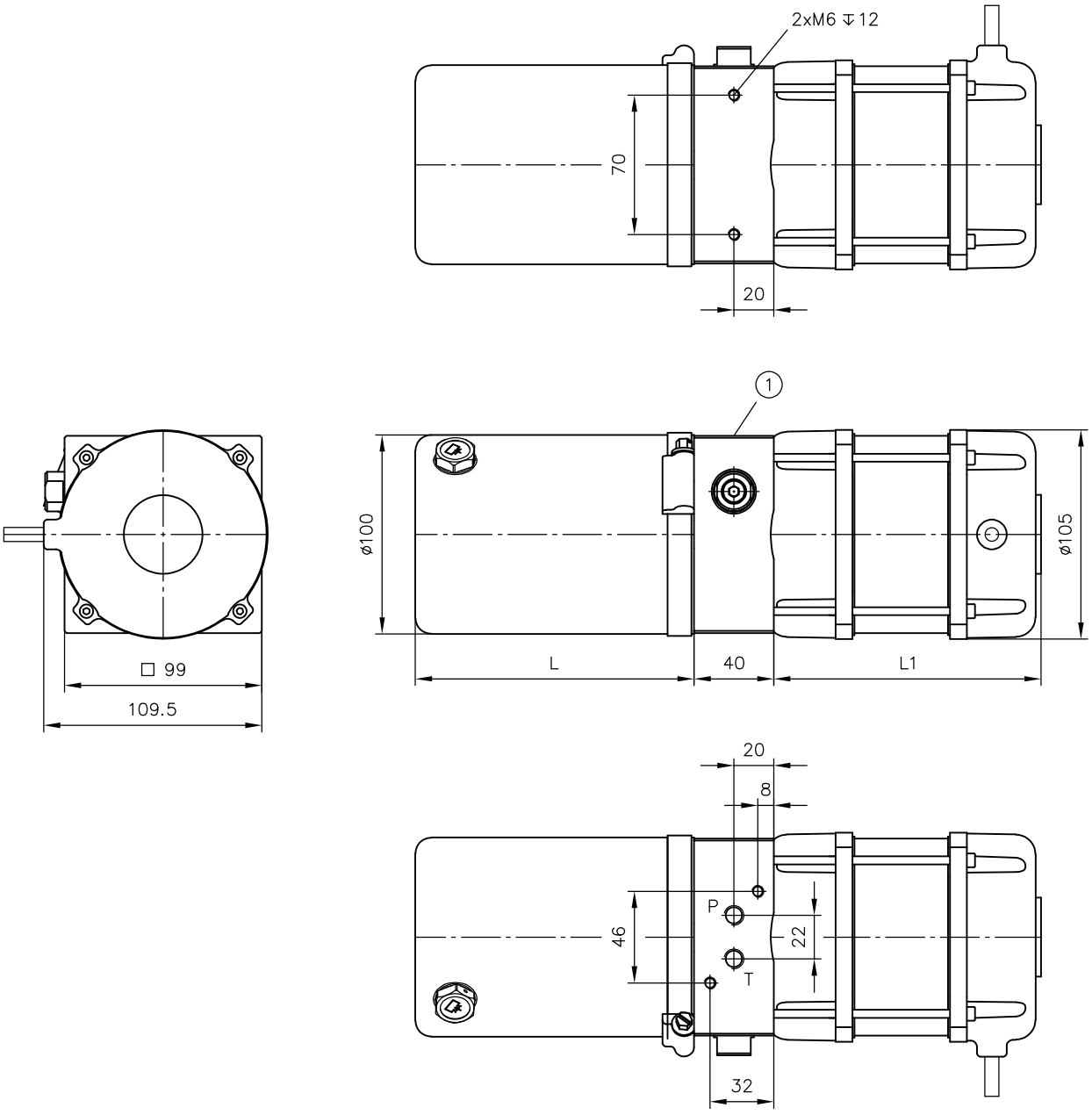
A 100 - Q ... A4D
A 100 - Q ... B2D



1 hydraulic connections P and T: 2x M10x1 or flange port

Coding Tank size	L
2	298.5
3	367.5

A 100 - Q ... A4B
A 100 - Q ... D4B
A 100 - Q ... J2B

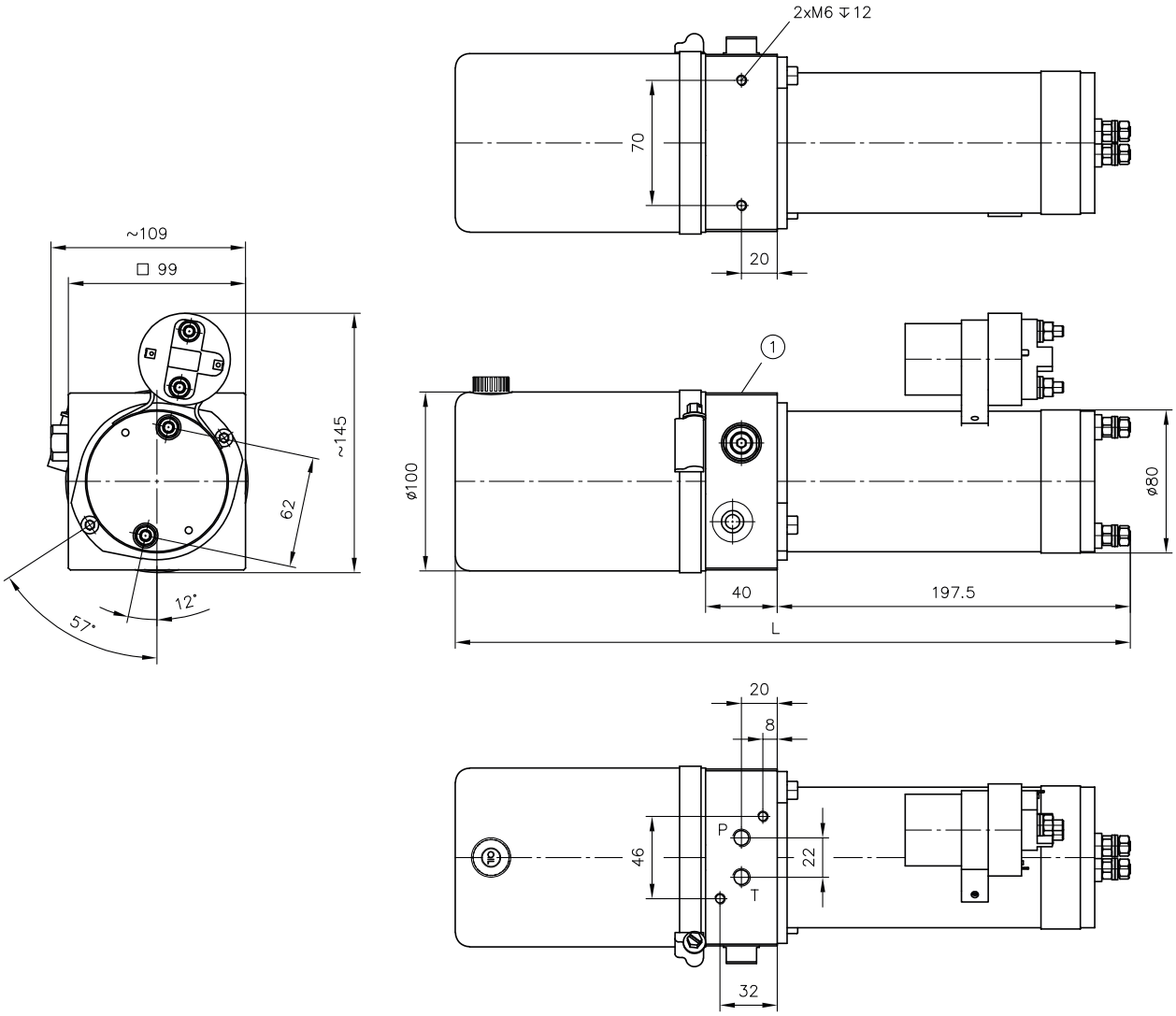


1 hydraulic connections P and T: 2x M10x1 or flange port

Coding Tank size	L
1	90
2	140
3	195

Coding Motor	L1
A4B	134.3
D4B	164.3
J2B	172.3

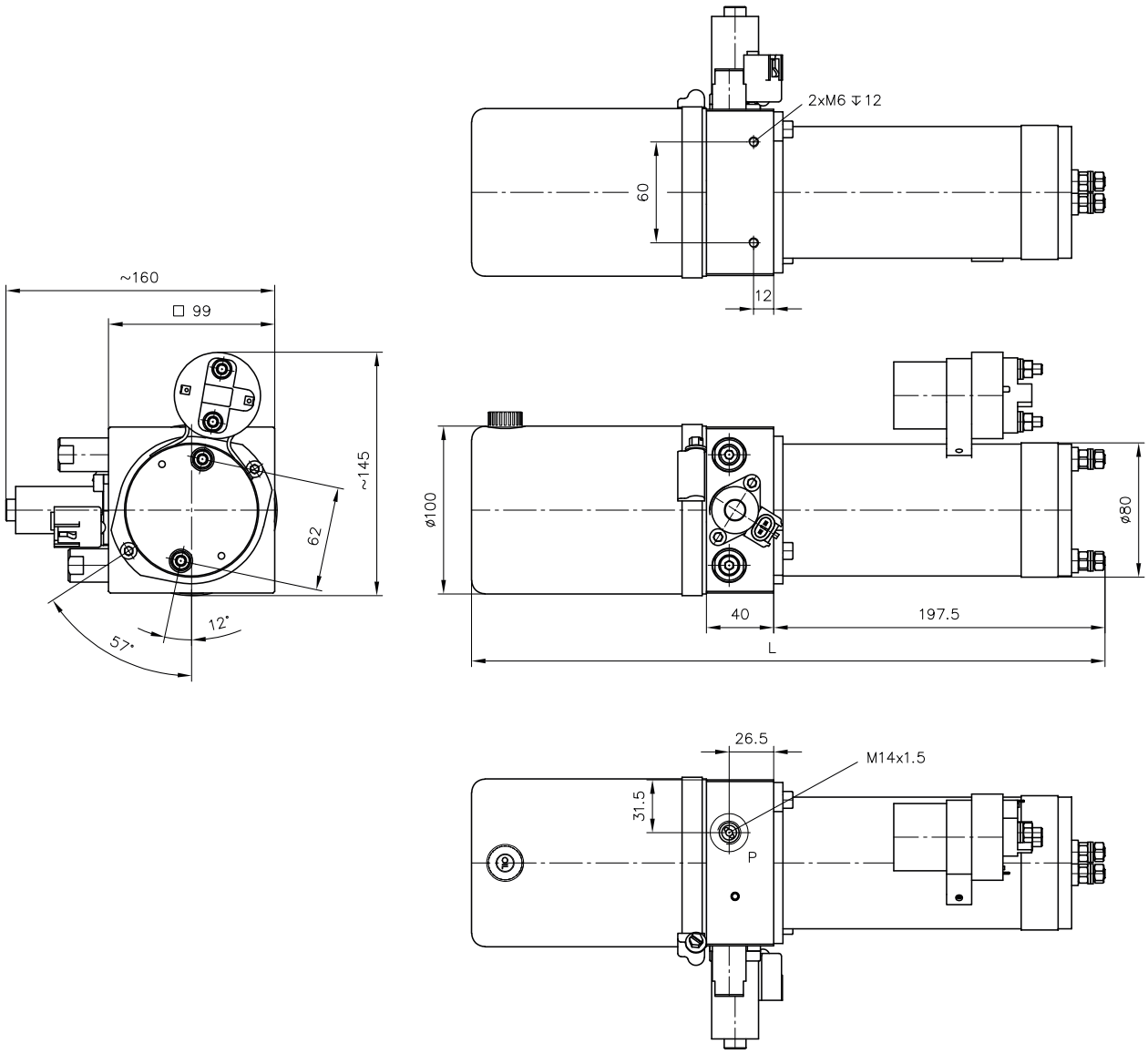
A 100 - Q ... R2E



1 hydraulic connections P and T: 2x M10x1 or flange port

Coding Tank size	L
1	327.5
2	377.5
3	432.5

A 100 - H ... R2E



Coding Tank size	L
1	327.5
2	377.5
3	432.5

5 Installation, operation and maintenance information

NOTICE

Reference to other document

Assembly instructions for mini hydraulic power pack type A: B 6025

Available for this product: assembly instructions with notes on

- intended use,
- operating and maintenance,
- Assembly information

D 6025 09-2023-1.8

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