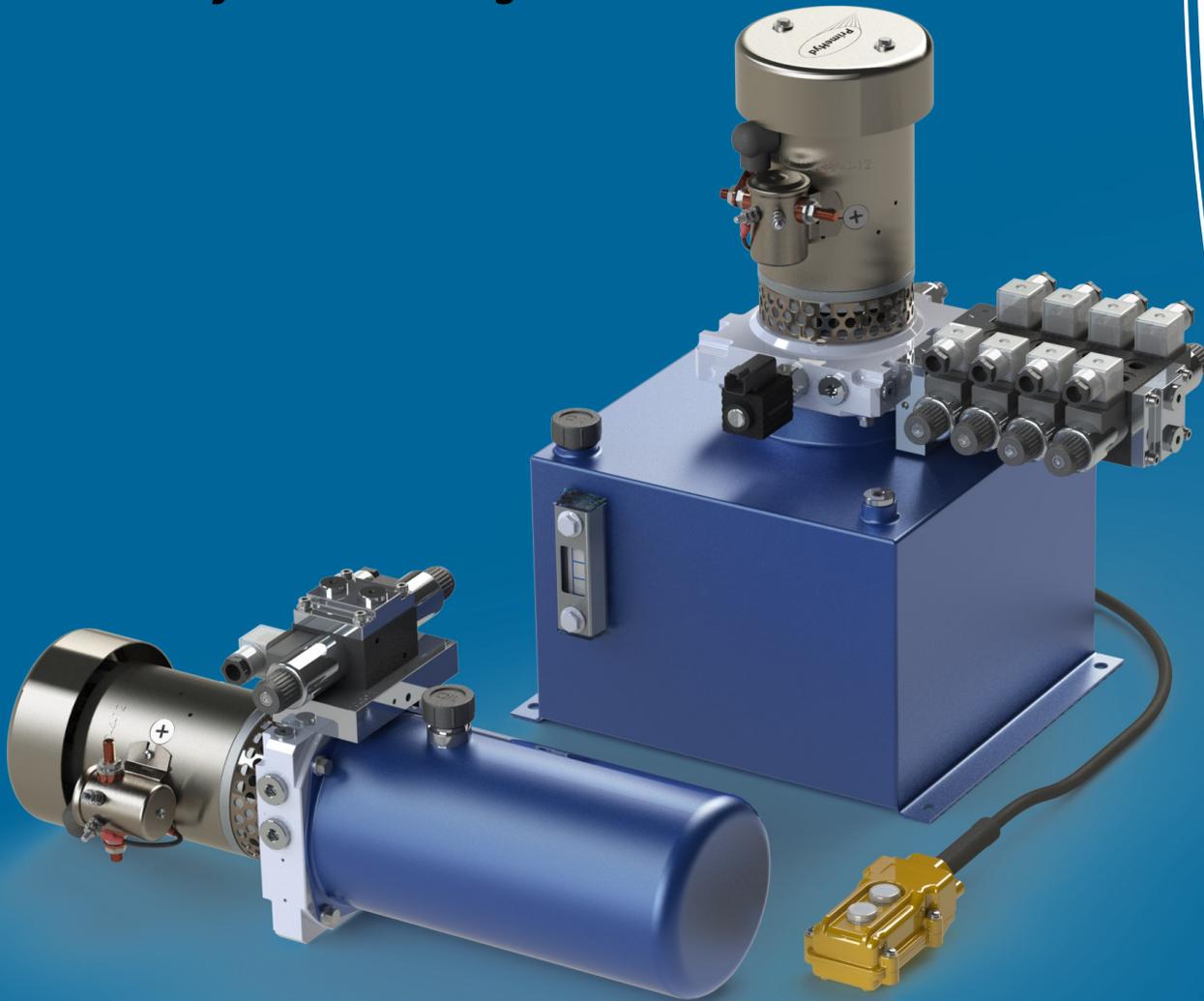




**PrimeHyd**

SMITHS  
WA

*"Quality on time on budget"*

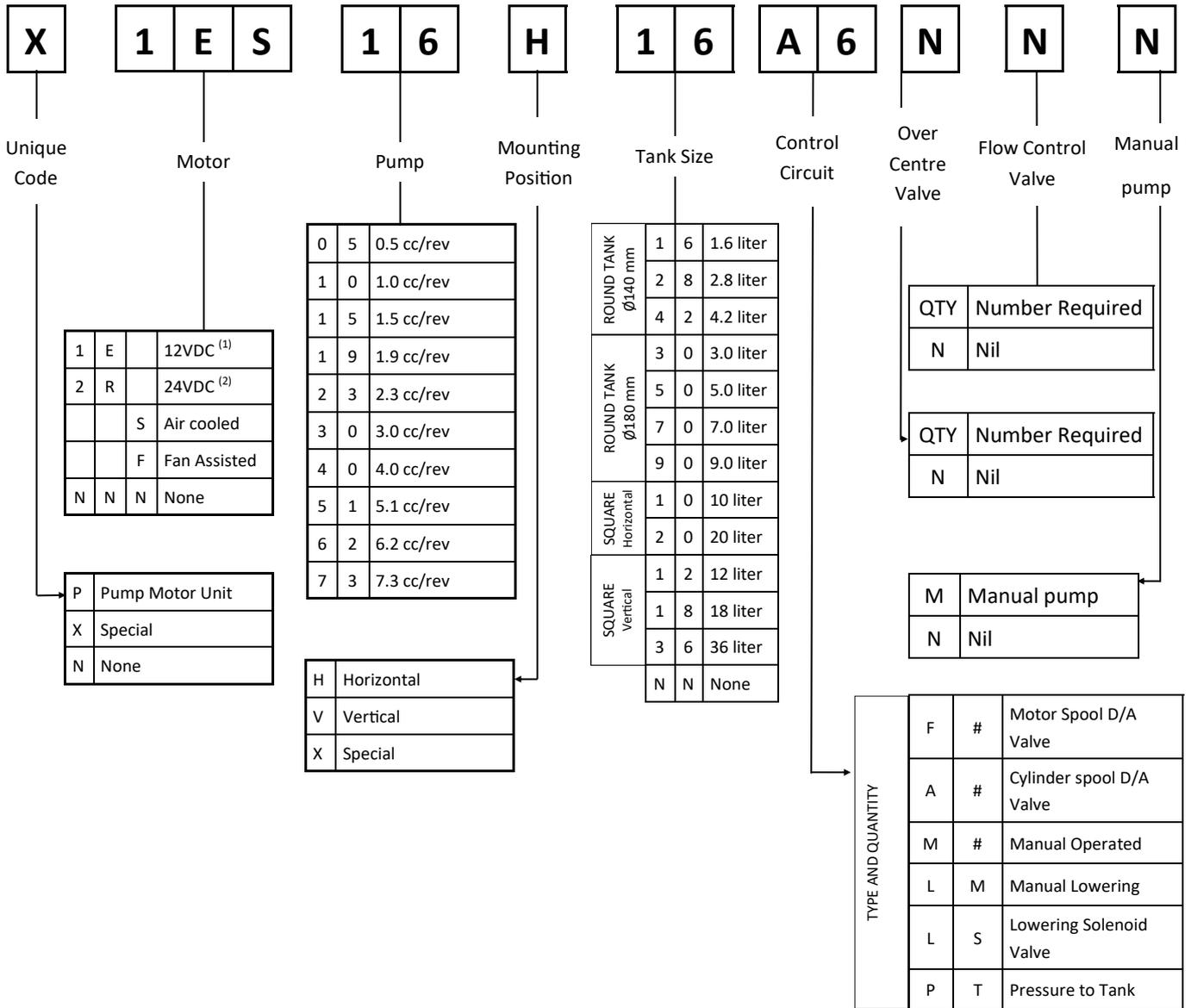


# PrimeHyd

## Standard DC Powerpacks

4/471 Victoria Rd, Malaga, Western Australia 6090  
Tel: +61 (08) 9248 4144  
Email: [Sales@primehyd.com.au](mailto:Sales@primehyd.com.au)





EXAMPLE OF ORDERING CODE:

**1ES23H90A664H**

AIR COOLED 12VDC, 2.3CC/REV PUMP, HORIZONTALLY MOUNTED ROUND 9.0 L TANK, 6 CYLINDER SPOOL D/A VALVES, COUNTER BALANCE VALVE FOR ALL 6 stations, FLOW CONTROL VALVE FOR 4 STATIONS, WITH HAND PUMP

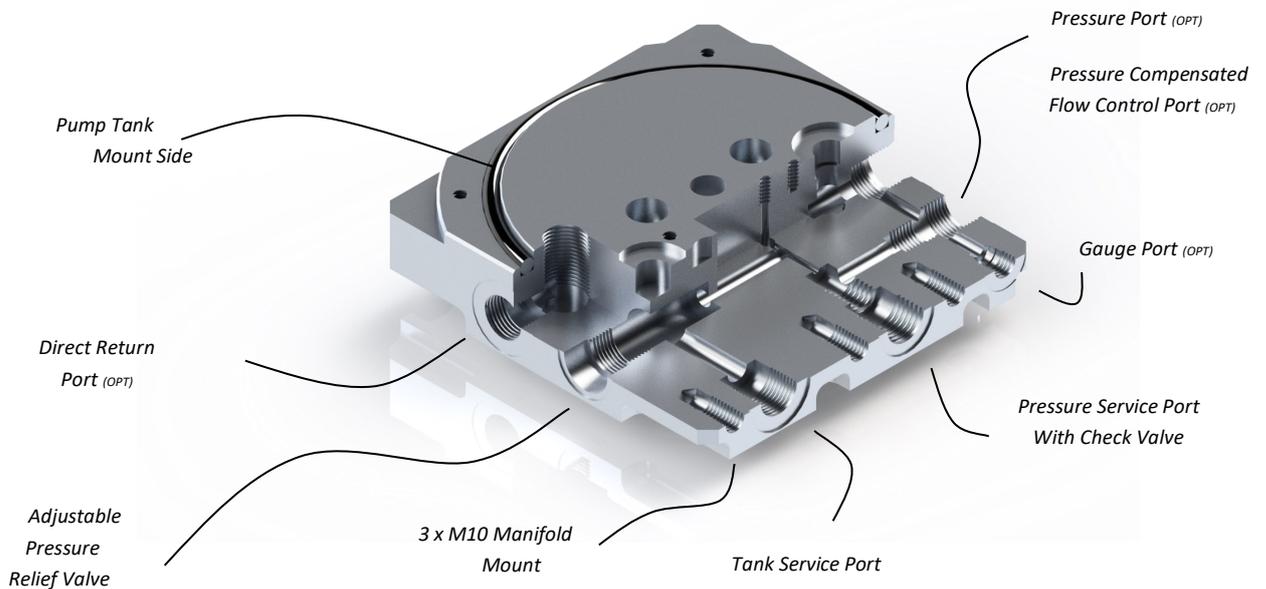
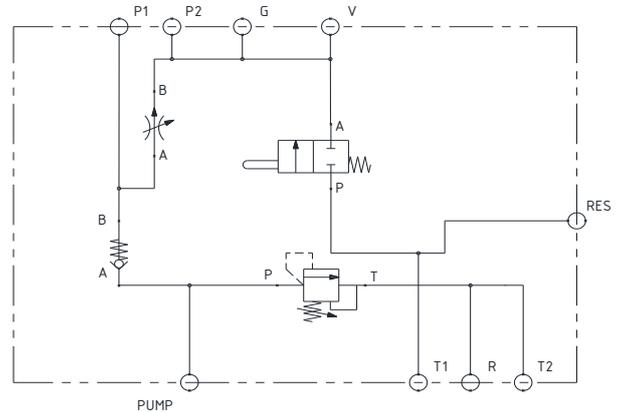
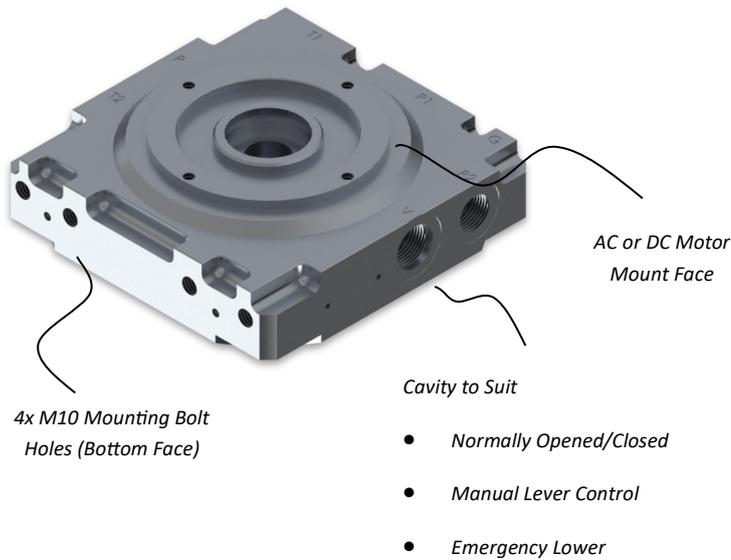
EXAMPLE:

**1ES23H90F3NNN**

AIR COOLED 12VDC, 2.3CC/REV PUMP, HORIZONTALLY MOUNTED ROUND 9.0 L TANK, 3 Motor Spool D/A valves, Nil, Nil, Nil.

# CENTRE BLOCK

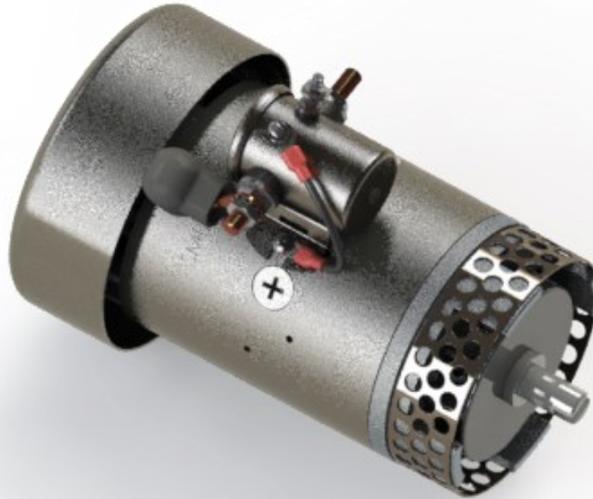
## MULTI FUNCTION



(OPT) = OPTIONAL

ORDERING CODE	SERVICE PORTS	PRESSURE RANGE	MATERIAL	DIMENSIONS (MM)	MOUNTING (MM)	ASSEMBLED WITH
P58890_CH_R2	Pressure / Tank 3/8" B.S.P.P.	30-210 Bar	High Grade Aluminium Alloy	160 x160 x 40	Centres 100-127	NIL
P58890_CH_R2_ASM	Pressure / Tank 3/8" B.S.P.P.	30-210 Bar	High Grade Aluminium Alloy	160 x160 x 40	Centres 100-127	ASSEMBLED WITH CARTRIDGES
P58890_CH_R3_YH	Pressure / Tank 3/8" B.S.P.P.	30-210 Bar	High Grade Aluminium Alloy	160 x160 x 40	Centres 100-127	YOYE RELIEF WITHOUT CARTRIDGES

## DC MOTOR

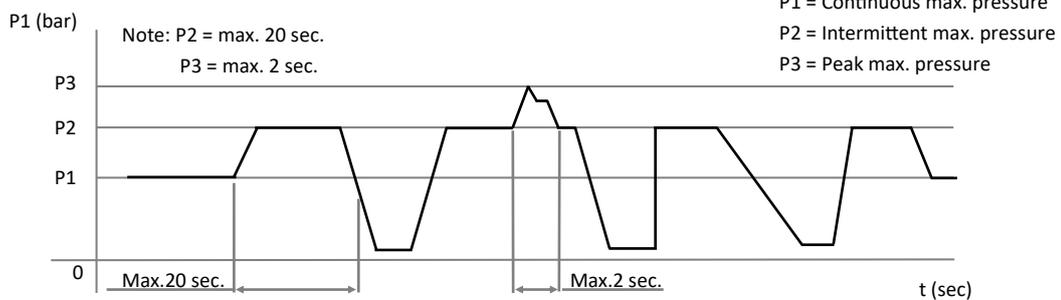
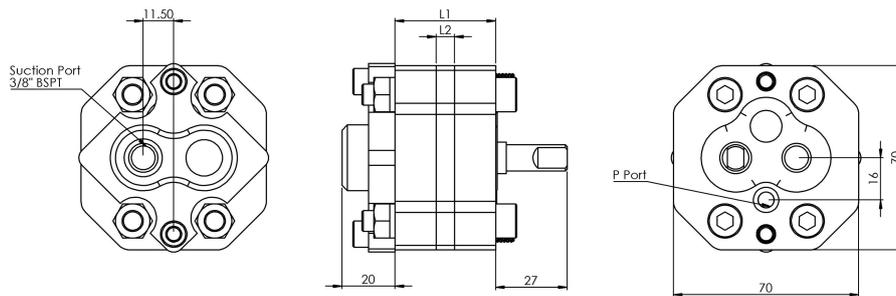


TEMPERATURE TEST RESULTS OF SMILTHS WA 12 VOLT MOTORS			
Standard Motor Vs Fan Assisted Motor			
Time (Min)	Brush Temperature (°C)	Time (Min)	Brush Temperature (°C)
One	73.0	One	37.5
Two	95.0	Two	38.5
Three	113.0	Three	43.5
Four	126.0	Four	55.5
Five	138.0	Five	75.0
Six	149.0	Six	76.0
Note: Maximum permissible brush temperature is limited to 150°C.  Testing Carried out at an ambient temperature of 22°C with continuous Draw of 180amps. Hydraulic pump used in the test -2.3cc/rev with pressure relief set at 100 bar.		Seven	65.0
		Eight	58.0
		Nine	64.5
		Ten	63.0
		Eleven	72.5
		Twelve	80.0

CODE	Power Rating W	Voltage DC	Connections	Assisted Cooling
101157/1EF	1500	12	Earth return (motor with 1 terminal)	Fan assisted
101157/1ES	1500	12	Earth return (motor with 1 terminal)	Nil
101157/2RF	2000	24	Insulated return motor with 2 terminals	Fan assisted
101157/2RS	2000	24	Insulated return motor with 2 terminals	Nil

Motor 90°C thermal cut off option is available for use in high temperature work environments

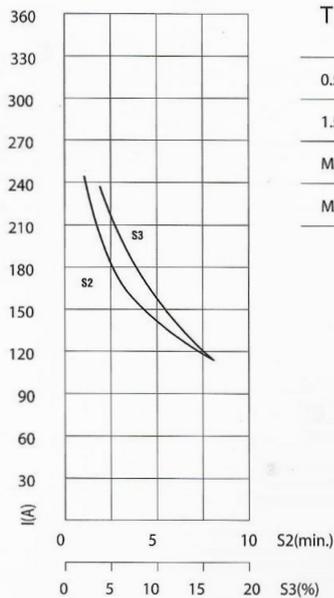
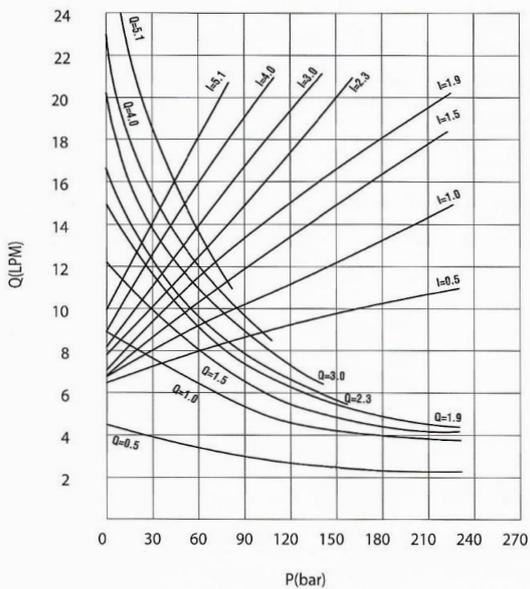
## HYDRAULIC GEAR PUMPS



CODE	Displacement	Flow at 1800 rev/min	Max Pressure			Max Speed	Dimensions	
			P1	P2	P3		L1	L2
	C.C./rev	LPM	bar	bar	bar	RPM	mm	mm
101158/05W	0.5	0.9	230	250	270	6000	36.5	5.3
101158/10W	1.0	1.8	230	250	270	6000	38.1	6.9
101158/15W	1.5	2.6	230	250	270	6000	39.8	8.6
101158/19W	1.9	3.3	230	250	270	6000	41.2	10.0
101158/23W	2.3	4.0	230	250	270	6000	42.6	11.4
101158/30W	3.0	5.2	210	250	270	5000	44.8	13.6
101158/40W	4.0	6.9	210	230	250	4000	48.4	17.2
101158/51W	5.1	8.8	180	200	220	2500	52.0	20.8
101158/62W	6.2	10.6	180	200	220	2500	55.6	24.4
101158/73W	7.3	12.5	180	200	220	2500	59.2	28.0

## PERFORMANCE CURVES

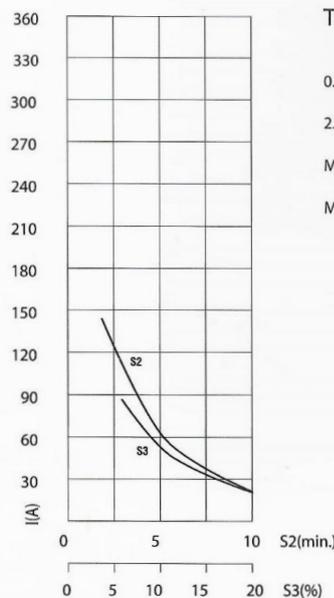
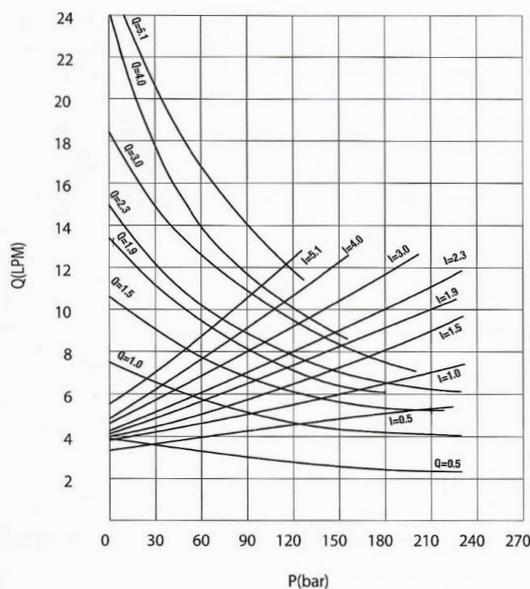
### 12 VOLT



#### TECHNICAL DATA

0.5-5.1 C.C PUMPS
1.5KW/12V/210A
MAX. POWER:2000W
MAX. CURRENT:310A

### 24 VOLT



#### TECHNICAL DATA

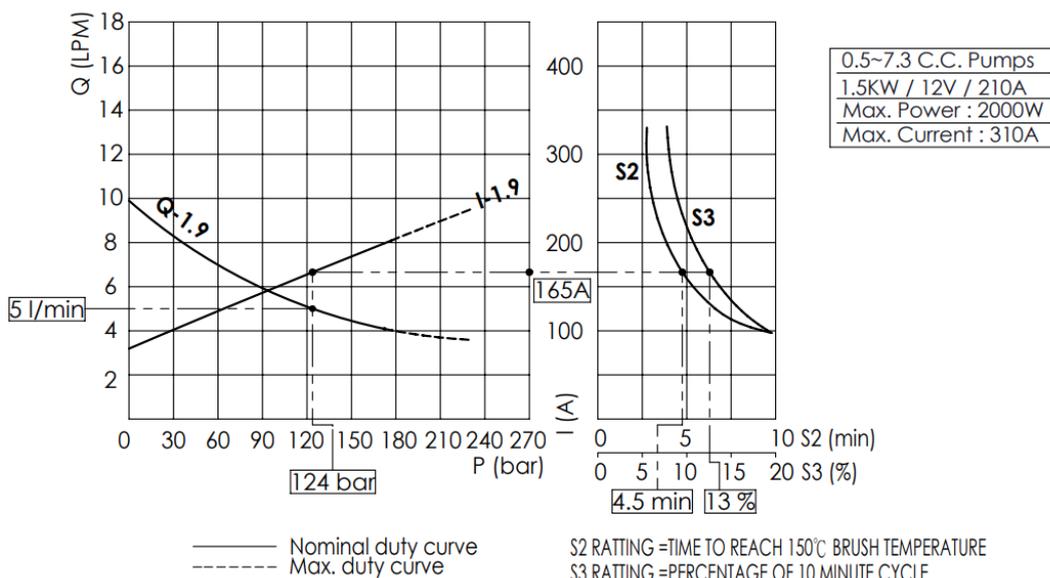
0.5-5.1 C.C PUMPS
2.0KW/24V/110A
MAX. POWER:2500W
MAX. CURRENT:190A

## HOW TO CHOOSE DC MOTOR AND PUMP

The dimensioning of DC 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 DC) 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.

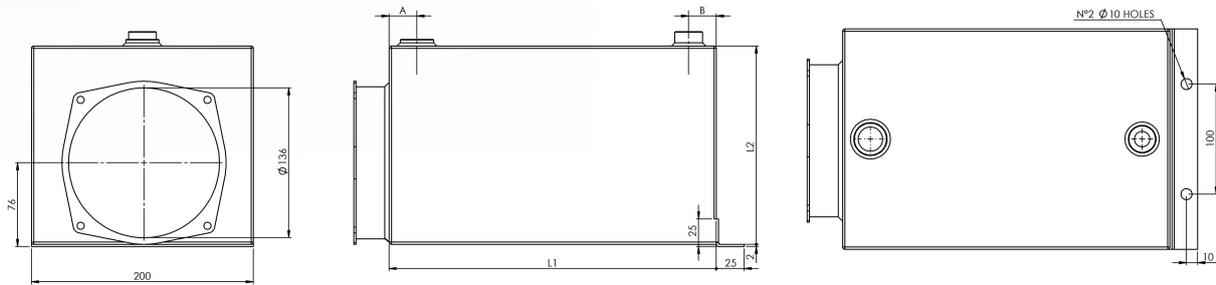
**Example:** S3=13%

The motor runs 1.3 minutes and stops 8.7 minutes.



## Reservoir

### Blue, Square Horizontal

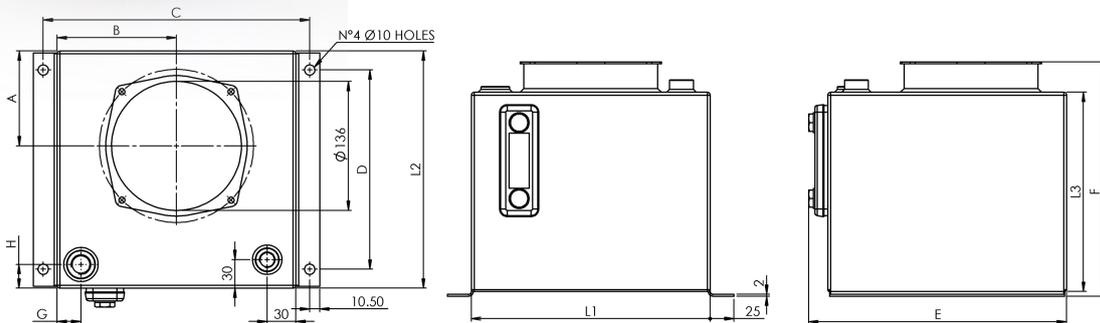


CODE	A (mm)	B (mm)	B (mm)	L1 (mm)	L2 (mm)	OIL (L)
MK3100H	21	21	21	300	180	10
MK3200H	25	25	25	550	210	20



## Reservoir

### Blue, Square Vertical

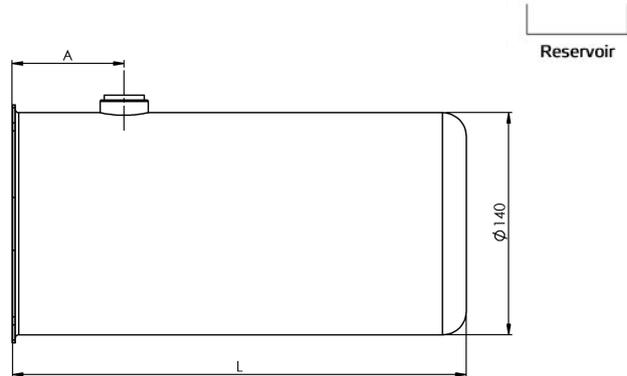
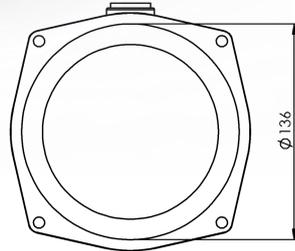


CODE	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	L1 (mm)	L2 (mm)	L3 (mm)	OIL (L)
MK3120V	100	125	280	210	270	247	25	25	250	250	210	12
MK3180V	120	150	330	260	270	247	25	25	300	300	210	18
MK3360V	120	175	380	310	370	372	35	35	350	350	335	36



## Reservoir

### Blue, Round 140mm

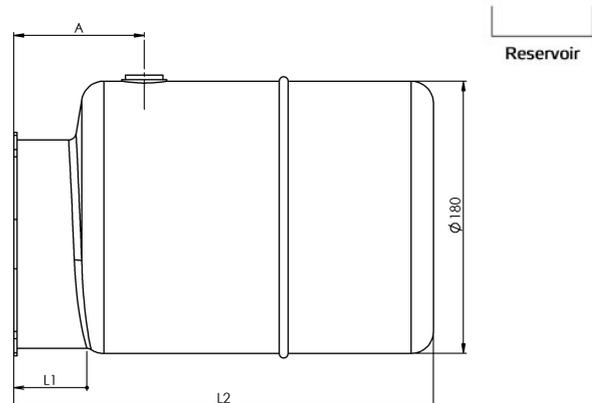
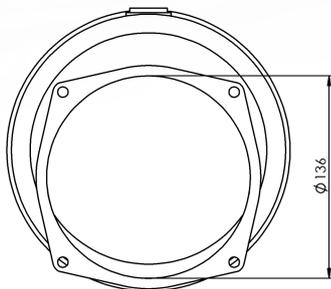


CODE	L (mm)	A (mm)	OIL (L)
MK316HW	170	40	1.6
MK328HW	285	40	2.8
MK342HW	405	40	4.2



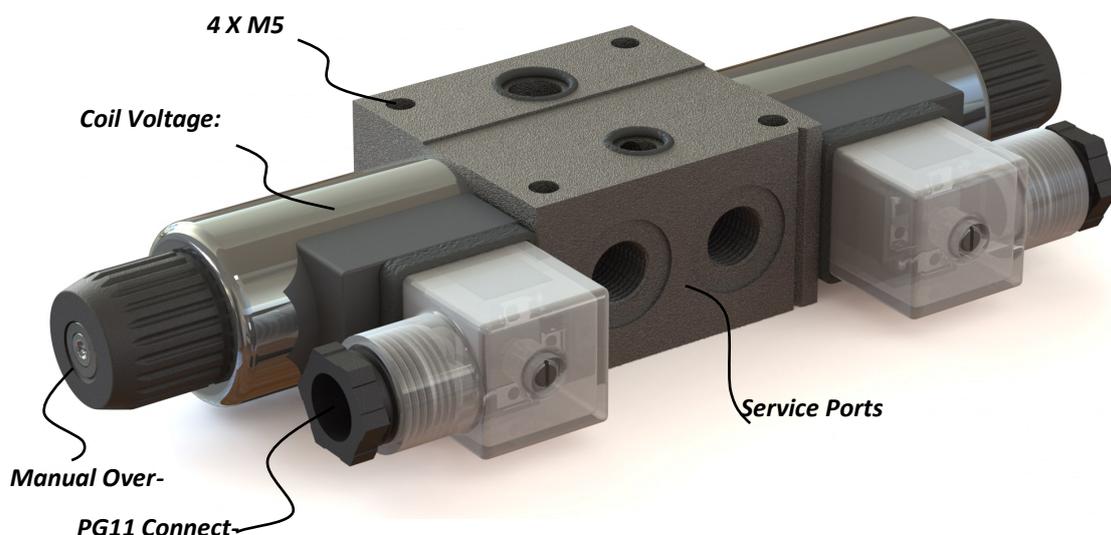
## Reservoir

### Blue, Round 180mm



CODE	L1 (mm)	L2 (mm)	A (mm)	OIL (L)
MK330HW	48	200	87	3
MK350HW	62	325	87	5
MK370HW	62	365	87	7
MK390HW	62	445	87	9

## PMC30 VALVES



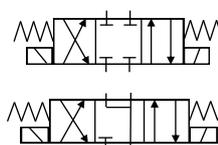
### Technical Specification:

● Nominal Working Pressure	140 Bar
● Max Working Pressure	250 Bar
● Max Flow rate	30 l/min
● Spool leakage (at 70 bar)	30 ml/min
● Max fluid temperature	80 °C
● Tightening torque on tie rods	6 Nm
● Voltage tolerance	± 10%
● Solenoid power (Nominal)	30 W
● Protection class	IP65
● Working Life	10 x 10 <sup>6</sup>
● Stackable	Up to 9 valves
● Port size (A,B)	1/4" BSPP
● Dimensions (in mmm)	37.2 x 58 x 210
● Weight	1.5 kg

### ORDERING CODE

P	M	C	3	0	-	X	X	-	X	X
DA		Cylinder Spool								
DM		Motor Spool								
12		12VDC coils								
24		24VDC coils								

Example: PMC30-DA-12



DA: Cylinder Spool



DM: Motor Spool

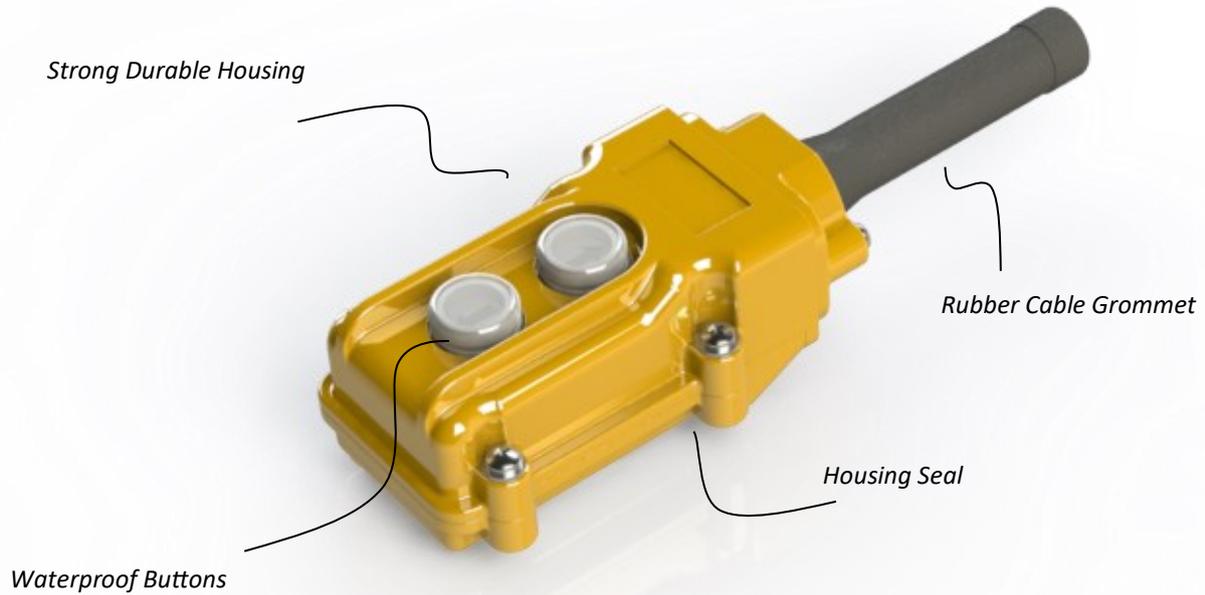


Coil item numbers:

PMC30C-12

PMC30C-24

## Pendants



CODE	Description	Single or Double Acting	Number or buttons
PMC-PEN-SA2	Rain proof pendant	Single	2
PMC-PEN-SA4	Rain proof pendant	Single	4
PMC-PEN-SA6	Rain proof pendant	Single	6
COP-21	Rain proof pendant	Double	2
COP-22	Rain proof pendant	Double	4
COP-23	Rain proof pendant	Double	6

## HOW TO WIRE A STANDARD DC POWERPACK EARTH RETURN MOTOR (101157/1ES & 101157/1EF)

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

Refer to Chart: (Battery Power Wires)

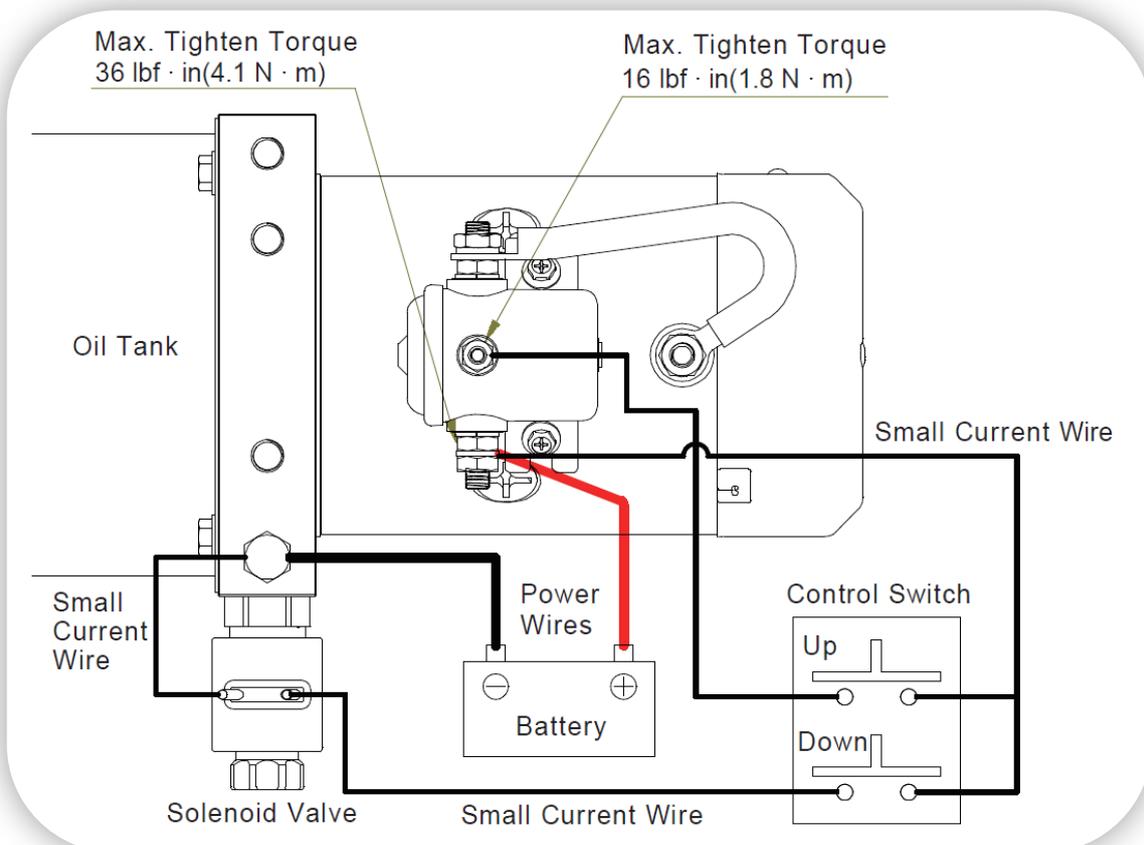
Current (A)	Wire Diameter (mm <sup>2</sup> )
90	5.5
120	8.0
180	14
230	22
280	30
330	38

Ambient temperature: 25 ~ 30 °C

Working time: approx. 30 seconds

Wire length: 1,000 mm

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 WIRE A STANDARD DC POWERPACK INSULATE RETURN MOTOR (101157/2RS & 101157/2RF)

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)

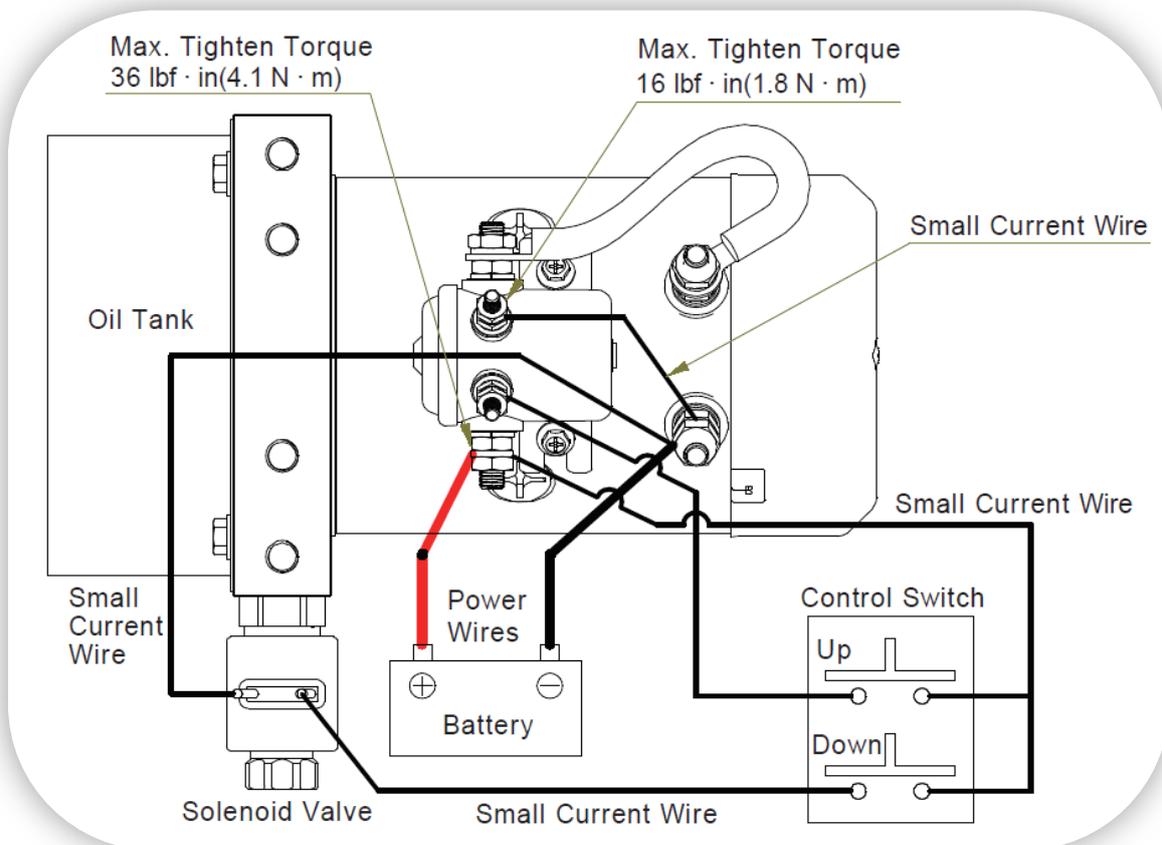
Current (A)	Wire Diameter (mm <sup>2</sup> )
90	5.5
120	8.0
180	14
230	22
280	30
330	38

Ambient temperature: 25 ~ 30 °C

Working time: approx. 30 seconds

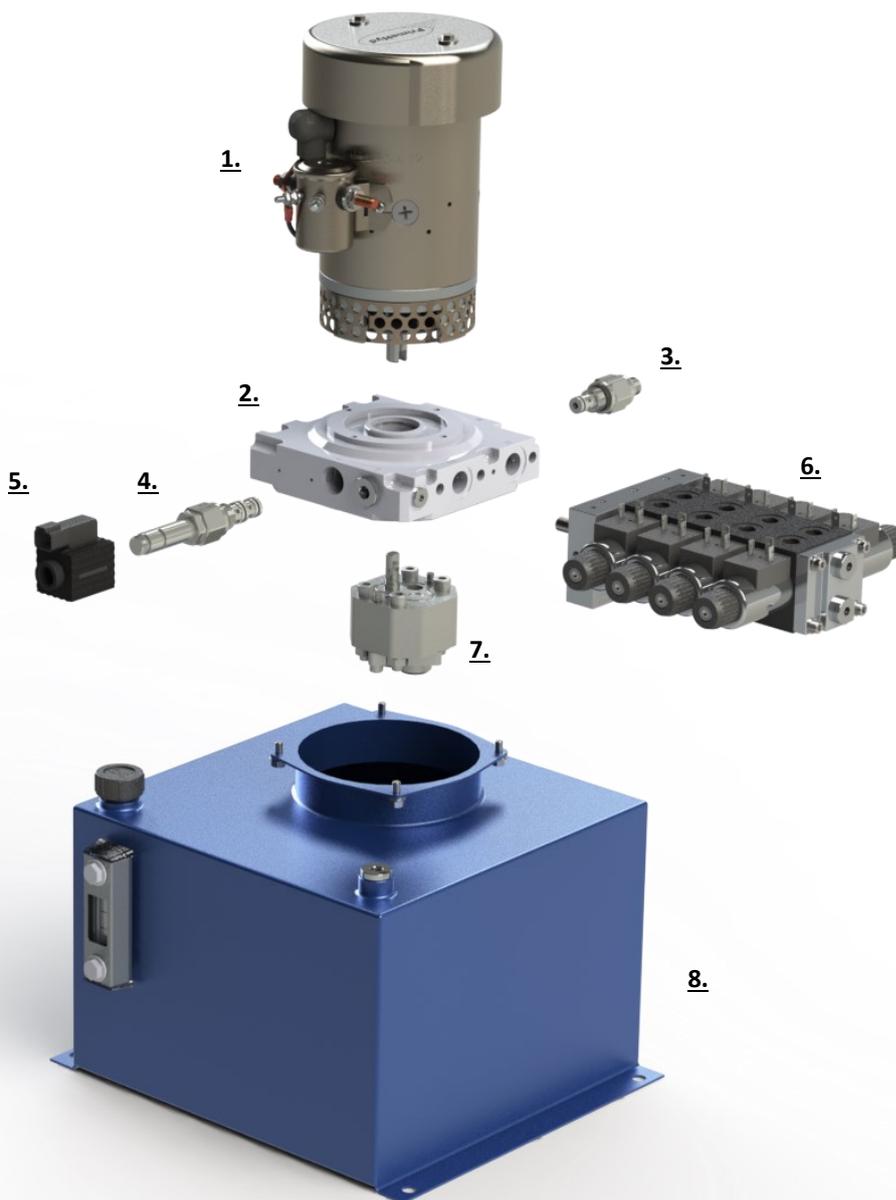
Wire length: 1,000 mm

2) Wire connection diagram



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

## PUMP GROUP ITEMS



1.	DC Motor Unit
2.	Center Block
3.	Pressure Relief
4.	No/Nc Cartridge
5.	Coil
6.	PMC Valves
7.	Hydraulic Gear Pump
8.	Oil Tank