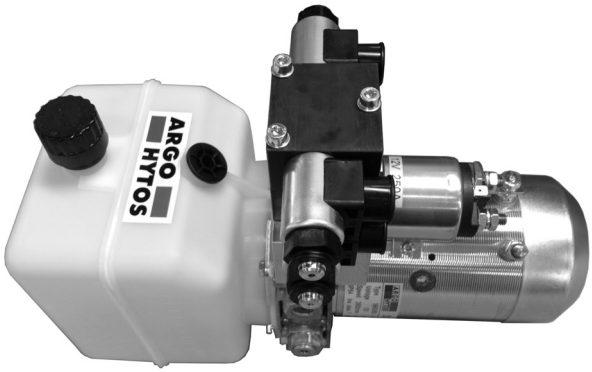
Compact Hydraulic Power Packs USMA 05

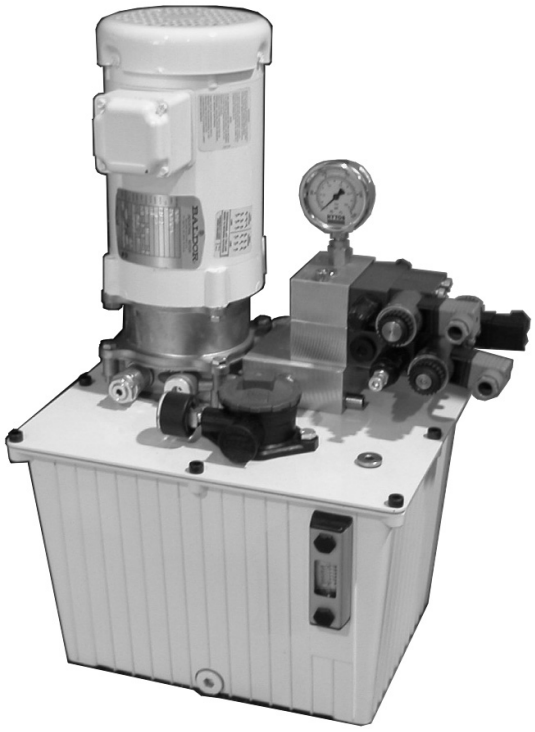
p_{max} • 3600 PSI (250 bar) • 4.5 GPM (17 L/min)

HU 7210
12/2012

Replaces
HA 7211 6/2008

- **Compact Hydraulic Power Packs for use in Lift- platforms, Lift-tables, Ramps, Presses, Machine Tools, Mobile and other applications**
- **3 basic hydraulic circuits integrated in the Die-cast Adapter Block, others per request, also optional double pumps**
- **Additional circuits can be added in form of manifolds or standard vertical or horizontal stack assemblies**
- **Usable Reservoir capacities from 0.4 to10.3 Gallon, 1.5 to 39 liter, made of Plastic or Alum.-diecastings. Custom Reservoirs per request.**
- **Gear pumps with low noise levels**





Functional Description

Each power pack consists of an electric motor, a pump, a manifold and a tank. The aluminum Die-cast 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 lay-out of additional circuits is defined by an application number which determines the manufacturer.
The hydraulic circuits can be accomplished in sizes 03, 04 and 06. The size 03 is in a form of sectional directional valves.

The mounting position of the power pack is either horizontal or vertical - see the Power Pack Dimensions on pages 10 to 15. All ports have 9/16-18 UNF SAE J1926-1 internal threads.
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

USMA 05- □ . □ □ □ □ □ □ / □ - □ □ □ □

Compact Power-Pack

Pump displacement in cm³
Series P

0.049 (0.8)	**08**
0.073 (1.2)	**12**
0.098 (1.6)	**16**
0.128 (2.1)	**21**
0.153 (2.5)	**25**
0.201 (3.3)	**33**
0.220 (3.6)	**36**
0.269 (4.4)	**44**
0.293 (4.8)	**48**
0.354 (5.8)	**58**
0.378 (6.2)	**62**
0.482 (7.9)	**79**

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

DC electric motor
with Starter Switch **R**

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

3-phase electric motor **0**

Type of hydraulic circuit
see table on pages 7

Tank code
see pages 10 - 15

Solenoid voltage

01200	12V DC
02400	24V DC
12060	120V / 50 (60)Hz

Other voltages per request - consult factory

Nominal size of stacking assembly elements

0	Without stacking assembly
3	Size 03
4	Size D02 (04)
6	Size D03 (06)

(see page 11)

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 11)

Type of stacking assembly

0	without stacking assembly
B	Configuration B
C	Configuration C
D	Configuration D
E	Configuration E
F	Configuration F

(see page 11)

Foot bracket

0	without foot bracket
F	low foot bracket

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 71 - 74 only

Technical Data

Flow rate	GPM	see tables 1, 2 and 3		
Working pressure	PSI	see tables 1, 2 and 3		
Tank capacity	gal (L)	0.528 - 11.6 (2 - 44)		
Type of pump		external gear pump, left-hand rotation		
Nominal pressure / max. pressure	PSI	see tables 1, 2		
Power of electric motor		see tables 1, 2 and 3		
Type of electric motor		single phase	three phase	DC
Voltage of the electric motor (specials for request)	V	115-230	230/460	12/24
Frequency	Hz	60	60	-
Electric motor enclosure type / insulation class		-	-	P 43/F
Voltage of directional valves	V	12DC, 24DC, 115AC/ 60Hz Other voltages - CF		
Hydraulic fluid		Hydraulic oils of power classes HM, HV to CETOP RP 91 H in viscosity classes ISO VG 32, 46 and 68		
Oil Conductivity	pS/m	≥ 500 on 68° F (20°C)		
Viscosity range	SUS (mm^2/s)	98 ... 461(20 ... 100)		
Max. degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999)		
Filtration (suction/return)	µm	60/12		
Fluid temperature range	°F (°C)	+32 ... 158 (0 ... +70)		
Fluid temperature range for a short term 10 minute max.	°F (°C)	-68 (-20) minimum +176 (+80) maximum		
Ambient temperature range	°F (°C)	-77 ... +122 (-25 ... +50)		
Thread of the connectiong ports P, T, A, B, M		9/16-18 UNF SAE J1926-1(6 SAE)		
Mounting position		horizontal, vertical		

Standard Surface Treatment

Model	Material used	Surface treatment
Aluminium tank/cover	Alu-die-cast/Steel	Komaxit RAL 7030
Plastic tank	MOSTEN (transparent)	Without surface treatment
DC electric motor		Zinc coated
AC electric motor		As per motor supplier
Other components to manufacturer standard		

Note: Other surface treatment - Consult factory

Table 1a Three-phase motor

Code of the electric motor			Code of the pump											
			08 P2-...		**12** P2-...		**16** P2-...		**21** P2-...		**25** P2-...		**33** P2-...	
$p_{max.}$ ** [PSI]			**3626**											
460V	n[R.P.M.]	p[HP]	$Q/p_{n.}$* [GPM] / [PSI]											
9	1725	1/4	0.4	928	0.6	638	0.7	479	0.9	377				
10		1/3	0.4	1233	0.6	841	0.7	638	0.9	508	1.1	421		
11		1/2	0.4	1857	0.6	1262	0.7	957	0.9	769	1.1	638	1.4	479
12		3/4	0.4	2785	0.6	1900	0.7	1436	0.9	1146	1.1	957	1.4	725
13		1			0.6	2524	0.7	1915	0.9	1523	1.1	1276	1.4	957
14		11/2					0.7	2886	0.9	2292	1.1	1900	1.4	1436
15		2							0.9	2901	1.1	2538	1.4	1914
16		3											1.4	2886
17		5												
25	3450	1/3	0.7	624	1.1	421								
26		1/2	0.7	928	1.1	638	1.4	479	1.8	377				
27		3/4	0.7	1392	1.1	943	1.4	725	1.8	566	2.2	479	2.9	363
28		1	0.7	1857	1.1	1262	1.4	957	1.8	769	2.2	638	2.9	479
29		11/2	0.7	2785	1.1	1900	1.4	1436	1.8	1146	2.2	957	2.9	725
30		2			1.1	2524	1.4	1914	1.8	1523	2.2	1276	2.9	957
31		3							1.8	2292	2.2	1900	2.9	1436
32		5									2.2	2901	2.9	2393

Table 1b

Code of the electric motor			Code of the pump											
			36 P2-...		**44** P2-...		**48** P2-...		**58** P2-...		**62** P2-...		**79** P2-...	
$p_{max.}$ ** [PSI]			**3626**						**2901**				**2320**	
460V	n[R.P.M.]	p[HP]	$Q/p_{n.}$* [GPM] / [PSI]											
9	1725	1/4												
10		1/3												
11		1/2	1.6	435	1.9	363								
12		3/4	1.6	667	1.9	551	2.1	493	2.5	406	2.7	392		
13		1	1.6	885	1.9	725	2.1	667	2.5	551	2.7	508	3.4	406
14		11/2	1.6	1320	1.9	1088	2.1	1001	2.5	827	2.7	769	3.4	609
15		2	1.6	1769	1.9	1450	2.1	1334	2.5	1102	2.7	1030	3.4	812
16		3	1.6	2654	1.9	2176	2.1	2002	2.5	1653	2.7	1537	3.4	1218
17		5					2.1	2901	2.5	2741	2.7	2567	3.4	2016
25	3450	1/3												
26		1/2												
27		3/4	3.1	334										
28		1	3.1	435	3.8	363	4.2	334						
29		11/2	3.1	667	3.8	551	4.2	493						
30		2	3.1	885	3.8	725	4.2	667						
31		3	3.1	1320	3.8	1088	4.2	1001						
32		5	3.1	2205	3.8	1813	4.2	1668						

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

Table 2a Single phase motor

Code of the electric motor			Code of the pump											
			08 P2-...		**12** P2-...		**16** P2-...		**21** P2-...		**25** P2-...		**33** P2-...	
$p_{max.}$ ** [PSI]			**3626**											
230V	n[R.P.M.]	p[HP]	$Q/p_{n.}$* [GPM] / [PSI]											
1	1725	1/4	0.4	928	0.6	638	0.7	479	0.9	377	1.1	319		
2		1/3	0.4	1233	0.6	841	0.7	638	0.9	508	1.1	421	1.4	319
3		1/2	0.4	1857	0.6	1262	0.7	957	0.9	769	1.1	638	1.4	479
4		3/4			0.6	1900	0.7	1436	0.9	1146	1.1	957	1.4	725
5		1					0.7	1915	0.9	1523	1.1	1276	1.4	957
6		11/2							0.9	2901	1.1	1900	1.4	1436
7		2											1.4	1914
8		3												
18	3450	1/3	0.7	624	1.1	421	1.4	319	1.8	261				
19		1/2	0.7	928	1.1	638	1.4	479	1.8	377	2.2	319		
20		3/4	0.7	1392	1.1	943	1.4	725	1.8	566	2.2	479	2.9	363
21		1	0.7	1857	1.1	1262	1.4	957	1.8	769	2.2	638	2.9	479
22		11/2	0.7	2785	1.1	1900	1.4	1436	1.8	1146	2.2	957	2.9	725
23		2			1.1	2524	1.4	1914	1.8	1523	2.2	1276	2.9	957
24		3					1.4	2886	1.8	2901	2.2	1900	2.9	1436

Table 2b

Code of the electric motor			Code of the pump											
			36 P2-...		**44** P2-...		**48** P2-...		**58** P2-...		**62** P2-...		**79** P2-...	
$p_{max.}$ ** [PSI]			**3626**						**2901**				**2320**	
230V	n[R.P.M.]	p[HP]	$Q/p_{n.}$* [GPM] / [PSI]											
1	1725	1/4												
2		1/3	1.6	290	1.9	247								
3		1/2	1.6	435	1.9	363	2.1	334	2.5	276	2.7	261		
4		3/4	1.6	667	1.9	551	2.1	493	2.5	406	2.7	392	3.4	305
5		1	1.6	885	1.9	725	2.1	667	2.5	551	2.7	508	3.4	406
6		11/2	1.6	1320	1.9	1088	2.1	1001	2.5	827	2.7	769	3.4	609
7		2	1.6	1770	1.9	1450	2.1	1334	2.5	1102	2.7	1030	3.4	812
8		3			1.9	2176	2.1	2002	2.5	1653	2.7	1537	3.4	1218
18	3450	1/3												
19		1/2												
20		3/4	3.1	334	3.8	276								
21		1	3.1	435	3.8	363	4.2	334						
22		11/2	3.1	667	3.8	551	4.2	493						
23		2	3.1	885	3.8	725	4.2	667						
24		3	3.1	1320	3.8	1088	4.2	1001						

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

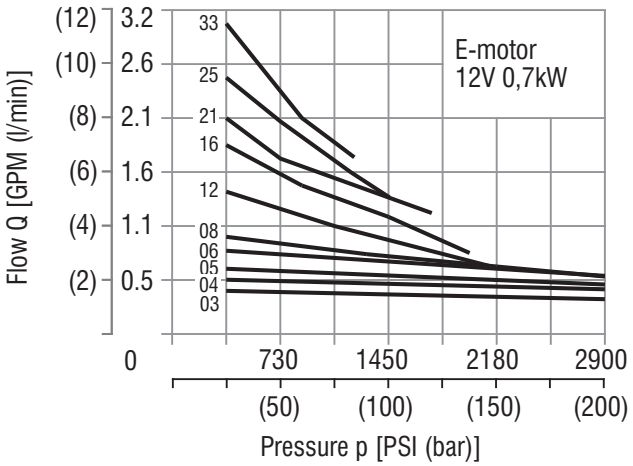
Table 3

12V	**24V**	**HP (kW)**	**Code of the pump 40 - 63**
Code of the electric motor			Q GPM (L/min) /p PSI (bar)
45	/	1 (0.70)	See characteristics on page 6
	44	1 (0.80)	
/	46	11/2 (1.20)	
51	/	2 (1.50)	
/	52	21/2 (2.00)	
/	63	4 (3.00)	

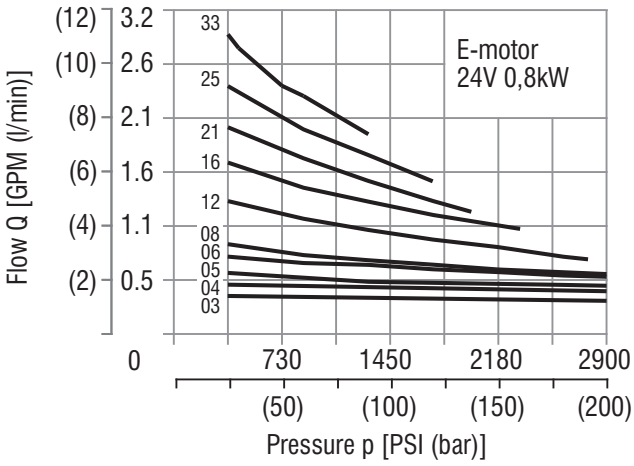
Attention! The DC motors must be loaded, so as to reduce the revolutions! Do not run the motors without pressure loading!

Characteristics

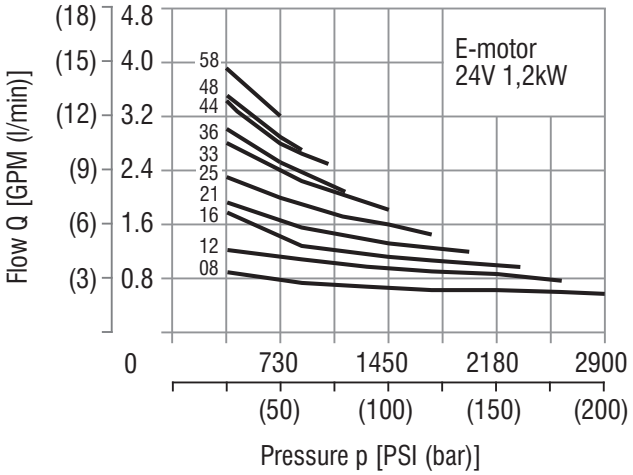
Code 45



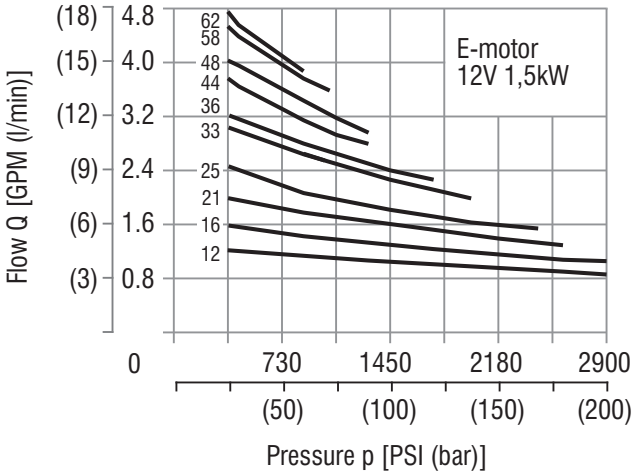
Code 44



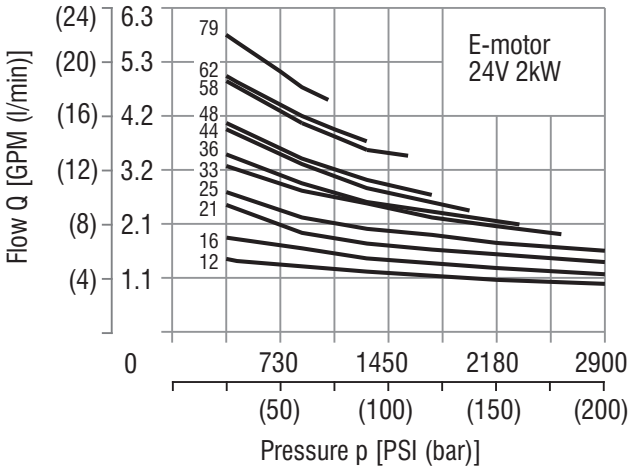
Code 46



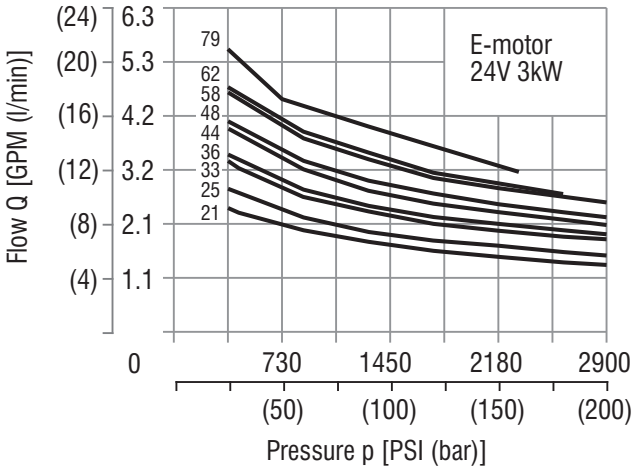
Code 51



Code 52

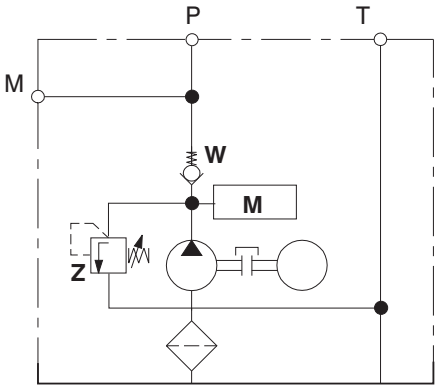


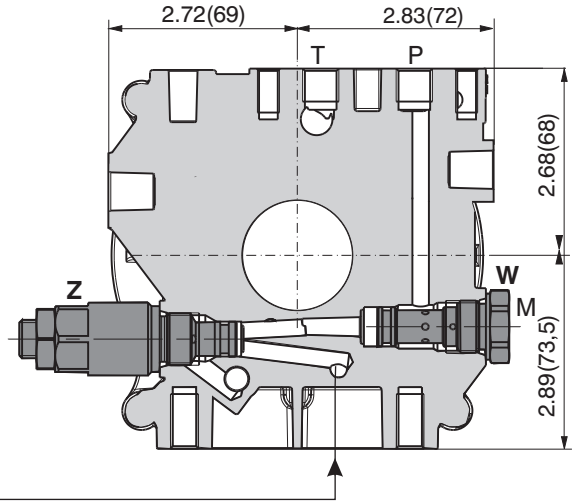
Code 63



Basic Hydraulic Circuit Diagrams

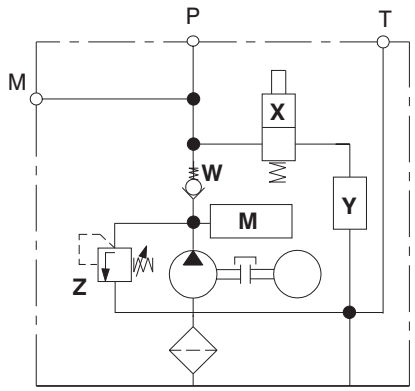
A

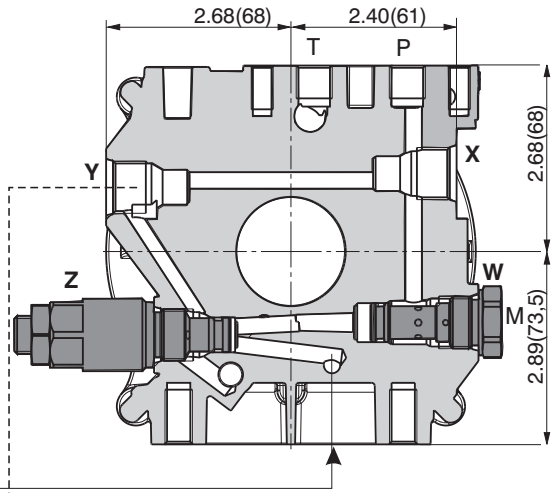




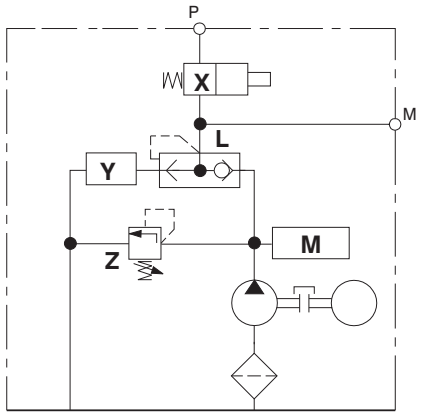
Mounted on the side of the pump via thread G1/4

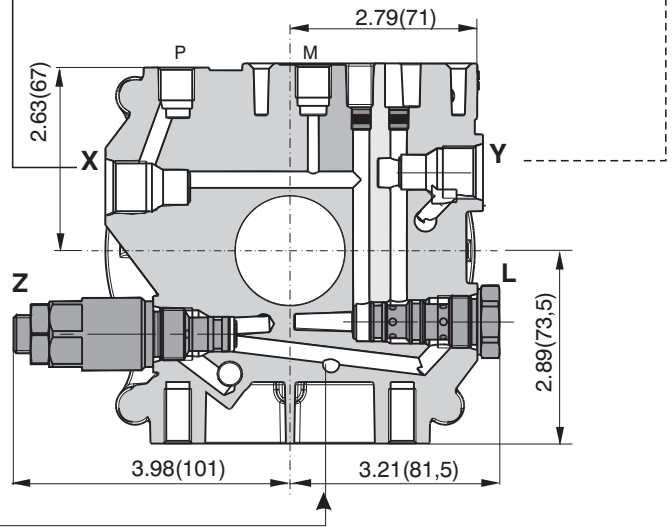
CXY



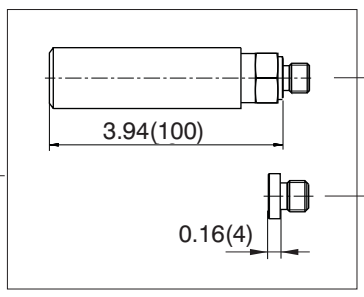


EXY





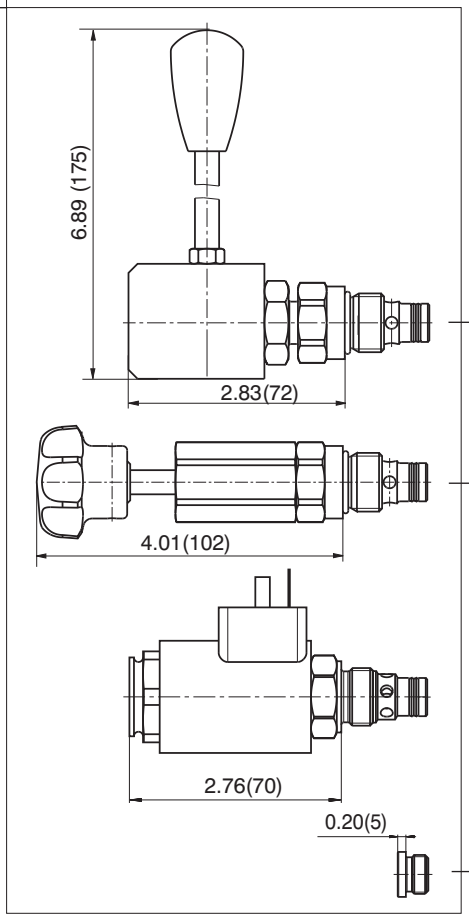
Mounted on the side of the pump via thread G1/4

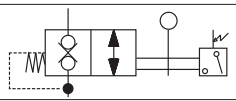
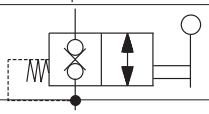
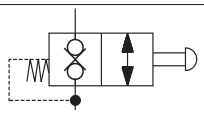
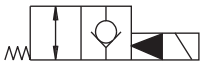
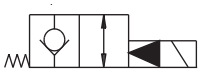


	Type	Ordering No.	Symbols
M	Starting module	736-2801	
0	Plug VSTI G1/4	336 350 000 014	

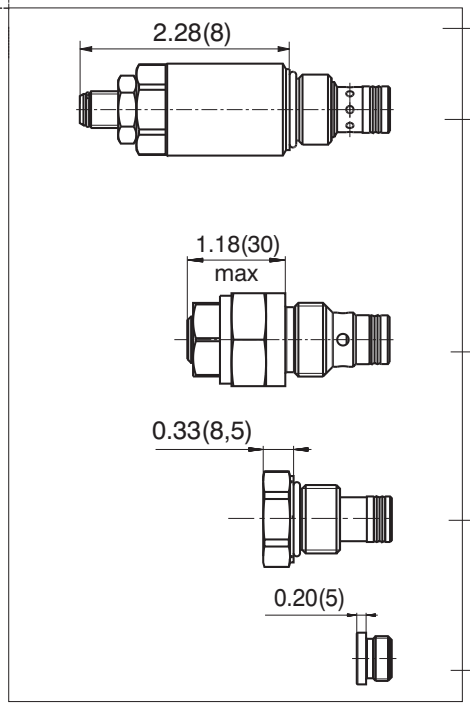
Exact position of the starting module or plug ... ref. page 18 .

X



X	Type of 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 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	

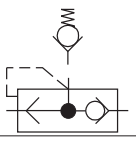
Z	**Pilot Operated Pressure Relief Valve**	SR1A-A2/S - Pressure range see data sheet HU 5063	
W	**Check Valves**	SC1F-A3/C	
L	**Logical valve**	SSH1H-A3/C	

Table of Dimensions

Single-phase and three-phase motors						- Dimensions of motor		
Code of EM	Motor	Power [HP(kW)]	Voltage [V]	Current [A]*	R.P.M. **	B [inch]	C [inch]	D [inch]
1		1/4 (0.188)	115/208-230	5/2.6-2.5	1725	9.29	4.51	6.19
2		1/3 (0.25)	115/208-230	6/3.2-3	1725	9.29	4.51	6.19
3		1/2 (0.375)	115/208-230	7.4/3.9-3.7	1725	10.39	4.51	6.19
4		3/4 (0.563)	115/208-230	8.2/4.5-4.1	1725	10.39	4.52	6.19
5		1 (0.75)	115/208-230	12.8/7-6.4	1725	10.79	5.25	7.19
6		11/2 (1.125)	115/208-230	18/8.4-8	1725	10.79	5.22	7.19
7		2 (1.5)	115/208-230	23/11.7-11.5	1725	10.79	6.00	8.49
8		3 (2.25)	115/208-230	28/15.5-14	1725	10.79	6.00	8.49
9		1/4 (0.188)	208-230/460	1.4-1.3/0.65	1725	9.29	4.53	6.19
10		1/3 (0.25)	208-230/460	1.8-1.6/0.8	1725	9.29	4.53	6.19
11		1/2 (0.375)	208-230/460	2.1-2/1	1725	10.39	4.53	6.19
12		3/4 (0.563)	208-230/460	3.2-3/1.5	1725	10.39	4.53	6.19
13		1 (0.75)	208-230/460	3.7-3.4/1.7	1725	10.79	4.51	6.19
14		11/2 (1.125)	208-230/460	5.3-5/2.5	1725	10.79	5.22	7.19
15		2 (1.5)	208-230/460	6.5-6.2/3.1	1725	12.13	5.22	7.19
16		3 (2.25)	208-230/460	8.5-8.2/4.1	1725	12.13	5.22	7.19
17		5 (3.75)	208-230/460	15-13.2/6.6	1725	13.78	6.00	8.49
18		1/3 (0.25)	115/208-230	6/3.2-3	3450	13.78	4.51	6.19
19		1/2 (0.375)	115/208-230	7.4/3.9-3.7	3450	9.29	4.51	6.19
20		3/4 (0.563)	115/208-230	9.6/5-4.8	3450	9.29	4.51	6.19
21		1 (0.75)	115/208-230	11.8/6.1-5.9	3450	10.39	5.25	7.19
22		11/2 (1.125)	115/208-230	16/8.4-8	3450	10.39	5.25	7.19
23		2 (1.5)	115/208-230	23/12-11.5	3450	10.79	5.25	7.19
24		3 (2.25)	115/208-230	29/15-14.5	3450	10.79	6.00	8.49
25		1/3 (0.25)	208-230/460	1.5-1.4/0.7	3450	12.13	4.53	6.19
26		1/2 (0.375)	208-230/460	2.1-2/1	3450	13.82	4.53	6.19
27		3/4 (0.563)	208-230/460	2.7-2.6/1.3	3450	9.29	4.53	6.19
28		1 (0.75)	208-230/460	3.7-3.6/1.8	3450	9.29	4.53	6.19
29		11/2 (1.125)	208-230/460	4.9-4.6/2.3	3450	10.39	4.53	6.19
30		2 (1.5)	208-230/460	5.7-5.4/2.7	3450	10.39	5.22	7.19
31		3 (2.25)	208-230/460	8.1-7.6/3.8	3450	10.79	5.22	7.19
32		5 (3.75)	208-230/460	13.2-12/6	3450	10.79	6.00	8.49

* Please be aware of the starting torque of the single-phase electric motors.

DC electric motors

Code of EM	Power [HP(kW)]	Voltage [V]	Current [A]**	R.P.M. **	Load factor **	B [inch]	C [inch]	D [inch]
44	0.80	24	40	3300	S2 - 2.5 min S3 - 7% ED	5.63	3.78	2.99
45	0.70	12	135	3300	S2 - 2.5 min S3 - 4% ED	6.50	3.74	3.15
46	1.20	24	90	3000	S2 - 1.2 min S3 - 4% ED	6.50	3.74	3.15
51	1.50	12	220	2600	S2 - 2 min S3 - 7.5% ED	7.05	3.94	4.61
52	2.00	24	140	2600	S2 - 1.2 min S3 - 4.5% ED	7.05	3.94	4.61
63	3.00	24	200	1700	S2 - 16 min S3 - 10% ED	13.23	4.76	6.38

** 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 lenght 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.

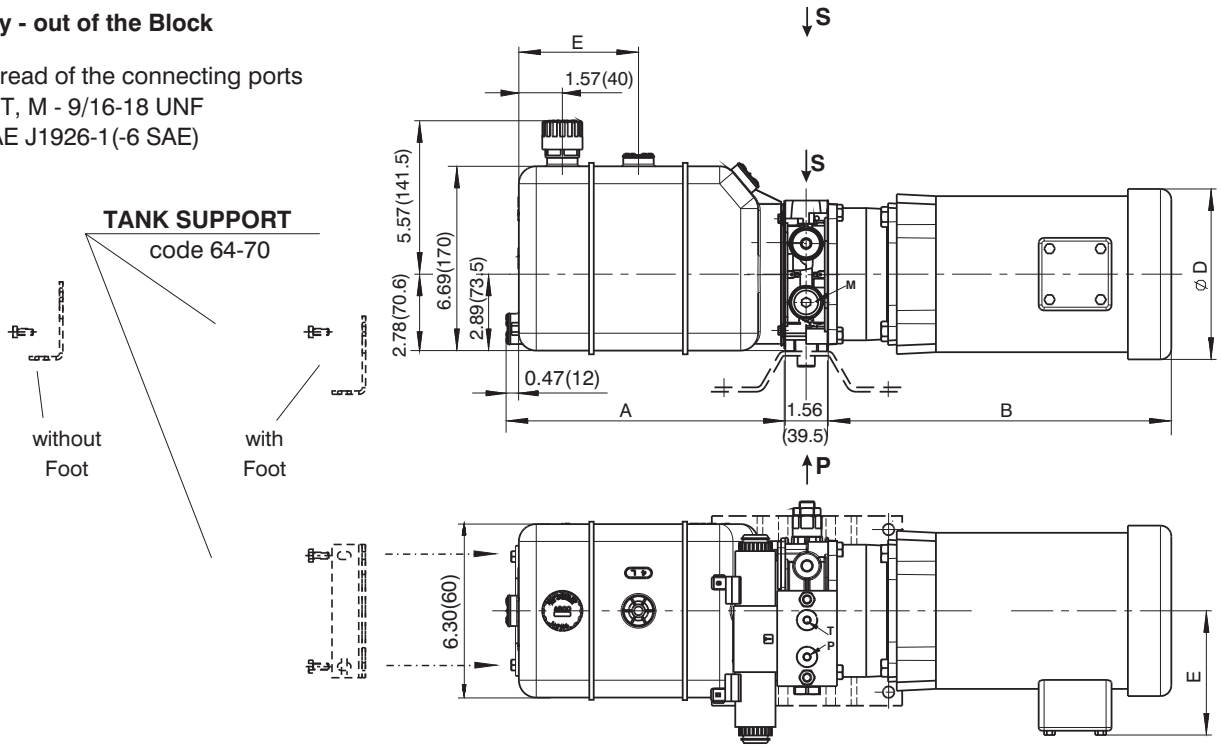
Valve Dimensions

Dimensions in inches and millimeters (in brackets)

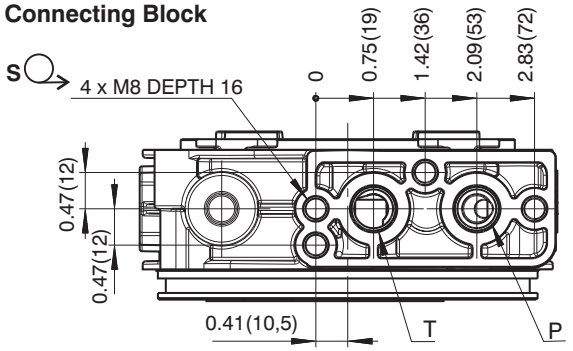
Power pack with plastic tank - mouting position horizontal

Lay - out of the Block

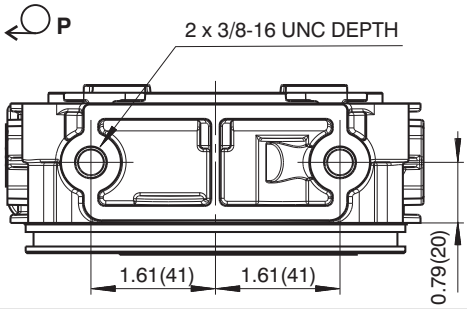
Thread of the connecting ports
P, T, M - 9/16-18 UNF
SAE J1926-1(-6 SAE)



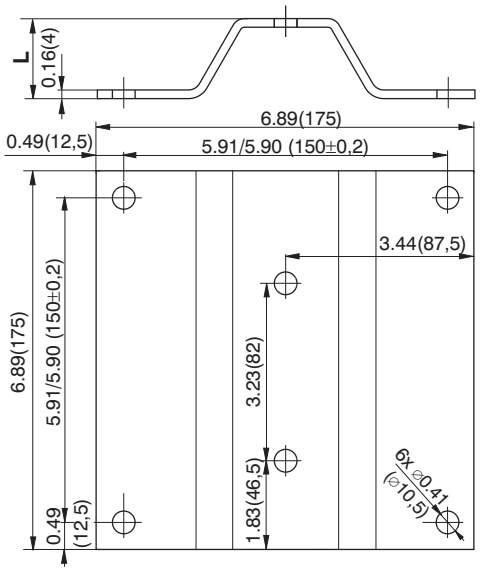
Connecting Block



Connection bracket



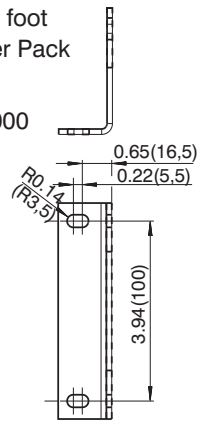
Code of the tank	Capacity in US gal [L]	Working volume US gal [L]	A	E
62	0.528 (2)	0.449 (1.7)	6.850 (174)	-
64	1.056 (4)	0.792 (3.0)	10.669 (271)	110
66	1.585 (6)	1.188 (4.5)	14.213 (361)	155
68	2.113 (8)	1.585 (6.0)	17.756 (451)	200
70	2.641(10)	1.981 (7.5)	21.299 (541)	245



Power pack foot bracket	
Typ	Dimensions **L** [Inch(mm)]
F	1.46 (37)
Part No. 23475600	

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

Part No. 23479000



For AC Power units the mounting bracket is suitable for motors up tu 2PH only Please use for larger motors the feet of the electric motor.

Valve Dimensions

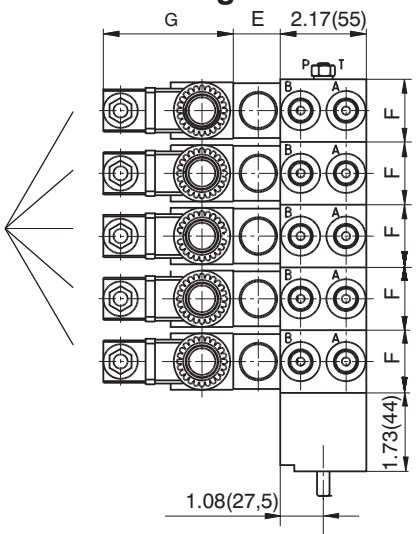
Dimensions in inches and millimeters (in brackets)

Configurations of stacking

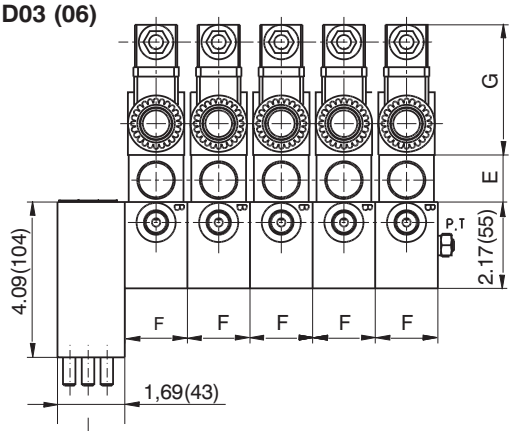
FIRST - ANGLE PROJECTION

Configuration **C**
Size D02 (04),
D03 (06)

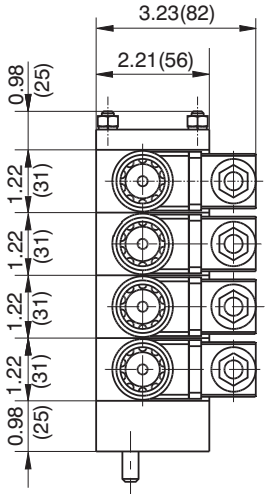
Number of
add-on units
0 ÷ 5



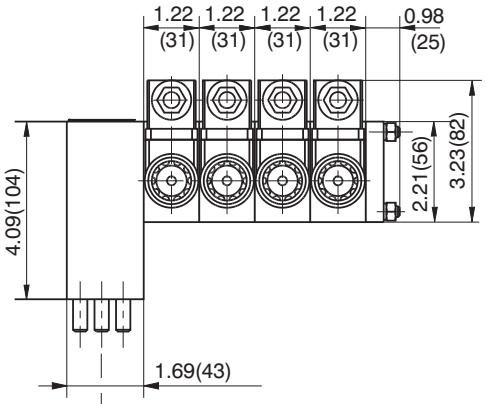
Configuration **B**
Size D02 (04),
D03 (06)



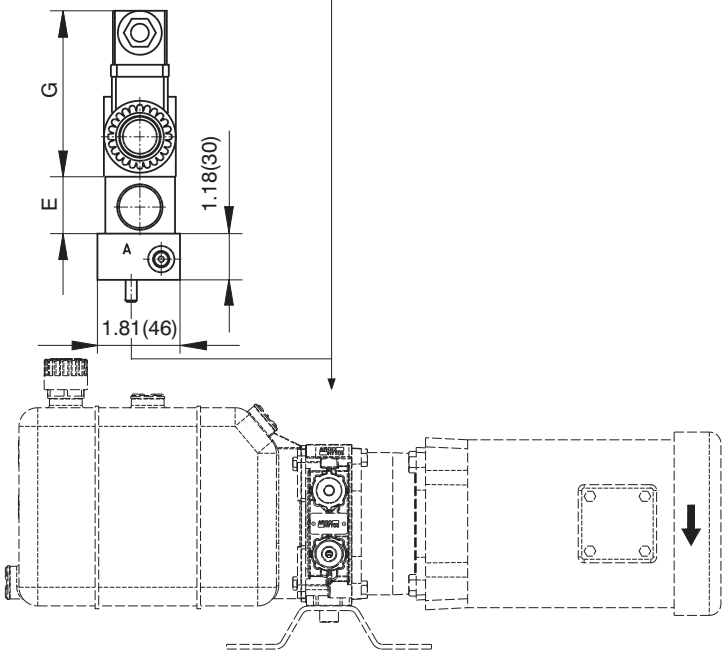
Configuration **D**
Size 03



Configuration **E**
Size 03



Configuration **F**
Size D02 (04),
D03 (06)



Thread of the connecting ports A, B, P, T, M - 9/16-18 UNF SAE J1926-1(-6SAE)

Dimension	E [in (mm)]						F [in (mm)]	G [in (mm)]
	Pressure switch	Reducing valves	Pressure relief valves	Pilot operated check valves cartridge	Check Valves	Flow Valves		
Size D02 (04)	1.38(35)	1.18(30)	1.38(35)	1.18(30)	1.18(30)	1.18(30)	1.57(40)	3.11(79)
Size D03 (06)	1.69(43)	1.77(45)	1.57(40)	1.57(40)	1.24(31.4)	1.57(40)	1.97(50)	3.62(92)

Valve Dimensions

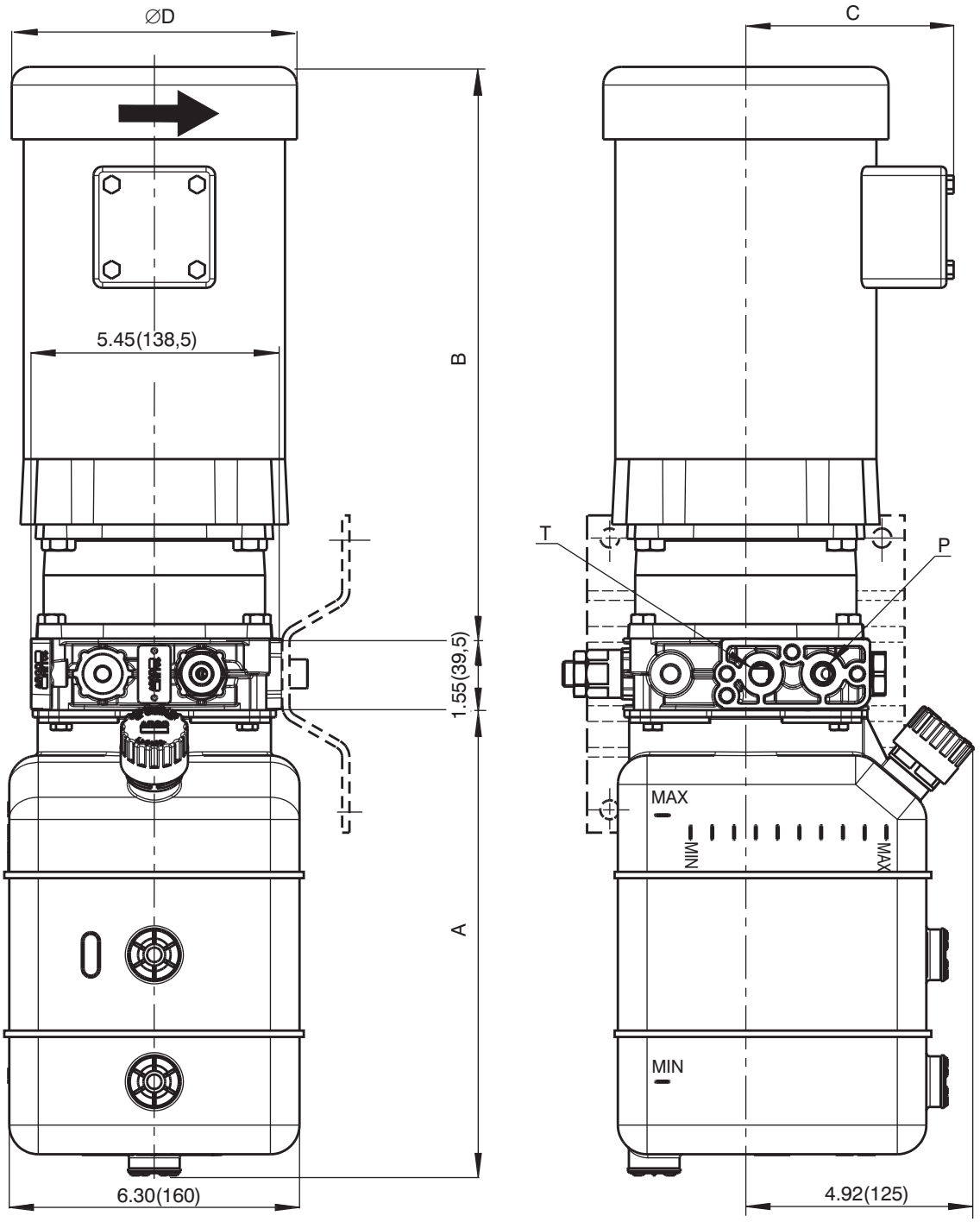
Dimensions in inches and millimeters (in brackets)

FIRST - ANGLE PROJECTION

Power pack with plastic tank - mounting position vertical

For AC Power units the mounting bracket is svitable for motors up tu 2HP only. Please use for larger motors the feet of the ectric motor.

Thread of the connecting ports
P, T, M - 9/16-18 UNF
SAE J1926-1(-6 SAE)



Code of the tank	Capacity in US gal [L]	Working volume US gal [L]	A
61	0.528 (2)	0.211 (1.3)	6.850 (174)
63	1.056 (4)	0.291 (3.5)	10.669 (271)
65	1.585 (6)	0.423 (5.5)	14.213 (361)
67	2.113 (8))	0.528 (7.5)	17.756 (451)
69	2.641(10)	2.509 (9.5)	21.299 (541)

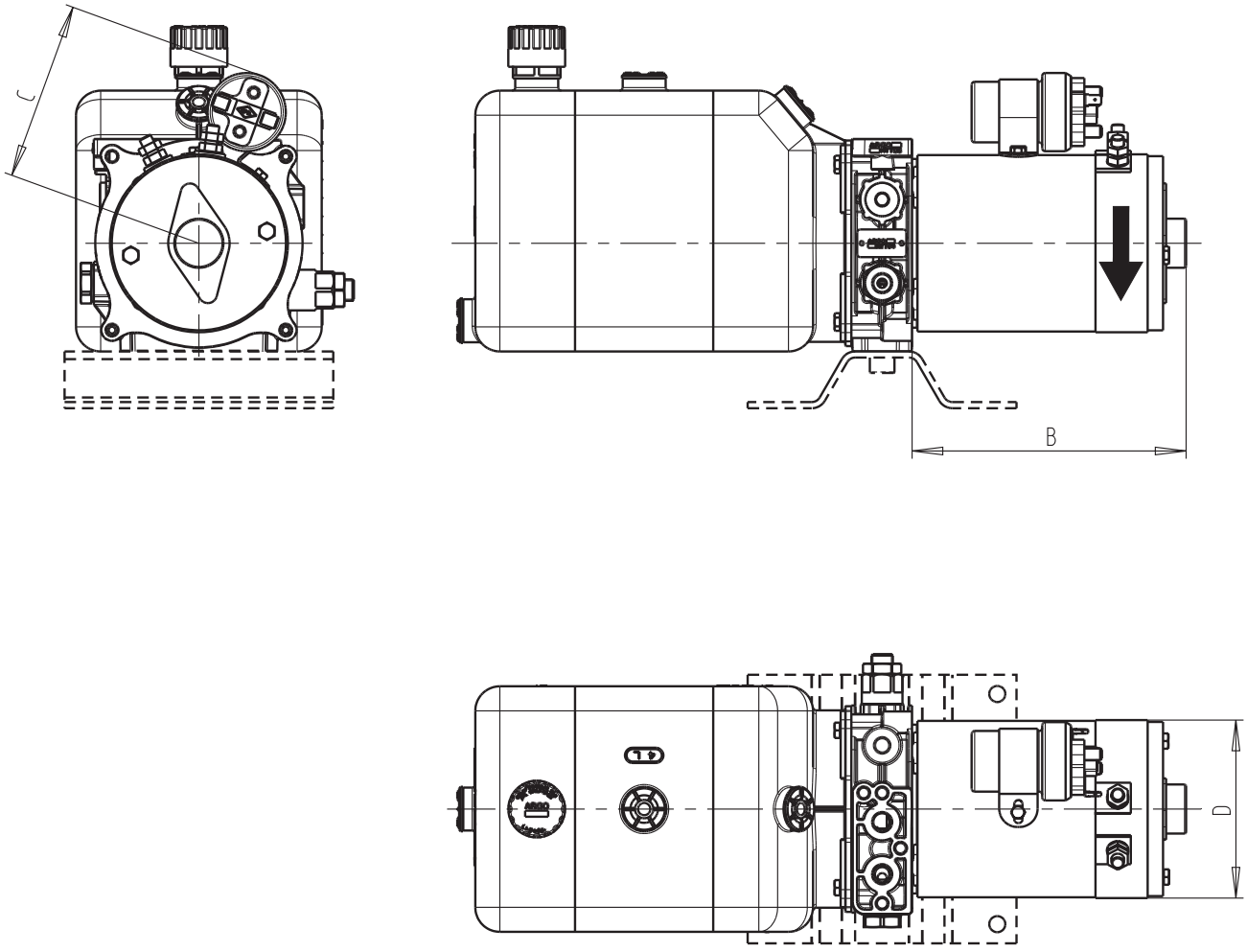
Valve Dimensions

Dimensions in inches and millimeters (in brackets)

Power pack with DC electric motor

FIRST - ANGLE PROJECTION

Thread of the connecting ports P, T, M - 9/16-18 UNF
SAE J1926-1(-6 SAE)



Dimensions B, C, D see Page 9.

Valve Dimensions

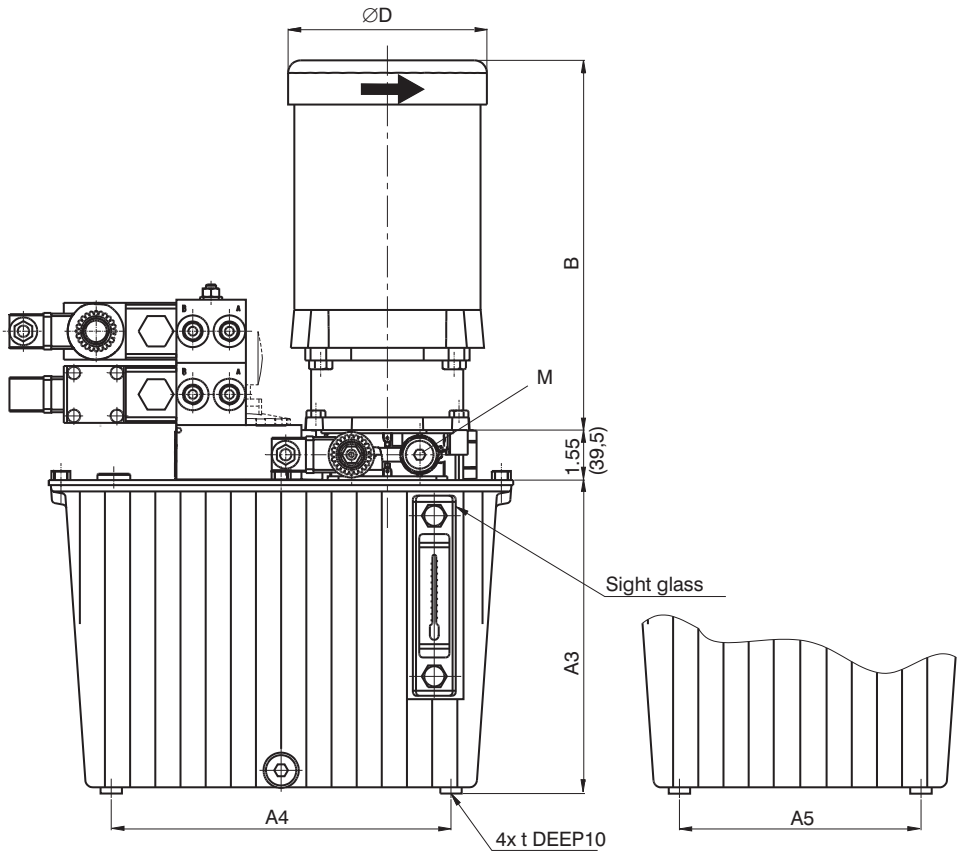
Dimensions in inches and millimeters (in brackets)

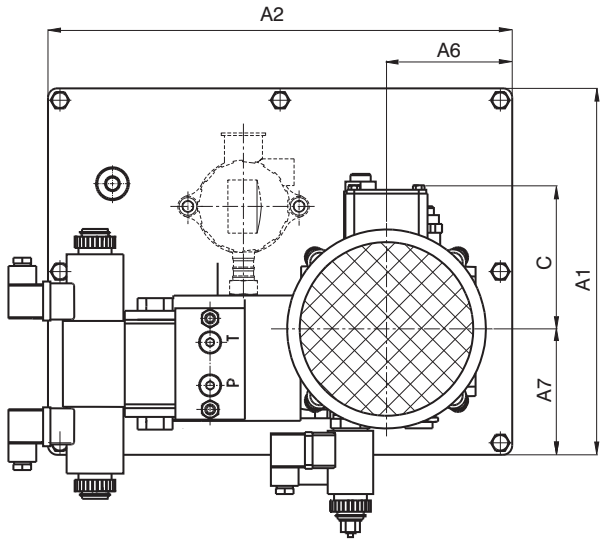
Power pack with die-cast aluminium tank

FIRST - ANGLE PROJECTION

Configuration B

Thread of the connecting ports A, B, P, T, M - 9/16-18 UNF
SAE J1926-1(-6 SAE)





Note: all units with tank code 71-74 shipped with sight glass and drain plug

Code of the tank	Capacity in US gal [L]	Working volume US gal [L]	A1	A2	A3	A4	A5	A6	A7	t
71 (Al)	3.17 (12)	2.64 (10)	9.53(242)	12.28(312)	8.82(224)	8.86(225)	6.10(155)	4.41(112)	3.58(91)	M8
72 (Al)	5.28 (20)	4.23 (16)	11.46(291)	14.53(369)	10(254)	10.63(270)	7.56(192)	4.13(105)	5.35(136)	M8
73 (Al)	7.93 (30)	6.60 (25)	13.43(341)	19.33(491)	11.42(290)	12.83(326)	6.93(176)	4.53(115)	6.14(156)	M10
74 (Al)	11.62 (44)	10.30 (39)	16.69(424)	20.67(525)	12.60(320)	13.43(341)	9.49(241)	4.53(115)	6.93(176)	M10

Valve Dimensions

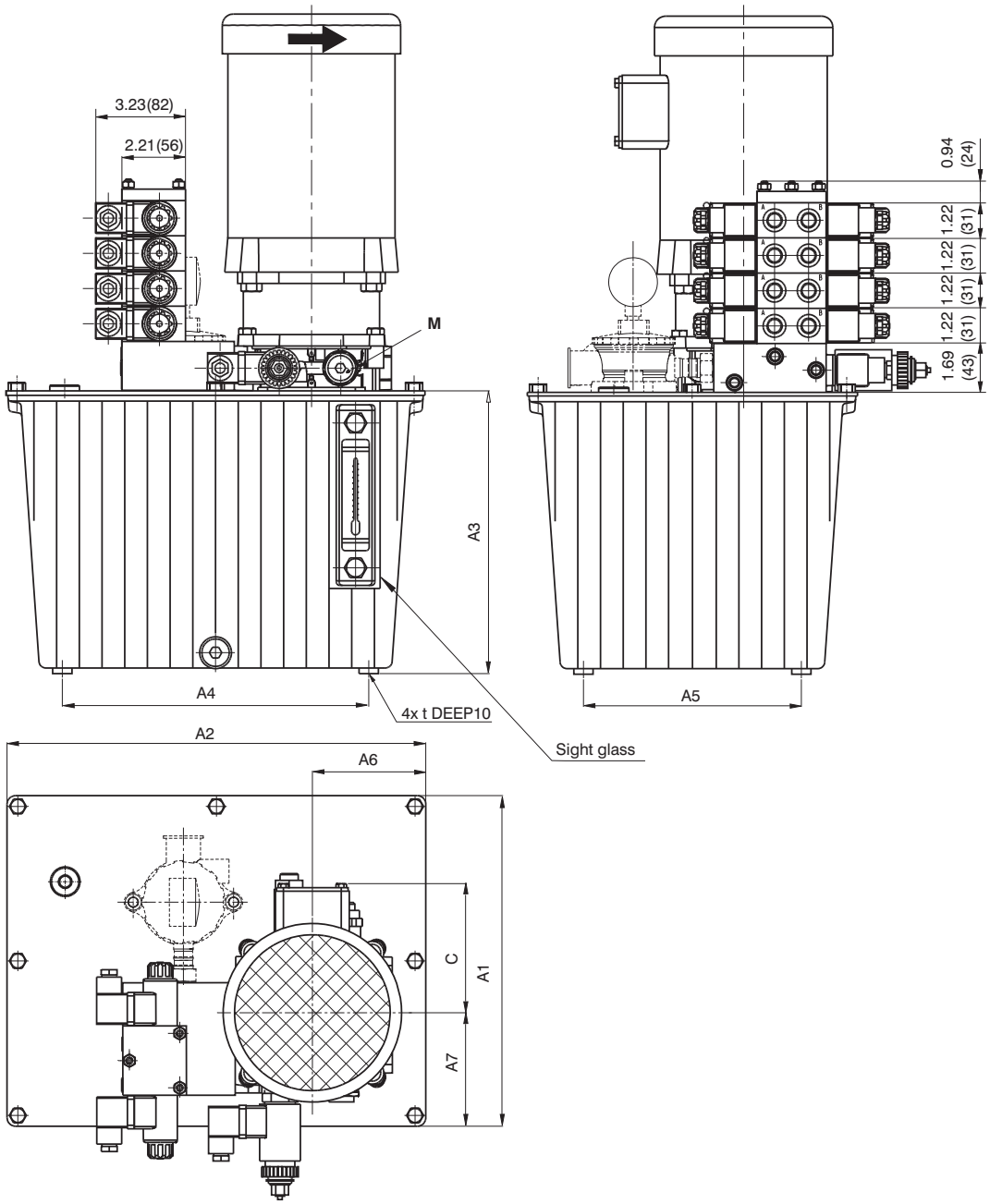
Dimensions in inches and millimeters (in brackets)

Power pack with die-cast aluminium tank and horizontal stacking assembly RPEK1-03

FIRST - ANGLE PROJECTION

Configuration E

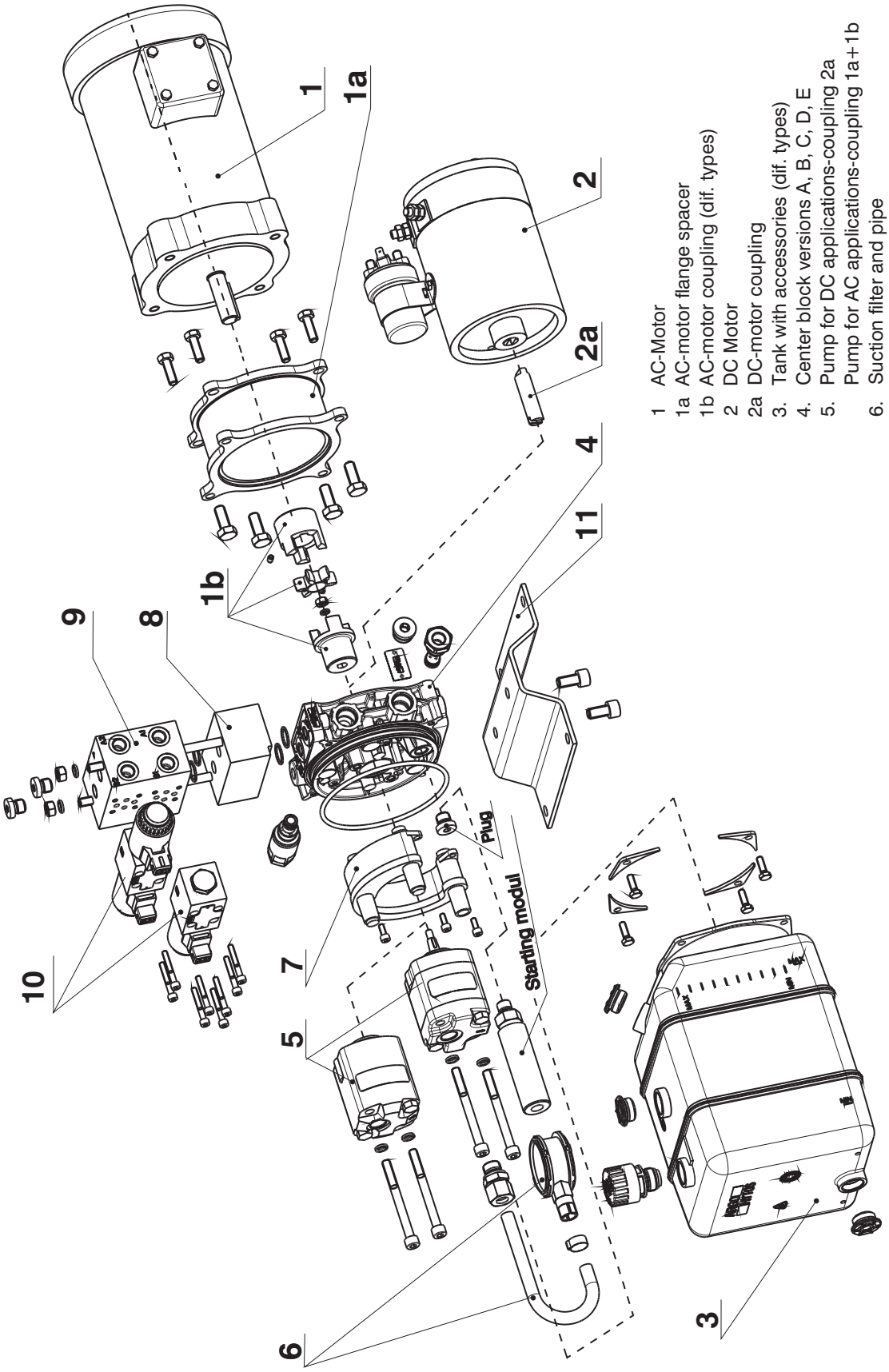
With the model RPEK1-03 of the vertical stacking assembly the connecting ports A, B, M are only provided with threads 9/16-18 UNF; SAE J1926-1 (6 SAE)- orientation of ports is evident from the picture.



Note: all units with tank code 71-74 shipped with sight glass and drain plug

Code of the tank	Capacity in US gal [L]	Working volume US gal [L]	A1	A2	A3	A4	A5	A6	A7	t
71 (Al)	3.17 (12)	2.64 (10)	9.53(242)	12.28(312)	8.82(224)	8.86(225)	6.10(155)	4.41(112)	3.58(91)	M8
72 (Al)	5.28 (20)	4.23 (16)	11.46(291)	14.53(369)	10(254)	10.63(270)	7.56(192)	4.13(105)	5.35(136)	M8
73 (Al)	7.93 (30)	6.60 (25)	13.43(341)	19.33(491)	11.42(290)	12.83(326)	6.93(176)	4.53(115)	6.14(156)	M10
74 (Al)	11.62 (44)	10.30 (39)	16.69(424)	20.67(525)	12.60(320)	13.43(341)	9.49(241)	4.53(115)	6.93(176)	M10

USMA 05



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 for DC applications-coupling 2a
   Pump for AC applications-coupling 1a+1b
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.
- Certified documentation is available per request.

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

Subject to alteration without notice!