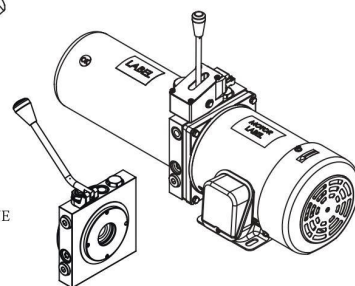
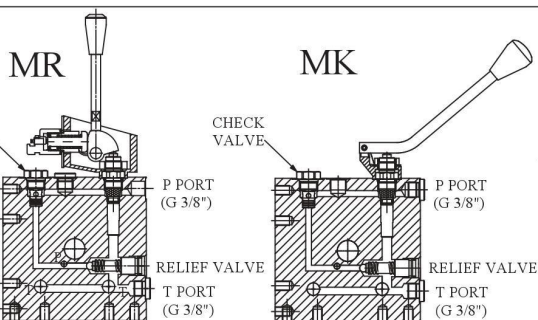
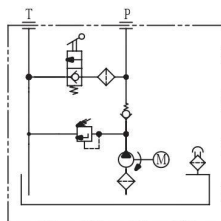


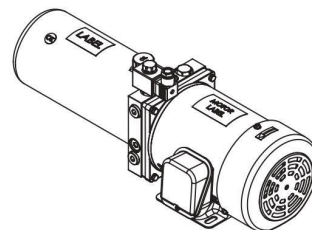
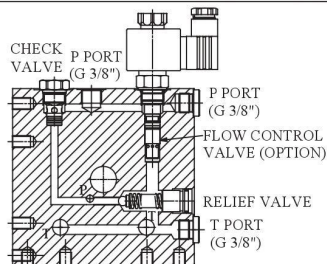
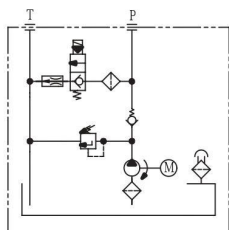
Hydraulic Power Packs

Series **W80A**

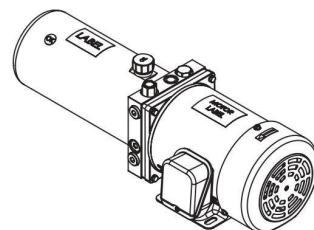
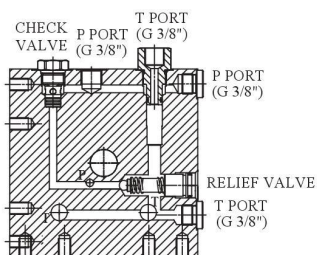
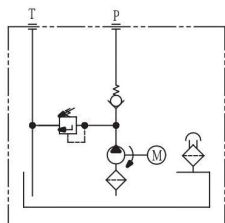
MR & MK Type



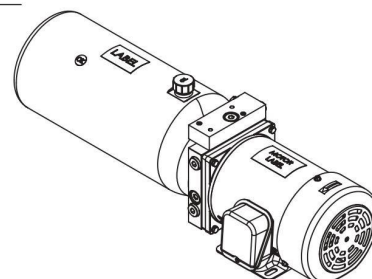
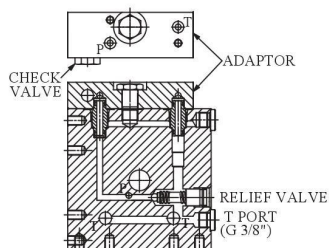
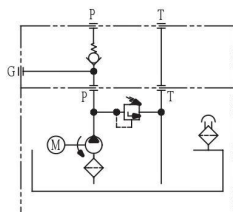
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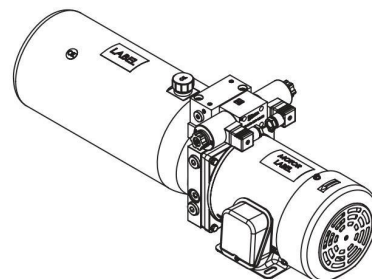
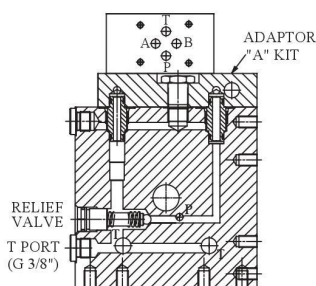
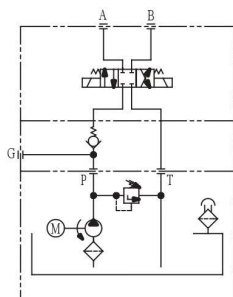
N Type



A Type



A Type + Cetop 03



The W80A series power pack is designed for a wide range of applications which include;

- ◆ Our standard AC motors range from 0.25HP to 3.0HP.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 1.0L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also available.

Before the power packs leave our factory they are fully inspected and tested by our QA/QC(ISO 9001) team. If you have any questions or need a custom design, please feel free to contact us.

HOW TO ORDER

STANDARD AC MOTOR HYDRAULIC POWER PACKS (W800532 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

AC MOTORS		MOUNTING POSITIONS		TANK SIZE		LOWERING VALVE		PUMP CAPACITY		HANDLE PUMP		WIRE BOX POSITIONS		BREATHER CAP POSITIONS		FLOW CONTROL VALVE		UNIQUE CODE																																																																																																																																																																																												
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STANDARD VOLTAGES AND HERTZ (REFER TO BELOW) SPECIAL VOLTAGES AND HERTZ ON REQUEST A-ZZ		H HORIZONTALLY MOUNTED V VERTICALLY MOUNTED X SPECIAL MOUNTING HN HORIZONTALLY MOUNTED WITHOUT TANK VN VERTICALLY MOUNTED WITHOUT TANK				S SOLENOID OPERATED (NORMALLY CLOSED) T SOLENOID OPERATED (NORMALLY OPEN) U SOLENOID OPERATED (NORMALLY CLOSED WITH MANUAL) V SOLENOID OPERATED (NORMALLY OPEN WITH MANUAL) MR MANUAL OPERATED MK MANUAL OPERATED (WITHOUT SWITCH) N NONE X SPECIAL OPERATED A ADAPTOR FOR OTHER MANIFOLD				A SAME SIDE AS CHECK VALVE B SAME SIDE AS RELIEF VALVE C THE SIDE OPPOSITE A D THE SIDE OPPOSITE B N NONE		N NONE 2 2 LPM 4 4 LPM 6 6 LPM 8 8 LPM 10 10 LPM rated flows				WITHOUT HANDLE PUMP P WITH HANDLE PUMP (7.4cc/stroke) X SPECIAL HANDLE PUMP ASSEMBLY																																																																																																																																																																																														
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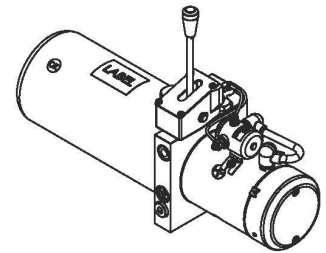
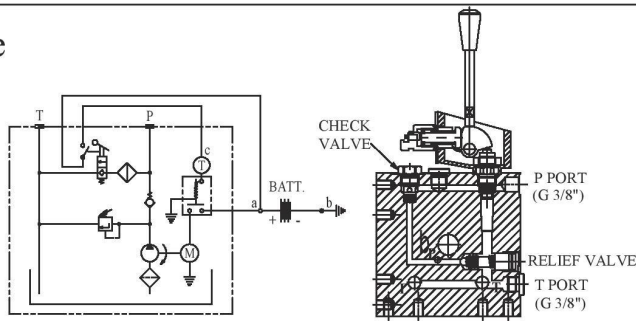
Special orders are available on request.
Please consult our sales department.

Hydraulic
Power Packs
Series W80A

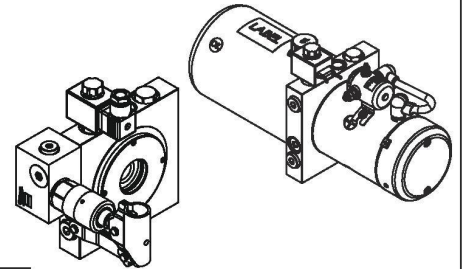
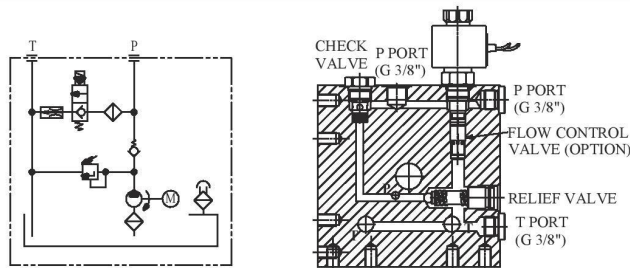
Hydraulic Power Packs

Series **W80D**

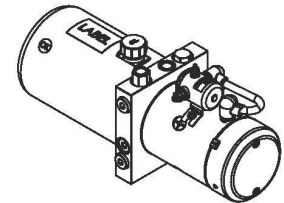
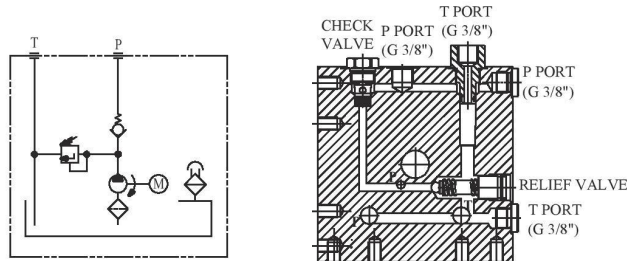
MR Type



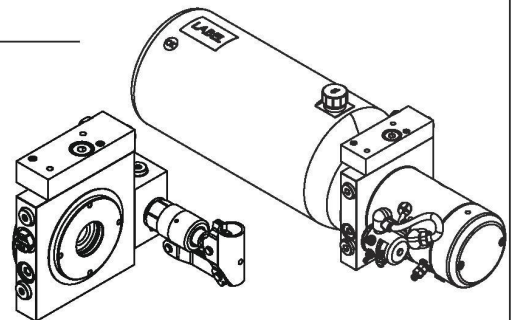
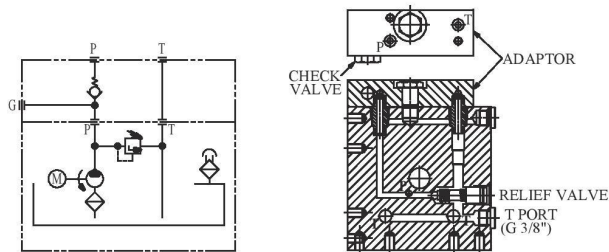
S Type



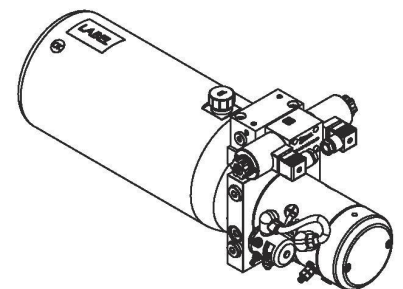
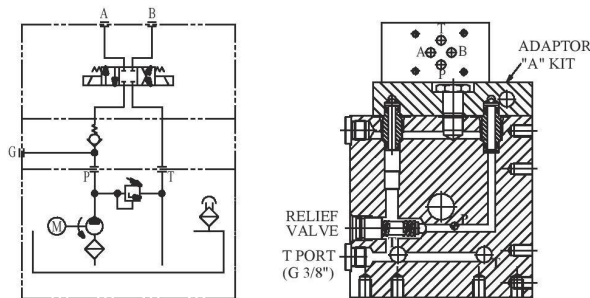
N Type



A Type



A Type + Cetop 03



The W80D series power pack is designed for a wide range of applications which include;

- ◆ DC motors range from 0.55KW to 3.0KW; as well as DC 12 and 24 volts.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 1.0L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also available.

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HOW TO ORDER

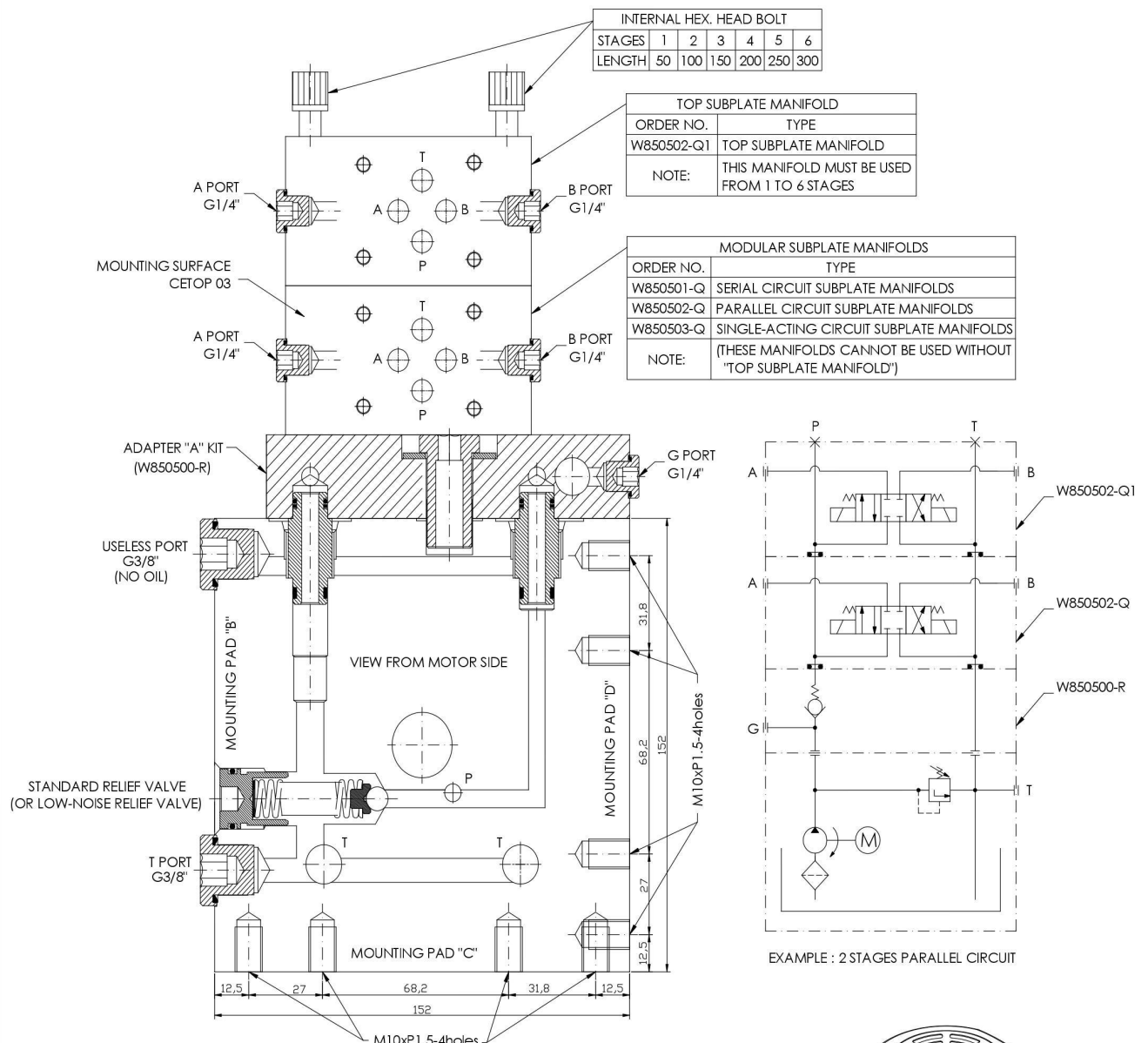
STANDARD DC MOTOR HYDRAULIC POWER PACKS (W800532 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

MOTOR TEMP. PROTECTOR		DC MOTOR	MOUNTING POSITIONS	TANK SIZE	LOWERING VALVE	PUMP CAPACITY	HANDLE PUMP	START SWITCH POSITIONS	BREATHER CAP POSITIONS	FLOW CONTROL VALVE	UNIQUE CODE
T		CN24	H	10	S	10		A	A	N	D***
T WITH TEMPERATURE PROTECTOR WITHOUT TEMPERATURE PROTECTOR		H HORIZONTALLY MOUNTED V VERTICALLY MOUNTED X SPECIAL MOUNTING HN HORIZONTALLY MOUNTED WITHOUT TANK VN VERTICALLY MOUNTED WITHOUT TANK		S SOLENOID OPERATED (NORMALLY CLOSED) T SOLENOID OPERATED (NORMALLY OPEN) U SOLENOID OPERATED (NORMALLY CLOSED WITH MANUAL) V SOLENOID OPERATED (NORMALLY OPEN WITH MANUAL) MR MANUAL OPERATED MK MANUAL OPERATED (WITHOUT SWITCH) N NONE X SPECIAL OPERATED A ADAPTOR FOR OTHER MANIFOLD		05 0.5 cc/rev 07 0.7 cc/rev 10 1.0 cc/rev 15 1.5 cc/rev 19 1.9 cc/rev 23 2.3 cc/rev 27 2.7 cc/rev 30 3.0 cc/rev 35 3.5 cc/rev 40 4.0 cc/rev 51 5.1 cc/rev 62 6.2 cc/rev 73 7.3 cc/rev	A SAME SIDE AS CHECK VALVE B SAME SIDE AS RELIEF VALVE C THE SIDE OPPOSITE A D THE SIDE OPPOSITE B N NONE	N NONE 2 2 LPM 4 4 LPM 6 6 LPM 8 8 LPM 10 10 LPM rated flows	WITHOUT HANDLE PUMP P WITH HANDLE PUMP (7.4cc/stroke) X SPECIAL HANDLE PUMP ASSEMBLY	MANIFOLD FUNCTION A-Z STANDARD MANIFOLD D STANDARD MANIFOLD WITH LOW NOISE RELIEF VALVE	
2 550W LOW-SPEED MOTOR 3 800W COMPOUND WOUND MOTOR 5 550W PERMANENT MAGNET MOTOR 8 800W PERMANENT MAGNET MOTOR C 2000W COMPOUND WOUND MOTOR (DC24V) 1500W COMPOUND WOUND MOTOR (DC12V) S 2000W SERIES WOUND MOTOR (DC24V) 1500W SERIES WOUND MOTOR (DC12V) L 3000W COMPOUND WOUND MOTOR (DC24V) 2500W COMPOUND WOUND MOTOR (DC12V) E EARTH RETURN (MOTOR WITH 1 TERMINAL) N INSULATE RETURN (MOTOR WITH 2 TERMINALS) 1 2 DC12V MOTOR 2 4 DC24V MOTOR N N N N WITHOUT MOTOR X X X X SPECIAL P 2200W COMPOUND WOUND MOTOR (DC24V) 1600W COMPOUND WOUND MOTOR (DC12V)		Ø 140 mm Dia. 10 1.0 Liters 16 1.6 Liters 20 2.0 Liters 24 2.4 Liters 28 2.8 Liters 42 4.2 Liters Ø 180 mm Dia. 30 3.0 Liters 40 4.0 Liters 50 5.0 Liters 60 6.0 Liters 80 8.0 Liters XX SPECIAL NN NONE (working volume)									

Series **W80D**
Hydraulic
Power Packs

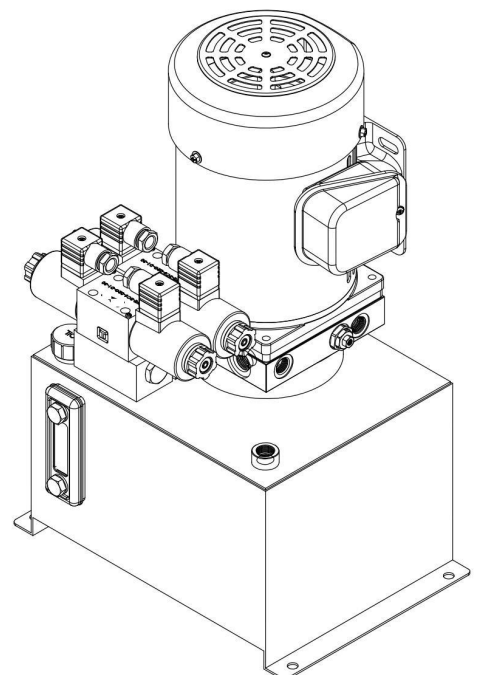
Special orders are available on request.
Please consult our sales department.

A-TYPE MANIFOLD FUNCTION



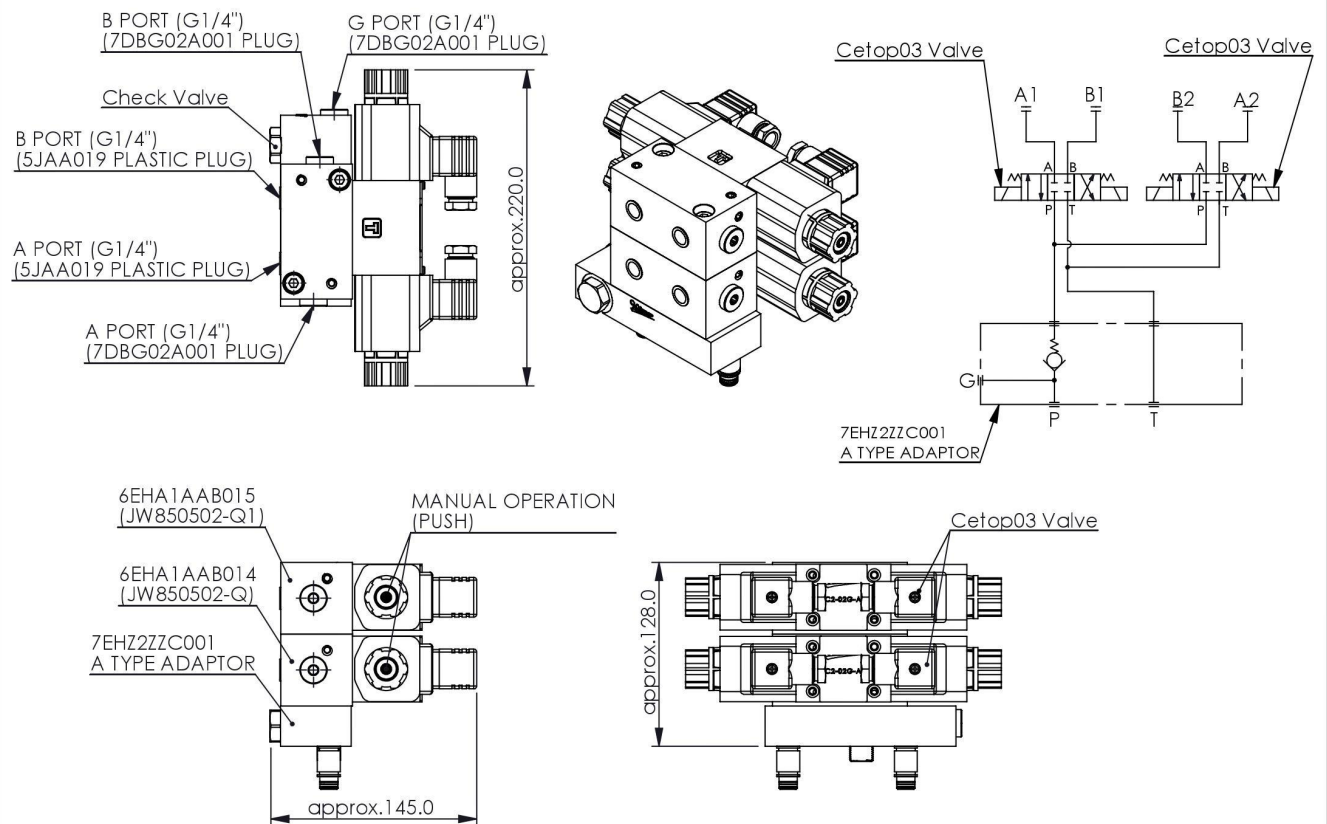
WINNER industrial valves are sold separately and including manual and solenoid-operated four-way valves, along with a complete range of accessory sandwich-type flow and pressure controls.

WINNER also manufactures custom manifolds with cartridge style valves for OEM applications. These integrated cartridge manifolds offer unsurpassed circuit flexibility and serviceability.

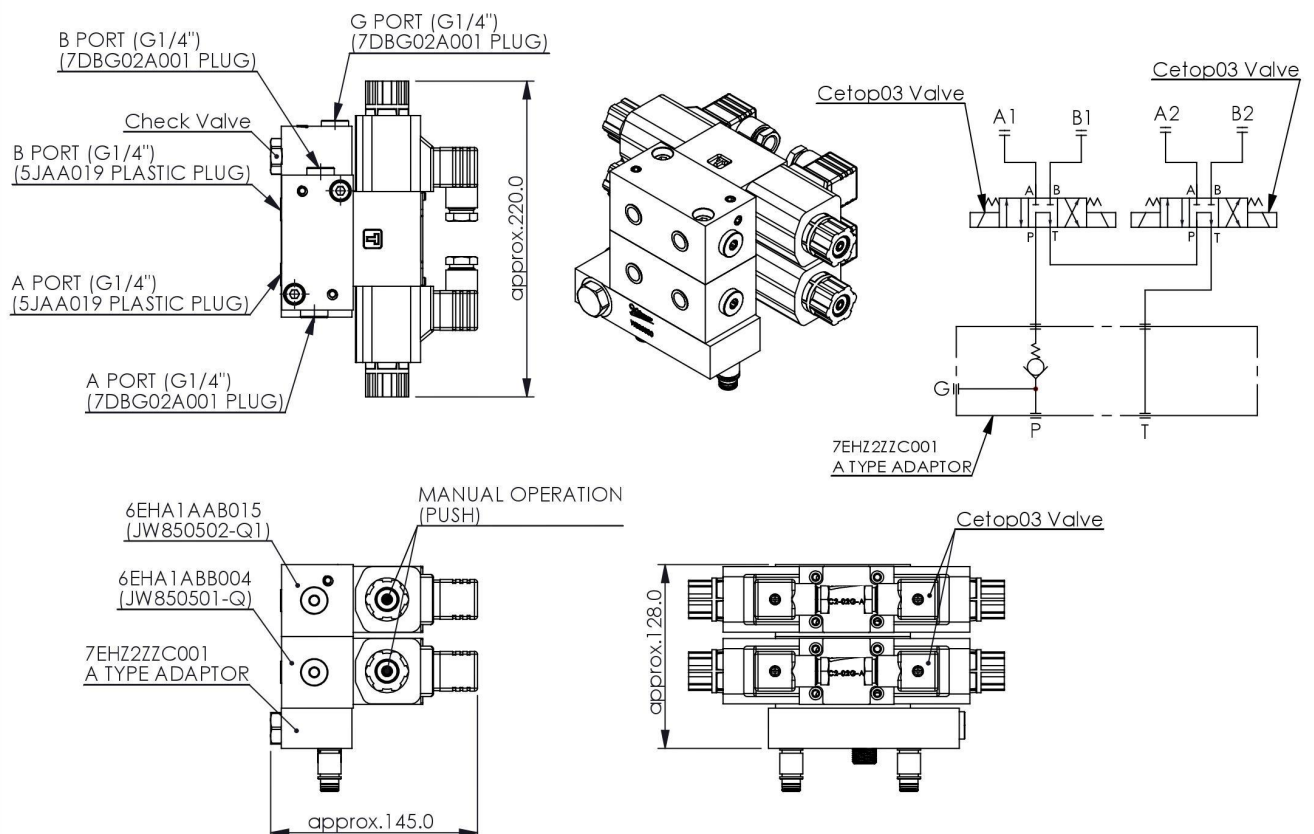


A-TYPE FUNCTION

The drawing for "A" type+Cetop 03 and parallel circuit with two station



The drawing for "A" type+Cetop 03 and series circuit with two station

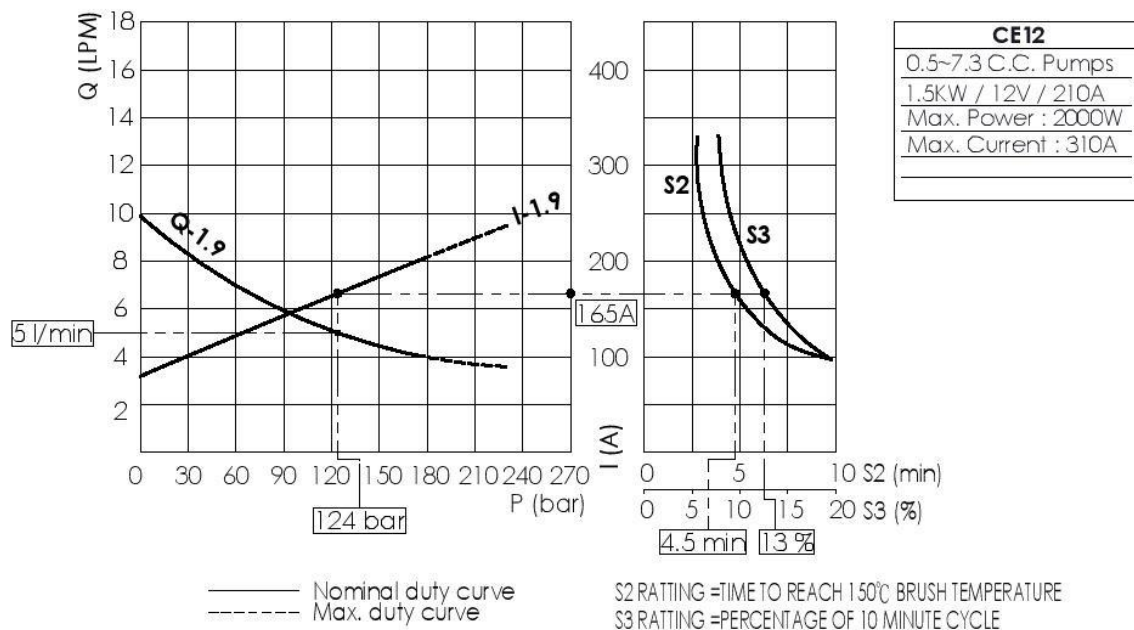


How To Choose D.C. Motor and Pump

The dimensioning of D.C. motors and electro-hydraulic pumps are based on the duty types. In particular the output power depends on the temperature reached by the motor.

When required pressure, flow and available voltage (12 or 24V D.C.) are known, select the motor by checking the diagram below. If a pump displacement is available at the intersection of pressure and flow valves the electrical current can be obtained on the "I" curve.

Example:



For this application we have the following data:

flow=5 l/min, max. pressure=124bar, not clearly defined cycle.

Please check the above diagrams and see if there is a pump available. When the intersection point is not on a pump curve, choose the closest intersection pump.

Using a pump of Q-1.9: (a 1.9 c.c./rev pump) On the "I" curve we read that a 165A current is known. With these conditions on the S2/S3 diagram note that :
 S2=4.5 minutes ; S3=13%.

If S2 and S3 values are not enough for a required cycle, choose a bigger motor and repeat the calculation on the new motor curves.

Short time-duty type : S2

Operation at constant load, of short duration, without thermal equilibrium being reached. A no load period follows, sufficient for the motor to return to ambient temperature.

Example: S2=4.5minutes

The motor runs continuously for 4.5 minutes, and stops a time sufficient to return to ambient temperature.

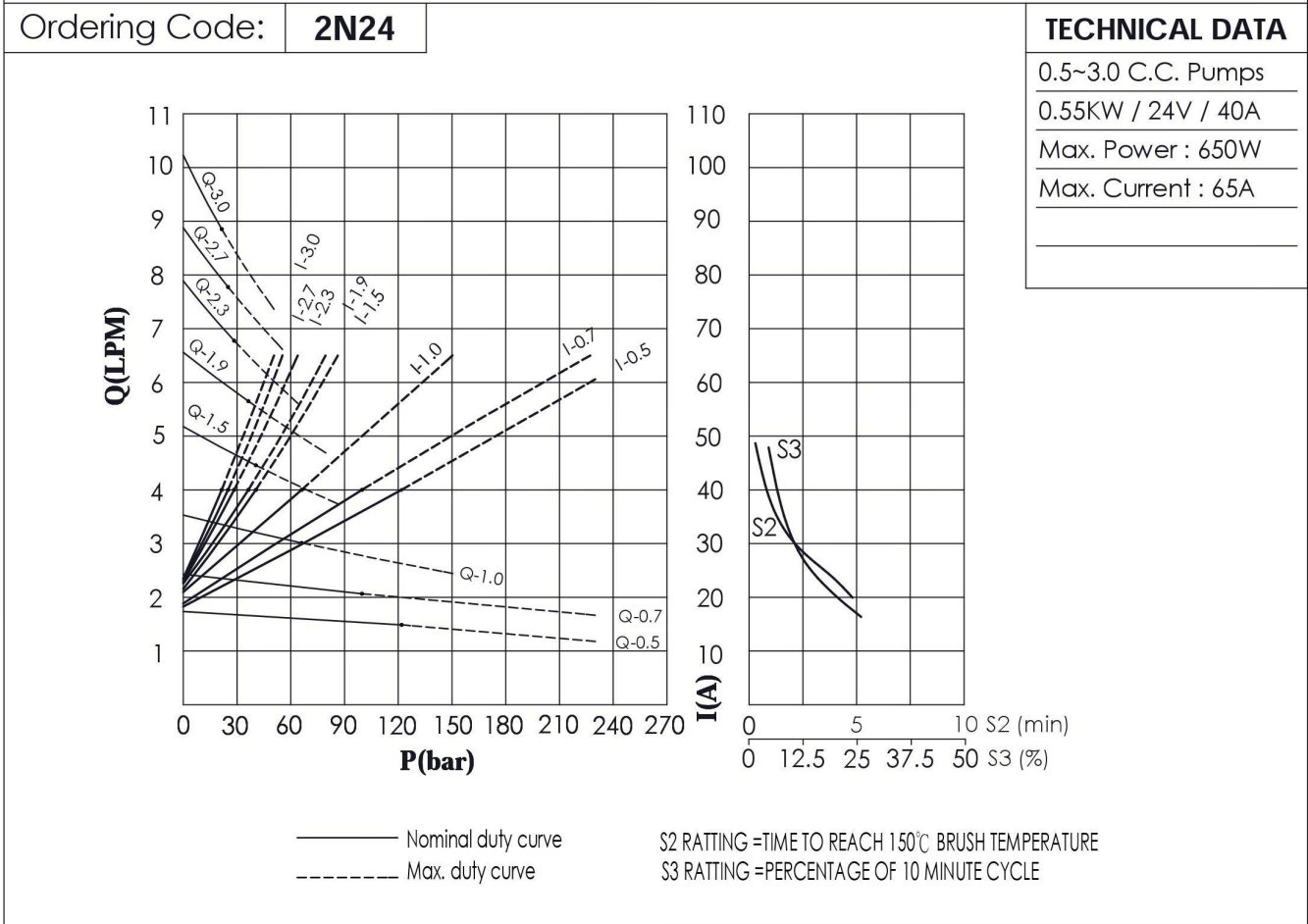
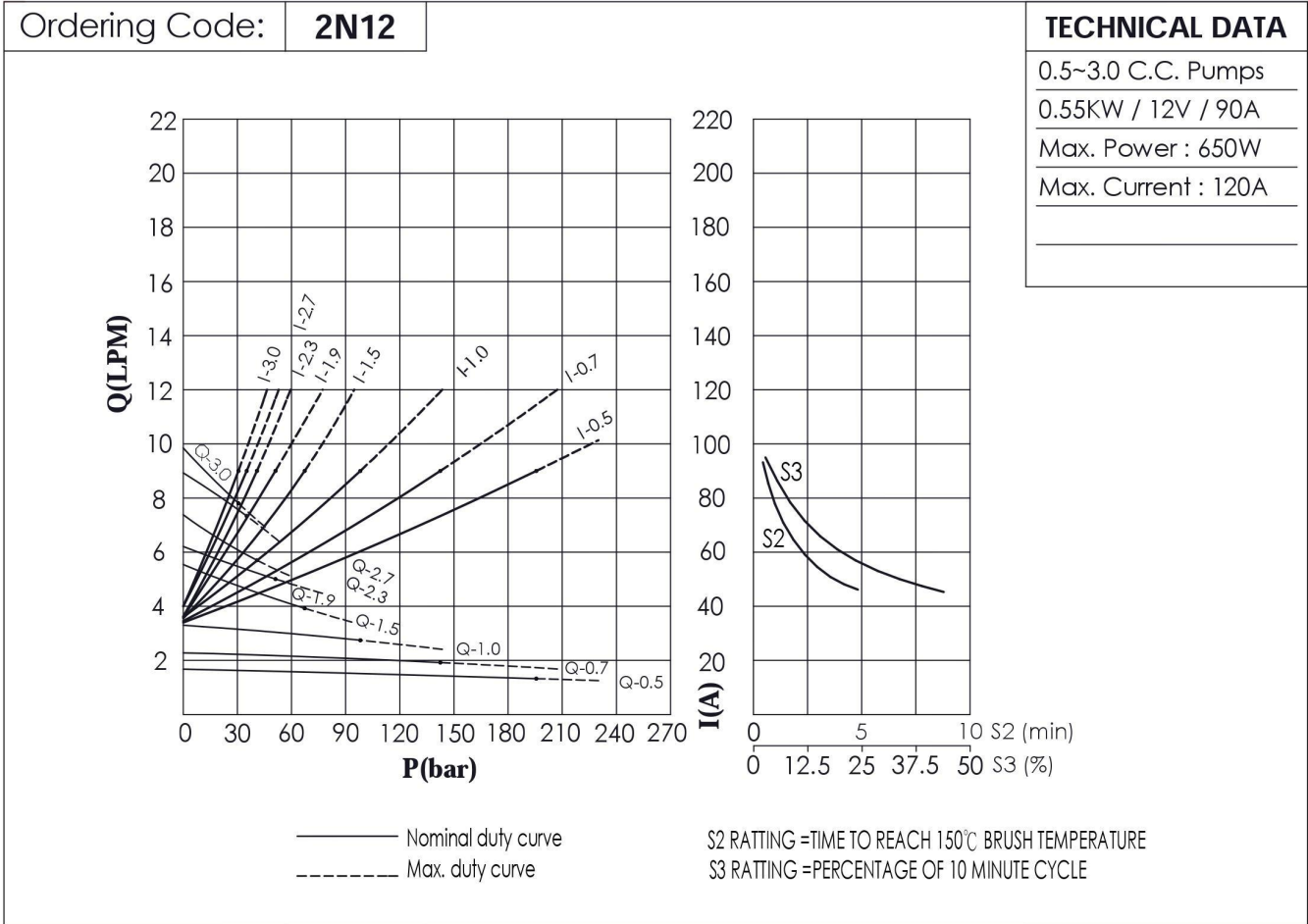
Intermittent periodic-duty type : S3

Operations which consist of a sequence of uniform cycles (duty cycle 10 minutes) consisting of a period at constant load and a no load period.

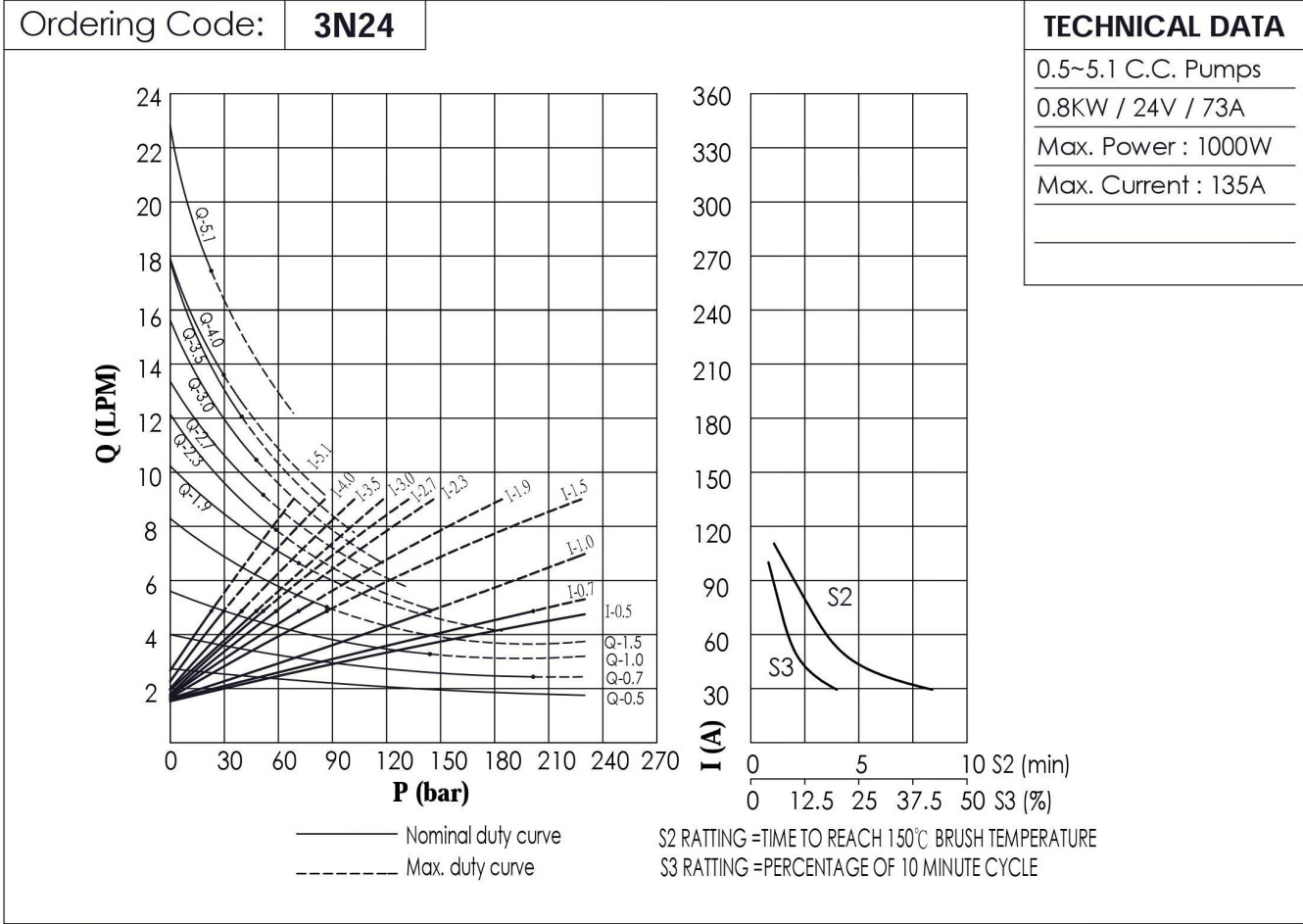
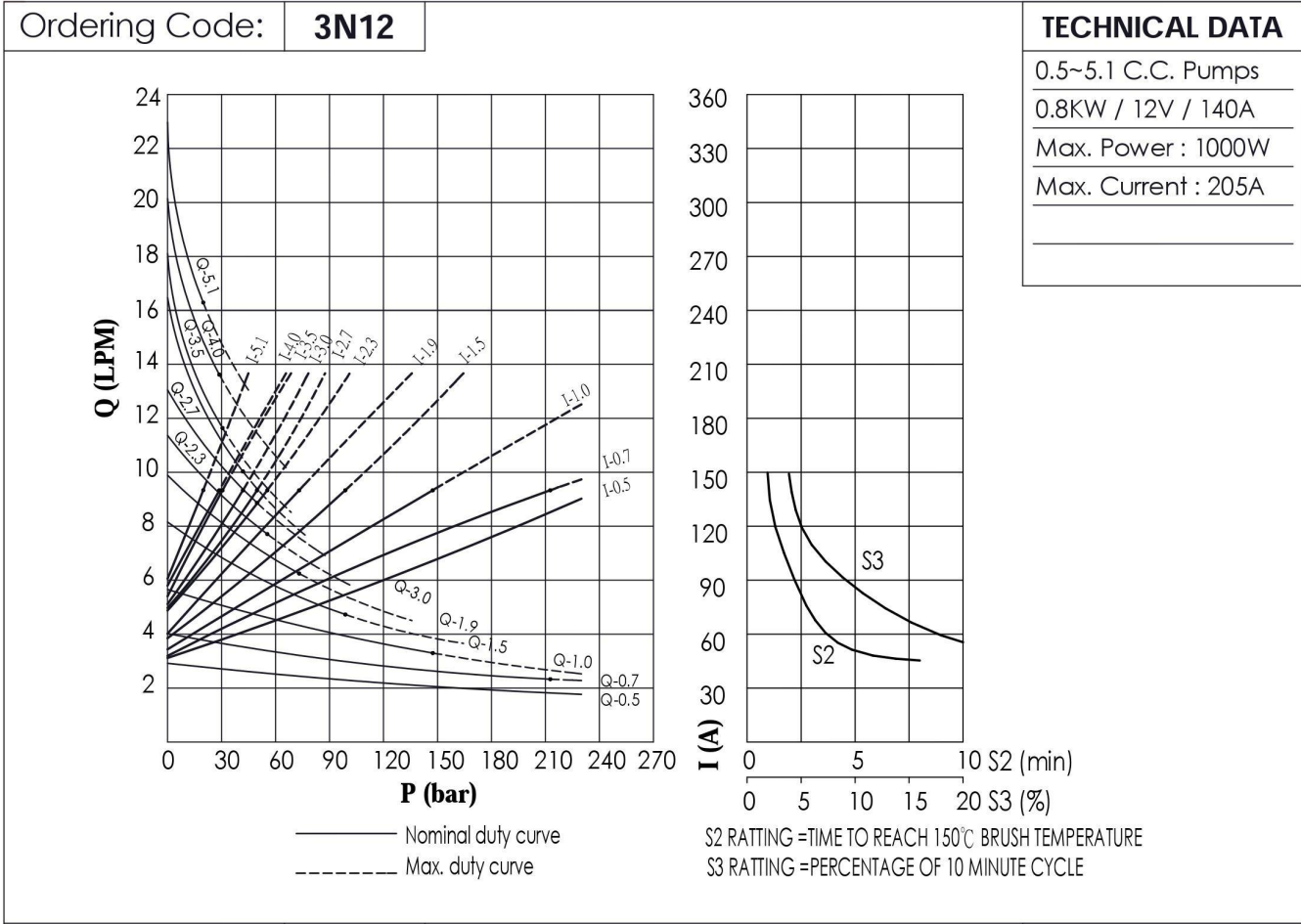
Example: S3=13%

The motor runs 1.3 minutes and stops 8.7 minutes.

D.C. Motor and Pump Performance Curve



D.C. Motor and Pump Performance Curve

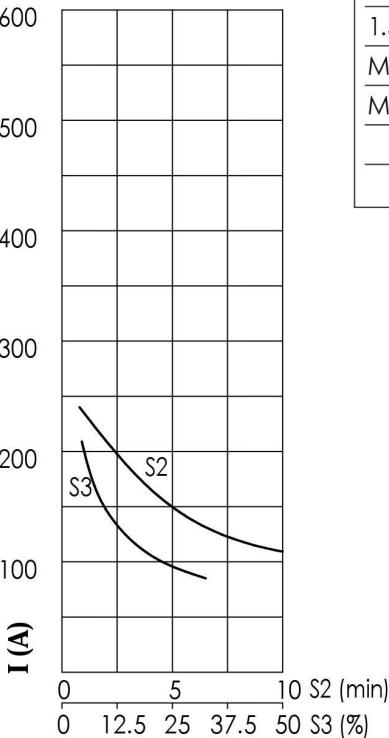
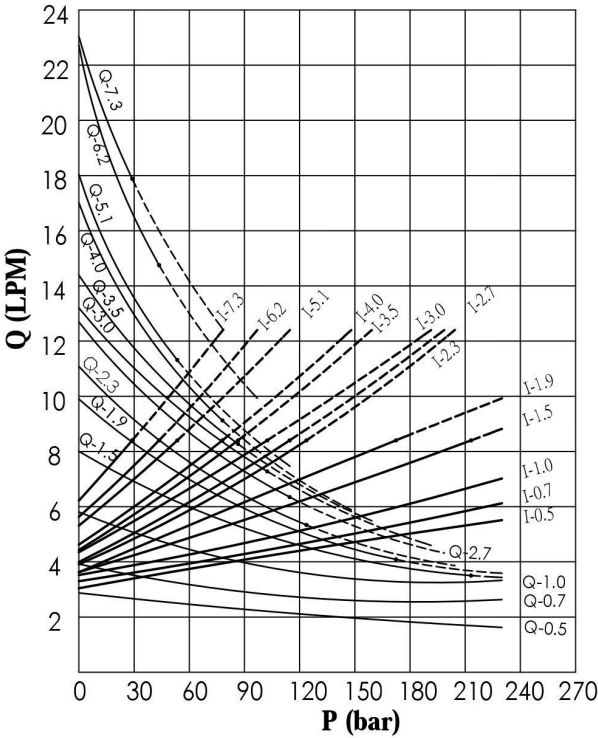


D.C. Motor and Pump Performance Curve

Ordering Code: **CE(N)12**

TECHNICAL DATA

0.5~7.3 C.C. Pumps
1.5KW / 12V / 210A
Max. Power : 2000W
Max. Current : 310A



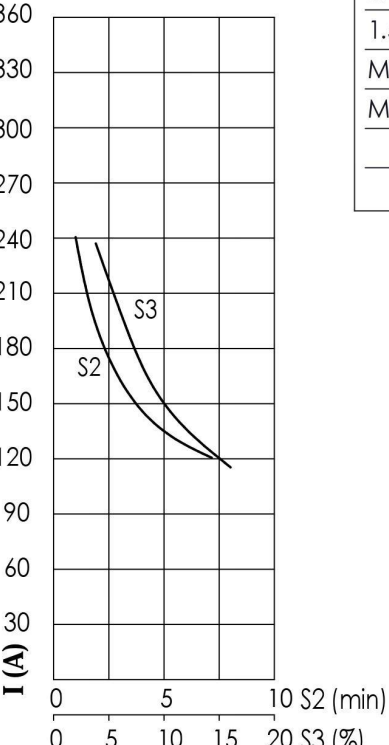
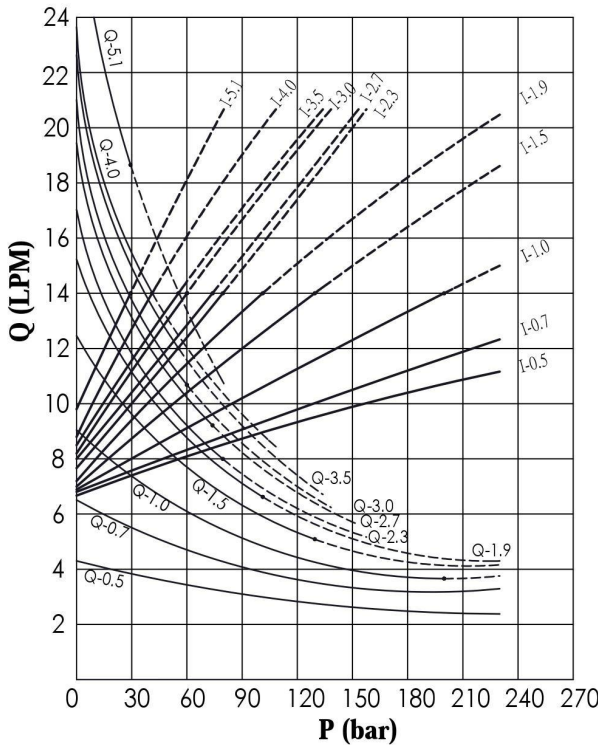
———— Nominal duty curve
----- Max. duty curve

S2 RATING = TIME TO REACH 150°C BRUSH TEMPERATURE
S3 RATING = PERCENTAGE OF 10 MINUTE CYCLE

Ordering Code: **SE(N)12**

TECHNICAL DATA

0.5~5.1 C.C. Pumps
1.5KW / 12V / 210A
Max. Power : 2000W
Max. Current : 310A



———— Nominal duty curve
----- Max. duty curve

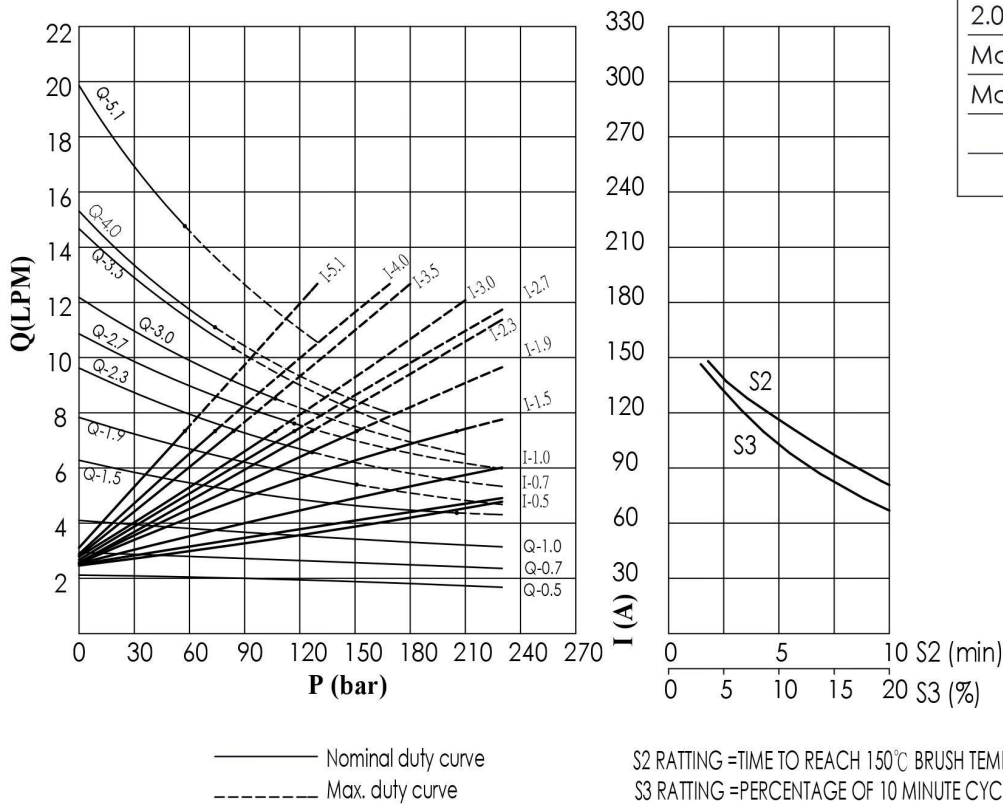
S2 RATING = TIME TO REACH 150°C BRUSH TEMPERATURE
S3 RATING = PERCENTAGE OF 10 MINUTE CYCLE

D.C. Motor and Pump
Performance Curve

Ordering Code: **CE(N)24**

TECHNICAL DATA

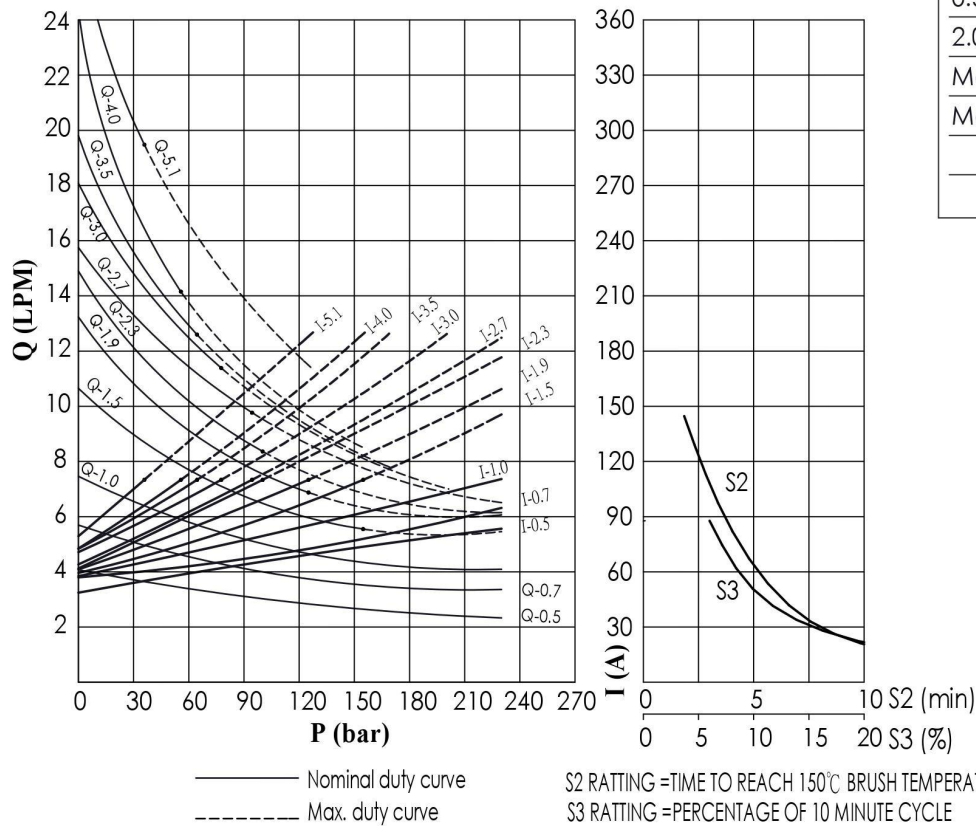
0.5~5.1 C.C. Pumps
2.0KW / 24V / 110A
Max. Power : 2500W
Max. Current : 190A



Ordering Code: **SE(N)24**

TECHNICAL DATA

0.5~5.1 C.C. Pumps
2.0KW / 24V / 110A
Max. Power : 2500W
Max. Current : 190A

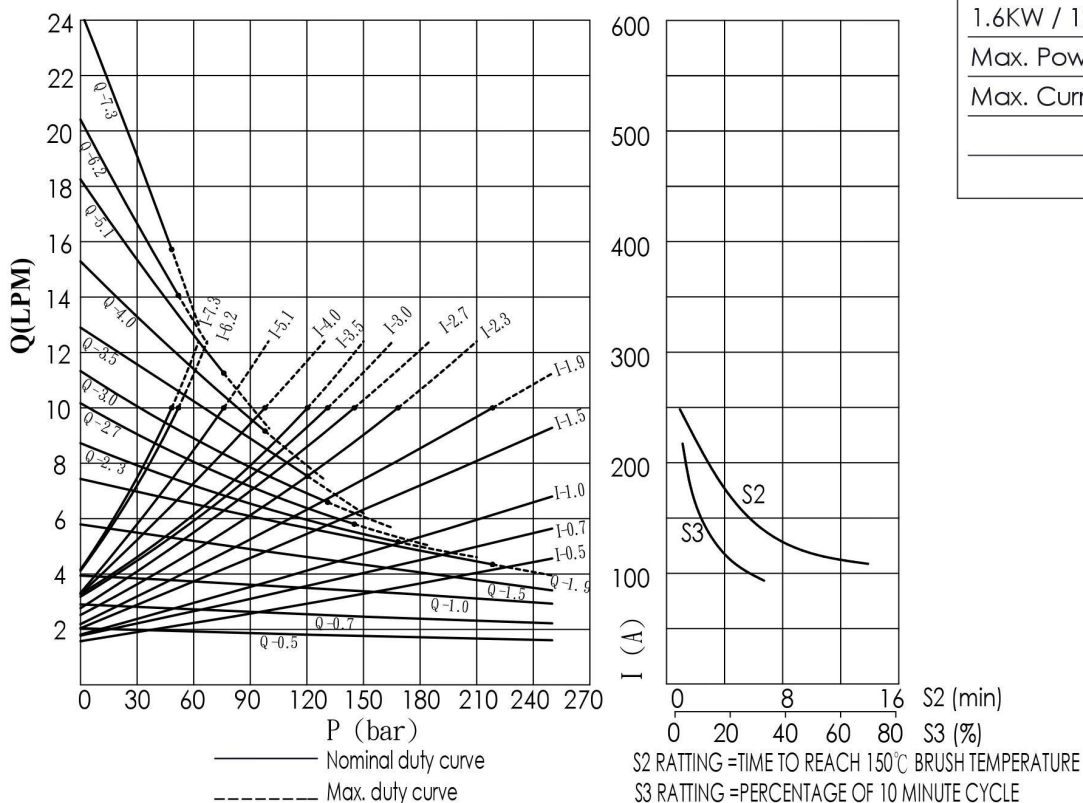


D.C. Motor and Pump Performance Curve

Ordering Code: **PN12**

TECHNICAL DATA

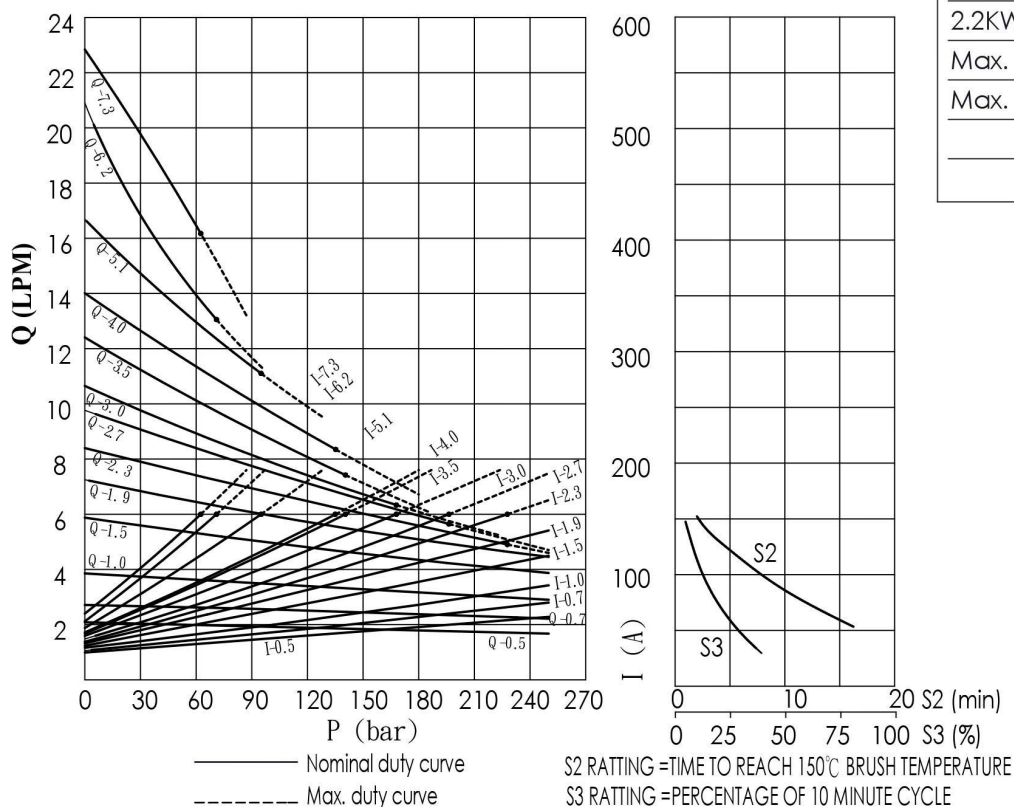
0.5~7.3 C.C. Pumps
1.6KW / 12V / 250A
Max. Power : 1800W
Max. Current : 310A



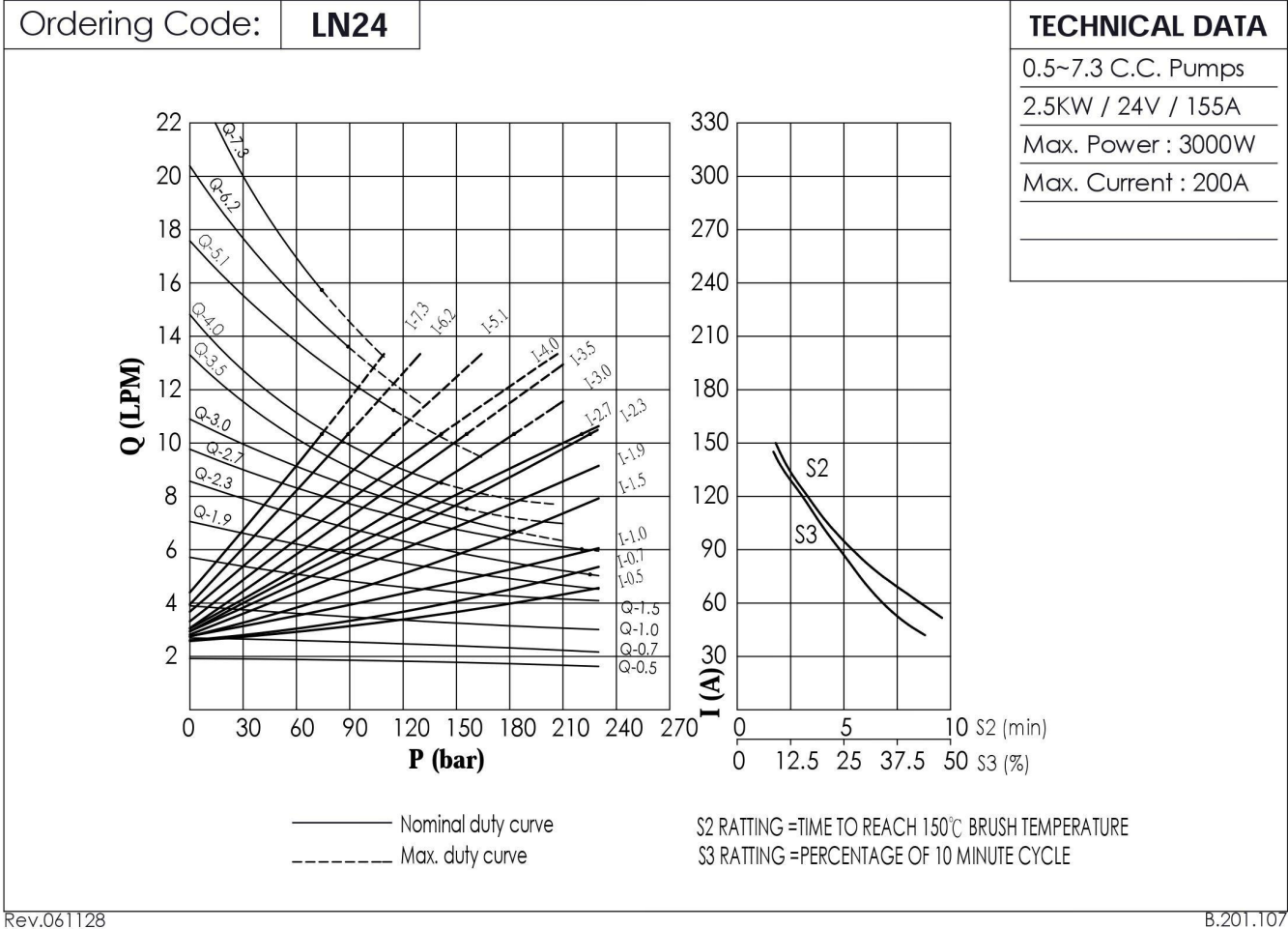
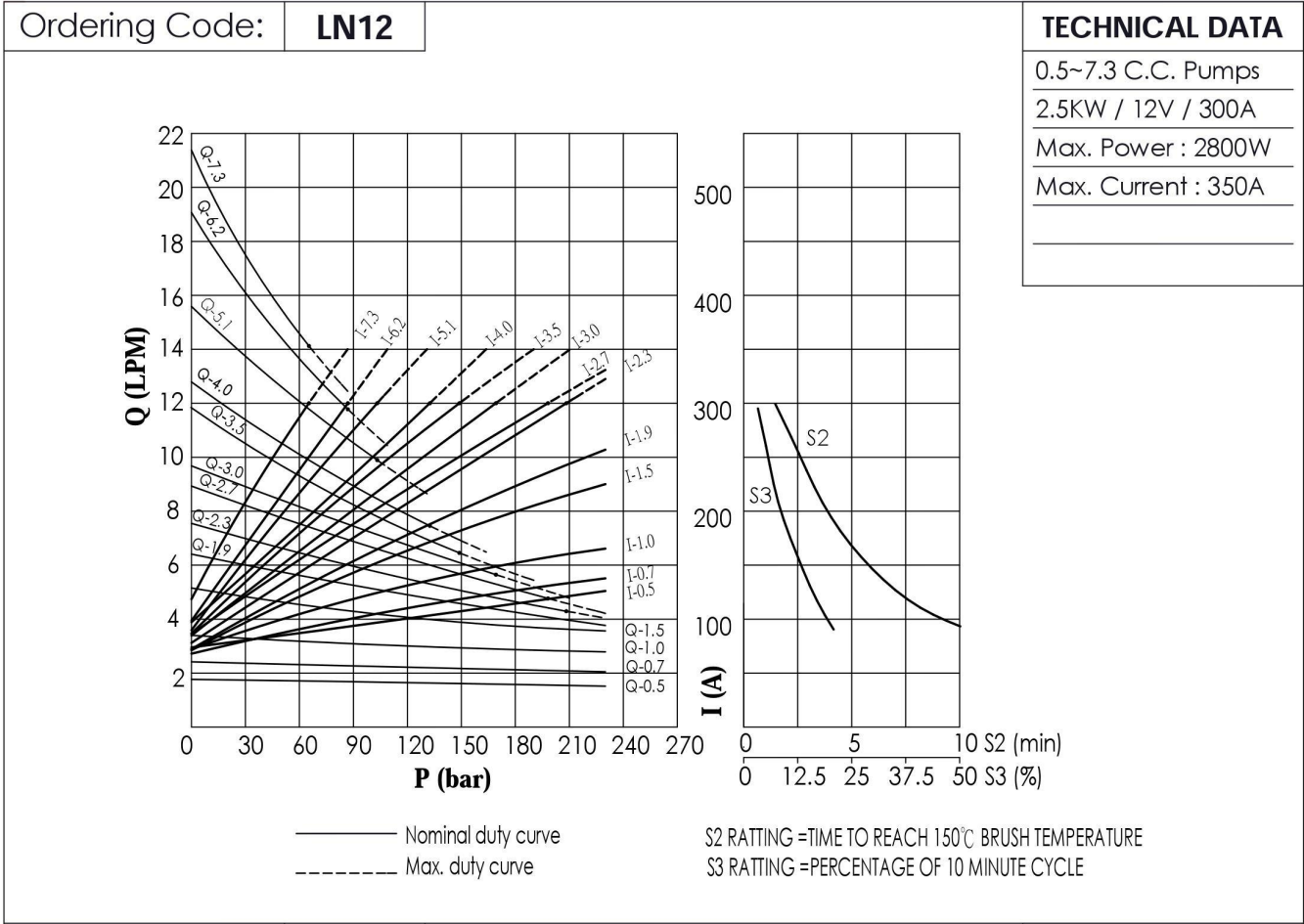
Ordering Code: **PN24**

TECHNICAL DATA

0.5~0.73 C.C. Pumps
2.2KW / 24V / 150A
Max. Power : 2400W
Max. Current : 190A



D.C. Motor and Pump Performance Curve



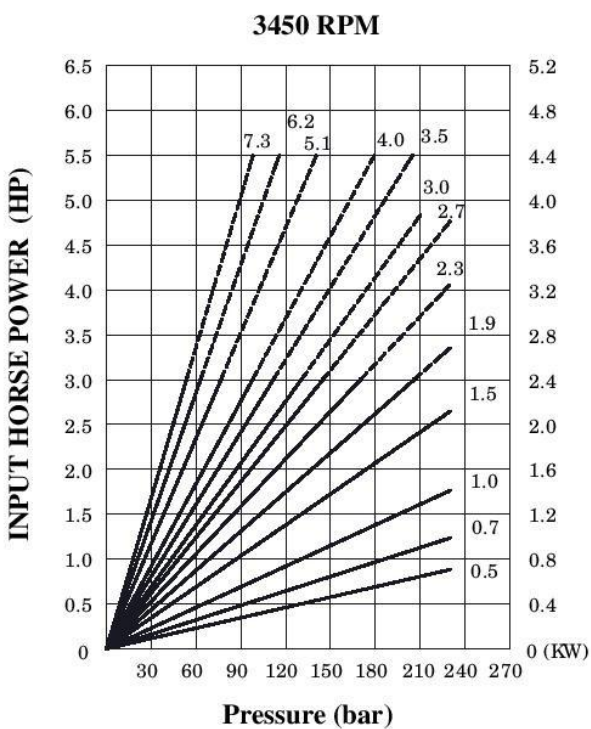
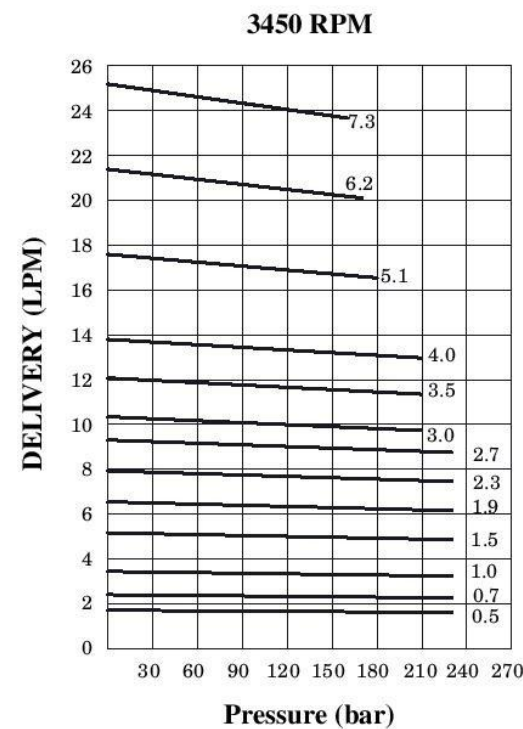
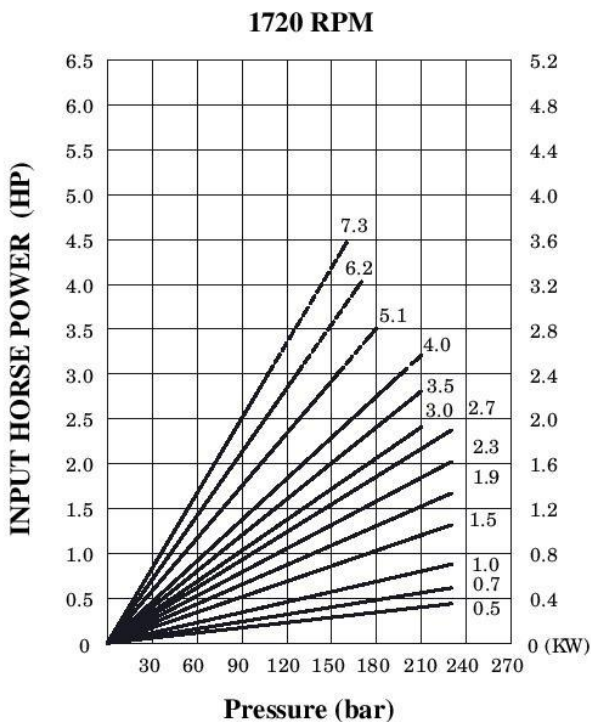
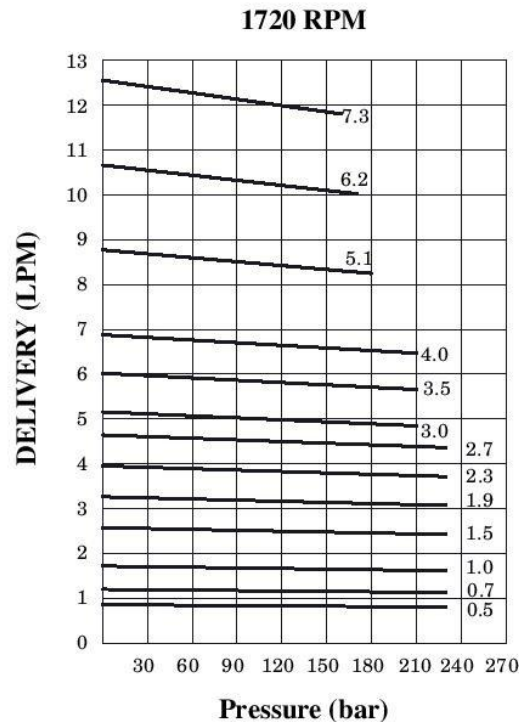
A.C. Motor and Pump Performance Curve

Available in a range of powers up to 3.0 HP for single and 3 phase voltage supply with pump displacements of 0.5~7.3 cc/rev. Packs can be supplied with a large selection of oil reservoir configurations and capacities.

TESTING CONDITIONS

0.5 ~ 7.3 C.C. Pumps

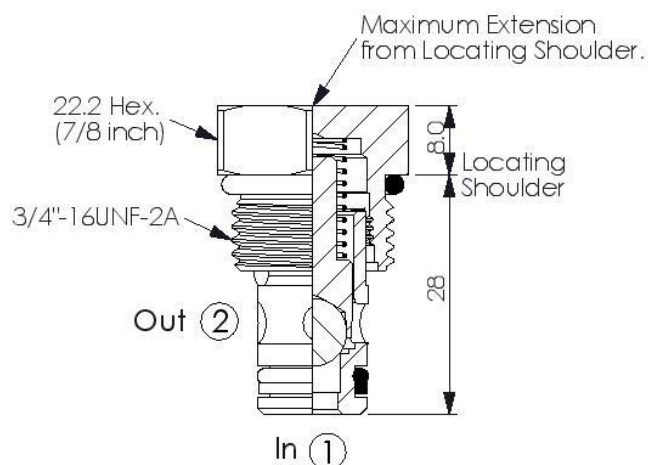
OIL VISCOSITY : 46 CST
OIL TEMPERATURE : 40 °C



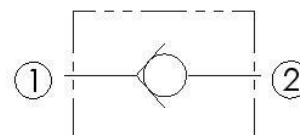
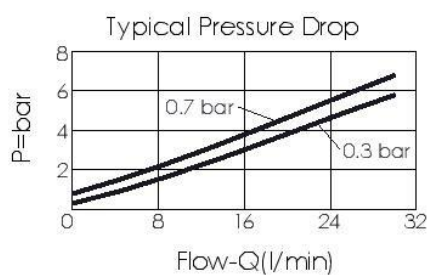
*High-Torque Motors Performance Curves, Please Consult Our Sales Department.

CHECK VALVE

Ordering Code: **CV-08W-X-Y-Z**



UNIT:mm



TECHNICAL DATA

Max. pressure:	240	bar
Rated flow:	30	l/min
Cavity-Tooling:	08W-2	
Installation torque:	25-35	Nm
Weight:	0.05	kg

X OPERATION

20 1 to 2 (Free Flow)

Z OPTION

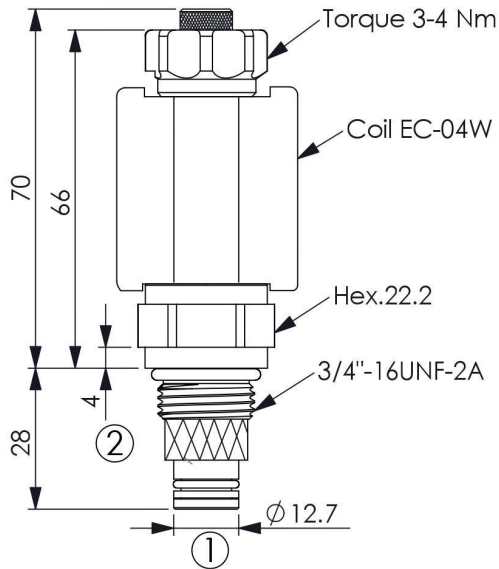
N Non-adjustable

Y	SPRINGS	
	Cracking pressure	
03	0.3 bar	
07	0.7 bar	
17	1.7 bar	
41	4.1 bar	
69	6.9 bar	
103	10.3 bar	
138	13.8 bar	
176	17.6 bar	

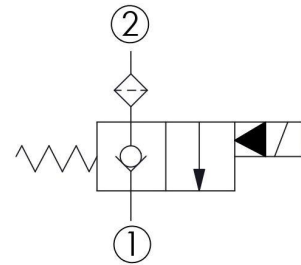
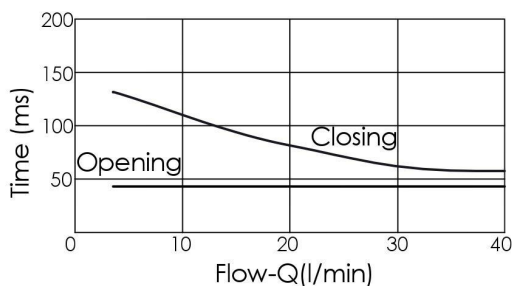
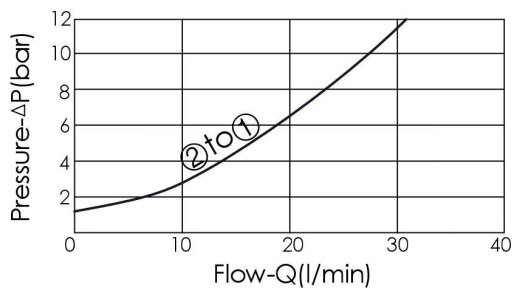
SOLENOID OPERATED VALVES

(Poppet 2-Way Normally-Closed Cartridge Style With Filter)

Ordering Code: **EP-08W-X-Y-Z-04**



UNIT:mm



TECHNICAL DATA

Max.Operating pressure: 210 bar

Rated flow: 30 l/min

Cavity-Tooling: 08W-2

Installation torque: 39-51 Nm

Weight: 0.13 kg

Fluids-Temperatures: -40~120 °C

Internal Leakage: 0.15cc/minute

(3 drops/minute) max.at 210 bar

Filtration: 25 µm nominal or better

Minimum Voltage Required:

90 % of nominal

Coils must be ordered separately

Mounting Position: unrestricted

X

STRUCTURE

2A

2 Ports 、 20 Watt. Coil

Y

OPERATION

07

Normally-Closed With Filter
No Reverse Flow Energized

Z

OPTIONS

N

Non-adjustable



M

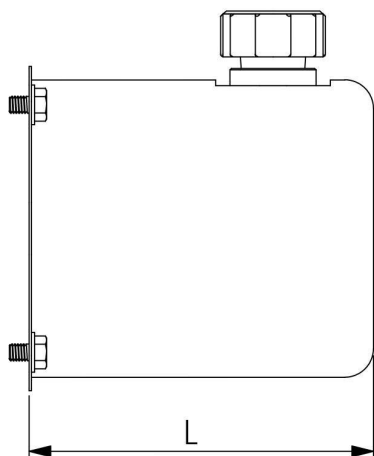
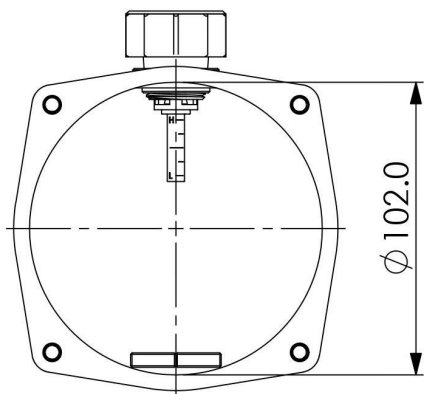
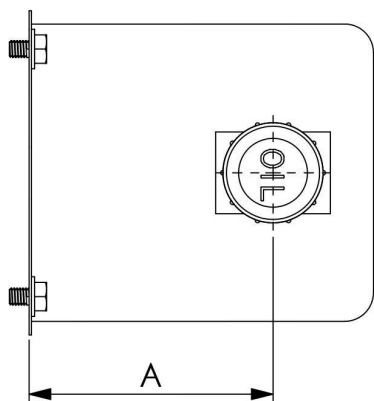
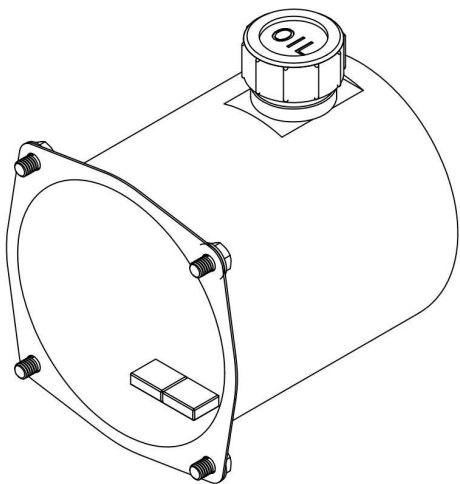
Screw-out Knob Style



Round steel reservoirs

For 115x115 manifold

Ø 102 mm



Unit : mm

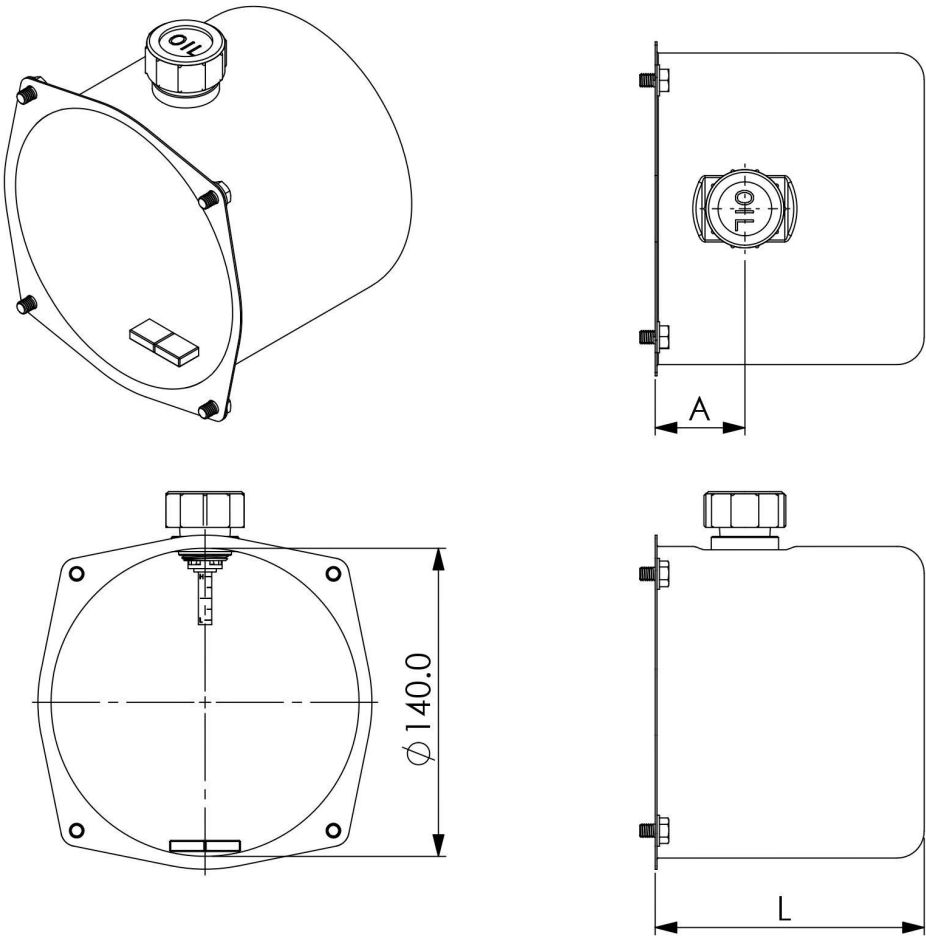
Ordering Code	L (mm)	A (mm)	Volume (Liters)
KKAS120RD002	120	85	0.5
KKAS170RD002	170	85	0.8
KKAS200RD002	205	85	1.0
KKAS240RD002	245	85	1.3
KKAS280RD002	285	85	1.7

* If you need the special specification.
Please contact us.

Round steel reservoirs

For 152x152 manifold

Ø 140 mm



Unit : mm

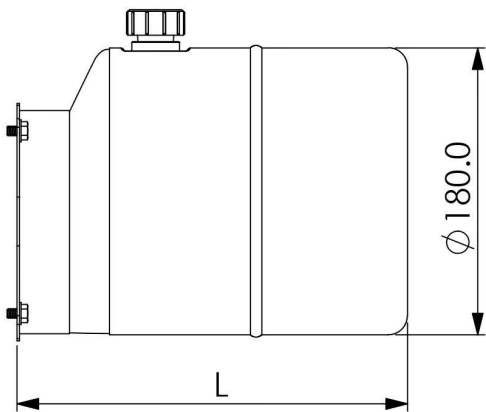
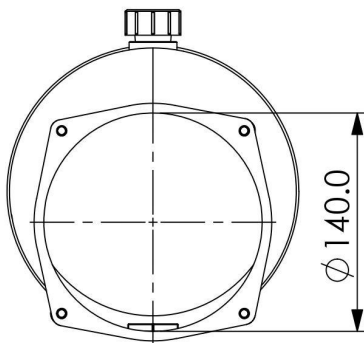
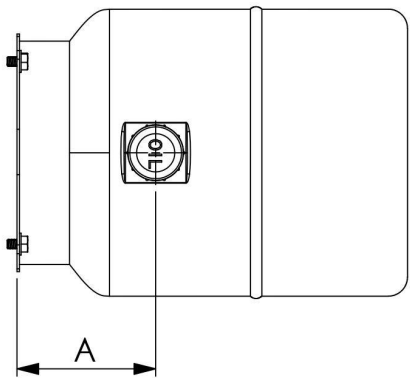
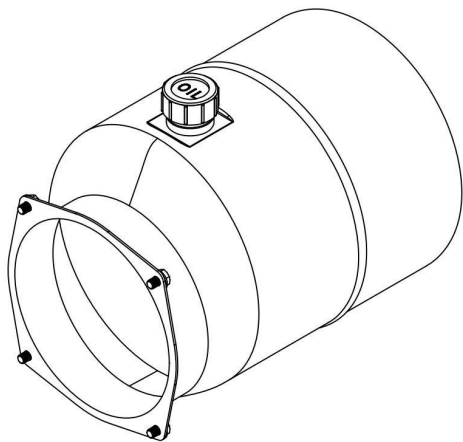
Ordering Code	L (mm)	A (mm)	Volume (Litters)
KKAM120RD002	120	40	1.0
KKAM170RD002	170	40	1.6
KKAM200RD002	205	40	2.0
KKAM240RD002	245	40	2.4
KKAM280RD002	285	40	2.8
KKAM360RD002	365	40	3.6
KKAM400RD002	405	40	4.2
KKAM440RD001	445	40	4.6

* If you need the special specification. Please contact us.

Round steel reservoirs

For 152x152 manifold

Ø 180 mm



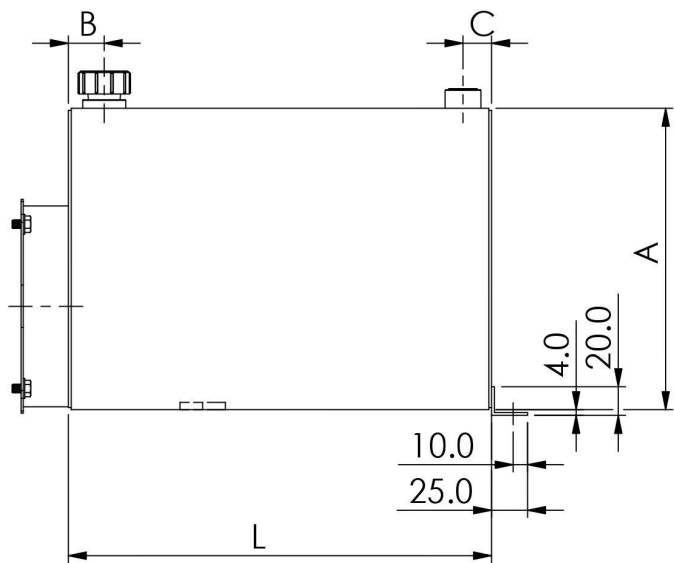
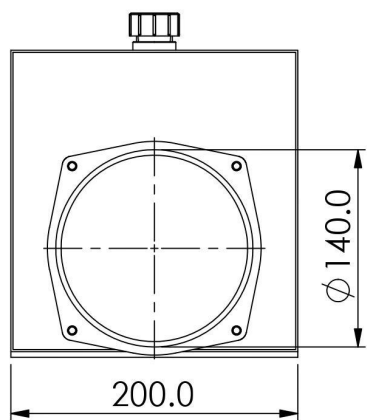
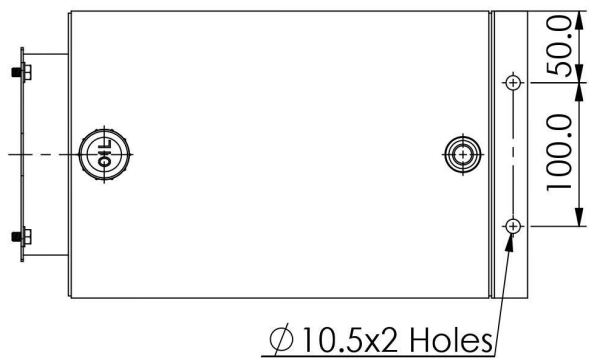
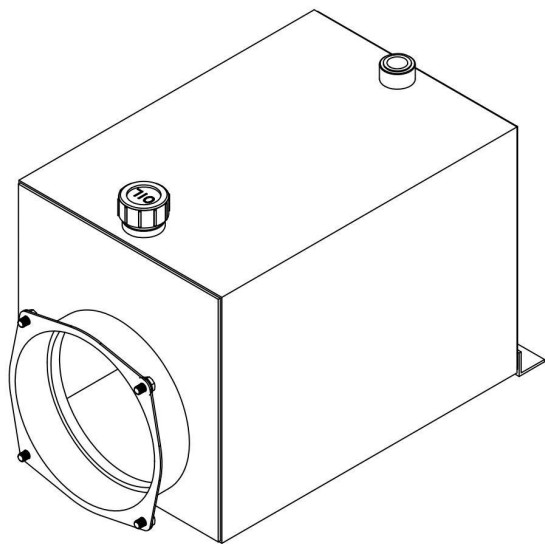
Unit : mm

Ordering Code	L (mm)	A (mm)	Volume (Liters)
KKAL200RD002	205	87	3.0
KKAL240RD002	245	87	4.0
KKAL280RD002	285	87	5.0
KKAL320RD002	325	87	6.0
KKAL360RD002	365	87	7.0
KKAL400RD002	405	87	8.0
KKAL440RD002	445	87	9.0

* If you need the special specification.
Please contact us.

Square steel reservoirs

For 152x152 manifold



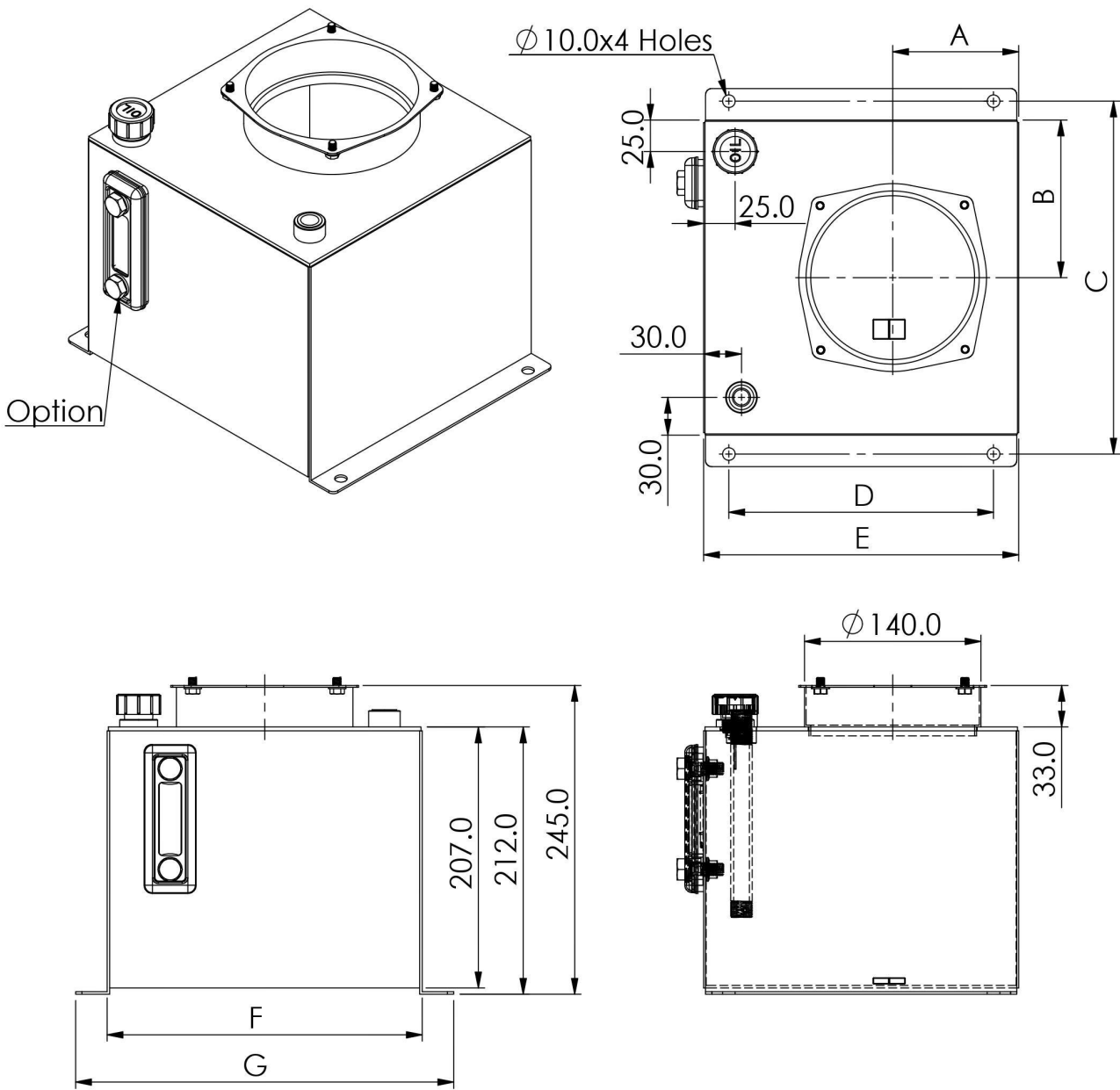
Unit:mm

Ordering Code	L (mm)	A (mm)	B (mm)	C (mm)	Volume (Litters)
KKB100HRD001	295	180	25	20	10 (2.5G)
KKB120HRD002	295	210	25	20	12 (3.0G)
KKB200HRD002	545	210	25	20	20 (5.0G)

* If you need the special specification.
Please contact us.

Square steel reservoirs

For 152x152 manifold

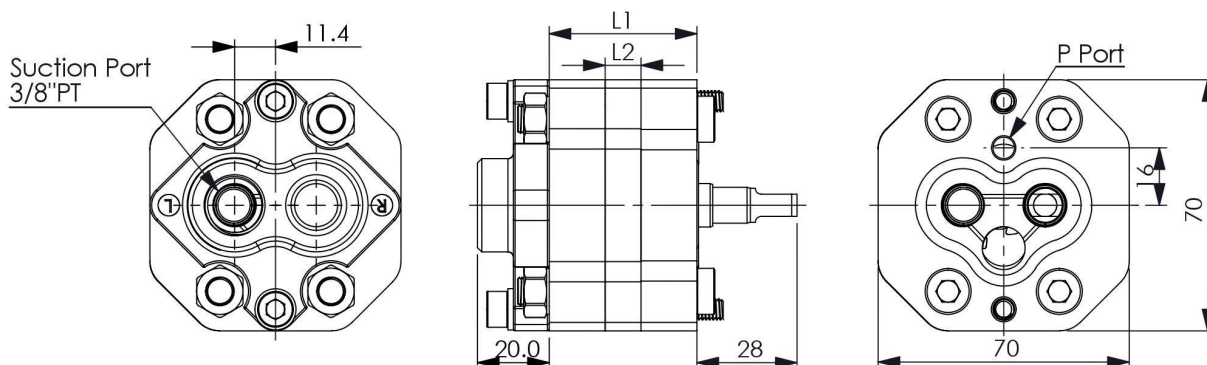
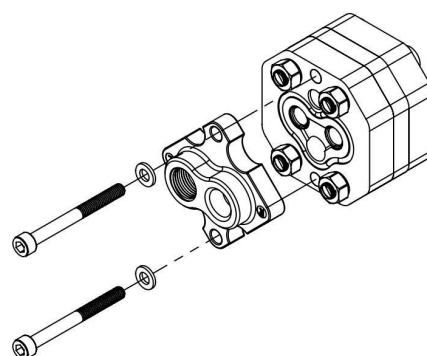
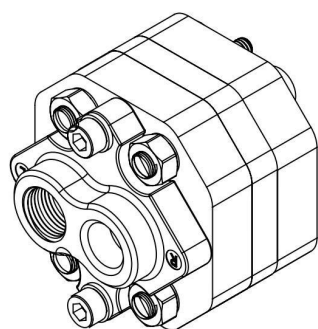


Unit:mm

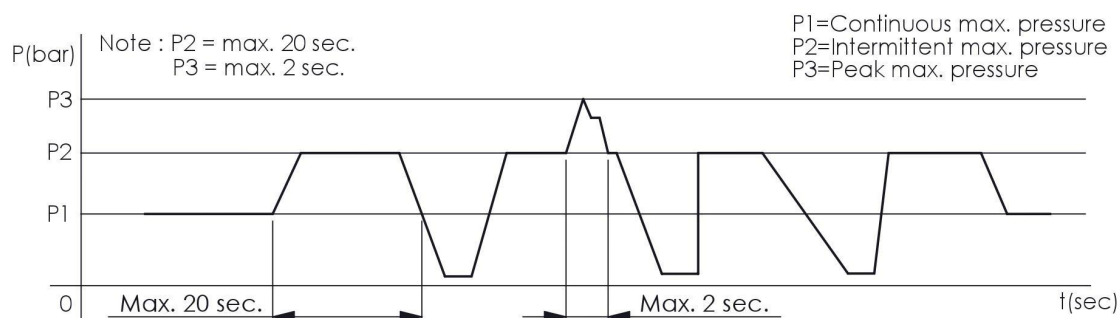
Ordering Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Volume (Liters)
KKB120VGN002	100	125	280	210	250	250	300	12
KKB180VGN002	120	150	330	260	300	300	350	18

* If you need the special specification. Please contact us.

P Type Hydraulic Gear Pumps



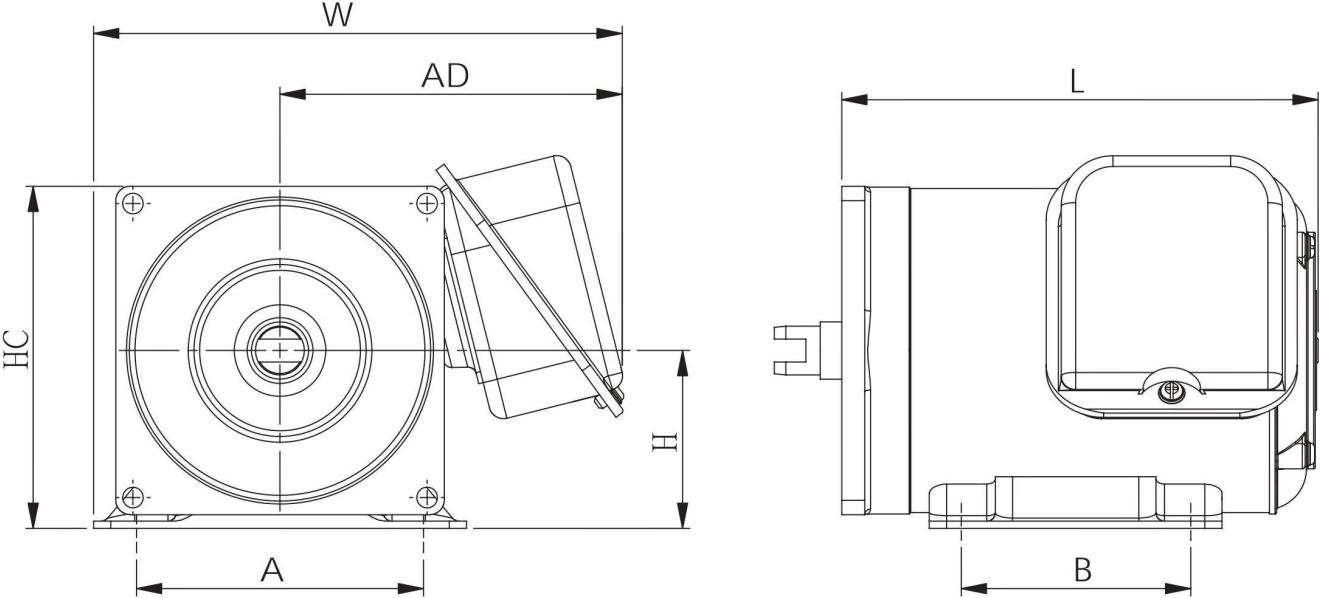
Note : P-type pumps are designed to Winner Hydraulic Power Pack manifolds.
If you need to use them for your manifolds. Please contact us.



* If you need higher working pressure.
Please contact us.

CODE	Displacement C.C./rev	Flow at 1800 rev/min LPM	Max Pressure			Max Speed RPM	Dimensions	
			P1	P2	P3		L1	L2
			bar	bar	bar		mm	mm
P05-Q-L(R)	0.5	0.9	230	250	270	6000	36.5	5.3
P07-Q-L(R)	0.7	1.2	230	250	270	6000	37.1	5.9
P10-Q-L(R)	1.0	1.8	230	250	270	6000	38.1	6.9
P15-Q-L(R)	1.5	2.6	230	250	270	6000	39.8	8.6
P19-Q-L(R)	1.9	3.3	230	250	270	6000	41.2	10.0
P23-Q-L(R)	2.3	4.0	230	250	270	6000	42.6	11.4
P27-Q-L(R)	2.7	4.7	230	250	270	6000	43.8	12.6
P30-Q-L(R)	3.0	5.2	210	230	250	5000	44.8	13.6
P35-Q-L(R)	3.5	6.0	210	230	250	4500	46.6	15.4
P40-Q-L(R)	4.0	6.9	210	230	250	4000	48.4	17.2
P51-Q-L(R)	5.1	8.8	180	200	220	2500	52.0	20.8
P62-Q-L(R)	6.2	10.6	180	200	220	2500	55.6	24.4
P73-Q-L(R)	7.3	12.5	180	200	220	2500	59.2	28.0

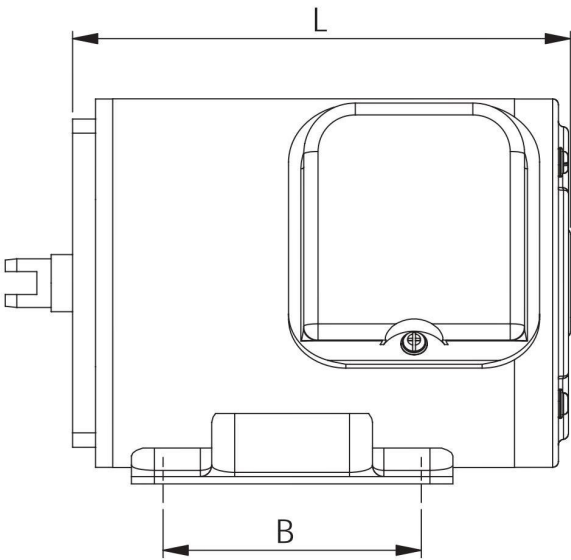
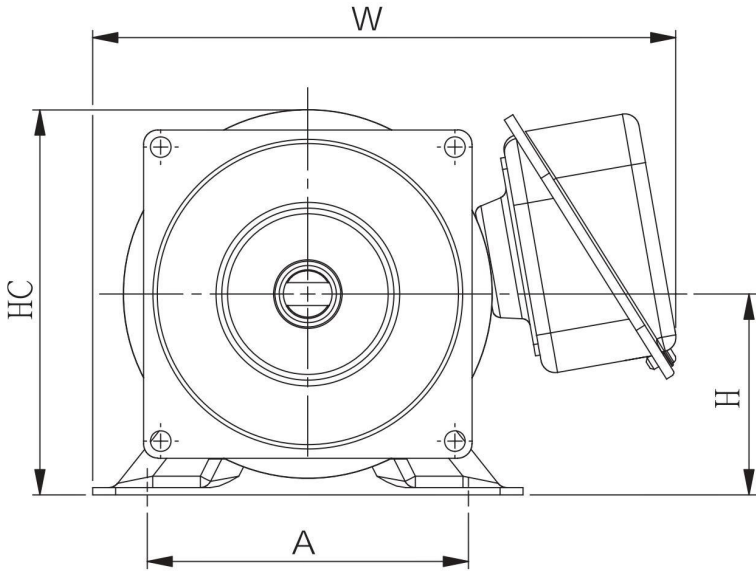
WITHOUT FAN



Unit : mm

MOTOR	REFERENCES	POWER	PHASE	VOLTAGES	HERTZ	RPM	A	AD	B	H	HC	L	W
MSN17	W850117-4	1/4HP 4P	1	110/220	50/60	1420/1720	100	119	80	62	119	165.5	184
MSN18	W850118-4	1/4HP 4P	3	220/380	50/60	1420/1720	100	112	80	62	119	165.5	175

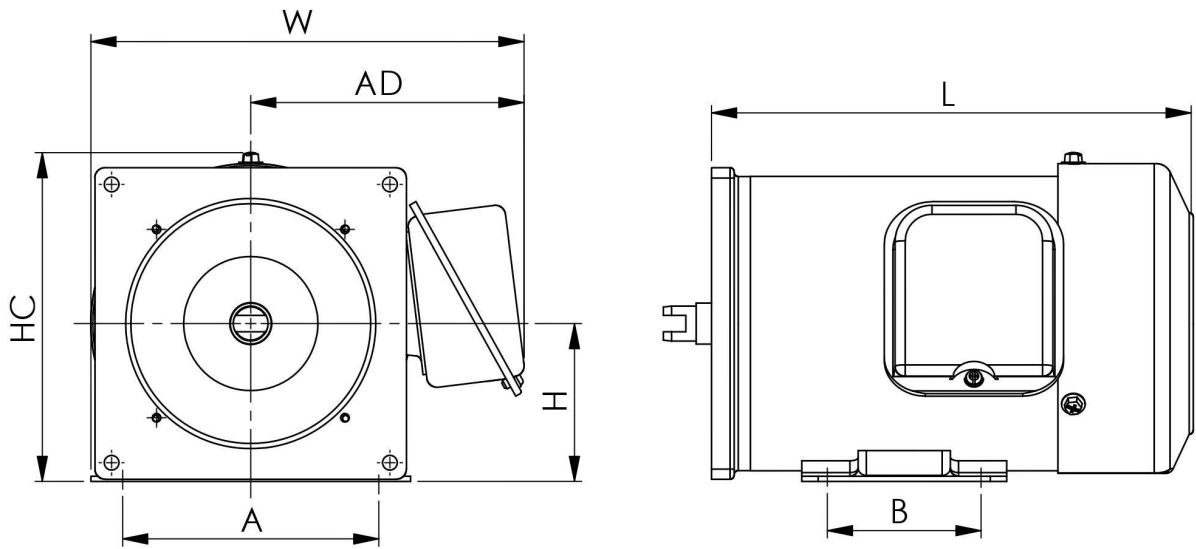
WITHOUT FAN



Unit : mm

MOTOR	REFERENCES	POWER	PHASE	VOLTAGES	HERTZ	RPM	A	AD	B	H	HC	L	W
MSM01	W850101-3	1HP 4P	3	220/380	50/60	1420/1720	112	128	90	70	134	173.5	204
MSM11	W850111-3	1/2HP 4P	1	110/220	50/60	1420/1720	112	128	90	70	134	173.5	204
MSM15	W850115-3	1/2HP 4P	3	220/380	50/60	1420/1720	112	119.5	90	70	134	158.5	195

WITH FAN

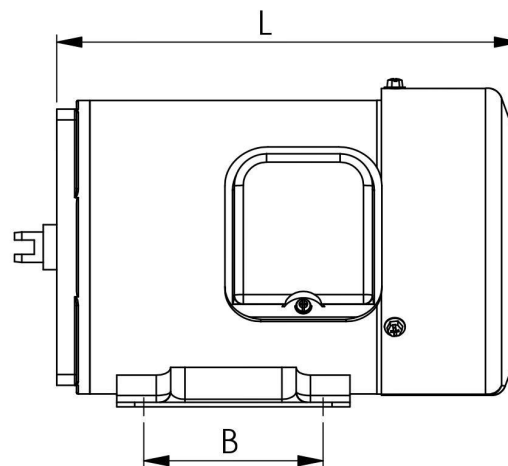
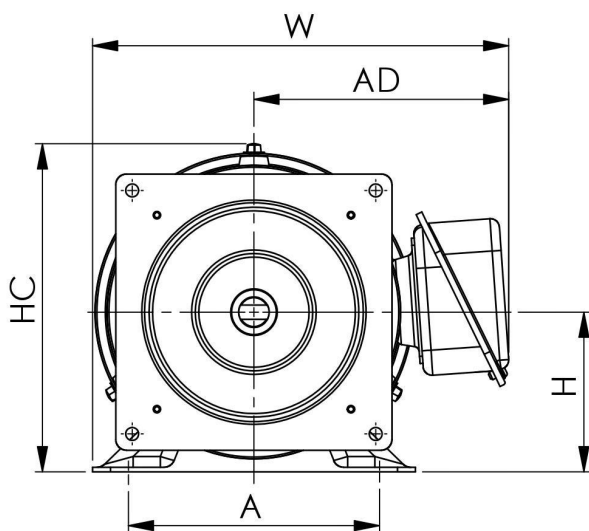


Unit : mm

MOTOR	REFERENCES	POWER	PHASE	VOLTAGES	HERTZ	RPM	A	AD	B	H	HC	L	W
MFS01	W850201-2	1HP 4P	3	220/380	50/60	1420/1720	125	132	75	77	155	235	211
MFS02	W850202-2	1HP 2P	3	220/380	50/60	2850/3450	125	133	75	77	155	235	211
MFS11	W850211-2	1/2HP 4P	1	110/220	50/60	1420/1720	125	132	75	77	155	235	211
MFS13	W850213-2	3/4HP 4P	1	110/220	50/60	1420/1720	125	134	75	77	155	245	213
MFS15	W850215-2	1/2HP 4P	3	220/380	50/60	1420/1720	125	132	75	77	155	235	211

Series ϕ 140 (MFS)

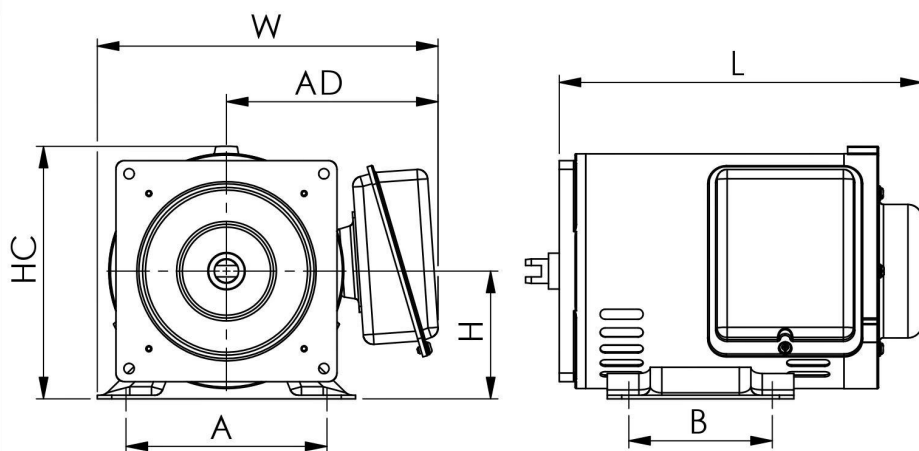
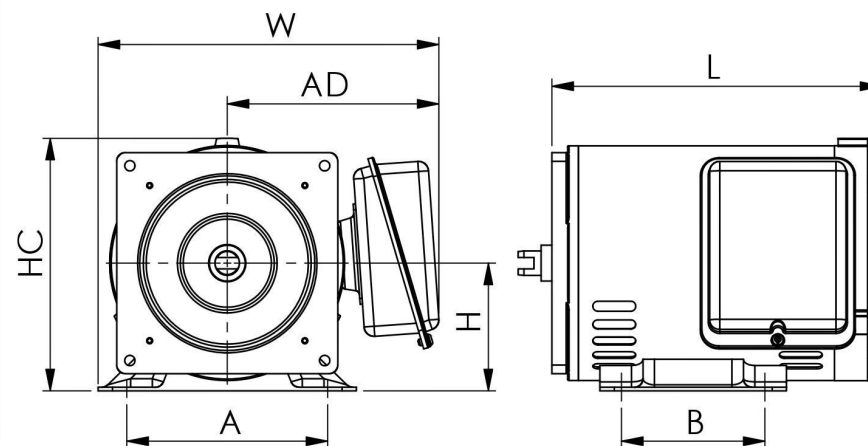
A.C. MOTORS
DIMENSIONS

WITH FAN

Unit : mm

MOTOR	REFERENCES	POWER	PHASE	VOLTAGES	HERTZ	RPM	A	AD	B	H	HC	L	W
MF01	W850201	1HP 4P	3	220/380	50/60	1420/1720	140	142	100	89	178	258	237
MF02	W850202	1HP 2P	3	220/380	50/60	2850/3450	140	142	100	89	178	258	237
MF03	W850203	1HP 4P	1	110/220	50/60	1420/1720	140	147.5	100	89	178	278	237
MF04	W850204	1HP 2P	1	110/220	50/60	2850/3450	140	147.5	100	89	178	278	237
MF05	W850205	2HP 4P	3	220/380	50/60	1420/1720	140	145	100	89	178	278	237
MF06	W850206	2HP 2P	3	220/380	50/60	2850/3450	140	145	100	89	178	278	237
MF07	W850207	2HP 4P	1	110/220	50/60	1420/1720	140	147.5	100	89	178	298	237
MF08	W850208	2HP 2P	1	110/220	50/60	2850/3450	140	147.5	100	89	178	298	237
MF09	W850209	3HP 4P	3	220/380	50/60	1420/1720	140	142	100	89	178	298	237
MF10	W850210	3HP 2P	3	220/380	50/60	2850/3450	140	142	100	89	178	298	237

Series $\varnothing$ 160 (MF)**A.C. MOTORS
DIMENSIONS**

WITHOUT FAN**SINGLE PHASE****3 PHASE**

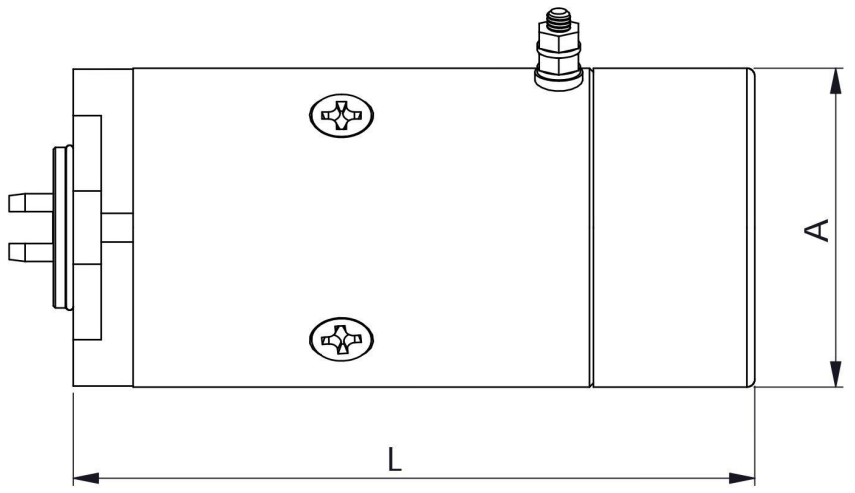
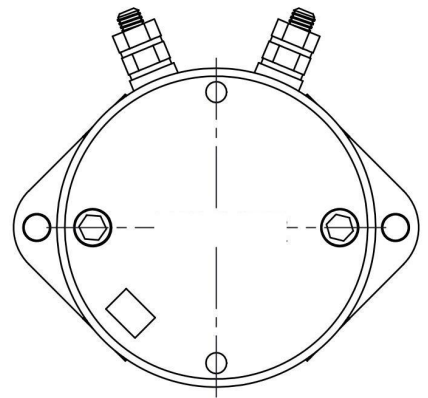
Unit : mm

MOTOR	REFERENCES	POWER	PHASE	VOLTAGES	HERTZ	RPM	A	AD	B	H	HC	L	W
MS01	W850101	1HP 4P	3	220/380	50/60	1420/1720	140	147	100	90	177	210	237
MS02	W850102	1HP 2P	3	220/380	50/60	2850/3450	140	147	100	90	177	210	237
MS03	W850103	1HP 4P	1	110/220	50/60	1420/1720	140	147	100	90	177	250	237
MS04	W850104	1HP 2P	1	110/220	50/60	2850/3450	140	147	100	90	177	250	237
MS05	W850105	2HP 4P	3	220/380	50/60	1420/1720	140	147	100	90	177	230	237
MS06	W850106	2HP 2P	3	220/380	50/60	2850/3450	140	147	100	90	177	230	237
MS07	W850107	2HP 4P	1	110/220	50/60	1420/1720	140	147	100	90	177	270	237
MS08	W850108	2HP 2P	1	110/220	50/60	2850/3450	140	147	100	90	177	270	237
MS09	W850109	3HP 4P	3	220/380	50/60	1420/1720	140	147	100	90	177	250	237
MS10	W850110	3HP 2P	3	220/380	50/60	2850/3450	140	147	100	90	177	250	237

Series $\varnothing$ 160 (MS)**A.C. MOTORS
DIMENSIONS**

D.C. MOTORS DIMENSIONS

Series		
	2N12	



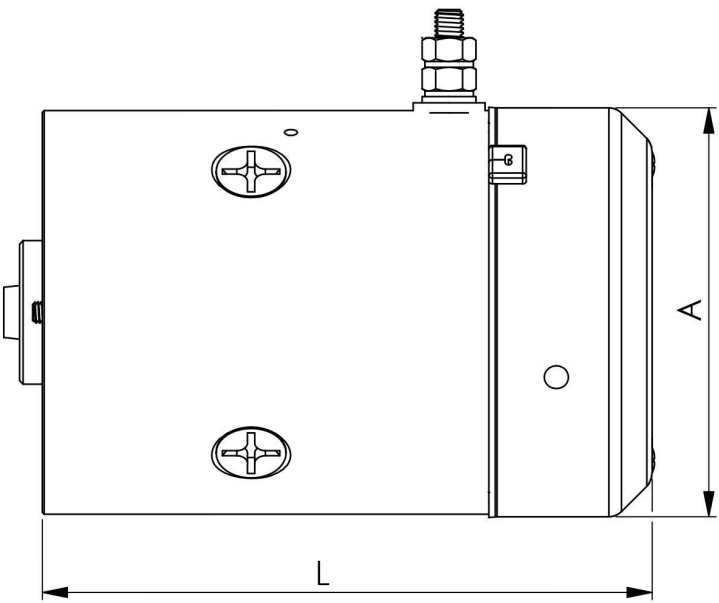
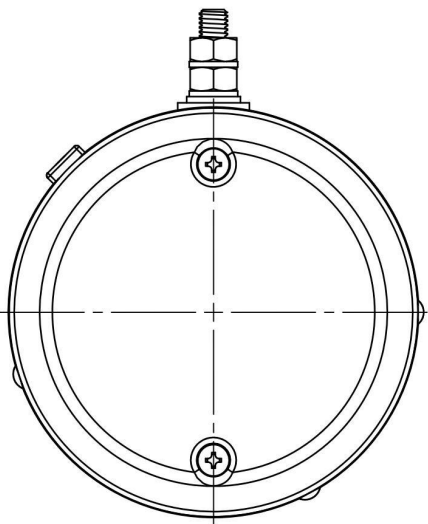
Unit : mm

MOTOR	REERENES	ØWER	ØLTAE S	WIRING	A	L
2N12	W801712	550W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 80	171
2N24	W801724	550W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 80	171
3N12	W802712	800W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 80	171
3N24	W802724	800W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 80	171

D.C. MOTORS DIMENSIONS

IP44

Series	
CE12	CE24
SE12	SE24



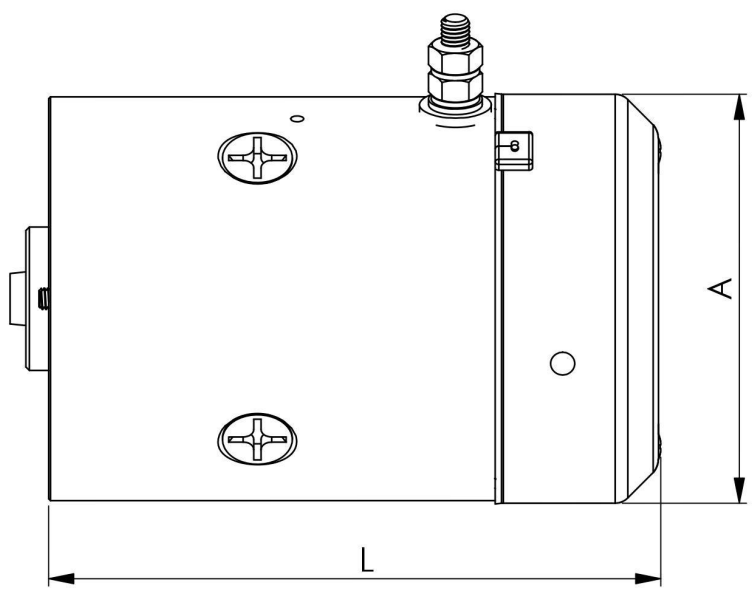
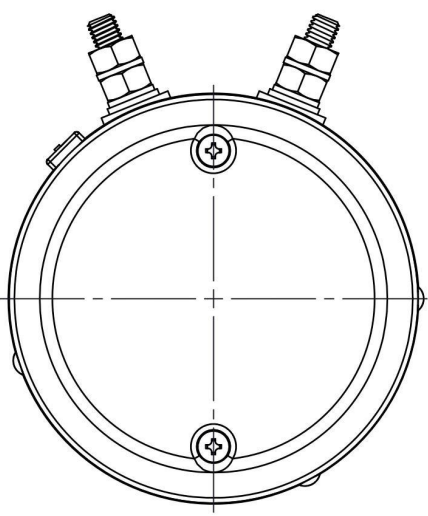
Unit : mm

MOTOR	REFERENCES	POWER	VOLTAGES	WIRING	A	L
CE12	W800612	1500W	12	EARTH RETURN (MOTOR WITH 1 TERMINALS)	Ø 114	170
CE24	W800624	2000W	24	EARTH RETURN (MOTOR WITH 1 TERMINALS)	Ø 114	170
SE12	W820612	1500W	12	EARTH RETURN (MOTOR WITH 1 TERMINALS)	Ø 114	170
SE24	W820624	2000W	24	EARTH RETURN (MOTOR WITH 1 TERMINALS)	Ø 114	170

D.C. MOTORS DIMENSIONS

IP44

Series	
CN12	CN24
SN12	SN24



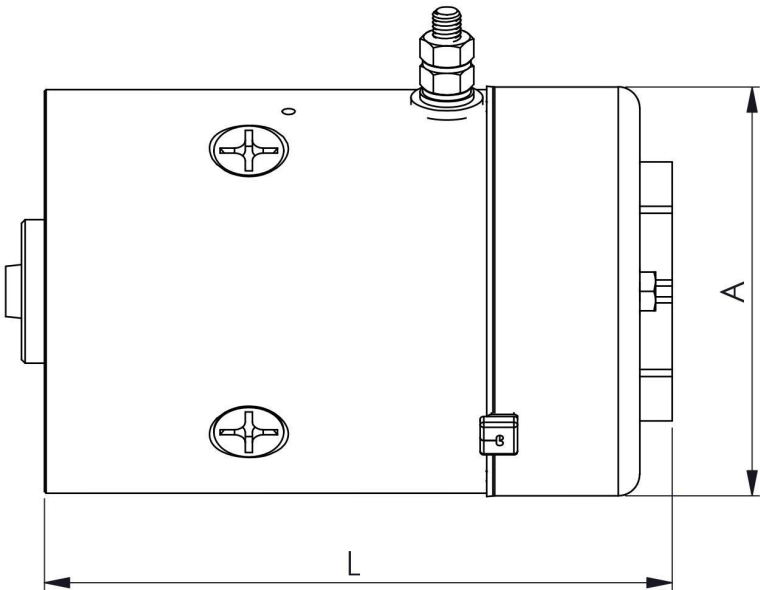
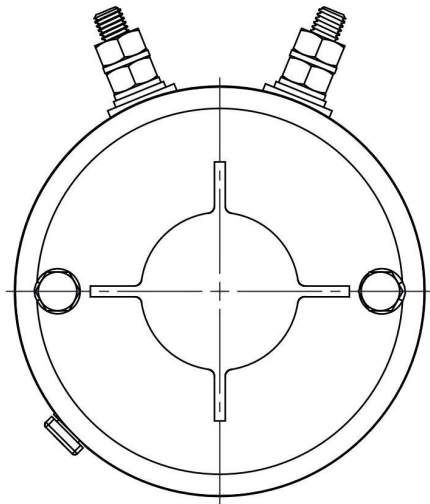
Unit : mm

MOTOR	REFERENCES	POWER	VOLTAGES	WIRING	A	L
CN12	W801012	1500W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	170
CN24	W801024	2000W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	170
SN12	W821012	1500W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	170
SN24	W821024	2000W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	170

D.C. MOTORS
DIMENSIONS

IP55
RoHS

Series
PN12
PN24

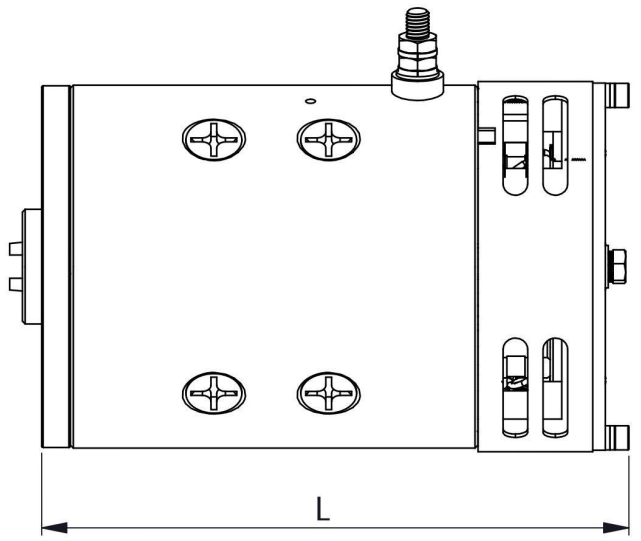
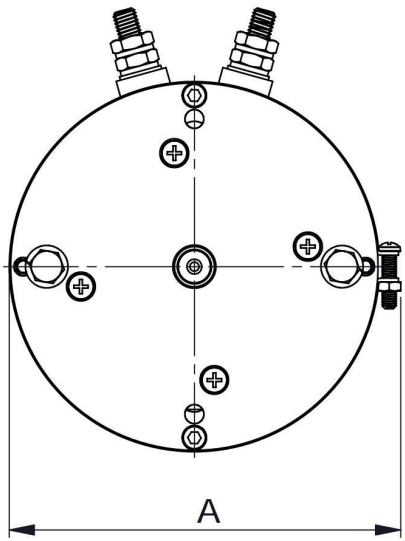


Unit : mm

MOTOR	REFERENCES	POWER	VOLTAGES	WIRING	A	L
PN12	W822612	1600W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	175
PN24	W822624	2200W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	Ø 114	175

D.C. MOTORS DIMENSIONS

Series	
LN12	LN24



Unit : mm

MOTOR	REERENES	ØWER	ØLTAE S	WIRING	A	L
LN12	W800663	2500W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	136.4	204.6
LN24	W800664	3000W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	136.4	204.6

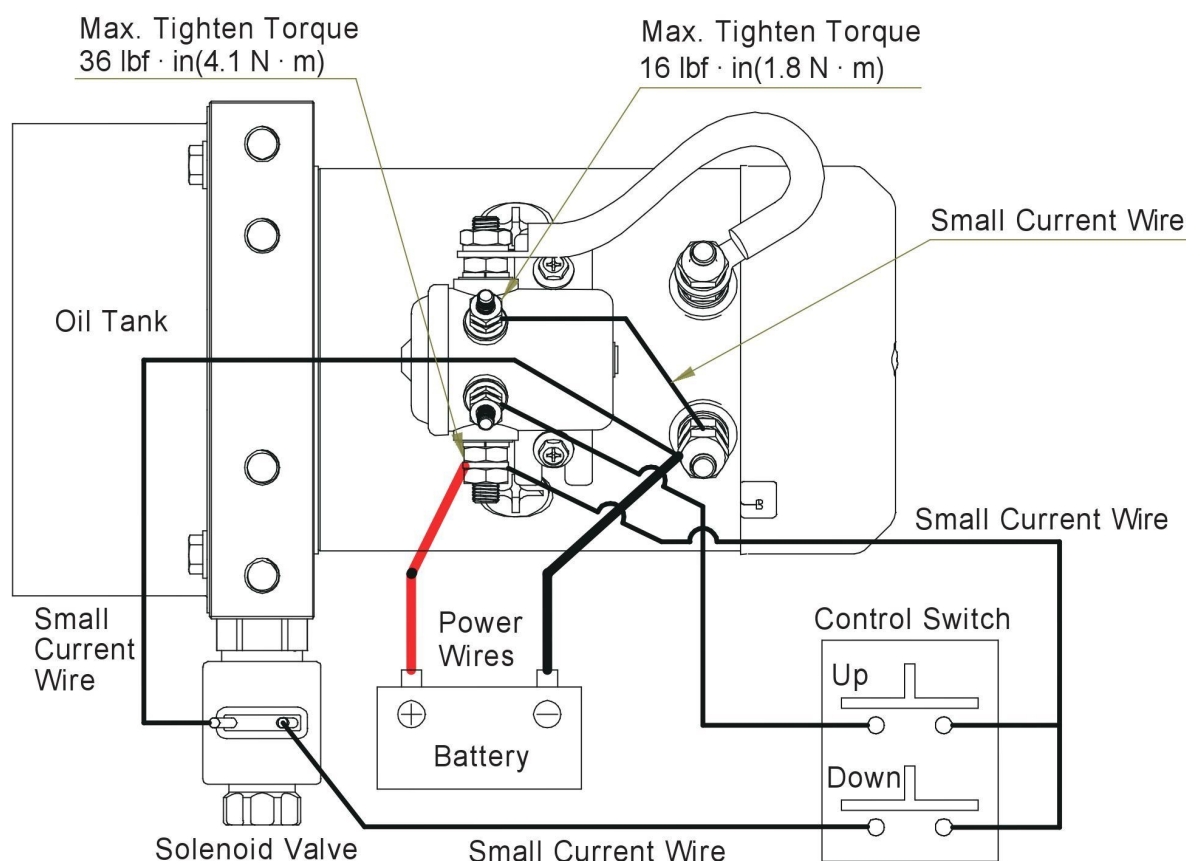
How to Connect Various Wires to the DC Hydraulic Power Pack (I) (INSULATE RETURN MOTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2. Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

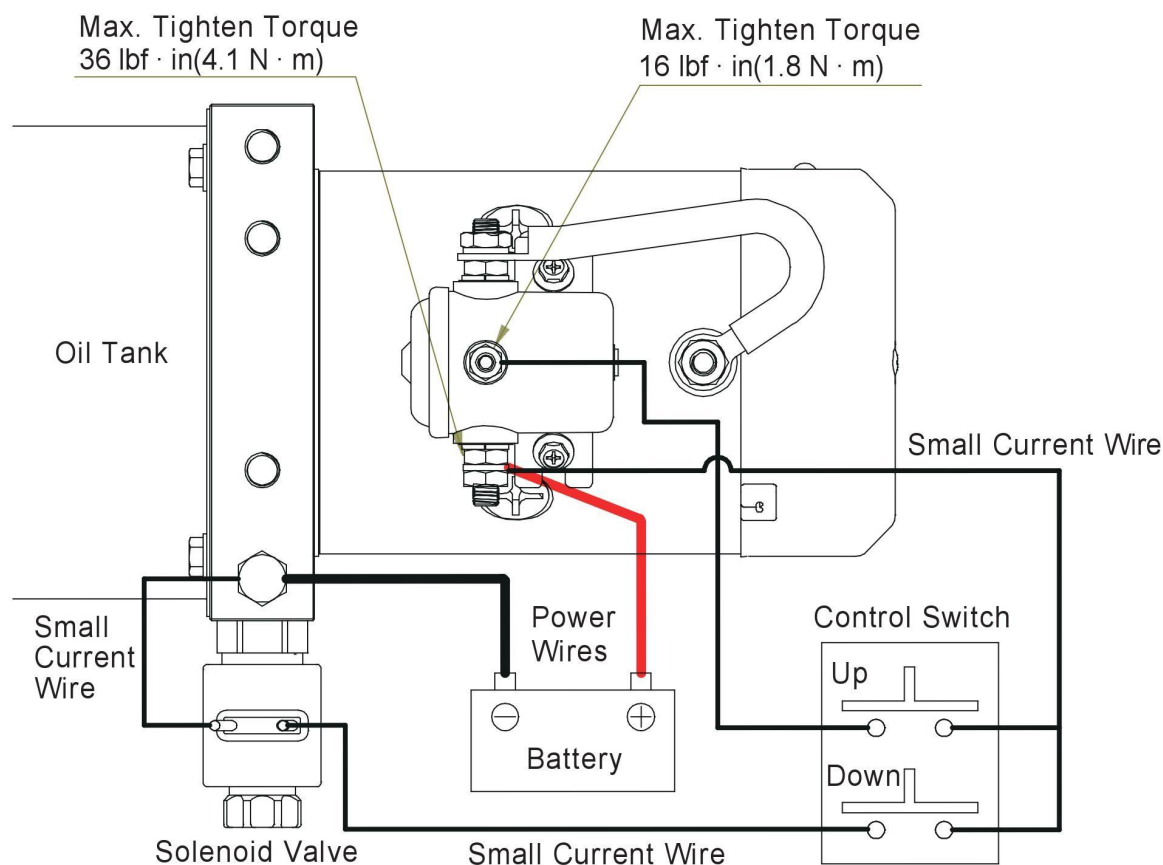
How to Connect Various Wires to the DC Hydraulic Power Pack (II) (EARTH RETURN MOTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2. Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

How to Connect Various Wires to the DC Hydraulic Power Pack (Ⅲ)

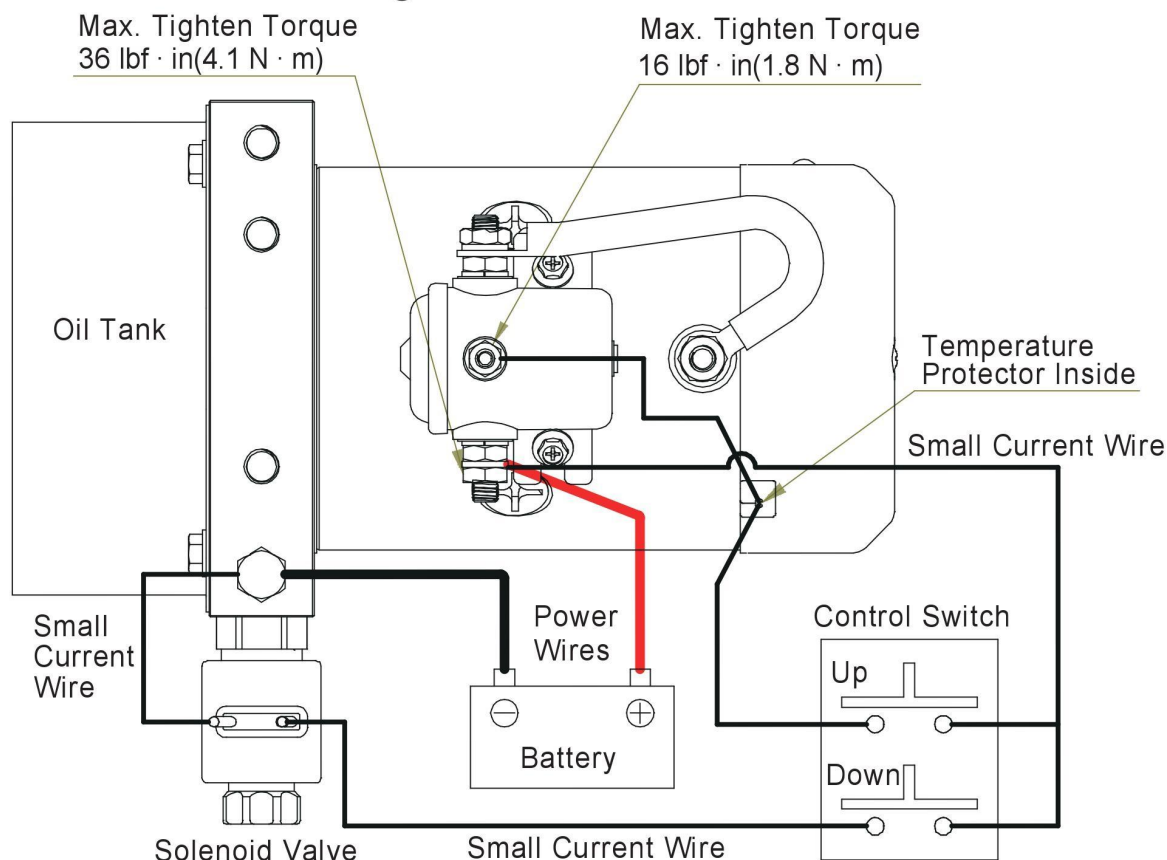
(EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2. Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

How to Connect Various Wires to the DC Hydraulic Power Pack (IV)

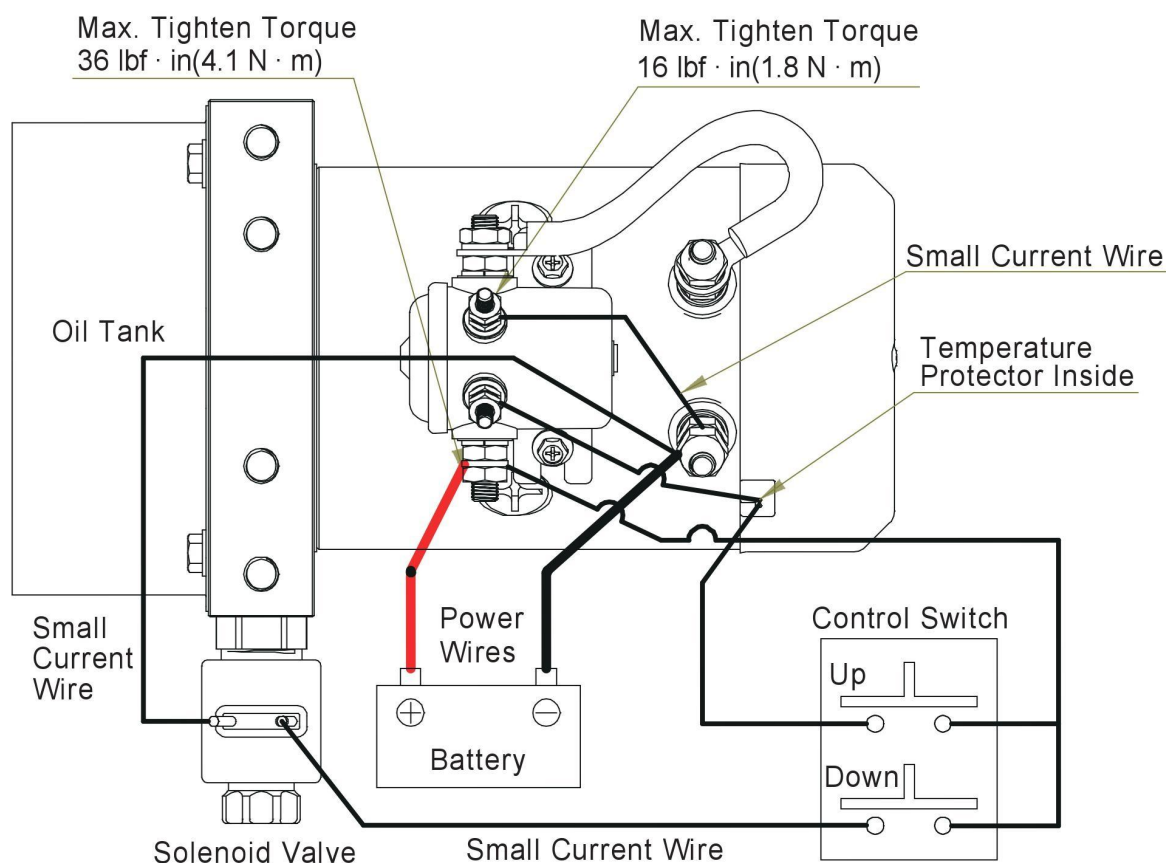
(INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2. Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

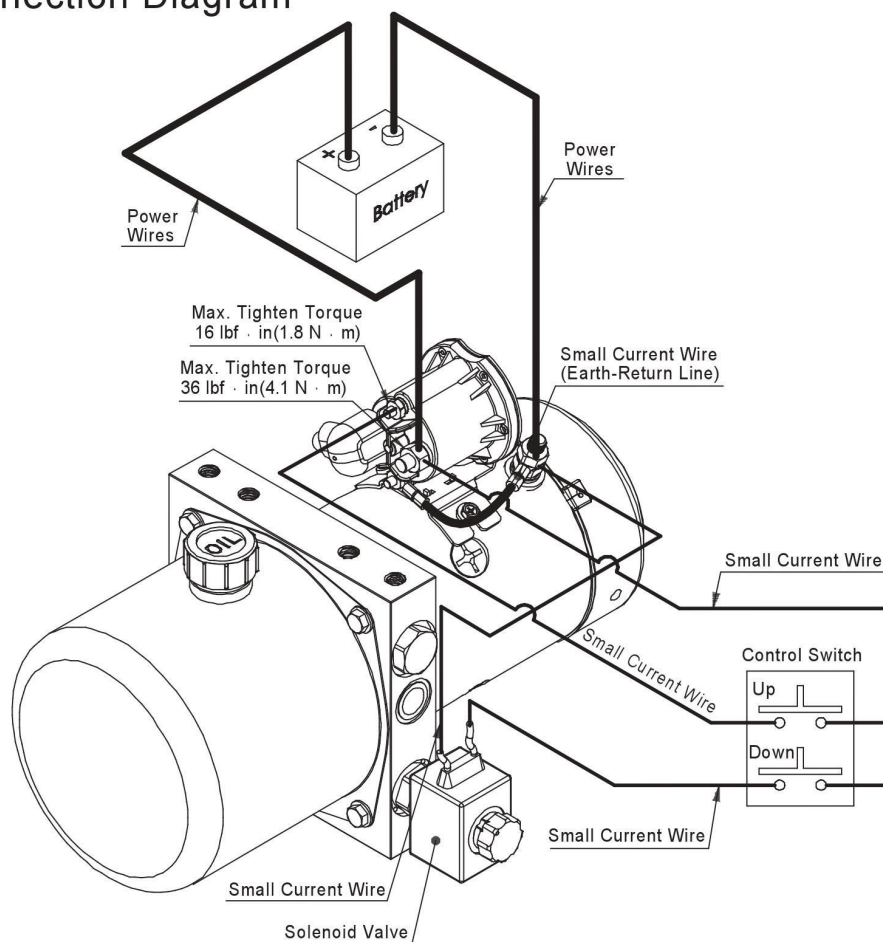
How to Connect Various Wires to the DC Hydraulic Power Pack (I) (INSULATE RETURN MOTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx. 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2.Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

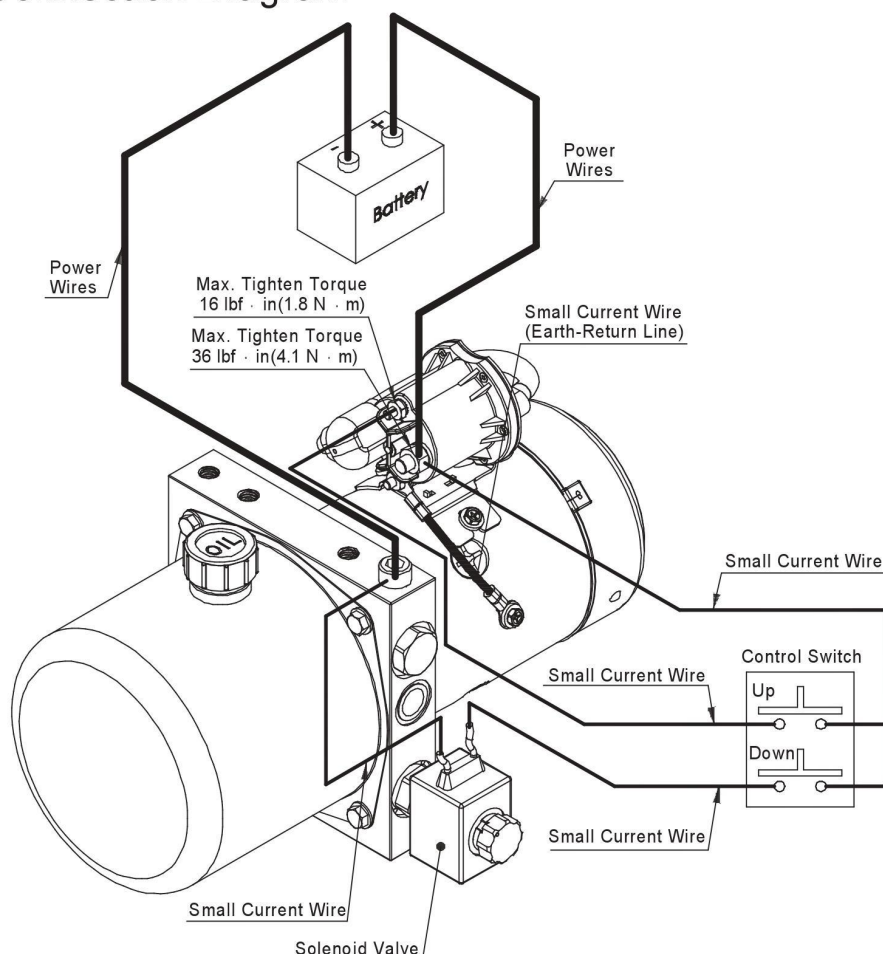
How to Connect Various Wires to the DC Hydraulic Power Pack (Ⅱ) (EARTH RETURN MOTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30 °C Working time: approx. 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2. Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

How to Connect Various Wires to the DC Hydraulic Power Pack (Ⅲ)

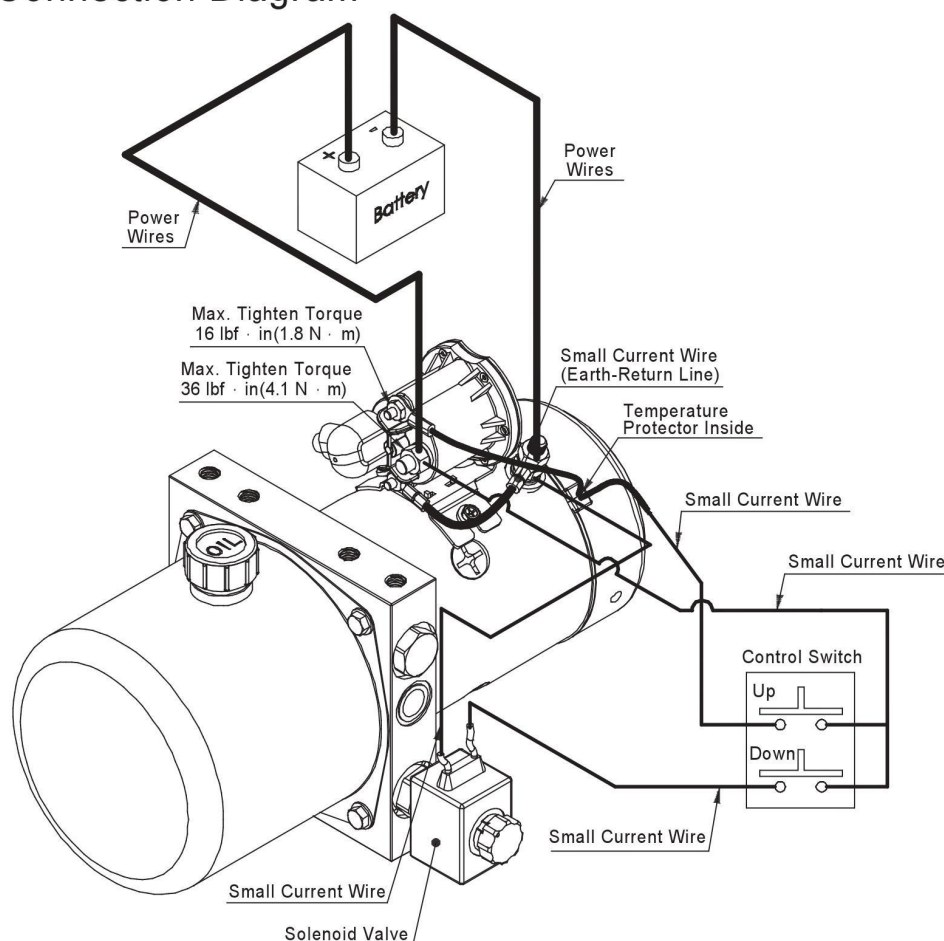
(EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30 °C Working time: approx. 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2.Wire Connection Diagram



* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

How to Connect Various Wires to the DC Hydraulic Power Pack (IV)

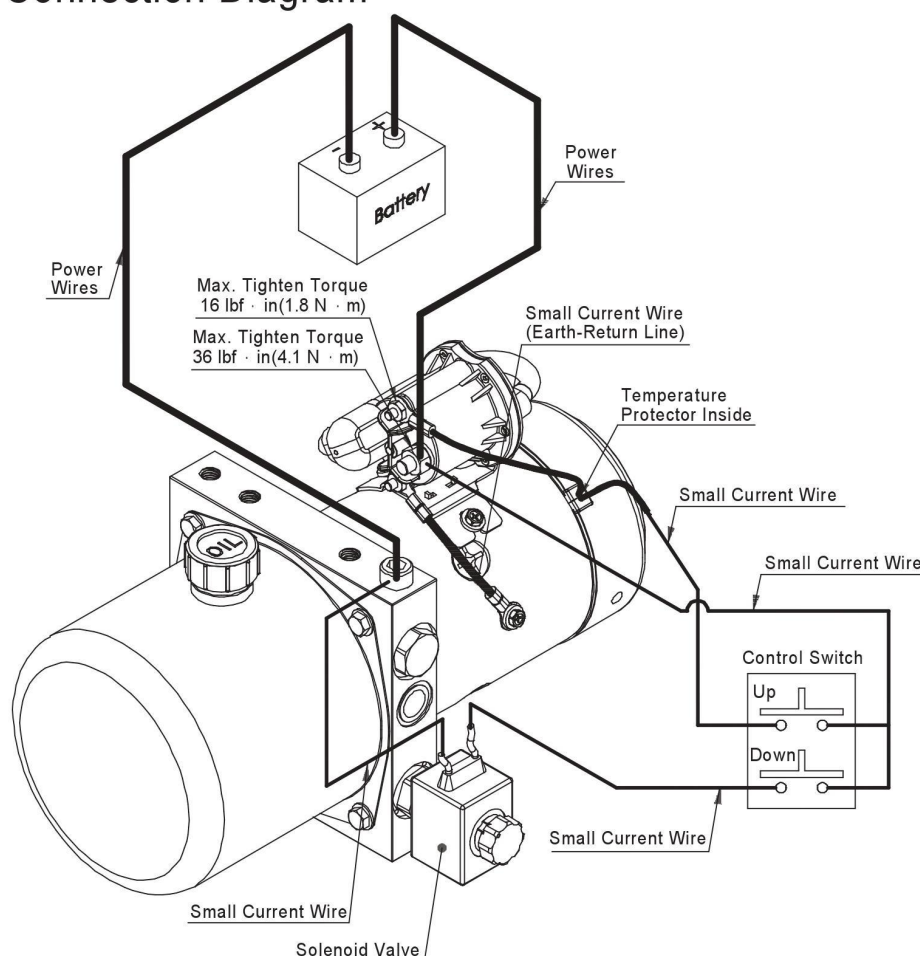
(INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR)

1. Before using the DC Hydraulic Power Pack, read all instructions and examine diagrams. The motor needs a large current, so correct wires are required.

Refer to Chart: (Battery Power Wires)

Current(A)	Diameter of wire	Please Note
90(A)	5.5(mm ²)	Ambient Temperature: 25~30°C Working time: approx. 30 sec. Wire length: 1m
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	
330(A)	38 (mm ²)	

2.Wire Connection Diagram

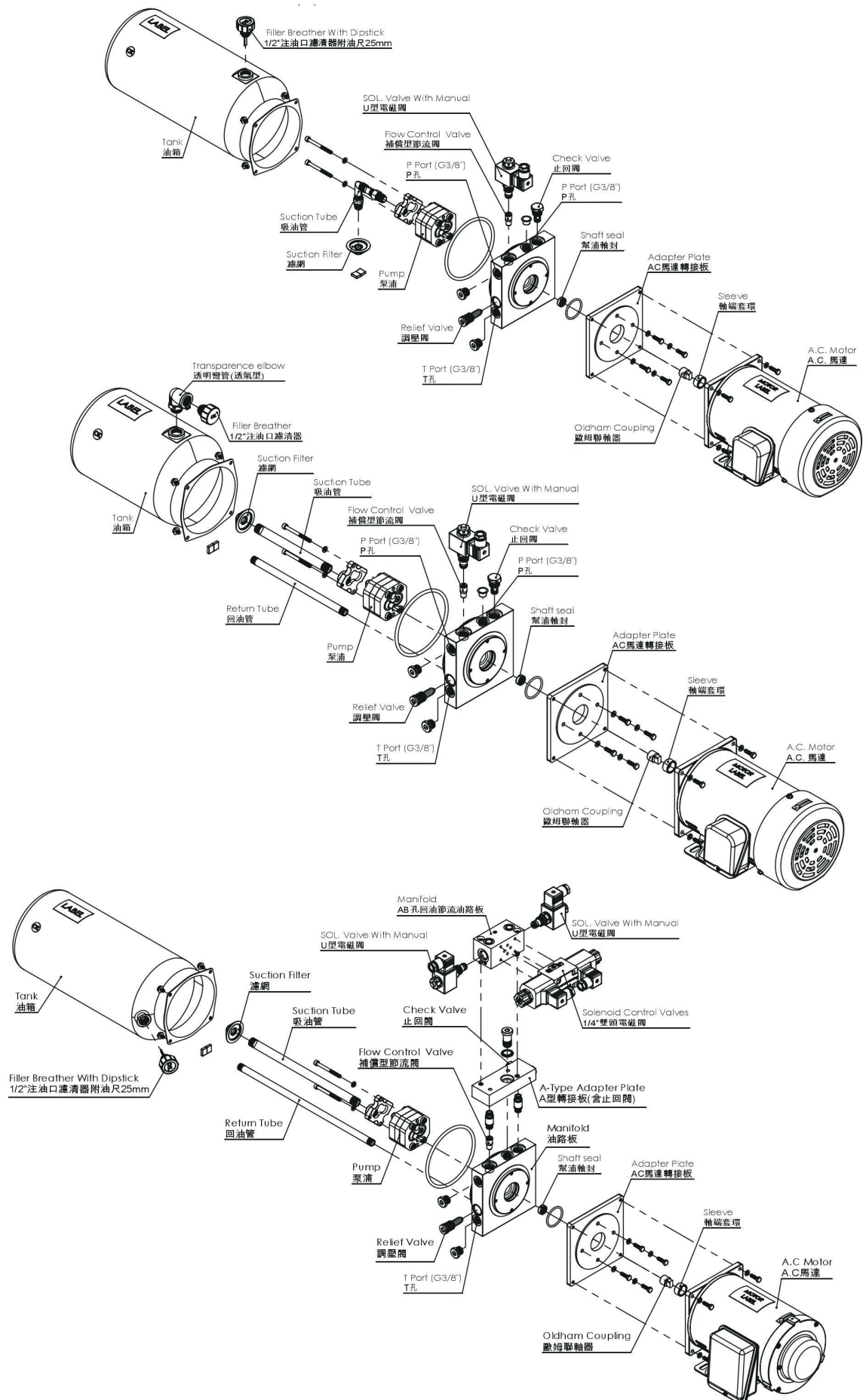


* The customer must choose the proper control wire (small current) to ensure they can hold 2 Amps and above.

appendix D

AC HYDRAULIC POWER PACK

EXPLODED DRAWING



appendix E

DC HYDRAULIC POWER PACK

EXPLODED DRAWING

