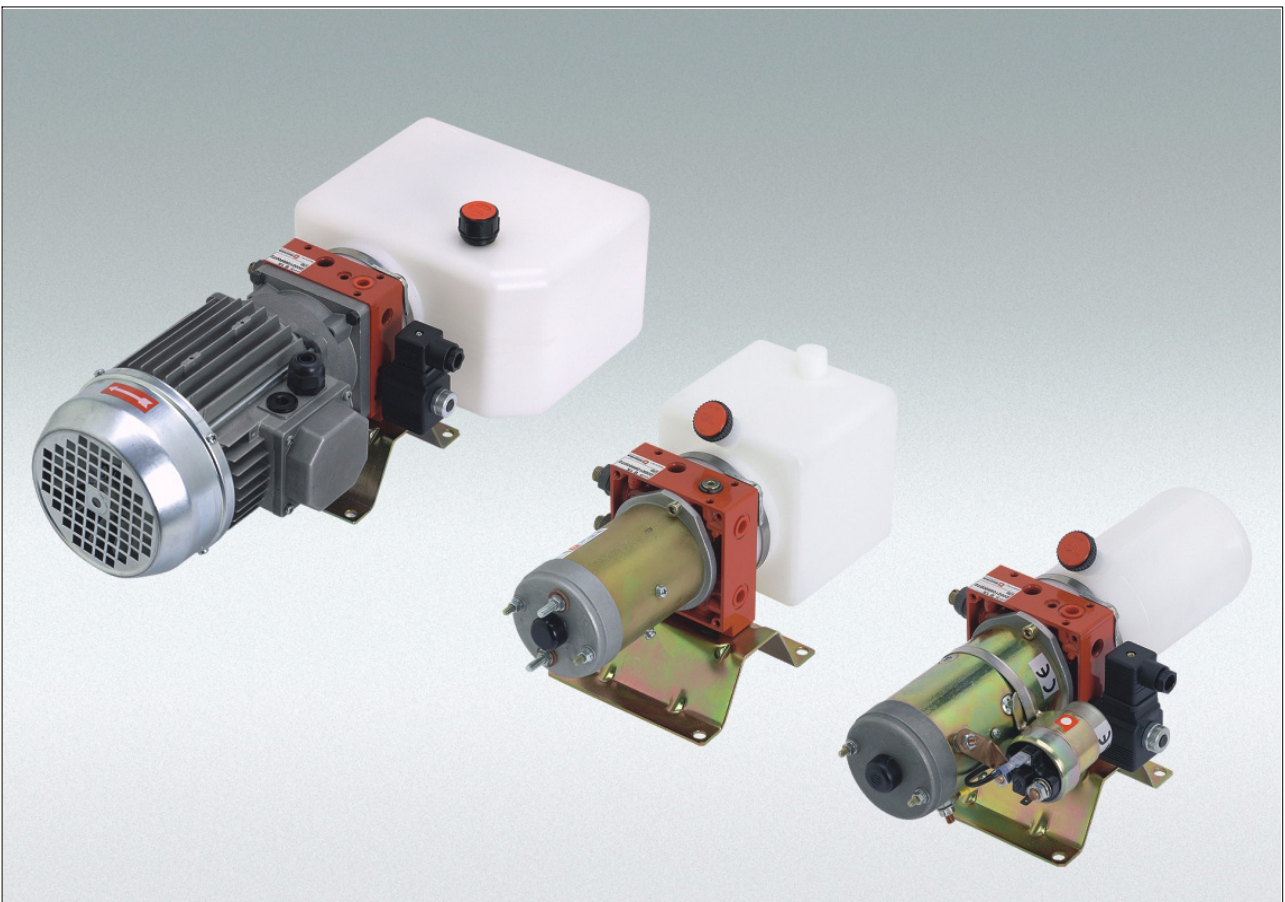


Hydraulic Units UP50



motion and progress

HYDRAULIC UNIT

UP50

GENERAL FEATURES

Modular assembly for single sub-groupes.

Standard circuit: **SINGLE ACTING - DOUBLE ACTING - REVERSIBLE**

Valves: adjustable max relief valve, check valve, flow control valve, directional control valves electrically or manually operated, parallel or series circuit, reversible pump with double hydraulic piloted check valves and relief valves integrated.

TECHNICAL FEATURES

MOTOR:

D.C. motor: (with or without starting switch)

12 V. _____ W: **350-2000**

24 V. _____ W: **400-2500**

48 V. _____ W: **2000**

A.C. motor: (UNEL - IEC - CEI - VDE standard)

230-400 V. ±10%(1500RPM) _____ Kw: **0.12-0.75**

PUMPS: _____ cc/g **0.25-2.30**

_____ C.I.P.R. **.015-.10**

working pressure _____ bar **170-230**

_____ PSI **2400-3300**

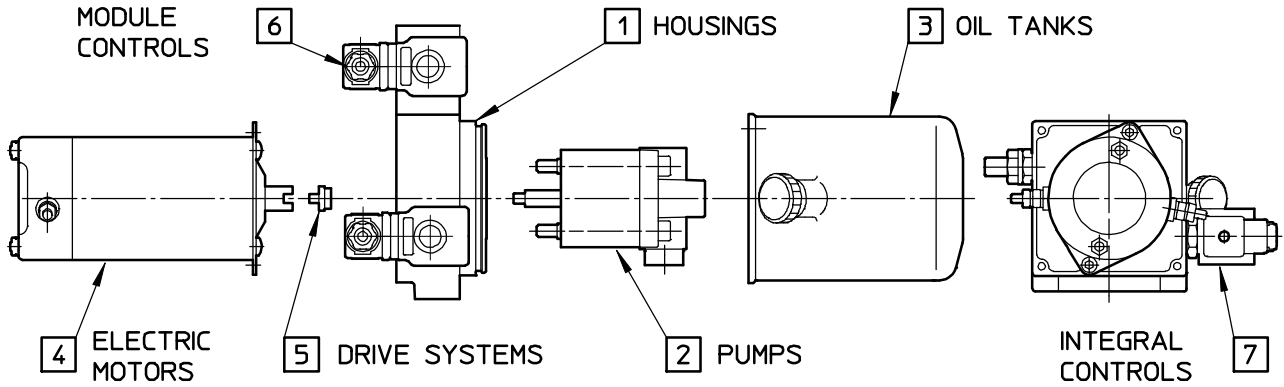
TANKS: _____ L **0.5-4.0**

_____ U.S. Gall. **0.13-1.05**

OIL: utilize HYDRAULIC OIL **ISO 6743/4** standard

Hidroirma pursues a policy of continuous research and development. Therefore the company reserves the right to modify all those technical features which need changing whenever necessary and without notice.

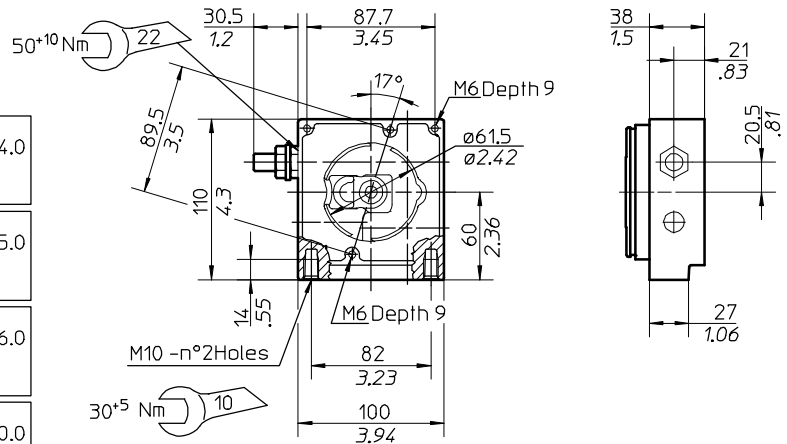
Important note: we inform you that starting from 01.04.99 all our part numbers are modified by adding the prefix "200" Ex.: present part code: 9402.3017.0 new code 200.9402.3017.0



1 HOUSINGS

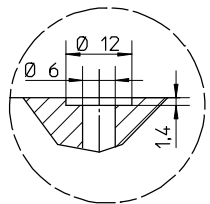
RELIEF VALVE SETTING ADJUSTEMENT BY SCREWDRIVER

	TYPE	CODE
03 = 30 bar - 430 PSI (setting range of spring from 0-40 bar, 0-570 PSI)	03VM01	7874.0084.0
06 = 60 bar - 860 PSI (setting range of spring from 45-80 bar, 640-1150 PSI)	06VM01	7874.0085.0
15 = 150 bar - 2140 PSI (setting range of spring from 85-210 bar, 1220-3000 PSI)	15VM01	7874.0086.0
HOUSING WITHOUT RELIEF VALVE AND PLUGGED SEAT	00VC00	7784.0020.0

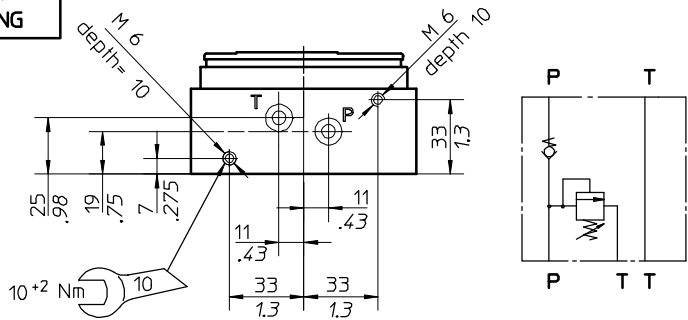


K03 DOUBLE ACTING CIRCUIT TYPE - ARRANGEMENT WITH SUB PLATE FOR ELECTROVALVE MOUNTING

CODE
7402.1004.0

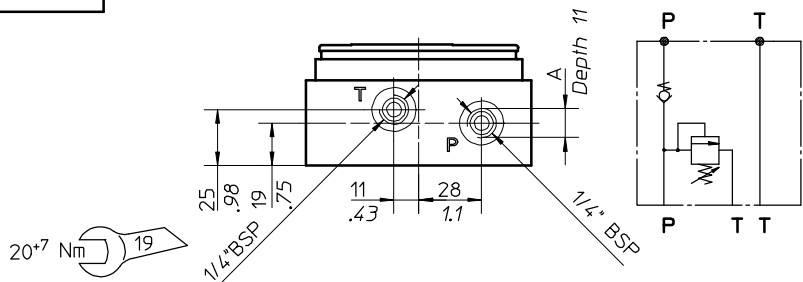


Section across the T and P holes



K17 DOUBLE ACTING CIRCUIT TYPE - HOUSING WITH P-T THREADED PORTS

CODE
7402.2004.0



1

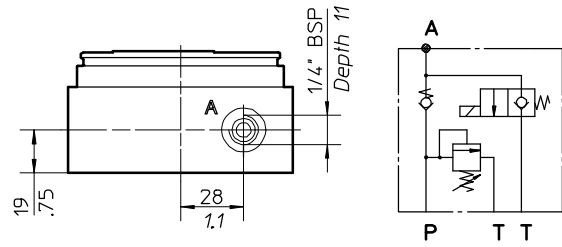
HOUSINGS

K04

SINGLE ACTING CIRCUIT TYPE - ARRANGEMENT FOR INTEGRAL CONTROL VALVE

Code

7402.3004.0*



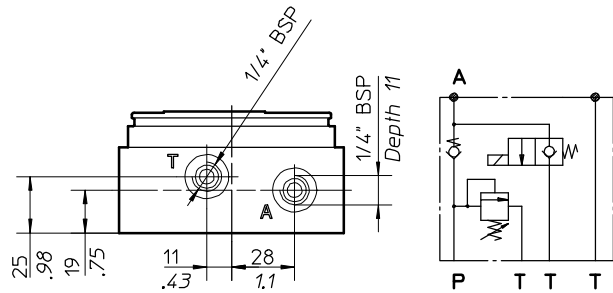
* The lowering valve is not part of this code

K41

SINGLE ACTING CIRCUIT TYPE - ARRANGEMENT FOR INTEGRAL CONTROL VALVE HOUSING WITH SUPPLEMENTARY T THREADED PORT

Code

7402.3024.0*



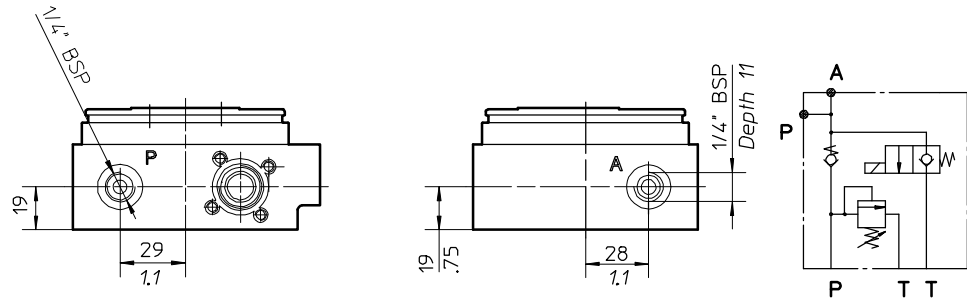
* The lowering valve is not part of this code

K42

SINGLE ACTING CIRCUIT TYPE - ARRANGEMENT FOR INTEGRAL CONTROL VALVE

Code

7402.3020.0*



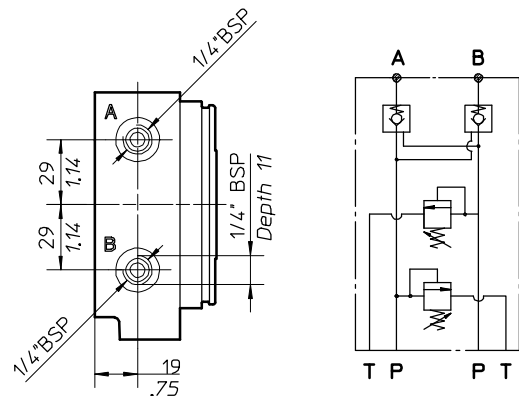
* The lowering valve is not part of this code

K50

REVERSIBLE CIRCUIT TYPE - ARRANGEMENT WITH 'A'-'B' THREADED PORTS

Code

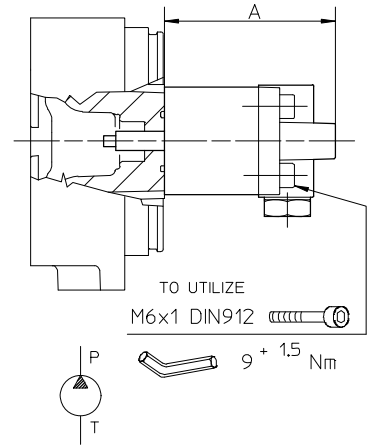
7402.5004.0



CATUP50.020

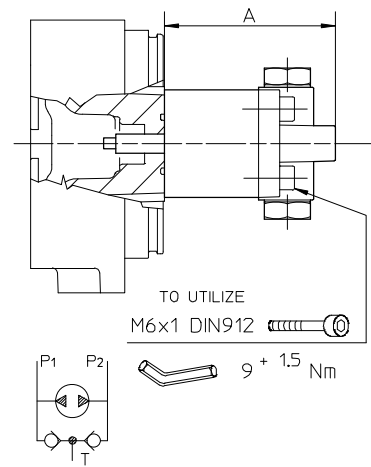
GEAR PUMPS – ANTICLOCKWISE ROTATION

Pump type	Displacement		Max pressure						A		Code
	cm ³ /g	cu. In. P.R.	P1		P2		P3		mm	inch.	
			bar	PSI	bar	PSI	bar	PSI			
AP05/0.25 S409	0.25	.015	190	2700	200	2900	220	3150	63	2.48	7481.2005.0
AP05/0.5 S409	0.5	.030	210	3000	230	3300	250	3600	65	2.56	7481.3005.0
AP05/0.75 S409	0.75	.045	210	3000	230	3300	250	3600	67	2.64	7481.4005.0
AP05/0.9 S409	0.9	.055	210	3000	230	3300	250	3600	68.5	2.69	7481.5005.0
AP05/1.2 S409	1.2	.075	190	2700	200	2700	220	3150	71	2.79	7481.6005.0
AP05/1.6 S409	1.6	.10	170	2400	180	2600	200	2900	74.7	2.94	7481.8006.0
AP05/2.3 S409	2.3	.140	170	2400	180	2600	200	2900	80.6	3.17	7481.9004.0



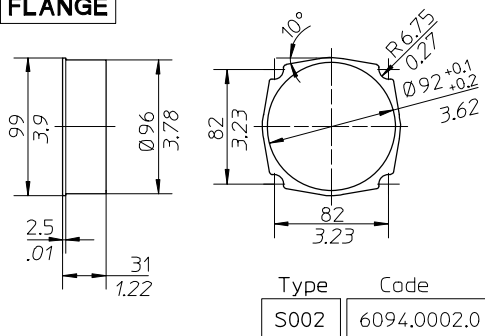
REVERSIBLE GEAR PUMPS

Pump type	Displacement		Max pressure						A		Code
	cm ³ /g	cu. In. P.R.	P1		P2		P3		mm	inch.	
			bar	PSI	bar	PSI	bar	PSI			
APR05/0.25-339	0.25	.015	170	2400	180	2600	200	2900	63	2.48	7481.2002.0
APR05/0.5-339	0.5	.030	190	2700	210	3000	230	3300	65	2.56	7481.3002.0
APR05/0.75-339	0.75	.045	190	2700	210	3000	230	3300	67	2.64	7481.4002.0
APR05/0.9-339	0.9	.055	190	2700	210	3000	230	3300	68.5	2.69	7481.5002.0
APR05/1.2-339	1.2	.075	170	2400	180	2600	200	2900	71	2.79	7481.6002.0
APR05/1.6-339	1.6	.10	170	2400	180	2600	200	2900	74.7	2.94	7481.8001.0
APR05/2.3-339	2.3	.140	150	2100	160	2200	180	2600	80.6	3.17	7481.9002.0

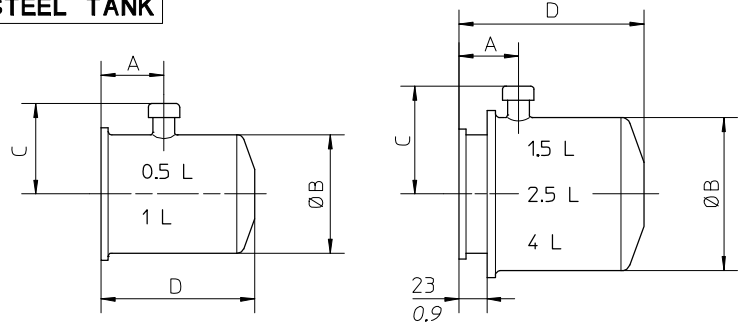


Pumps with not threaded back cover for standard versions. For availability of pumps with threaded back cover consult our Sales Center

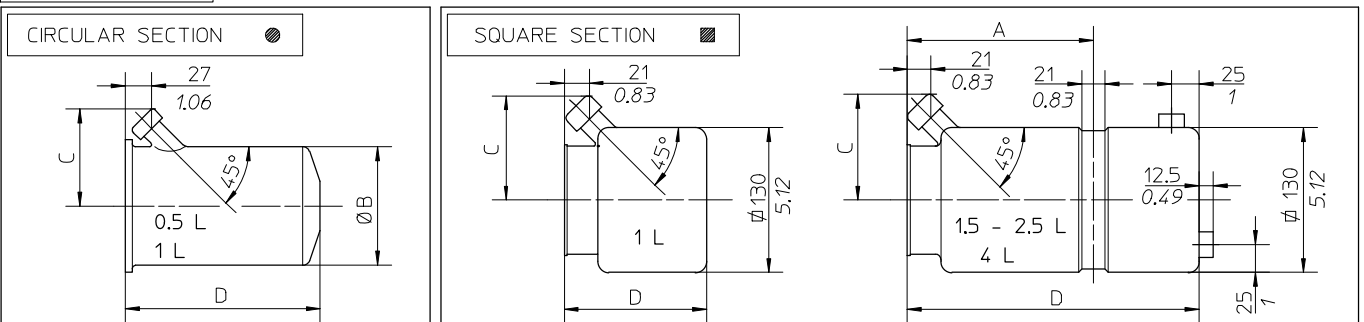
FLANGE



STEEL TANK

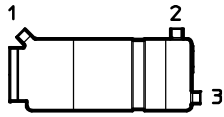


PLASTIC TANK

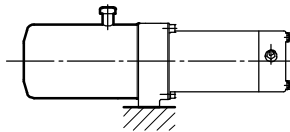


FIXING POSITIONS

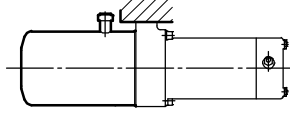
OPENED FILLING PORTS AND DRAIN PORTS



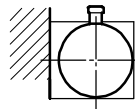
Type	OPENED Ports		
	1	2	3
A	●		
B		●	
D	●	●	
E	●		●
F		●	●



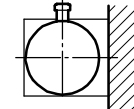
POSITION: HORIZONTAL
Fixing side: down



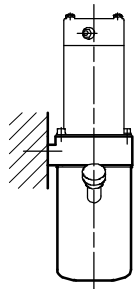
POSITION: HORIZONTAL
Fixing side: up



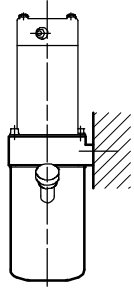
POSITION: HORIZONTAL
Fixing side: lateral left hand



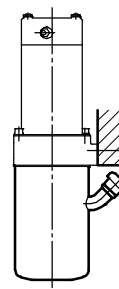
POSITION: HORIZONTAL
Fixing side: lateral right hand



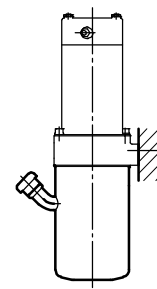
POSITION: VERTICAL
Oil caps: on the right of fixing side



POSITION: VERTICAL
Oil caps: on the left of fixing side

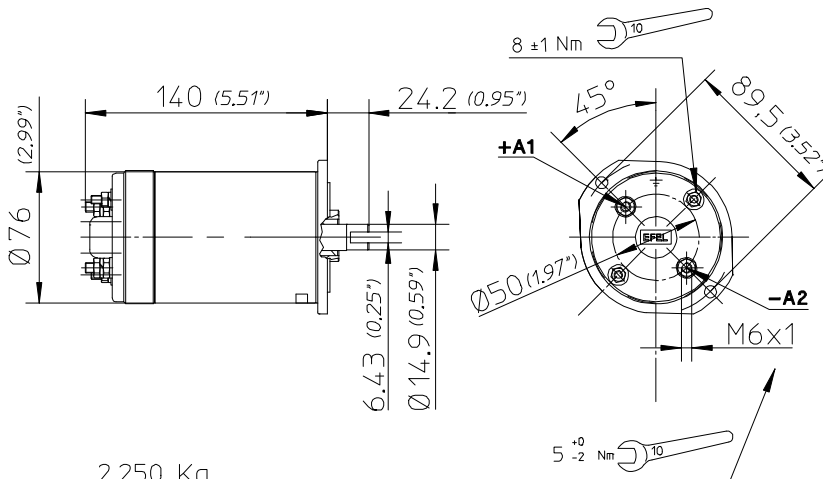


POSITION: VERTICAL
Oil cap: fixing side



POSITION: VERTICAL
Oil cap: against of fixing side (not available with manifolds)

Material	Capacity			Dimensions				Fixing position							
	L.	U.S.G.	IMP.G.	A	B	C	D	Horizontal position				Vertical position			
								P01	P02	P03	P04	P05	P15	P25	P35
STEEL	0.5	.13	.11	8.5	96	72	126	TYPE L00.5R-01							
				.33	3.78	2.83	4.96								
STEEL	1	.26	.22	8.5	96	72	190	TYPE L01.0R-01							
				.33	3.78	2.83	7.5								
STEEL	1.5	.40	.33	47	127	88	152	TYPE L01.5R-01							
				1.85	5	3.46	6								
STEEL	2.5	.66	.55	47	127	88	257	TYPE L02.5R-01							
				1.85	5	3.46	10.1								
STEEL	3	.79	.66	52	154	102	220	TYPE L03.0R-01							
				2.05	6.07	4.02	8.65								
STEEL	4	1.05	.88	52	154	102	294	TYPE L04.0R-01							
				2.05	6.07	4.02	11.6								
PLASTIC ●	0.5	.13	.11	—	96	82.5	126	TYPE P-005R-A							
					3.78	3.25	4.96								
PLASTIC ●	1	.26	.22	—	96	82.5	190	TYPE P-010R-A							
					3.78	3.25	7.48								
PLASTIC ■	1	.26	.22	—	—	99	126	TYPE P-010Q-A							
						3.9	4.96								
								P01 P02 P03 P04				P01 P02 P03 P04			
PLASTIC ■	1.5	.40	.33	—	—	99	159	TYPE P-015Q-A P-015Q-E P-015Q-D P-015Q-B P-015Q-F							
						3.9	6.26	CODE 9732.3003.0 9732.3007.0 9732.3006.0 9732.3004.0 9732.3008.0							
PLASTIC ■	2.5	.66	.55	167	—	99	262	TYPE P-025Q-A P-025Q-E P-025Q-D P-025Q-B P-025Q-F							
				6.6		3.9	10.3	CODE 9732.4002.0 9732.4006.0 9732.4005.0 9732.4003.0 9732.4007.0							
PLASTIC ■	4	1.05	.88	232	—	99	327	TYPE P-040Q-A P-040Q-E P-040Q-D P-040Q-B P-040Q-F							
				9.13		3.9	12.9	CODE 9732.6002.0 9732.6006.0 9732.6005.0 9732.6003.0 9732.6007.0							



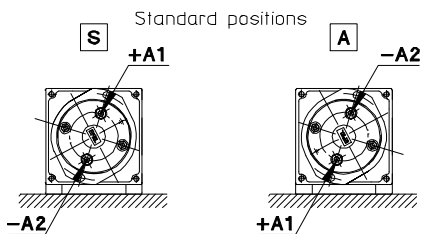
Weight 2.250 Kg
4.96 lb

DIRECT CURRENT

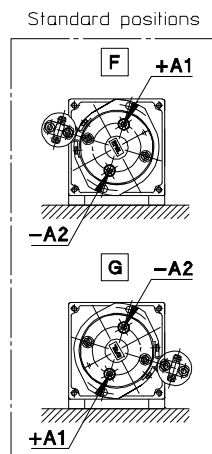
Voltage	12 V	24 V
Power	350 W	400 W
Protection index	IP54	
Insulation class	F	
Type of winding	Permanent magnets	
Brushes kit	5441.3802.1	
Minimum brush length	mm inch	

	MOTOR		MOTOR WITH RELAY			
Rotation						
Reversible						
	12V - 350W	24V - 400W	12V - 350W	24V - 400W	12V	24V
Type	C117PE/V0	C220PE/Z0	C117PE/V0 +R106	C220PE/Z0 +R209		
Code	5439.1170.1	5439.2200.1	7633.1013.0	7633.2013.0	Relè code only 5441.3410.5	Relè code only 5441.3420.5
Relay	STANDARD Single relè can be used only for clock-wise rotation				To be used with bi-directional rotation	
Relay type			R106	R209		

MOTOR MOUNTING POSITION



RELAY MOUNTING POSITION



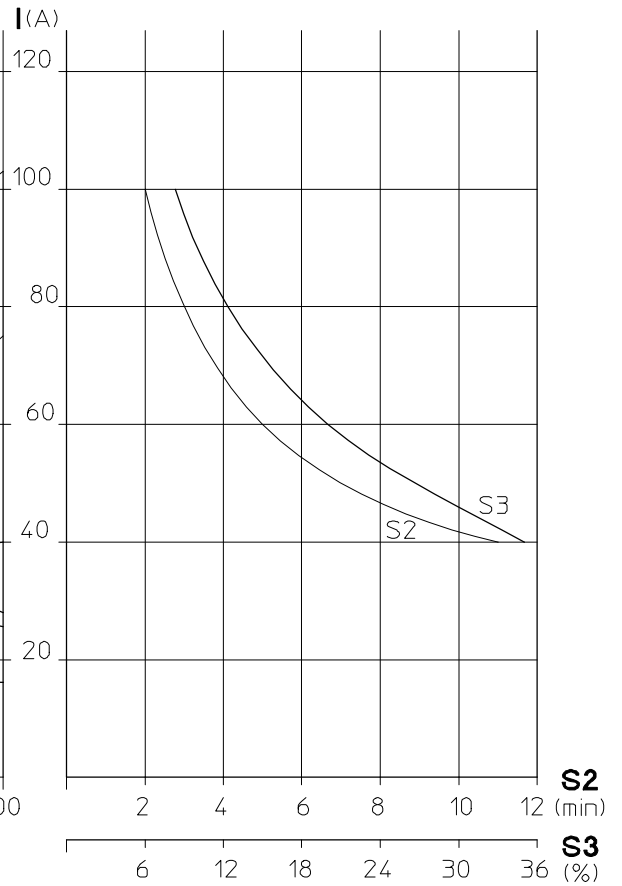
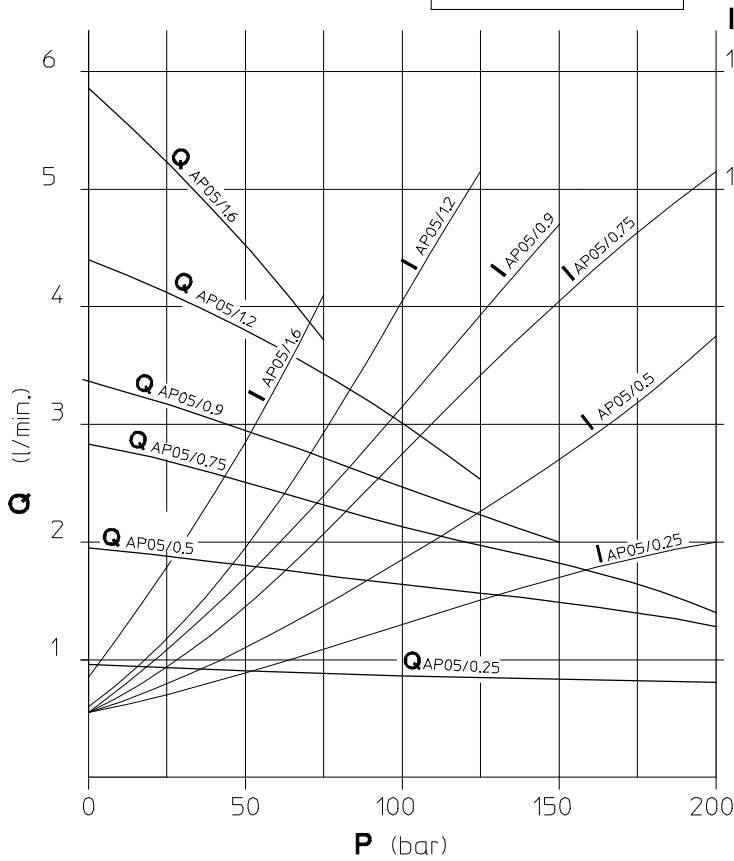
5 Electric motor Pos. C 1 1 7 P E / V 0 S

Example

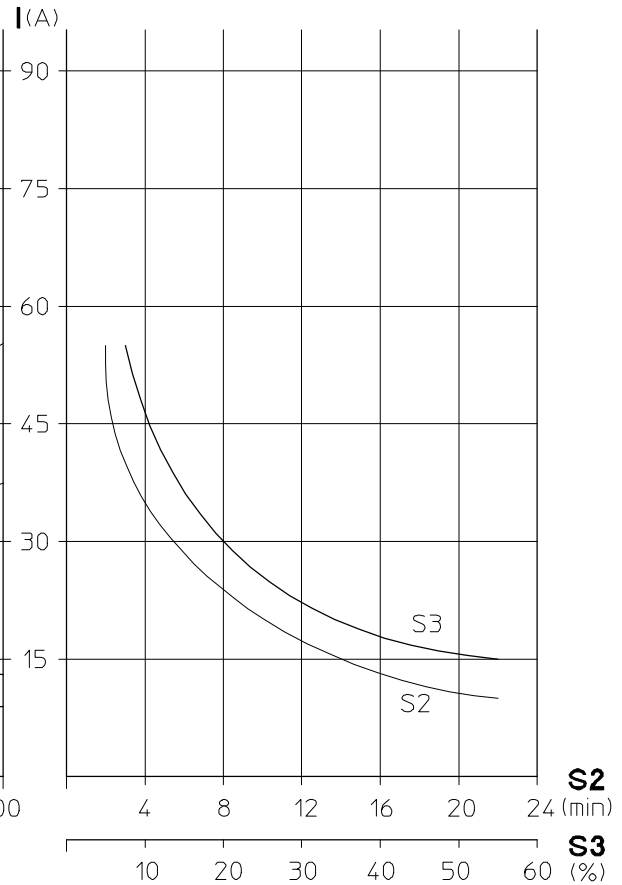
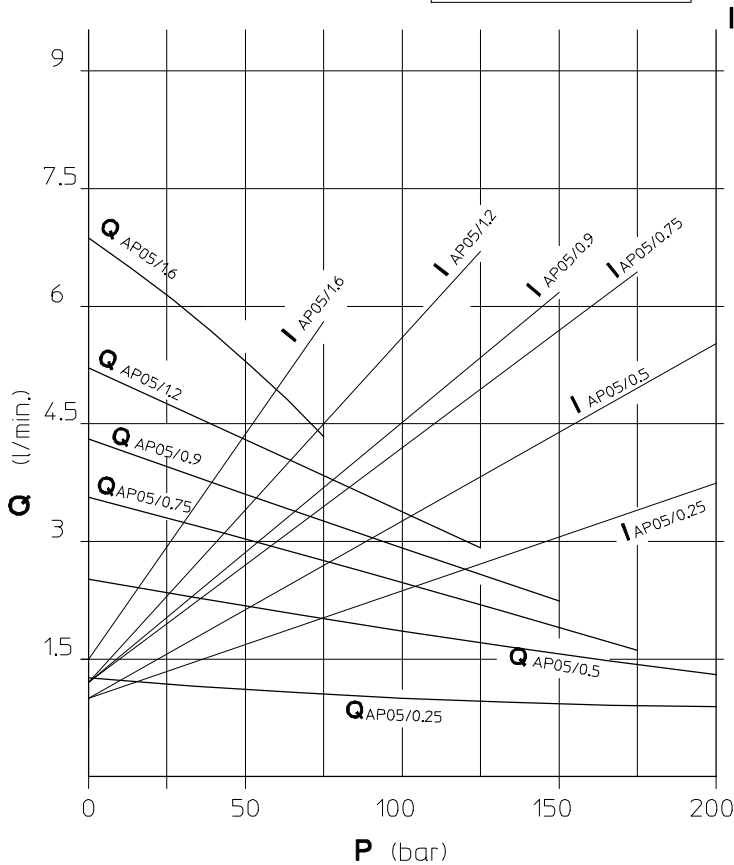
Relay Pos.

--	--	--	--	--	--

12 V – 350 W

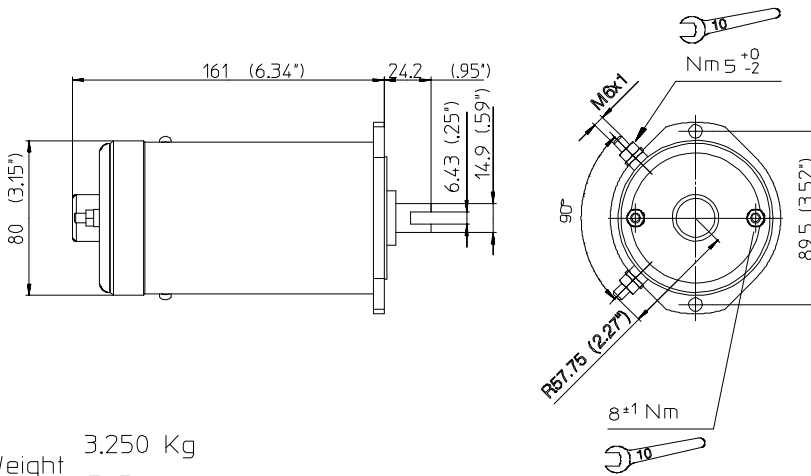


24 V – 400 W



CATUP50.060

DIRECT CURRENT

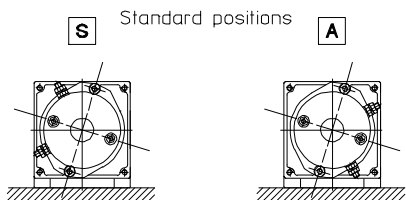


Weight 3.250 Kg
7.15 lb

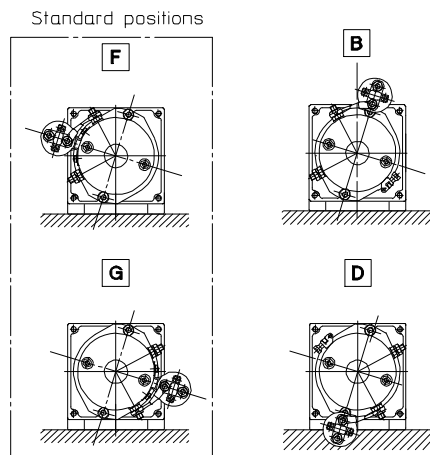
Voltage	12 V	24 V
Power	700 W	800 W
Protection index	IP54	
Insulation class	F	
Type of winding	Compound	
Brushes kit	5441.3802.6	
Minimum brush length	5mm 0.2inch	

Rotation Right	MOTOR		MOTOR WITH RELAY	
	12V - 700W	24V - 800W	12V - 700W	24V - 800W
Type	C128AE/S0	C232AE/R0	C128AE/S0 +R106	C232AE/R0 +R209
Code	5439.1280.4	5439.2320.3	7633.1014.0	7633.2014.0
Relay	STANDARD			
Relay type			R106	R209

MOTOR MOUNTING POSITION

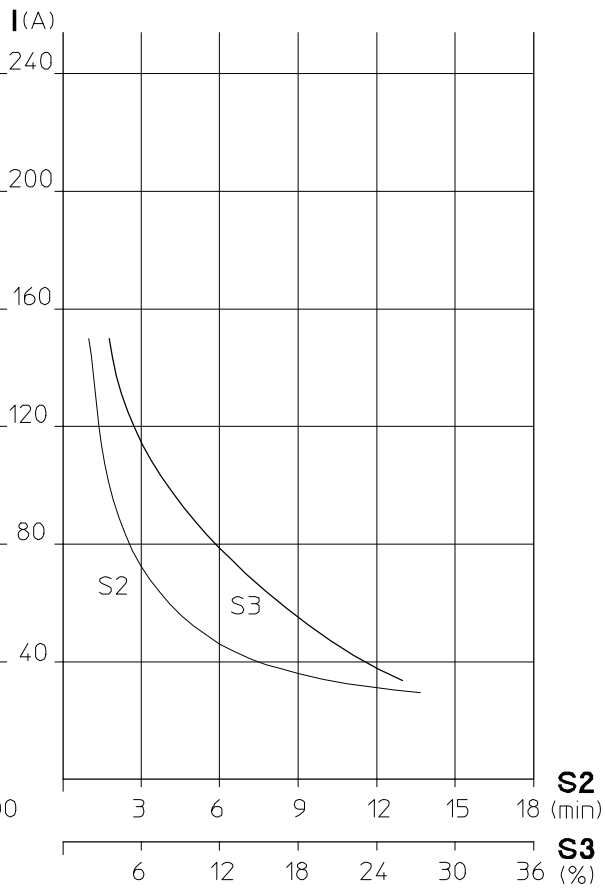
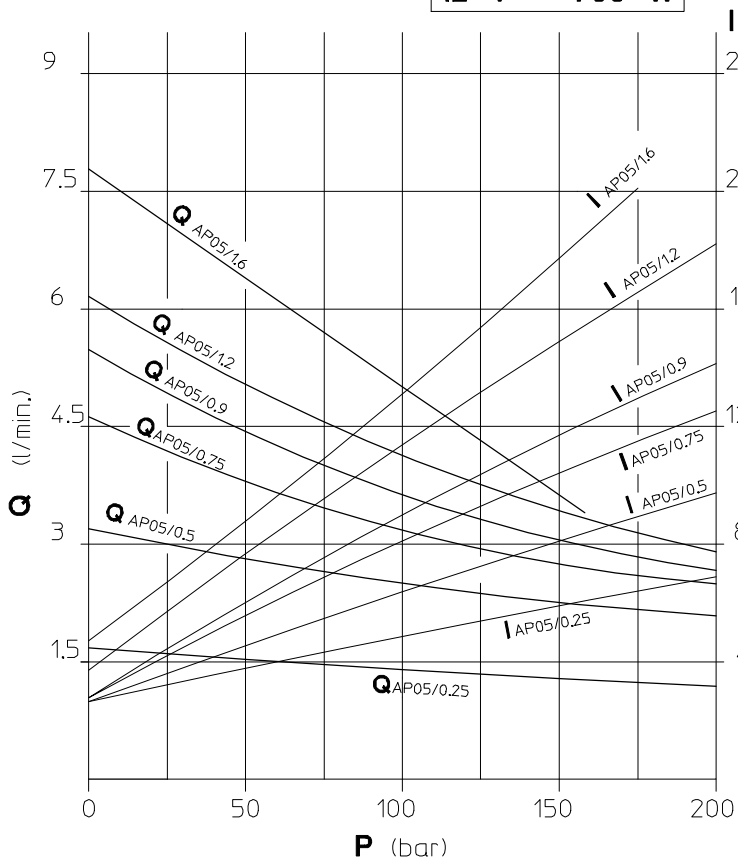


RELAY MOUNTING POSITION

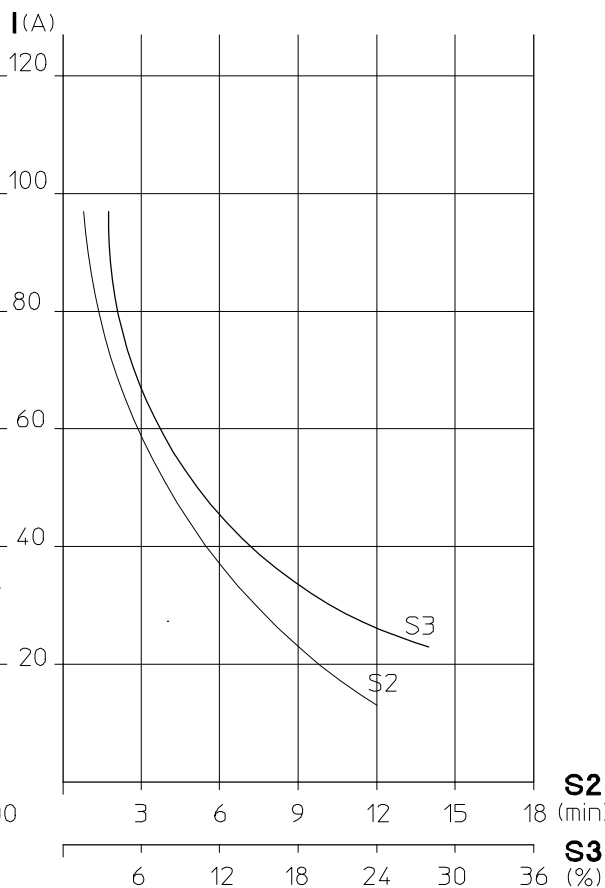
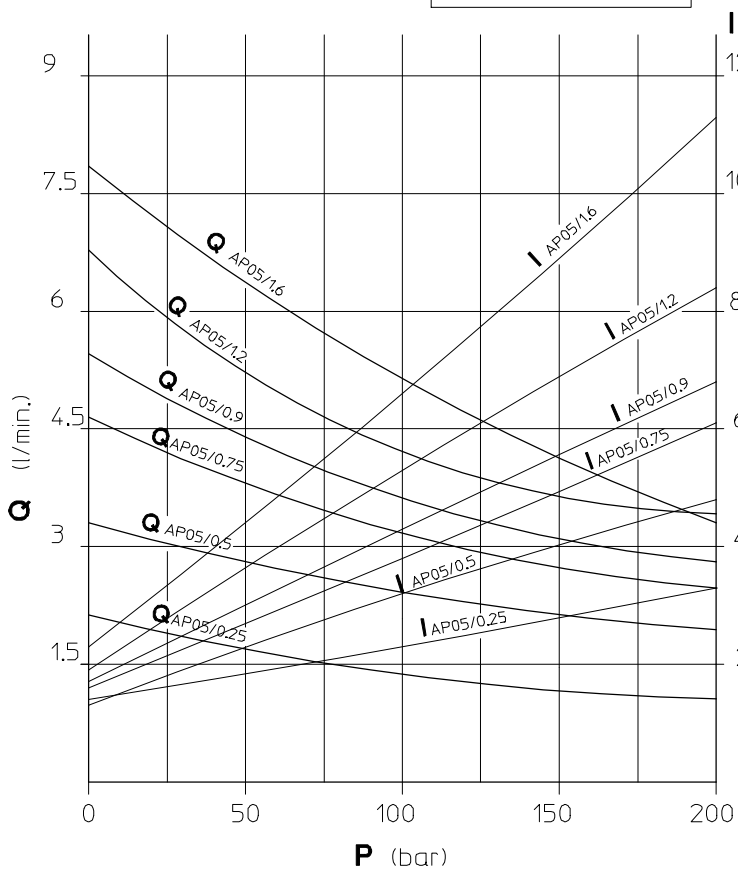


5	Electric motor						Pos.
	C	2	3	2	A	E / R	0
Example							
	Relay				Pos.		
	R	2	0	9		F	

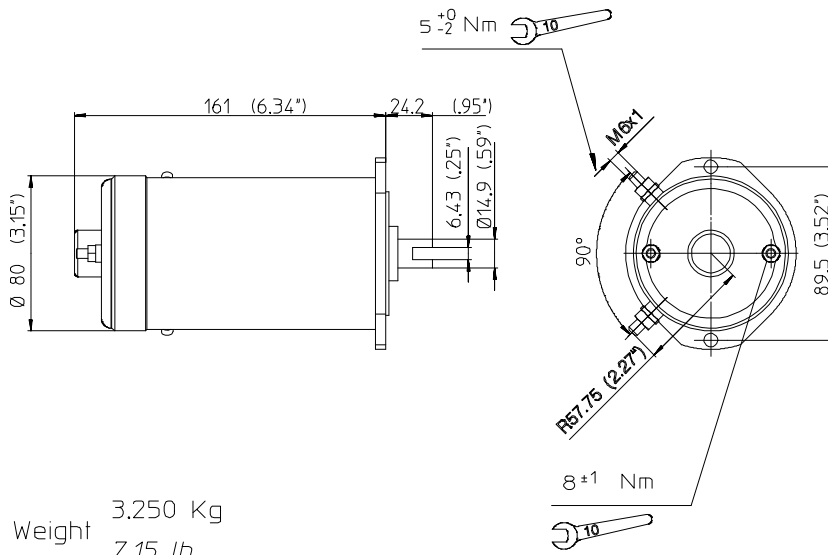
12 V – 700 W



24 V – 800 W



CATUP50.080



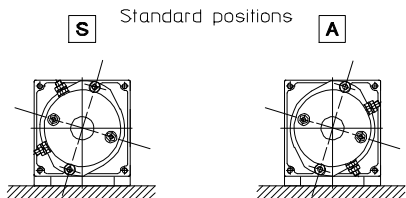
Weight 3.250 Kg
7.15 lb

DIRECT CURRENT

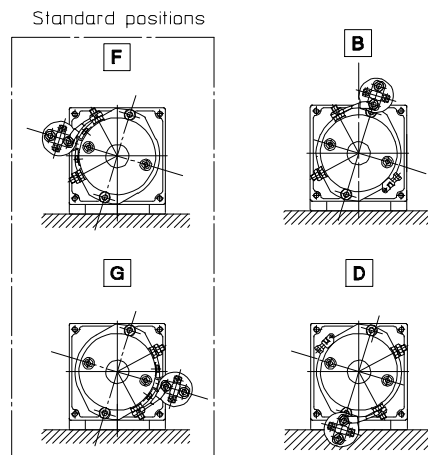
Voltage	12 V	24 V
Power	700 W	800 W
Protection index	IP54	
Insulation class	F	
Type of winding	Permanent magnet	
Brushes kit	5441.3802.6	
Minimum brush length	5mm 0.2inch	

	MOTOR		MOTOR WITH RELAY			
Rotation						
Reversible						
	12V - 700W	24V - 800W	12V - 700W	24V - 800W	12V	24V
Type	C128PE/X0	C229PE/Y0	C128PE/X0 +R106	C229PE/Y0 +R209		
Code	5439.1280.6	5439.2290.1	7633.1012.0	7633.2015.0	Relè code only 5441.3410.5	Relè code only 5441.3420.5
Relay			STANDARD Single relè can be used only for clock-wise rotation		To be used with bi-directional rotation	
Relay type			R106	R209		

MOTOR MOUNTING POSITION



RELAY MOUNTING POSITION

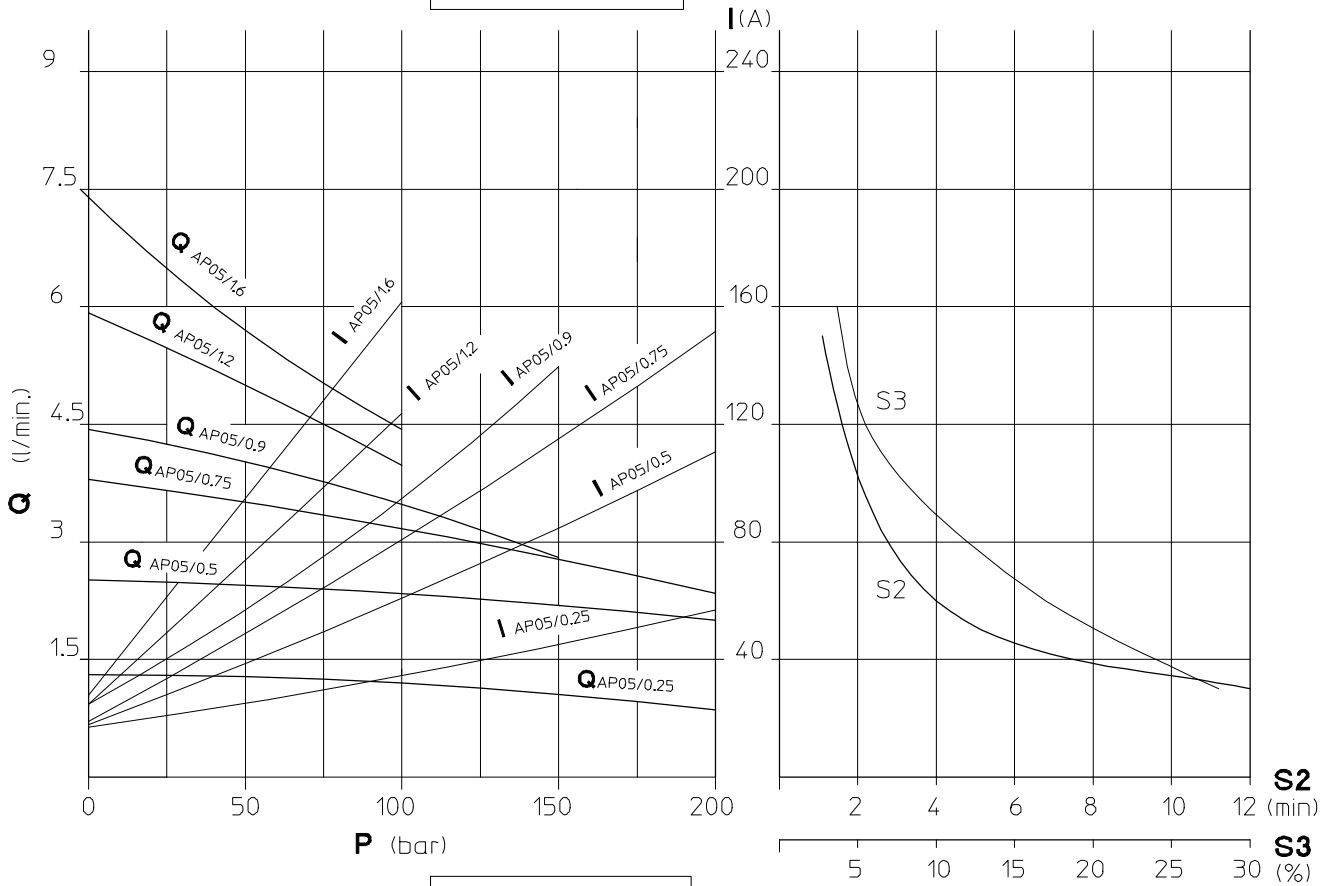


5 Electric motor Pos.
C 1 2 8 P E / X 0 S

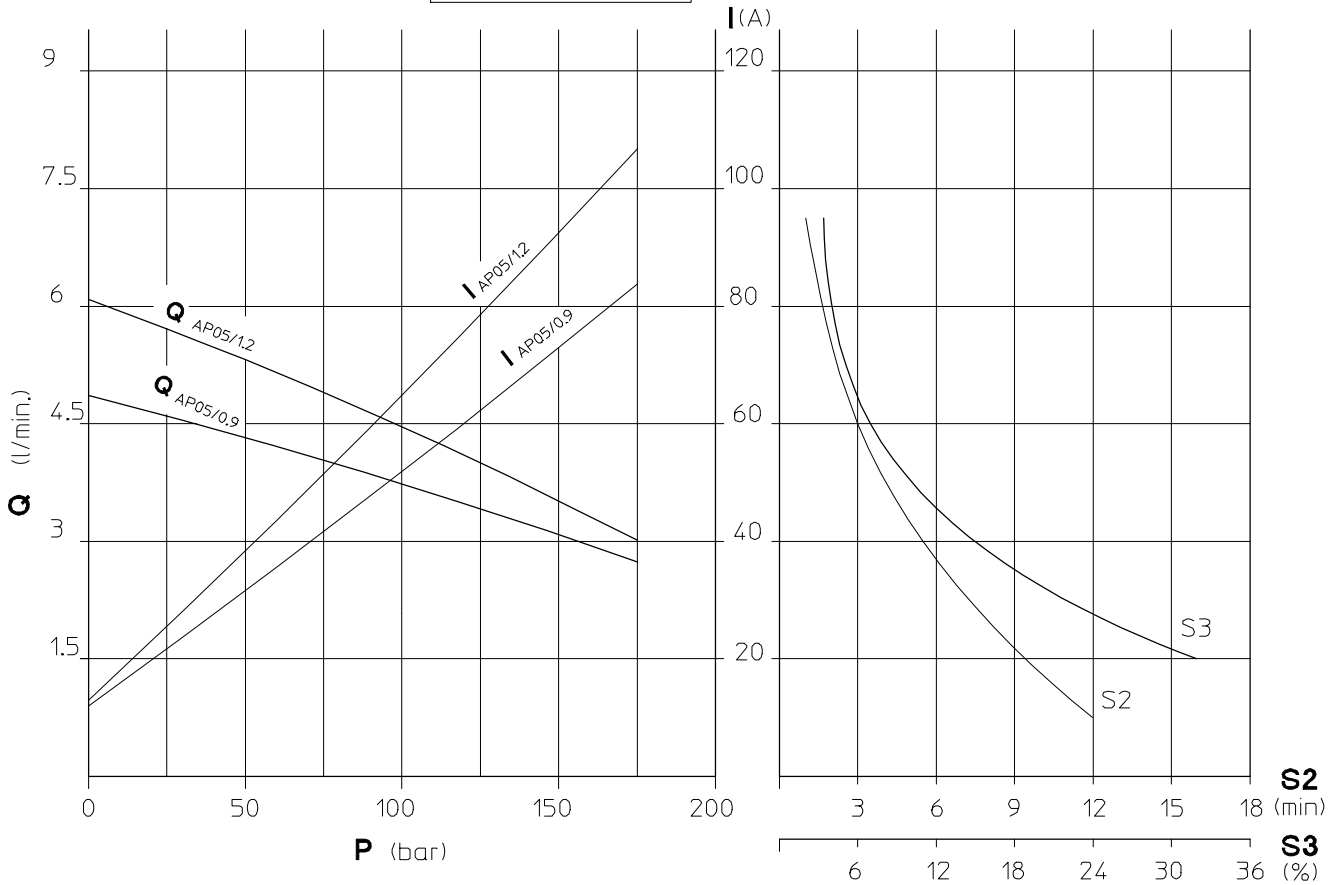
Example

Relay Pos.
R 1 0 6 F

12 V – 700 W

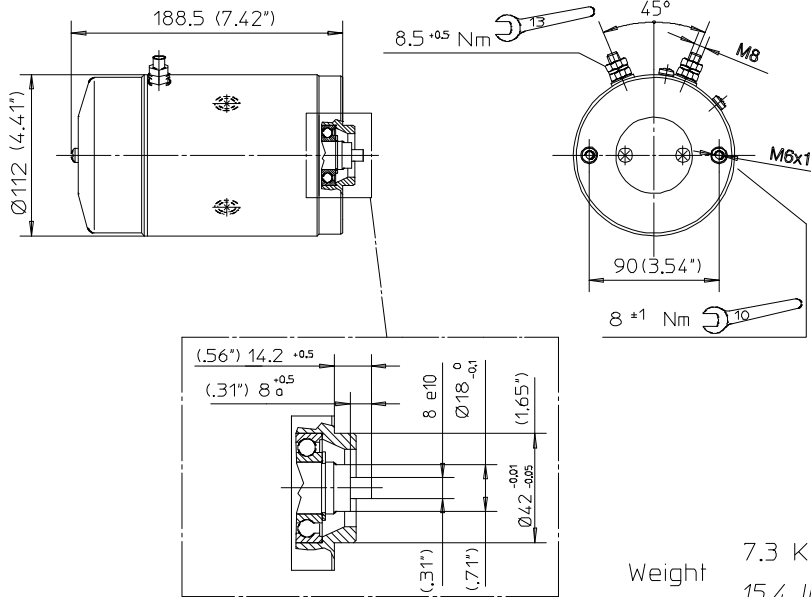


24 V – 800 W



4

ELECTRIC MOTORS



DIRECT CURRENT

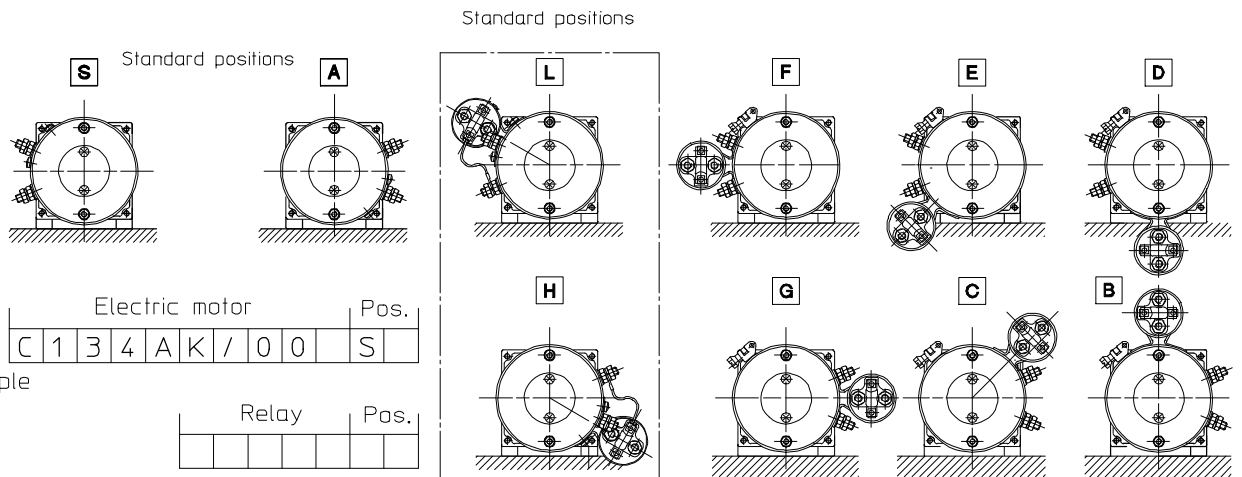
Voltage	12 V	24 V
Power	1500 W	2000 W
Protection index	IP54	
Insulation class	F	
Type of winding	Compound	
Brushes kit	12/1500 24/2000	5441.3801.6 5441.3801.5
Minimum brush length	12.5mm 0.5 inch	

Weight 7.3 Kg
15.4 lb

Rotation Right	MOTOR		MOTOR WITH RELAY			
	12V - 1500W	24V - 2000W	12V - 1500W	24V - 2000W	12V - 1500W	24V - 2000W
Type	C134AK/O0	C238AK/P0	C134AK/O0 +R106	C238AK/P0 +R209	C134AK/O0 +R107	C238AK/P0 +R210
Code	5439.1341.6	5439.2381.3	7633.1001.0	7633.2003.0	7633.1003.0	7633.2005.0
Relay			STANDARD		HEAVY DUTY	
Relay type			R106	R209	R107	R210
			Standard pos. only			

MOTOR MOUNTING POSITION

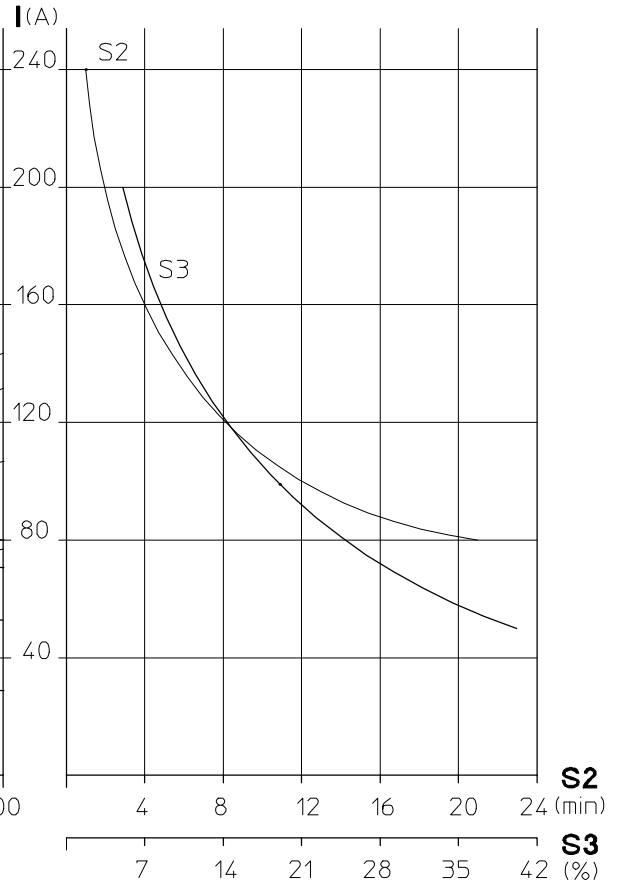
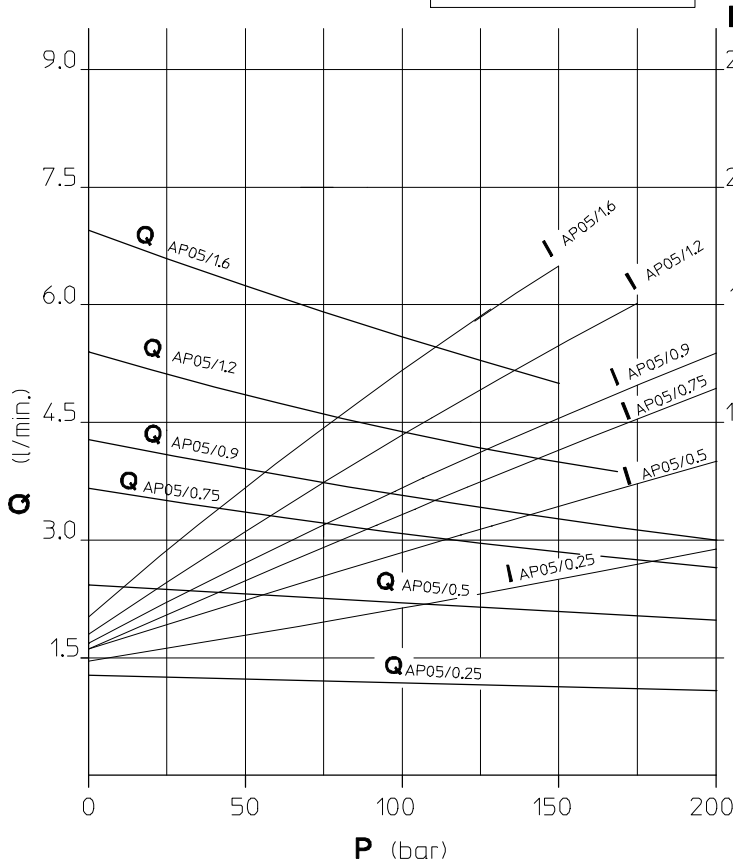
RELAY MOUNTING POSITION



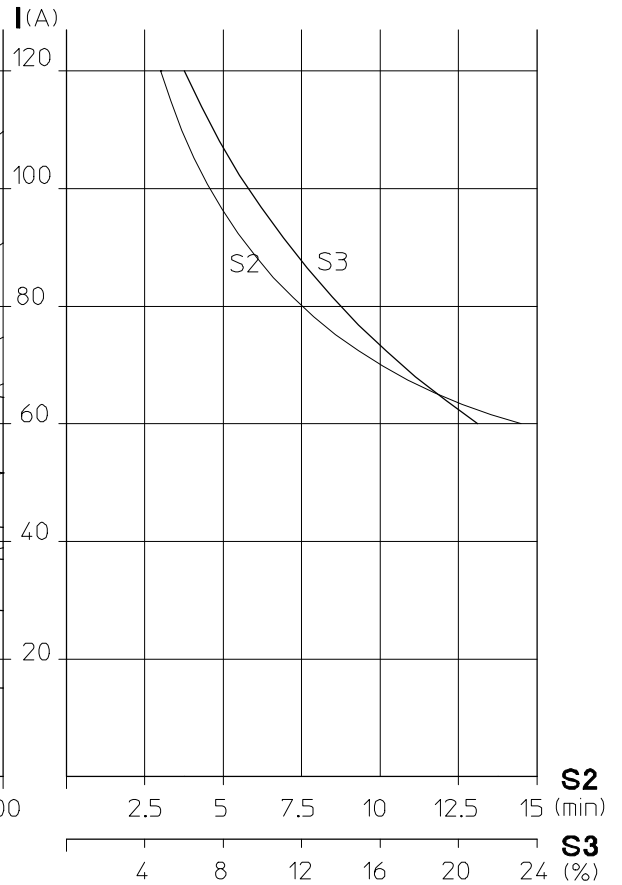
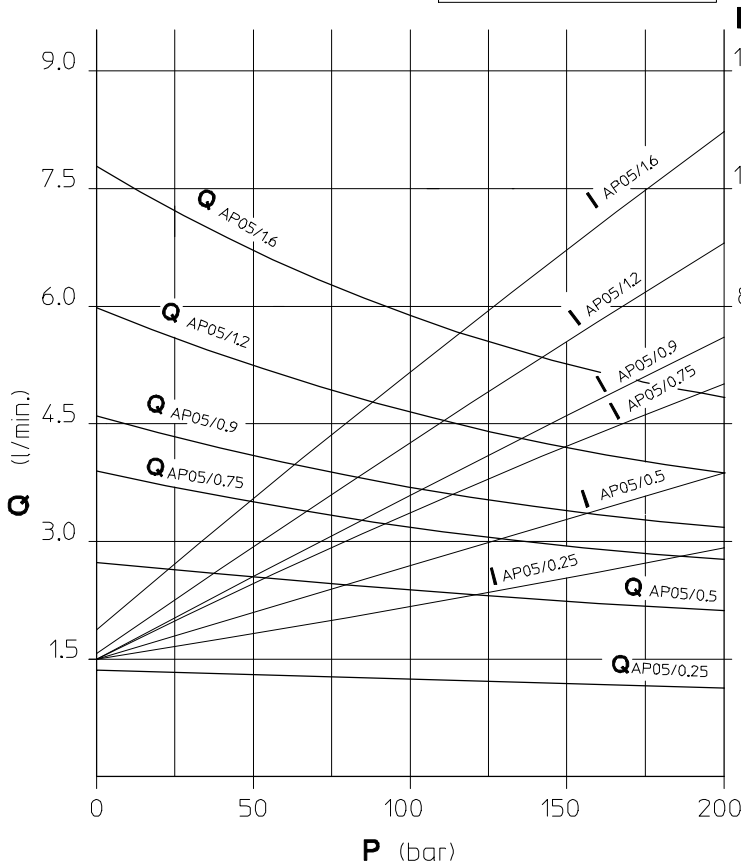
5	Electric motor						Pos.
	C	1	3	4	A	K / 0 0	S
Example	Relay						Pos.

CATUP50.090

12 V – 1500 W

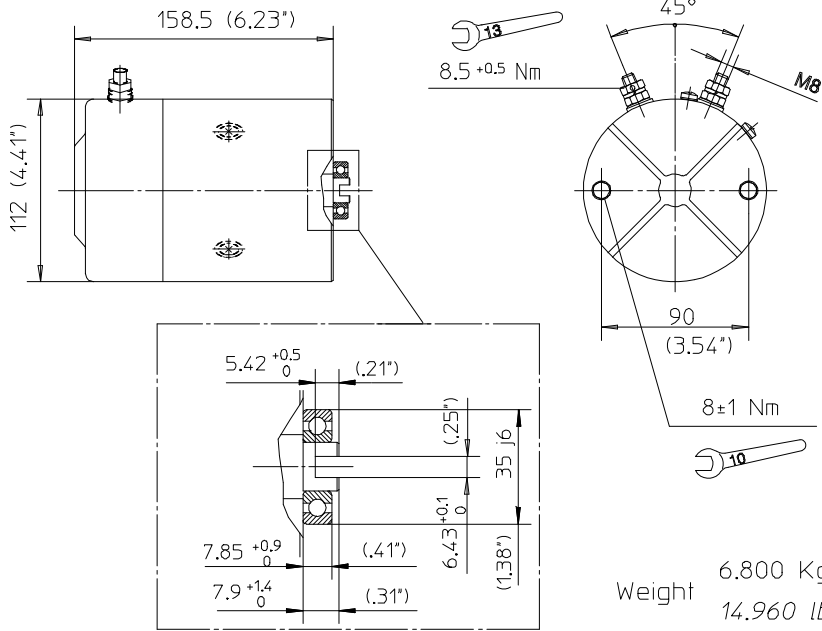


24 V – 2000 W



4

ELECTRIC MOTORS



DIRECT CURRENT

Voltage	12 V	24 V
Power	1600 W	2200 W
Protection index	IP44 (12 V) IP54 (24 V)	
Insulation class	F	
Type of winding	Compound	
Brushes kit	12/1600 24/2200	5441.3802.2 5441.3802.3
Minimum brush length	12.5 mm	

Weight 6.800 Kg
14.960 lb

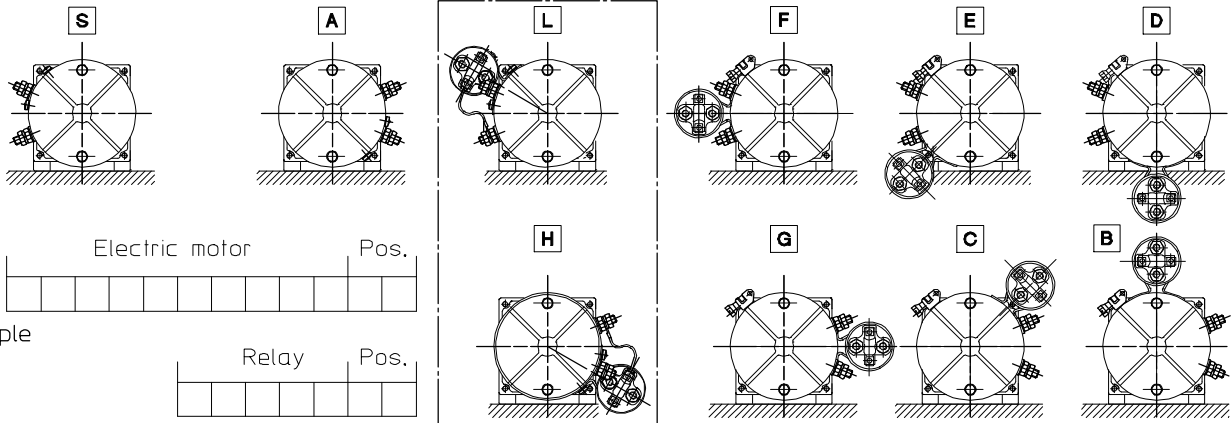
Rotation Right	MOTOR		MOTOR WITH RELAY			
	12V - 1600W	24V - 2200W	12V - 1600W	24V - 2200W	12V - 1600W	24V - 2200W
Type	C135AK/X0	C240AK/Y0	C135AK/X1	C240AK/Y1	C135AK/X0 +R107	C240AK/Y0 +R210
Code	5439.1350.1	5439.2400.1	5439.1350.3	5439.2400.2	7633.1009.0	7633.2009.0
Relay	STANDARD			HEAVY DUTY		
Relay type			R106	R209	R107	R210
			Standard pos. only			

MOTOR MOUNTING POSITION

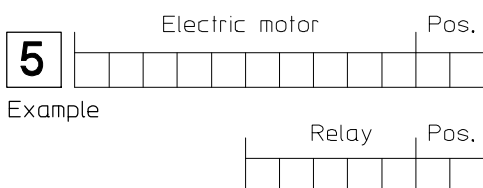
RELAY MOUNTING POSITION

Standard positions

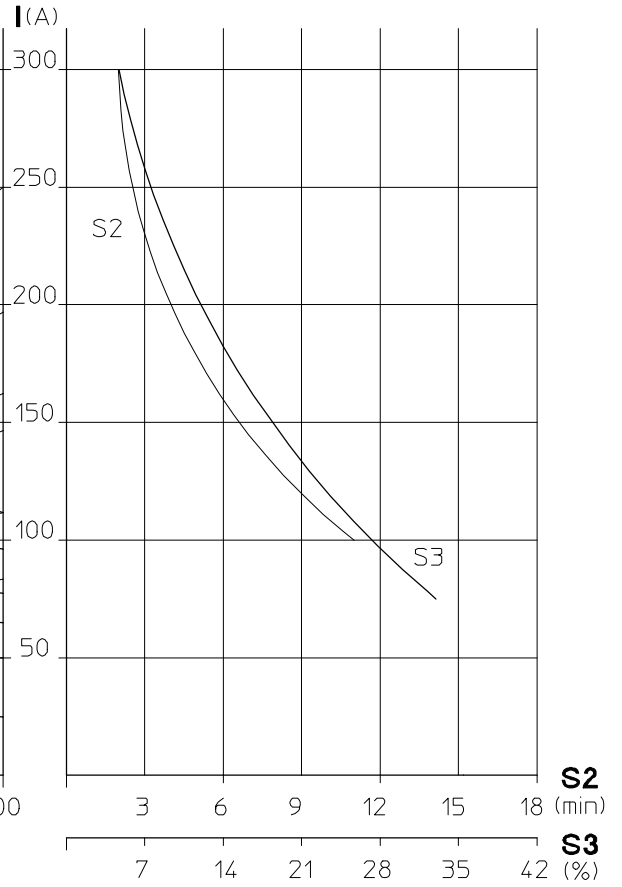
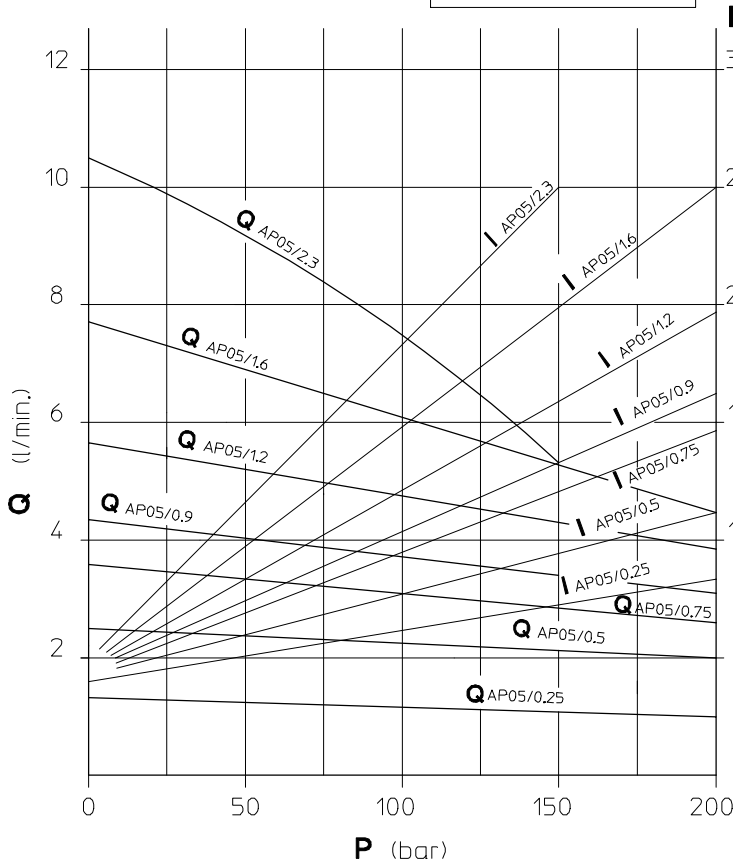
Standard positions



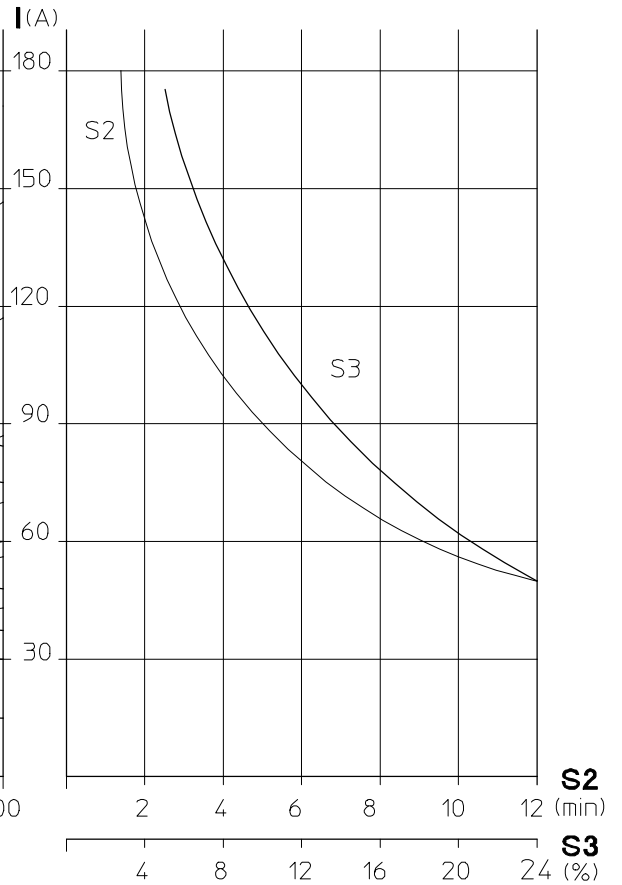
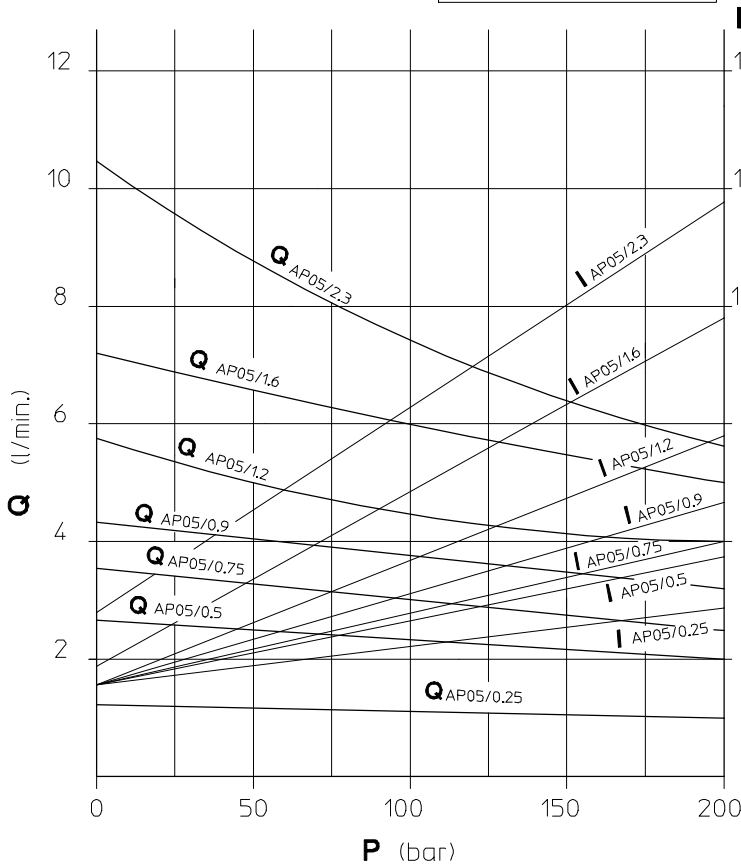
5



12 V - 1600 W

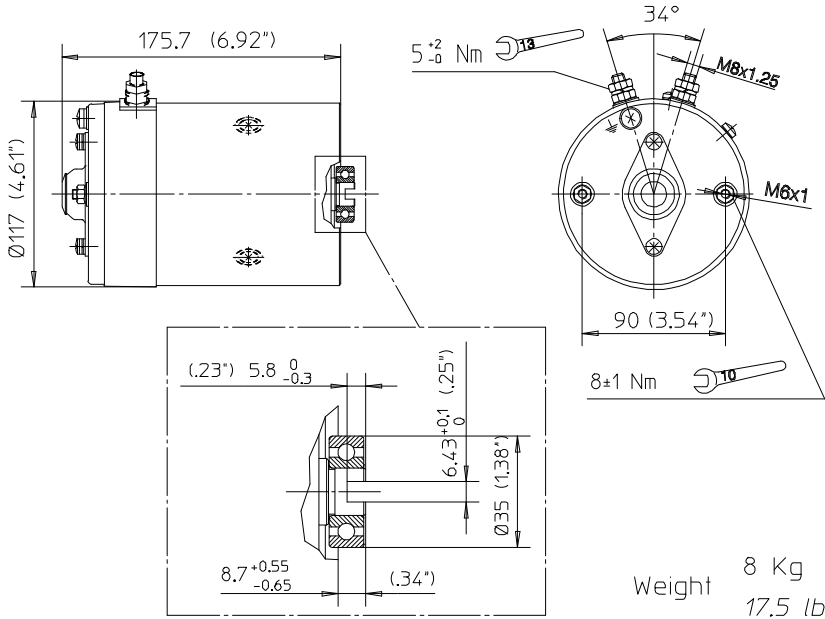


24 V - 2200 W



4

ELECTRIC MOTORS



DIRECT CURRENT

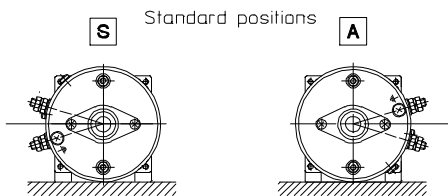
Voltage	12 V	24 V
Power	1700 W	2200 W
Protection index	IP44	
Insulation class	B	
Type of winding	Compound	
Brushes kit	12/1700 24/2200	5441.3801.2
Minimum brush length	5mm 0.2inch	

Weight 8 Kg
17.5 lb

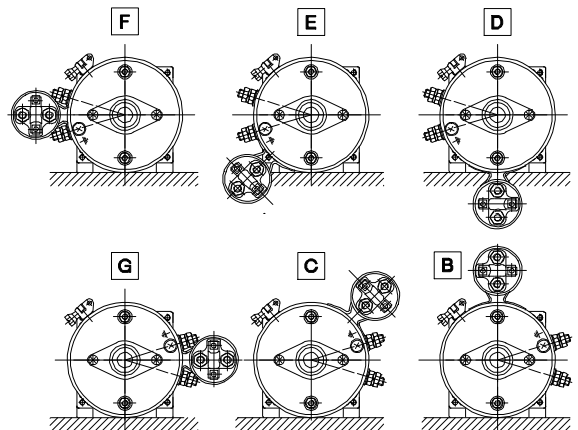
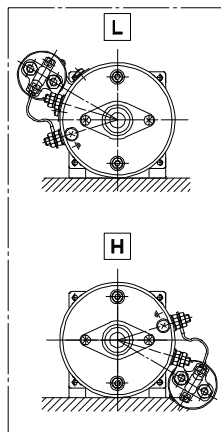
Rotation	MOTOR		MOTOR WITH RELAY			
	12V - 1700W	24V - 2200W	12V - 1700W	24V - 2200W	12V - 1700W	24V - 2200W
Right						
Type	T107E	T109E	T107E +R106	T109E +R209	T107E +R107	T109E +R210
Code	5439.1380.6	5439.2420.5	7633.1016.0	7633.2017.0	7633.1019.0	7633.2023.0
Relay			STANDARD		HEAVY DUTY	
Relay type			R106	R209	R107	R210
			Standard pos. only			

MOTOR MOUNTING POSITION

RELAY MOUNTING POSITION



Standard positions

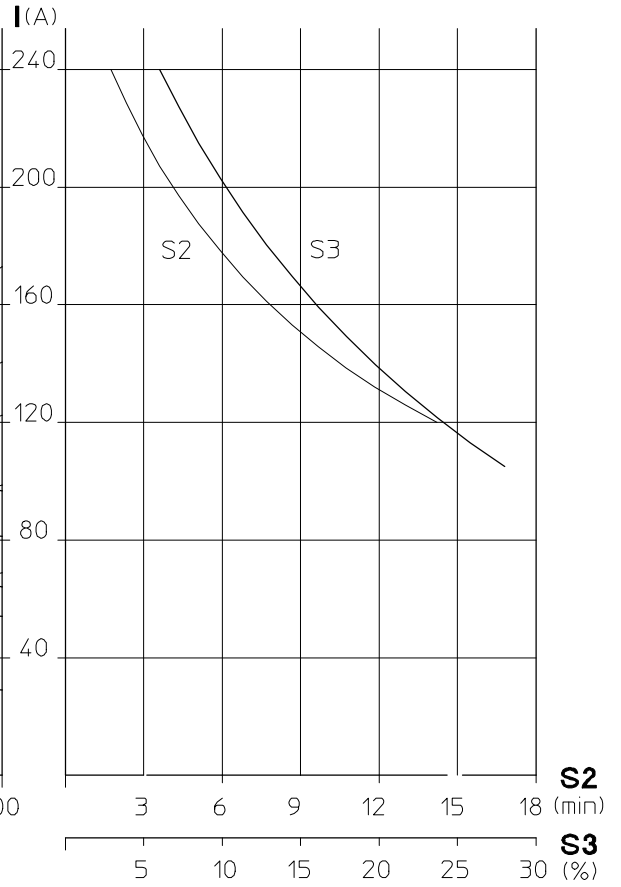
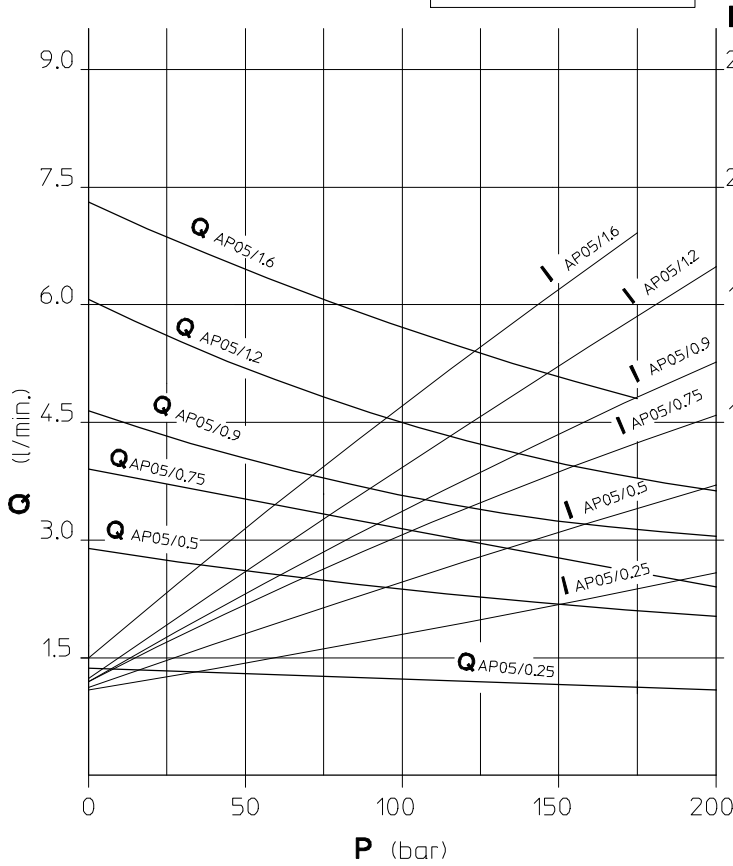


5 Electric motor Pos.
T 1 0 9 E S

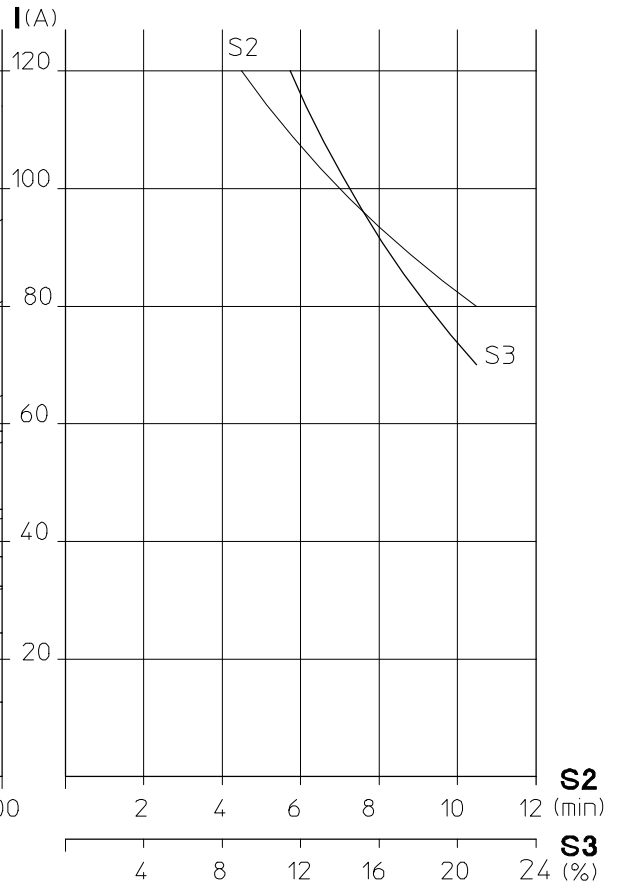
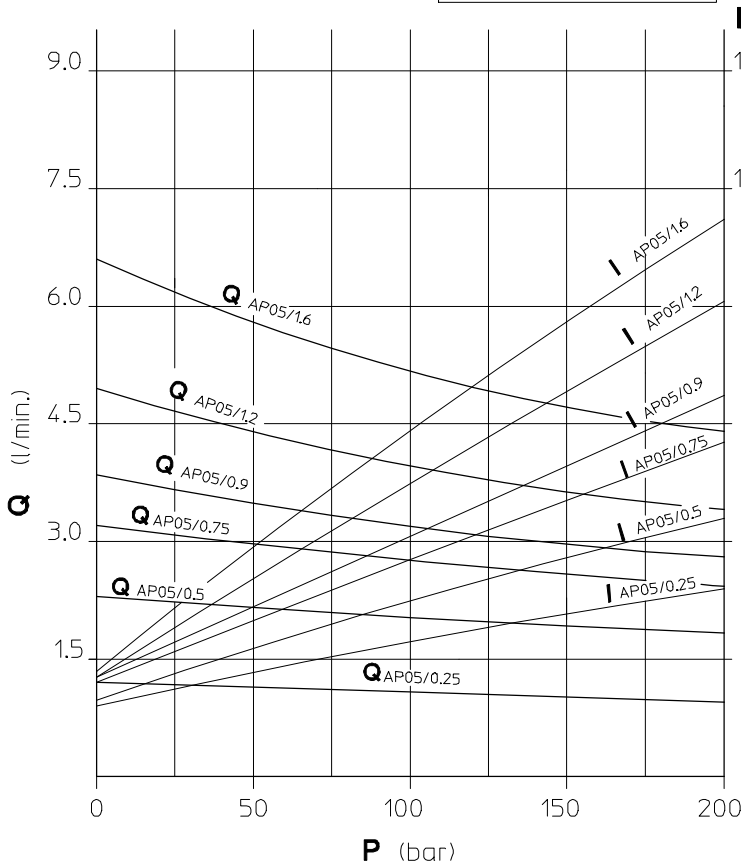
Example

Relay Pos.
[] [] [] [] [] [] [] []

12 V – 1700 W

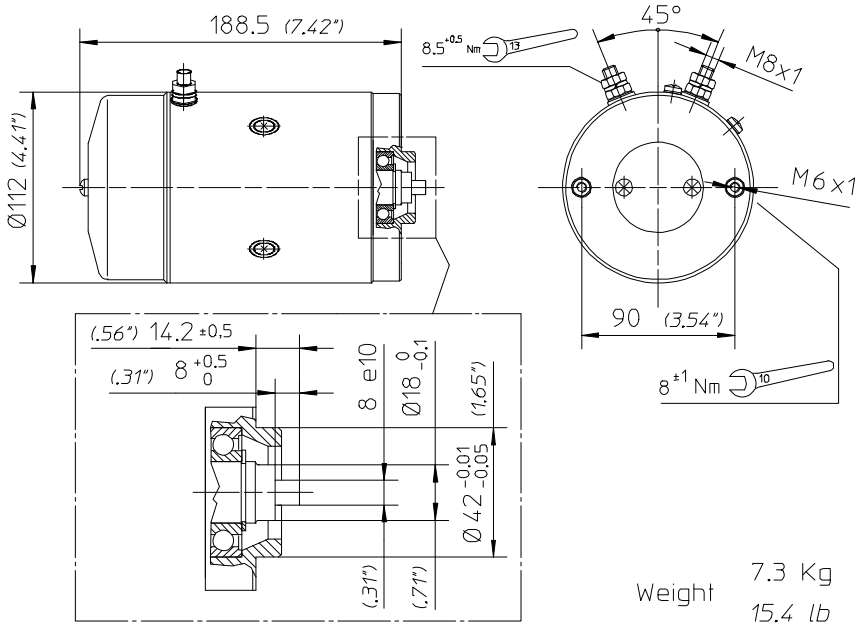


24 V – 2200 W



4

ELECTRIC MOTORS



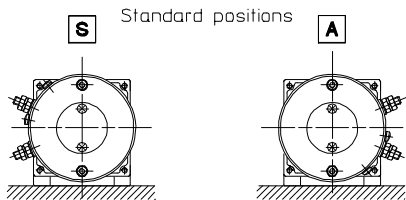
DIRECT CURRENT

Voltage	48 V	
Power	2000 W	
Protection index	IP54	
Insulation class	F	
Type of winding	Compound	
Brushes kit	5441.3801.8	
Minimum brush length	12.5mm 0.5 inch	

Weight 7.3 Kg
15.4 lb

	MOTOR	MOTOR WITH RELAY			
Rotation					
Right					
	48V - 2000W				
Type	T82K				
Code	5439.3380.3				
Relay					
Relay type					

MOTOR MOUNTING POSITION



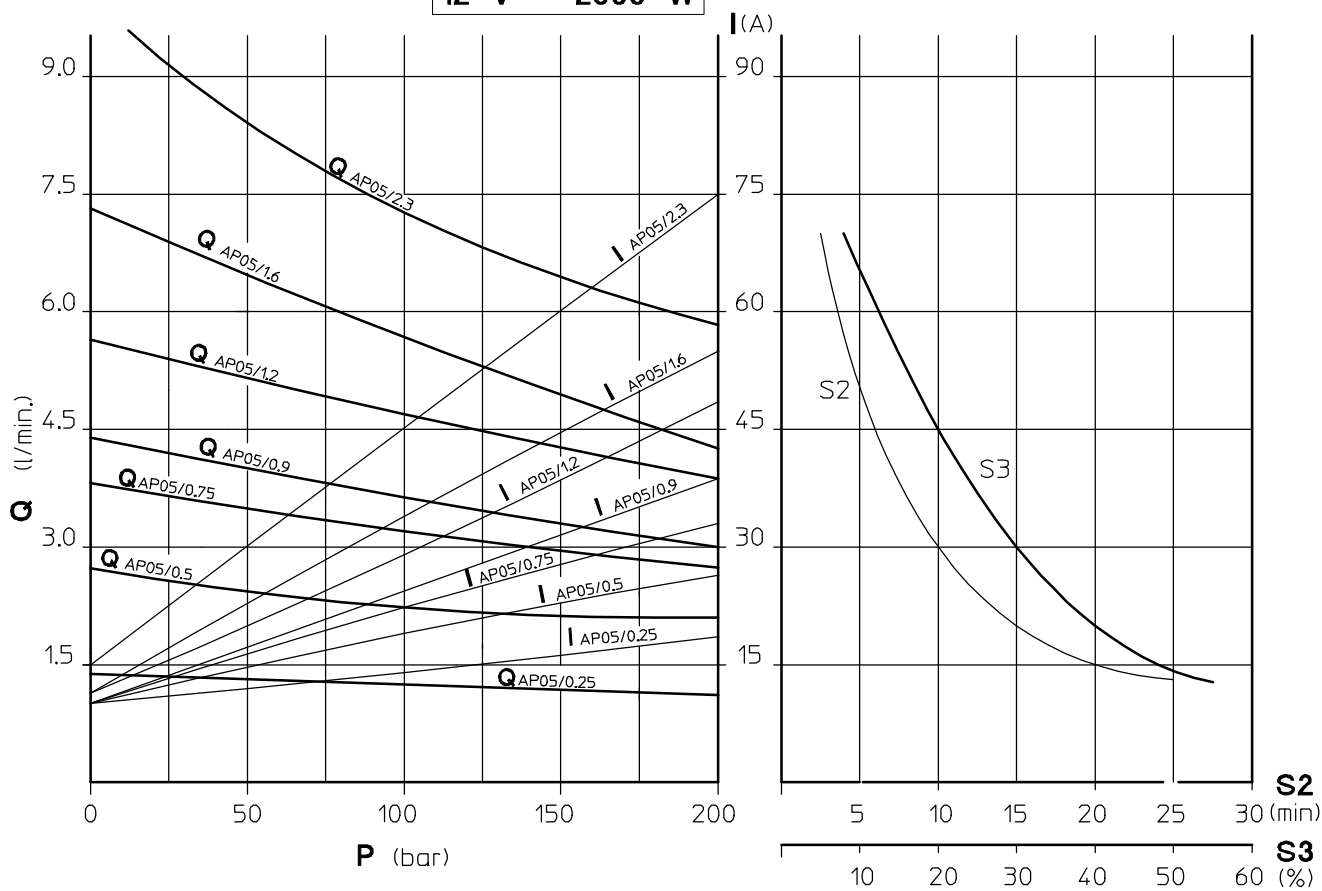
5	Electric motor							Pos.
	T	8	2	K				S

Example

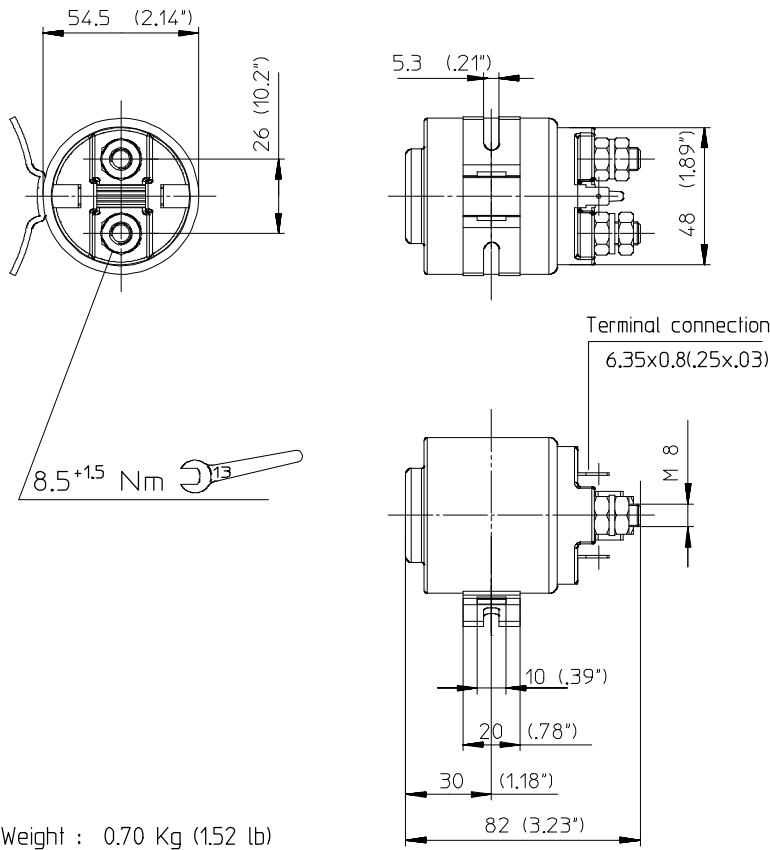
Relay							Pos.

CATUP50.130

12 V - 2000 W



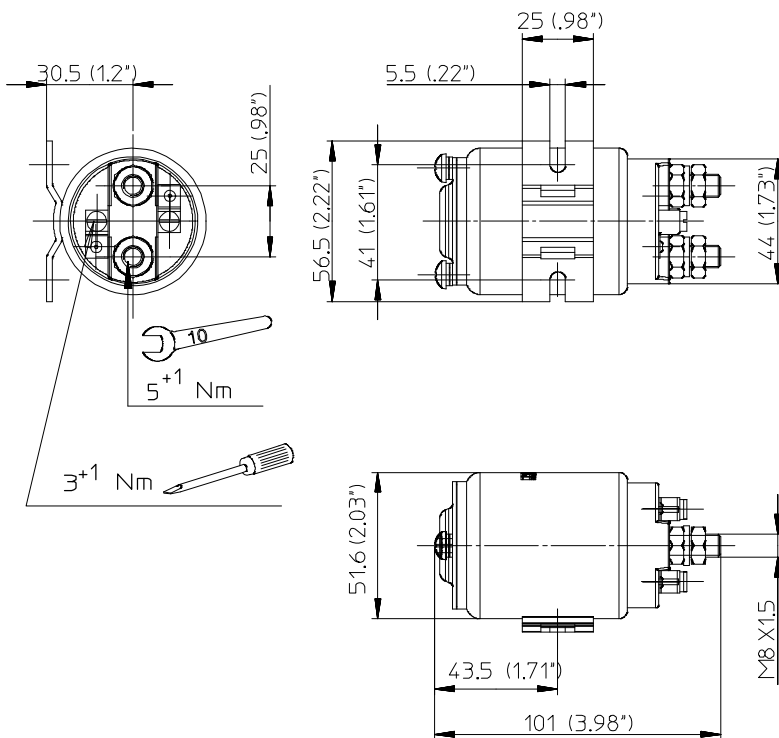
STARTER RELAYS



Weight : 0.70 Kg (1.52 lb)

STANDARD RELAY

Voltage	12 V	24 V
Type	R106	R209
Code	5441.34106	5441.34209
Amps Consumption by the coil	2.8 A	1.1 A
Current for continuous duty	80 A	
Max. current (5 sec.)	500 A	
Protection index	IP54	
Insulation class	F	
Electric diagram		



Weight : 0.78 Kg (1.69 lb)

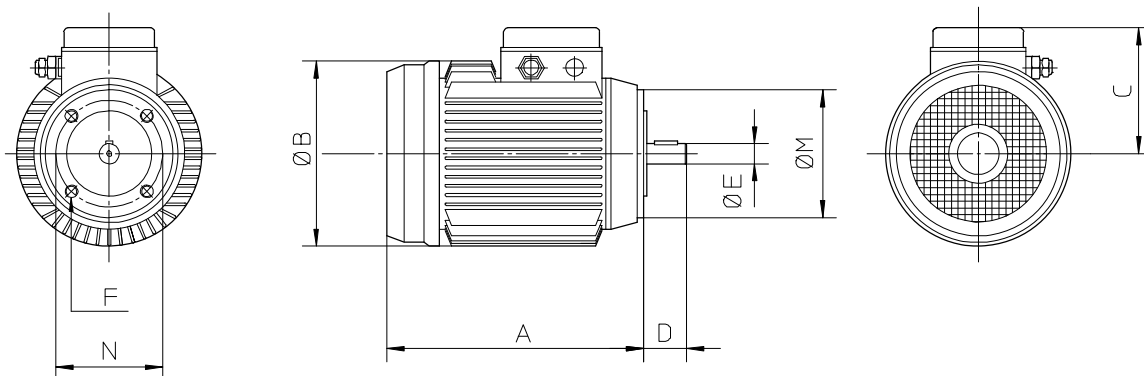
HEAVY DUTY

Voltage	12 V	24 V
Type	R107	R210
Code	5441.34107	5441.34210
Amps Consumption by the coil	2 A	1.1 A
Current for continuous duty	150 A	
Max. current (5 sec.)	800 A	
Protection index	IP42	
Insulation class	B	
Electric symbol		

A.C. CURRENT

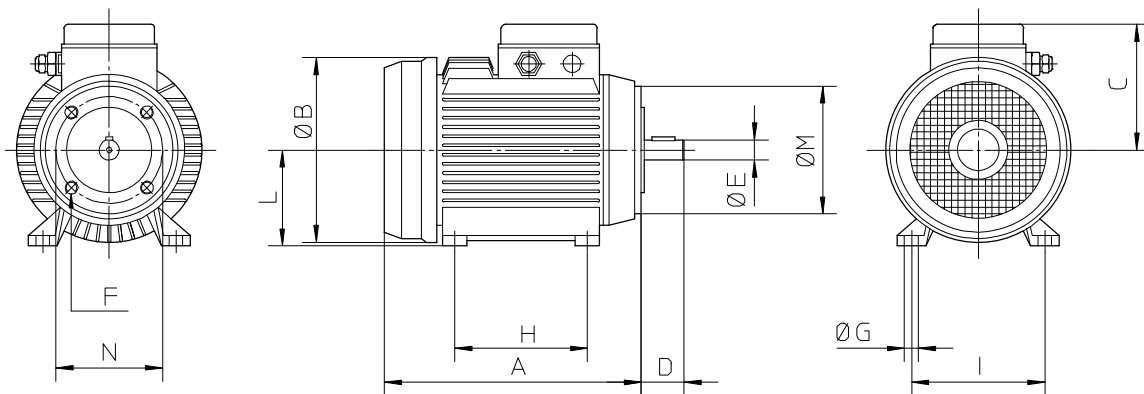
Frame size

B14



Frame size

B34



Size	DIMENSIONS												
		A	B	C	D	E	F	G	H	I	L	M	N
63	mm	189	124	104	23	11	M5	7	80	100	63	90	75
	inch	7.44	4.88	4.09	.90	.43		.28	3.14	3.93	2.48	3.54	2.95
71	mm	218	140	109	30	14	M6	7	90	112	71	105	85
	inch	8.58	5.51	4.29	1.18	.55		.27	3.54	4.41	2.79	4.13	3.35
80	mm	237	156	123	40	19	M6	9	100	125	80	120	100
	inch	9.33	6.14	4.84	1.57	.75		.35	3.94	4.92	3.15	4.72	3.94

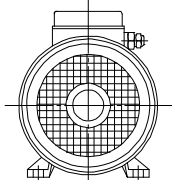
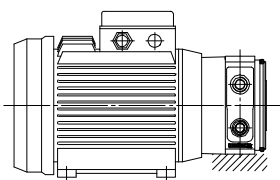
Lengths and diameters indicated by the letter A and B are guideline only.

Frame size B14 SINGLE PHASE motor					Frame size B34 SINGLE PHASE motor				
Power		Size	Type	Code	Power		Size	Type	Code
kW	HP				kW	HP			
0.12	0.16	63	T211	5431.60411	0.12	0.16	63	T711	5431.60412
0.18	0.25	63	T212	5431.60811	0.18	0.25	63	T712	5431.60812
0.25	0.33	71	T209	5431.61221	0.25	0.33	71	T709	5431.61223
0.37	0.5	71	T201	5431.61831	0.37	0.5	71	T701	5431.61832
0.55	0.75	80	T202	5431.62231	0.55	0.75	80	T702	5431.62233
0.75	1	80	T203	5431.62631	0.75	1	80	T703	5431.62633
Frame size B14 THREE PHASE motor					Frame size B34 THREE PHASE motor				
Power		Size	Type	Code	Power		Size	Type	Code
kW	HP				kW	HP			
0.12	0.16	63	T011	5435.60441	0.12	0.16	63	T511	5435.60442
0.18	0.25	63	T012	5435.61041	0.18	0.25	63	T512	5435.61011
0.25	0.33	71	T009	5435.61221	0.25	0.33	71	T509	5435.61222
0.37	0.5	71	T001	5435.61821	0.37	0.5	71	T501	5435.61822
0.55	0.75	80	T002	5435.62231	0.55	0.75	80	T502	5435.62232
0.75*	1	80	T003	5435.62635	0.75*	1	80	T503	5435.62634
* According to IE2 efficiency class									

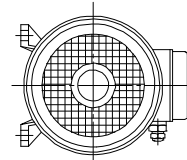
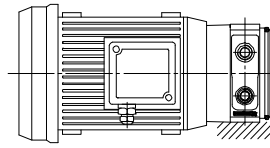
Mounting positions

Standard position

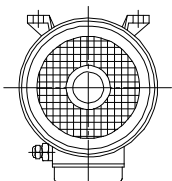
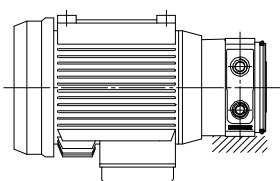
S



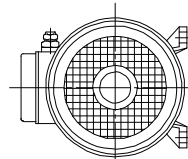
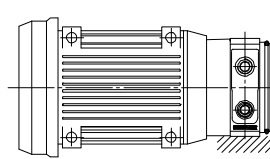
B



A



C



Example

5

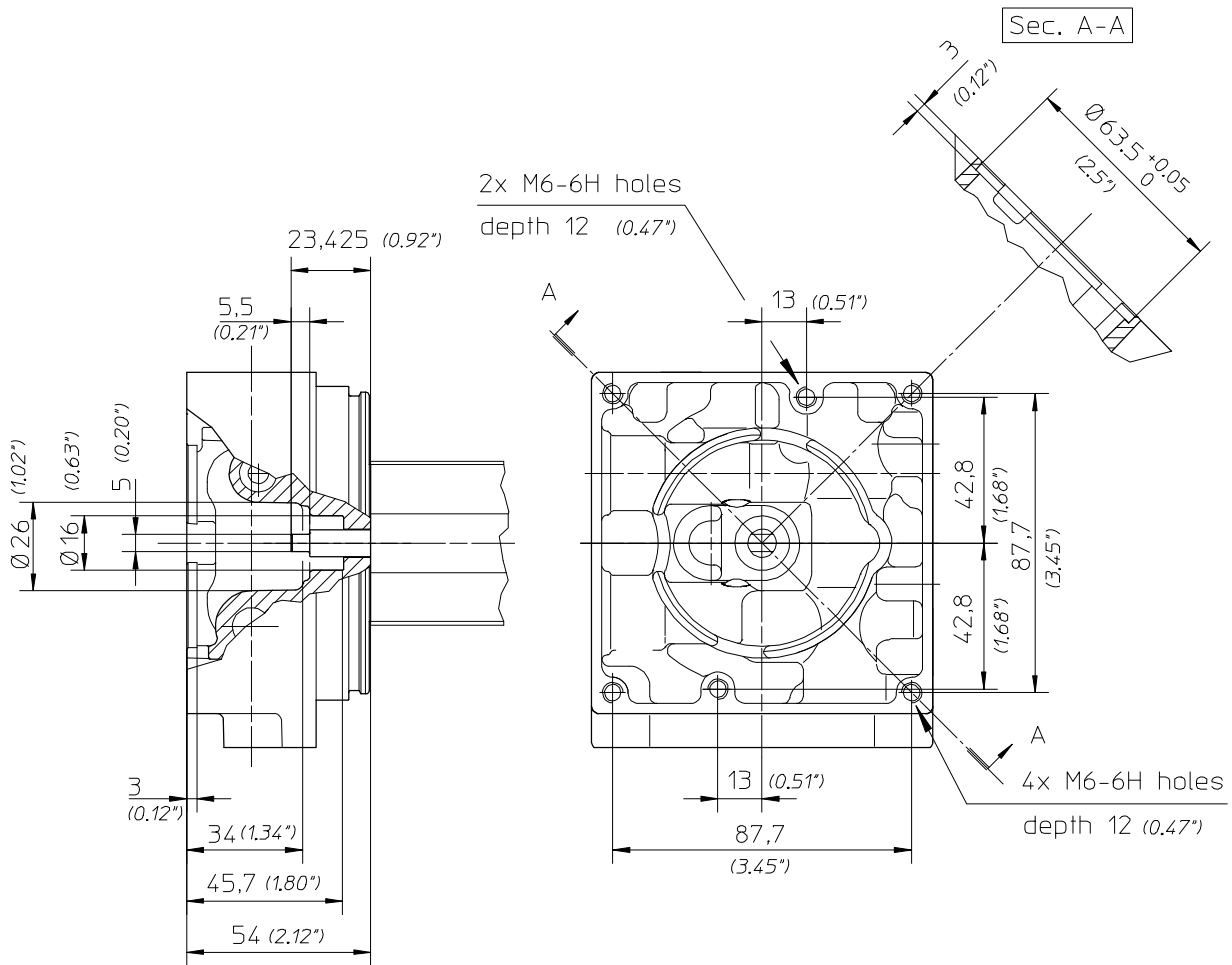
Electric motor							Pos.
T	0	0	1				S

Relay				Pos.

INTRODUCTION

The drives illustrated in this chapter are intended for use in conjunction with d.c. and a.c. motors as described in the previous chapter.

To allow the use of different motors, the interface on the motor side is shown with the dimensions of the spigot and of the end of the pump drive shaft.



Materials

The flanges for connection of the power pack housing and the electric motor are in aluminium alloy GdAlSi12Cu to UNI 5076.

Couplings are high strength steel, with mating surfaces hardened by heat treatment for added resistance to wear.

The tables allow selection of the correct drive for the selected motor.

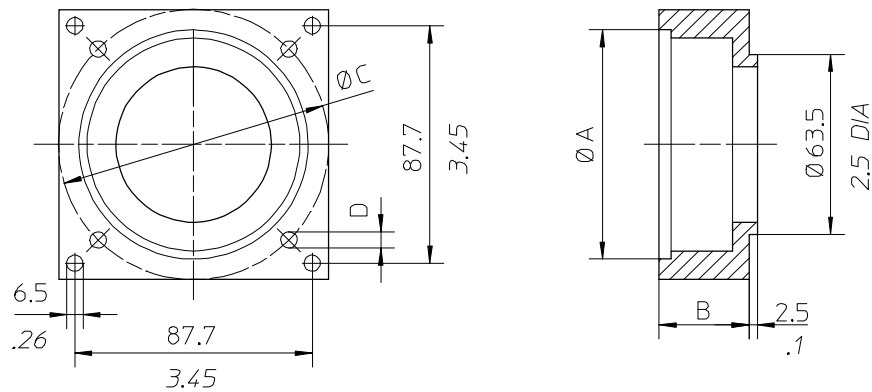
D.C. MOTORS

Motor type			Voltage	Power	Drive
C117PE/V0	C117PE/V0 + R106		12 V	350 W	E61
C220PE/Z0	C220PE/Z0 + R209		24 V	400 W	
C128AE/S0	C128AE/S0 + R106		12 V	700 W	
C232AE/R0	C232AE/R0 + R209		24 V	800 W	
C128PE/X0	C128PE/X0 + R106		12 V	700 W	
C229PE/Y0	C229PE/Y0 + R209		24 V	800 W	
C135AK/X0	C135AK/X1	C135AK/X0 + R107	12 V	1600 W	E66
C240AK/Y0	C240AK/Y1	C240AK/Y0 + R210	24 V	2200 W	
C129AE/B0	C129AE/B0 + R106		12 V	900 W	
C235AE/A0	C235AE/A0 + R209		24 V	1600 W	
T107E	T107E + R106	T107E + R107	12 V	1700 W	
T109E	T109E + R209	T109E + R210	24 V	2200 W	
C134AK/O0	C134AK/O0 + R106	C134AK/O0 + R107	12 V	1500 W	E65
C238AK/P0	C238AK/P0 + R209	C238AK/P0 + R210	24 V	2000 W	
T82K			48 V	2000 W	

A.C. MOTORS

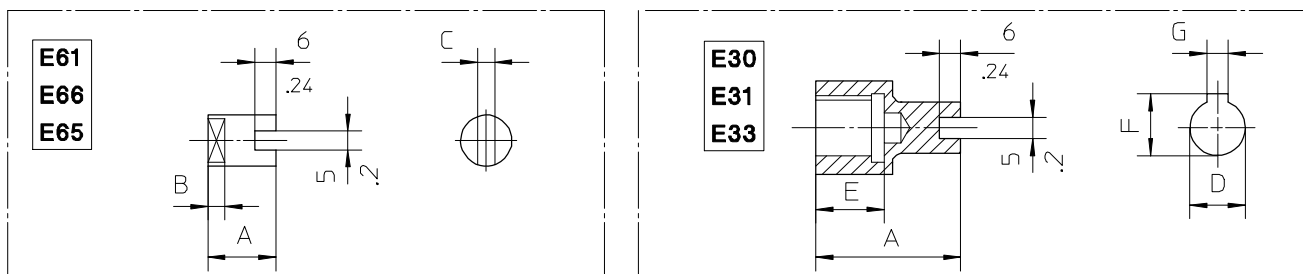
SINGLE PHASE			THREE PHASE				
Motor type	Power		Drive	Motor type	Power		Drive
	kW	HP			kW	HP	
T211-T711	0.12	0.16	E30	T011-T511	0.12	0.16	E30
T212-T712	0.18	0.25		T012-T512	0.18	0.25	
T209-T709	0.25	0.33	E33	T009-T509	0.25	0.33	E33
T201-T701	0.37	0.5		T001-T501	0.37	0.5	
T202-T702	0.55	0.75	E31	T002-T502	0.55	0.75	E31
T203-T703	0.75	1		T003-T503	0.75	1	

MOTORS FLANGE



Drive system	Flange code	Dimensions			
		A	B	C	D
E66	6581.0018.0	98 (3.85")	3 (.12")	115 (4.53")	6.5 (.25")
E65	6581.0017.0	42 (1.65")	11.5 (.45")	90 (3.54")	M6
E30	6581.0008.0	60 (2.36")	30 (1.18")	75 (2.95")	5.5 (.22")
E33	6581.0009.0	70 (2.76")	30 (1.18")	85 (3.35")	6.5 (.25")
E31	6581.0007.0	80 (3.15")	30 (1.18")	100 (3.94")	6.5 (.25")

MOTORS COUPLING

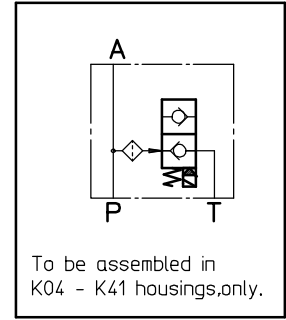
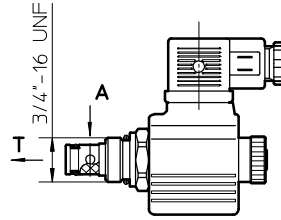
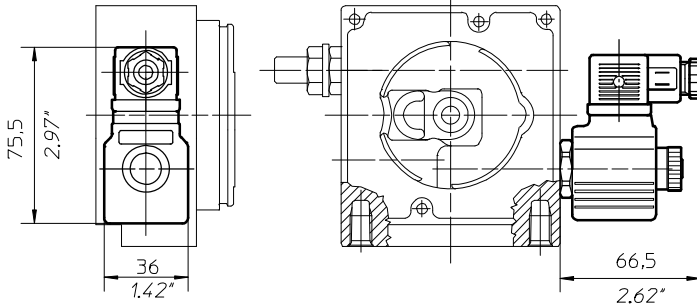


Drive system	Coupling code	Dimensions						
		A	B	C	D	E	F	G
E66	6596.0034.0	34.5 (1.36")	5.5 (.22")	6.4 (.26")				
E61	6596.0011.0	15 (.6")	5.5 (.22")	6.4 (.26")				
E65	6596.0015.0	39.5 (1.55")	7 (.27")	8 (.31")				
E30	6594.0029.0	60 (2.36")			11 (.43")	18 (.71")	12.7 (.5")	4 (.16")
E33	6594.0030.0	55 (2.17")			14 (.55")	20 (.79")	16.2 (.64")	5 (.2")
E31	6594.0031.0	50 (1.97")			19 (.75")	25 (.98")	21.7 (.86")	6 (.24")

TWO POSITION-TWO WAY N.O.EL.VALVE

Directional valve without coil and connector

SPF817/22-T0 P.M. 7572.0020.0



Manual override version available:
please contact our Sales Department.

Coil voltage

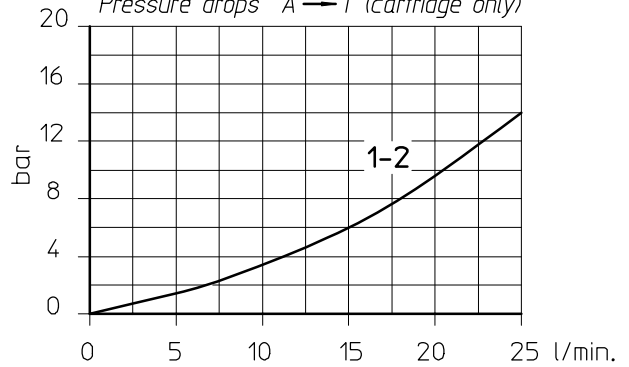
	D.C.		A.C.		
Volt	12 V.	24 V.	24 V.	110 V.	220 V.
Type	13	23	21	41	51

Complete solenoid valve for d.c. and a.c. current

SPF817/22-T0-13-HC27	9570.1006.7
SPF817/22-T0-23-HC27	9570.2007.3
SPF817/22-T0-21-HC27	9569.2005.0
SPF817/22-T0-41-HC27	9569.4004.5
SPF817/22-T0-51-HC27	9569.6005.1

Minimum operating pressure = 5 bar

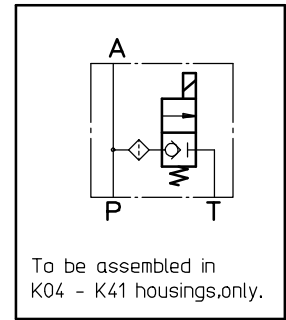
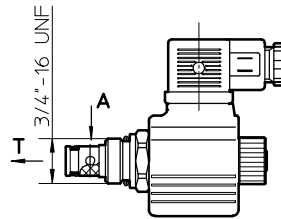
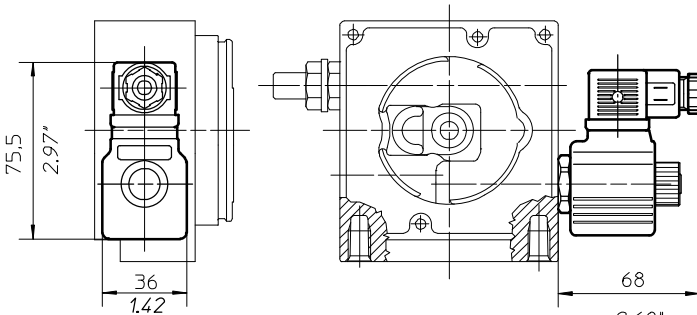
Pressure drops A → T (cartridge only)



TWO POSITION-TWO WAY N.C.EL.VALVE

Directional valve without coil and connector

SDF817/22-TH P.M. 7572.0090.0



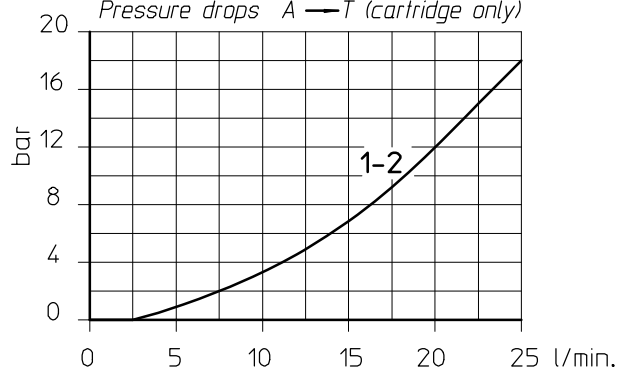
Coil voltage

	D.C.		A.C.		
Volt	12 V.	24 V.	24 V.	110 V.	220 V.
Type	13	23	21	41	51

Complete solenoid valve for d.c. and a.c. current

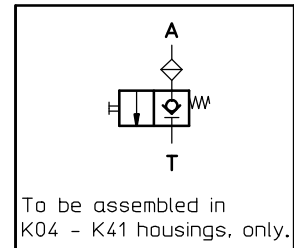
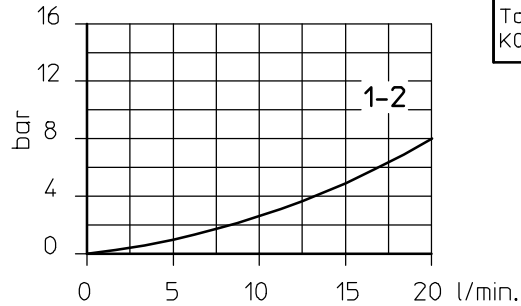
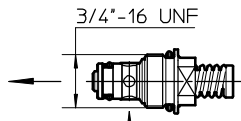
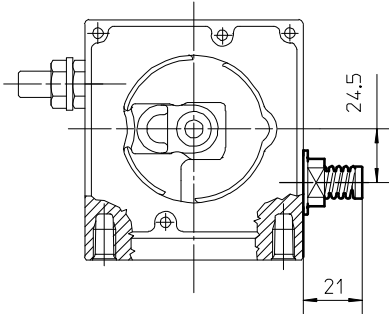
SDF817/22-TH-13-HC27	9570.1006.1
SDF817/22-TH-23-HC27	9570.2006.7
SDF817/22-TH-21-HC27	9569.2004.8
SDF817/22-TH-41-HC27	9569.4004.3
SDF817/22-TH-51-HC27	9569.6004.9

Pressure drops A → T (cartridge only)



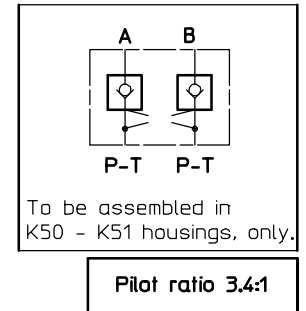
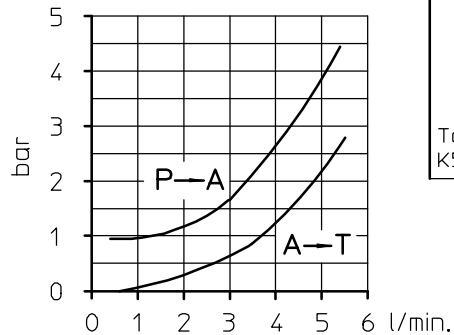
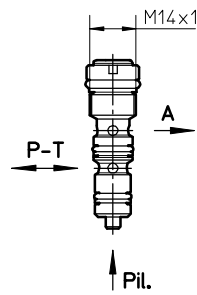
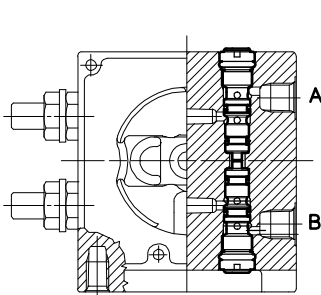
TWO POSITION-TWO WAY MANUAL OPERATED VALVE

ZR817/22-TV 7876.0194.0

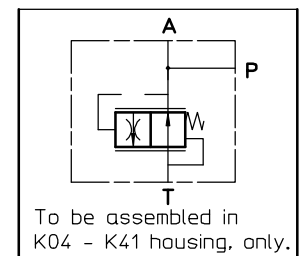
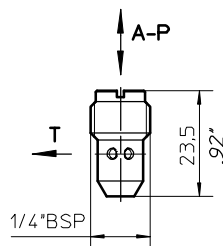
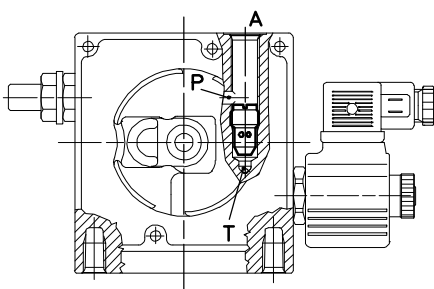


DOUBLE PILOTED CHECK VALVE

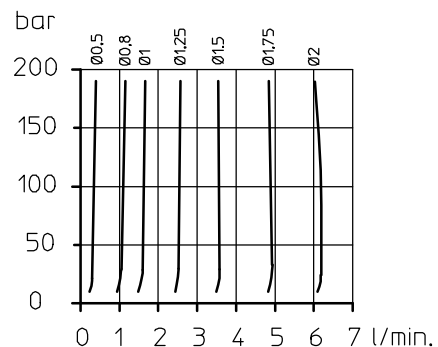
VRP05 7876.0092.0



THROTTLE COMPENSATED FLOW VALVE

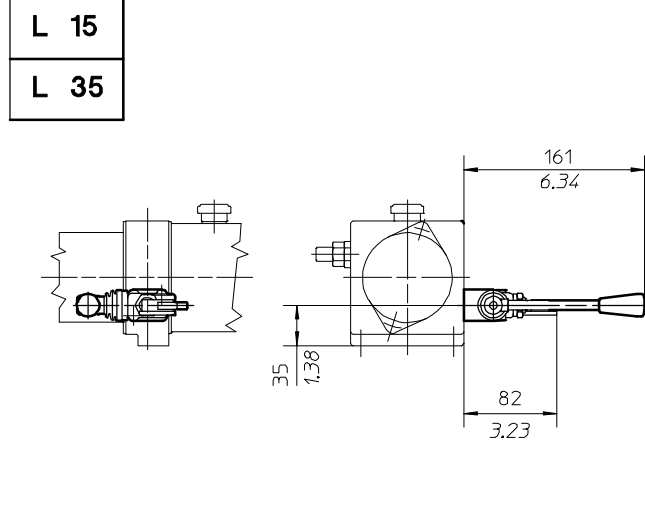
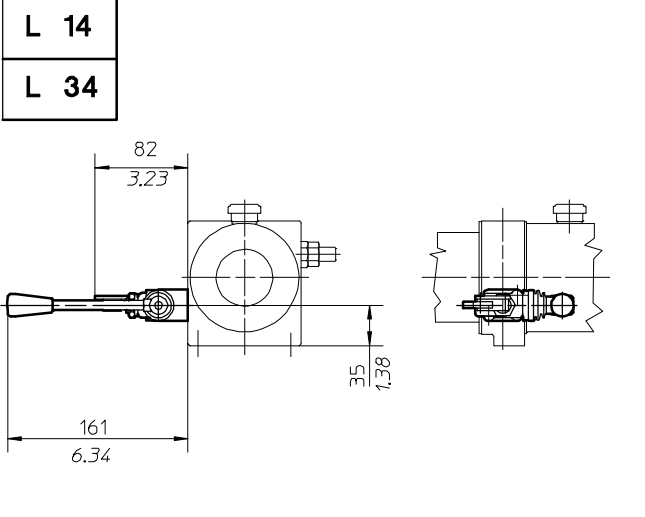
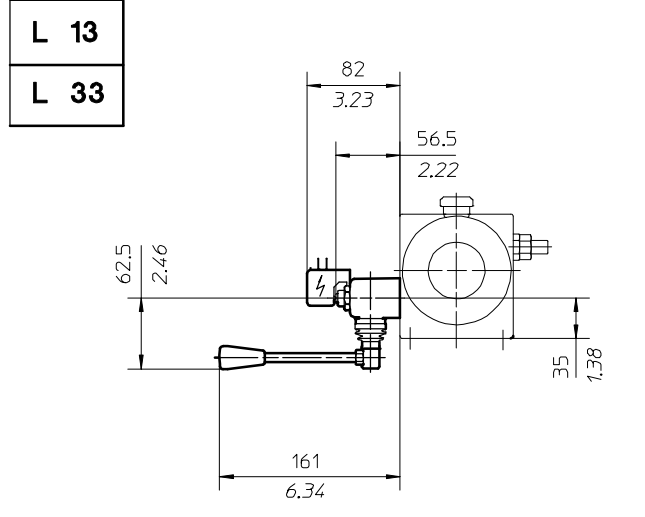
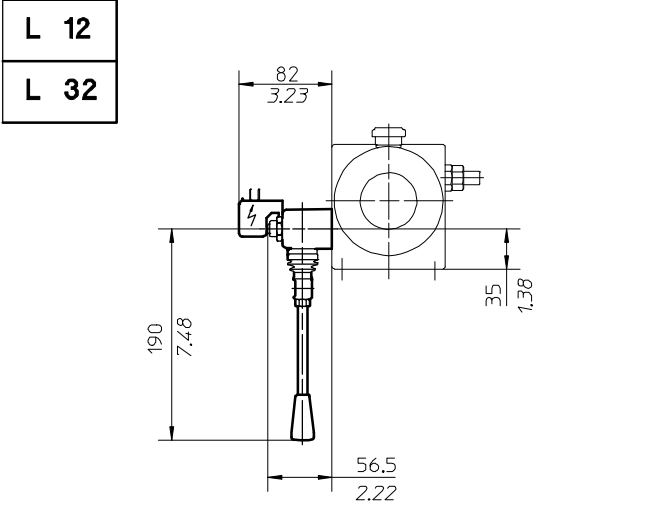
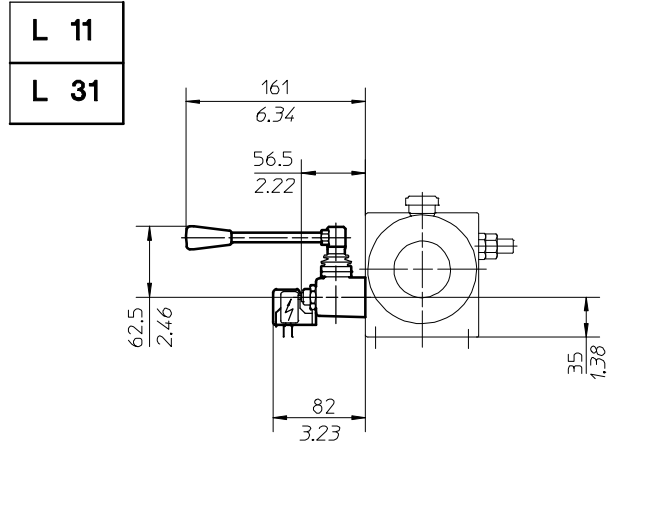
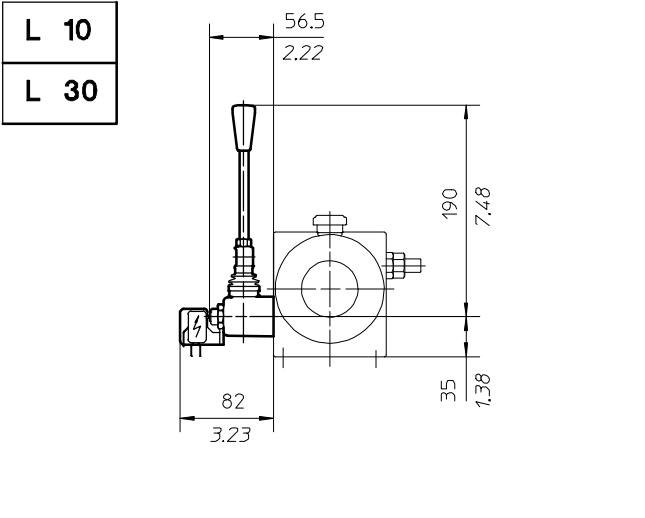


Type valve	Hole flow restrictor	Controlled flow Q			Code
		l/min	UK.G.P.M.	US.G.P.M.	
VRC05/0.35	Ø0.5	0.35	0.077	0.092	7872.0025.0
VRC05/1	Ø0.8	1	0.22	0.26	7872.0026.0
VRC05/1.6	Ø1	1.6	0.35	0.42	7872.0027.0
VRC05/2.5	Ø1.25	2.5	0.55	0.66	7872.0028.0
VRC05/3.5	Ø1.5	3.5	0.77	0.92	7872.0029.0
VRC05/4.9	Ø1.75	4.9	1.08	1.3	7872.0030.0
VRC05/6	Ø2	6	1.32	1.59	7872.0031.0



MANUAL CONTROL

Valves	Code	Description	Lever
ZR817/22-TV	7876.0196.0	Without micro-switch	L10...L15
ZR817/22-TVM	7876.0195.0	With micro-switch	L30...L35

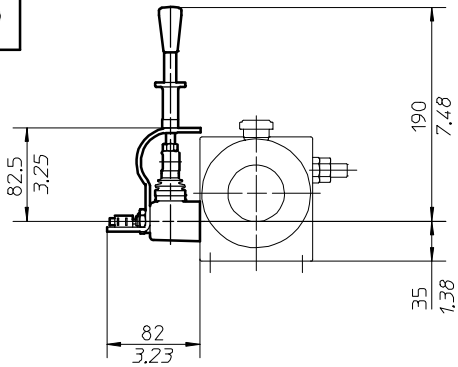


CATUP50.230

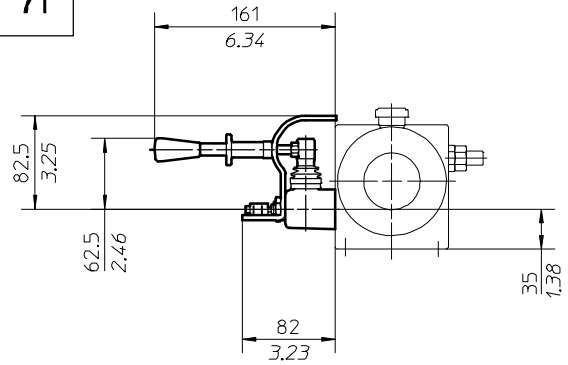
MANUAL CONTROL

Valves	Code	Description	Lever
ZR817/22-TVS	7876.0197.0	With safety lever without micro-switch	L50...L55
ZR817/22-TVMS	7876.0198.0	With safety lever and micro-switch	L70...L75

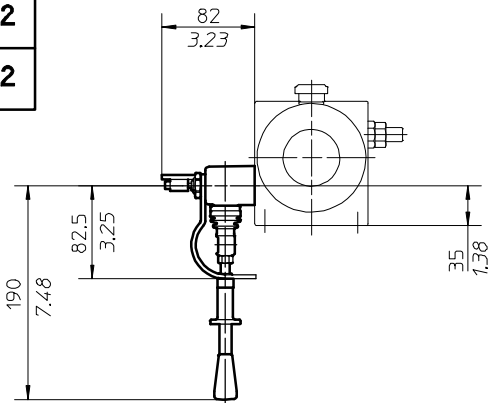
L 50
L 70



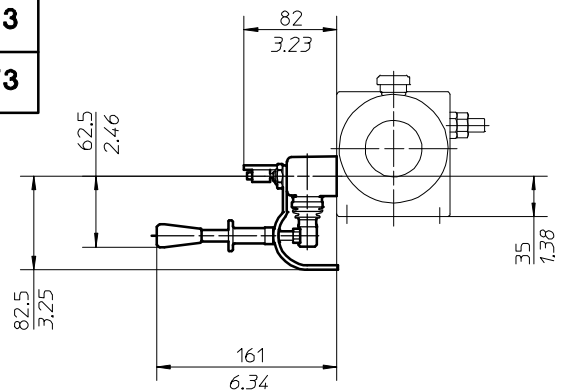
L 51
L 71



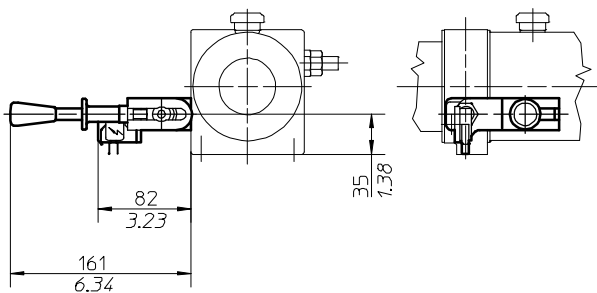
L 52
L 72



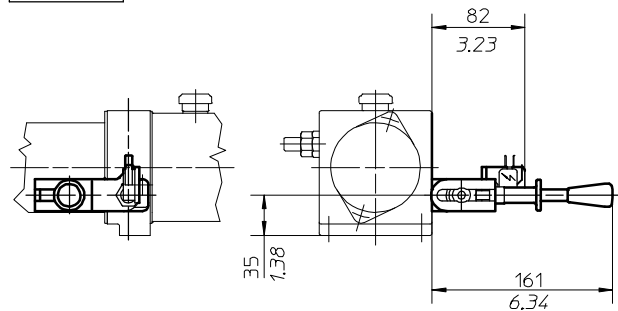
L 53
L 73



L 54
L 74



L 55
L 75



7 MODULE CONTROLS

MANIFOLD FOR PARALLEL CIRCUIT – VERTICAL ASSEMBLY

CARTRIDGE SOLENOID VALVES-SUB PLATE APPLICABLE ON HOUSING K03

MANIFOLD FOR SINGLE ELECTROVALVE

E	H1	Type	Code
31 (1.22)	57 (5.31)	6013	7646.0028.0

MANIFOLD FOR TWO ELECTROVALVE

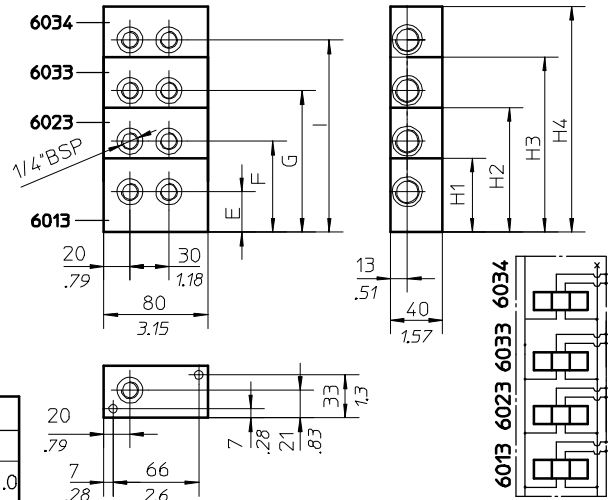
E	F	H2	Type	Code
31 (1.22)	70 (2.76)	96 (5.31)	6023	7646.0029.0

MANIFOLD FOR THREE ELECTROVALVE

E	F	G	H3	Type	Code
31 (1.22)	70 (2.76)	109 (4.29)	135 (5.31)	6033	7646.0030.0

MANIFOLD FOR FOUR ELECTROVALVE

E	F	G	I	H4	Type	Code
31 (1.22)	70 (2.76)	109 (4.29)	148 (5.31)	174 (5.31)	6034	7646.0031.0



MANIFOLD FOR PARALLEL CIRCUIT – HORIZONTAL ASSEMBLY

INTERMEDIATE MANIFOLD FOR HORIZONTAL ASSEMBLY

Type	Code
4011	7649.0040.0

MANIFOLD FOR SINGLE ELECTROVALVE

E	H1	Type	Code
31 (1.22)	57 (5.31)	6013	7646.0028.0

MANIFOLD FOR TWO ELECTROVALVE

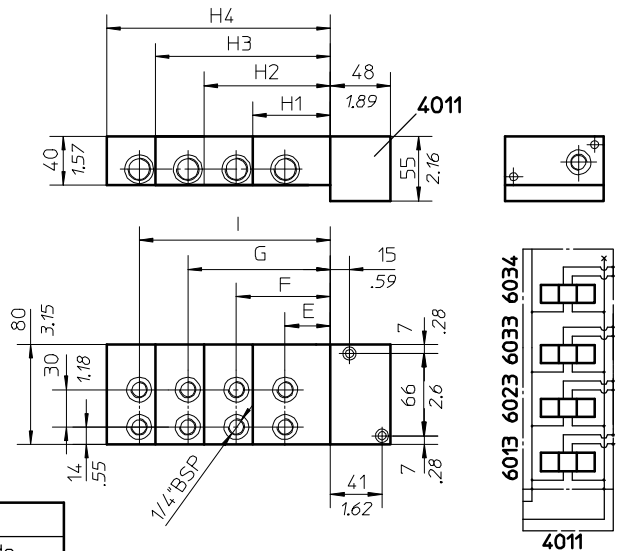
E	F	H2	Type	Code
31 (1.22)	70 (2.76)	96 (5.31)	6023	7646.0123.0

MANIFOLD FOR THREE ELECTROVALVE

E	F	G	H3	Type	Code
31 (1.22)	70 (2.76)	109 (4.29)	135 (5.31)	6033	7646.0030.0

MANIFOLD FOR FOUR ELECTROVALVE

E	F	G	I	H4	Type	Code
31 (1.22)	70 (2.76)	109 (4.29)	148 (5.31)	174 (5.31)	6034	7646.0031.0



MANIFOLD FOR SERIE CIRCUIT – VERTICAL ASSEMBLY

FIRST MANIFOLD

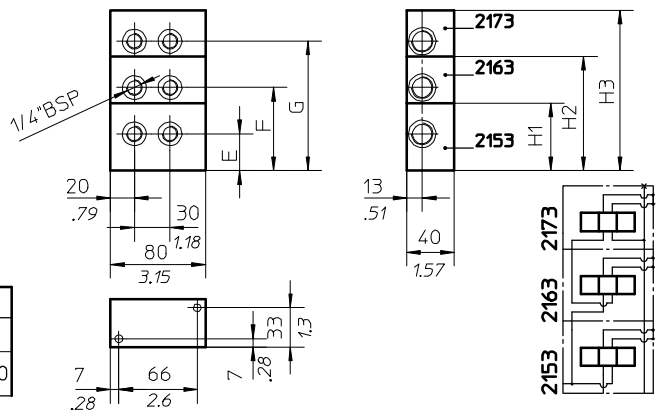
E	H1	Type	Code
31 (1.22)	57 (5.31)	2153	7644.0012.0

INTERMEDIATE MANIFOLD

E	F	H2	Type	Code
31 (1.22)	70 (2.76)	96 (5.31)	2163	7644.0006.0

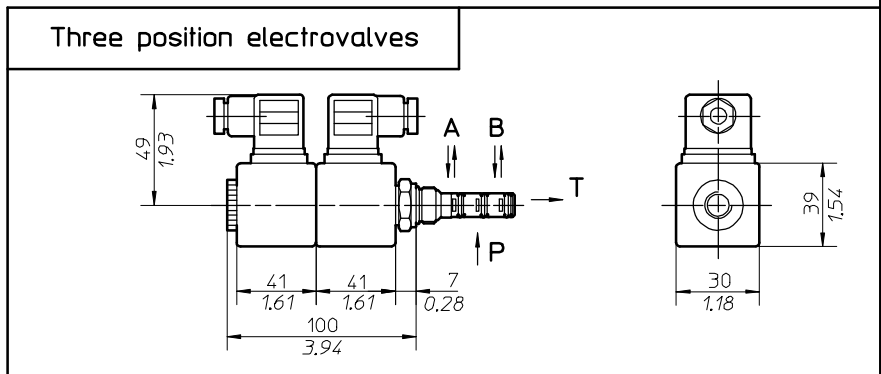
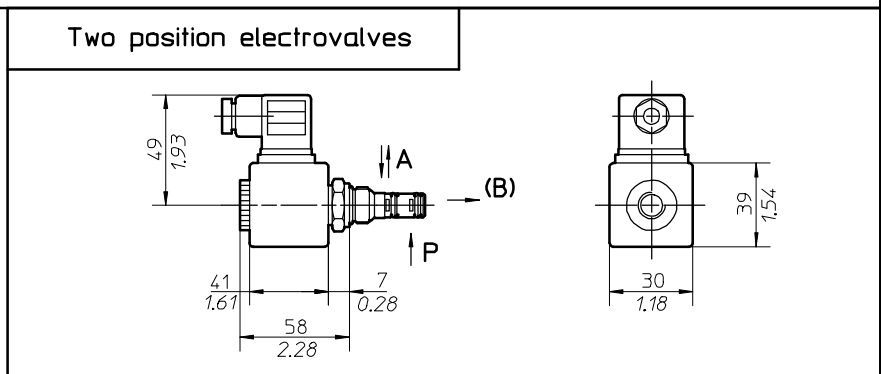
END MANIFOLD

E	F	G	H3	Type	Code
31 (1.22)	70 (2.76)	109 (4.29)	135 (5.31)	2173	7644.0005.0



CARTRIDGE TYPE ELECTROVALVES (For availability please contact our Sales Department)

Circuit	Type
	CT-01
	CF-02
	CH-01
	CB-01
	CR-01
	CC-01
	CA-01
	CI-01
	CB-02
	CC-02
	CA-02
	CD-02
	CX-02



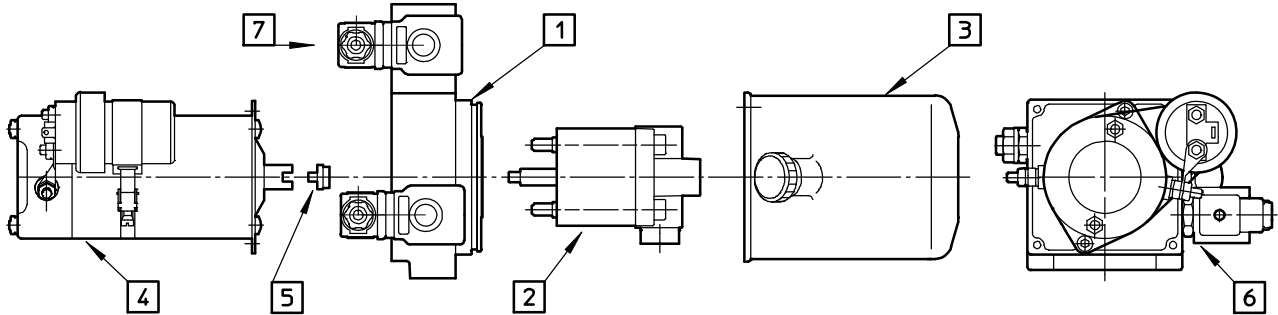
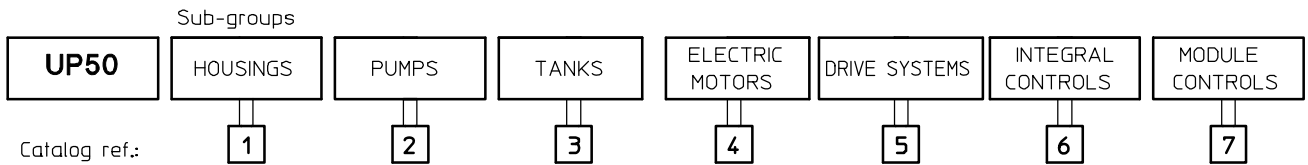
Std. voltage	Type	Std. voltage	Type
12 V D.C	13	24 V A.C 50Hz	21
24 V D.C	23	110 V A.C 50Hz	41
48 V D.C	33	220 V A.C 50Hz	51

CONNECTOR: insulation class C-VDE 0110
HIRSCHMAN type plug
connection DIN 43650

SOLENOID: insulation class E-VDE 0580/10.70-33;
protection degree: IP65 - DIN 40050;
intermittency: ED 100%; power: 24 W;

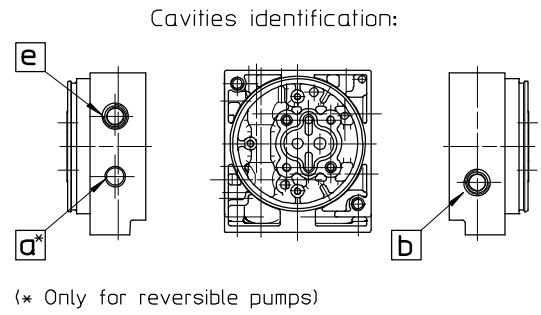
Type Circuit	Mechanical Part code	13	23	33	21	41	51
		Code	Code	Code	Code	Code	Code
CT-01	5423.10002	9570.1100.1	9570.2100.1		9569.2100.1	9569.4100.2	9569.6100.2
CF-02	5423.40003	9570.1400.2	9570.2400.2		9569.2400.2	9569.4400.2	9569.6400.4
CH-01	5423.20002	9570.1200.7	9570.2200.7		9569.2200.7	9569.4200.8	9569.6200.8
CB-01	5423.20003	9570.1200.4	9570.2200.4		9569.2200.3	9569.4200.4	9569.6200.4
CR-01	5423.20001	9570.1201.2	9570.2201.2		9569.2201.2	9569.4201.2	9569.6201.2
CC-01	5423.20004	9570.1200.5	9570.2200.5		9569.2200.5	9569.4200.6	9569.6200.6
CA-01	5423.20005	9570.1200.1	9570.2200.1		9569.2200.1	9569.4200.2	9569.6200.2
CI-01	5423.20006	9570.1200.9	9570.2200.9		9569.2200.9	9569.4201.0	9569.6201.0
CB-02	5423.50003	9570.1500.4	9570.2500.9		9569.2500.4	9569.4500.4	9569.6500.3
CC-02	5423.50001	9570.1500.6	9570.2500.5		9569.2500.7	9569.4500.6	9569.6500.5
CA-02	5423.50004	9570.1500.2	9570.2500.2		9569.2500.2	9569.4500.2	9569.6500.2
CD-02	5423.50005	9570.1500.8	9570.2500.8		9569.2500.9	9569.4500.8	9569.6500.7
CX-02	5423.50006	9570.1501.0	9570.2501.1		9569.2501.1	9569.4501.0	9569.6500.9

COMPOSITION OF HYDRAULIC POWER PACK DESIGNATION



EXAMPLE:

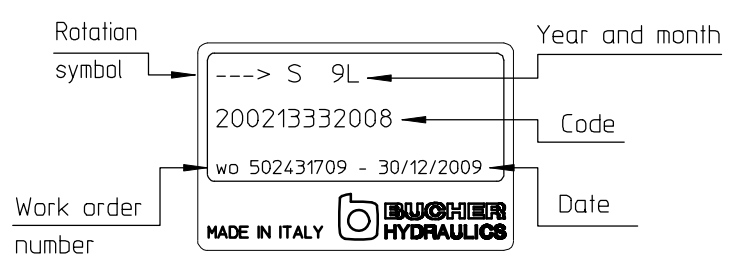
1	Type of housing	Vers.		
	UP50 / K04			
2	Pump	Hi-Lo	Series	
	AP05 / 0.75		S409	
3	Tank	Fitting	Pos.	
	P-025Q-E		P15	
4	Electric motor	Pos.	Relay	Pos.
	C232AE / R0	F	R209	
5	Drive			
	E61			



6	Cavity a	Cavity b	Cavity c
	SDF817 / 22 - TV - 23		
	Cavity d	Cavity e	Cavity f
6	15VM01		
	Cavity g	Hand lever	Lever stick
			Volts
7	23		
	Sequence	Manifolds	Valves for manifolds
			Q.ty
7			

Manufacturing month	Manufacturing year						
	2010	2011	2012	2013	2014	2015	2016
JANUARY	0A	1A	2A	3A	4A	5A	6A
FEBRUARY	0B	1B	2B	3B	4B	5B	6B
MARCH	0C	1C	2C	3C	4C	5C	6C
APRIL	0D	1D	2D	3D	4D	5D	6D
MAY	0E	1E	2E	3E	4E	5E	6E
JUNE	0F	1F	2F	3F	4F	5F	6F
JULY	0G	1G	2G	3G	4G	5G	6G
AUGUST	0H	1H	2H	3H	4H	5H	6H
SEPTEMBER	0I	1I	2I	3I	4I	5I	6I
OCTOBER	0J	1J	2J	3J	4J	5J	6J
NOVEMBER	0K	1K	2K	3K	4K	5K	6K
DECEMBER	0L	1L	2L	3L	4L	5L	6L

PRODUCT IDENTIFICATION PLATE - Example



CATUP50.270

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www.bucherhydraulics.com

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Classification: 440.405.000

200-P-991186-E-07/03.13

UP50

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