ARGO HYTOS

Hydraulic Power Units

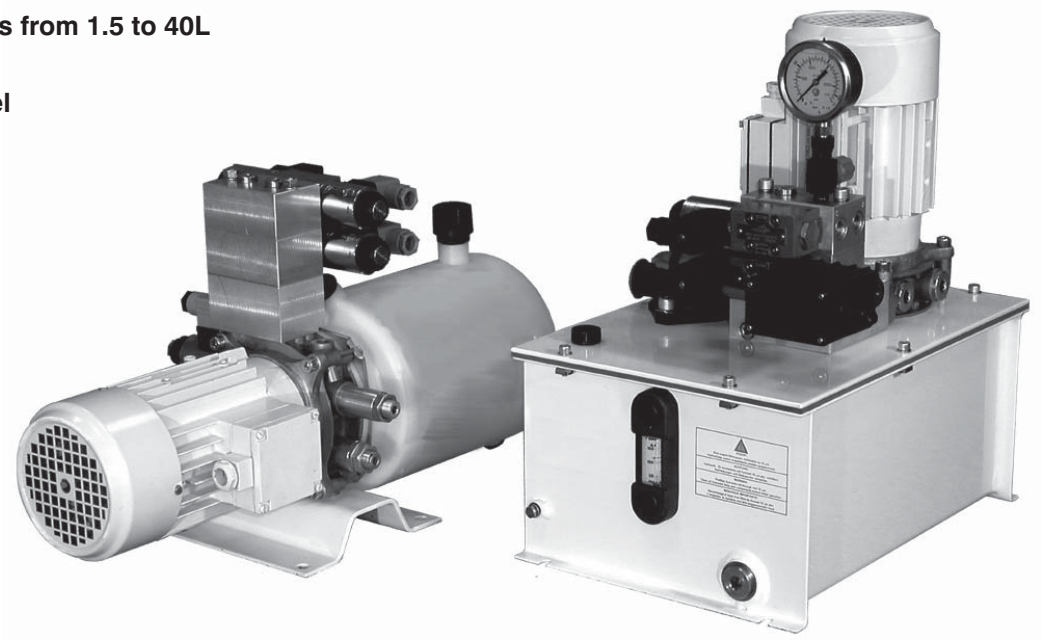
SMA 05

p_{max} up to 250 bar • Q_{max} up to 17 L/min

HA 7212
12/2012

Replaces
HA 7212 6/2008

- **Compact power packs for the use in lifting platforms, elevating tables, ramps, presses, machine tools, mobile applications and others**
- **5 basic hydraulic circuits in the manifold**
- **Possibility of building up an additional circuit in the form of vertical or horizontal stacking assembly**
- **Tank capacities from 1.5 to 40L**
- **Low noise level**



Functional Description

Compact hydraulic power packs are designed to fit into small envelope dimensions and can be used in lifting platforms, elevating tables, manipulators, small presses, machine tools and mobile applications.
Each power pack consists of an electric motor, a pump, a manifold and a tank. The aluminum body forms the base of the power pack, on which all the main components, including the hydraulic elements, are mounted. The function of the power packs is apparent from the respective hydraulic circuit diagrams. The desired combination of particular components and hydraulic elements can be defined by reference to the ordering code and the respective tables.
The hydraulic circuits can be accomplished in sizes 03, 04 and 06. The size 03 is in a form of sectional directional valves, and does not enable any extension by valves for controlling the flow rate and the pressure.
The mounting position of the power pack is horizontal or vertical - see the Power Pack Dimensions on pages 11 to 17. All ports have G 1/4 internal threads (the thread G3/8 is to agreed with manufacturer).
With the standard model the connecting ports A, B of the components of the vertical stacking assembly are oriented onto one side. Orientation of ports A, B each onto another side is to be agreed with the manufacturer.
The basic combinations of electric motors and pumps, as well as their code designations, are shown in tables 1, 2 and 3.

Information regarding the basic power pack surface treatment is on page 3.

Ordering Code

SMA 05-□ / □ . □ - □ - □ □ . □ - □ □ □ / □

Compact Power Pack

Pump displacement in cm³

Series X		Series P	
0.32	**03**	0.8	**08**
0.40	**04**	1.2	**12**
0.50	**05**	1.6	**16**
0.63	**06**	2.1	**21**
		2.5	**25**
		3.3	**33**
		3.6	**36**
		4.4	**44**
		4.8	**48**
		5.8	**58**
		6.2	**62**
		7.9	**79**

Code of the electric motor
(see tables 1, 2 and 3)

DC electric motor
with switch **R**

Single-phase electric motor
without starting module **0**
with starting module **M**

Thre-phase electric motor **0**

Type of hydraulic circuit
see table on pages 7 and 8

Tank code
see pages 11 - 16

Type of filter used

0	without filter
S	suction filter
R*	return line filter without indication
E*	return line filter with el. indication
M*	return line filter with manometer

* for tank codes 56 - 60 only

Foot bracket

0	without foot bracket
F	low foot bracket
K	high holder (for tank codes 40 - 45 only)

Type of stacking assembly

0	Without stacking assembly
A	Configuration A
B	Configuration B
C	Configuration C
D	Configuration D
E	Configuration E
F	Configuration F

(see page 12)

Number of add-on units

0	Without stacking assembly
1	1Section
2	2 Sections
3	3 Sections
4	4 Sections
5	5 Sections

(see page 12)

Nominal size of stacking assembly elements

0	Without stacking assembly
3	Size 03
4	Size 04
6	Size 06

(see page 12)

Solenoid voltage

01200	12V DC
02400	24V DC
20500	205V DC
23050	230V / 50 (60)Hz

Technical Data

Flow rate	L/min	to tables 1, 2 and 3		
Working pressure	bar	to tables 1, 2 and 3		
Tank capacity	L	1.5 - 40		
Type of pump		external gear pump, left-hand rotation		
Nominal pressure / max. pressure	bar	to tables 1, 2		
Power of electric motor		to tables 1, 2 and 3		
Type of electric motor		single phase	three phase	DC
Voltage of the electric motor	V	230	230/400	12/24
Frequency	Hz	50	50	-
Electric motor enclosure type / insulation class		IP 55/F	IP 55/F	IP 43/F
Voltage of directional valves	V	12DC, 24DC, 205DC, 230AC		
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51 524		
Oil Conductivity	pS/m	≥ 500 on 20° C		
Viscosity range	mm^2/s	20 ... 100		
Max. degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999).		
Filtration (suction/return/)	µm	60/12		
Fluid temperature range	°C	0 ... +70		
Fluid temperature range for a short term 10 minute max.	°C	-20 minimum	+80 maximum	
Ambient temperature range	°C	-25 ... +50		
Thread of the connectiong ports P, T, A, B, M		G1/4 (A, B G3/8 - per request)		
Working position		horizontal, vertical		

Standard Surface Treatment

Model	Material used	Surface treatment
Cylindrical sheet tank	Sheet steel	Komaxit RAL 7030
Square sheet tank/cover	Sheet steel	Komaxit RAL 7030
Cylindrical plastic tank	BOREALIS ME 8131 (transparent)	Without surface treatment
Square plastic tank	MOSTEN (transparent)	Without surface treatment
DC electric motor		Zinc coated
AC electric motor		RAL 7030
Other components to manufacturer standard		

Other surface treatment - is to agreed with manufacturer.

Tab. 1a

Code of the three-phase motors			Code of the pump															
			03 X-...		**04** X-...		**05** X-...		**06** X-...		**08** P2-...		**12** P2-...		**16** P2-...		**21** P2-...	
$p_{max.}$ ** [bar]			**240**								**250**							
400V	n[1/min]	p[kW]	Q/$p_{n.}$* [L/min] / [bar]															
9	1320	0,12	0,3	160	0,4	130	0,6	100	0,7	80	0,9	65	1,4	40	1,8	30		
10	1320	0,18	0,3	240	0,4	190	0,6	150	0,7	120	0,9	95	1,4	60	1,8	45	2,5	35
11	1395	0,25			0,5	200	0,6	200	0,8	160	0,9	125	1,4	80	1,9	60	2,6	45
12	1400	0,37							0,8	200	0,9	180	1,4	120	1,9	90	2,6	70
13	1390	0,55									0,9	200	1,4	180	1,9	135	2,6	105
14	1400	0,75											1,4	200	1,9	180	2,6	140
15	1410	1,10													2,0	200	2,6	200
16	1410	1,50																
17	1425	2,20																
18	1425	3,00																
27	2745	0,18	0,7	115	0,9	90	1,2	75	1,5	60	1,9	45	2,8	30				
28	2740	0,25	0,7	160	0,9	130	1,2	100	1,5	80	1,9	65	2,8	40	3,8	30		
29	2790	0,37	0,7	200	0,9	185	1,2	150	1,5	115	1,9	90	2,9	60	3,9	45	5,2	35
30	2820	0,55					1,2	200	1,5	175	1,9	135	2,9	90	3,9	65	5,3	50
31	2850	0,75							1,5	200	1,9	180	2,9	120	4,0	90	5,3	70
32	2850	1,10									1,9	200	2,9	175	4,0	130	5,3	100
33	2855	1,50											2,9	200	4,0	175	5,3	135
34	2855	2,20													4,0	200	5,3	200
35	2860	3,00																

Tab. 1b

Code of the three-phase motors			Code of the pump															
			25 P2-...		**33** P2-...		**36** P2-...		**44** P2-...		**48** P2-...		**58** P2-...		**62** P2-...		**79** P2-...	
$p_{max.}$ ** [bar]			**250**										**200**				**160**	
400V	n[1/min]	p[kW]	Q/$p_{n.}$* [L/min] / [bar]															
9	1320	0,12																
10	1320	0,18	3,0	30														
11	1395	0,25	3,2	40	4,2	30	4,6	25										
12	1400	0,37	3,2	55	4,2	45	4,6	40	5,6	35	6,1	30	7,4	25				
13	1390	0,55	3,2	85	4,2	65	4,6	60	5,6	50	6,1	45	7,4	35	7,9	35	10,1	25
14	1400	0,75	3,2	115	4,3	90	4,6	80	5,7	65	6,2	60	7,5	50	8,0	45	10,2	35
15	1410	1,10	3,2	165	4,3	130	4,7	115	5,7	95	6,2	90	7,5	75	8,0	70	10,2	55
16	1410	1,50	3,2	200	4,3	175	4,7	160	5,7	130	6,2	120	7,5	100	8,0	95	10,2	75
17	1425	2,20			4,3	200	4,7	200	5,8	190	6,3	175	7,6	145	8,1	135	10,4	105
18	1425	3,00									6,3	200	7,6	195	8,1	180	10,4	145
27	2745	0,18																
28	2740	0,25																
29	2790	0,37	6,3	30														
30	2820	0,55	6,4	40	8,6	30	9,3	30	114	25								
31	2850	0,75	6,5	55	8,7	45	9,4	40	11,5	30	12,6	30	15,2	25				
32	2850	1,10	6,5	80	8,7	65	9,4	60	11,5	45	12,6	45	15,2	35	16,3	35		
33	2855	1,50	6,5	110	8,7	85	9,5	80	11,6	65	12,6	60	15,2	50	16,3	45		
34	2855	2,20	6,5	165	8,7	125	9,5	115	11,6	95	12,6	85	15,2	70	16,3	65		
35	2860	3,00	6,5	200	8,7	170	9,5	160	11,6	130	12,6	120	15,3	100	16,3	90		

* $p_{n.}$ - nominal pressure = the highest working pressure allowed without time restriction
** $p_{max.}$ - maximum pressure = maximum pressure allowed for a short time - max. 20s

Tab. 2a

Code of the single-phase motors			Code of the pump															
			03 X-...		**04** X-...		**05** X-...		**06** X-...		**08** P2-...		**12** P2-...		**16** P2-...		**21** P2-...	
$p_{max.}$ ** [bar]			**240**								**250**							
230V	n[1/min]	p[kW]	Q/$p_{n.}$* [L/min] / [bar]															
1	1300	0,12	0,3	160	0,4	125	0,6	100	0,7	80	0,9	65	1,3	40	1,8	30		
2	1350	0,18	0,4	200	0,4	185	0,6	150	0,7	115	0,9	90	1,4	60	1,9	45	2,5	35
3	1390	0,25			0,5	250	0,6	200	0,8	160	0,9	125	1,4	80	1,9	60	2,6	45
4	1410	0,37							0,8	200	0,9	180	1,4	120	1,9	90	2,6	70
5	1370	0,55									0,9	200	1,4	180	1,9	135	2,6	105
6	1410	0,75											1,5	200	2,0	180	2,6	140
7	1410	1,10															2,6	200
8	1410	1,50																
19	2840	0,18	0,7	110	0,9	90	1,2	70	1,5	55	1,9	45	2,9	30				
20	2840	0,25	0,7	155	0,9	125	1,2	100	1,5	80	1,9	60	2,9	40	3,9	30		
21	2780	0,37	0,7	200	0,9	185	1,2	150	1,5	120	1,9	90	2,9	60	3,9	45	5,2	35
22	2820	0,55					1,2	200	1,5	175	1,9	135	2,9	90	3,9	65	5,3	50
23	2820	0,75							1,5	200	1,9	185	2,9	120	3,9	90	5,3	70
24	2845	1,10									1,9	200	2,9	175	4,0	130	5,3	100
25	2855	1,50											2,9	200	4,0	175	5,3	135
26	2810	2,20															5,3	200

Tab. 2b

Code of the single-phase motors			Code of the pump															
			25 P2-...		**33** P2-...		**36** P2-...		**44** P2-...		**48** P2-...		**58** P2-...		**62** P2-...		**79** P2-...	
$p_{max.}$ ** [bar]			**250**										**200**				**160**	
230V	n[1/min]	p[kW]	Q/$p_{n.}$* [L/min] / [bar]															
1	1300	0,12																
2	1350	0,18	3,1	30														
3	1390	0,25	3,1	40	4,2	30	4,6	30										
4	1410	0,37	3,1	55	4,2	45	4,6	40	5,6	30	6,1	30	7,4	25				
5	1370	0,55	3,1	85	4,2	65	4,6	60	5,6	50	6,1	45	7,4	35	7,8	35	10,0	30
6	1410	0,75	3,2	115	4,3	85	4,7	80	5,7	65	6,2	60	7,5	50	8,0	45	10,2	35
7	1410	1,10	3,2	165	4,3	130	4,7	115	5,7	95	6,2	90	7,5	75	8,0	70	10,2	55
8	1410	1,50	3,2	200	4,3	175	4,7	160	5,7	130	6,2	120	7,5	100	8,0	95	10,2	75
19	2840	0,18																
20	2840	0,25																
21	2780	0,37	6,3	30														
22	2820	0,55	6,4	40	8,6	30	9,3	30										
23	2820	0,75	6,4	55	8,6	45	9,3	40	11,4	35	12,5	30	15,0	25				
24	2845	1,10	6,5	85	8,6	65	9,4	60	11,5	50	12,5	45	15,1	35	16,2	35		
25	2855	1,50	6,5	110	8,6	85	9,4	80	11,5	65	12,5	60	15,1	50	16,2	45		
26	2810	2,20	6,5	165	8,6	130	9,4	120	11,5	95	12,5	90	15,1	75	16,1	70		

Attention! Pay special attention to the start-up torque of single-phase motors. Use the start-up module during start-up under pressure.

* $p_{n.}$ - nominal pressure = the highest working pressure allowed without time restriction

** $p_{max.}$ - maximum pressure = maximum pressure allowed for a short time - max. 20s

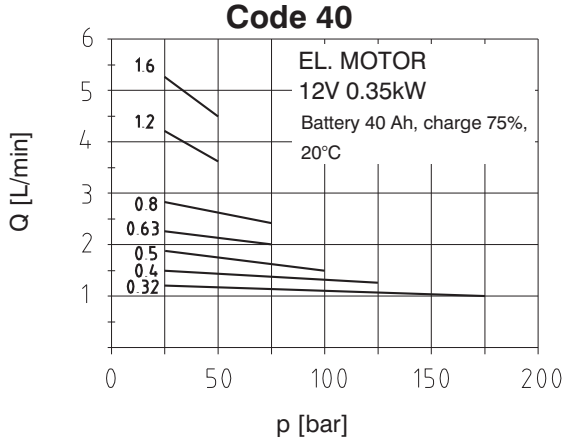
Tab. 3

12V	24V	kW	**Code of the pump 40 - 63**
Code of the electric motor			**Q** [L/min] /**p** [bar]
40	/	0,35	See characteristics on page 6
45	/	0,8	
/	**46**	1,2	
51	/	1,5	
/	**52**	2,0	
/	**63**	3,0	

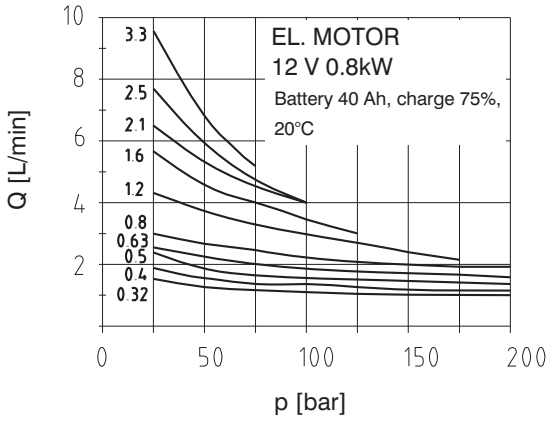
Attention! The DC motors must be loaded, so as to reduce the revolutions! Do not run the motors without pressure loading!

Characteristics

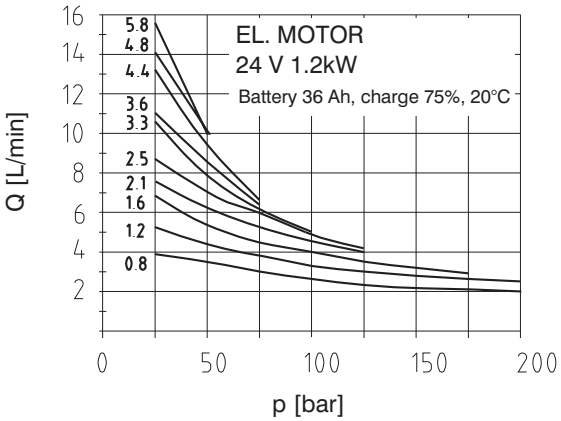
Code 40



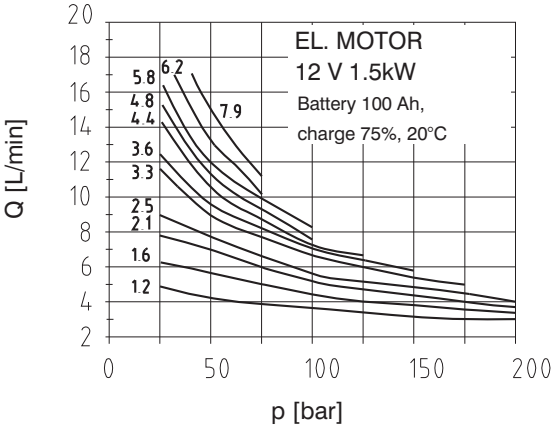
Code 45



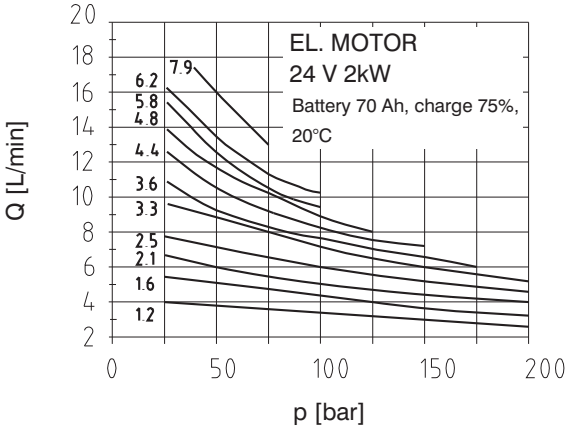
Code 46



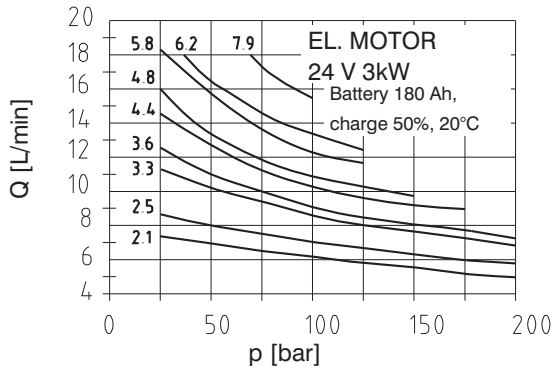
Code 51



Code 52

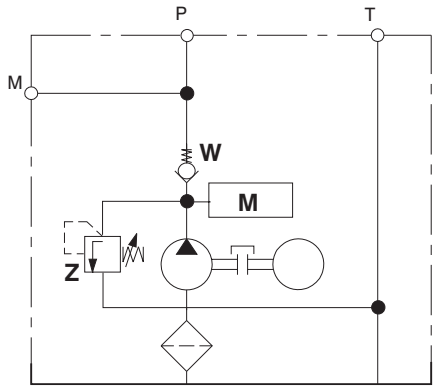


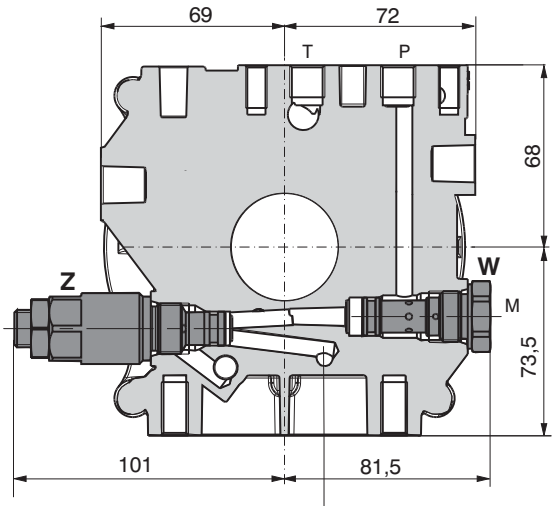
Code 63



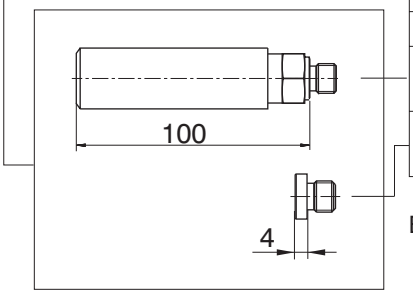
Basic Hydraulic Circuit Diagrams

A





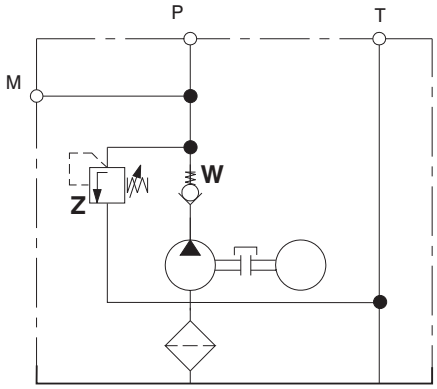
Mounted on the side of the pump via thread G1/4

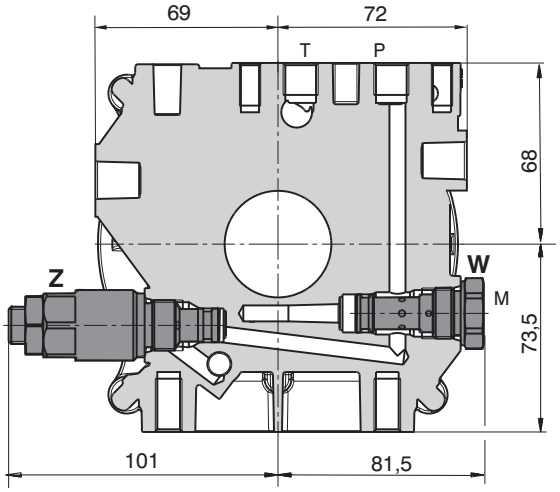


	Type	Ordering number	Symbols
M	Starting module	736-2801	
0	Plug VSTI G1/4	336 350 000 014	

Exact position of the starting module or plug ... ref. page 18.

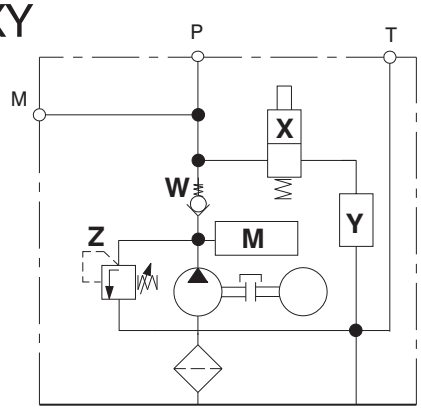
B

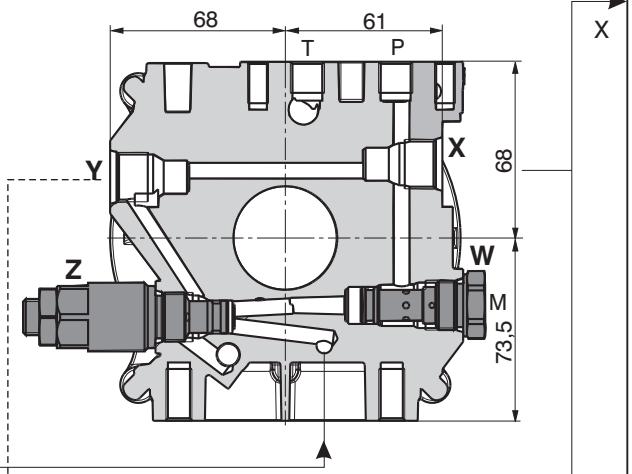




Basic Hydraulic Circuit Diagrams

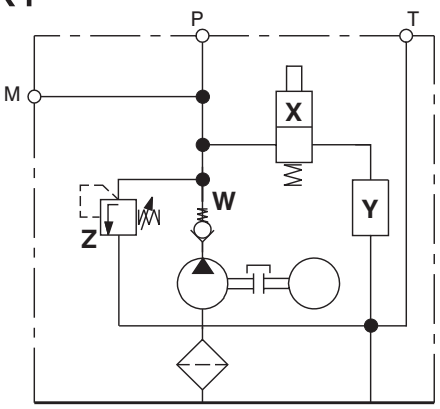
CXY

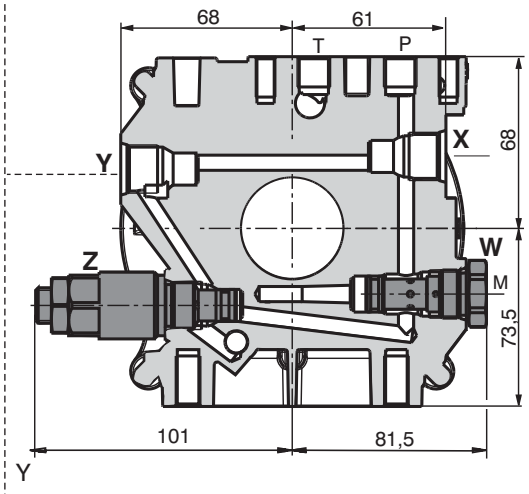




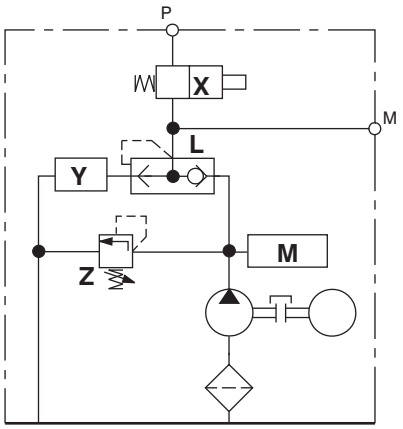
Mounted on the side of the pump via thread G1/4

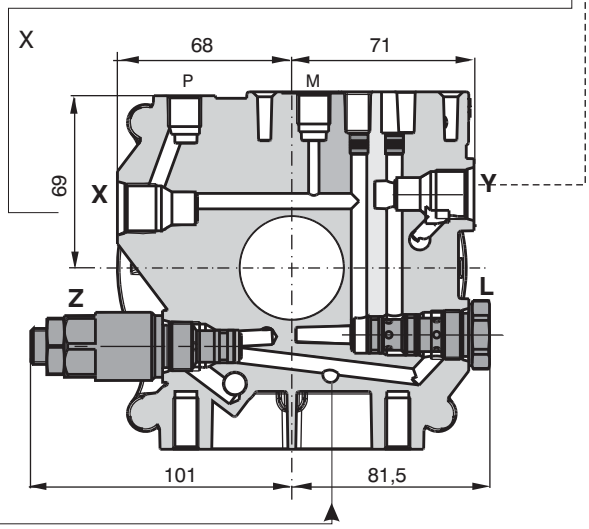
DXY

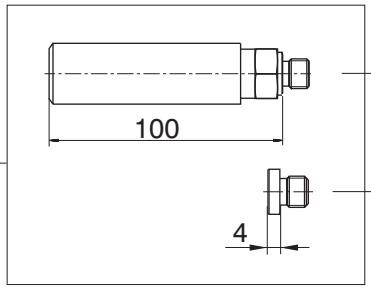




EXY



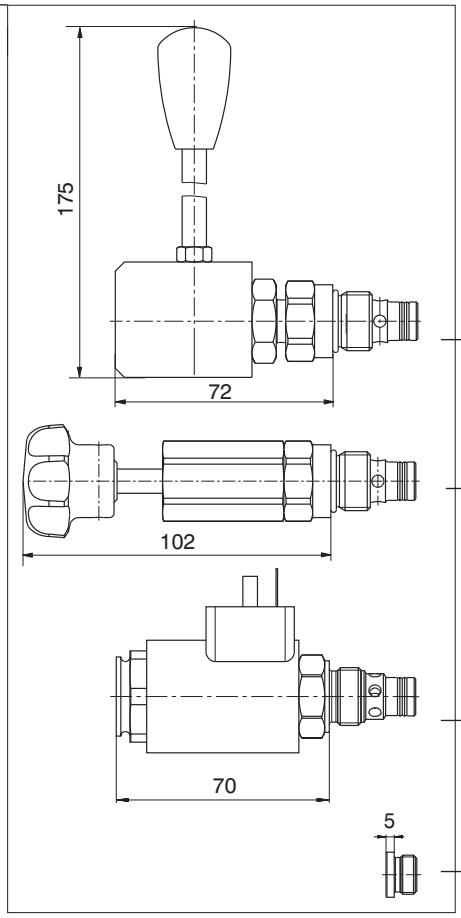


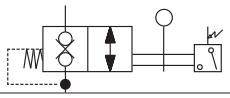
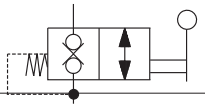
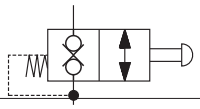
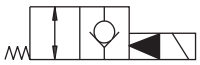
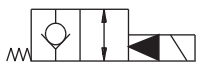


	Type	Ordering number	Symbols
M	Starting module	736-2801	
0	Plug VSTI G1/4	336 350 000 014	

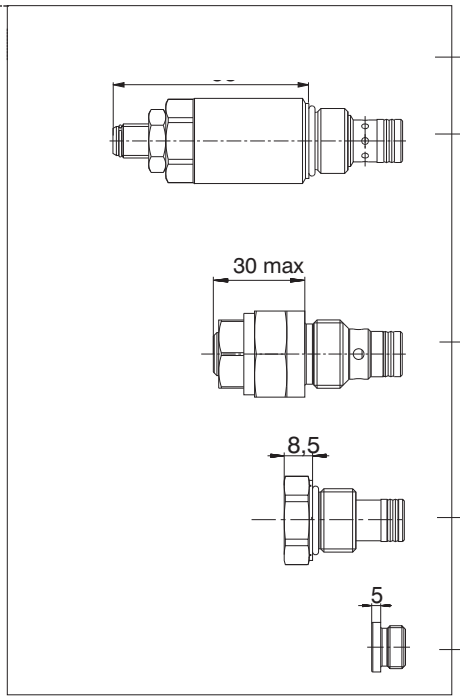
Exact position of the starting module or plug ... ref. page 18.

X



X	Type of the seat valve	Functional symbol
5	SD1M1-A2/SL3 + lever with micro switch	
4	SD1M1-A2/SL2 +lever without micro switch	
3	SD1M-A2/SL1	
2	SD3E-A2/H2O2	
1	SD3E-A2/H2L2	
0	336312341602	

Y



Y	Type of the throttle valve	Functional symbol
	Manually controlled pump – upon request	
2	**SF22A-A2/H***	
	* The size of the throttle valve corresponds regularly with the flow rate Q of the pump used. Other throttle valve size on request of the customer.	
1	VSV1-UNF	
0	531-0602 pro X = 0	
0	336 312 341 602 pro X ≠ 0	

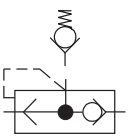
Z	**Directly Operated Pressure Relief Valves**	SR1A-A2/S	- Pressure range refer to data sheet HA 5063	
W	**Check Valves**	SC1F-A3/C		
L	**Logical Valves**	SSH1H-A3/C		

Table of Dimensions

Single-phase and three-phase motors

Code of EM	Power [kW]	Voltage [V]	Current [A]**	Speed [1/min]**	B max [mm]	C max [mm]	∅D [mm]
1	0,12	230	1,30	1300	248	139	120
2	0,18	230	1,70	1350	248	139	120
3	0,25	230	2,13	1390	261	151	141
4	0,37	230	2,82	1410	261	151	141
5	0,55	230	5,00	1370	305	157	159
6	0,75	230	6,00	1410	305	157	159
7	1,10	230	8,20	1410	314	165	174
8	1,50	230	10,00	1410	339	165	174
9	0,12	400	0,65	1320	248	101	120
10	0,18	400	0,78	1320	248	101	120
11	0,25	400	0,83	1395	261	105	140
12	0,37	400	1,14	1400	261	105	140
13	0,55	400	1,51	1390	305	127	159
14	0,75	400	1,98	1400	305	127	159
15	1,10	400	2,78	1410	314	139	174
16	1,50	400	3,61	1410	339	139	174
17	2,20	400	5,07	1425	390	148	196
18	3,00	400	6,66	1425	390	148	196
19	0,18	230	1,52	2840	248	139	120
20	0,25	230	1,90	2840	248	139	120
21	0,37	230	2,90	2780	261	151	141
22	0,55	230	4,10	2820	261	151	141
23	0,75	230	5,45	2820	305	157	159
24	1,10	230	8,00	2845	305	157	159
25	1,50	230	11,50	2855	314	165	174
26	2,20	230	14,80	2810	339	165	174
27	0,18	400	0,56	2745	248	101	120
28	0,25	400	0,73	2740	248	105	120
29	0,37	400	1,00	2790	261	105	140
30	0,55	400	1,40	2820	261	105	140
31	0,75	400	1,80	2850	305	127	159
32	1,10	400	2,54	2850	305	127	159
33	1,50	400	3,50	2855	314	139	174
34	2,20	400	4,95	2855	339	139	174
35	3,00	400	6,35	2860	390	148	196

DC electric motor

Code of EM	Power [kW]	Voltage [V]	Current [A]**	Speed [1/min]**	Load factor **		B [mm]	C [mm]	D [mm]
40	0,35	12	40	3200	S2 - 10 min	S3 - 35% ED	143	96	76
45	0,80	12	135	2700	S2 - 1 min	S3 - 4% ED	165	95	80
46	1,20	24	90	3200	S2 - 1min	S3 - 3% ED	165	95	80
51	1,50	12	220	2400	S2 - 2 min	S3 - 7% ED	179	100	117
52	2,00	24	140	2100	S2 - 3 min	S3 - 8% ED	179	100	117
63	3,00	24	200	2200	S2 - 4.5 min	S3 - 10% ED	336	121	162

** Valid for rated power values.

Load factor

Duty S1 (min) – Intended for use under continuous duty cycle conditions (load factor S1) for various press-related applications and those which involve dynamic strokes, with recommendation to consult the conditions of use with manufacturer.

Duty S2 (min) - short-time operation

The motor operates with constant load for a definite time, in order to reach the maximum permissible temperature Tmax., later on an idle period long enough to reach the equality between motor temperature and ambient temperature.

Duty S3 (%ED) - periodic operation

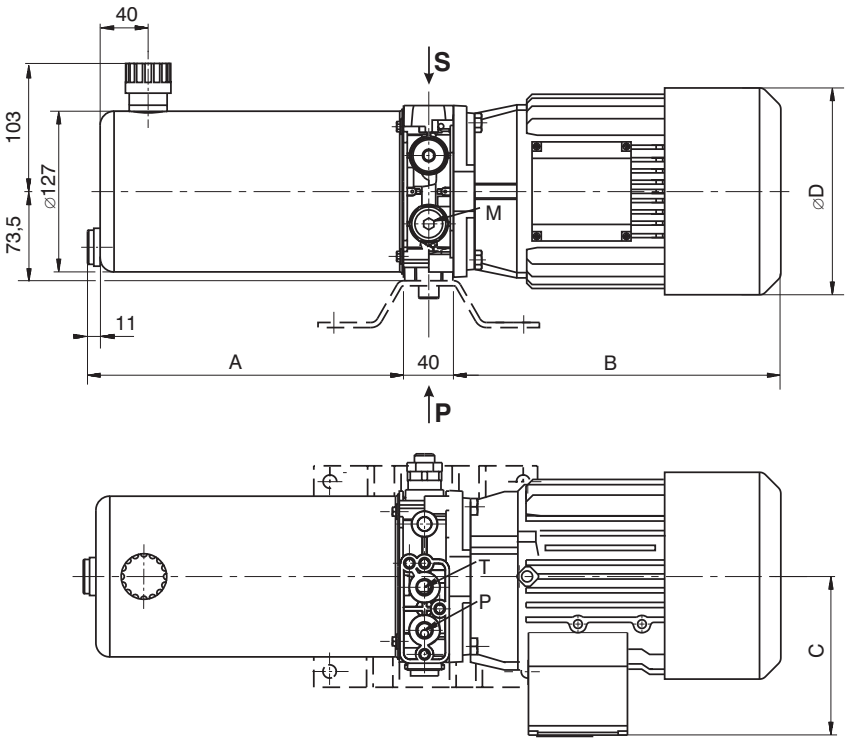
The operation of the motor is a continuous sequence of identical cycle, each compound from a load period and an idle period. During the load period the motor can be reach the maximum permissible temperature. S3 value shows, in percentage, the length of the load period respect to the total cycle-load period more idle period. The S3 curve quoted in the performance specifications is referred to a lengh'ts cycle of 10 minutes.

Valve Dimensions

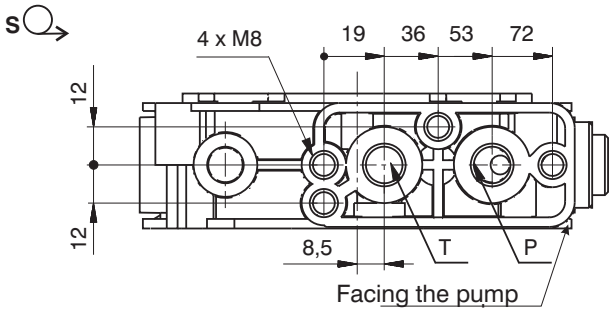
Dimensions in millimeters

Power pack with cylindrical sheet tank, single-phase and three-phase motors

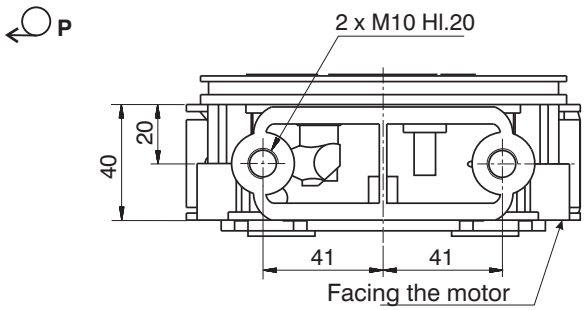
- mounting position horizontal



Connecting Block

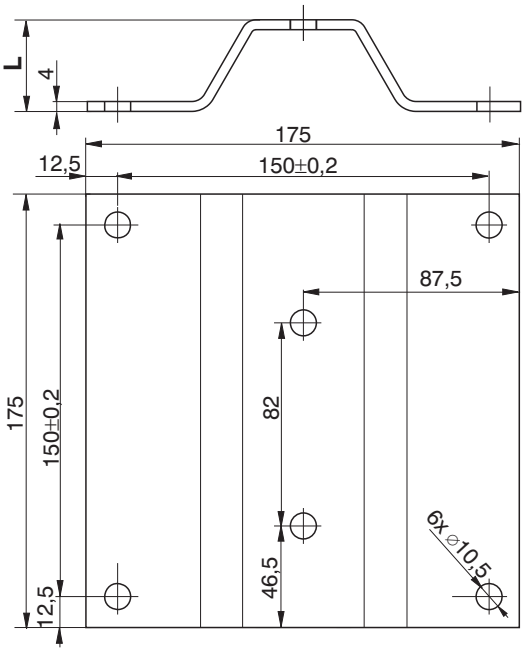


Connection holder



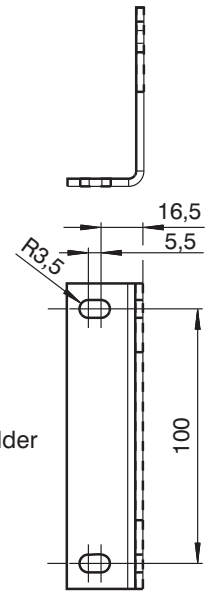
Dimensions B, C, ∅D see Table of Dimensions page 10

Code of the tank	Capacity in [L]	Working volume [L]	A
10 (sheet)	1.5	0.8	151
11 (sheet)	2	1.1	251
12 (sheet)	3	1.6	331
13 (sheet)	4	2	411



Power pack foot bracket	
Typ	Dimensions **L** [mm]
F	37
K	62

TANK SUPPORT
code 64-70 with holder of Power Pack Configuration F



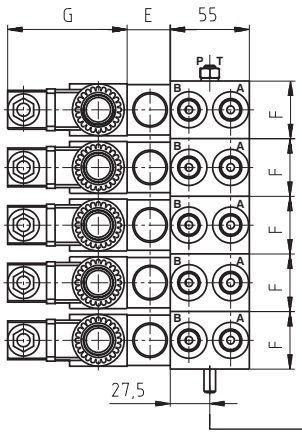
Valve Dimensions

Dimensions in millimeters

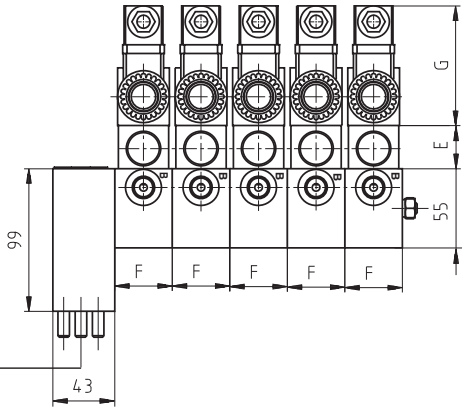
Lay - out of the Block power pack with cylindrical sheet tank

Configuration **A**
Size 04, 06

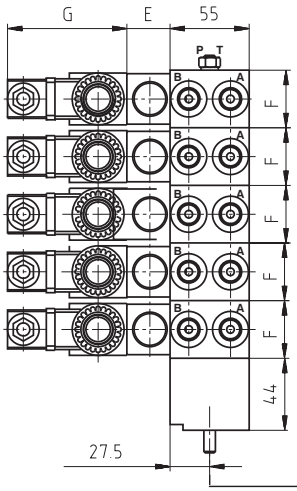
Number of
add-on units
0 ÷ 5



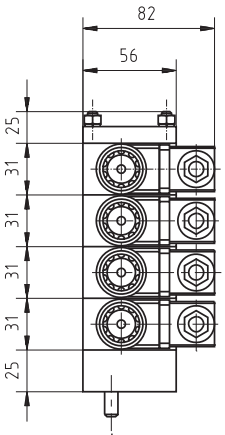
Configuration **B**
Size 04, 06



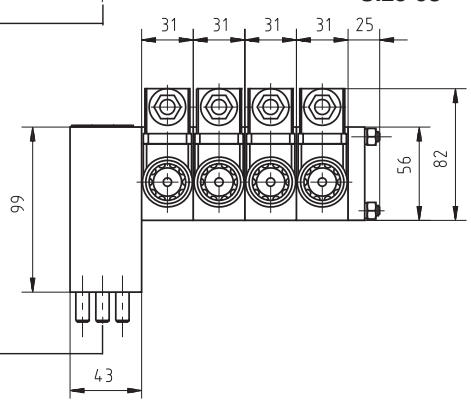
Configuration **C**
Size 04, 06



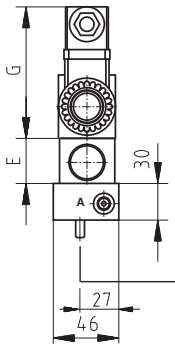
Configuration **D**
Size 03

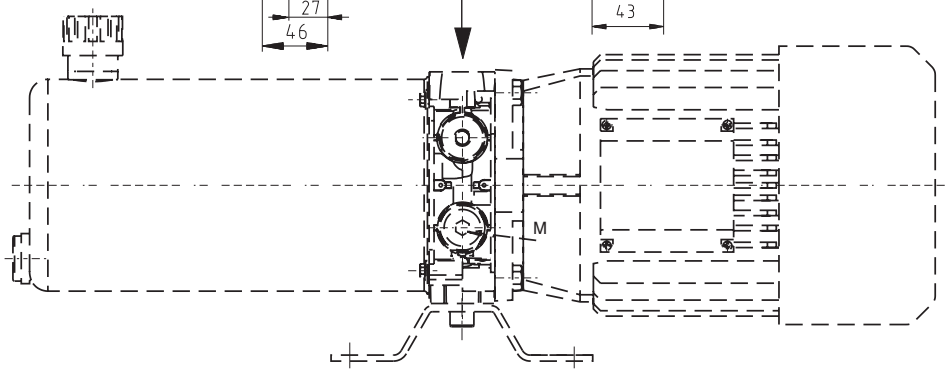


Configuration **E**
Size 03



Configuration **F**
Size 04, 06





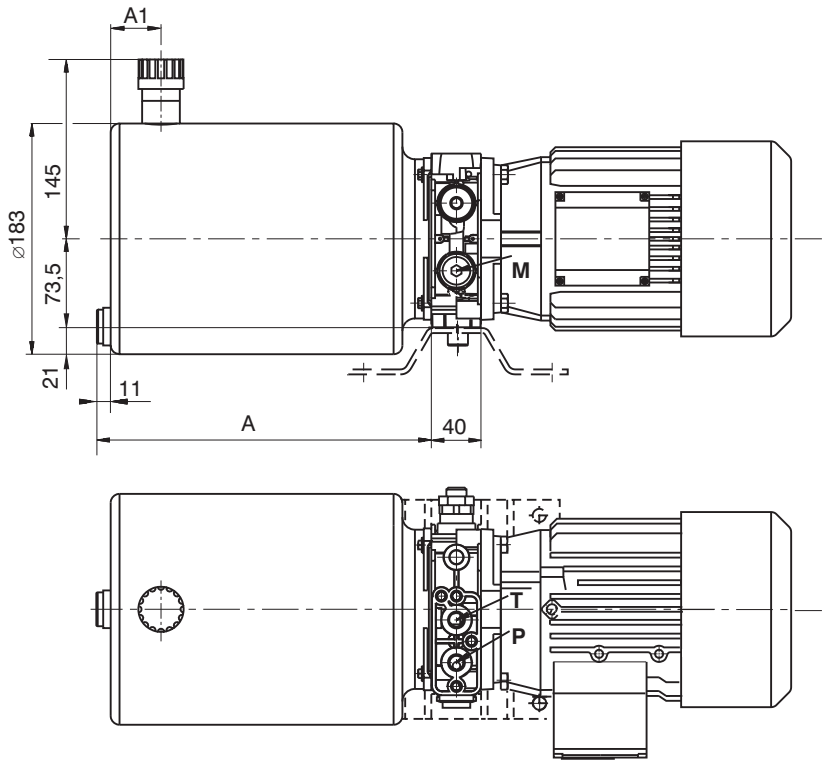
Thread of the connecting ports A, B, P, T, M - G1/4 (A, B - G3/8)

Dimension	**E [mm]**						**F[mm]**	**G[mm]**
	Pressure switch	Reducing valves	Pressure relief valves	Pilot operated check valves cartridge	Check Valves	Flow Valves		
Size 04	35	30	35	30	30	30	40	79
Size 06	43	45	40	40	31.4	40	50	92

Valve Dimensions

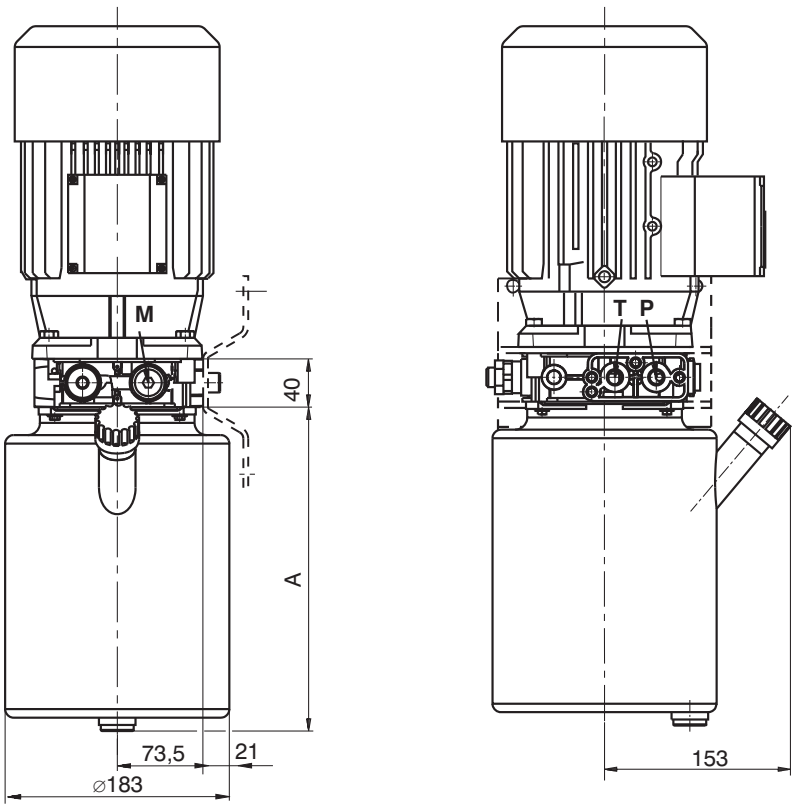
Dimensions in millimeters

Power pack with cylindrical sheet tank - mounting position horizontal



Code of the tank	Code of the tank	Working volume [L]	A	A1
20 (sheet)	6	3,7	269	40
22 (sheet)	8	4,9	349	155
24 (sheet)	10	6,1	429	195

Power pack with cylindrical sheet tank - mounting position vertical

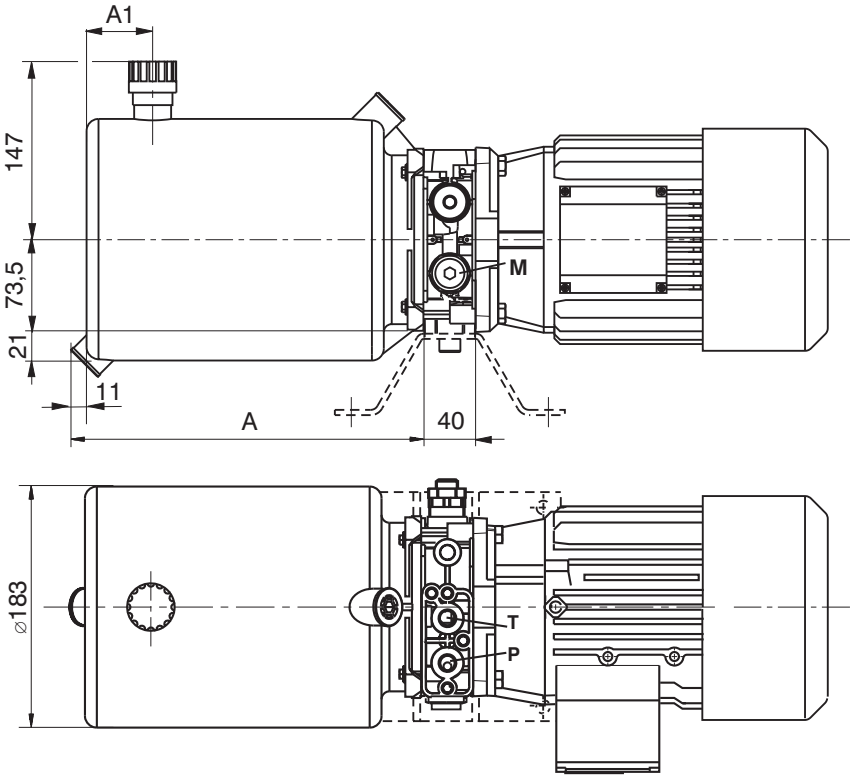


Code of the tank	Code of the tank	Working volume [L]	A
51(sheet)	6	3,4	269
53 (sheet)	8	5,4	349
55 (sheet)	10	7,4	429

Valve Dimensions

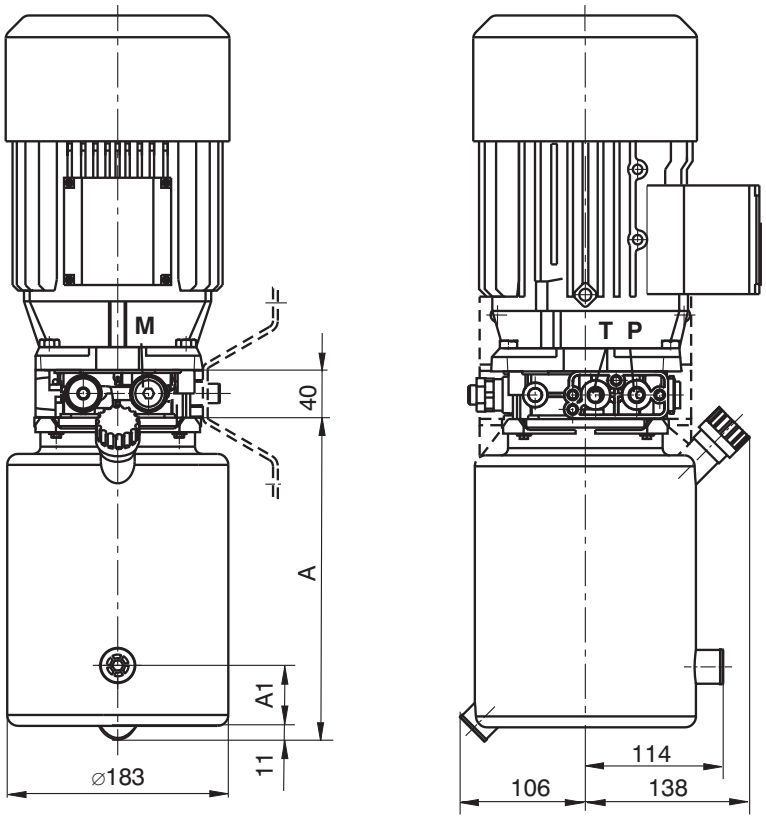
Dimensions in millimeters

Power pack with cylindrical plastic tank - mounting position horizontal



Code of the tank	Capacity in [L]	Working volume [L]	A	A1
40 (plastic)	6	3,7	280	61
42 (plastic)	8	4,9	360	121
44 (plastic)	10	6,1	440	201

Power pack with cylindrical plastic tank - mounting position vertical

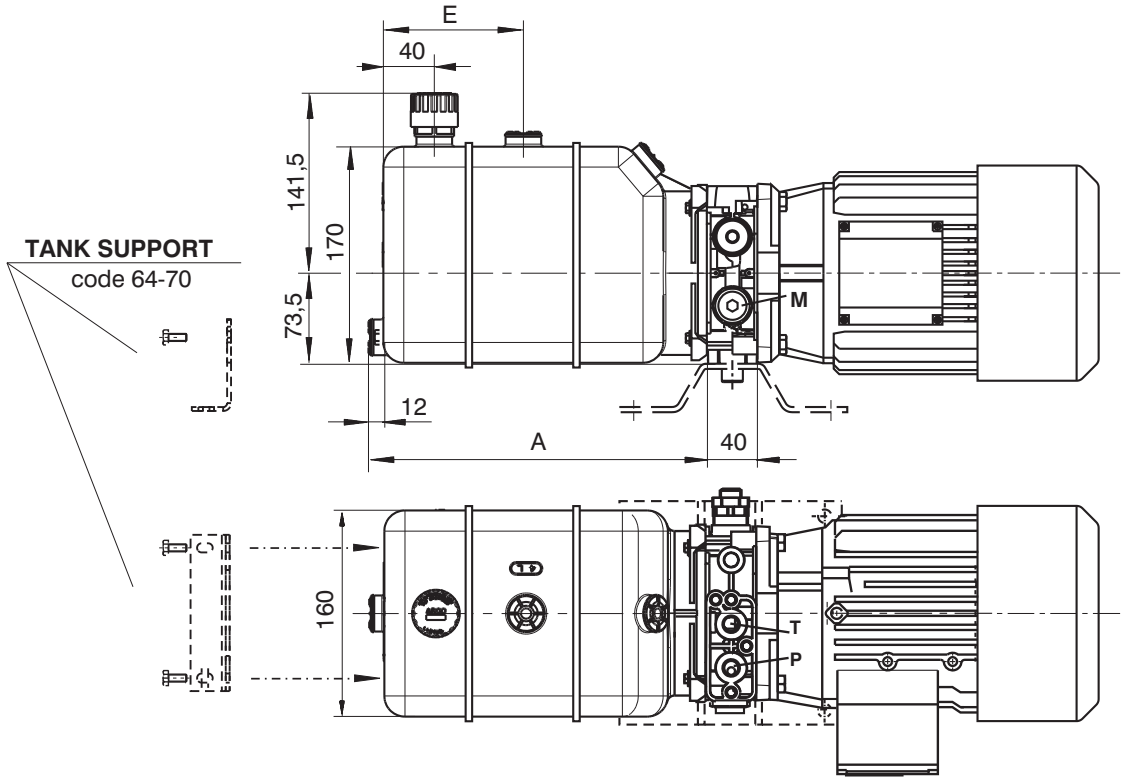


Code of the tank	Capacity in [L]	Working volume [L]	A	A1
41 (plastic)	6	3,7	280	61
43 (plastic)	8	4,9	360	121
45 (plastic)	10	6,1	440	201

Valve Dimensions

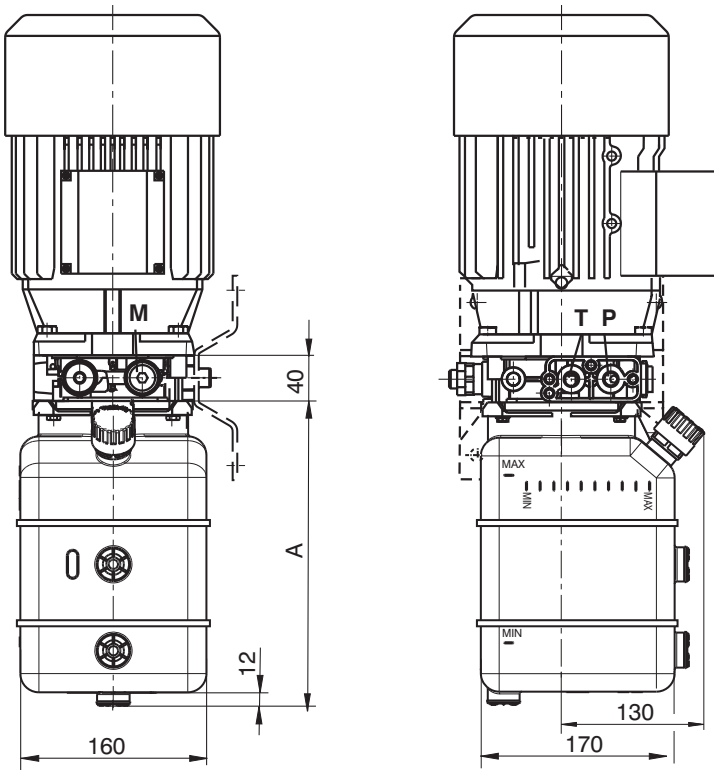
Dimensions in millimetes

Power pack with square plastic tank - mounting position horizontal



Code of the tank	Capacity in [L]	Working volume [L]	A	E
62 (Plastic)	2	1.7	178	-
64 (Plastic)	4	3.0	270	120
66 (Plastic)	6	4.5	359	165
68 (Plastic)	8	6.0	449	208
70 (Plastic)	10	7.5	543	208

Power pack with square plastic tank - mounting position vertikal



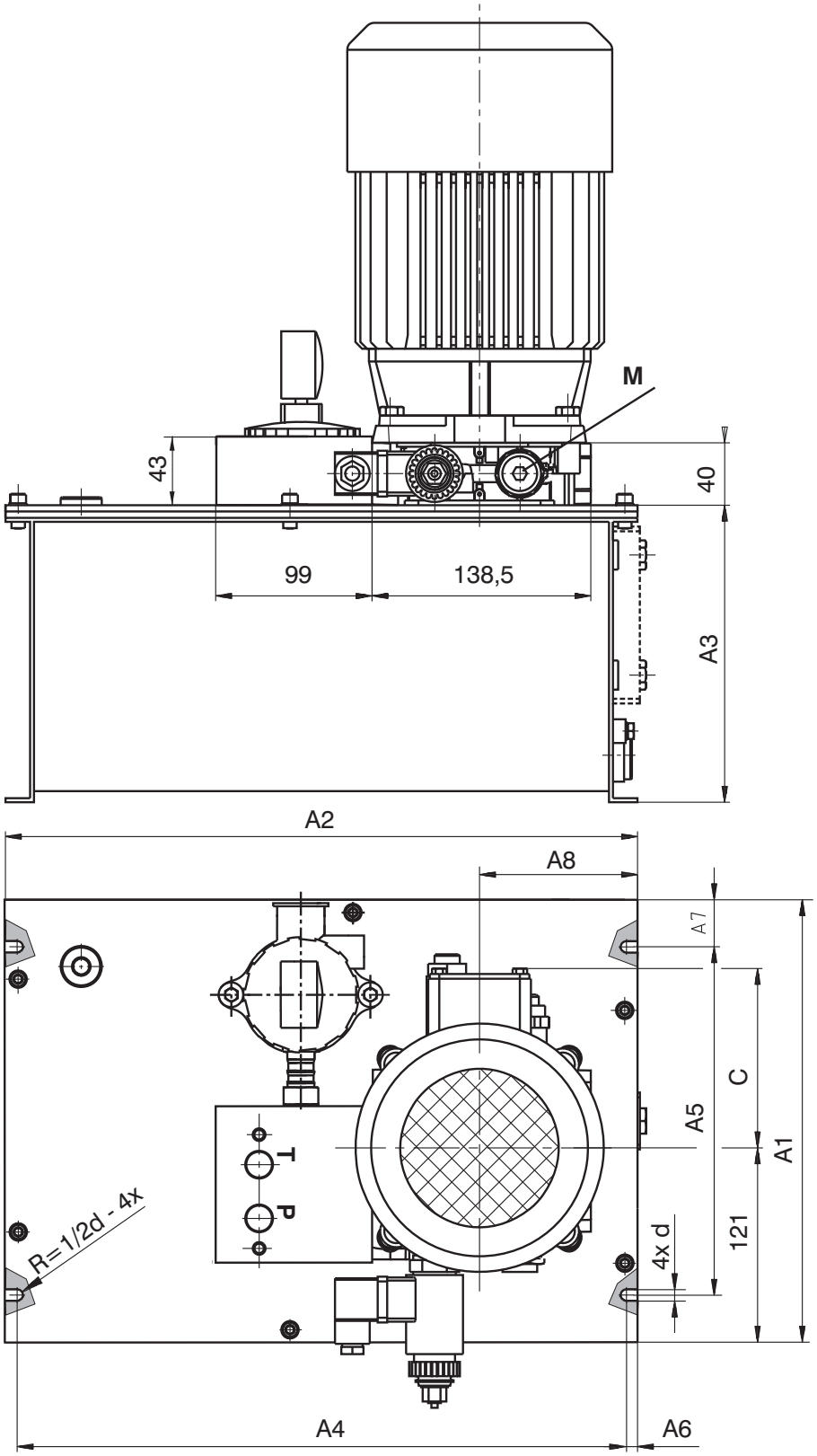
Code of the tank	Capacity in [L]	Working volume [L]	A
61 (Plastic)	2	1,3	178
63 (Plastic)	4	3,5	270
65 (Plastic)	6	5,5	359
67 (Plastic)	8	7,5	449
69 (Plastic)	10	9,5	543

Valve Dimensions

Dimensions in millimetes

Power pack with square sheet tank - single-phase and three-phase motors with return line filter

Configuration B, E



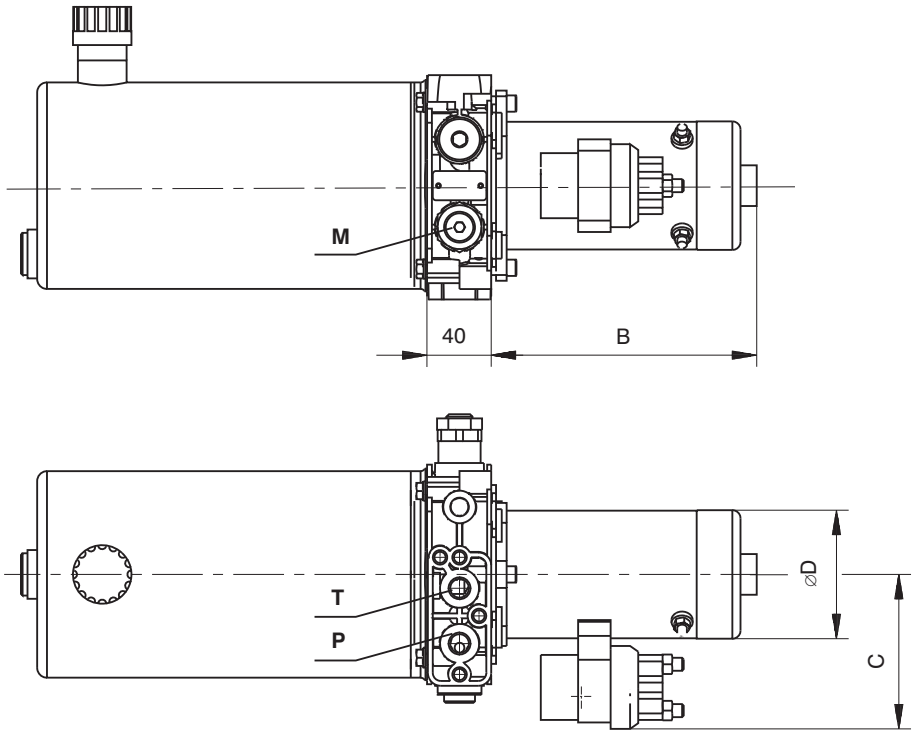
Dimensions C seehe page 10 - Table of Dimensions

Code of the tank	Capacity in [L]	Working volume [L]	A1	A2	A3	A4	A5	A6	A7	A8	d
56 (sheet)	8	4,5	280	340	165	319	220	10,5	30	100	9
57 (sheet))	10	8	280	400	188	388	220	6	30	100	9
58 (sheet)	20	16	280	400	276	388	220	6	30	100	9
59 (sheet)	30	24	320	500	287	479	260	9,5	30	132	11
60 (sheet)	40	34	320	500	366	479	260	9,5	30	132	11

Valve Dimensions

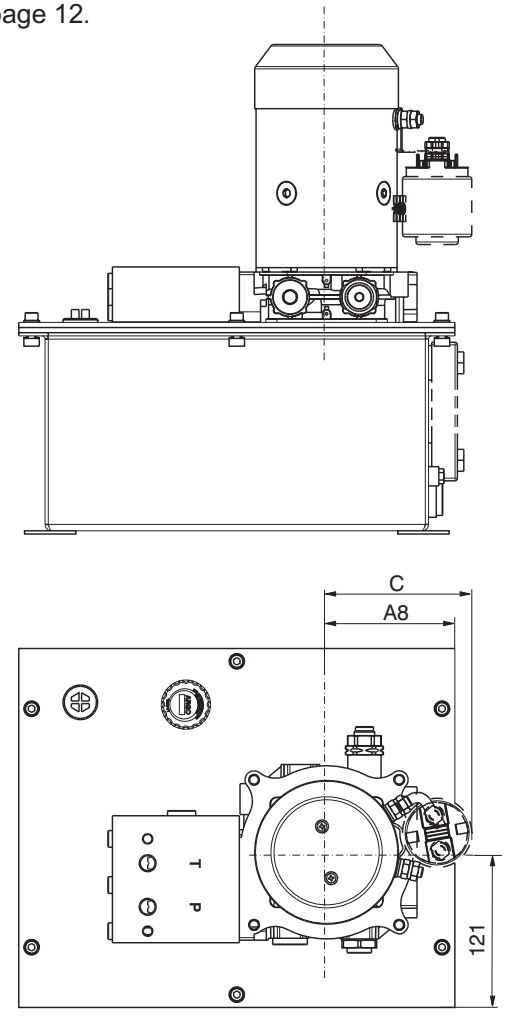
Dimensions in millimeters

Power pack with cylindrical sheet tank - with DC electric motor out return line filter



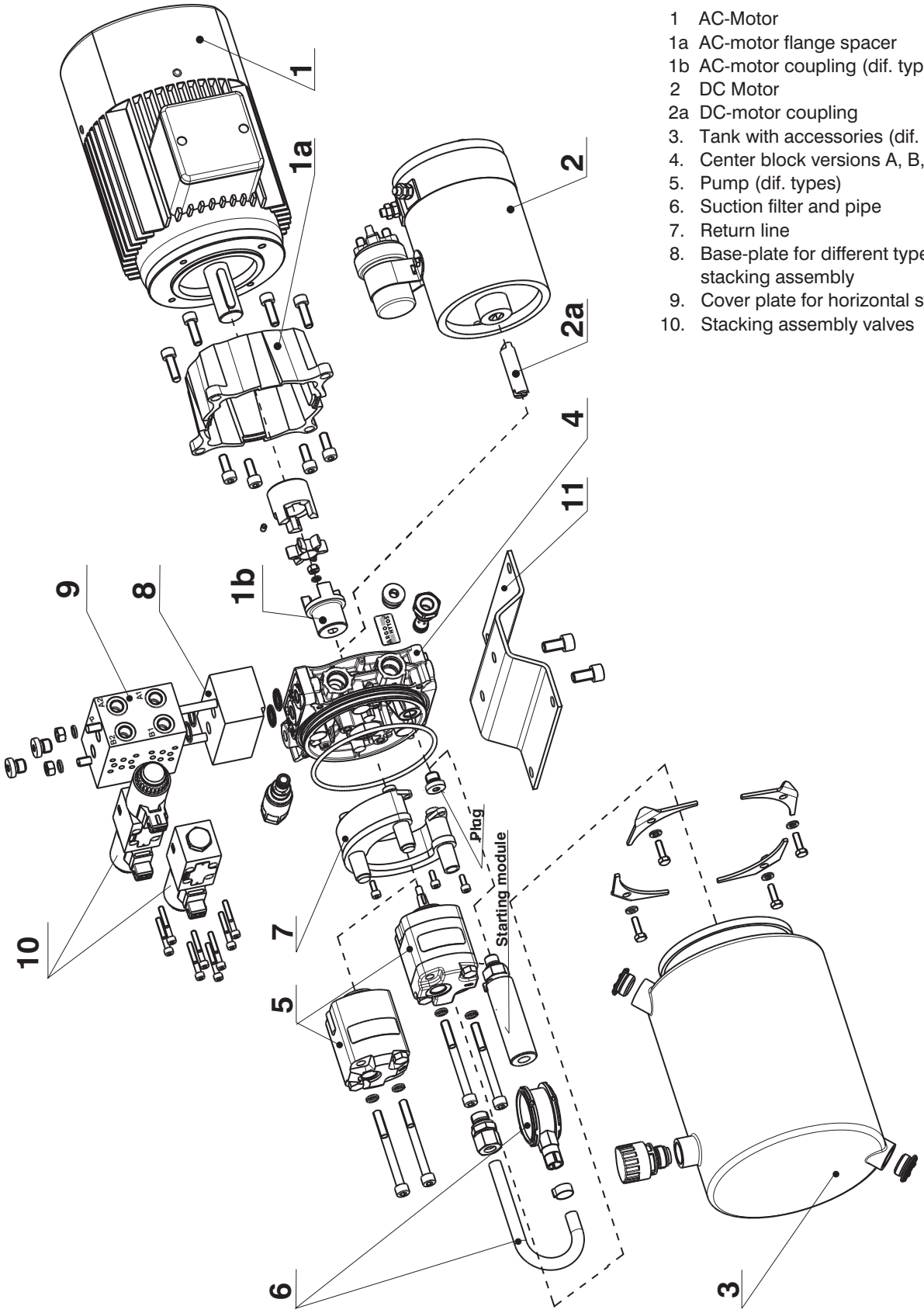
Power pack with square sheet tank - with DC electric motor out return line filter

Optional stacking assembly, versions B, E ref. page 12.



Dimensions B, C, ⌀D seehe page 10 - Table of Dimensions
Dimensions A8 seehe page 15

SMA 05 - Ilustration Figure



1 AC-Motor
1a AC-motor flange spacer
1b AC-motor coupling (dif. types)
2 DC Motor
2a DC-motor coupling
3. Tank with accessories (dif. types)
4. Center block versions A, B, C, D, E
5. Pump (dif. types)
6. Suction filter and pipe
7. Return line
8. Base-plate for different types of stacking assembly
9. Cover plate for horizontal stacking
10. Stacking assembly valves

Caution!

- The packing foil is recyclable.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

ARGO-HYTOS s.r.o. CZ - 543 15 Vrchlabí
Tel.: +420-499-403111, Fax: +420-499-403421
E-mail: sales.cz@argo-hytos.com
www.argo-hytos.com