

Mini hydraulic power pack type A

Product documentation



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

210 bar
0.2 to 0.8 l



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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 drive also acts as the pump shaft. Compact hydraulic power packs are designed to supply hydraulic circuits with hydraulic fluid.

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.

Features and benefits

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

Application areas

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

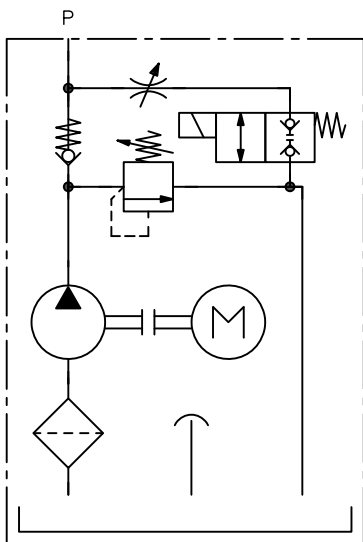


Mini hydraulic power pack type A

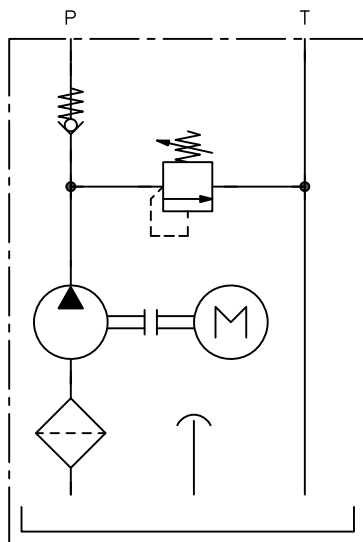
2 Available versions

Circuit symbol

Lifting version (H)



One flow direction (Q)



Ordering example

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

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 100	with DC and AC motor

2.2 design

Coding	For type	Description	For motor code
H	A 100	Lifting version, with direct current	F2E R2E
Q	A 065	One flow direction, with direct current	C2D
	A 100	One flow direction, with direct current or alternating current	F2E A4D B2D R2E A4B (alternating current)

2.3 Tank size

Coding	Fill volume (l)		Usable volume (l) horizontal		Usable volume (l) vertical	
	A 065	A 100	A 065	A 100	A 065	A 100
1	0.23	0.4	--	0.2	0.18	0.3
2	0.3	0.8	--	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 (cm ³ /U)	A 065	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 speedl (rpm)
C2D	A 065	24 V DC	0.25	> 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



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 100	Horizontal or vertical (tank on top)	
Attachment	Firmly screwed, 2 x M6 on the equipment rack preferably elastic suspension		
Pump design	External gear pump		
Noise level (distance 1 m, decoupled attachment)		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)
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 mm ² /s Other media on request		
Cleanliness level	ISO 4406 <u>20/18/15</u>		
Temperatures	A 065	Environment: approx. -15 to +80 °C, hydraulic fluid: +10 to +40 °C	
	A 100	Environment: approx. -30 to +80 °C, hydraulic fluid: -15 to +80 °C	
	Pay attention to the viscosity range		
Service life	10 years with max. 10,000 cycles		

3.2 Weight

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

3.3 Pressure and volumetric flow

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

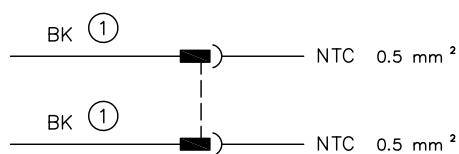
3.4 Electrical data

Motor C2D

Voltage	24 V direct current
Nominal power	250 W
Duty cycle	S3 - 20 % ED
Electrical connection	2 x flex (2x)
Protection class	IP50 per DIN 40050

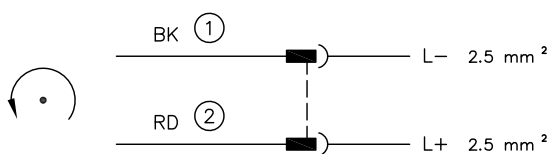
Terminal assignment

Temperature measurement



1 black

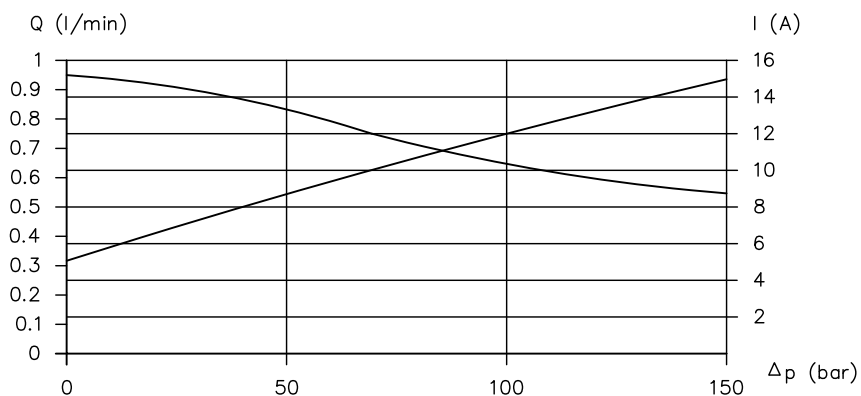
Motor



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

1 black
2 red

Characteristic line

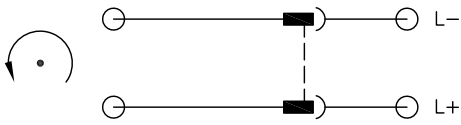


Δp operating pressure (bar); Q delivery flow (lpm); I current consumption (A)

Motor F2E

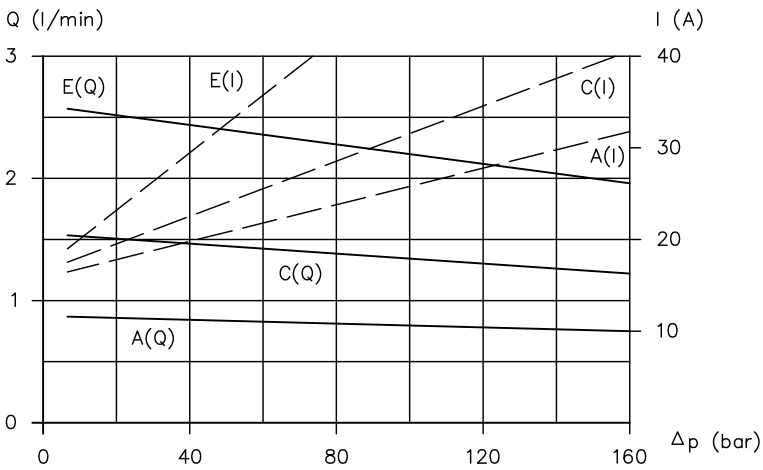
voltage	12 V (DC)
rated output	350 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	2 x M6 (eyelet)
protection class	IP54 concerning to DIN 40050

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 (lpm); I current consumption (A)

Motor A4D

voltage	24 V (DC)
Nominal power	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

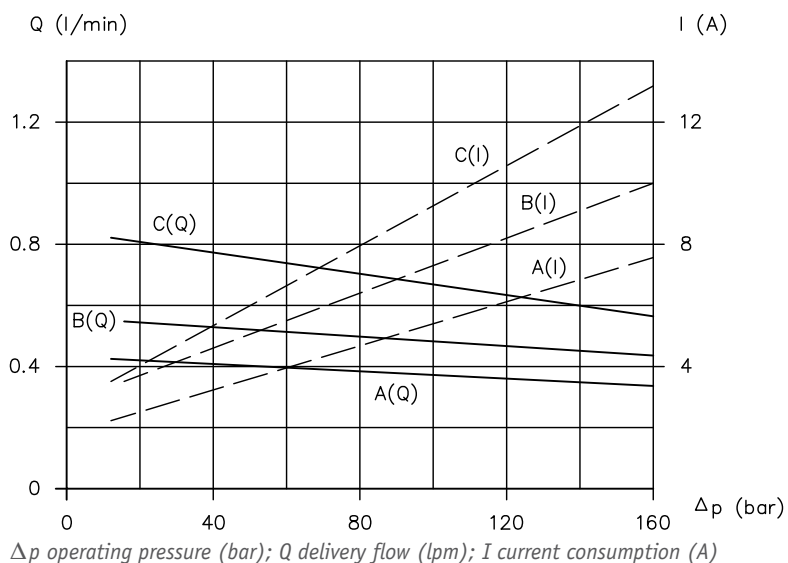
Terminal assignment



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

- 1 black
- 2 red

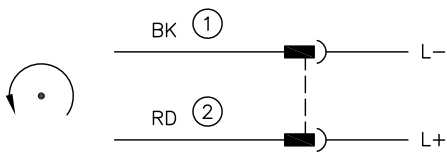
Characteristic line pump A, B, C



Motor B2D

voltage	24 V (DC)
Nominal power	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

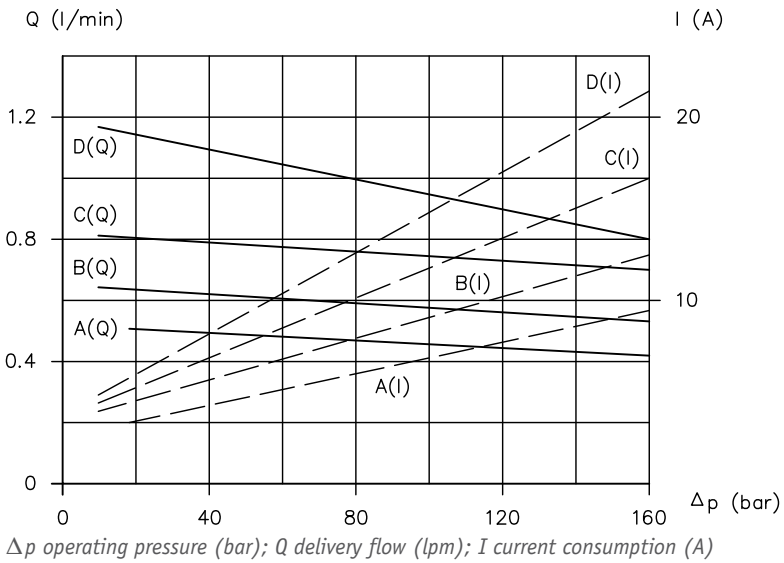
Terminal assignment



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

- 1 black
- 2 red

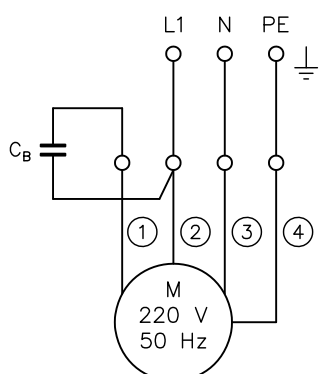
Characteristic line pump A, B, C, D



Motor A4B

voltage	1 x 230 V alternating voltage
Nominal power	120 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	cables with ferrules
protection class	IP44 concerning to DIN 40050

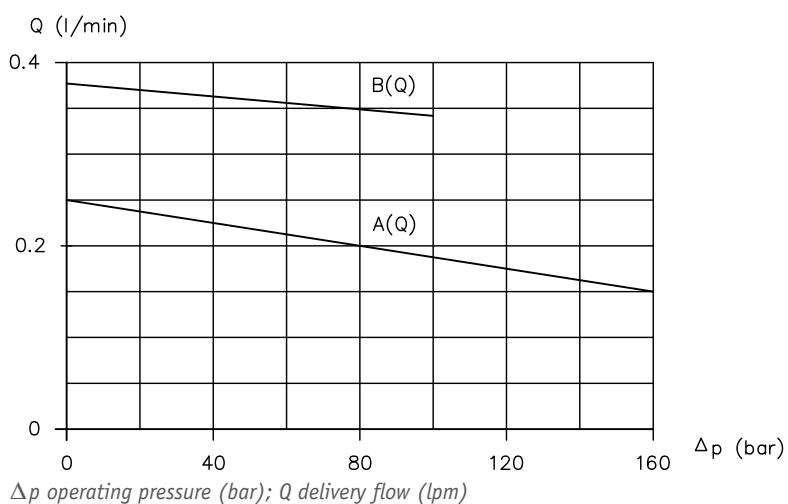
Terminal assignment



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

- 1 brown
- 2 black
- 3 blue
- 4 yellow/green

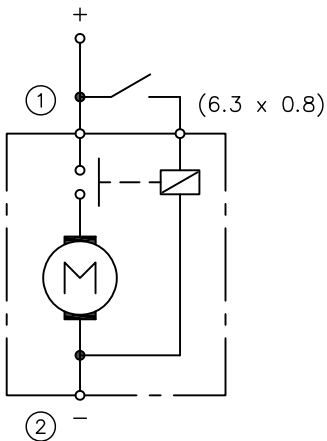
Characteristic line pump A, B



Motor R2E

voltage	12 V (DC)
rated output	700 W
duty cycle*	up to 40 % (depends on je nach delivery flow, pressure, environmental condition)
electrical connection	1 x M6 and 1 x M8 for eyelet, 1 x 6.3 x 0.8 for flat push-in receptacle
protection class	IP54 concerning to DIN 40050

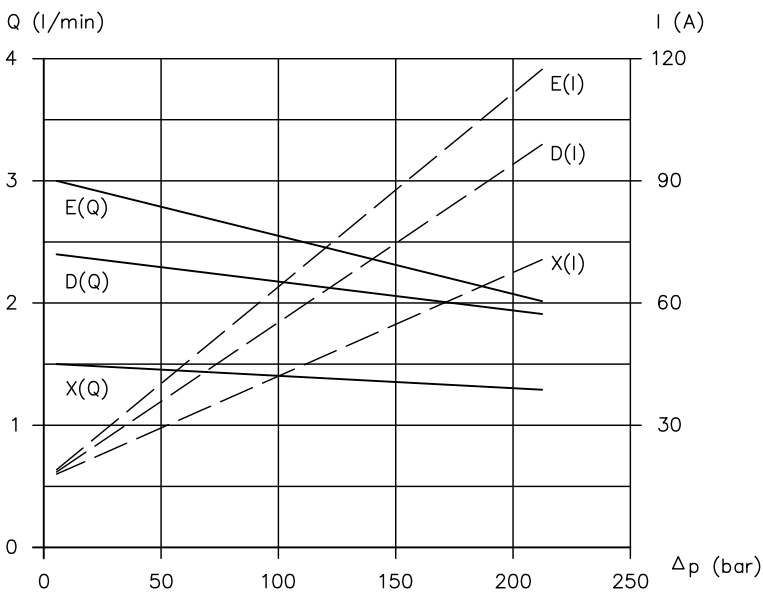
Terminal assignment



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

- 1 M8 - red
- 2 M6 - black

Characteristic line pump X, D, E

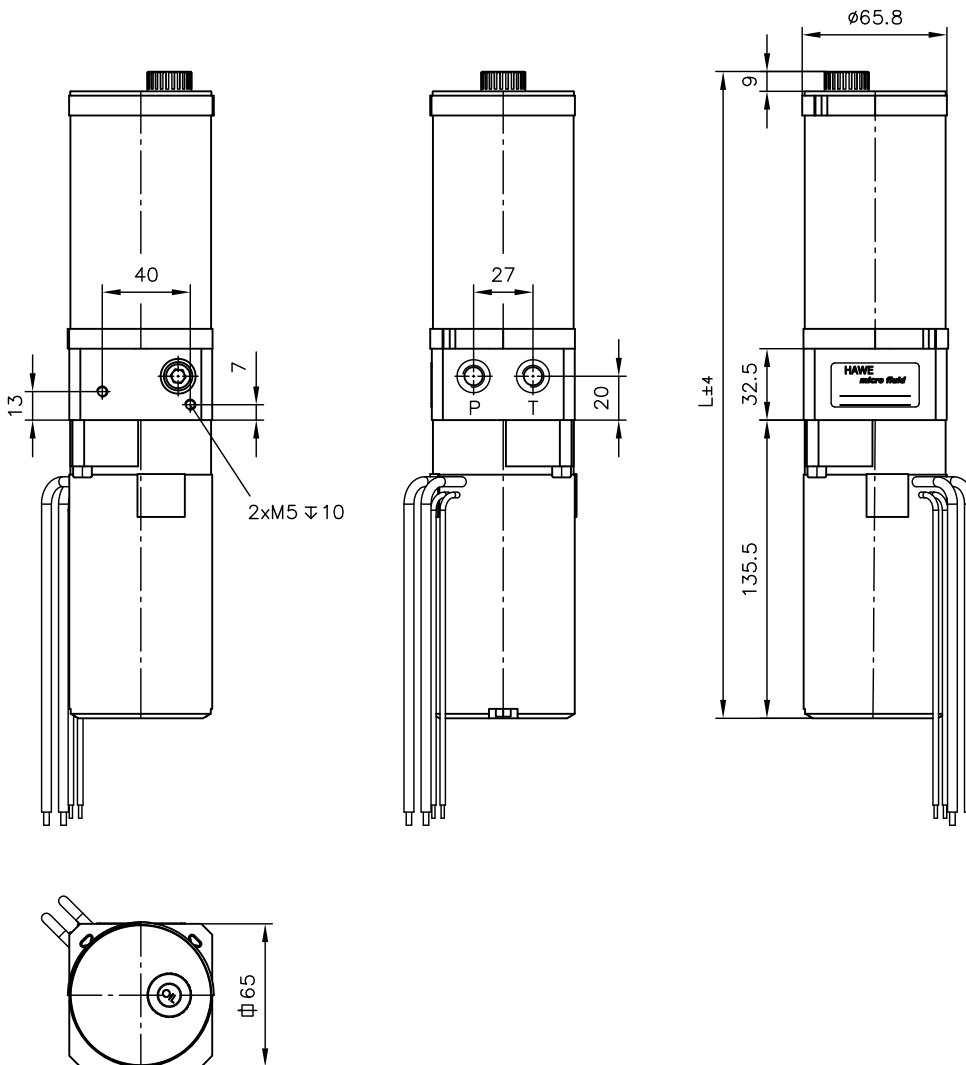


Δp operating pressure (bar); Q delivery flow (lpm); I current consumption (A)

4 Dimensions

All dimensions in mm, subject to change.

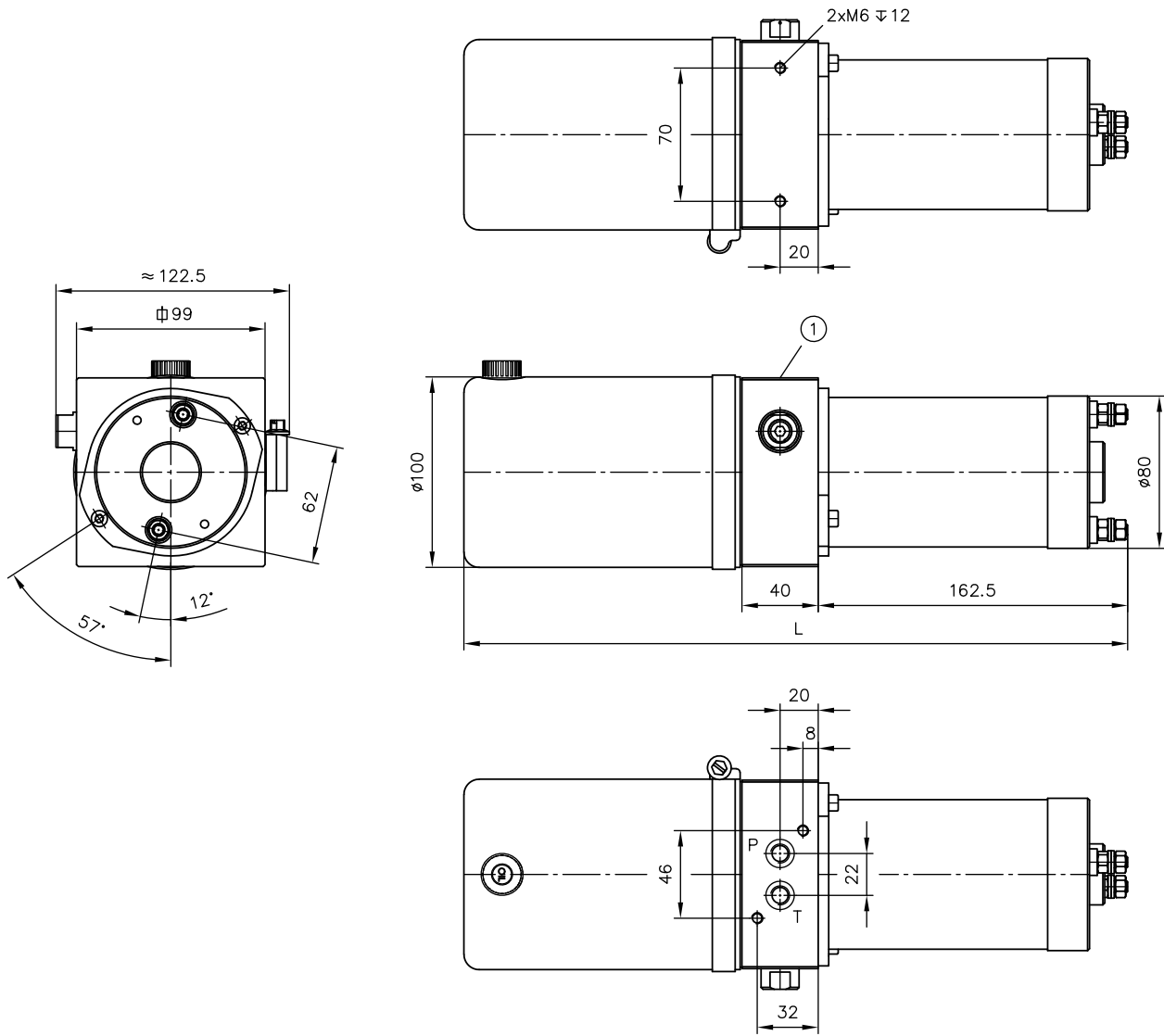
A 065 - Q ... C2D



hydraulic connections P and T: 2x M10x1

Coding Tank size	L
1	265
2	292
3	337

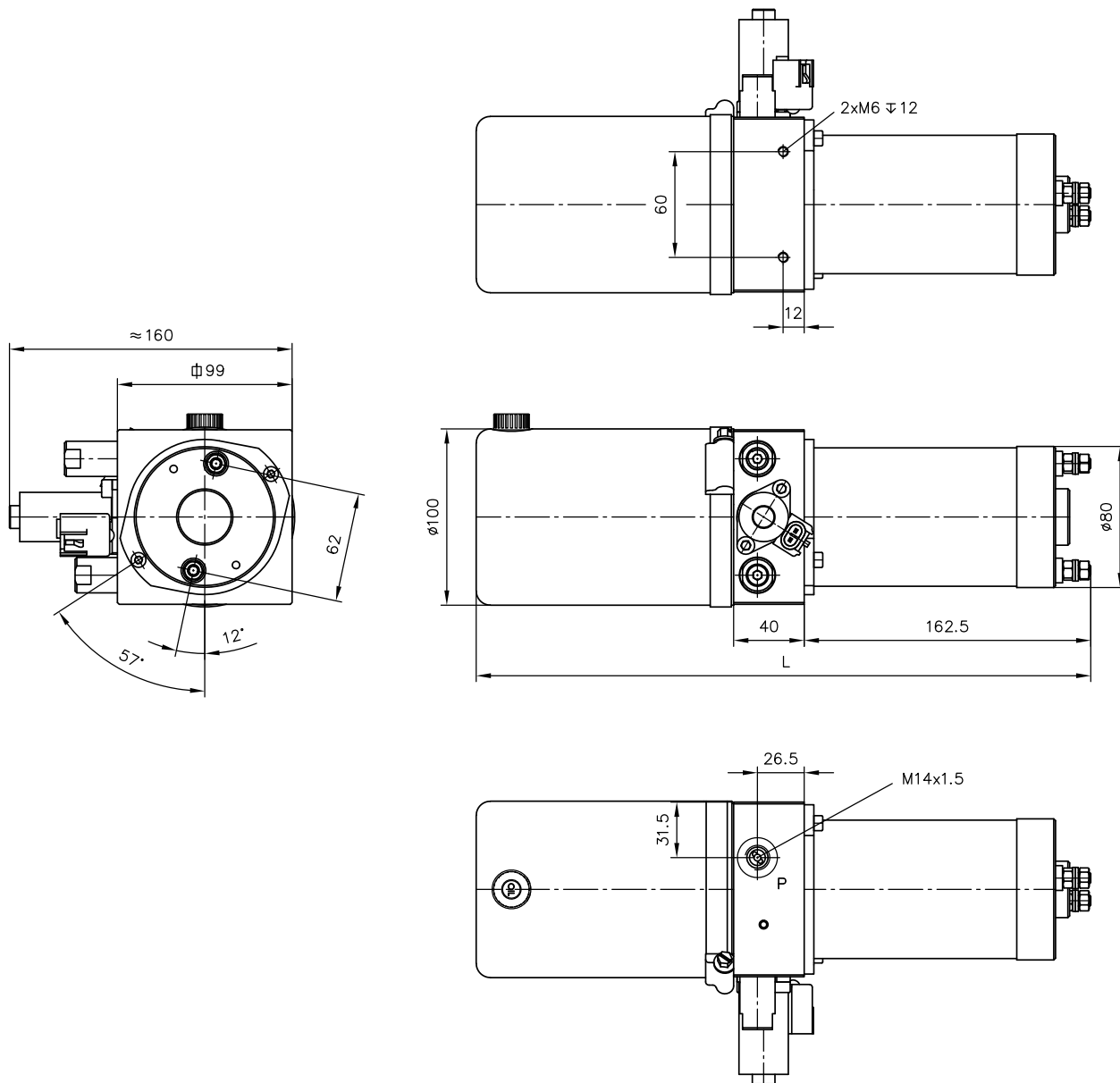
A 100 -Q ... F2E



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

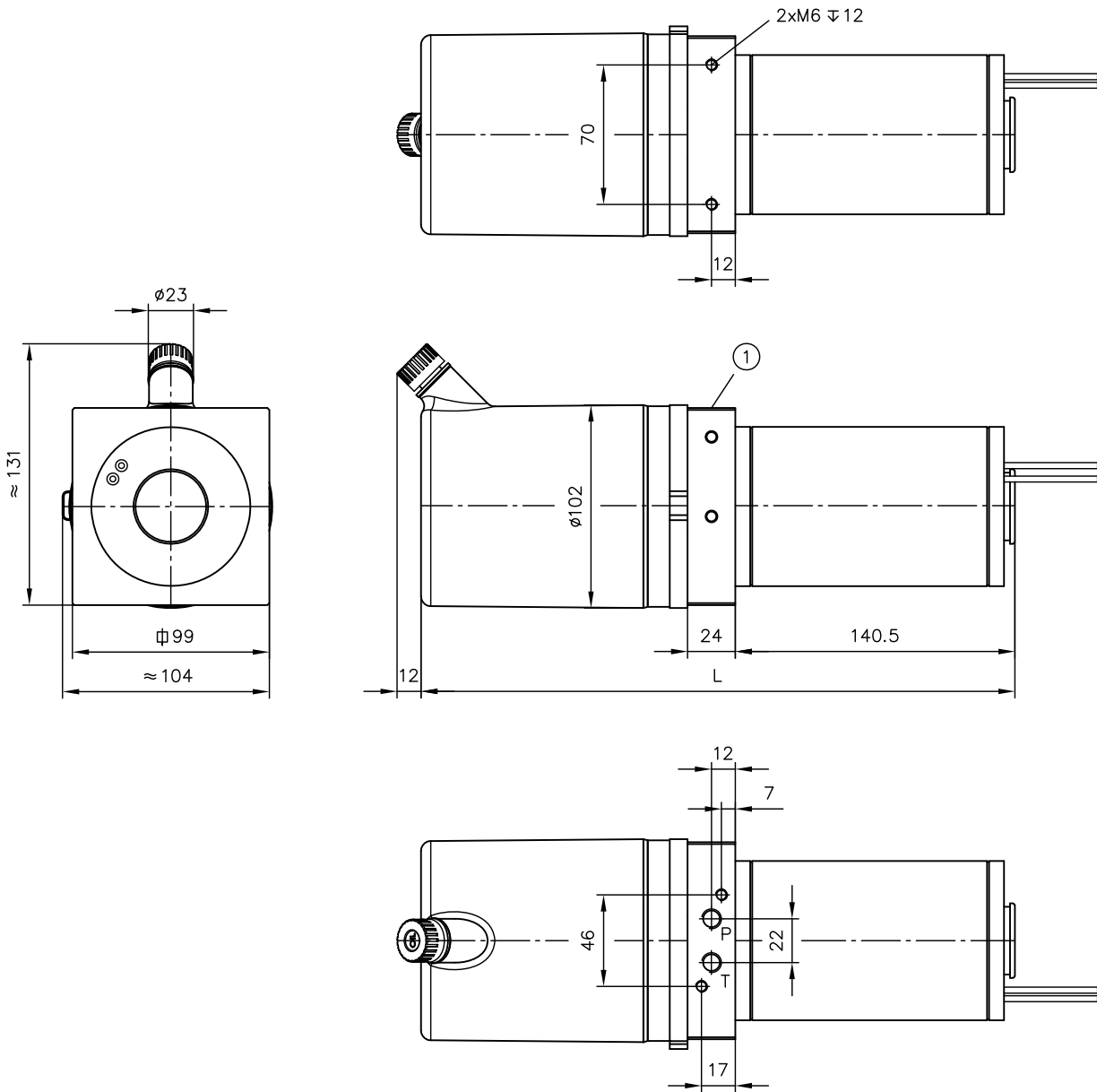
Coding Tank size	L
1	292.5
2	342.5
3	392.5

A 100 -H ... F2E



Coding Tank size	L
1	292.5
2	342.5
3	392.5

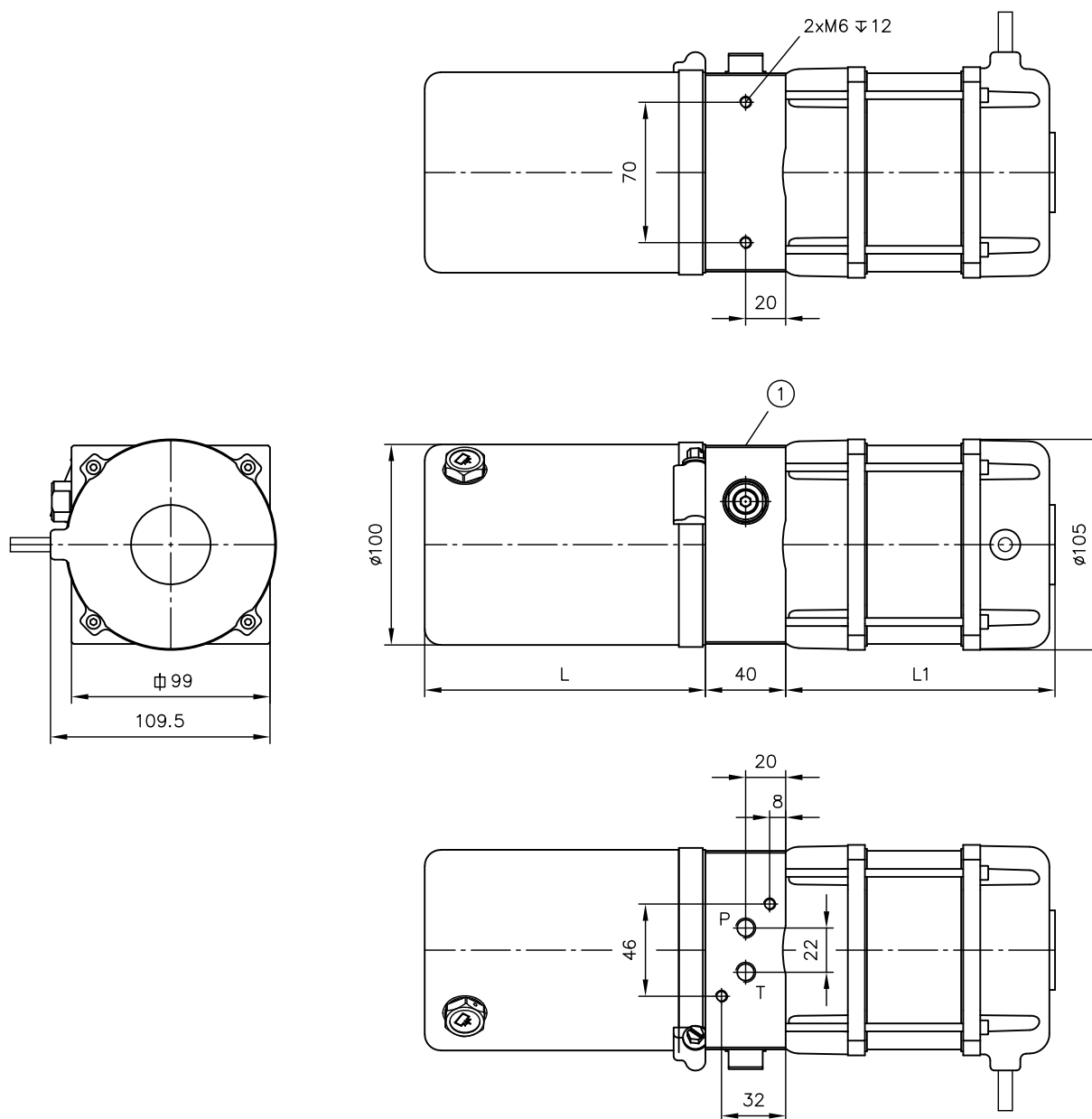
A 100 -Q ... A4D
A 100 -Q ... B2D



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

Coding	L
Tank size	
2	298.5
3	367.5

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

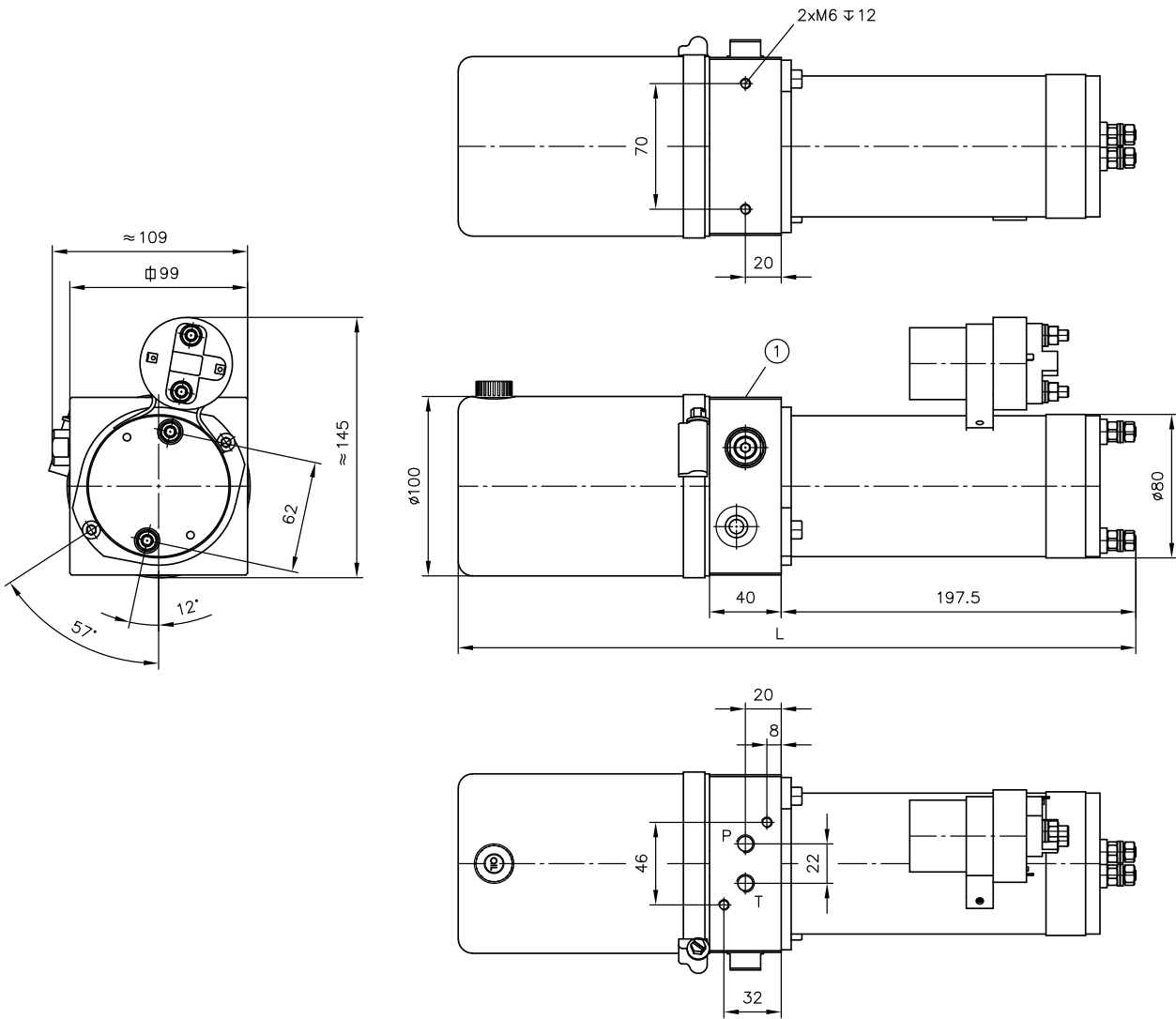


1 hydraulic connections P and T: 2x M10x1 or flange port

Coding Tank size	L
1	90
2	140
3	195

Coding Motor	L1
A4B	134.3
D4B	164.3
J2B	172.3

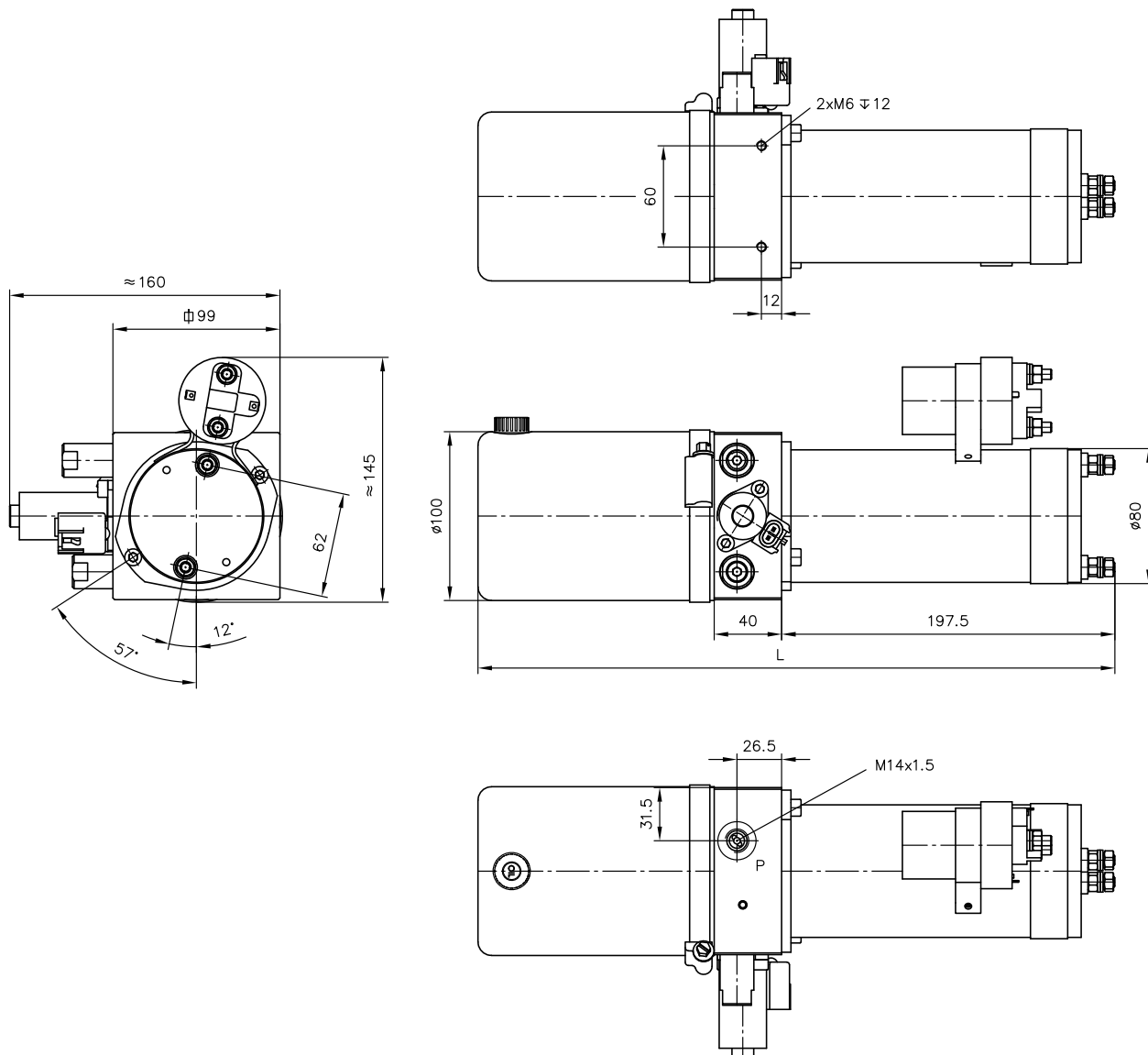
A 100 -Q ... R2E



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



DAMAGE

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

