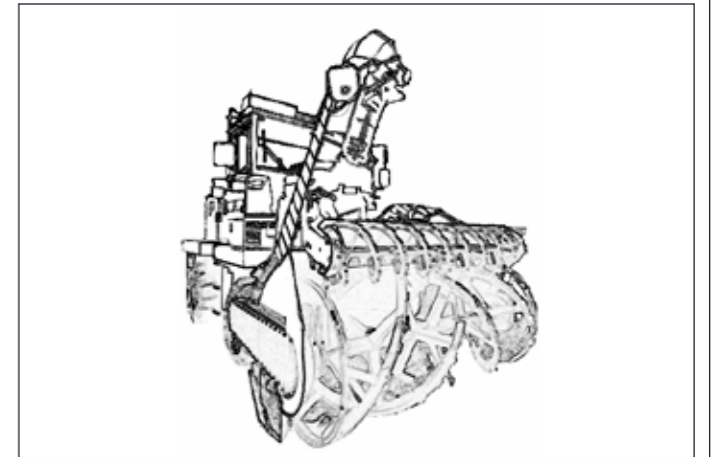
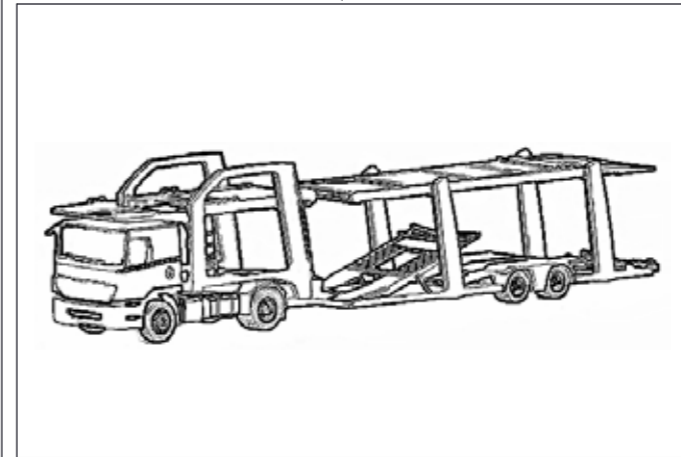
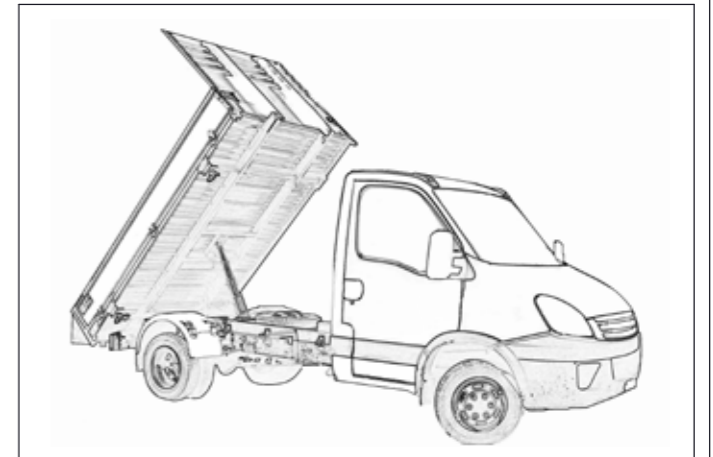
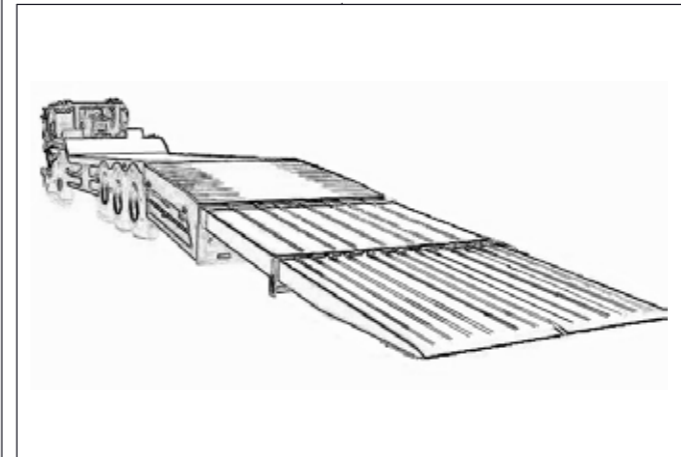
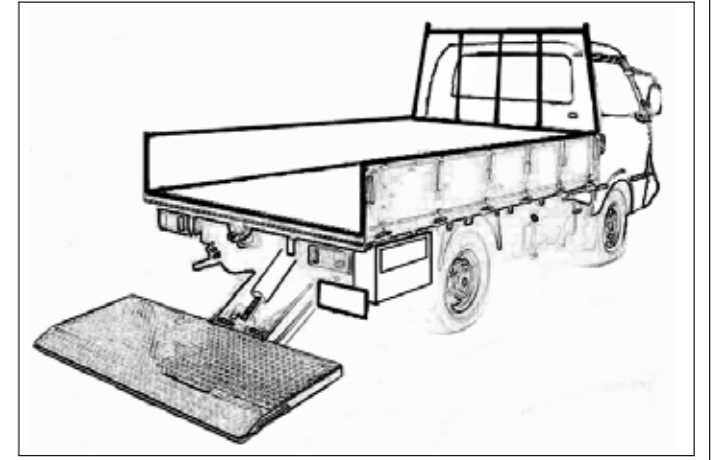
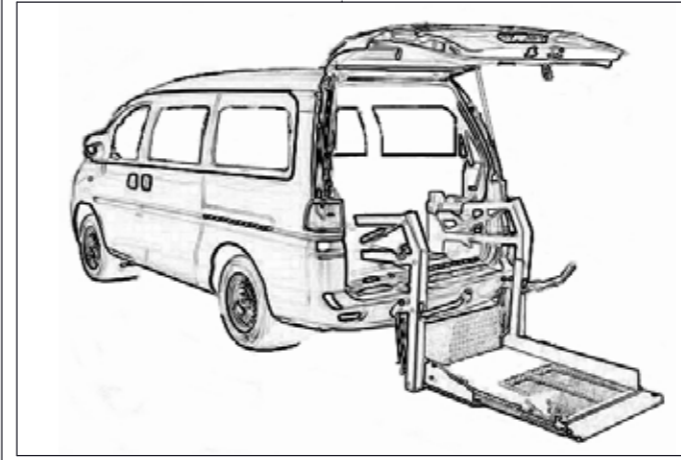
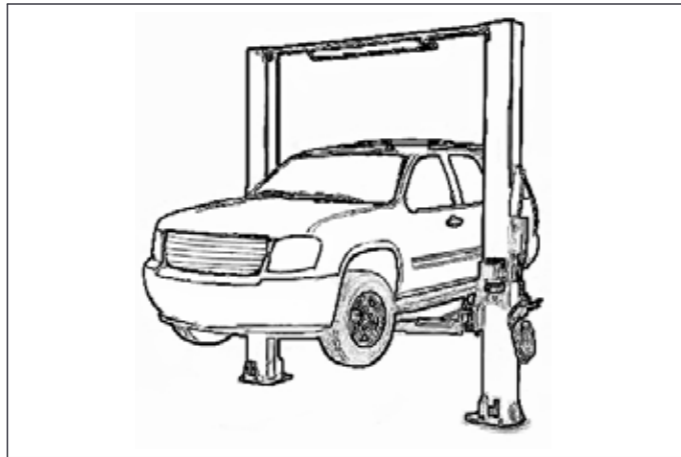
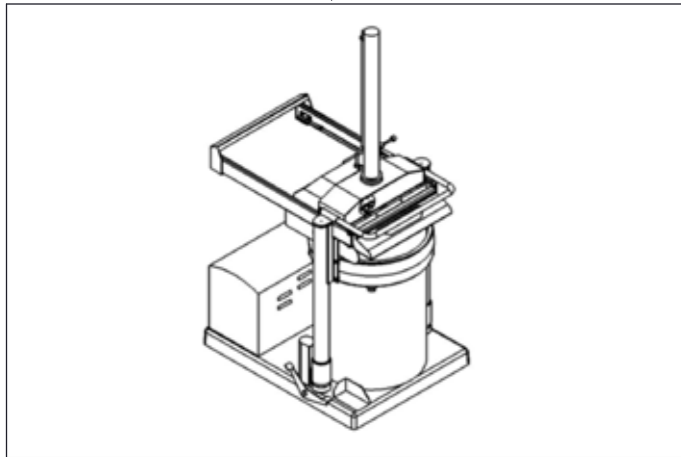
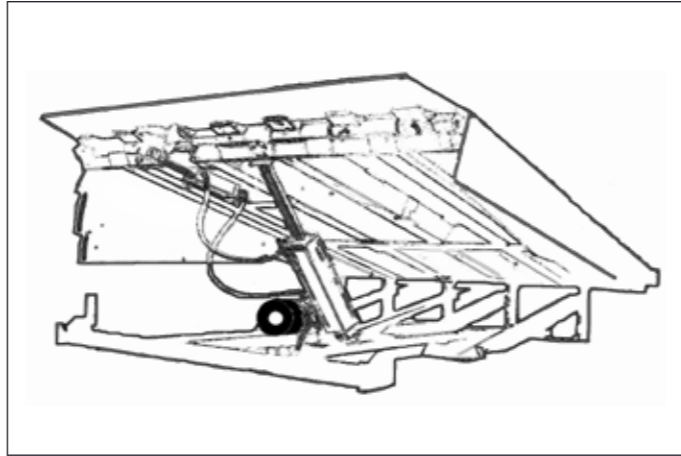
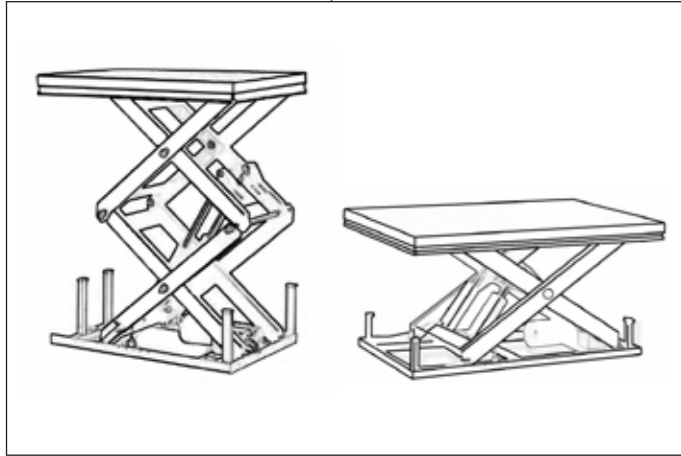
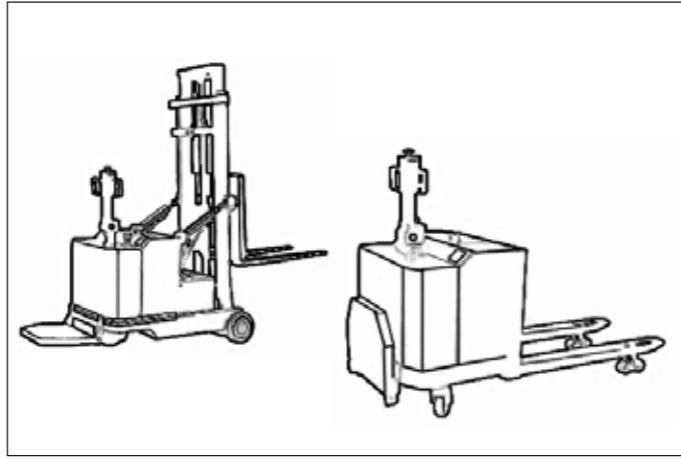
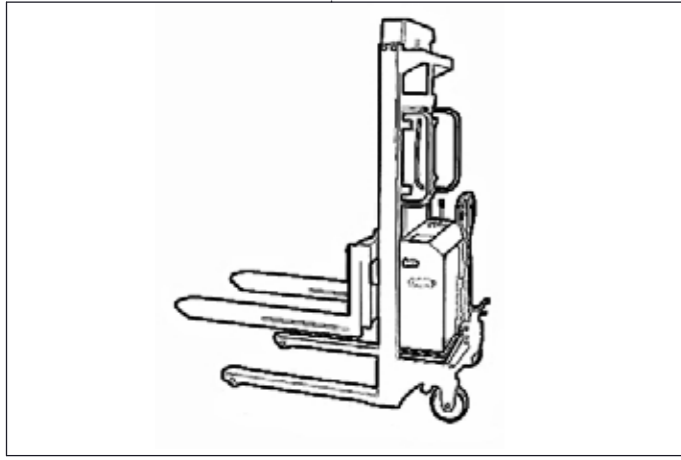


Winner



ZASILACZE KOMPAKTOWE





GENERAL INDEX

CONTENTS	PAGES
SERIES CODE	
The Series Code of Hydraulic Power Packs	1
HYDRAULIC POWER PACKS & HOW TO ORDER	
W88(A,D)	2
W80(A,AB,BT,D)	3
W81(A,AB,BT,D)	11
W82(A,A1)	19
W83(A,AB,BT,D)	23
W84(A,AB,BT,D)	31
W85(A,AB,BT,D)	39
W87(A,D)	47
TG168	51
WL214	53
SBT	55
A-TYPE MANIFOLD FUNCTION	58
DC(AC) MOTOR AND PUMP PERFORMACE CURVES	
HOW TO CHOICE	60
2N12;2N24	61
3N12;3N24	62
CE12;CN12;SE12;SN12	63
CE24;CN24;SE24;SN24	64
PN12;PN24	65
LN12;LN24	66
AC MOTORS	67
CHECK VALVE	68
SOLENOID OPERATED VALVE	69
HAND PUMP	70
SOLENOID DIRECTIONAL CONTROL VALVES	71
TECHNICAL INFORMATION	
ROUND STEEL RESERVOIRS	73
P TYPE HYDRAULIC GEAR PUMPS	78
AC MOTOR DIMENSIONS	79
DC MOTOR DIMENSIONS	84
DC MOTOR CARBON BRUSH DIMENSIONS	89
FITTINGS	92



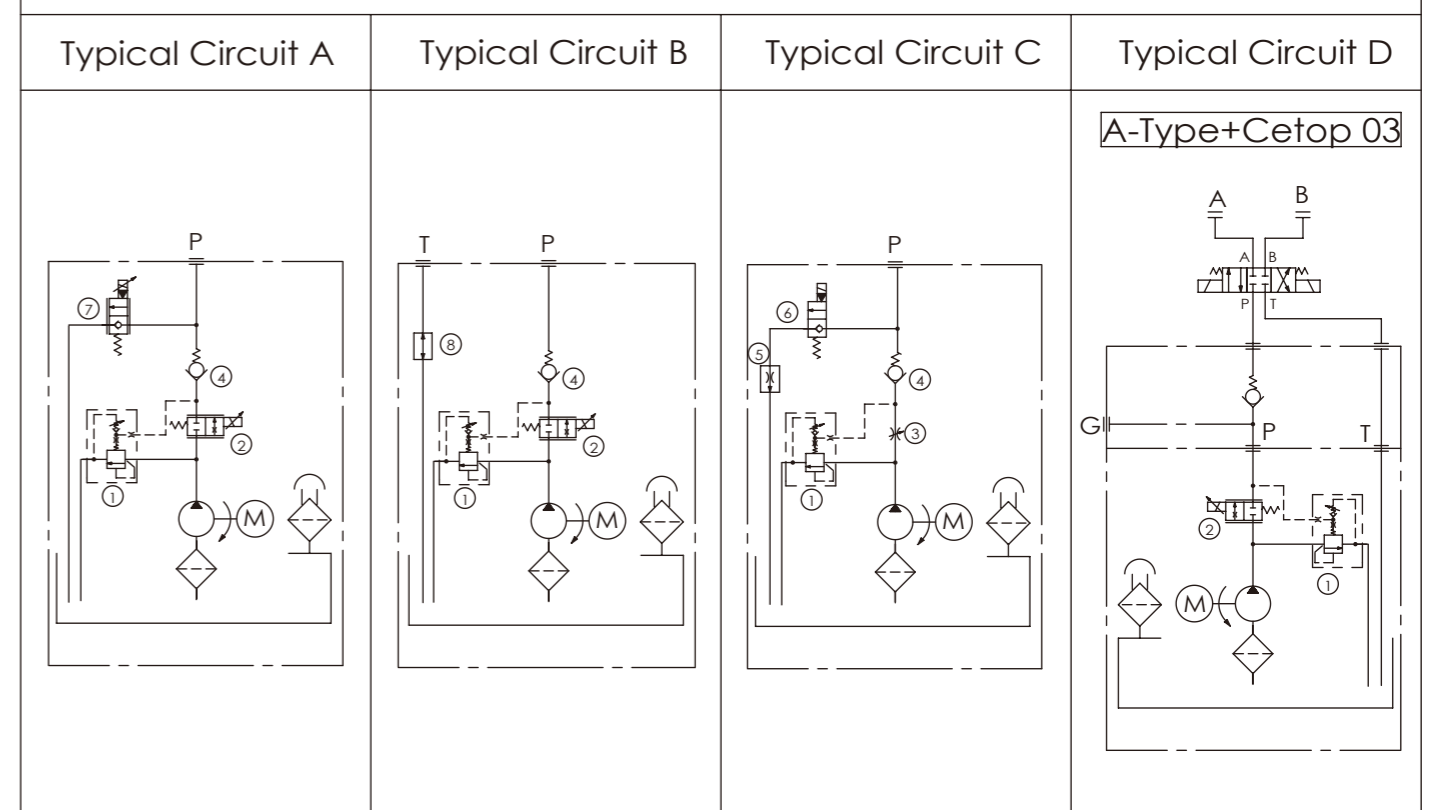
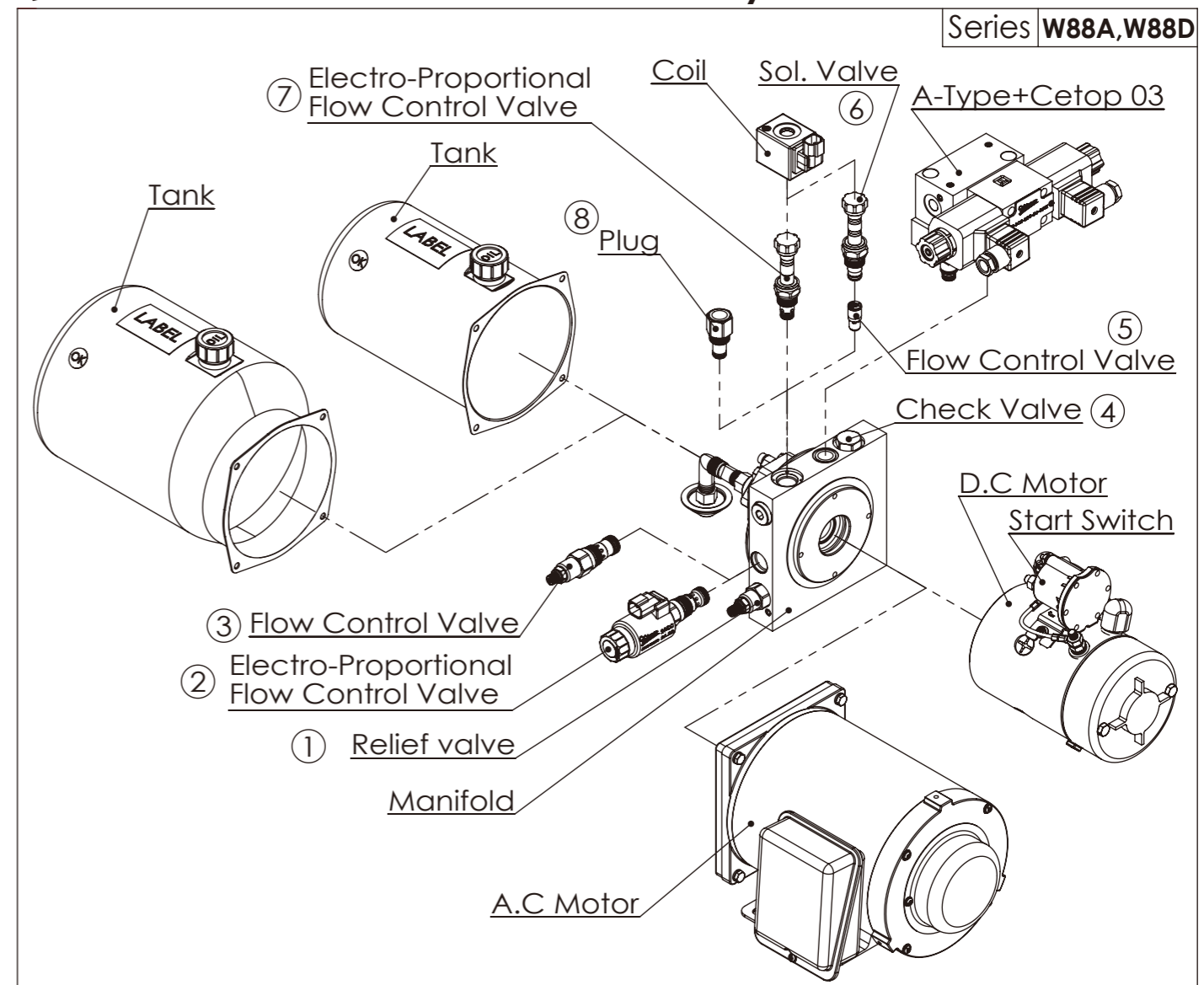
GENERAL INDEX

CONTENTS	PAGES
TECHNICAL INFORMATION	
BELL HOUSING AND MUFF COUPLING ASSEMBLY	94
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(I) (INSULATE RETURN MOTOR) (appendix B-1)	99
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(II) (EARTH RETURN MOTOR) (appendix B-2)	100
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(III) (EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR) (appendix B-3)	101
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(IV) (INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR) (appendix B-4)	102
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(I) (INSULATE RETURN MOTOR) (appendix B-5)	103
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(II) (EARTH RETURN MOTOR) (appendix B-6)	104
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(III) (EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR) (appendix B-7)	105
HOW TO CONNECT VARIOUS WIRES TO THE DC HYDRAULIC POWER PACK(IV) (INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR) (appendix B-8)	106
FILLING THE HYDRAULIC OIL TANK(I) (appendix C)	107
AC HYDRAULIC POWER PACK EXPLODED DRAWING ... (appendix D)	108
DC HYDRAULIC POWER PACK EXPLODED DRAWING ... (appendix E)	109

SERIES CODE	W	MATERIAL	80	SERIES	A	POWER
	W	STEEL	80	STANDARD MANIFOLD (152 x 152)	A	AC MOTOR
	A	ALUMINIUM	81	STANDARD (MINI) MANIFOLD (115 x 115)	D	DC MOTOR
			82	DOCK-LEVELLER (152 x 152)	AB	B14 FRAME STANDARD AC MOTOR
			83	HI-Lo PRESSURE (SPECIAL) MANIFOLD (152 x 152)	BT	HORIZONTAL INFLUENCE DRIVE SYSTEM
			84	HI-Lo PRESSURE (STANDARD) MANIFOLD (152 x 152)	AN	NEMA FRAME STANDARD AC MOTOR
			85	DOUBLE PUMPS (152 x 152)		
			87	BY-PASS FLOW CONTROL MANIFOLD (152 x 152)		
			88	PROPORTIONAL FLOW CONTROL MANIFOLD (152 x 152)		

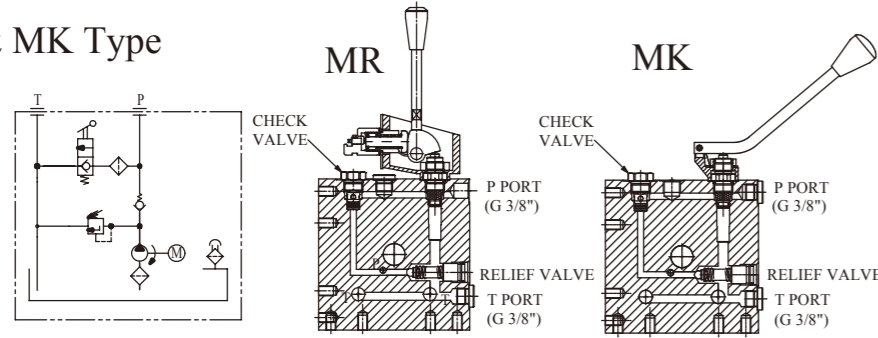
Special orders are available on request.
Please consult our sales department.

Series **W88A, W88D**

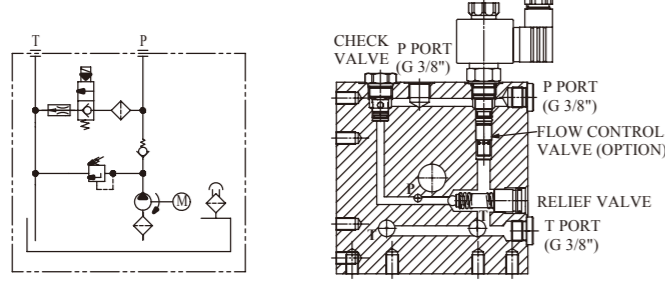


Series **W80A**

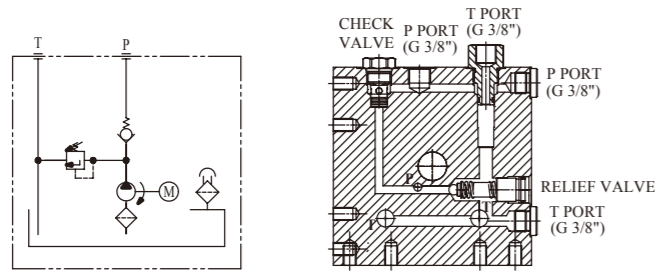
MR & MK Type



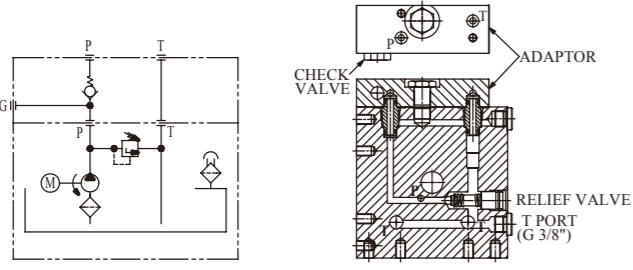
S Type



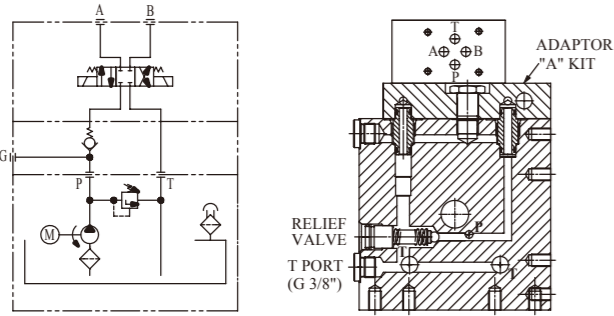
N Type



A Type



A Type + Cetop 03



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

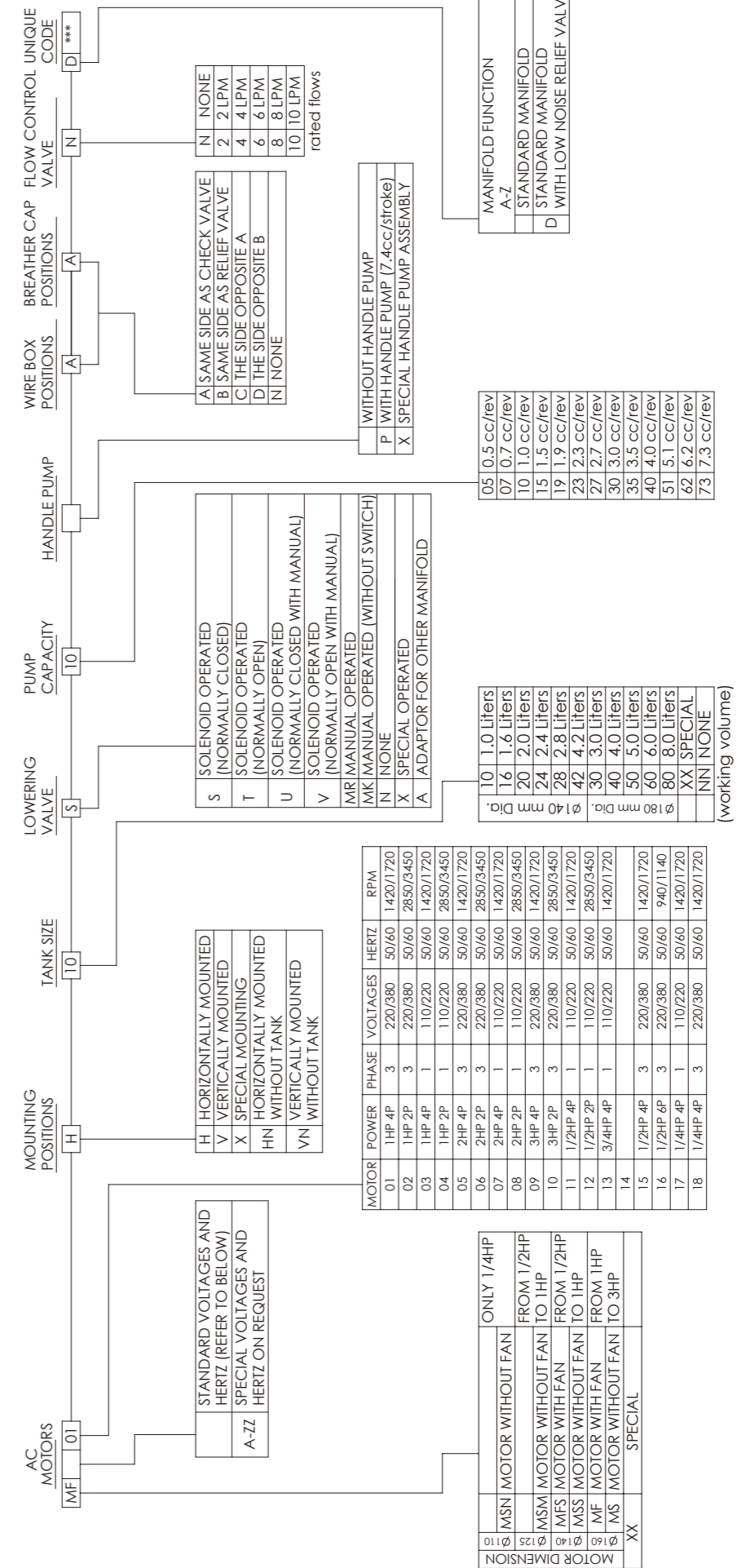
- ◆ Our standard AC motors range from 0.25HP to 3.0HP.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 1.0L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also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

Series **W80A**

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

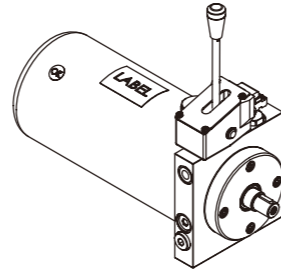
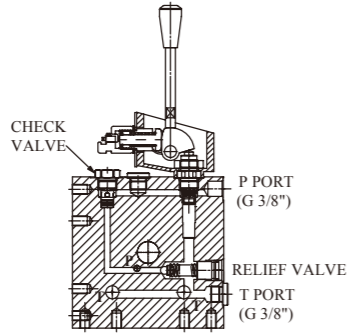
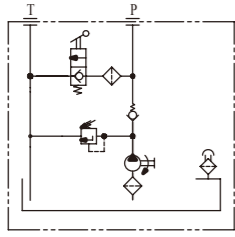
HOW TO ORDER



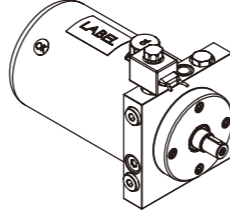
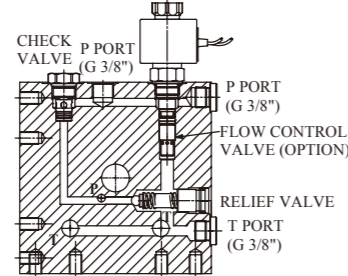
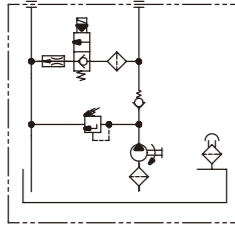
Special orders are available on request. Please consult our sales department.

Series **W80BT**

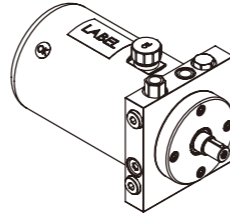
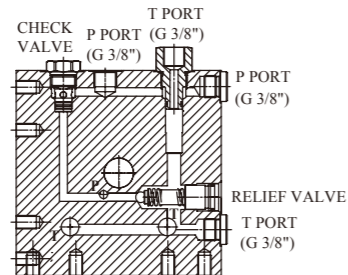
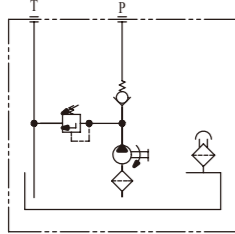
MR Type



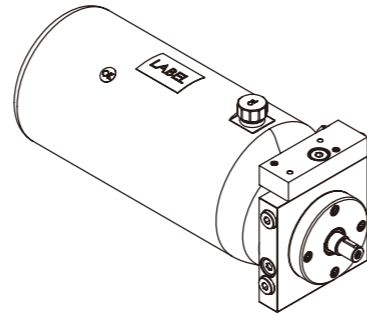
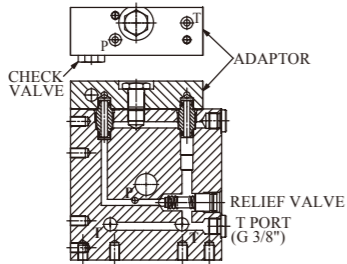
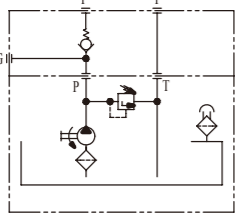
S Type



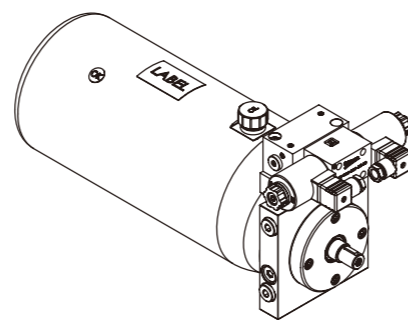
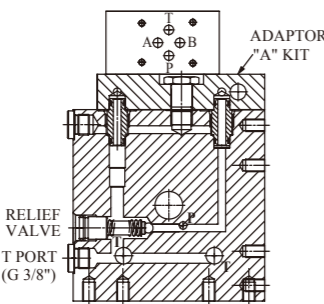
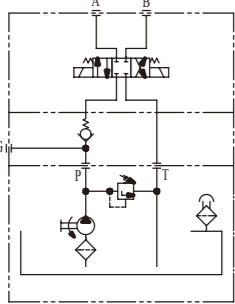
N Type



A Type



A Type + Cetop 03



The W80BT power pack series is designed for use with horizontal influence drive system by various engines. These power packs have been designed mostly for agricultural use, but can be used in other fields.

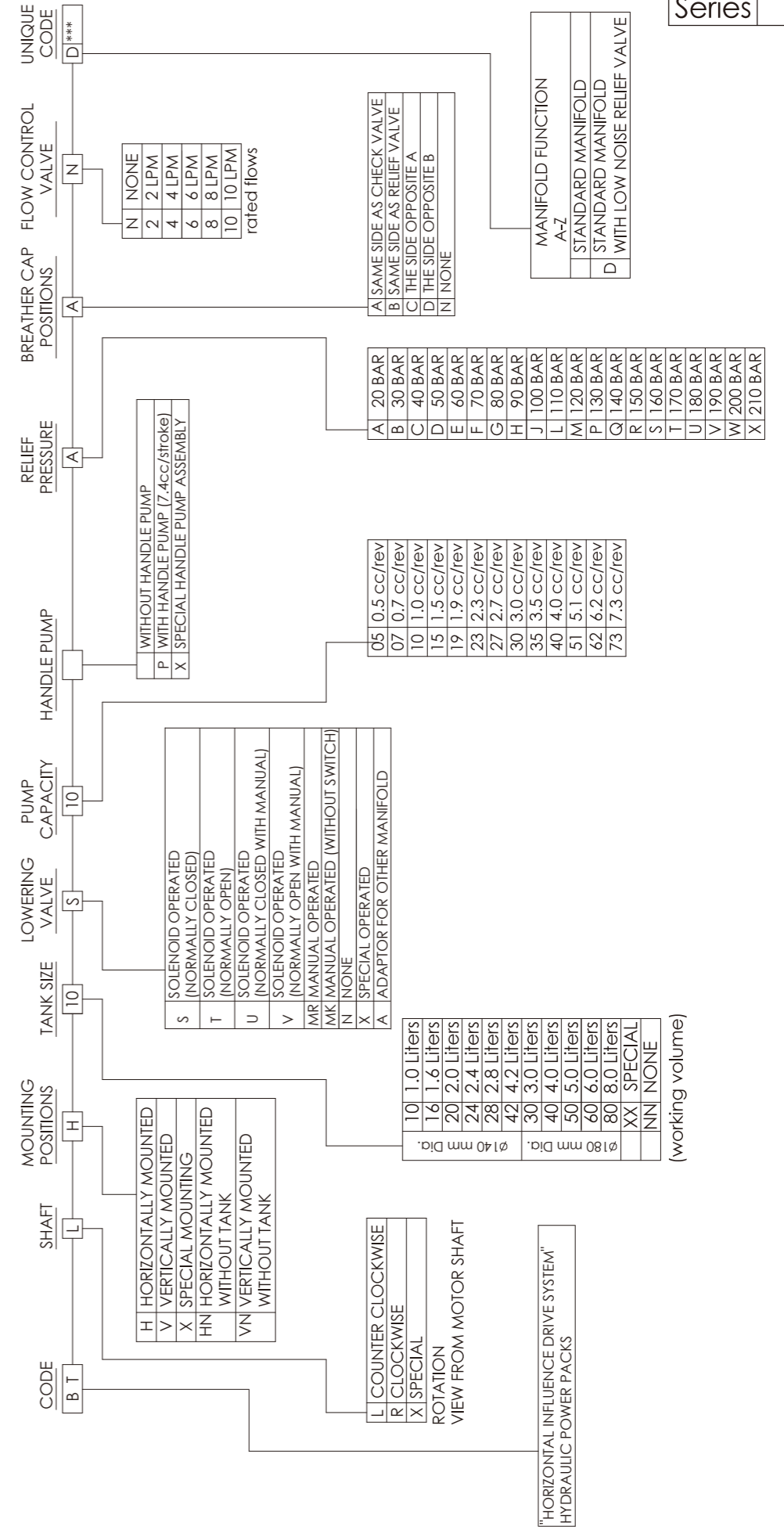
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 1.0L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also available.

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.

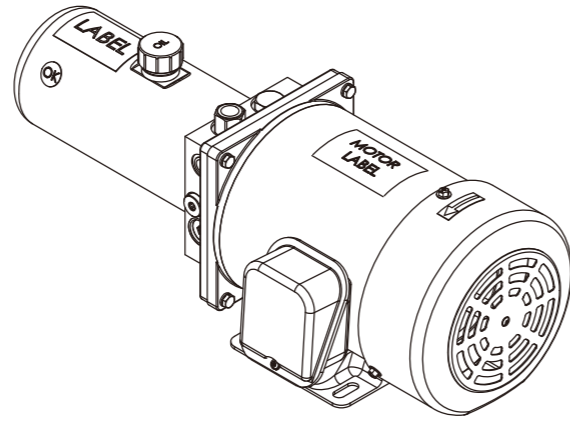
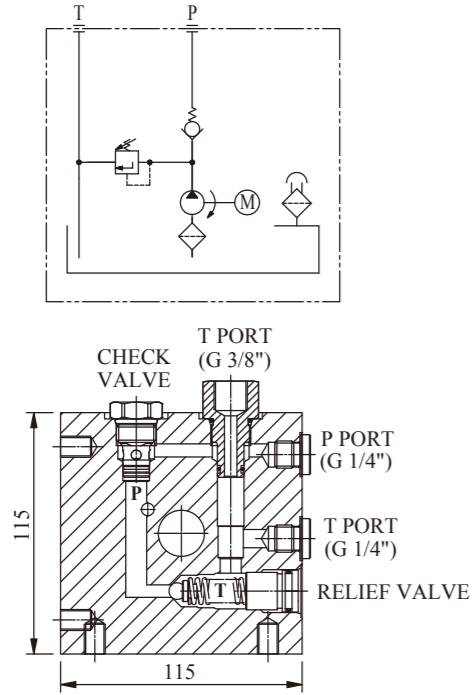
Series **W80BT**

"HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS (W800532 STEEL MANIFOLD / ϕ 140 & ϕ 180 TANKS)

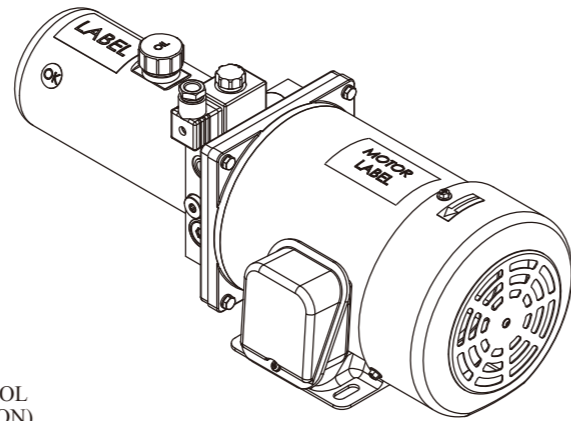
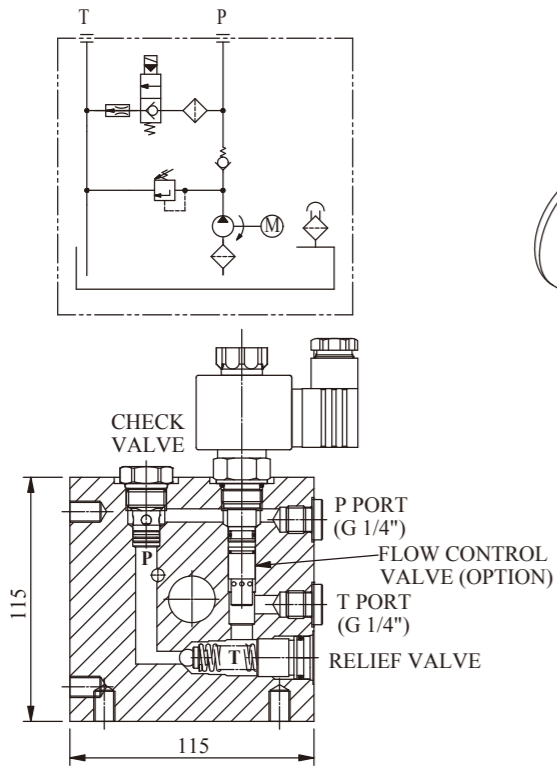
HOW TO ORDER



N Type



S Type



The W81A mini power pack series is designed for a wide range of applications which include;

- ◆ Our standard AC motors range from 0.25HP to 3.0HP.
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.

The purpose for the mini design is to save space. The power pack is only 115mm by 115mm. If you have any questions or need a custom design, please feel free to contact us.

AC MOTOR MINI HYDRAULIC POWER PACKS (W800554 STEEL MANIFOLD / Ø 102 TANKS)

HOW TO ORDER

CODE	F	AC MOTOR MINI HYDRAULIC POWER PACK WITH W800554 MANIFOLD 11.5mm*11.5mm
SPECIAL REQUEST		WITH STANDARD PARTS A SPECIAL REQUEST FOR EXAMPLE: WITH CY08W2007G03 VALVE; ADD ONE Z T-PORT OR OTHER DIFFERENT DESIGNS. REFER TO DRAWING.
AC MOTORS	MF 01	STANDARD VOLTAGES AND HERTZ (REFER TO BELOW) SPECIAL VOLTAGES AND HERTZ ON REQUEST
MOUNTING POSITIONS	H	H HORIZONTALLY MOUNTED V VERTICALLY MOUNTED X SPECIAL MOUNTING HN HORIZONTALLY MOUNTED WITHOUT TANK VN VERTICALLY MOUNTED WITHOUT TANK
TANK SIZE	05	
LOWERUNG VALVE	S	
PUMP CAPACITY	10	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
HANDLE PUMP		
WIRE BOX POSITIONS	A	05 0.5 Liters 08 0.8 Liters 10 1.0 Liters 13 1.3 Liters 17 1.7 Liters XX SPECIAL NN NONE (working volume)
BREATHER CAP POSITIONS	A	WITHOUT HANDLE PUMP P WITH HANDLE PUMP (7.4cc/stroke) X SPECIAL HANDLE PUMP ASSEMBLY
FLOW CONTROL VALVE	N	
UNIQUE CODE	D***	

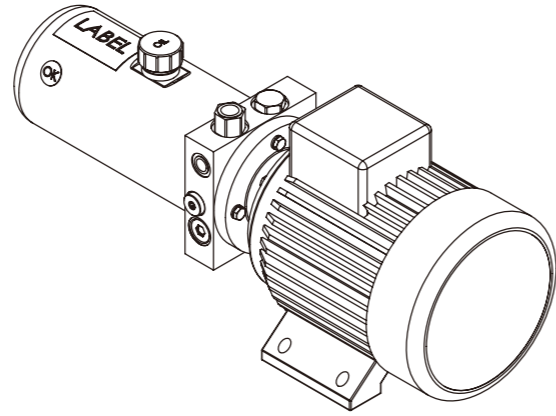
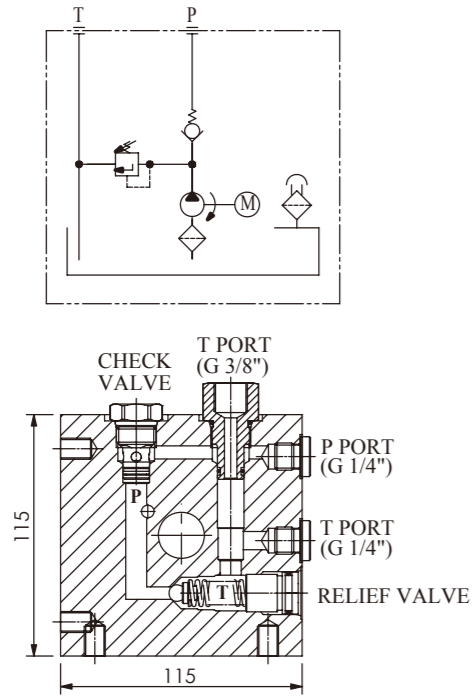
MOTOR	POWER	PHASE	VOLTAGES	HERTZ	RPM	
01	1HP	4P	3	220/380	50/60	1420/1720
02	1HP	2P	3	220/380	50/60	2850/3450
03	1HP	4P	1	110/220	50/60	1420/1720
04	1HP	2P	1	110/220	50/60	2850/3450
05	2HP	4P	3	220/380	50/60	1420/1720
06	2HP	2P	3	220/380	50/60	2850/3450
07	2HP	4P	1	110/220	50/60	1420/1720
08	2HP	2P	1	110/220	50/60	2850/3450
09	3HP	4P	3	220/380	50/60	1420/1720
10	3HP	2P	3	220/380	50/60	2850/3450
11	1/2HP	4P	1	110/220	50/60	1420/1720
12	1/2HP	2P	1	110/220	50/60	2850/3450
13	3/4HP	4P	1	110/220	50/60	1420/1720
14						
15	1/2HP	4P	3	220/380	50/60	1420/1720
16	1/2HP	6P	3	220/380	50/60	940/1140
17	1/4HP	4P	1	110/220	50/60	1420/1720
18	1/4HP	4P	3	220/380	50/60	1420/1720

MOTOR DIMENSION	ONLY 1/4HP
MSN	MOTOR WITHOUT FAN
MSM	MOTOR WITHOUT FAN FROM 1/2HP TO 1HP
MSS	MOTOR WITH FAN FROM 1/2HP TO 1HP
MF	MOTOR WITH FAN FROM 1HP TO 3HP
MS	MOTOR WITHOUT FAN
XX	SPECIAL

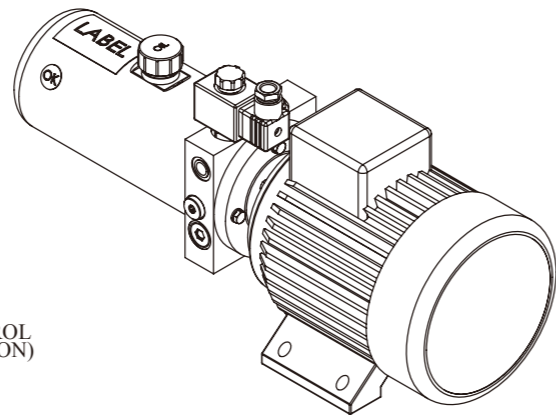
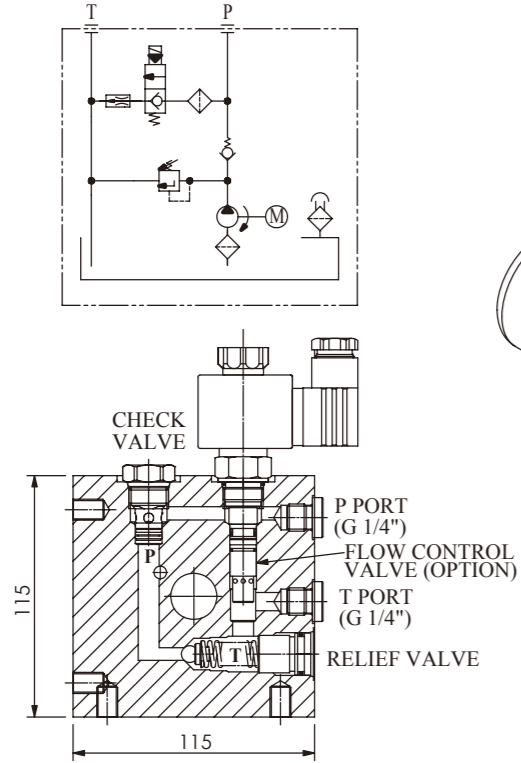
MANIFOLD FUNCTION	MANIFOLD FUNCTION
A-Z	STANDARD MANIFOLD
D	STANDARD MANIFOLD WITH LOW NOISE RELIEF VALVE

Series **W81AB**

N Type



S Type



The W81AB mini power pack series is designed for use with European standard B14 AC motors.

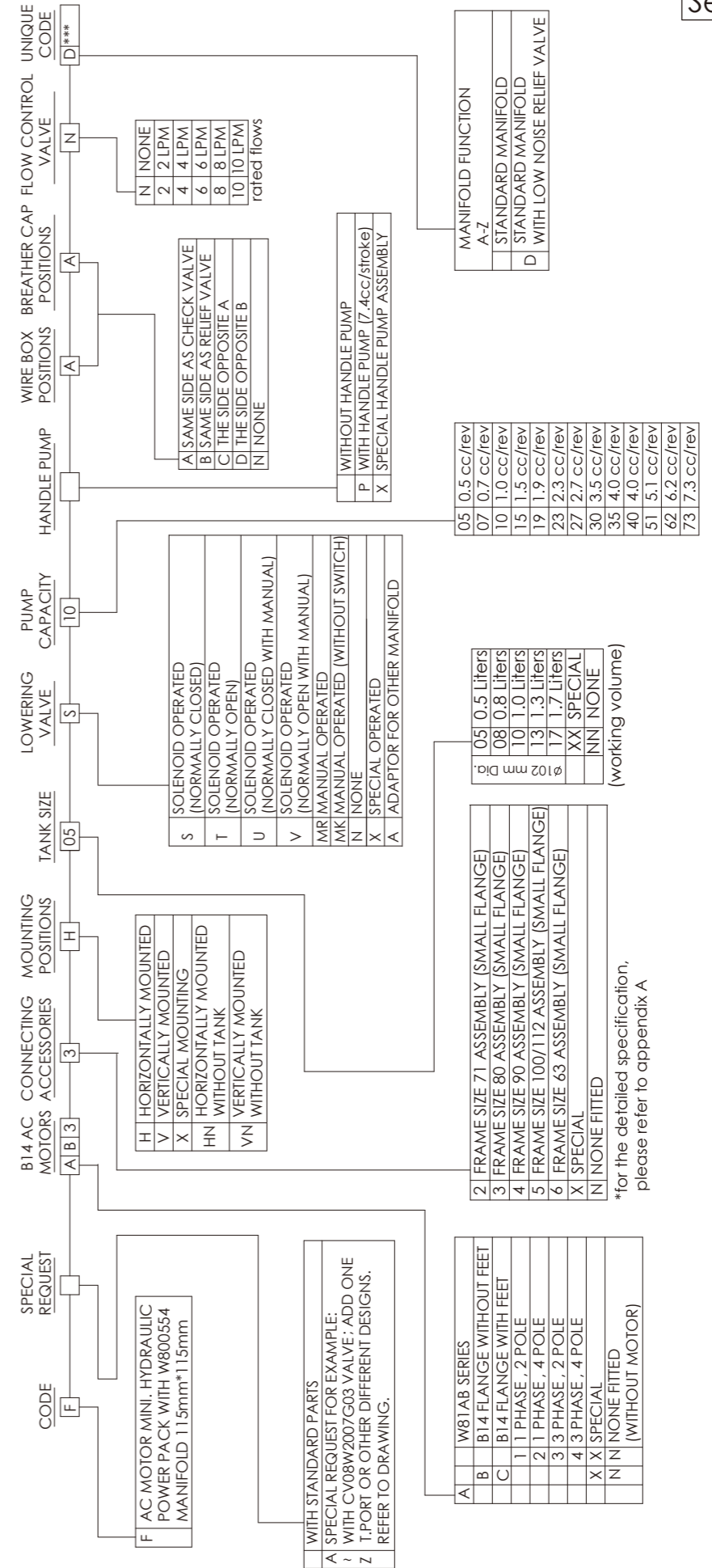
- ◆ Standard frame sizes range from 63M to 112M.
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.

The purpose for the mini design is to save space. The power pack is only 115mm by 115mm. If you have any questions or need a custom design, please feel free to contact us.

Series **W81AB**

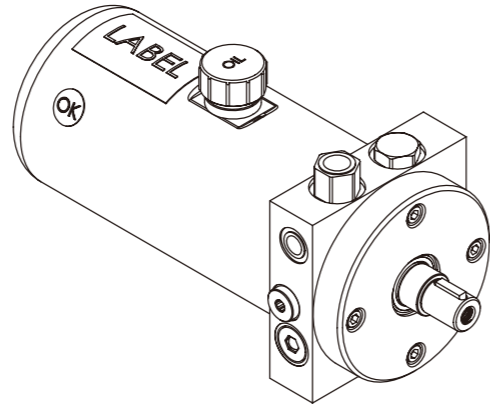
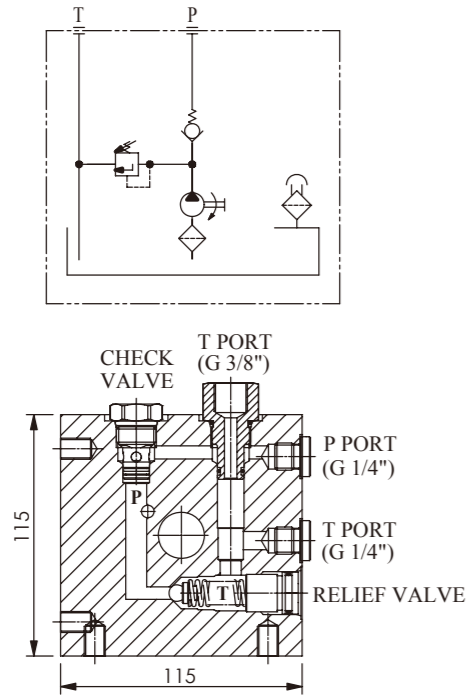
B14 FRAME AC MOTOR MINI HYDRAULIC POWER PACKS (W800554 STEEL MANIFOLD / Ø102 TANKS)

HOW TO ORDER

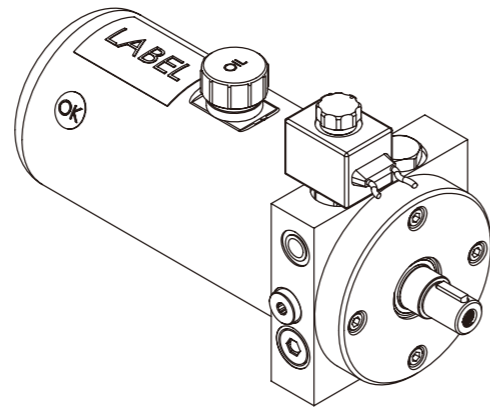
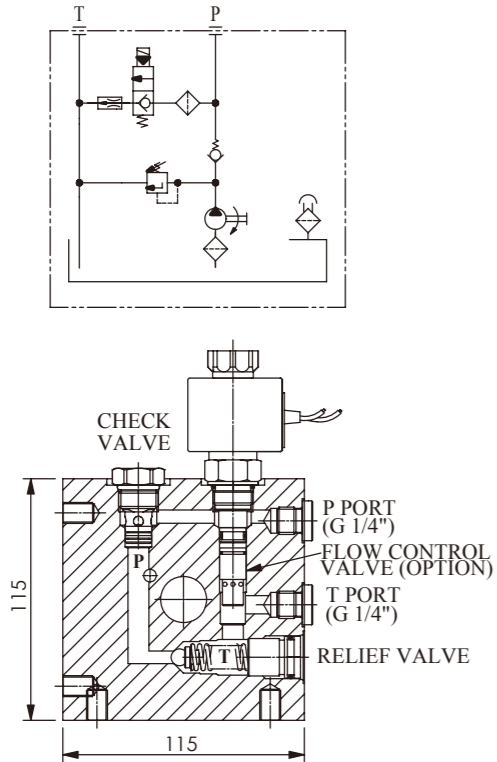


Series **W81BT**

N Type



S Type



The W81BT mini power pack series is designed for use with horizontal influence drive system by powered by various engines. These mini power packs have been designed mostly for agricultural use, but can be used in other fields.

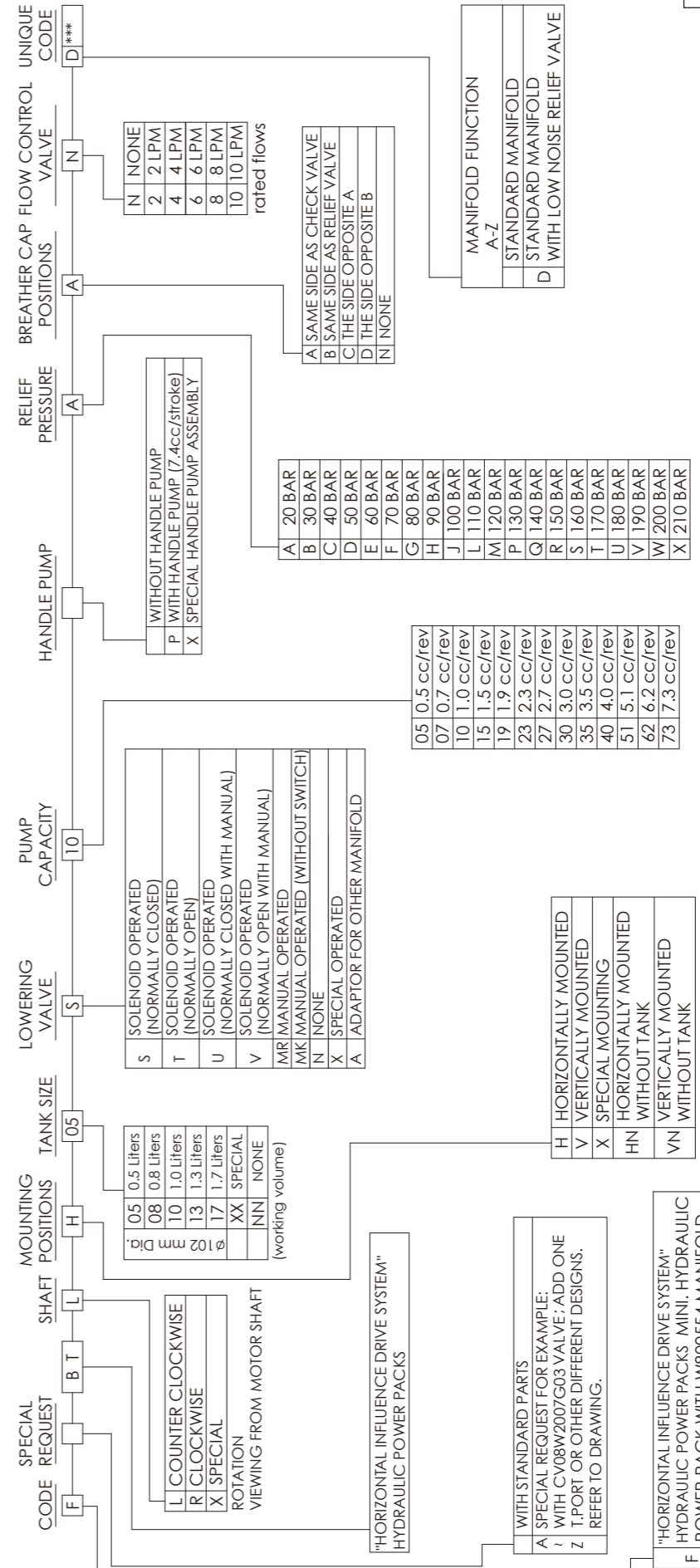
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.

The purpose for the mini design is to save space. The power pack is only 115mm by 115mm. If you have any questions or need a custom design, please feel free to contact us.

Series **W81BT**

"HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS (W800554 STEEL MANIFOLD / Ø102 TANKS)

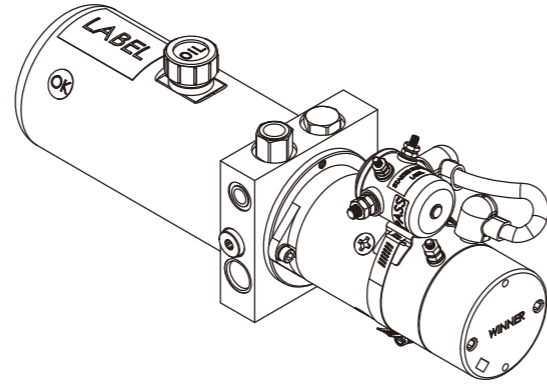
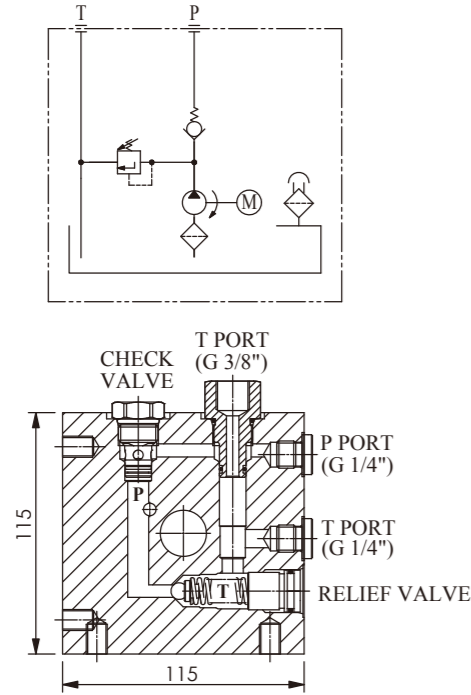
HOW TO ORDER



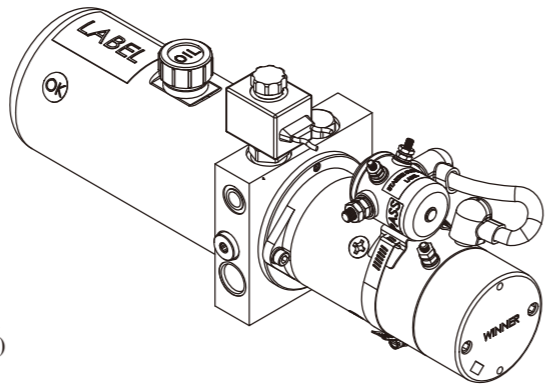
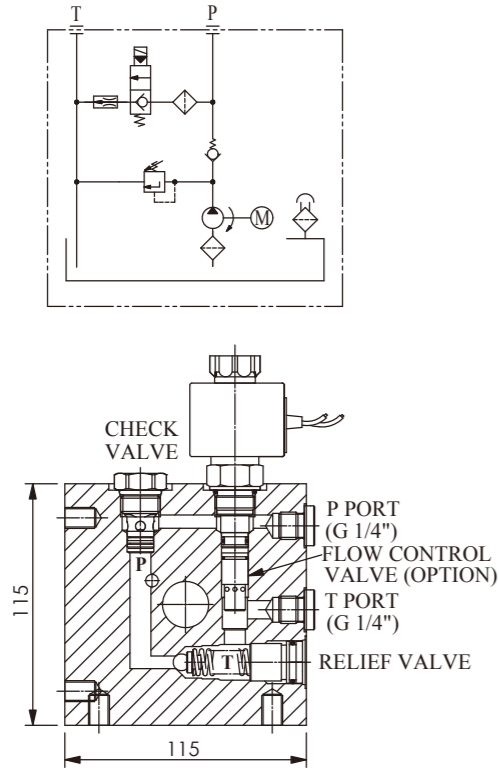
Special orders are available on request. Please consult our sales department.

Series **W81D**

N Type



S Type



The W81D mini power pack series is designed for a wide range of applications which include;

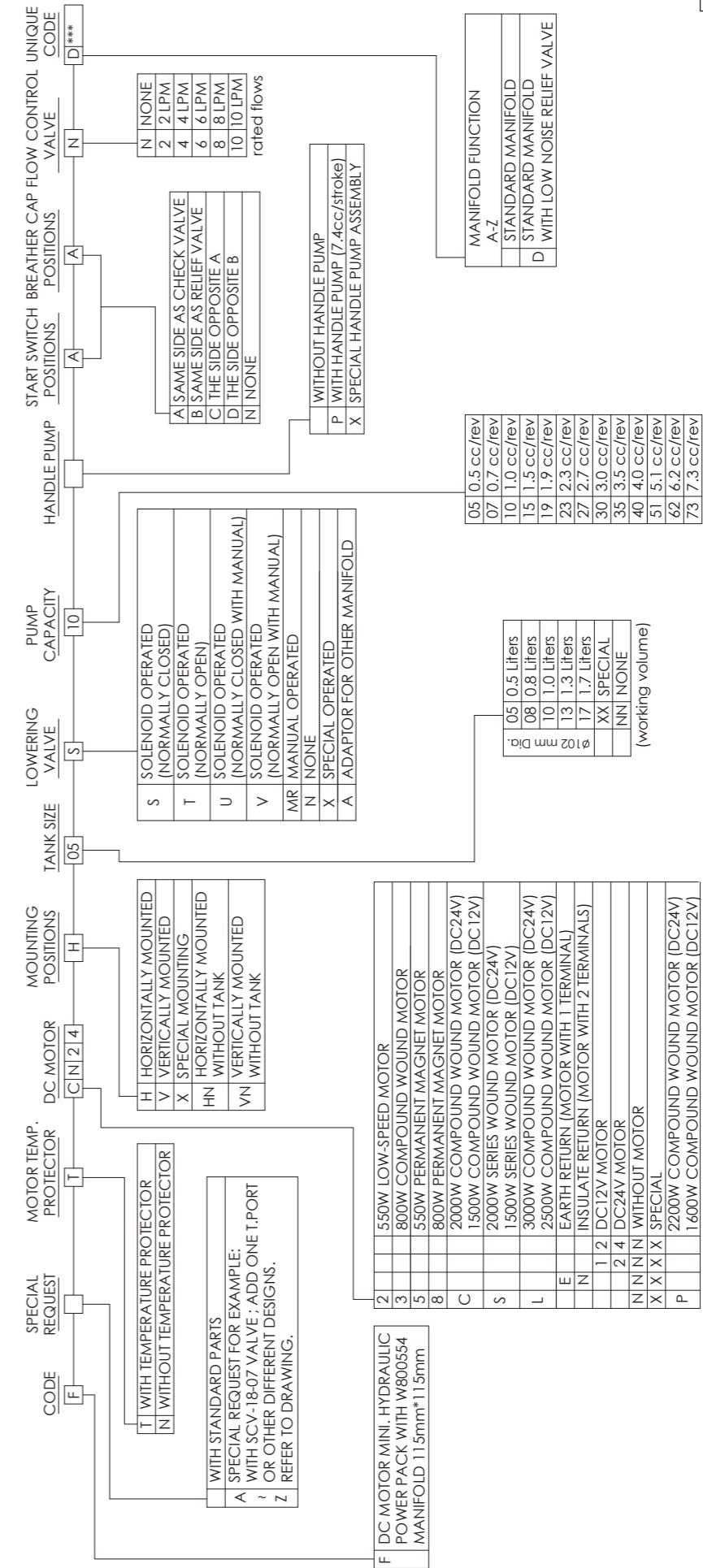
- ◆ DC motors range from 0.55KW to 3.0KW; as well as DC 12 and 24 volts.
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.

The purpose for the mini design is to save space. The power pack is only 115mm by 115mm. If you have any questions or need a custom design, please feel free to contact us.

Series **W81D**

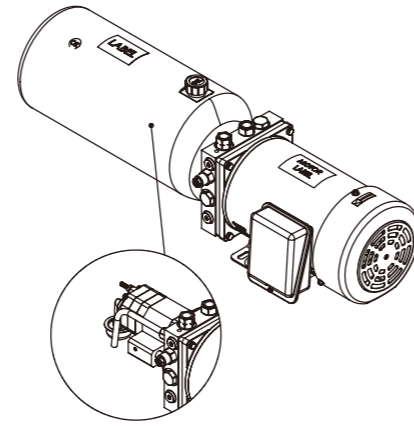
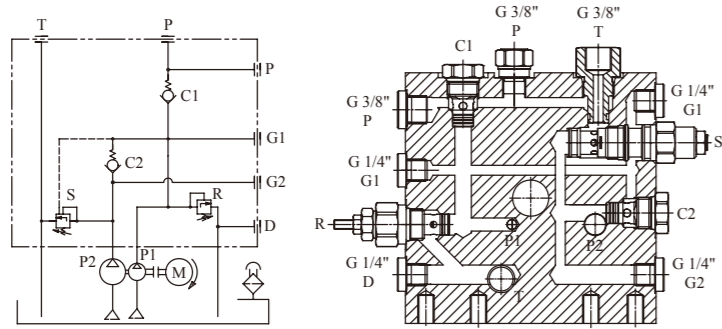
DC MOTOR MINI HYDRAULIC POWER PACKS (W800554 STEEL MANIFOLD / Ø 102 TANKS)

HOW TO ORDER

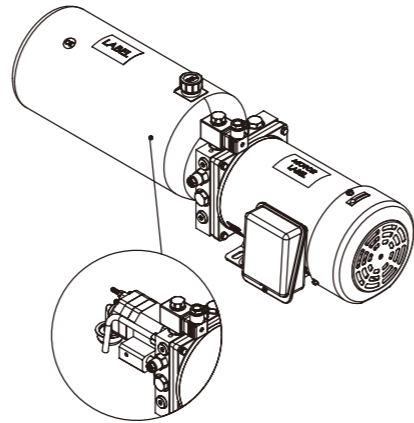
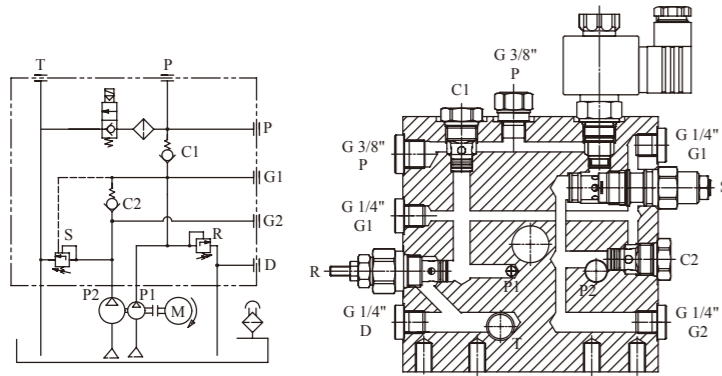


Series **W83A**

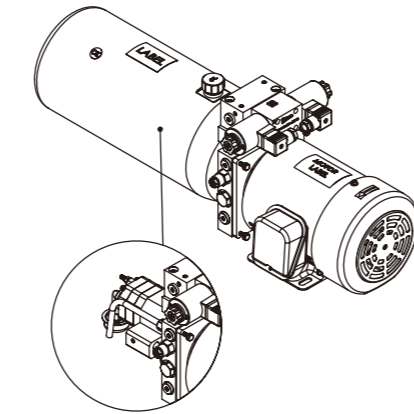
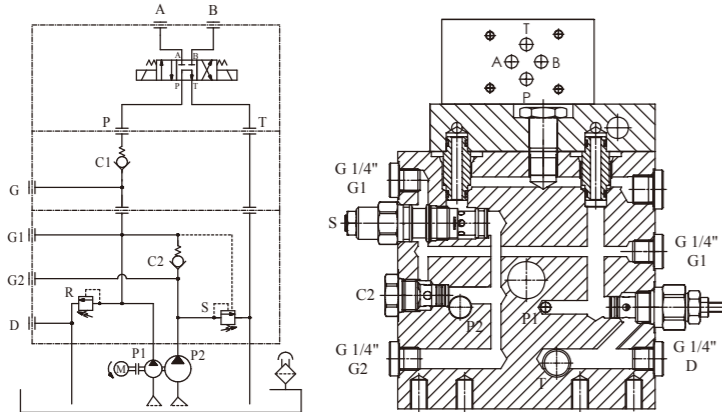
N Type



S Type



A Type + Cetop 03



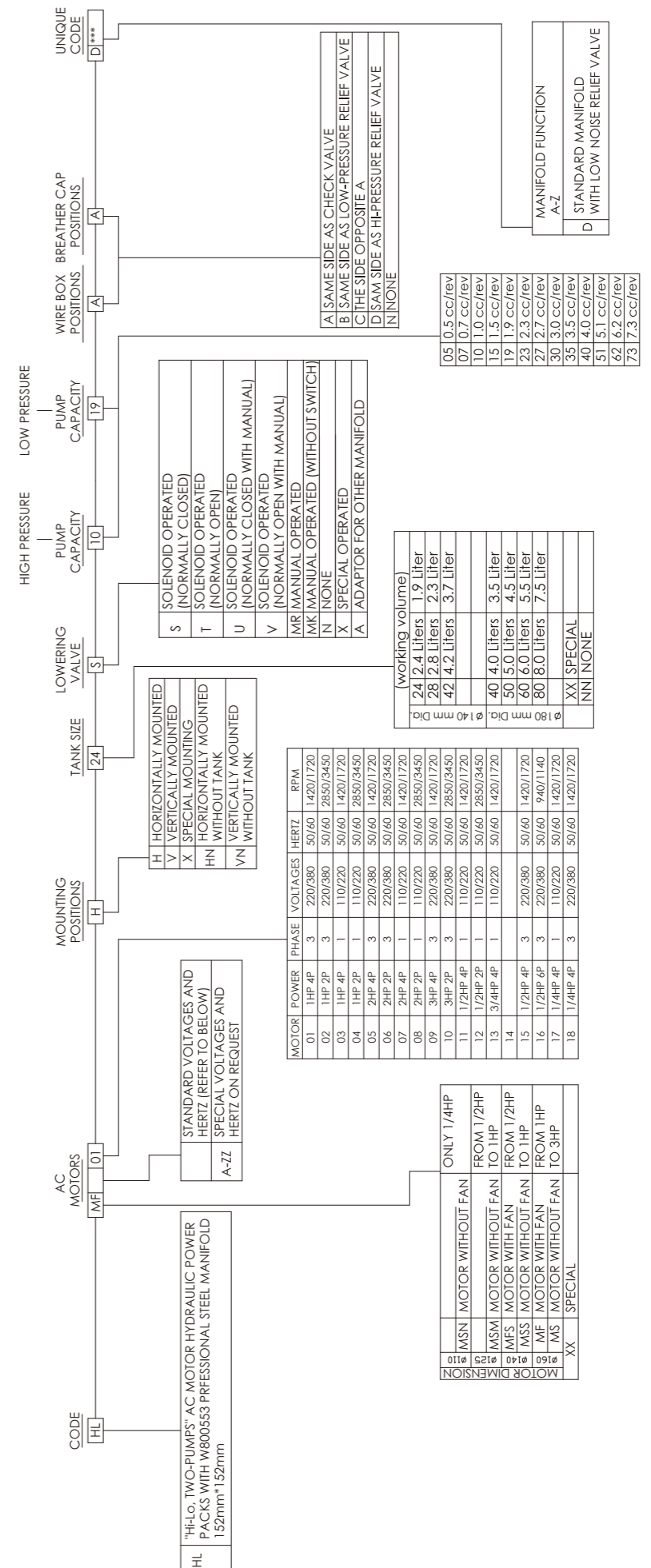
The W83A series power pack is designed for applications that need high pressure and larger flow, but use a low-power A.C. motor. The power pack uses a special manifold (W800553). All screw-in cartridge valves have been designed to be adjusted easily to service the power pack quickly. They still have the same dimensions and functions as the standard manifold (W800532).

- ◆ 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 2.4L 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.

Series **W83A**

"Hi-Lo Pressure, Two Pumps" AC Motor Hydraulic Power Packs (W800553 Steel Manifold / ϕ 140 & ϕ 180 Tanks)

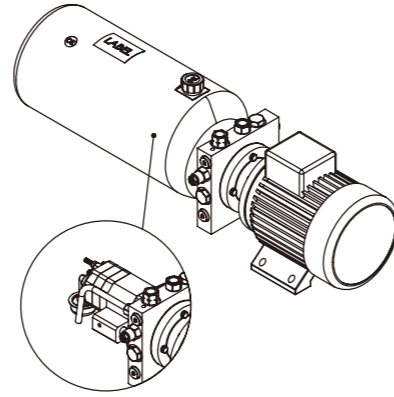
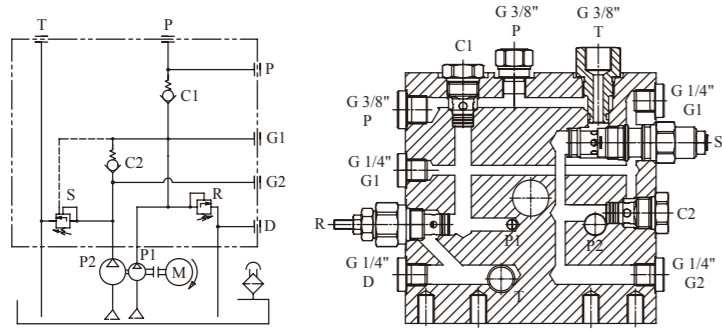


HOW TO ORDER

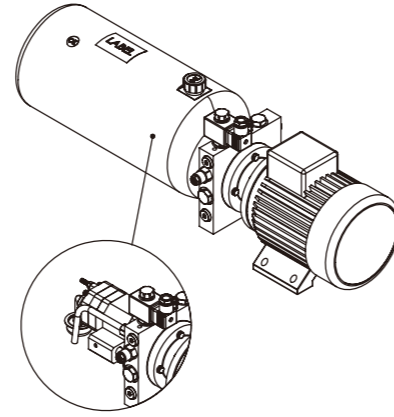
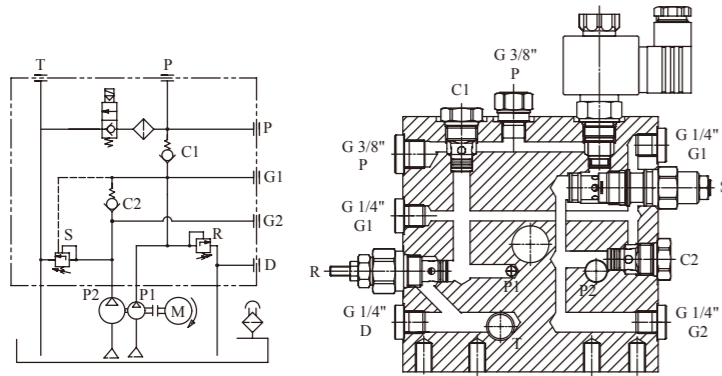
Special orders are available on request. Please consult our sales department.

Series **W83AB**

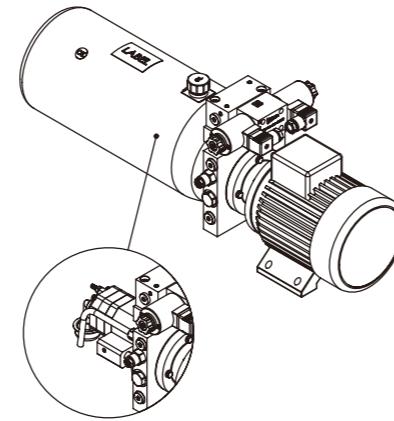
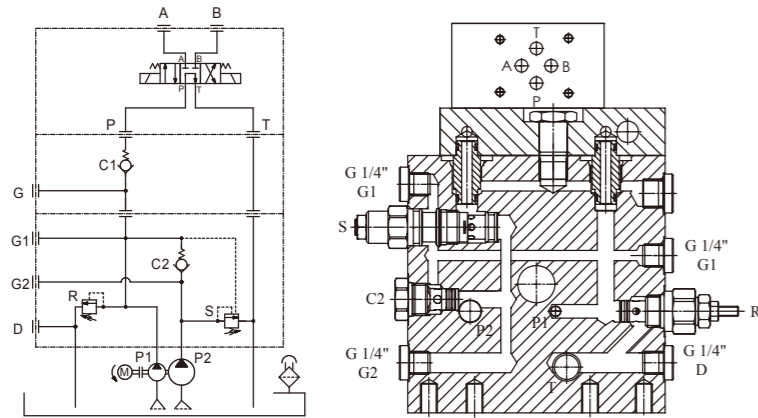
N Type



S Type



A Type + Cetop 03



The W83AB series power pack is designed for applications that need high pressure and larger flow, but use a low-power B14 Frame motor. The power pack uses a special manifold (W800553). All screw-in cartridge valves have been designed to be adjusted easily to service the power pack quickly. They still have the same dimensions and functions as the standard manifold (W800532).

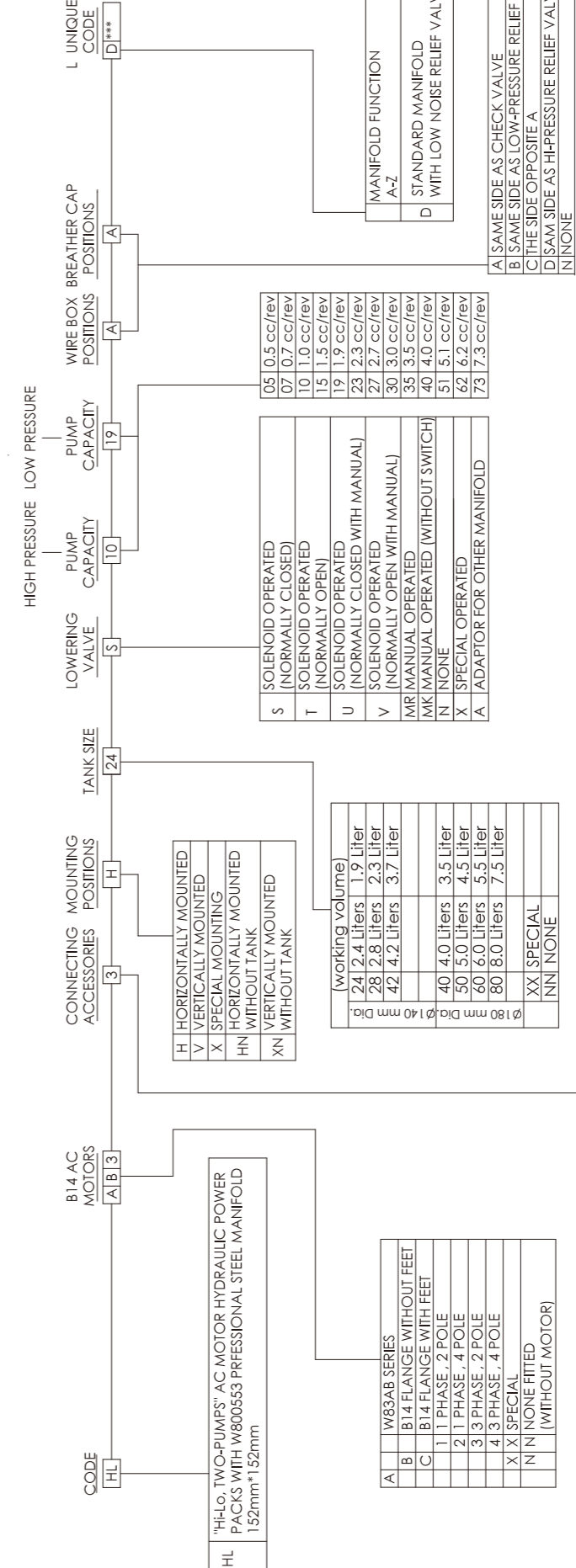
- ◆ Standard frame sizes range from 63M to 112M.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 2.4L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also available.

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.

Series **W83AB**

"HI-LO PRESSURE, TWO-PUMPS" B14 FRAME AC MOTOR HYDRAULIC POWER PACKS (W800553 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

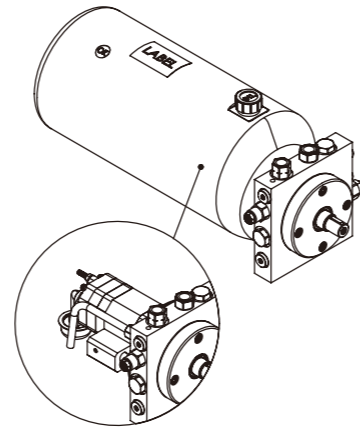
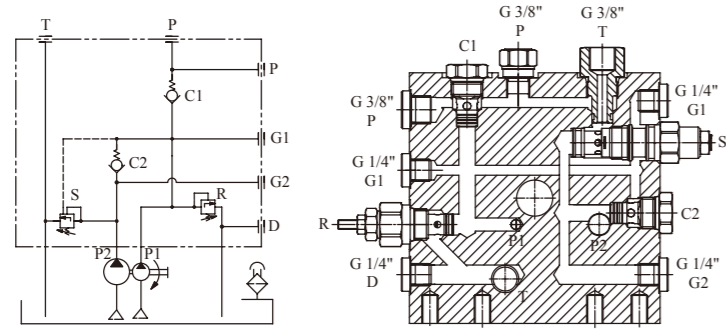
HOW TO ORDER



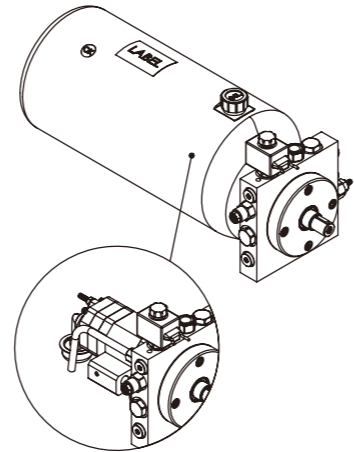
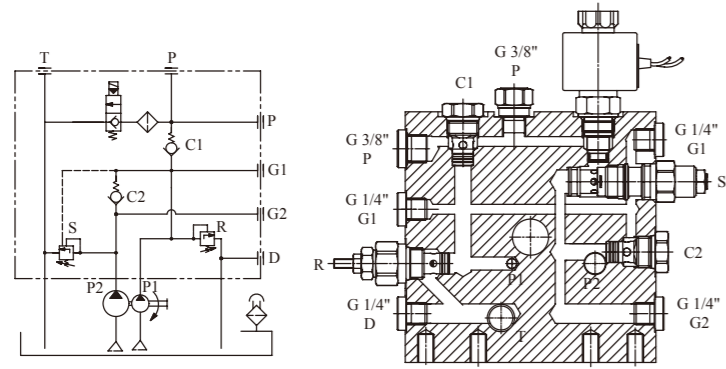
Special orders are available on request. Please consult our sales department.

Series **W83BT**

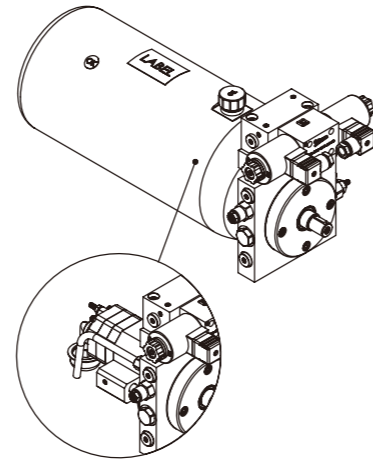
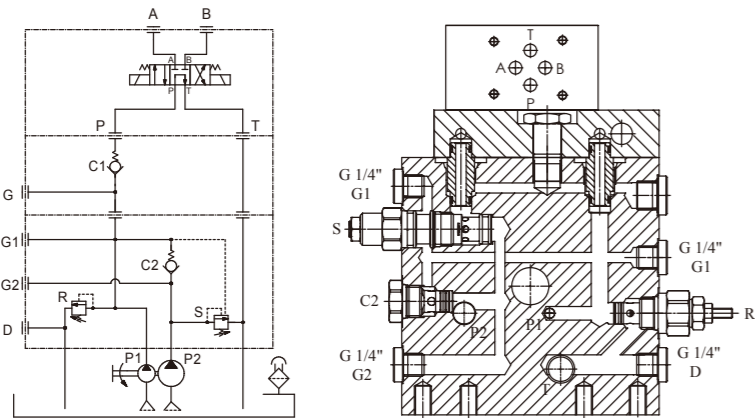
N Type



S Type



A Type + Cetop 03



The W83BT series power pack is designed for applications that need high pressure and larger flow, but use a customer supplied low-power transmission. The power pack uses a special manifold (W800553). All screw-in cartridge valves have been designed to be adjusted easily to service the power pack quickly. They still have the same dimensions and functions as the standard manifold (W800532).

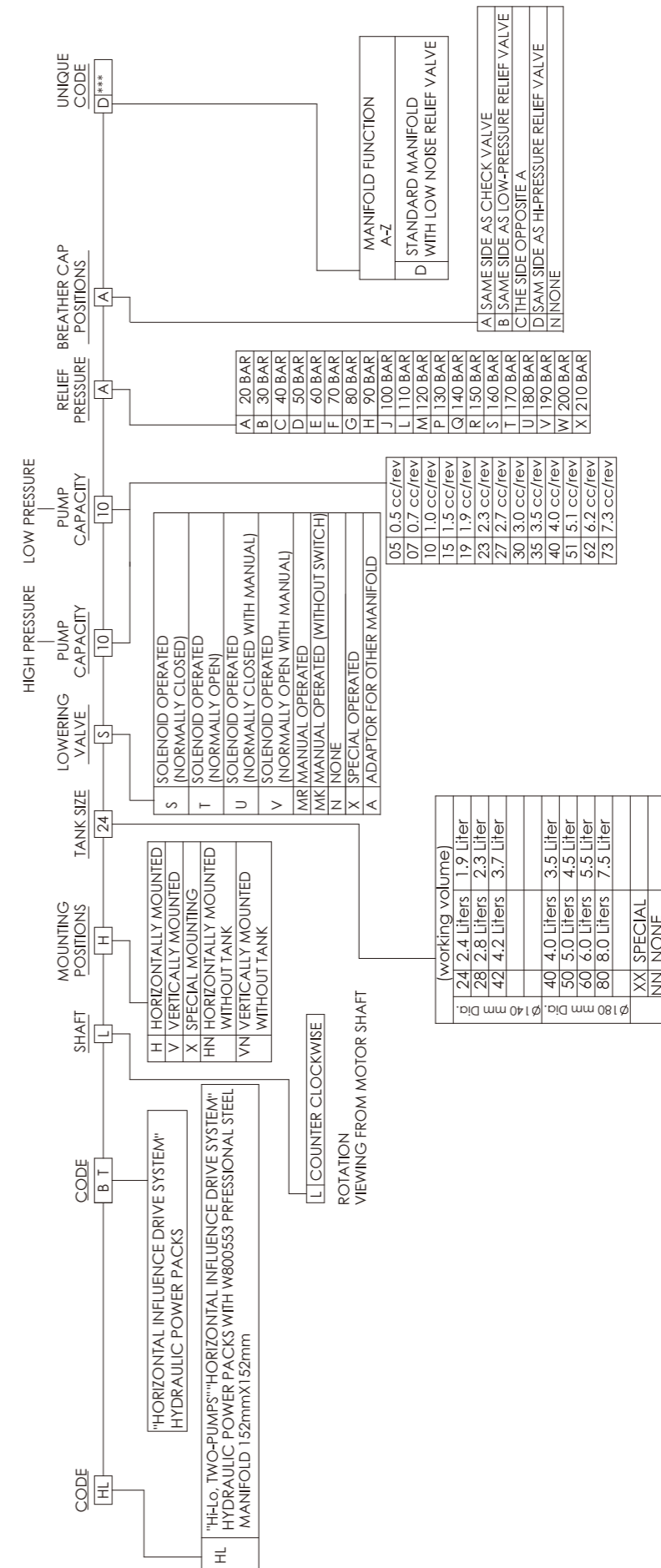
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
 - ◆ Standard tank sizes vary from 2.4L to 8.0L. Tailor made tanks are also available.
 - ◆ Hydraulic circuit valves can be inter-changed with the standard manifold.
- Custom made circuits are also available.

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.

Series **W83BT**

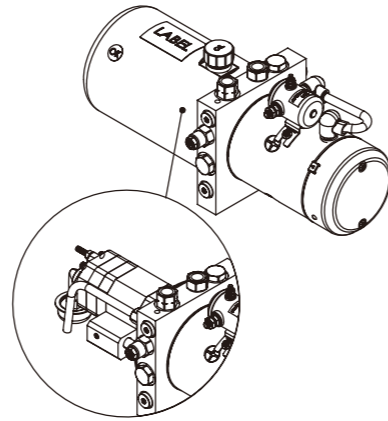
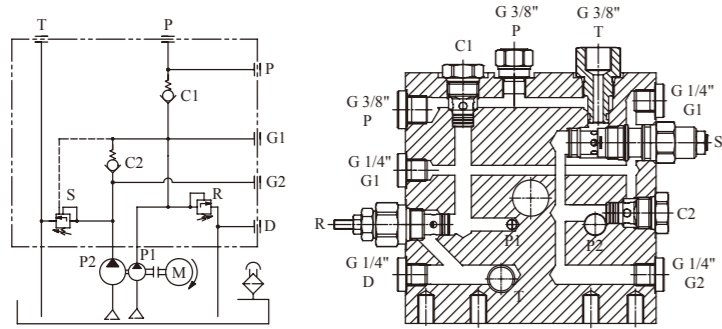
"HI-LO PRESSURE, TWO PUMPS" "HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS (W800553 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

HOW TO ORDER

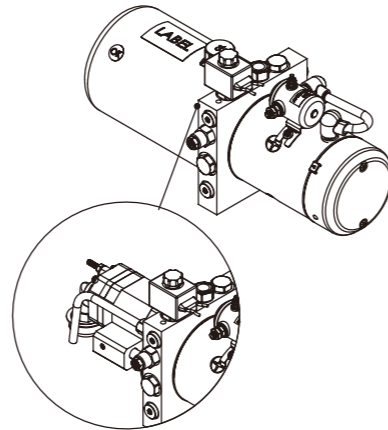
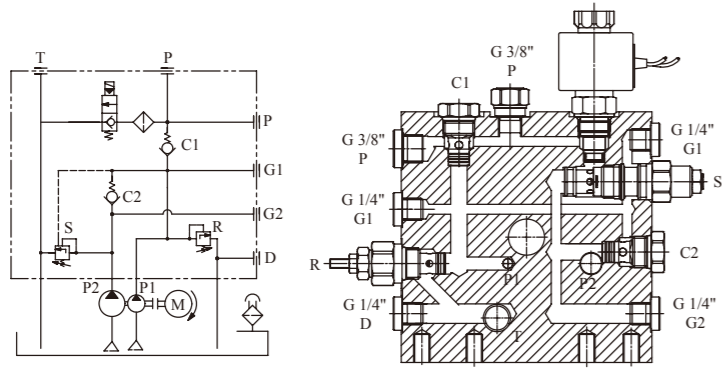


Series **W83D**

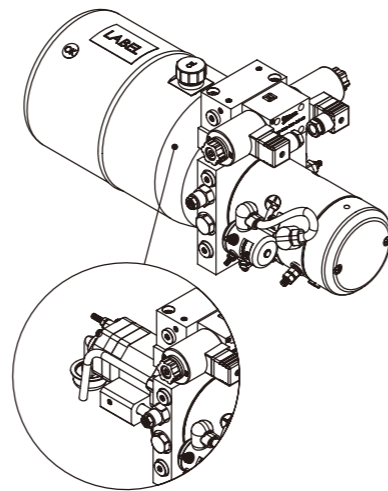
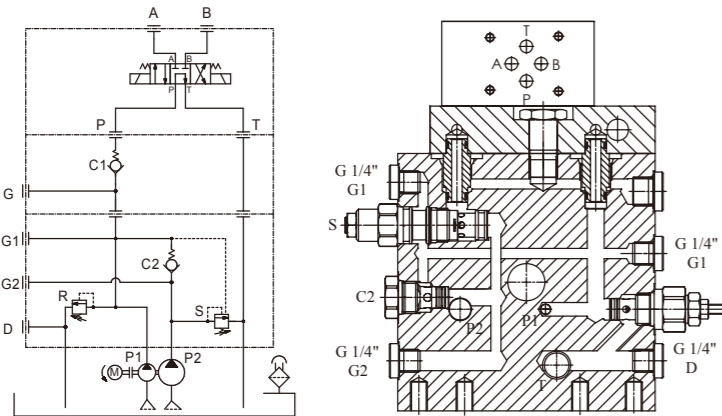
N Type



S Type



A Type + Cetop 03



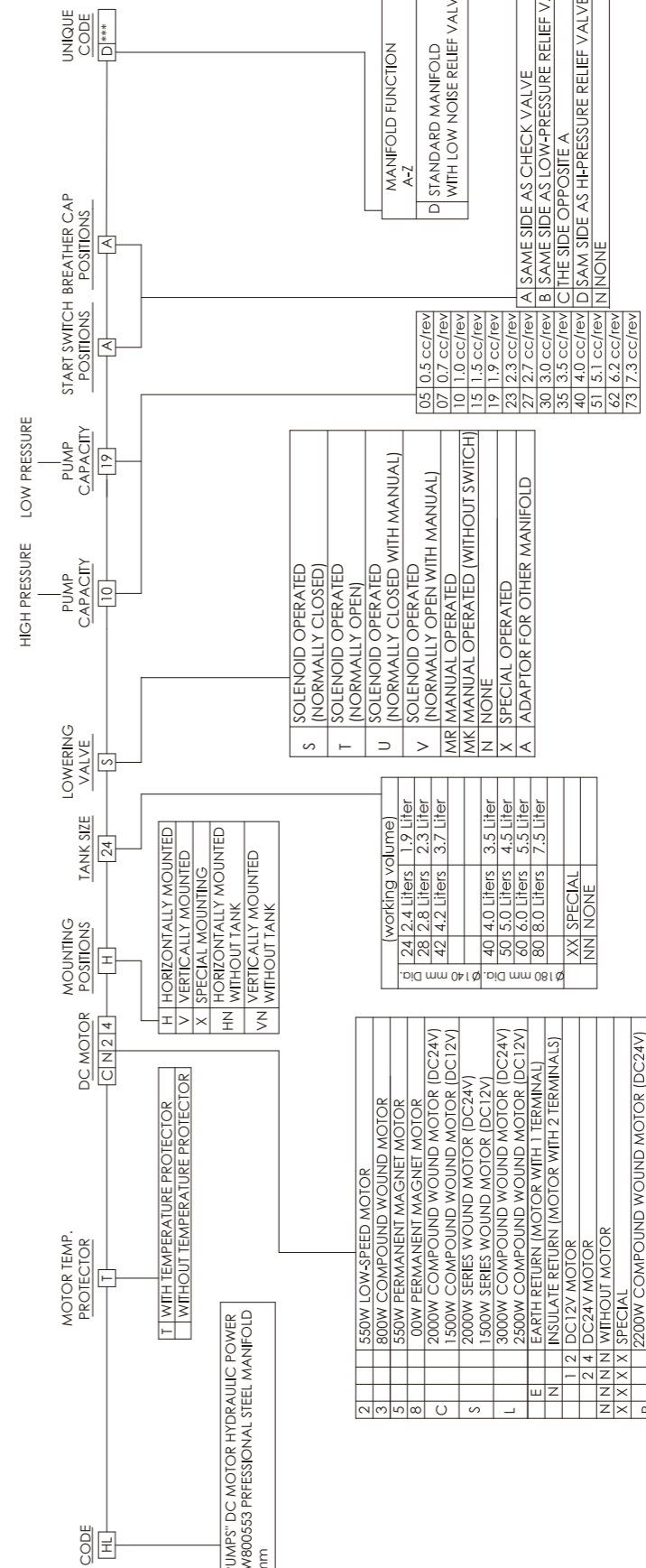
The W83D series power pack is designed for applications that need high pressure and larger flow, but use a low-power D.C. motor. The power pack uses a special manifold (W800553). All screw-in cartridge valves have been designed to be adjusted easily to service the power pack quickly. They still have the same dimensions and functions as the standard manifold (W800532).

- ◆ 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 2.4L 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.

Series **W83D**

"Hi-Lo Pressure, Two Pumps" DC Motor Hydraulic Power Packs (W800553 Steel Manifold / ϕ 140 & ϕ 180 Tanks)



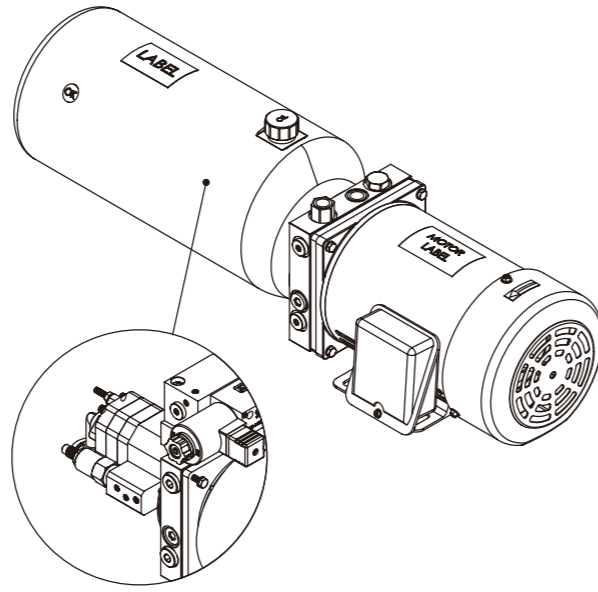
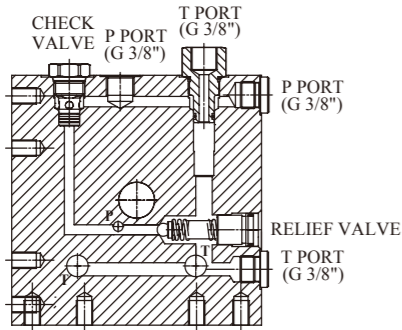
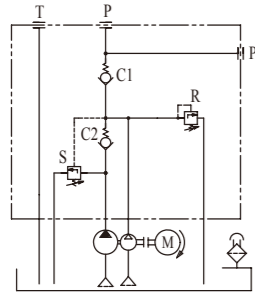
HOW TO ORDER

HL "Hi-Lo, Two-Pumps" DC Motor Hydraulic Power Packs with W800553 Professional Steel Manifold 152mm x 152mm

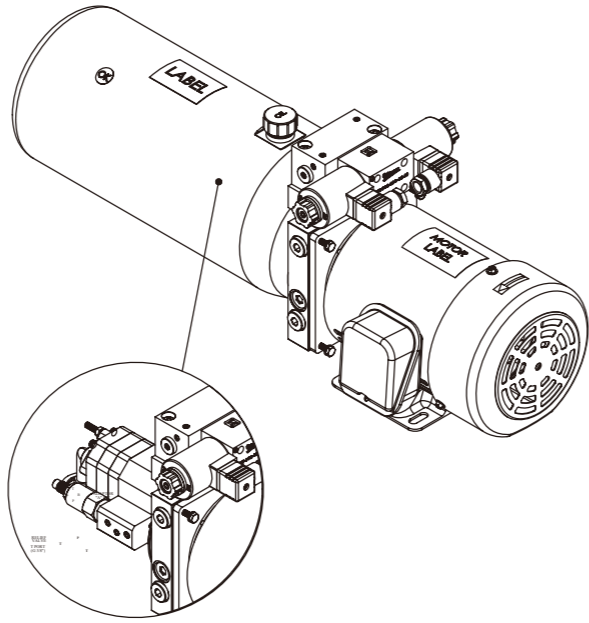
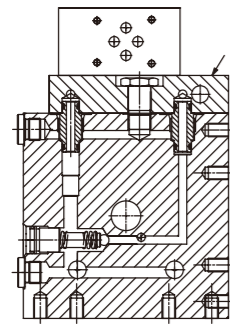
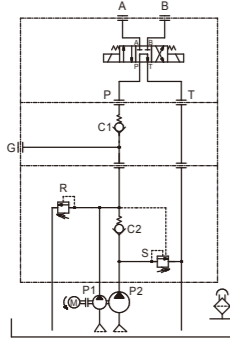
Special orders are available on request. Please consult our sales department.

Series **W84A**

N Type



A Type + Cetop 03



The W84A series power pack is designed for applications that need high pressure and larger flow, but use a low-power A.C. motor. Because the power pack uses a standard manifold (W800532), they will have the same functions as the W80A series power pack.

- ◆ 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 2.4L 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.

NOTE : The low-pressure relief valve must be pre-set before installing the tank.

Series **W84A**

"Hi-Lo Pressure, Two Pumps" AC Motor Hydraulic Power Packs (W800532 Steel Manifold / ϕ 140 & ϕ 180 Tanks)

HOW TO ORDER

AC MOTORS	MF 01	MOUNTING POSITIONS	H	TANK SIZE	24	LOWERING VALVE	S	PUMP CAPACITY	10	HIGH PRESSURE	PUMP CAPACITY	10	LOW PRESSURE	PUMP CAPACITY	10	WIRE BOX POSITIONS	A	BREATHER CAP POSITIONS	A	FLOW CONTROL VALVE	N	UNIQUE CODE	D***	MANIFOLD FUNCTION	A-Z	STANDARD MANIFOLD	WITH LOW NOISE RELIEF VALVE	05	07	10	15	19	23	27	30	35	40	51	62	73
																												0.5 cc/rev	0.7 cc/rev	1.0 cc/rev	1.5 cc/rev	1.9 cc/rev	2.3 cc/rev	2.7 cc/rev	3.0 cc/rev	3.5 cc/rev	4.0 cc/rev	5.1 cc/rev	6.2 cc/rev	7.3 cc/rev

AC MOTORS	MSN	ONLY 1/4HP
	MSM	MOTOR WITHOUT FAN
	MSS	MOTOR WITH FAN
	MF	MOTOR WITHOUT FAN FROM 1/2HP TO 1HP
	MS	MOTOR WITH FAN FROM 1/2HP TO 1HP
	XX	SPECIAL MOTOR WITHOUT FAN FROM 1HP TO 3HP

STANDARD VOLTAGES AND HERTZ (REFER TO BELOW)	01	1HP 4P	3	220/380	50/60	1420/1720
SPECIAL VOLTAGES AND HERTZ ON REQUEST	02	1HP 2P	3	220/380	50/60	2850/3450
	03	1HP 4P	1	110/220	50/60	1420/1720
	04	1HP 2P	1	110/220	50/60	2850/3450
	05	2HP 4P	3	220/380	50/60	1420/1720
	06	2HP 2P	3	220/380	50/60	2850/3450
	07	2HP 4P	1	110/220	50/60	1420/1720
	08	2HP 2P	1	110/220	50/60	2850/3450
	09	3HP 4P	3	220/380	50/60	1420/1720
	10	3HP 2P	3	220/380	50/60	2850/3450
	11	1/2HP 4P	1	110/220	50/60	1420/1720
	12	1/2HP 2P	1	110/220	50/60	2850/3450
	13	3/4HP 4P	1	110/220	50/60	1420/1720
	14	1/2HP 4P	3	220/380	50/60	1420/1720
	15	1/2HP 4P	3	220/380	50/60	940/1140
	16	1/2HP 4P	3	220/380	50/60	1420/1720
	17	1/4HP 4P	1	110/220	50/60	1420/1720
	18	1/4HP 4P	3	220/380	50/60	1420/1720

MOUNTING POSITIONS	H	HORIZONTALLY MOUNTED
	V	VERTICALLY MOUNTED
	X	SPECIAL MOUNTING
	HN	HORIZONTALLY MOUNTED WITHOUT TANK
	VN	VERTICALLY MOUNTED WITHOUT TANK

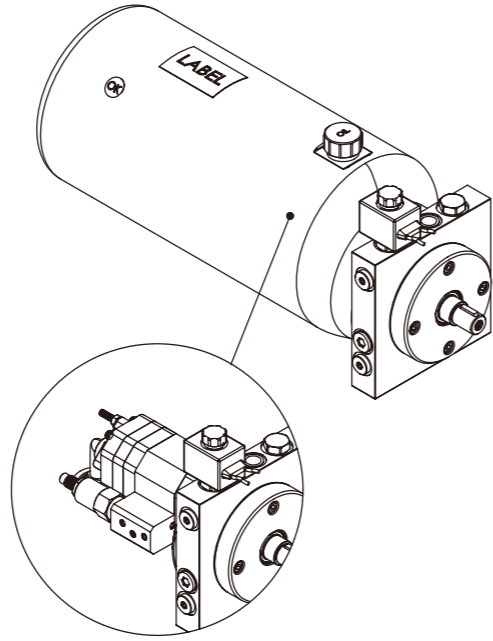
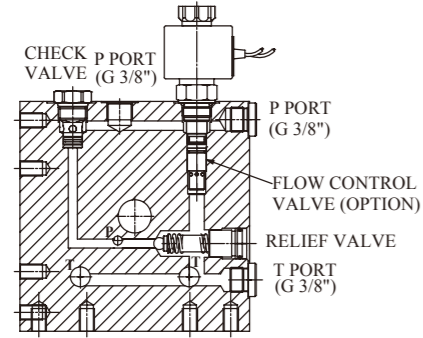
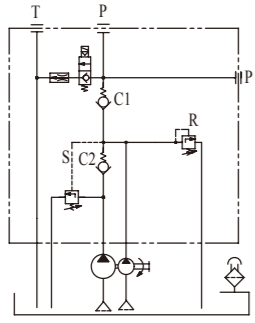
SOLENOID OPERATED (NORMALLY CLOSED)	S
SOLENOID OPERATED (NORMALLY OPEN)	T
SOLENOID OPERATED (NORMALLY CLOSED WITH MANUAL)	U
SOLENOID OPERATED (NORMALLY OPEN WITH MANUAL)	V
MANUAL OPERATED	MR
MANUAL OPERATED (WITHOUT SWITCH)	MK
NONE	N
SPECIAL OPERATED	X
ADAPTOR FOR OTHER MANIFOLD	A

24	2.4 Liters	1.9 Liter
28	2.8 Liters	2.3 Liter
42	4.2 Liters	3.7 Liter
40	4.0 Liters	3.5 Liter
50	5.0 Liters	4.5 Liter
60	6.0 Liters	5.5 Liter
80	8.0 Liters	7.5 Liter
XX	SPECIAL	
NN	NONE	

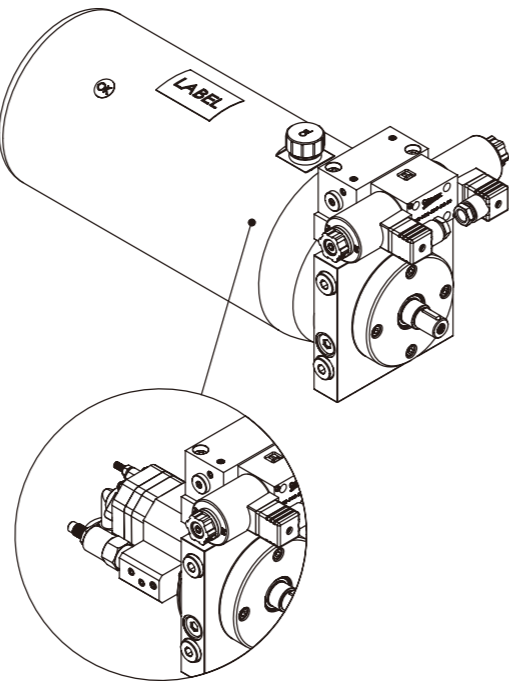
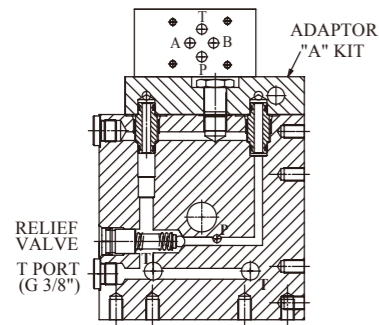
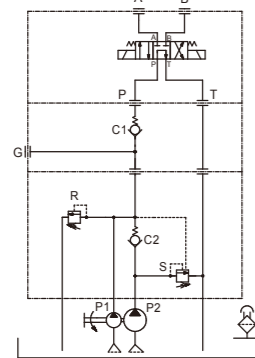
(working volume)

Series **W84BT**

S Type



A Type + Cetop 03



The W84BT series power pack is designed for applications that need high pressure and larger flow, but use a customer supplied low-power transmission. Because the power pack uses a standard manifold (W800532), they will have the same functions as the W80BT series power pack.

- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 2.4L 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.

NOTE : The low-pressure relief valve must be pre-set before installing the tank.

Series **W84BT**

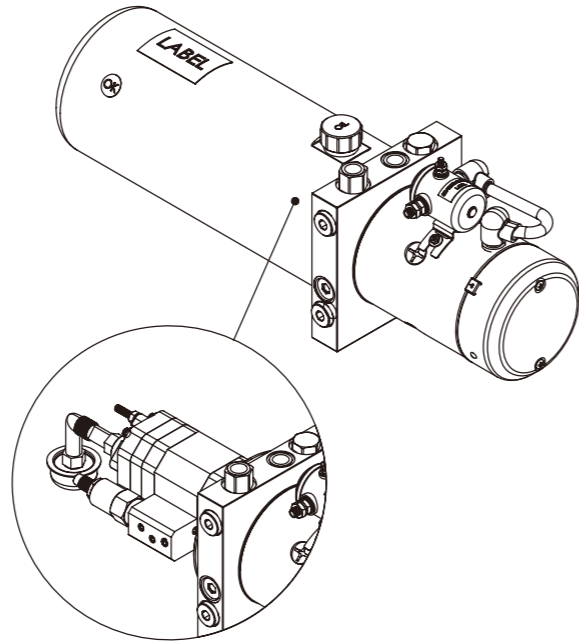
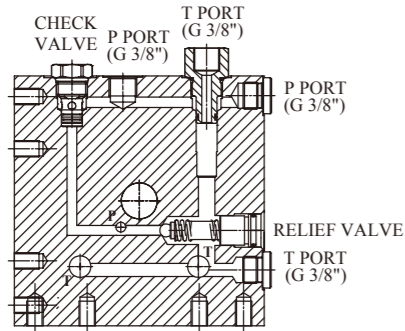
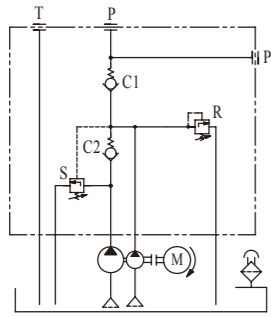
"HI-LO PRESSURE TWO PUMPS" "HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS (W800532 STEEL MANIFOLD / ϕ 140 & ϕ 180 TANKS)

HOW TO ORDER

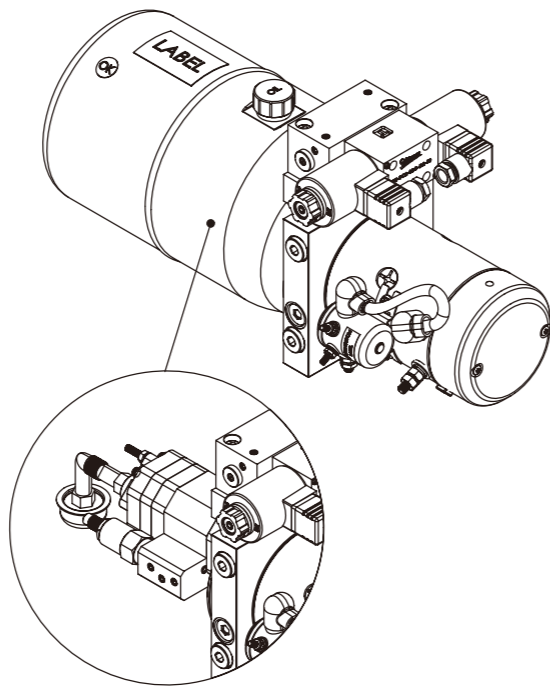
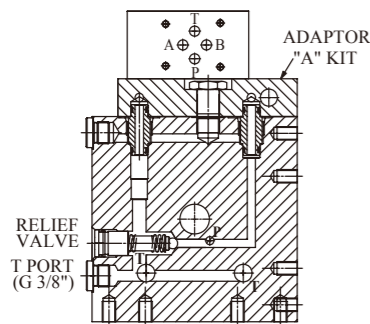
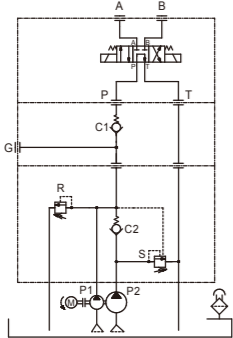
CODE	SHAFT	MOUNTING POSITIONS	TANK SIZE	LOWERING VALVE	PUMP CAPACITY	PUMP CAPACITY	RELIEF PRESSURE	BREATHER CAP POSITIONS	FLOW CONTROL VALVE	UNIQUE CODE	MANIFOLD FUNCTION	
											A-Z	D
B T	L	H	24	S	10	10	A	A	N	D***	N	NONE
											2	2 LPM
											4	4 LPM
											6	6 LPM
											8	8 LPM
											10	10 LPM
											rated flows	
							A				MANIFOLD FUNCTION	
							B				STANDARD MANIFOLD	
							C				STANDARD MANIFOLD	
							D				WITH LOW NOISE RELIEF VALVE	
							A				A) SAME SIDE AS CHECK VALVE	
							B				B) SAME SIDE AS RELIEF VALVE	
							C				C) THE SIDE OPPOSITE A	
							D				D) THE SIDE OPPOSITE B	
							N				N) NONE	
							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	
											working volume	
							24				2.4 Liters	
							28				2.8 Liters	
							42				4.2 Liters	
							40				4.0 Liters	
							50				5.0 Liters	
							60				6.0 Liters	
							80				8.0 Liters	
							XX				SPECIAL	
							NN				NONE	
											ROTATION VIEWING FROM MOTOR SHAFT	
							L				COUNTER CLOCKWISE	
							R				CLOCKWISE	
							X				SPECIAL	
											"HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS	
							H				HORIZONTALLY MOUNTED	
							V				VERTICALLY MOUNTED	
							X				SPECIAL MOUNTING	
							HN				HORIZONTALLY MOUNTED WITHOUT TANK	
							VN				VERTICALLY MOUNTED WITHOUT TANK	

Series **W84D**

N Type



A Type + Cetop 03



The W84D series power pack is designed for applications that need high pressure and larger flow, but use a low-power D.C. motor. Because the power pack uses a standard manifold (W800532), they will have the same functions as the W80D series power pack.

- ◆ 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 2.4L 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.

NOTE : The low-pressure relief valve must be pre-set before installing the tank.

Series **W84D**

"Hi-Lo PRESSURE, TWO PUMPS" DC MOTOR HYDRAULIC POWER PACKS (W800532 STEEL MANIFOLD / Ø140 & Ø180 TANKS)

HOW TO ORDER

MOTOR TEMP. PROTECTOR	T	WITH TEMPERATURE PROTECTOR	WITHOUT TEMPERATURE PROTECTOR
DC MOTOR	C	1500W COMPOUND WOUND MOTOR (DC12V)	2000W COMPOUND WOUND MOTOR (DC24V)
MOUNTING POSITIONS	H	HORIZONTALLY MOUNTED WITHOUT TANK	VERTICALLY MOUNTED WITHOUT TANK
TANK SIZE	24	2.4 Liter	2.8 Liter
LOWERING VALVE	S	1.9 Liter	2.3 Liter
PUMP CAPACITY	10	3.7 Liter	4.0 Liter
PUMP CAPACITY	10	3.5 Liter	5.0 Liter
START SWITCH POSITIONS	A	4.5 Liter	5.5 Liter
BREATHER CAP	A	7.5 Liter	SPECIAL
FLOW CONTROL VALVE	N	NONE	NONE
UNIQUE CODE	D	05	07
		10	15
		19	23
		27	30
		35	40
		51	62
		73	

2	550W LOW-SPEED MOTOR
3	800W COMPOUND WOUND MOTOR
5	550W PERMANENT MAGNET MOTOR
8	00W 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	DC12V MOTOR
2	DC24V MOTOR
N	WITHOUT MOTOR
X	SPECIAL
P	2200W COMPOUND WOUND MOTOR (DC24V)
	1600W COMPOUND WOUND MOTOR (DC12V)

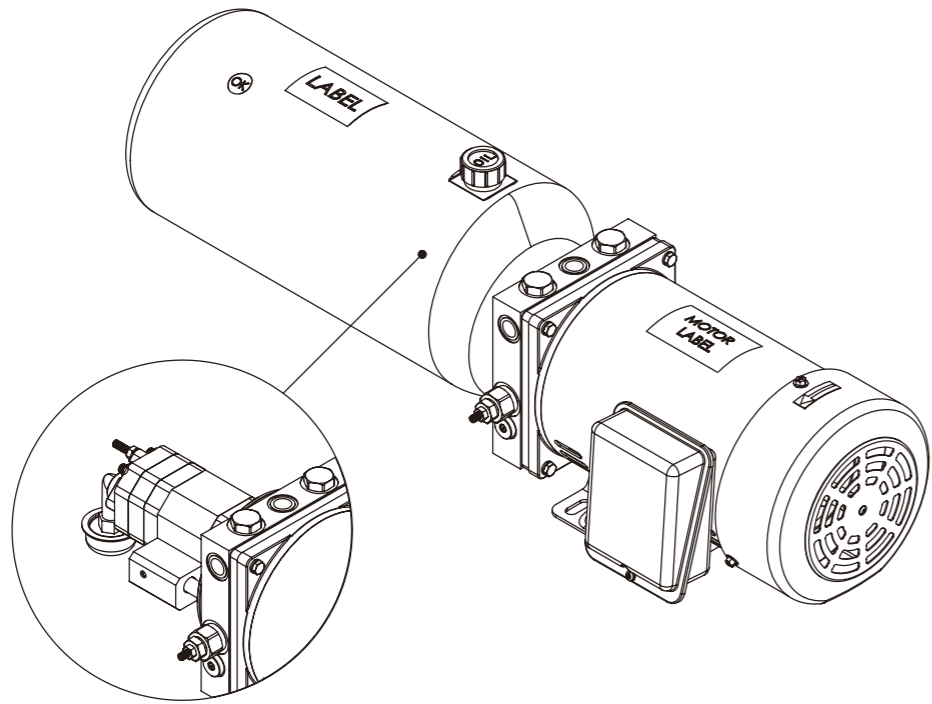
S	SOLENOID OPERATED (NORMALLY CLOSED)
T	SOLENOID OPERATED (NORMALLY OPEN)
U	SOLENOID OPERATED (NORMALLY CLOSED WITH MANUAL)
V	SOLENOID OPERATED (NORMALLY OPEN WITH MANUAL)
MR	MANUAL OPERATED
MK	MANUAL OPERATED (WITHOUT SWITCH)
N	NONE
X	SPECIAL OPERATED
A	ADAPTOR FOR OTHER MANIFOLD

N	NONE
2	2 LPM
4	4 LPM
6	6 LPM
8	8 LPM
10	10 LPM

rated flows

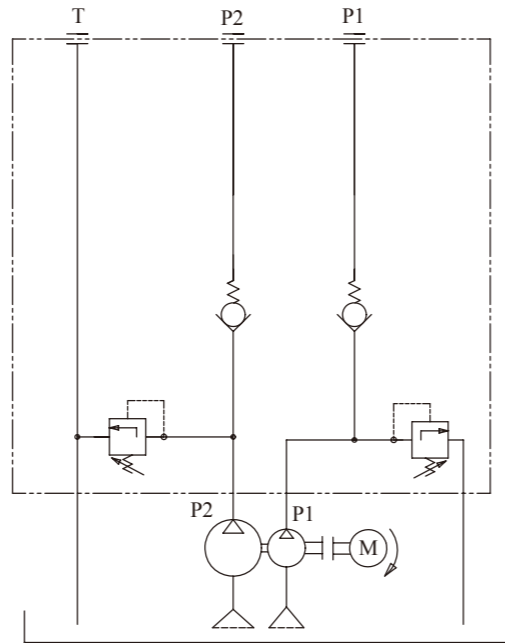
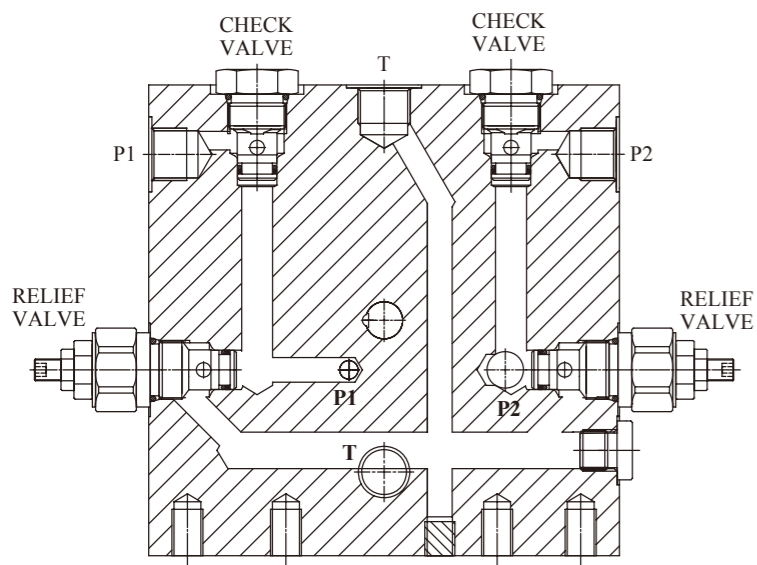
A-Z	MANIFOLD FUNCTION
	STANDARD MANIFOLD
	STANDARD MANIFOLD
D	WITH LOW NOISE RELIEF VALVE

A	SAME SIDE AS CHECK VALVE
B	SAME SIDE AS RELIEF VALVE
C	THE SIDE OPPOSITE A
D	THE SIDE OPPOSITE B
N	NONE



"Double-Pumps" Hydraulic Valves Diagram

"Double-Pumps" Hydraulic Schematic



The W85A series power pack is designed for applications that need two independent hydraulic power supply, but only use a single A.C. motor.

- ◆ 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 2.4L 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) team. If you have any questions or need a custom design, please feel free to contact us.

"DOUBLE-PUMPS" AC MOTOR HYDRAULIC POWER PACKS (W800552 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

HOW TO ORDER

DOUBLE-PUMPS HYDRAULIC POWER PACKS

CODE DP

AC MOTORS MF 01

MOUNTING POSITIONS H

TANK SIZE 24

SPECIAL PARTS N

PUMP NO.1 CAPACITY 10

PUMP NO.2 CAPACITY 10

PUMP NO.1 PRESSURE A

PUMP NO.2 PRESSURE A

WIRE BOX POSITIONS A

BREATHING CAP POSITIONS A

UNIQUE CODE

DOUBLE-PUMPS HYDRAULIC POWER PACKS

STANDARD VOLTAGES AND HERTZ (REFER TO BELOW) SPECIAL VOLTAGES AND HERTZ ON REQUEST A-Z

MSN MOTOR WITHOUT FAN ONLY 1/4HP

MSM MOTOR WITHOUT FAN FROM 1/2HP TO 1HP

MFS MOTOR WITH FAN FROM 1/2HP TO 1HP

MSS MOTOR WITHOUT FAN TO 1HP

MSF MOTOR WITH FAN FROM 1HP TO 3HP

MS MOTOR WITHOUT FAN TO 3HP

XX SPECIAL

MOTOR DIMENSION

MOTOR	POWER	PHASE	VOLTAGES	HERTZ	RPM
01	1HP 4P	3	220/380	50/60	1420/1720
02	1HP 2P	3	220/380	50/60	2850/3450
03	1HP 4P	1	110/220	50/60	1420/1720
04	1HP 2P	1	110/220	50/60	2850/3450
05	2HP 4P	3	220/380	50/60	1420/1720
06	2HP 2P	3	220/380	50/60	2850/3450
07	2HP 4P	1	110/220	50/60	1420/1720
08	2HP 2P	1	110/220	50/60	2850/3450
09	3HP 4P	3	220/380	50/60	1420/1720
10	3HP 2P	3	220/380	50/60	2850/3450
11	1/2HP 4P	1	110/220	50/60	1420/1720
12	1/2HP 2P	1	110/220	50/60	2850/3450
13	3/4HP 4P	1	110/220	50/60	1420/1720
14					
15	1/2HP 4P	3	220/380	50/60	1420/1720
16	1/2HP 6P	3	220/380	50/60	940/1140
17	1/4HP 4P	1	110/220	50/60	1420/1720
18	1/4HP 4P	3	220/380	50/60	1420/1720

(working volume)
24 2.4 Liters 1.9 Liter
28 2.8 Liters 2.3 Liter
42 4.2 Liters 3.7 Liter
40 4.0 Liters 3.5 Liter
50 5.0 Liters 4.5 Liter
60 6.0 Liters 5.5 Liter
80 8.0 Liters 7.5 Liter
XX SPECIAL
NNI NONE

Ø 180 mm Dia.
Ø 140 mm Dia.

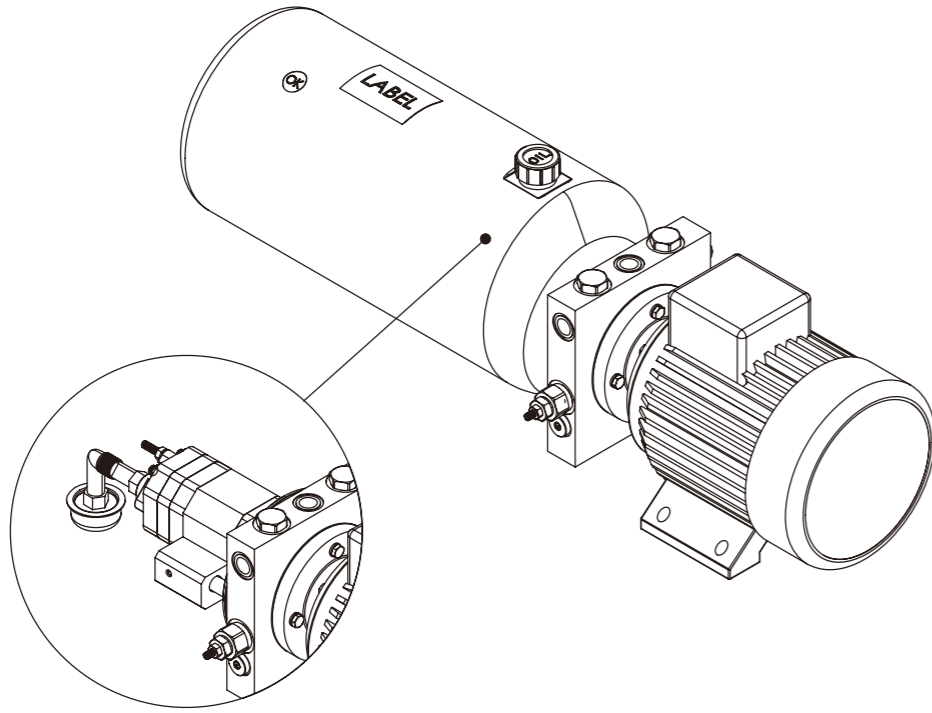
N one P1 port : one P2 port
P two P1 port : two P2 port

A 20 BAR
B 30 BAR
C 40 BAR
D 50 BAR
E 60 BAR
F 70 BAR
G 80 BAR
H 90 BAR
J 100 BAR
L 110 BAR
M 120 BAR
P 130 BAR
Q 140 BAR
R 150 BAR
S 160 BAR
T 170 BAR
U 180 BAR
V 190 BAR
W 200 BAR
X 210 BAR
Z SPECIAL

A SAME SIDE AS CHECK VALVE
B SAME SIDE AS RELIEF NO.2
C THE SIDE OPPOSITE A
D THE SIDE OPPOSITE B
N NONE

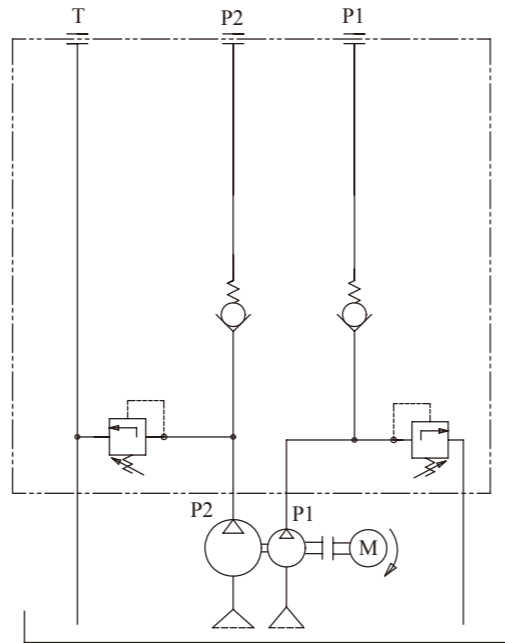
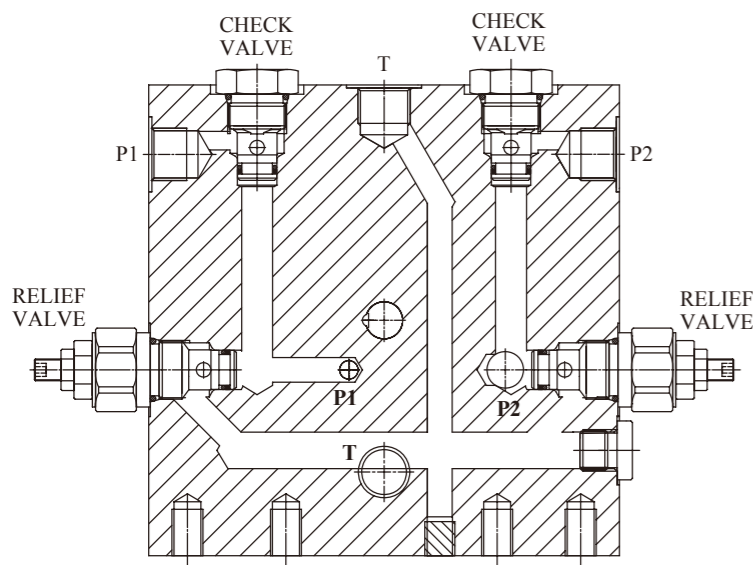
H HORIZONTALLY MOUNTED
V VERTICALLY MOUNTED
X SPECIAL MOUNTING
HN HORIZONTAL MOUNTED WITHOUT TANK
VN VERTICALLY MOUNTED WITHOUT TANK

Series **W85AB**



"Double-Pumps" Hydraulic Valves Diagram

"Double-Pumps" Hydraulic Schematic



The W85AB series power pack is designed for applications that need two independent hydraulic power supply, but only use a single B14 Frame motor.

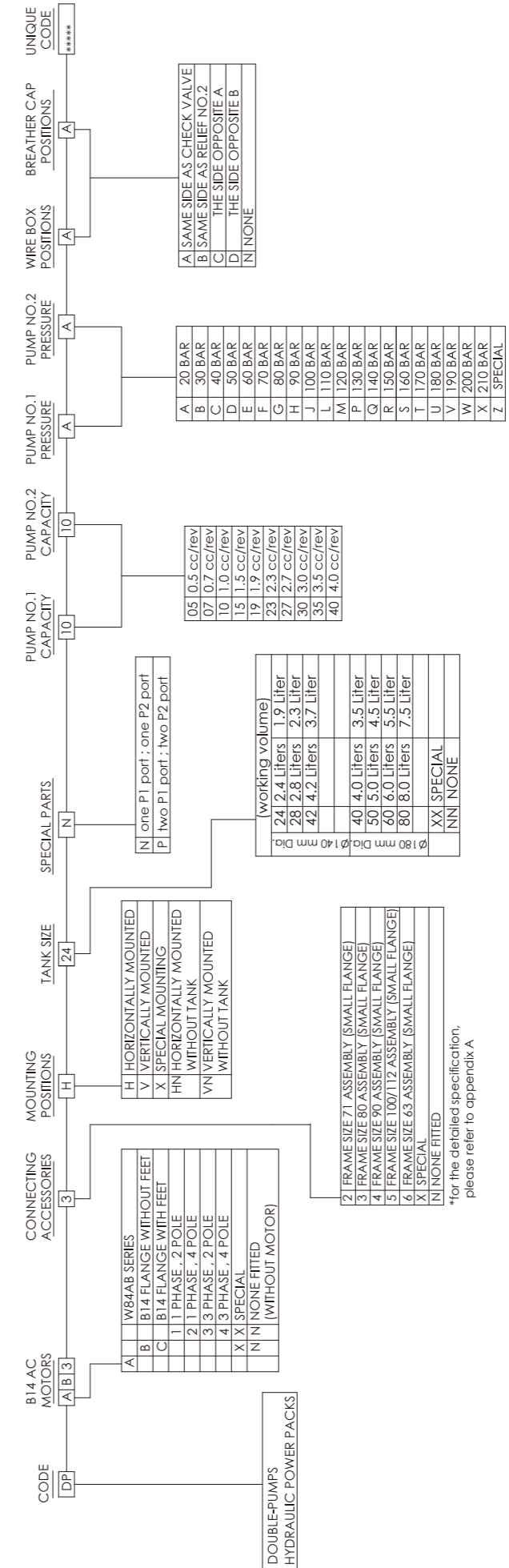
- ◆ Standard frame sizes range from 63M to 112M.
 - ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
 - ◆ Standard tank sizes vary from 2.4L to 8.0L. Tailor made tanks are also available.
 - ◆ Hydraulic circuit valves can be inter-changed with the standard manifold.
- Custom made circuits are also available.

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

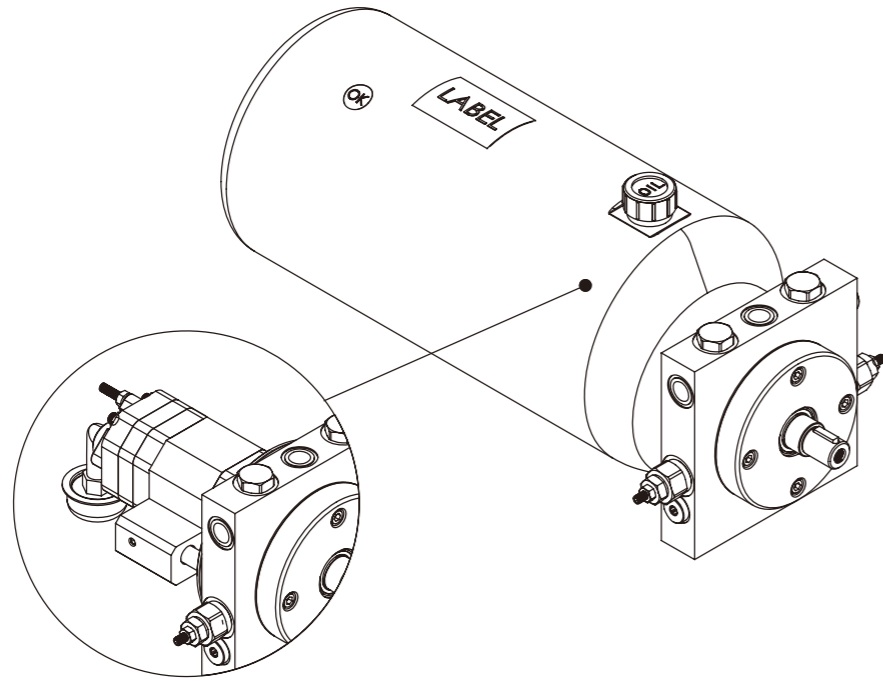
Series **W85AB**

"DOUBLE-PUMPS" B14 FRAME AC MOTOR HYDRAULIC POWER PACKS (W800552 STEEL MANIFOLD / ϕ 140 & ϕ 180 TANKS)

HOW TO ORDER

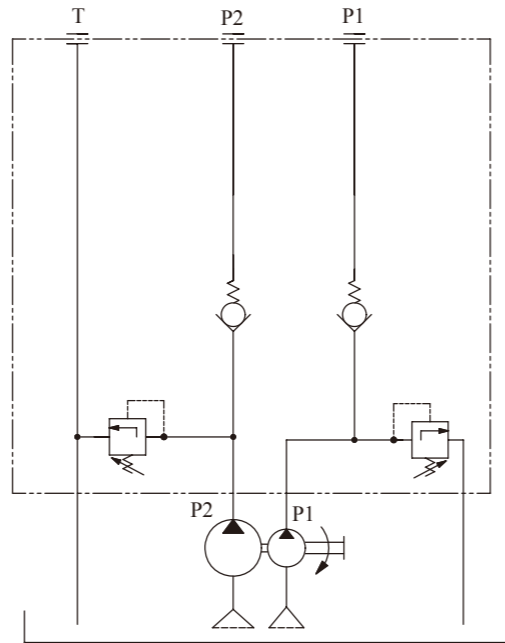
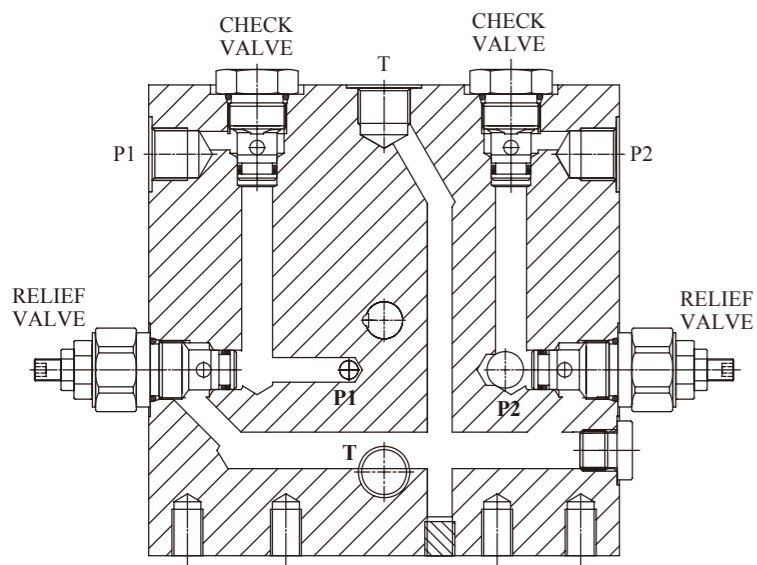


Series **W85BT**



"Double-Pumps" Hydraulic Valves Diagram

"Double-Pumps" Hydraulic Schematic



The W85BT series power pack is designed for applications that need two independent hydraulic power supply, but only use a single transmission.

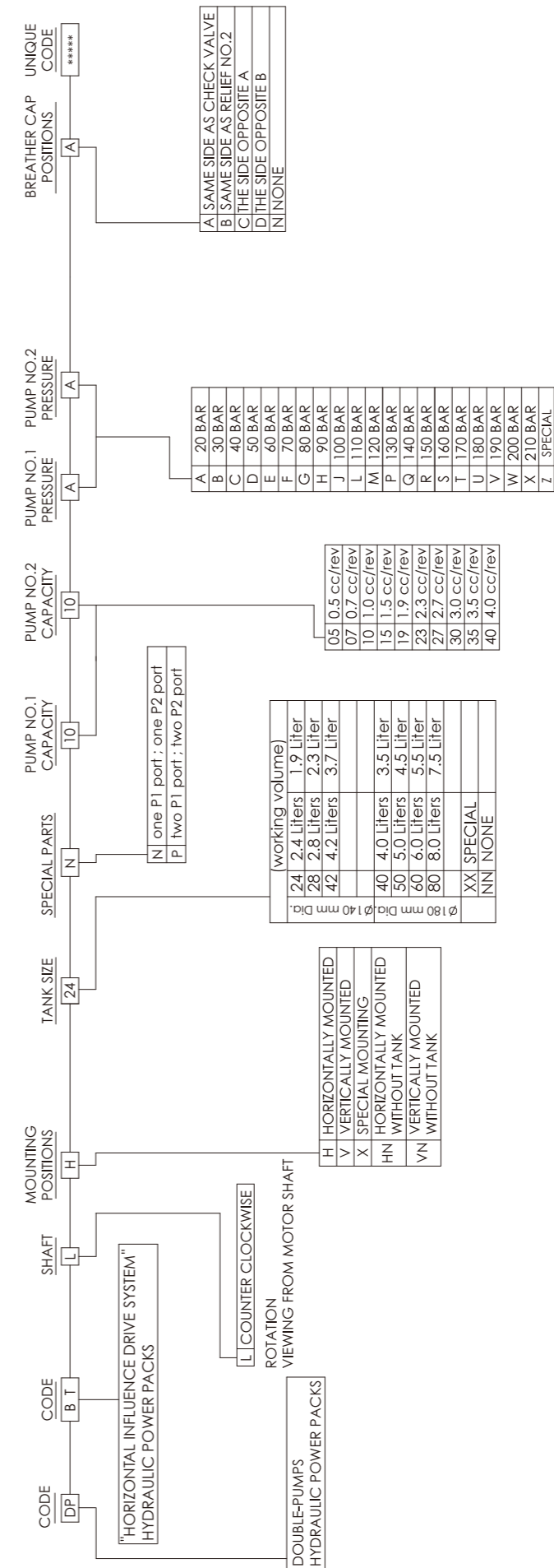
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Standard tank sizes vary from 2.4L to 8.0L. Tailor made tanks are also available.
- ◆ Hydraulic circuit valves can be inter-changed with the standard manifold. Custom made circuits are also available.

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

Series **W85BT**

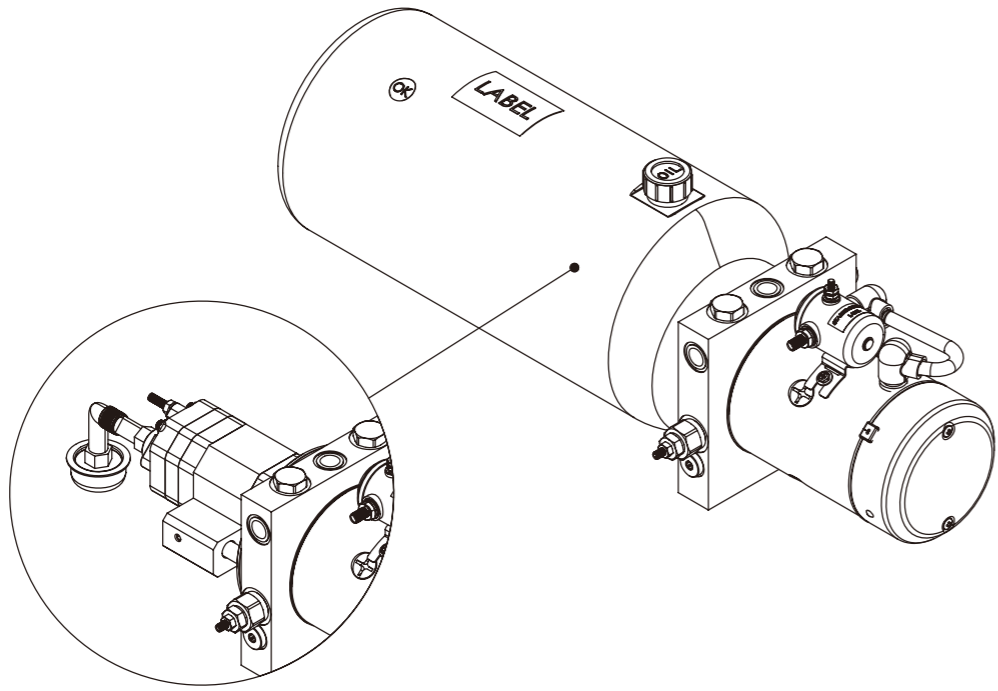
"DOUBLE PUMPS" "HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS (W800552 STEEL MANIFOLD / ϕ 140 & ϕ 180 TANKS)

HOW TO ORDER



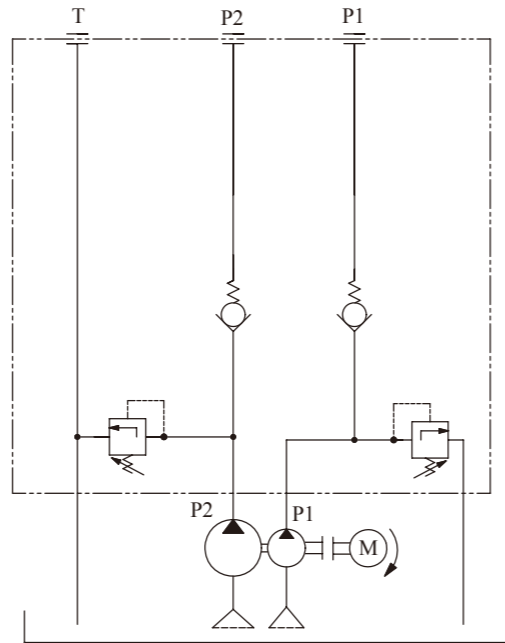
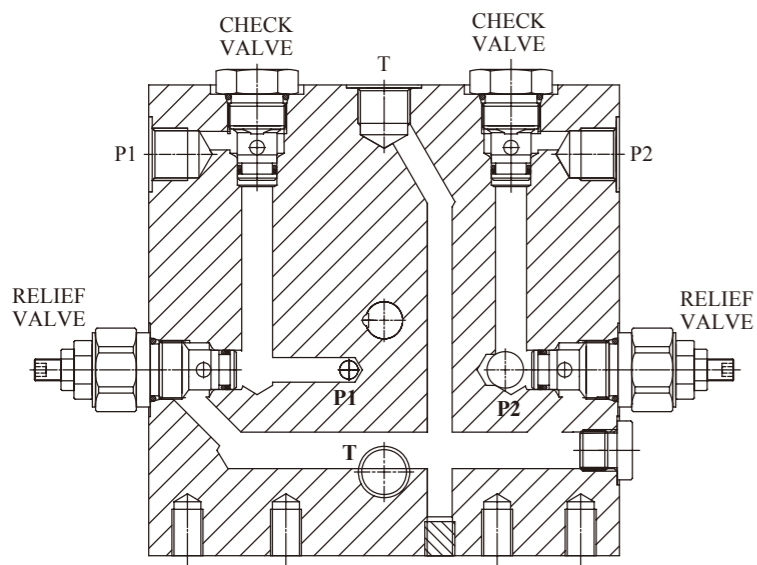
Special orders are available on request. Please consult our sales department.

Series **W85D**



"Double-Pumps" Hydraulic Valves Diagram

"Double-Pumps" Hydraulic Schematic



The W85D series power pack is designed for applications that need two independent hydraulic power supply, but only use a single D.C. motor.

- ◆ 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 2.4L 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) team. If you have any questions or need a custom design, please feel free to contact us.

Series **W85D**

"DOUBLE-PUMPS" DC MOTOR HYDRAULIC POWER PACKS (W800552 STEEL MANIFOLD / Ø140 & Ø180 TANKS)

HOW TO ORDER

CODE	DP	MOTOR TEMP. PROTECTOR	T	WITH TEMPERATURE PROTECTOR WITHOUT TEMPERATURE PROTECTOR	DC MOTOR	CIN24	MOUNTING POSITIONS	H V X HN VN	HORizontally mounted Vertically mounted Special mounting Horizontally mounted without tank Vertically mounted without tank	TANK SIZE	24	SPECIAL PARTS	N P	one P1 port : one P2 port Two P1 port : two P2 port	PUMP NO.1 CAPACITY	10	PUMP NO.2 CAPACITY	10	PUMP NO.1 PRESSURE	A	PUMP NO.2 PRESSURE	A	START SWITCH POSITIONS	A	BREATHER CAP POSITIONS	A	UNIQUE CODE	*****
------	----	-----------------------	---	---	----------	-------	--------------------	-------------------------	--	-----------	----	---------------	--------	--	--------------------	----	--------------------	----	--------------------	---	--------------------	---	------------------------	---	------------------------	---	-------------	-------

2	550W LOW-SPEED MOTOR	3	800W COMPOUND WOUND MOTOR
5	550W PERMANENT MAGNET MOTOR	8	2000W PERMANENT MAGNET MOTOR
C	2000W COMPOUND WOUND MOTOR (DC24V)	S	1500W SERIES WOUND MOTOR (DC24V)
L	3000W COMPOUND WOUND MOTOR (DC24V)	E	2500W COMPOUND WOUND MOTOR (DC12V)
N	INSULATE RETURN (MOTOR WITH 1 TERMINAL)	1 2	DC12V MOTOR
NIN	WITHOUT MOTOR	2 4	DC24V MOTOR
X	SPECIAL	P	2200W COMPOUND WOUND MOTOR (DC24V)
			1600W COMPOUND WOUND MOTOR (DC12V)

(working volume)	24	2.4 Liters
	28	2.8 Liters
	42	4.2 Liters
	40	4.0 Liters
	50	5.0 Liters
	60	6.0 Liters
	80	8.0 Liters
XX	SPECIAL	
NN	NONE	

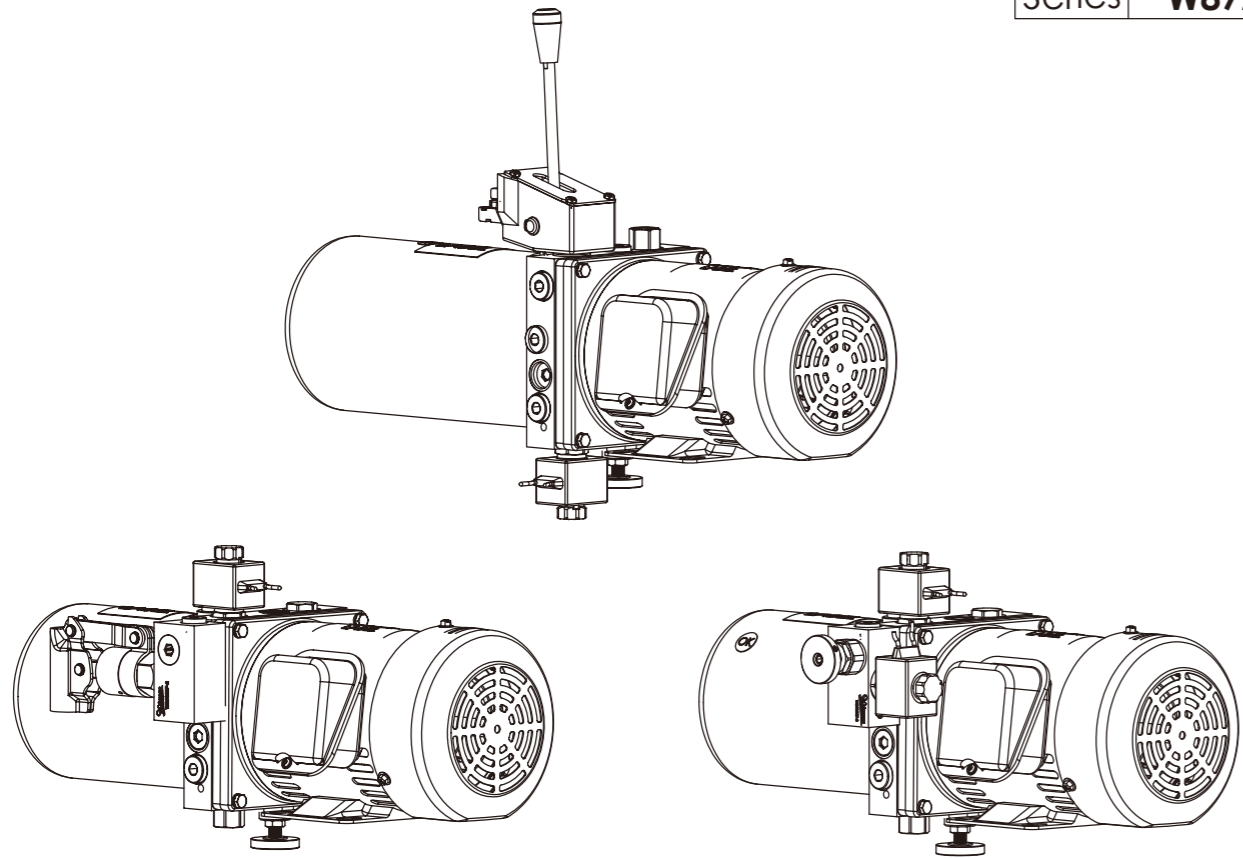
05	0.5 cc/rev
07	0.7 cc/rev
10	1.0 cc/rev
15	1.5 cc/rev
19	1.9 cc/rev
23	2.3 cc/rev
27	2.7 cc/rev
30	3.0 cc/rev
35	3.5 cc/rev
40	4.0 cc/rev

A	20 BAR
B	30 BAR
C	40 BAR
D	50 BAR
E	60 BAR
F	70 BAR
G	80 BAR
H	90 BAR
J	100 BAR
L	110 BAR
M	120 BAR
P	130 BAR
Q	140 BAR
R	150 BAR
S	160 BAR
T	170 BAR
U	180 BAR
V	190 BAR
W	200 BAR
X	210 BAR
Z	SPECIAL

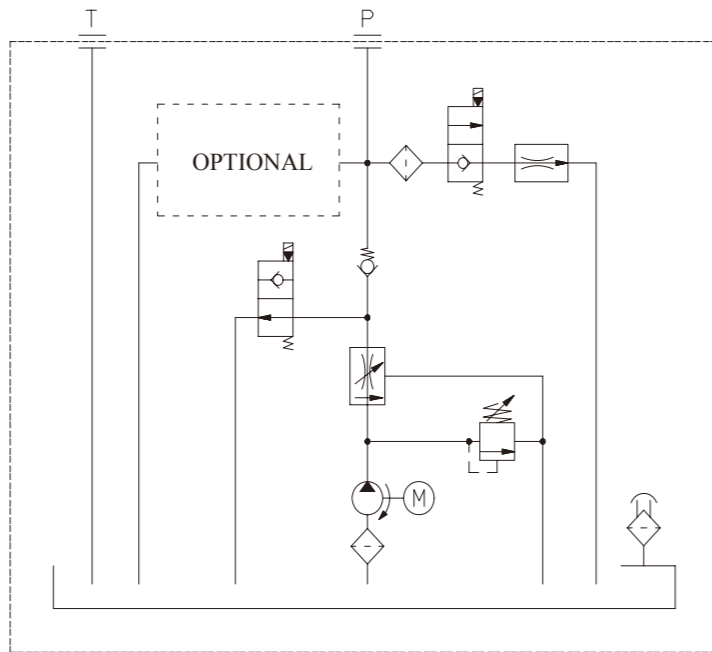
A	SAME SIDE AS CHECK VALVE
B	SAME SIDE AS RELIEF NO.2
C	THE SIDE OPPOSITE A
D	THE SIDE OPPOSITE B
N	NONE

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

Series **W87A**



OPTIONAL	
TYPE	SCHEMATIC
P	
P1	
S	



*Please refer to the "HOW TO ORDER" pages of W87A series.

The W87A power pack series is designed for a wide range of applications which include;

- ◆ Our standard AC motors range from 0.25HP to 3.0HP.
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Options: Handle pump; Hi-Low speed lowering solenoid valves; Adjustable output flow; By-Pass solenoid valve.

The purpose for the mini design is to save space. The power pack is only 152mm by 152mm. If you have any questions or need a custom design, please feel free to contact us.

Series **W87A**

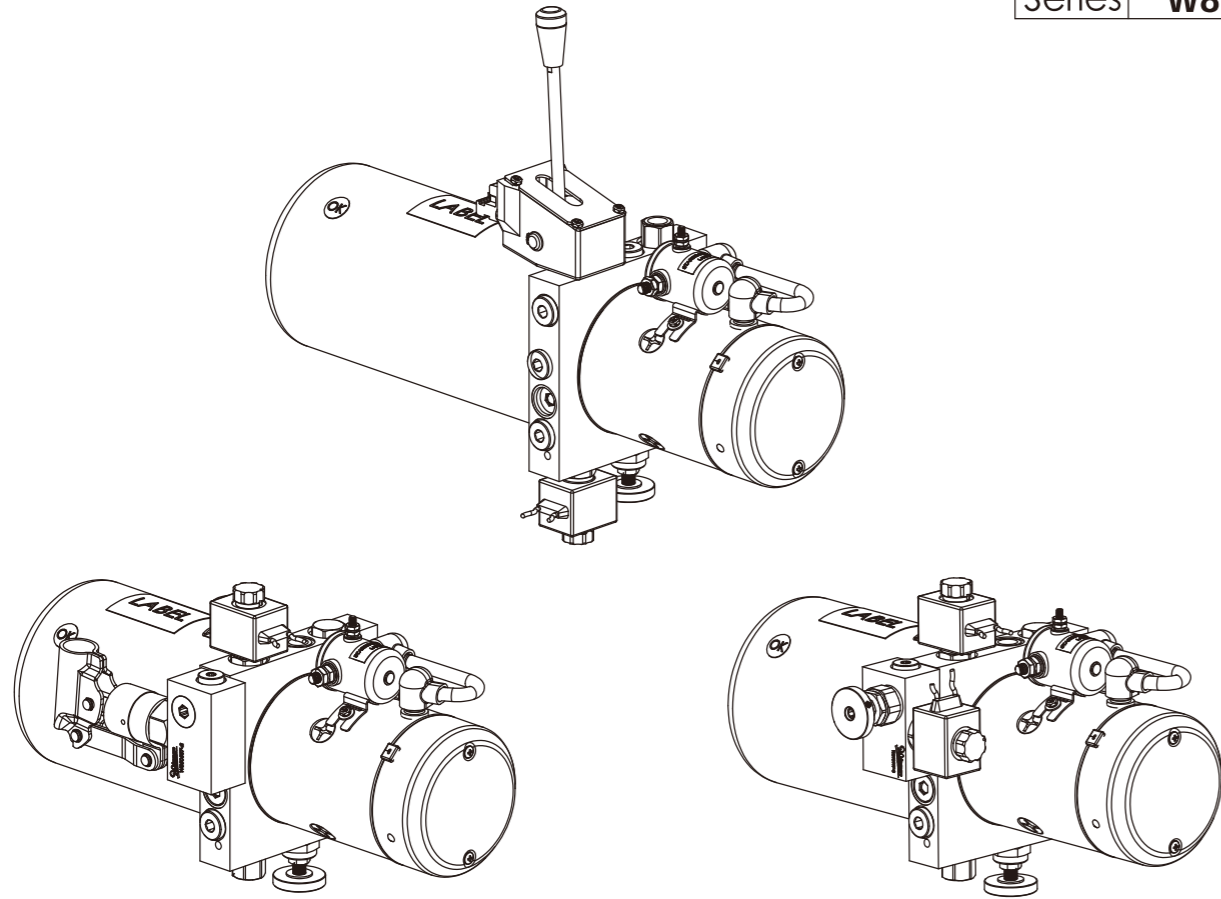
BY-PASS FLOW CONTROL AC MOTOR HYDRAULIC POWER PACKS (W800536-1 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

HOW TO ORDER

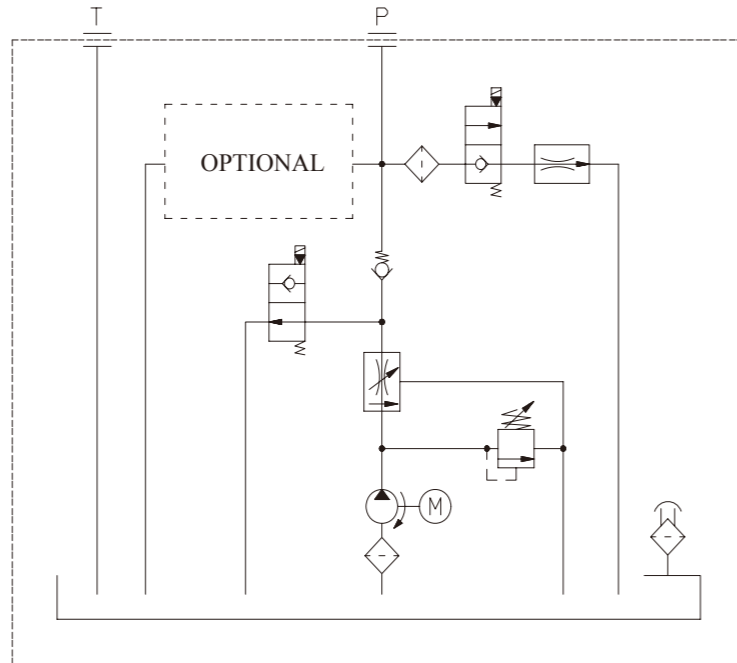
CODE	AC MOTORS	MOUNTING POSITIONS	TANK SIZE	LOWERING VALVE	PUMP CAPACITY	HANDLE PUMP OR OTHERS	UNLOADING VALVE	FLOW REGULATOR	FLOW CONTROL VALVE	UNIQUE CODE
BIP	[MF] [01]	[H]	[2B]	[S]	[19]	[P] [X] [S]	[E]	[E] [N]	[N]	[D]**
MSN MOTOR WITHOUT FAN	ONLY 1/4HP	H HORIZONTALLY MOUNTED V VERTICALLY MOUNTED X SPECIAL MOUNTING	10 1.0 Liters 14 1.6 Liters 20 2.0 Liters 24 2.4 Liters 28 2.8 Liters 42 4.2 Liters 50 5.0 Liters 60 6.0 Liters 80 8.0 Liters XX SPECIAL	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 (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	P WITH HANDLE PUMP (7.4 cc/stroke) X WITH HANDLE PUMP (10.6 cc/stroke) S WITH ANOTHER SOLENOID OPERATED LOWERING VALVE	E WITH UNLOADING SOLENOID VALVE N SOLENOID VALVE	E WITH BY-PASS FLOW REGULATOR WITHOUT BY-PASS FLOW REGULATOR N FLOW REGULATOR	N NONE 2 2 LPM 4 4 LPM 6 6 LPM 8 8 LPM 10 10 LPM rated flows	MANIFOLD FUNCTION A-Z STANDARD MANIFOLD D WITH LOW NOISE RELIEF VALVE
MES MOTOR WITH FAN	FROM 1/2HP TO 1HP	HN HORIZONTALLY MOUNTED WITHOUT TANK VN VERTICALLY MOUNTED WITHOUT TANK	10 1.0 Liters 14 1.6 Liters 20 2.0 Liters 24 2.4 Liters 28 2.8 Liters 42 4.2 Liters 50 5.0 Liters 60 6.0 Liters 80 8.0 Liters XX SPECIAL							
MSS MOTOR WITH FAN	FROM 1/2HP TO 1HP									
MSF MOTOR WITH FAN	FROM 1HP TO 3HP									
MS MOTOR WITHOUT FAN										
XX SPECIAL										

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

Series **W87D**



OPTIONAL	
TYPE	SCHEMATIC
P	
P1	
S	



*Please refer to the "HOW TO ORDER" pages of W87D series.

The W87D power pack series 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.
- ◆ Tank sizes vary from 0.5L to 1.7L.
- ◆ Pump capacity range is from 0.5cc/rev to 7.3cc/rev.
- ◆ Options: Handle pump; Hi-Low speed lowering solenoid valves; Adjustable output flow; By-Pass solenoid valve.

The purpose for the mini design is to save space. The power pack is only 152mm by 152mm. If you have any questions or need a custom design, please feel free to contact us.

Series **W87D**

BY-PASS FLOW CONTROL DC MOTOR HYDRAULIC POWER PACKS (W800536-1 STEEL MANIFOLD / Ø 140 & Ø 180 TANKS)

HOW TO ORDER

MOTOR TEMP PROTECTOR	CODE	BP	By-Pass
DC MOTOR	CIN 214		
MOUNTING POSITIONS	H		
TANK SIZE	28		
LOWERING VALVE	S		
PUMP CAPACITY	19		
HANDLE PUMP OR OTHERS	P		
UNLOADING VALVE	E		
FLOW REGULATOR	E		
FLOW CONTROL VALVE	N		
UNIQUE CODE	D**		

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)
S	1500W SERIES WOUND MOTOR (DC12V)
L	3000W COMPOUND WOUND MOTOR (DC24V)
E	2500W COMPOUND WOUND MOTOR (DC12V)
N	EARTH RETURN (MOTOR WITH 1 TERMINAL)
N	INSULATE RETURN (MOTOR WITH 2 TERMINALS)
1	DC12V MOTOR
2	DC24V MOTOR
N	N WITH MOTOR
N	N WITHOUT MOTOR
X	X SPECIAL
P	2200W COMPOUND WOUND MOTOR (DC24V)
	1600W COMPOUND WOUND MOTOR (DC12V)

H	H HORIZONTALLY MOUNTED
V	V VERTICALLY MOUNTED
X	X SPECIAL MOUNTING
HN	HN HORIZONTALLY MOUNTED WITHOUT TANK
VN	VN VERTICALLY MOUNTED WITHOUT TANK

S	S SOLENOID OPERATED (NORMALLY CLOSED)
T	T SOLENOID OPERATED (NORMALLY OPEN)
U	U SOLENOID OPERATED (NORMALLY CLOSED WITH MANUAL)
V	V SOLENOID OPERATED (NORMALLY OPEN WITH MANUAL)
MR	MR MANUAL OPERATED
MK	MK MANUAL OPERATED (WITHOUT SWITCH)
N	N NONE
X	X SPECIAL OPERATED
A	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

10	1.0 Liters
16	1.6 Liters
20	2.0 Liters
24	2.4 Liters
28	2.8 Liters
42	4.2 Liters
30	3.0 Liters
40	4.0 Liters
50	5.0 Liters
60	6.0 Liters
80	8.0 Liters
XX	SPECIAL
NN	NONE

WITH TEMPERATURE PROTECTOR	T
WITHOUT TEMPERATURE PROTECTOR	

WITHOUT HANDLE PUMP	P
WITH HANDLE PUMP (7.4 cc/stroke)	
SPECIAL HANDLE PUMP ASSEMBLY	X
WITH ANOTHER SOLENOID OPERATED LOWERING VALVE	S

WITH UNLOADING SOLENOID VALVE	E
WITHOUT UNLOADING SOLENOID VALVE	N

WITH BY-PASS FLOW REGULATOR	E
WITHOUT BY-PASS FLOW REGULATOR	N

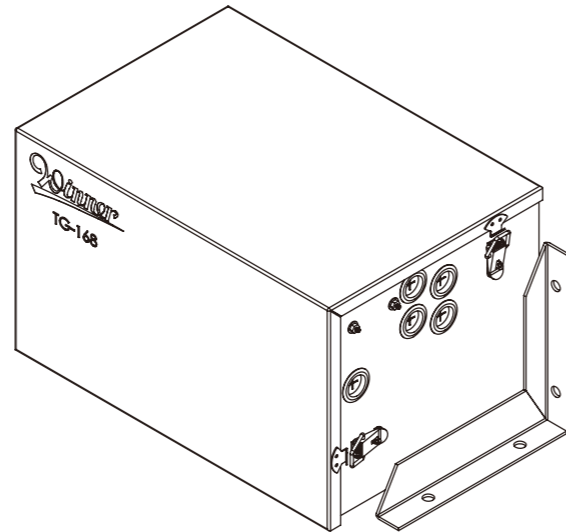
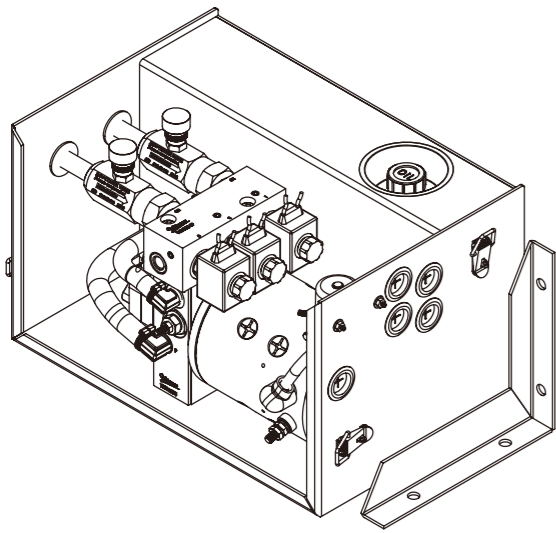
MANIFOLD FUNCTION	
A-Z	STANDARD MANIFOLD
S	STANDARD MANIFOLD WITH LOW NOISE RELIEF VALVE
D	WITH LOW NOISE RELIEF VALVE

N	NONE
2	2 LPM
4	4 LPM
6	6 LPM
8	8 LPM
10	10 LPM

rated flows

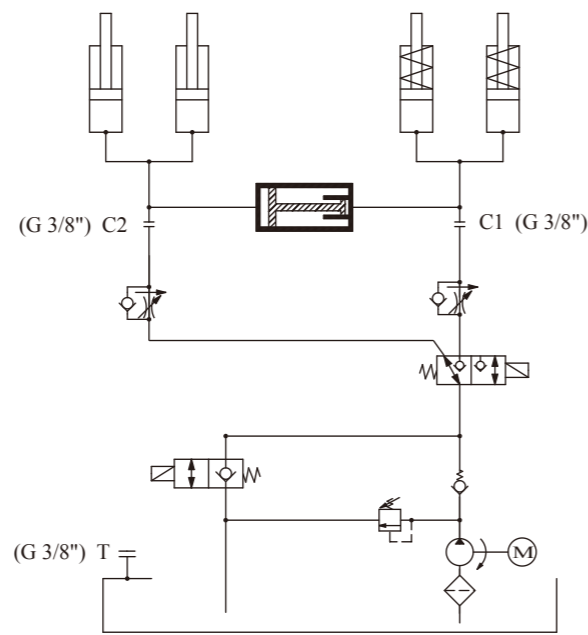
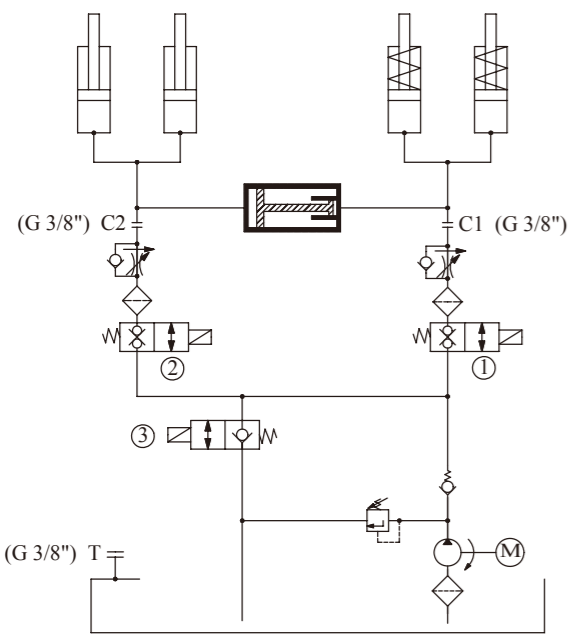
Special orders are available on request. Please consult our sales department.

Series **TG168**



"Tail-Gate" Hydraulic Schematic (A)

"Tail-Gate" Hydraulic Schematic (B)



The TG-168 series power pack is designed for "Tail-Gate of the truck" application, which includes the unit and complete components of a power protecting cover, therefore users just need to connect the fittings and control wires.

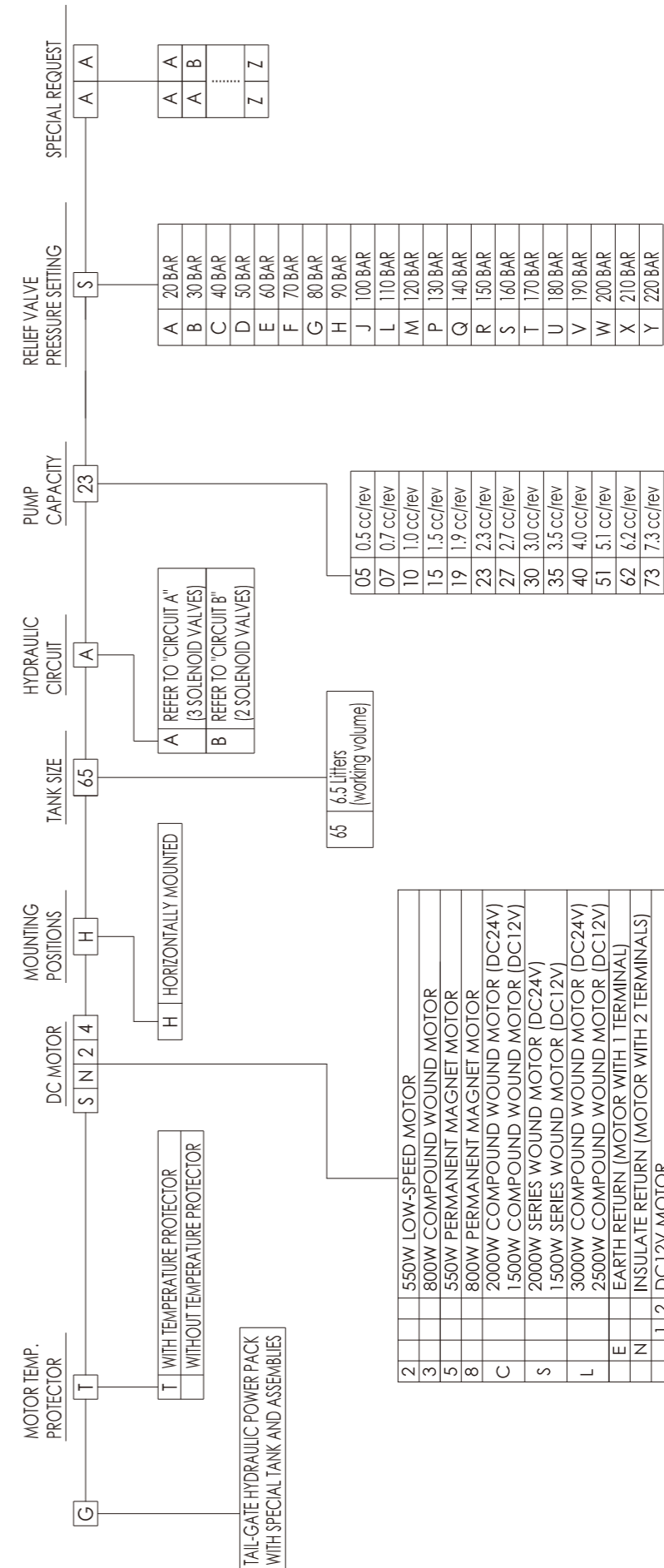
This compact design supplies customers:

- ◆ Easy to install and service
- ◆ Save space and cost.
- ◆ High quality and quick delivery

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

Series **TG168**

"TAIL-GATE" DC MOTOR HYDRAULIC POWER PACKS (W800575 ALUMINUM MANIFOLD / 6.5LITERS TANK)



HOW TO ORDER

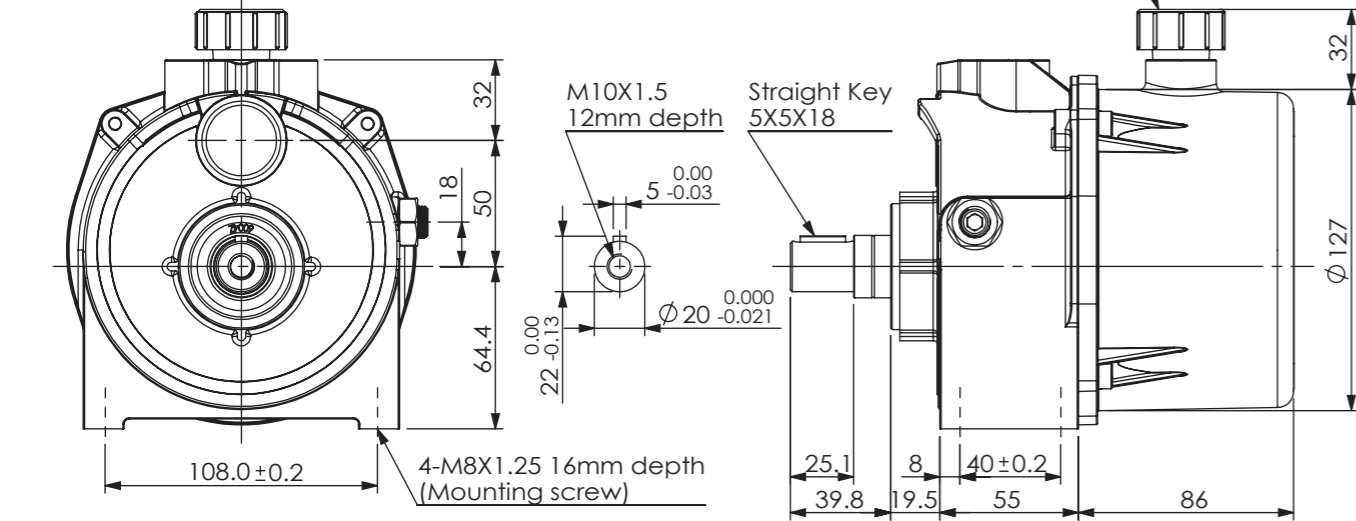
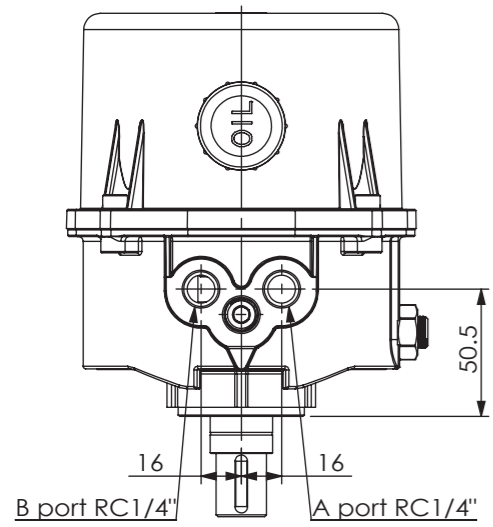
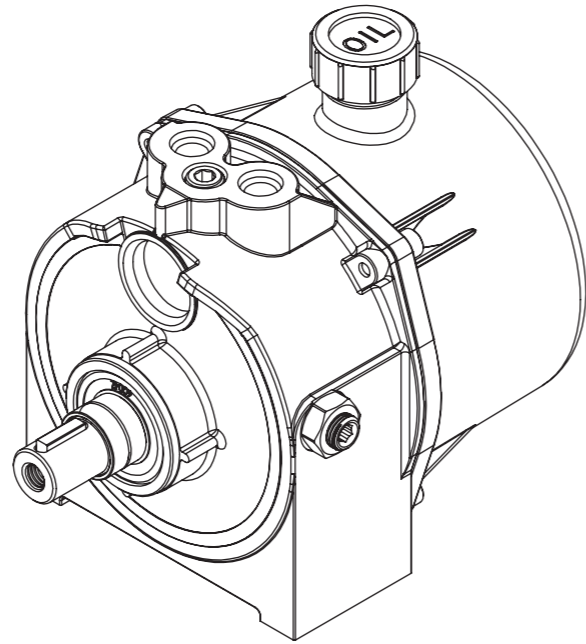
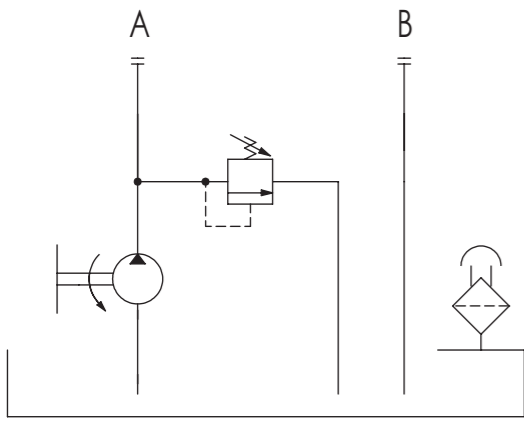
2		550W LOW-SPEED MOTOR
3		800W COMPOUND WOUND MOTOR
5		550W PERMANENT MAGNET MOTOR
8		800W PERMANENT MAGNET MOTOR
C		2000W COMPOUND WOUND MOTOR (DC24V)
		1500W COMPOUND WOUND MOTOR (DC12V)
S		2000W SERIES WOUND MOTOR (DC24V)
		1500W SERIES WOUND MOTOR (DC12V)
L		3000W COMPOUND WOUND MOTOR (DC24V)
		2500W COMPOUND WOUND MOTOR (DC12V)
E		EARTH RETURN (MOTOR WITH 1 TERMINAL)
N		INSULATE RETURN (MOTOR WITH 2 TERMINALS)
	1	DC12V MOTOR
	2	DC24V MOTOR
N	N	WITHOUT MOTOR
X	X	SPECIAL
P		2200W COMPOUND WOUND MOTOR (DC24V)
		1600W COMPOUND WOUND MOTOR (DC12V)

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

Hydraulic Power Packs

Series	SBT
Type	NN

HYDRAULIC CIRCUIT



The SBT power pack series is designed for use with horizontal influence drive system by various engines. These power packs have been designed mostly for agricultural use, but can be used in other fields.

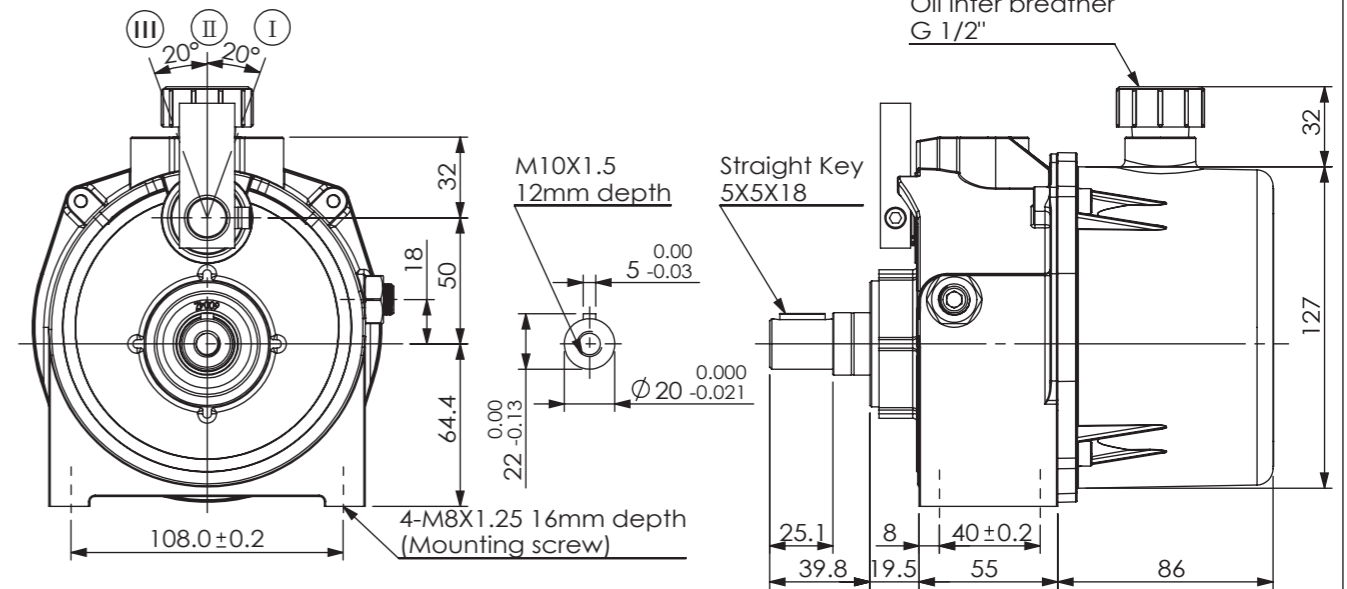
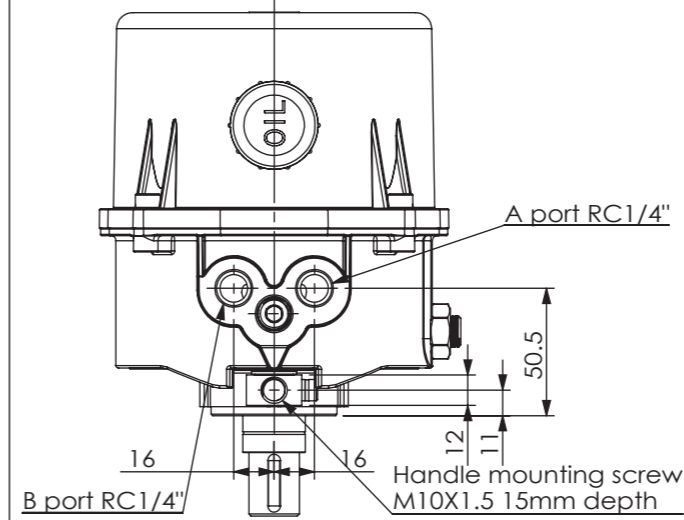
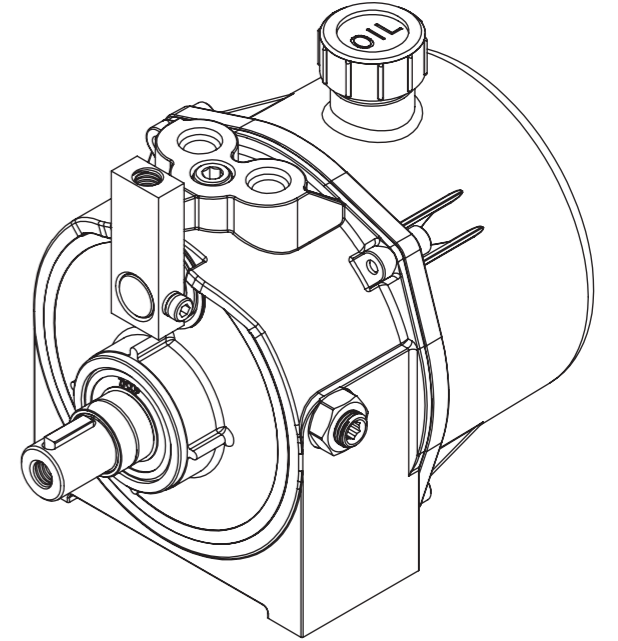
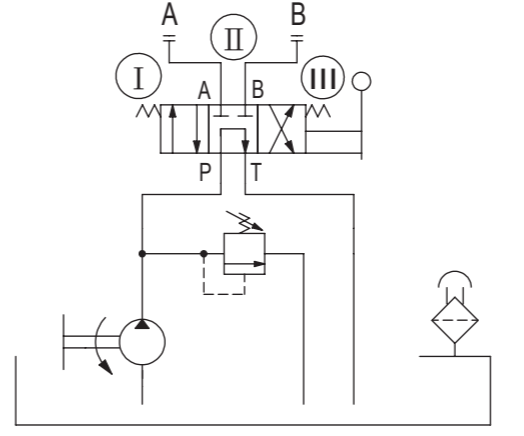
- ◆ Easy to install and service
- ◆ Save space and cost.
- ◆ High quality and quick delivery

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.

Hydraulic Power Packs

Series	SBT
Type	MC

HYDRAULIC CIRCUIT



The SBT power pack series is designed for use with horizontal influence drive system by various engines. These power packs have been designed mostly for agricultural use, but can be used in other fields.

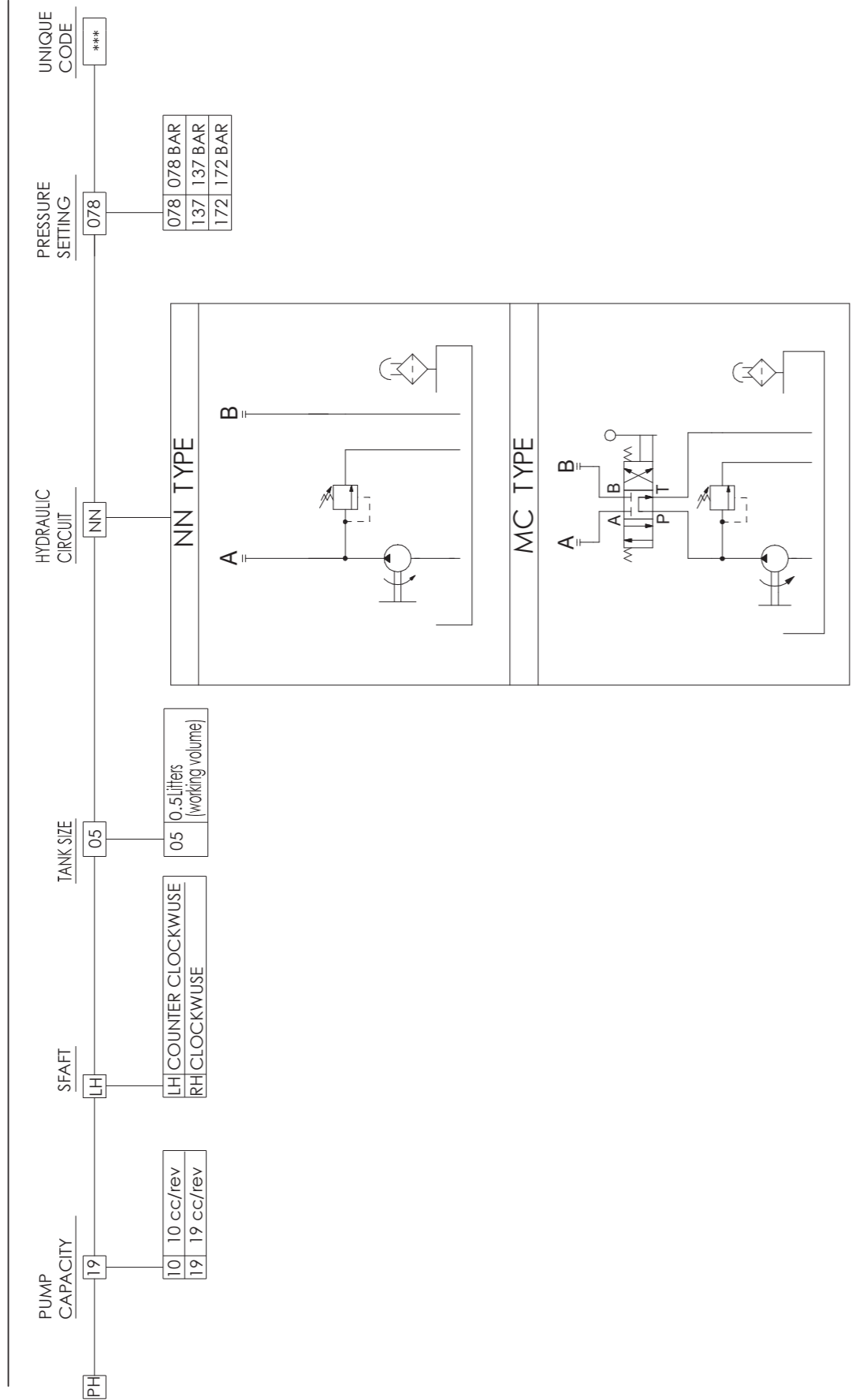
- ◆ Easy to install and service
- ◆ Save space and cost.
- ◆ High quality and quick delivery

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.

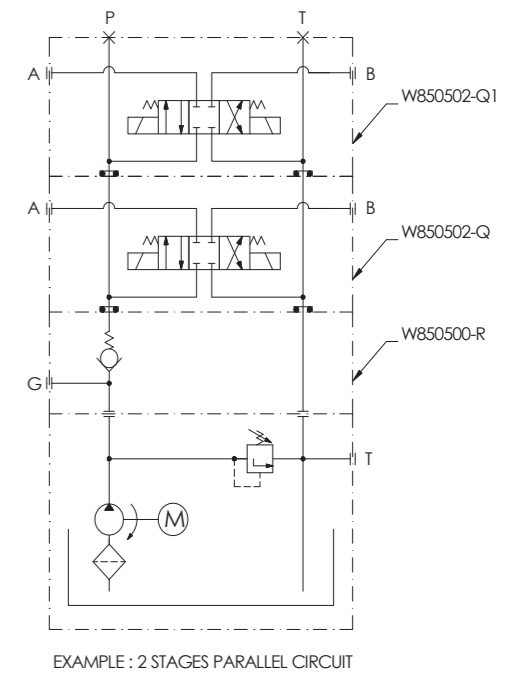
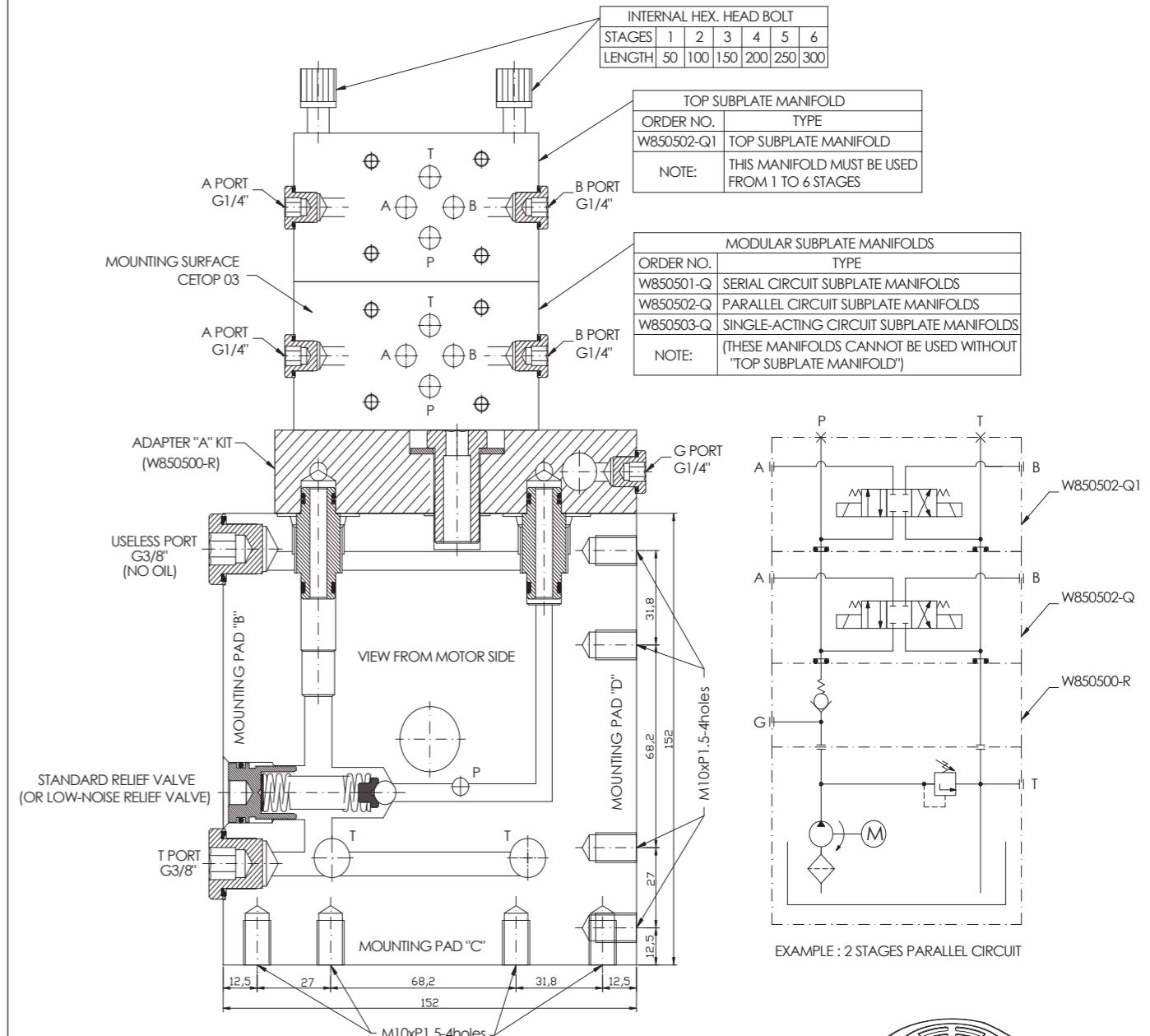
Series **SBT**

HOW TO ORDER

SBT SERIES "HORIZONTAL INFLUENCE DRIVE SYSTEM" HYDRAULIC POWER PACKS

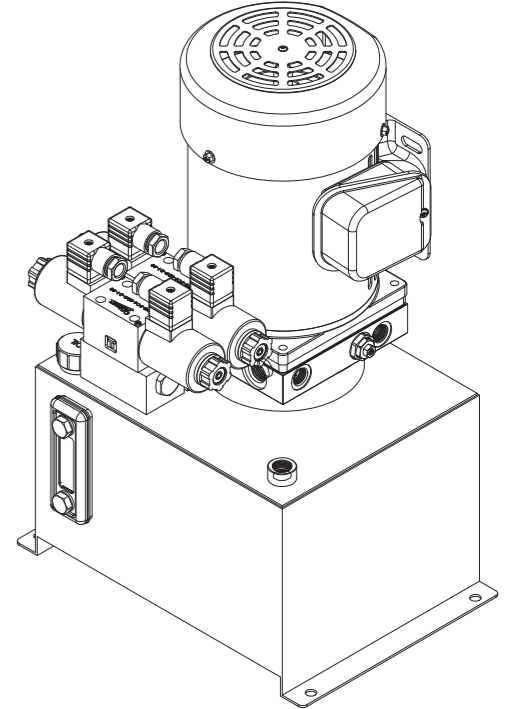


Special orders are available on request. Please consult our sales department.



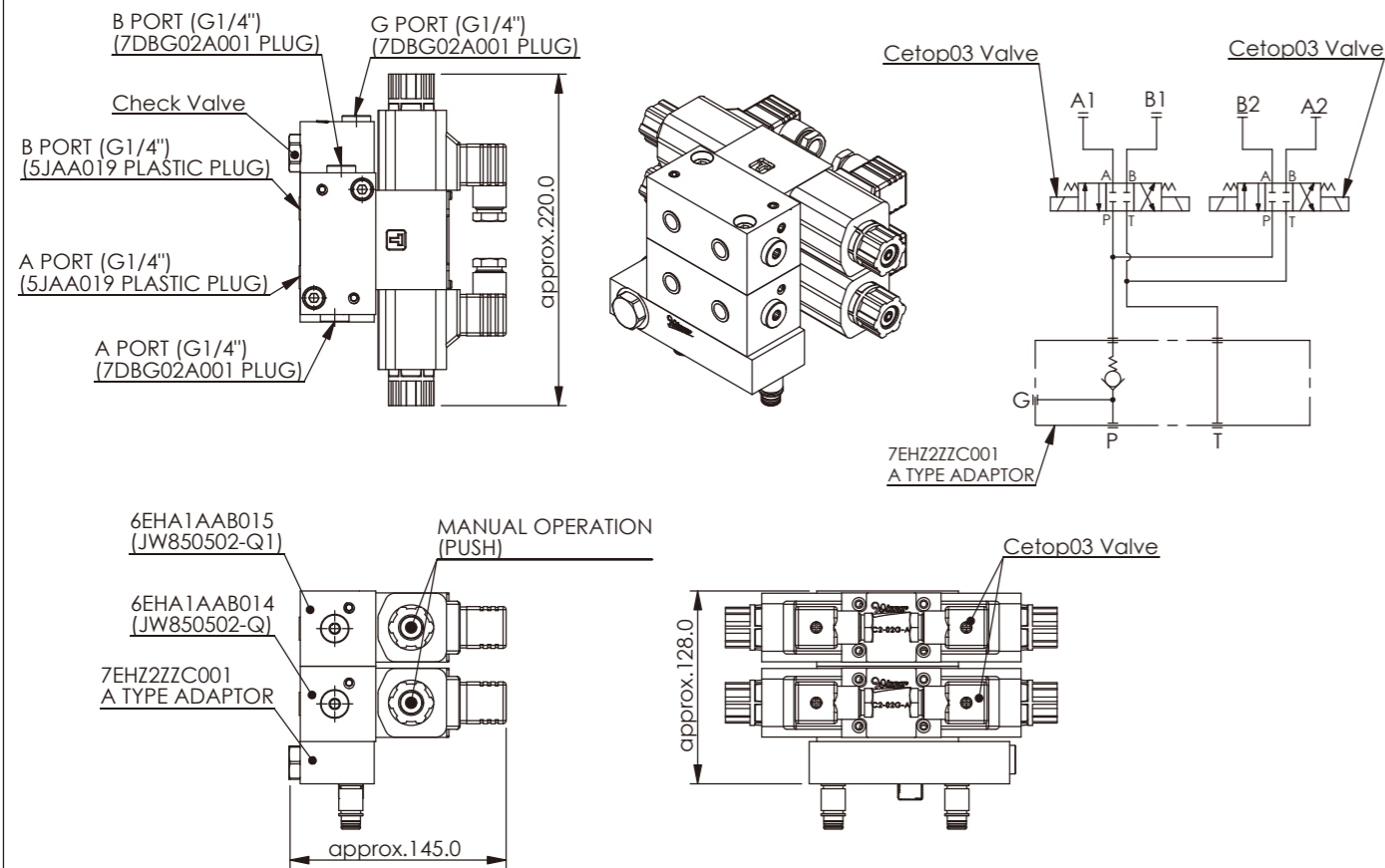
WINNER industrial valves are sold separately and including manual and solenoid-operated four-way valves, along with a complete range of accessory sandwich-type flow and pressure controls.

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

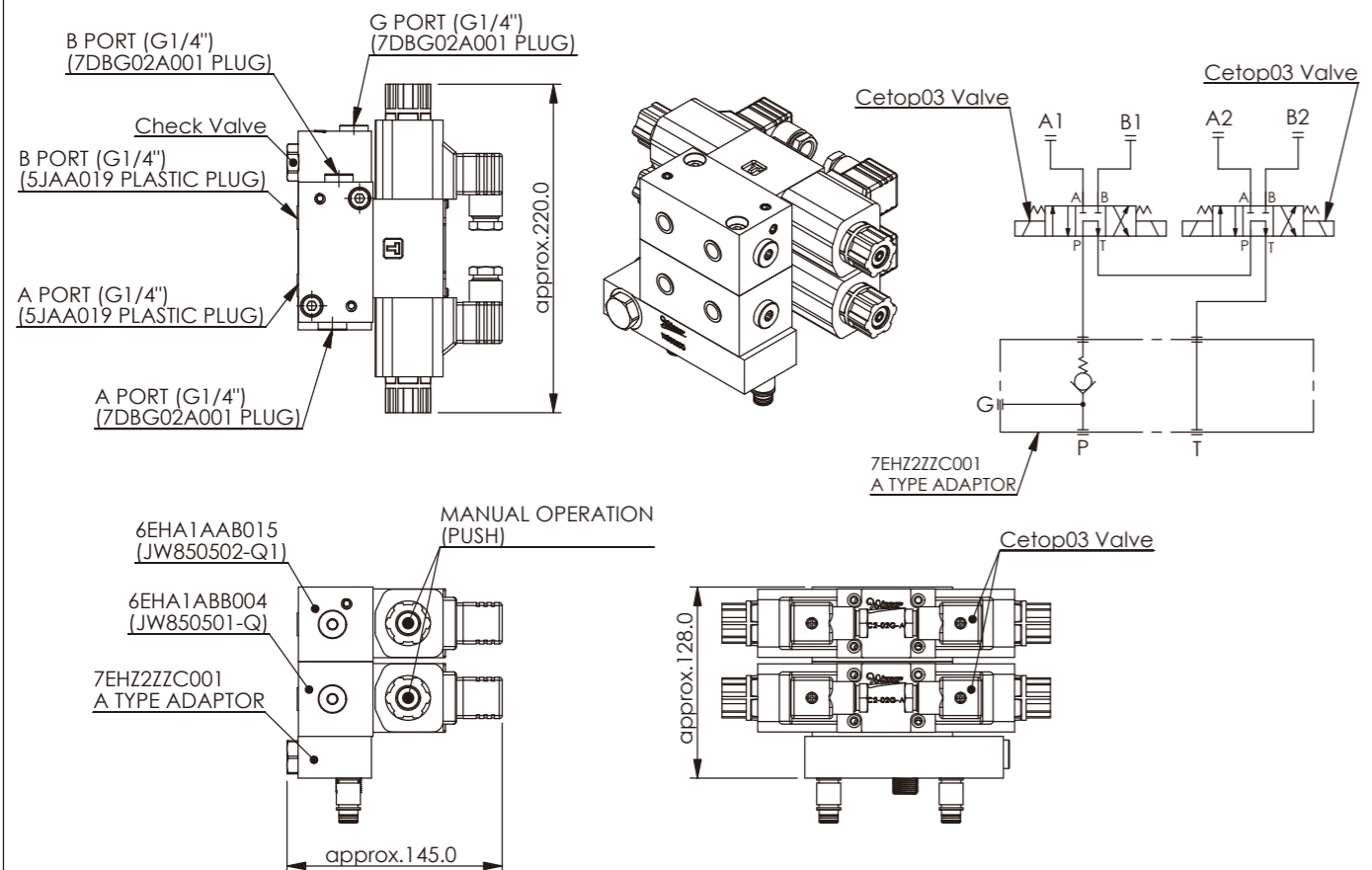


A-TYPE FUNCTION

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

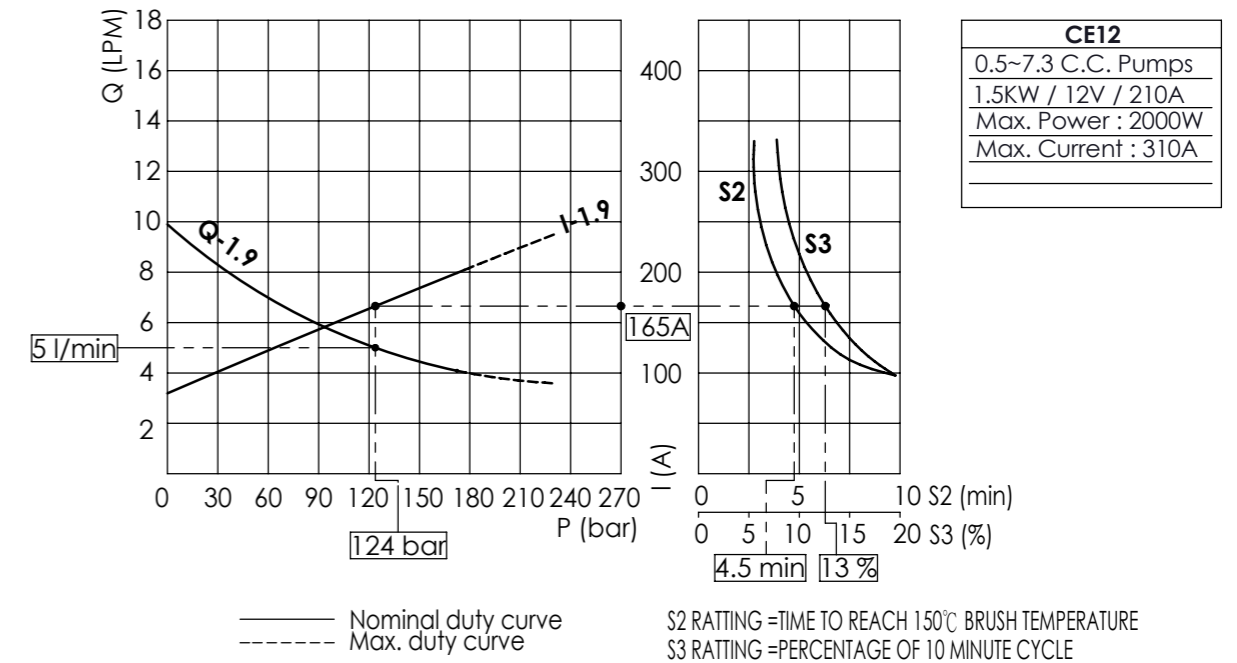


How To Choose D.C. Motor and Pump

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.

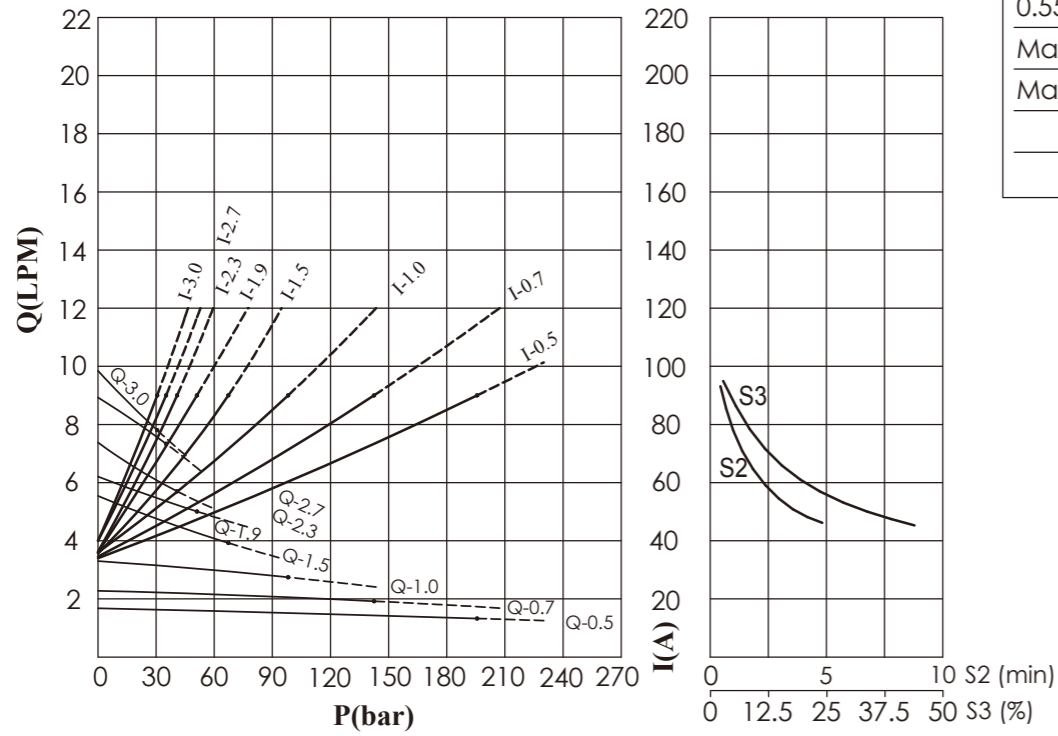


D.C. Motor and Pump Performance Curve

Ordering Code: **2N12**

TECHNICAL DATA

0.5~3.0 C.C. Pumps
0.55KW / 12V / 90A
Max. Power : 650W
Max. Current : 120A



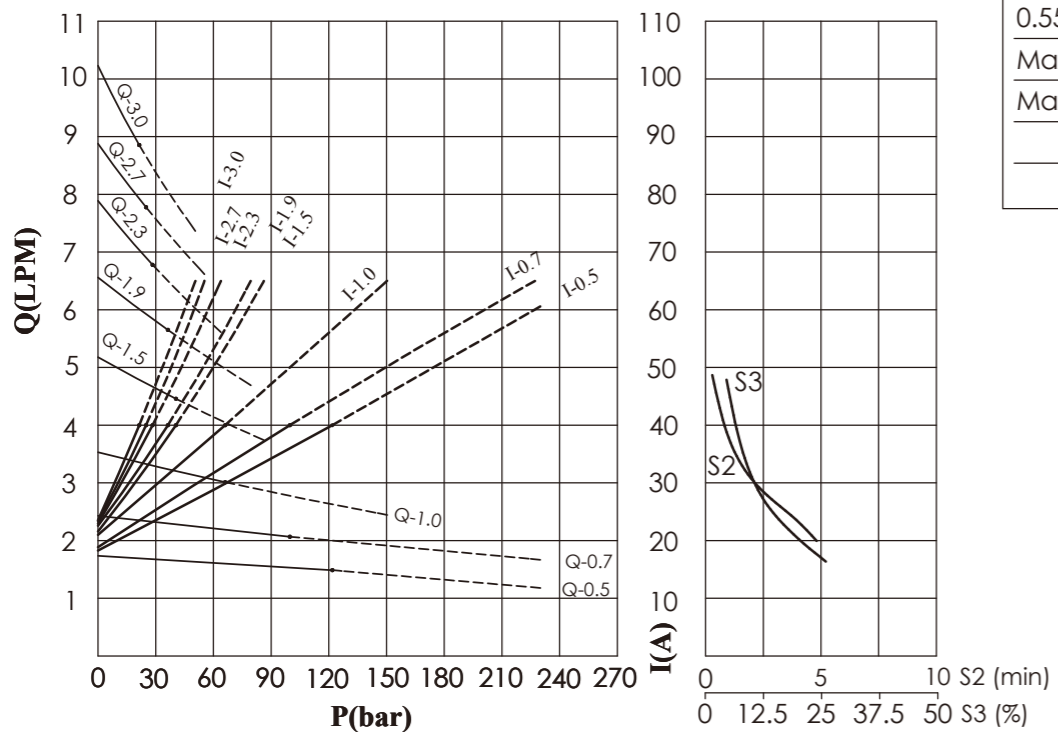
— Nominal duty curve
- - - Max. duty curve

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

Ordering Code: **2N24**

TECHNICAL DATA

0.5~3.0 C.C. Pumps
0.55KW / 24V / 40A
Max. Power : 650W
Max. Current : 65A



— Nominal duty curve
- - - Max. duty curve

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

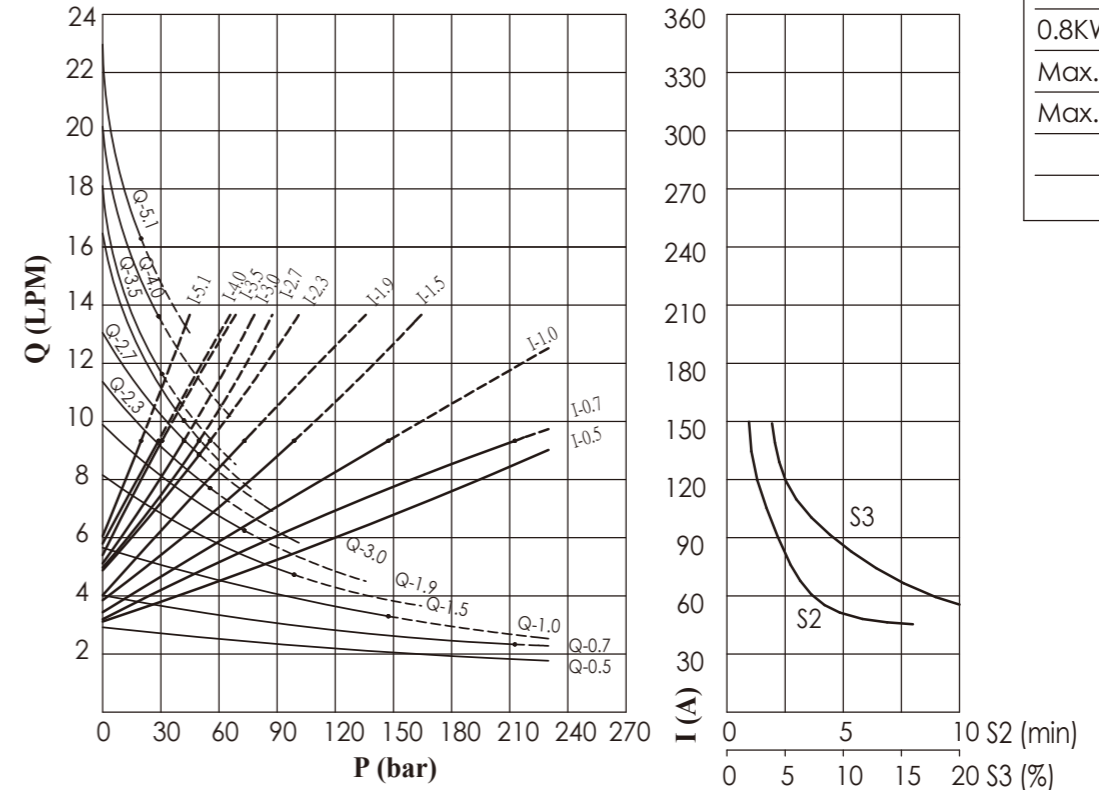


D.C. Motor and Pump Performance Curve

Ordering Code: **3N12**

TECHNICAL DATA

0.5~5.1 C.C. Pumps
0.8KW / 12V / 140A
Max. Power : 1000W
Max. Current : 205A



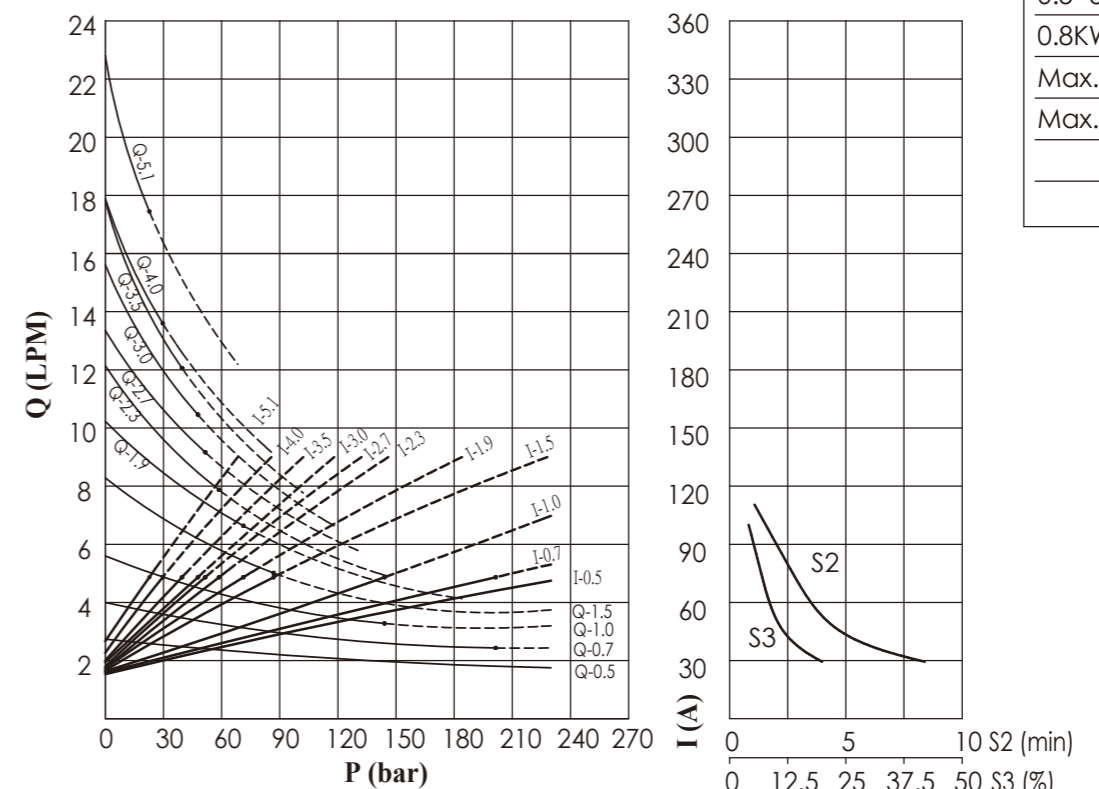
— Nominal duty curve
- - - Max. duty curve

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

Ordering Code: **3N24**

TECHNICAL DATA

0.5~5.1 C.C. Pumps
0.8KW / 24V / 73A
Max. Power : 1000W
Max. Current : 135A



— Nominal duty curve
- - - Max. duty curve

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

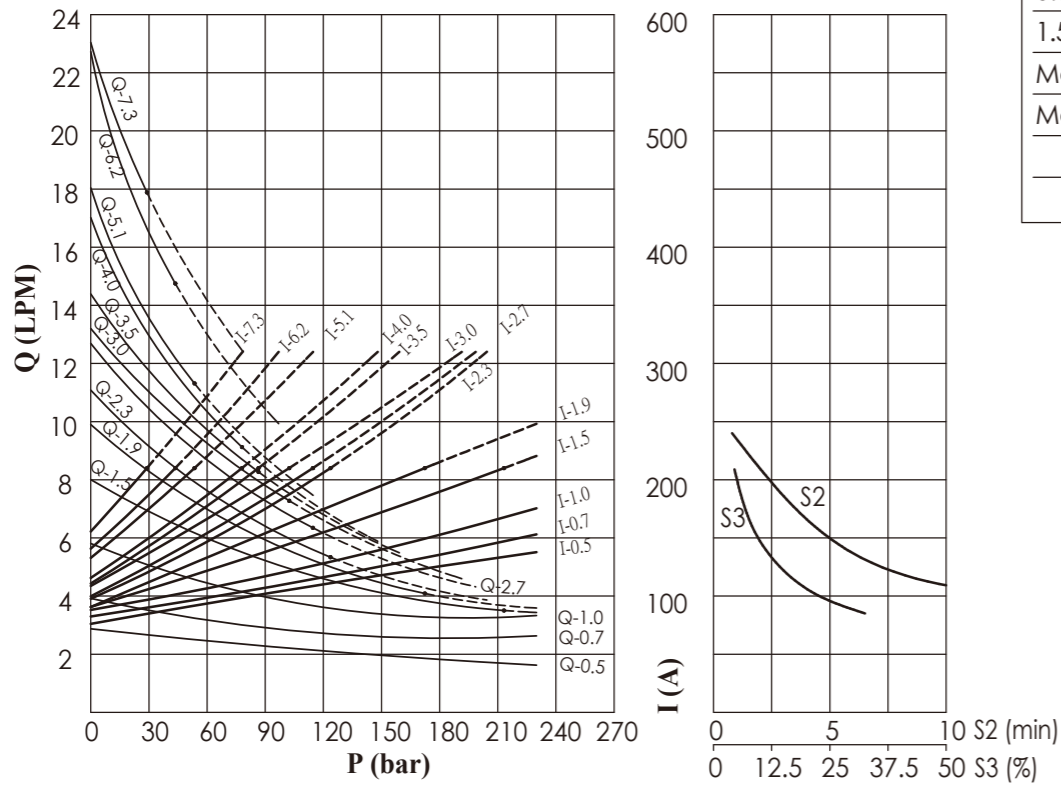


D.C. Motor and Pump Performance Curve

Ordering Code: **CE(N)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

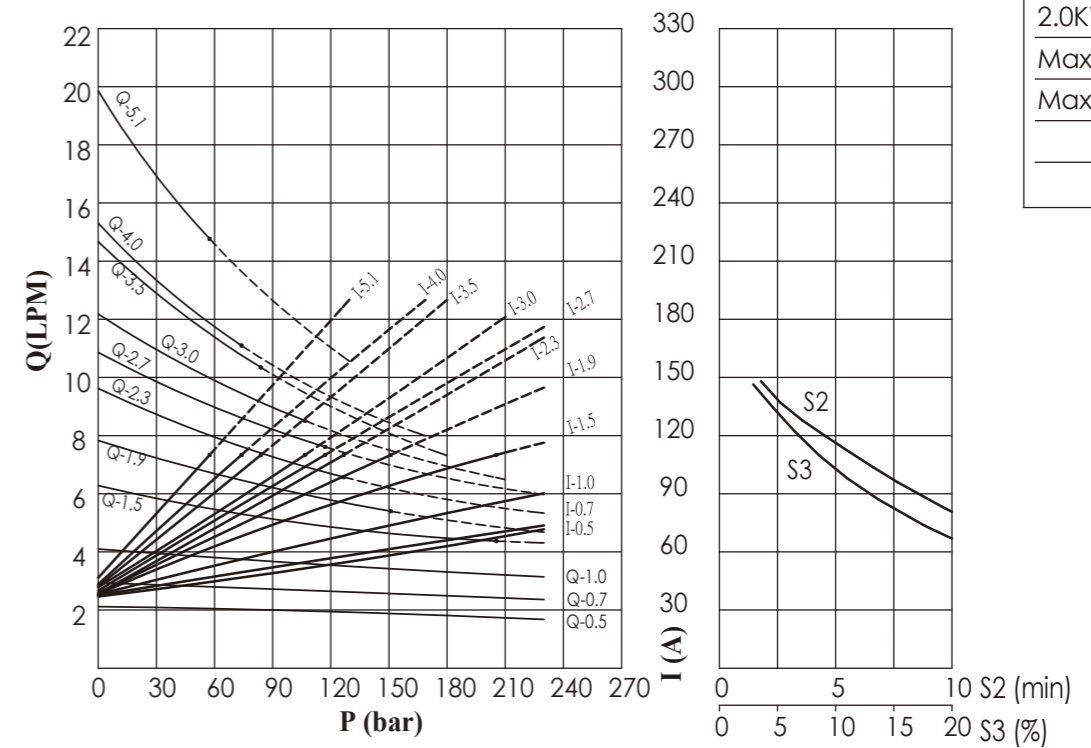


D.C. Motor and Pump Performance Curve

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

TECHNICAL DATA

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



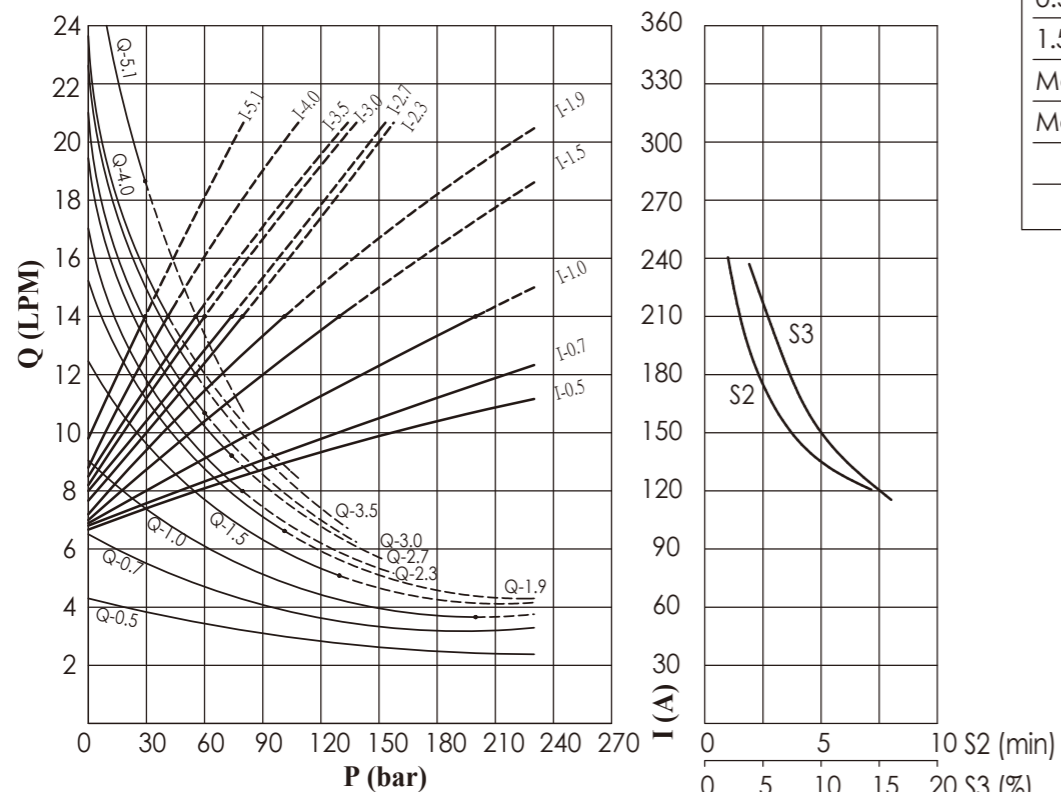
— Nominal duty curve
- - - Max. duty curve

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



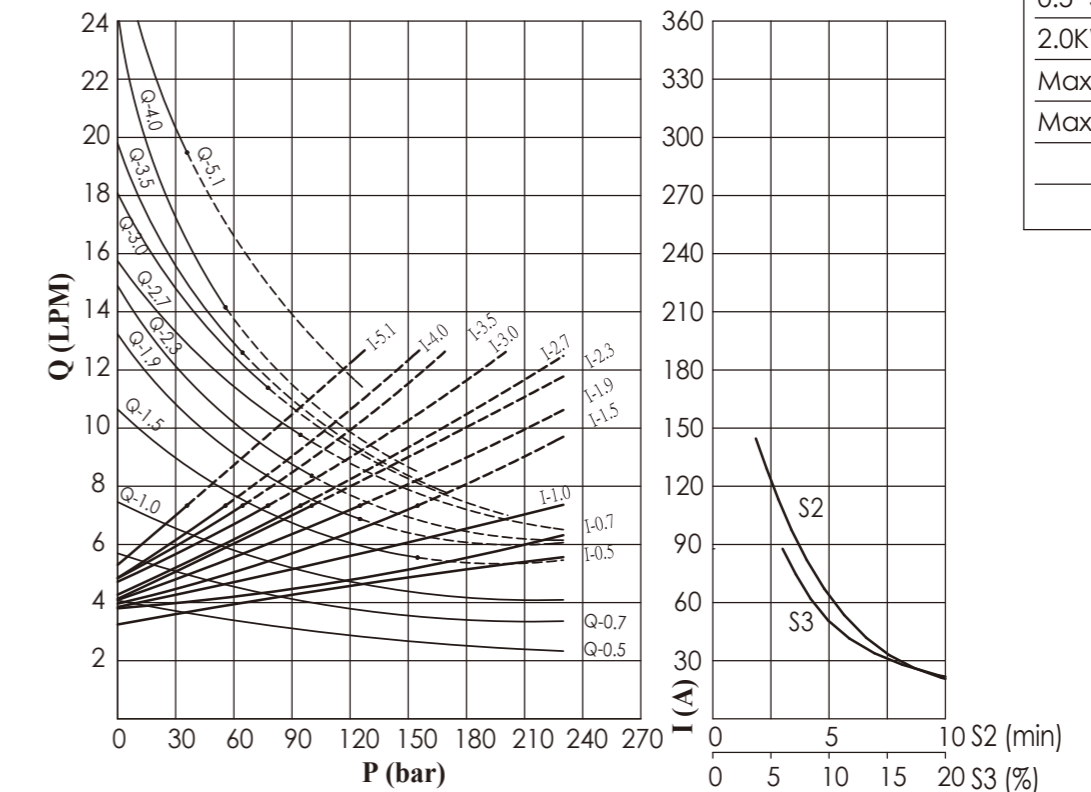
— Nominal duty curve
- - - Max. duty curve

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

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

TECHNICAL DATA

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



— Nominal duty curve
- - - Max. duty curve

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

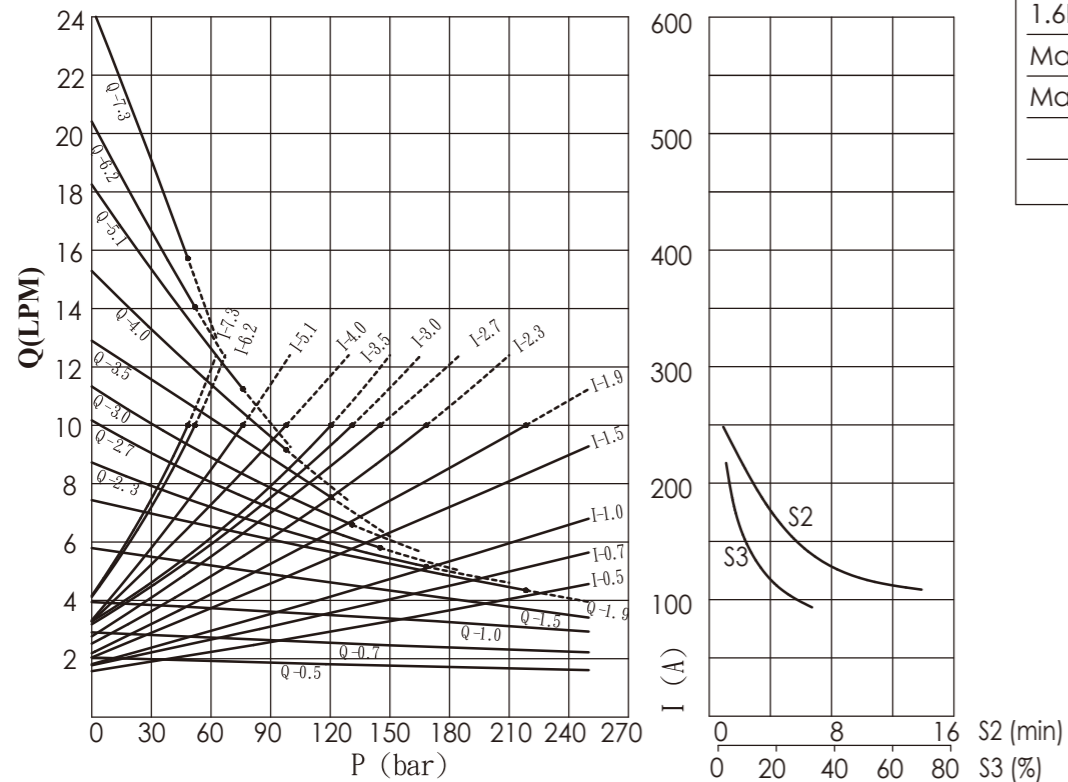


D.C. Motor and Pump Performance Curve

Ordering Code: **PN12**

TECHNICAL DATA

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



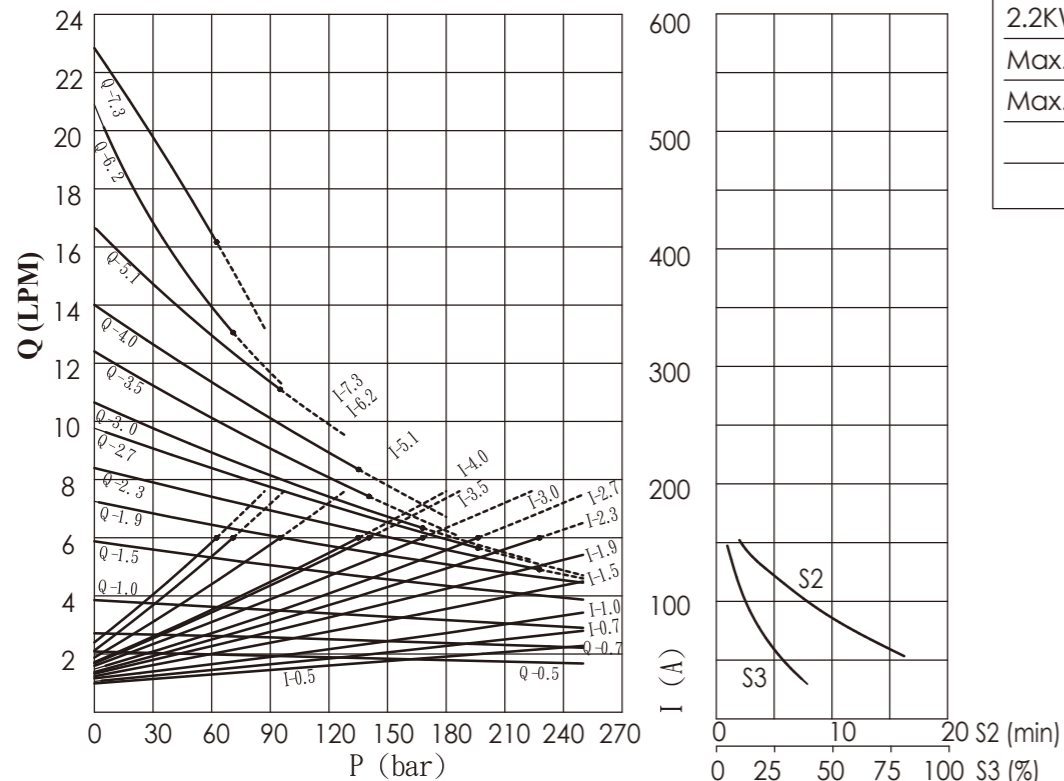
— Nominal duty curve
- - - Max. duty curve

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

Ordering Code: **PN24**

TECHNICAL DATA

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



— Nominal duty curve
- - - Max. duty curve

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

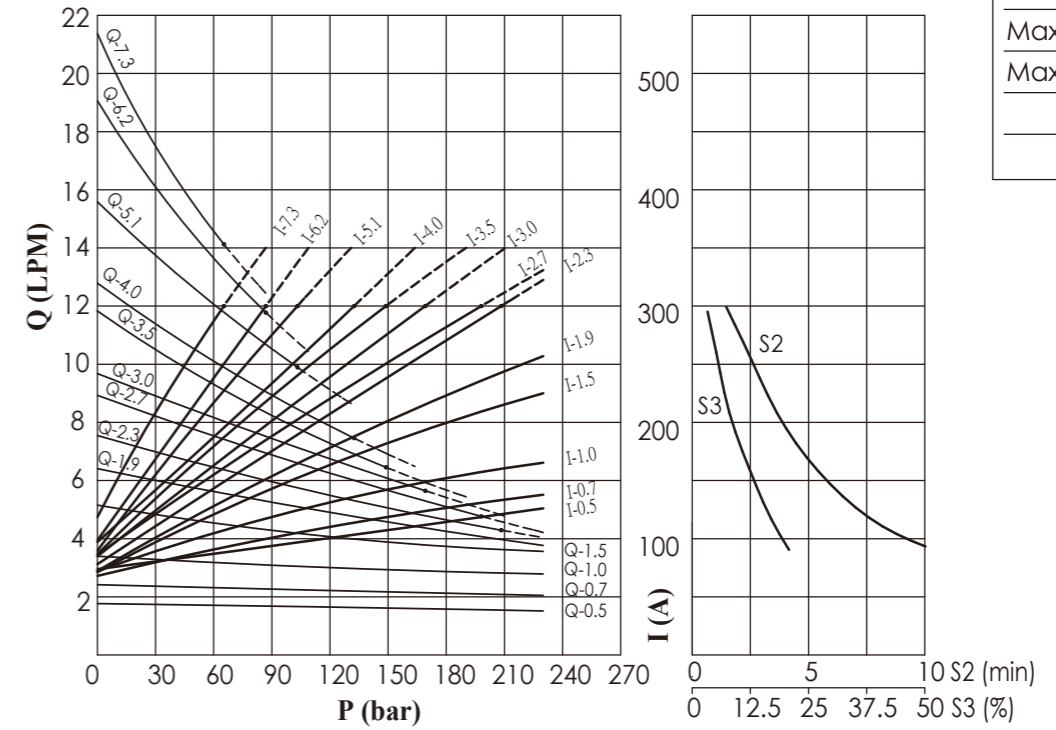


D.C. Motor and Pump Performance Curve

Ordering Code: **LN12**

TECHNICAL DATA

0.5~7.3 C.C. Pumps
2.5KW / 12V / 300A
Max. Power : 2800W
Max. Current : 350A



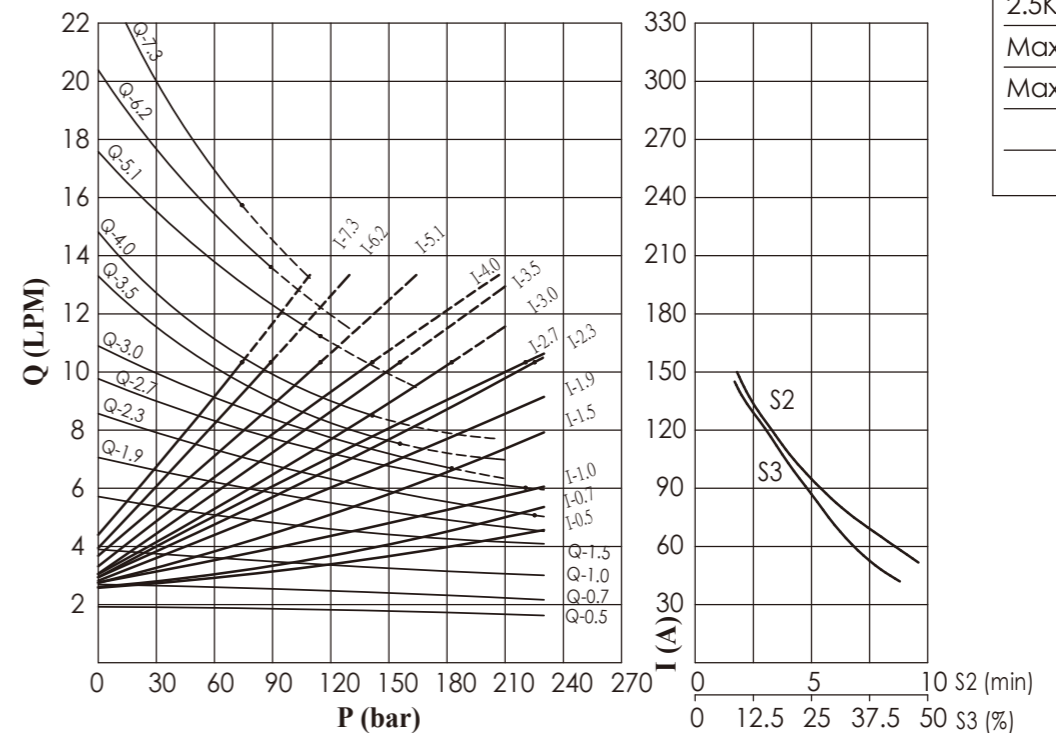
— Nominal duty curve
- - - Max. duty curve

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

Ordering Code: **LN24**

TECHNICAL DATA

0.5~7.3 C.C. Pumps
2.5KW / 24V / 155A
Max. Power : 3000W
Max. Current : 200A



— Nominal duty curve
- - - Max. duty curve

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

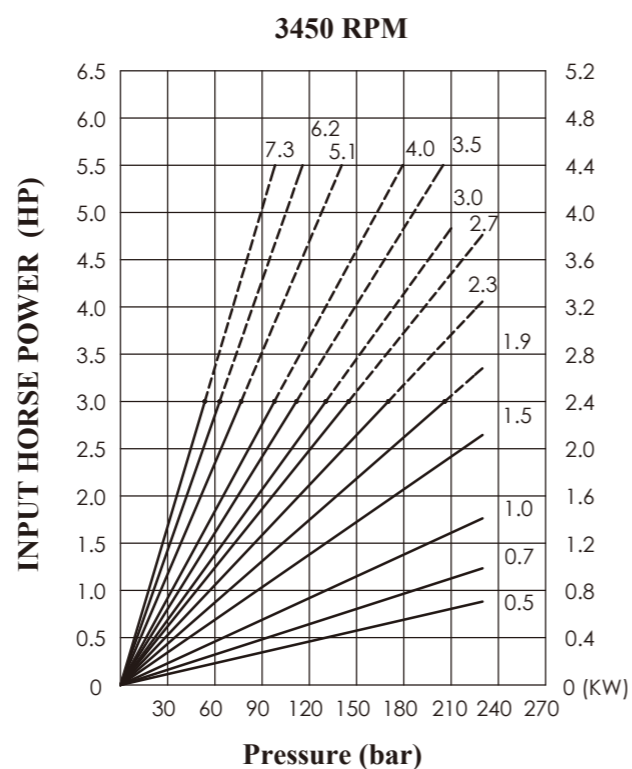
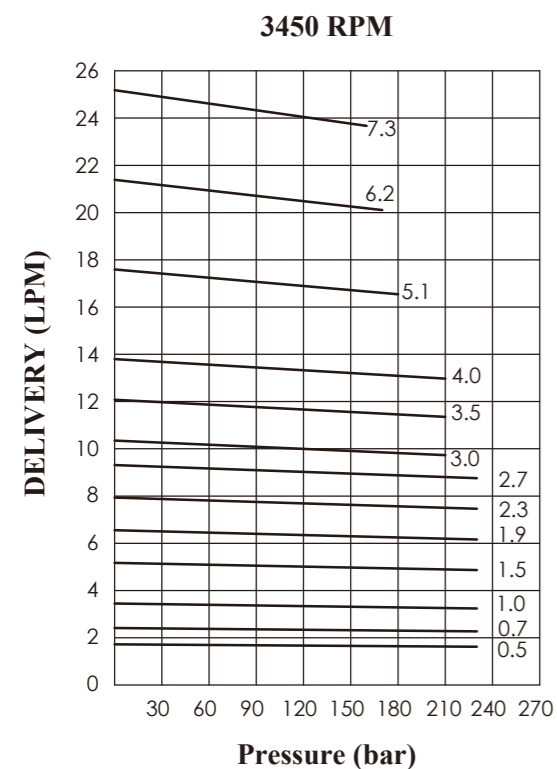
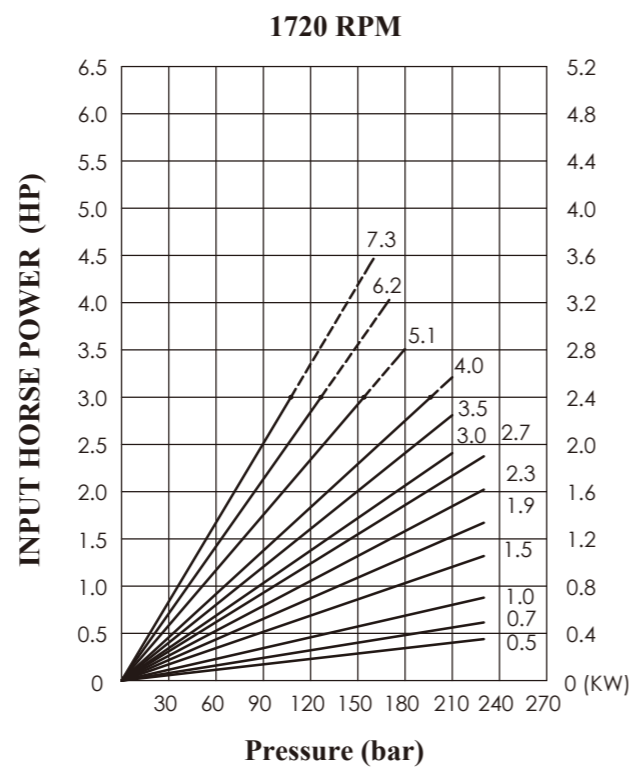
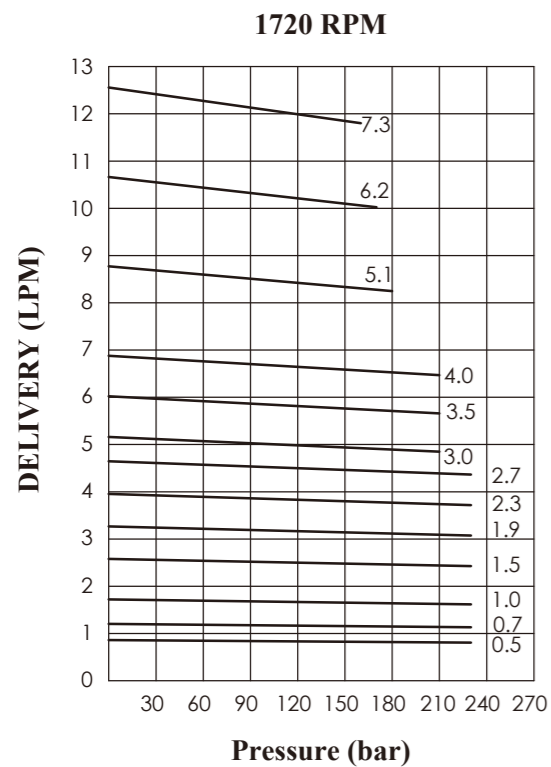
A.C. Motor and Pump Performance Curve

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 ~ 7.3C.C. Pumps

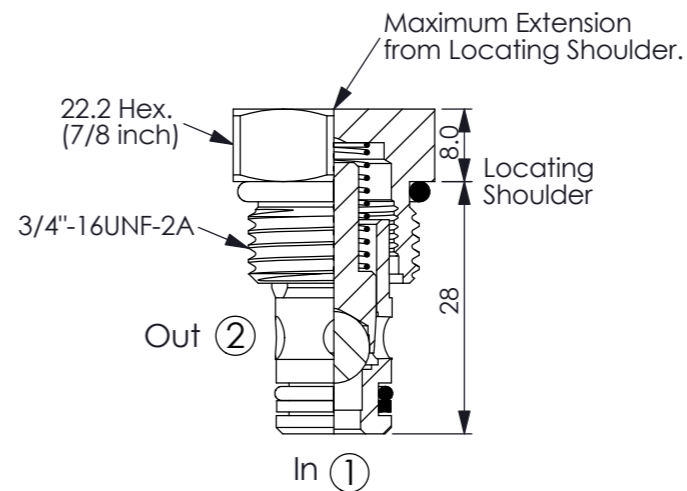
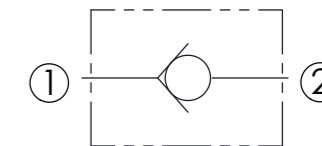
OIL VISCOSITY : 46 CST
OIL TEMPERATURE : 40°C



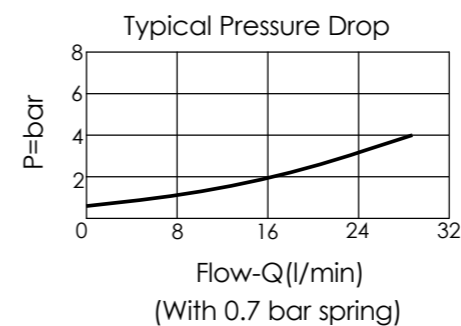
*High-Torque Motors' Performance Curves, Please Consult Our Sales Department.

CHECK VALVE

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



UNIT:mm



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	

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)

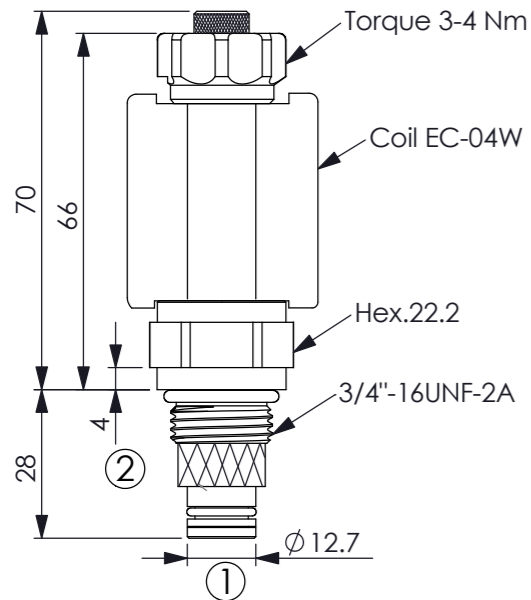
Z OPTION

N Non-adjustable

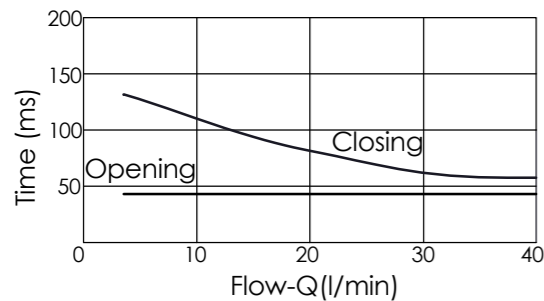
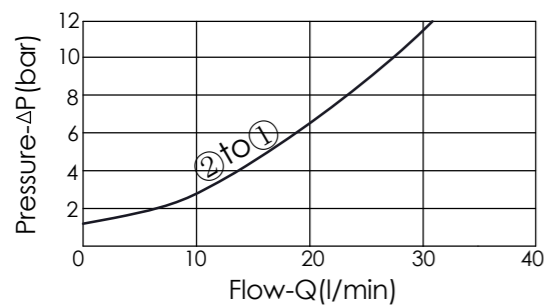
SOLENOID OPERATED VALVES

1-Port 2-Way Normally-Closed Cartridge Style With Filter

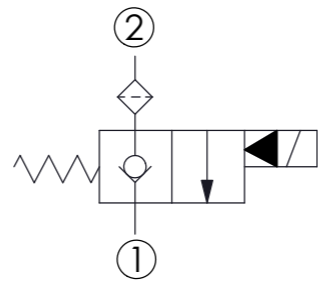
Ordering Code: **EP-08W-X-Y-Z-04**



UNIT:mm





Y	OPERATION
07	Normally-Closed With Filter No Reverse Flow Energized



TECHNICAL DATA

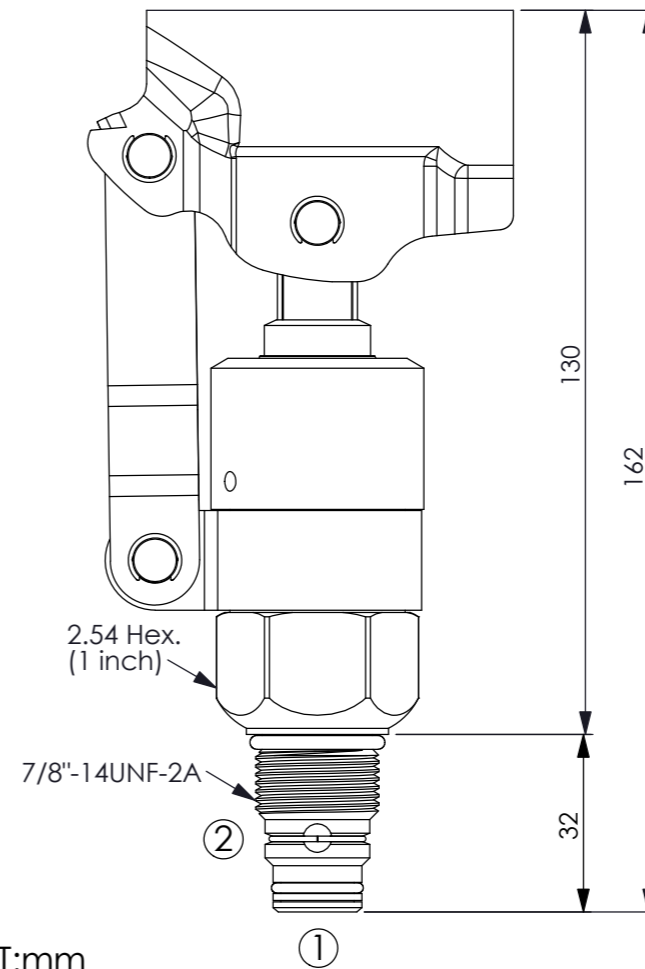
Max.Operating pressure:	210	bar
Rated flow:	30	l/min
Cavity-Tooling:	08W-2	
Installation torque:	39-51	Nm
Weight:	0.13	kg
Fluids-Temperatures:	-40~120	°C
Internal Leakage:	0.15cc/minute	(3 drops/minute) max.at 210 bar
Filtration:	25 μm nominal or better	
Minimun Voltage Required:	90 % of nominal	
Coils must be ordered separately		
Mounting Position:	unrestricted	

X	STRUCTURE
2A	2 Ports · 20 Watt. Coil

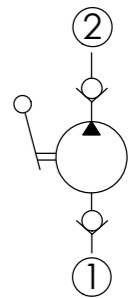
Z	OPTIONS
N	Non-adjustable 
M	Screw-out Knob Style 

HAND PUMP

Ordering Code: **HP-10W-X-Y-Z**



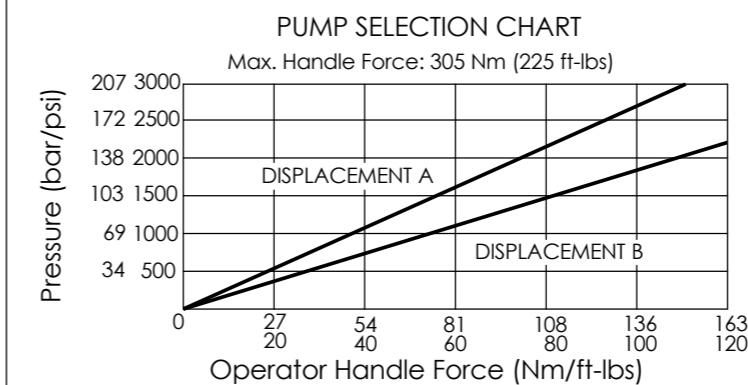
UNIT:mm



TECHNICAL DATA

Max. Operating Pressure:	210	bar
Flow:	Up to 10.6 c.c. per stroke	
Cavity-Tooling:	10W-2	
Installation torque:	35-45	Nm
Weight:	0.83	kg
Lever must be ordered separately.		

Lever order code no. : 7GYAG001
Lever length : 405 mm



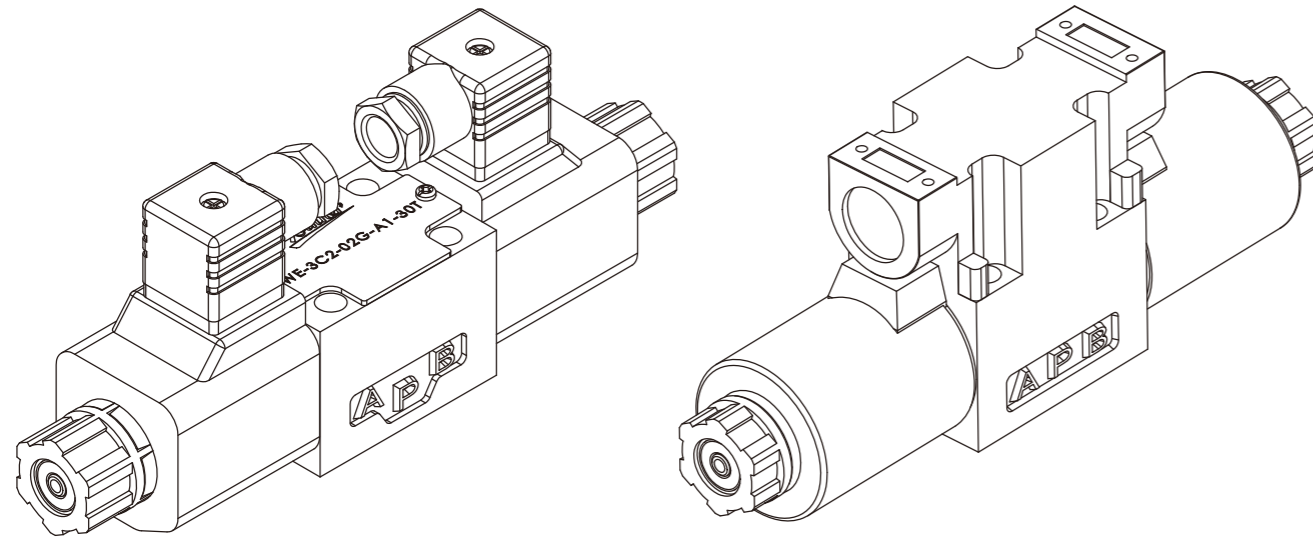
Y	DISPLACEMENT
A	7.4 c.c. per stroke
B	10.6 c.c. per stroke

X	OPERATION
20	Push to pressurize

Z	OPTION
N	Non-adjustable

CETOP 03

Series WE



Wiring Box Type

SPECIFICATION

Pipe Diameter (Nominal)	02 (1/4")
Max. Pressure	250 BAR
Max. Flow	50 LPM
Allowance Back Pressure	175 BAR
Max. Change Frequency	240 times/mim (AC,DC) 120 times/min(RF)

HOW TO ORDER

WE-3C6-02G-D2-30T

DESIGN SERIES
30 : DIN TYPE
20 : WIRING BOX TYPE

COIL VOLTAGE
A1 : AC110V,50Hz / AC110V,60Hz
A2 : AC220V,50Hz / AC220V,60Hz

D1 : DC12V
D2 : DC24V

PIPE DIAMETER(NOMINAL) G02;1/4"

SPOOL TYPES (Detail as next page listed)

SOLENOID DIRECTIONAL CONTROL VALVES(WET TYPE)

SPOOL TYPE

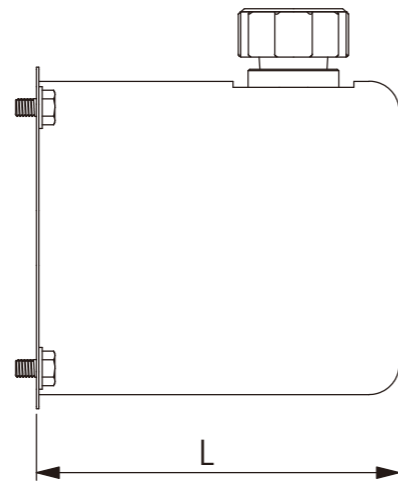
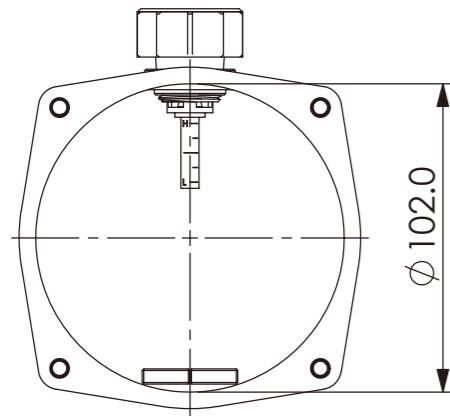
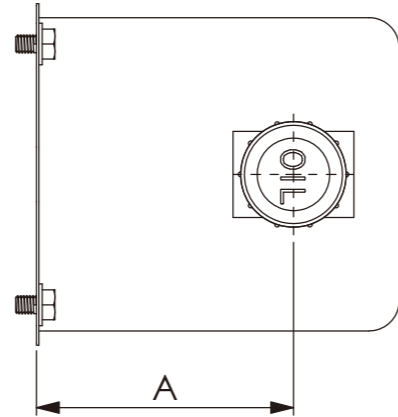
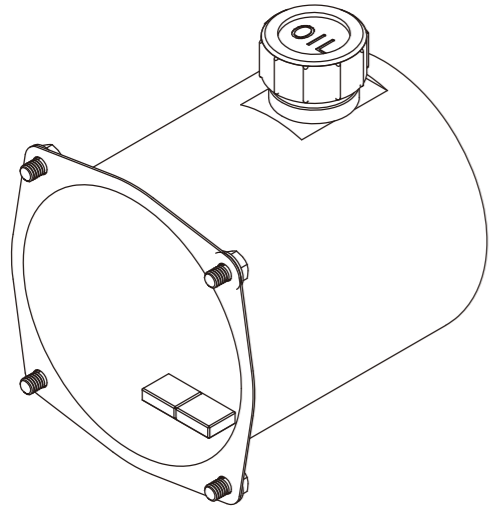
SPRING CENTER	SYMBOLS	NO SPRING	SYMBOLS	NO SPRING	SYMBOLS	
3C2		2D2		2D2A		
3C3		2D3		2D3A		
3C4		2D7		2D4A		
3C40						
3C5		SPRING OFFSET	SYMBOLS			
3C60						
3C7						
3C9		2A3				
3C10		2B2				
3C11		2B3				
3C12						

SPRING OFFSET	SYMBOLS	SPRING OFFSET	SYMBOLS
2B2A		2B2B	
2B3A		2B3B	
2B4A		2B4B	
2B40A		2B40B	
2B5A		2B5B	
2B60A		2B60B	
2B7A		2B7B	
2B9A		2B9B	
2B10A		2B10B	
2B11A		2B11B	
2B12A		2B12B	

Round steel reservoirs

For 115x115 manifold

∅ 102 mm



Unit : mm

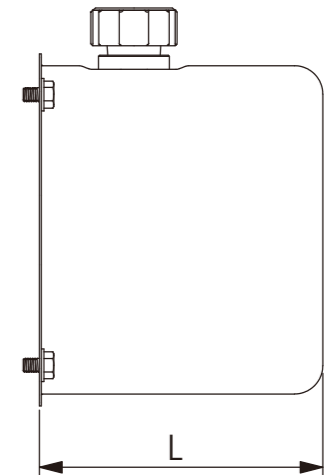
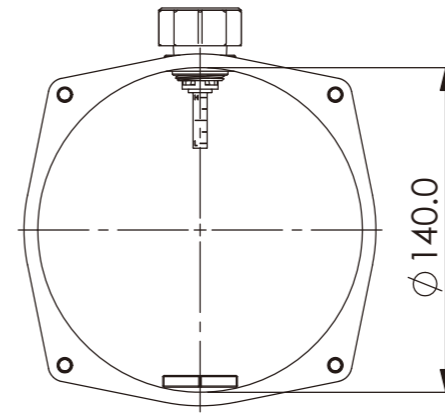
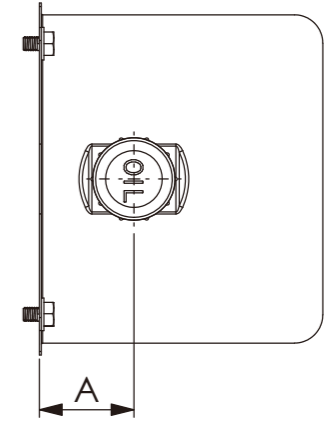
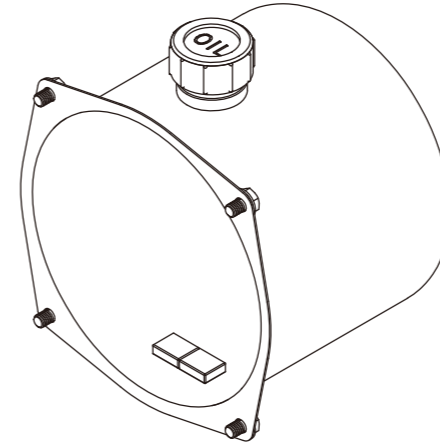
Ordering Code	L (mm)	A (mm)	Volume (Liters)
KKAS120RD002	120	85	0.5
KKAS170RD002	170	85	0.8
KKAS200RD002	205	85	1.0
KKAS240RD002	245	85	1.3
KKAS280RD002	285	85	1.7

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

Round steel reservoirs

For 152x152 manifold

∅ 140 mm



Unit : mm

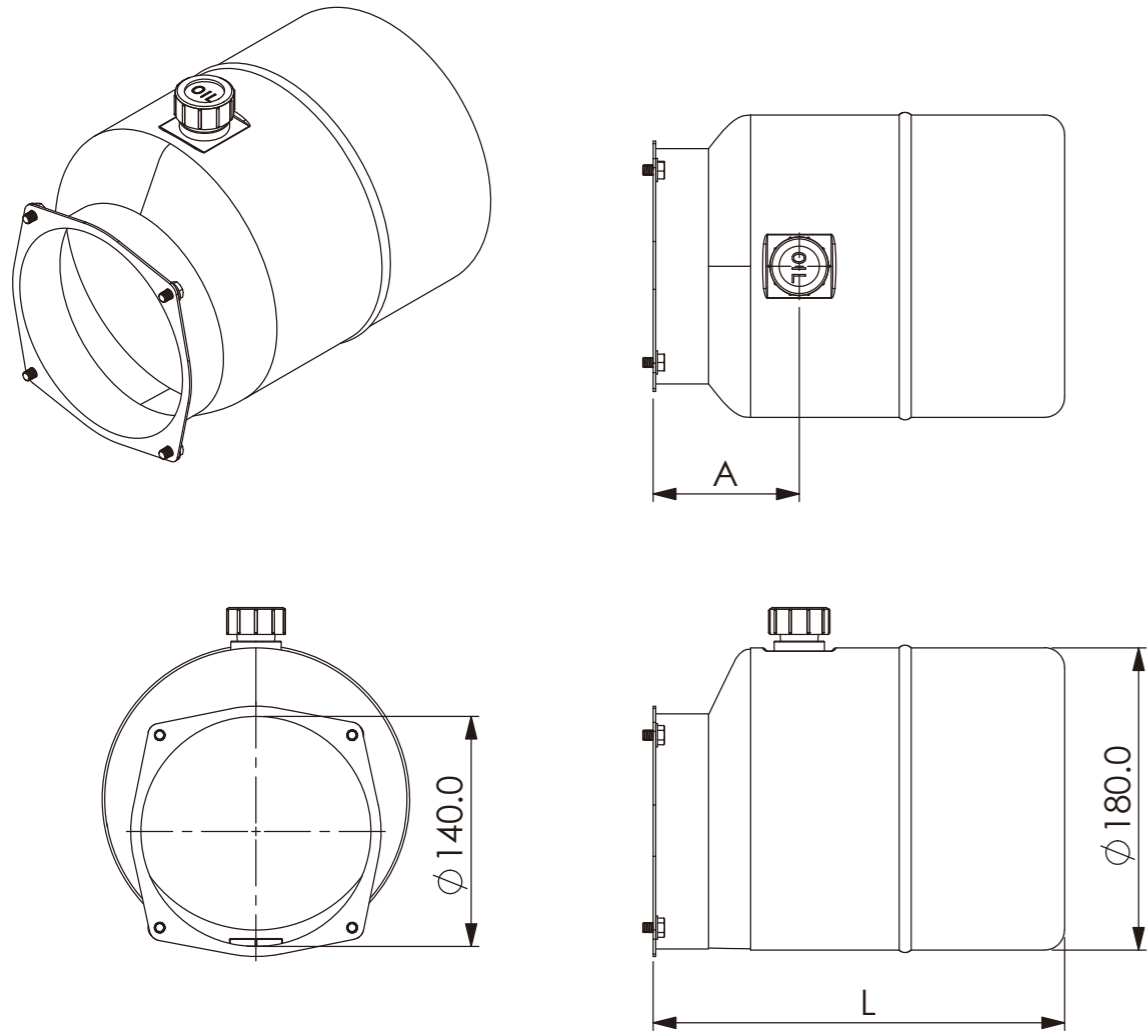
Ordering Code	L (mm)	A (mm)	Volume (Liters)
KKAM120RD002	120	40	1.0
KKAM170RD002	170	40	1.6
KKAM200RD002	205	40	2.0
KKAM240RD002	245	40	2.4
KKAM280RD002	285	40	2.8
KKAM360RD002	365	40	3.6
KKAM400RD002	405	40	4.2
KKAM440RD001	445	40	4.6

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

Round steel reservoirs

For 152x152 manifold

∅ 180 mm



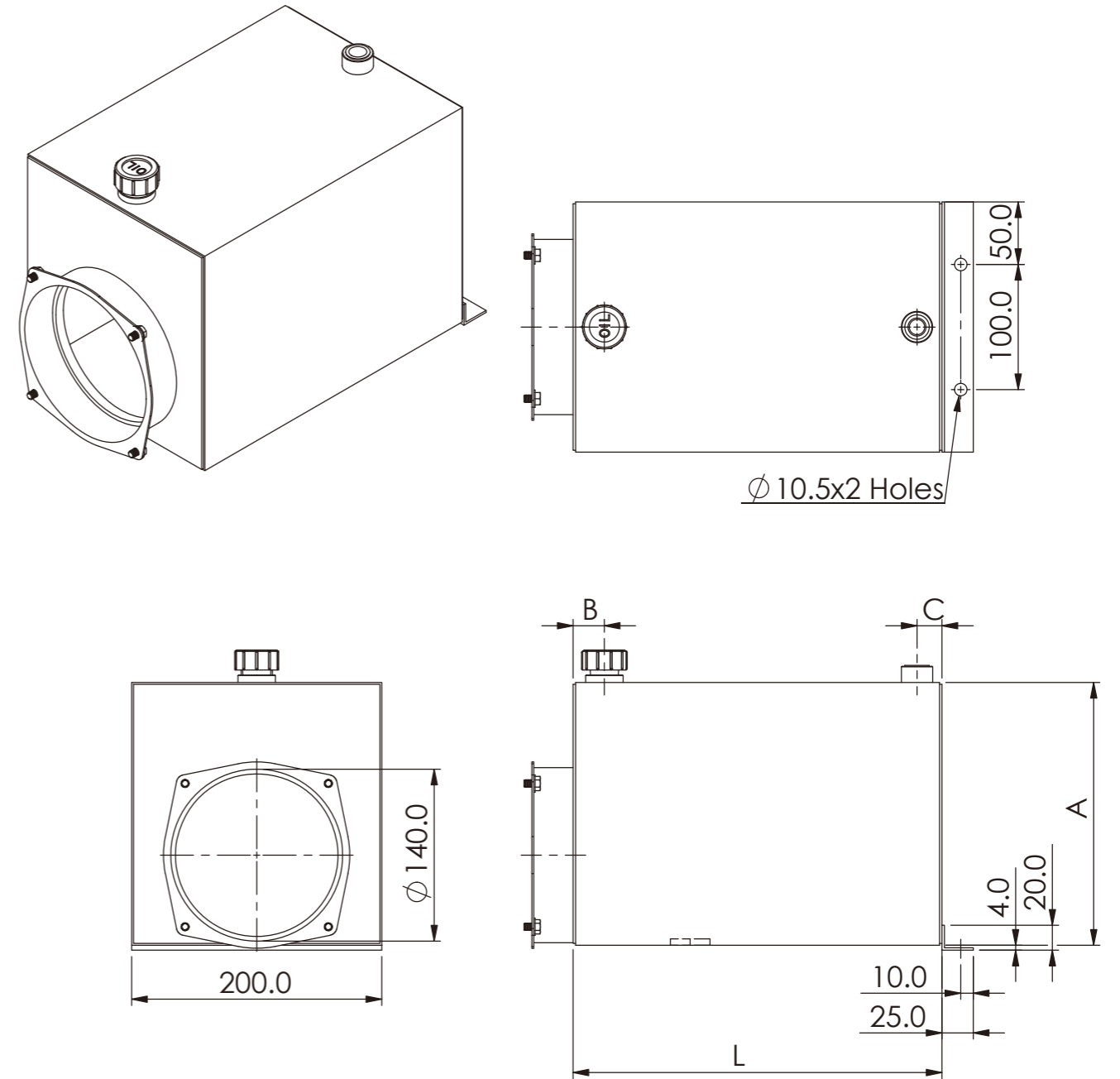
Unit : mm

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



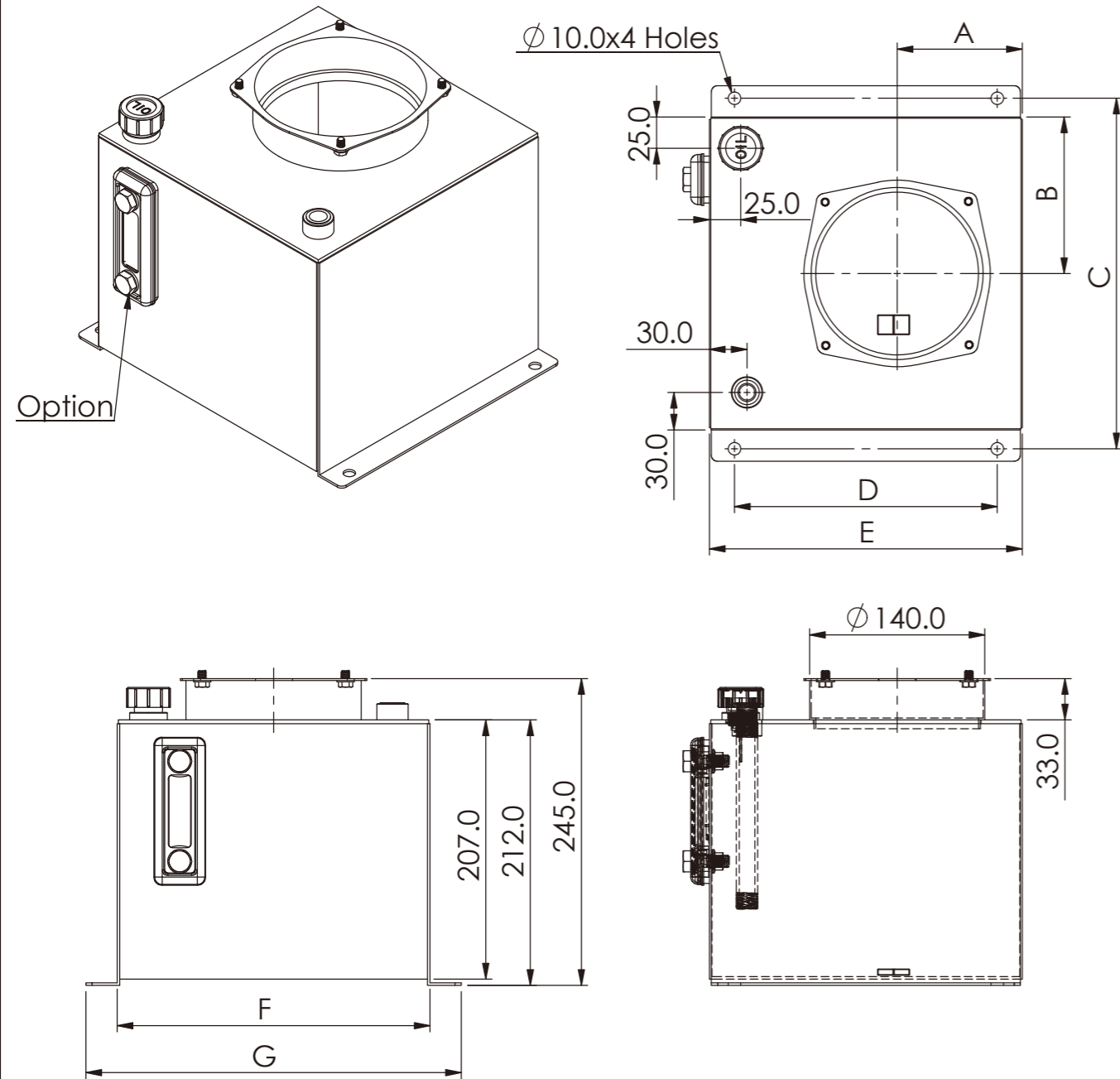
Unit:mm

Ordering Code	L (mm)	A (mm)	B (mm)	C (mm)	Volume (Liters)
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

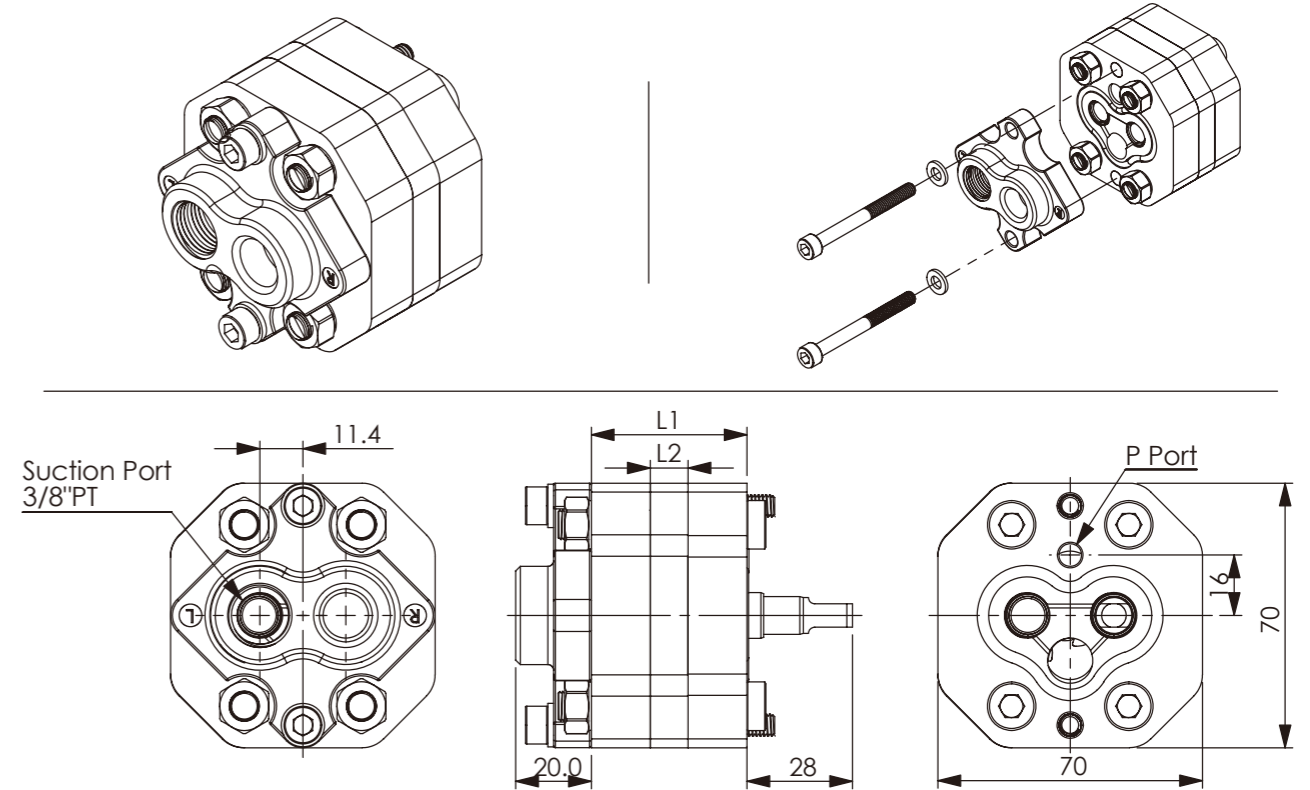


Unit:mm

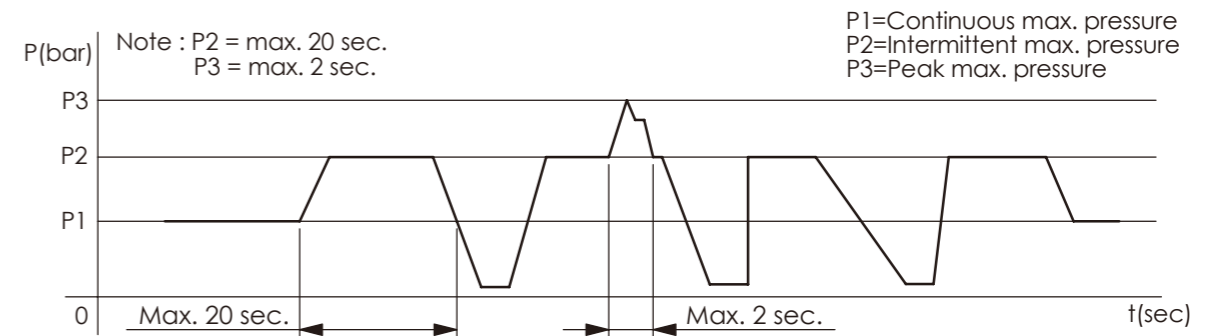
Ordering Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Volume (Liters)
KKB120VGN002	100	125	280	210	250	250	300	12
KKB180VGN002	120	150	330	260	300	300	350	18

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

P Type Hydraulic Gear Pumps



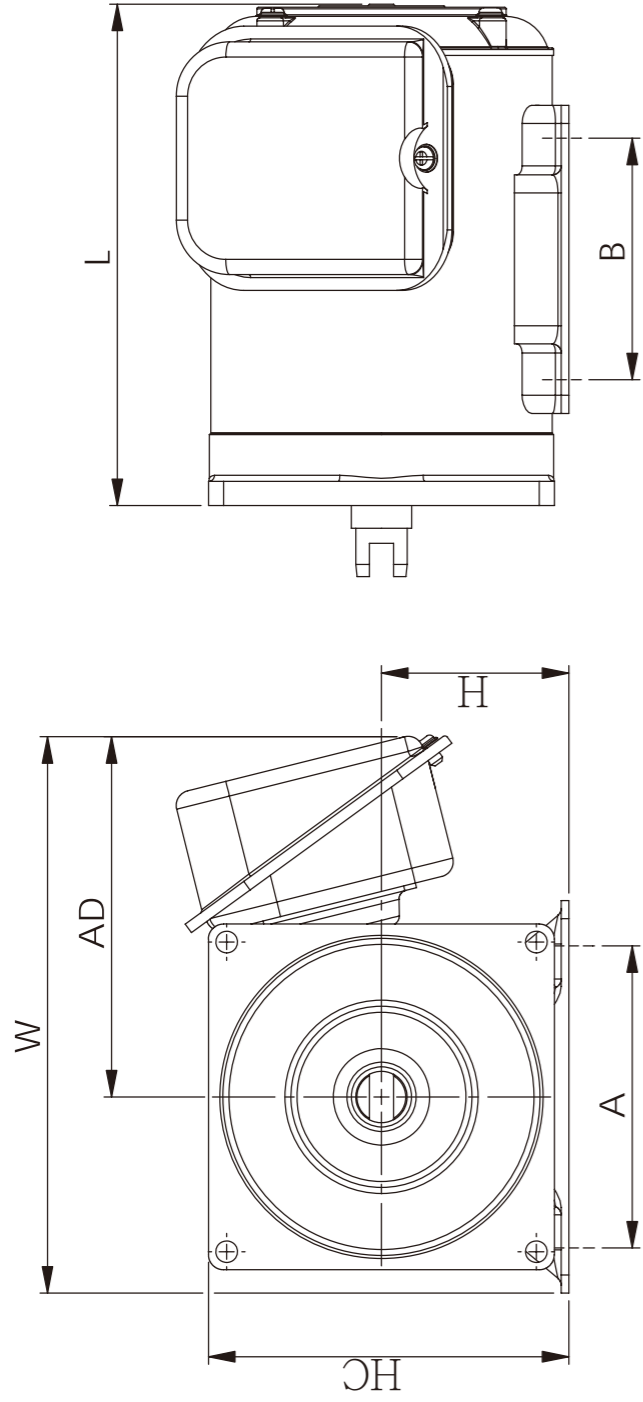
Note : P-type pumps are designed to Winner Hydraulic Power Pack manifolds. If you need to use them for your manifolds. Please contact us.



* 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 bar	P2 bar	P3 bar		L1 mm	L2 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

Series ϕ 110 (MSN)

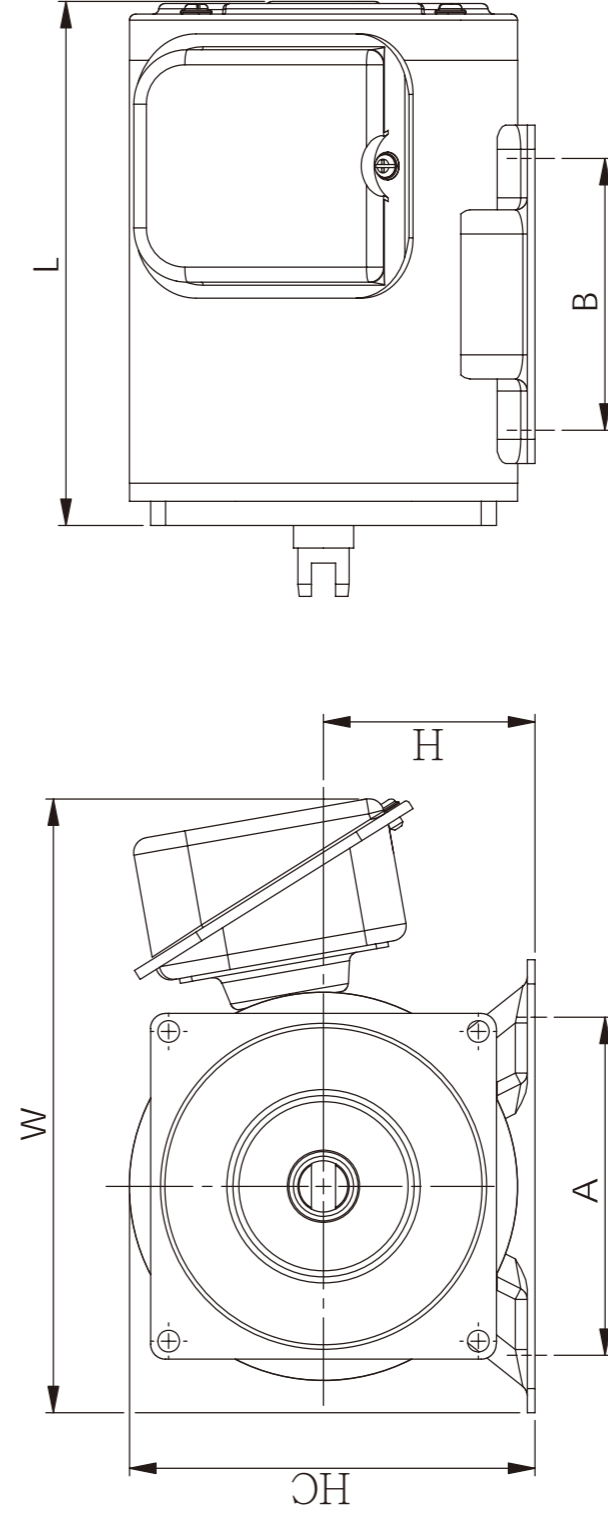


Unit : mm

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	100	119	80	62	119	165.5	184
MSN18	W850118-4	1/4HP 4P	3	220/380	50/60	100	112	80	62	119	165.5	175

WITHOUT FAN

Series ϕ 125 (MSM)

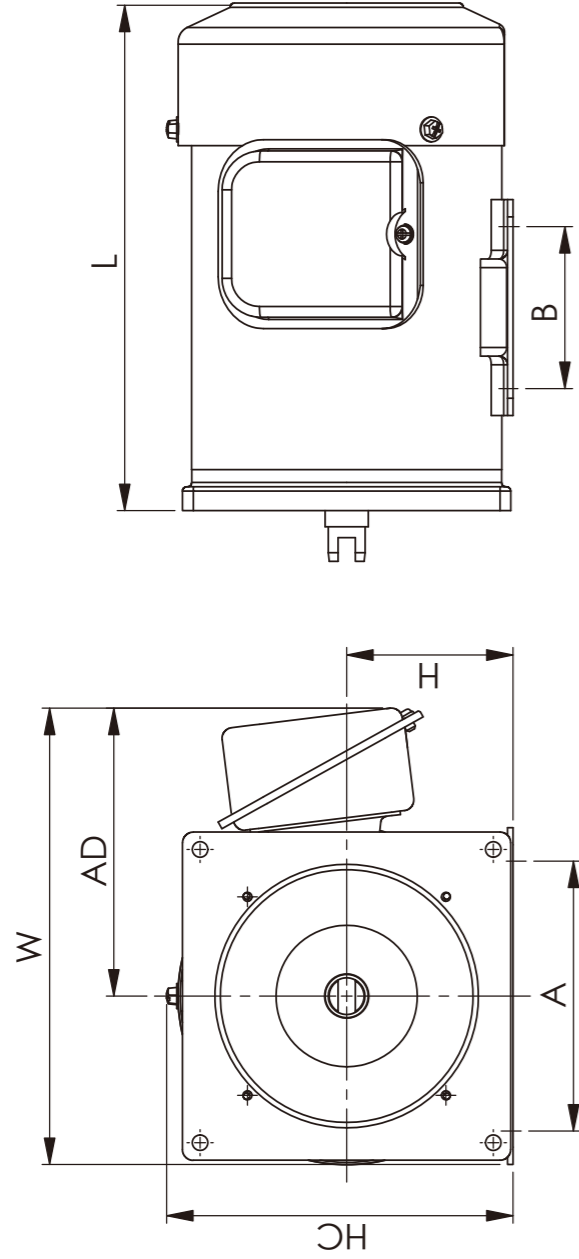


Unit : mm

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

WITHOUT FAN

Series ϕ 140 (MFS)

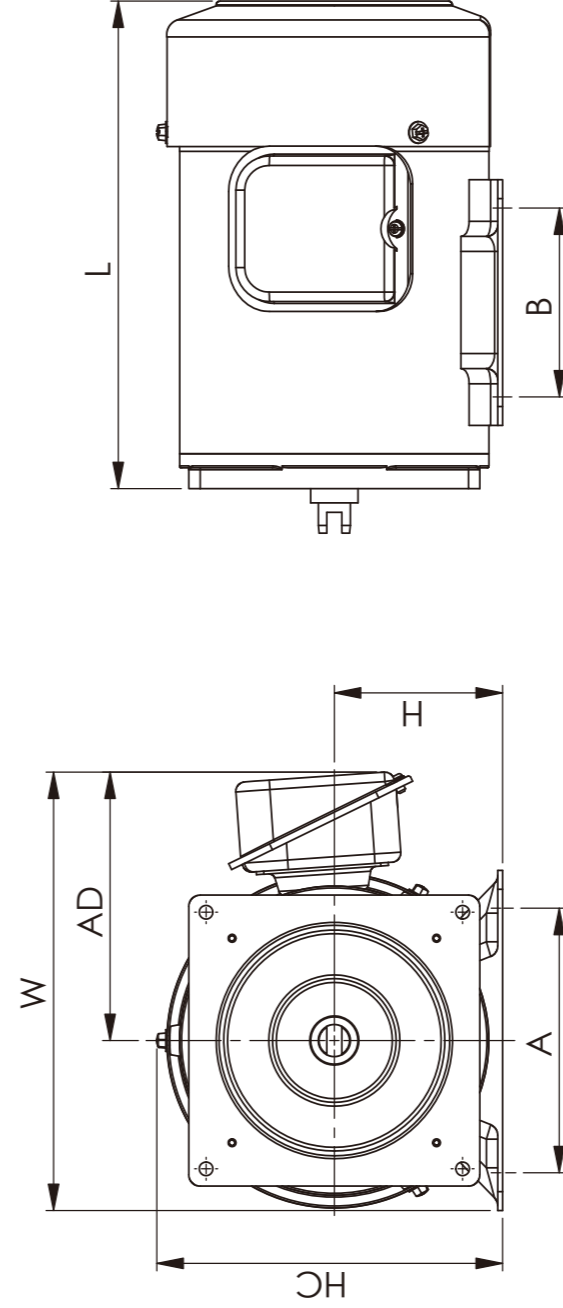


Unit : mm

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

WITH FAN

Series ϕ 160 (MF)



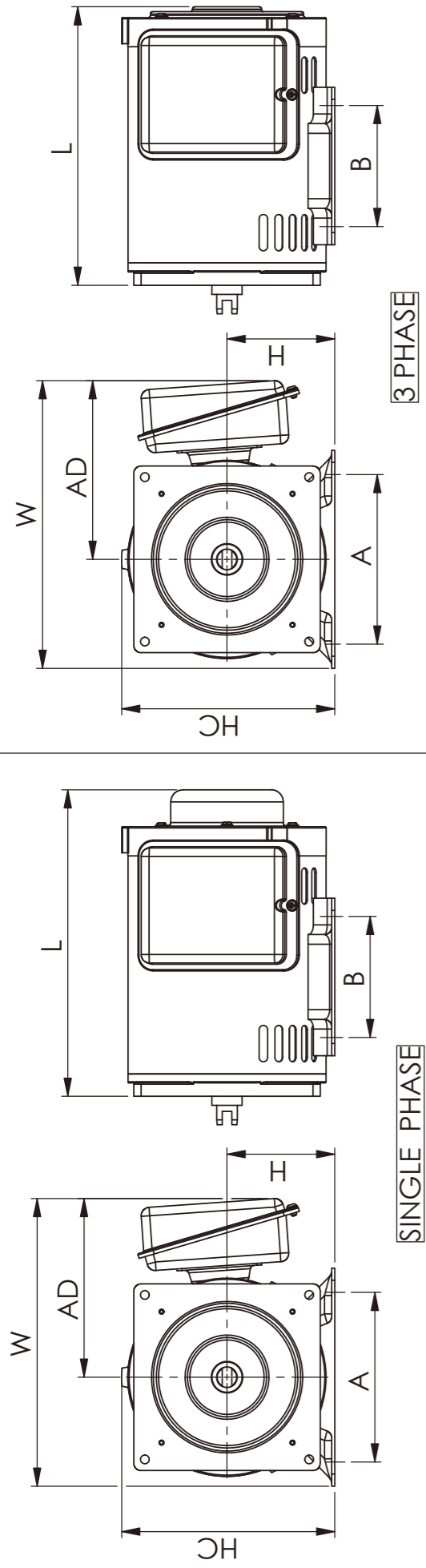
Unit : mm

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

WITH FAN

Series ϕ 160 (MS)

WITHOUT FAN

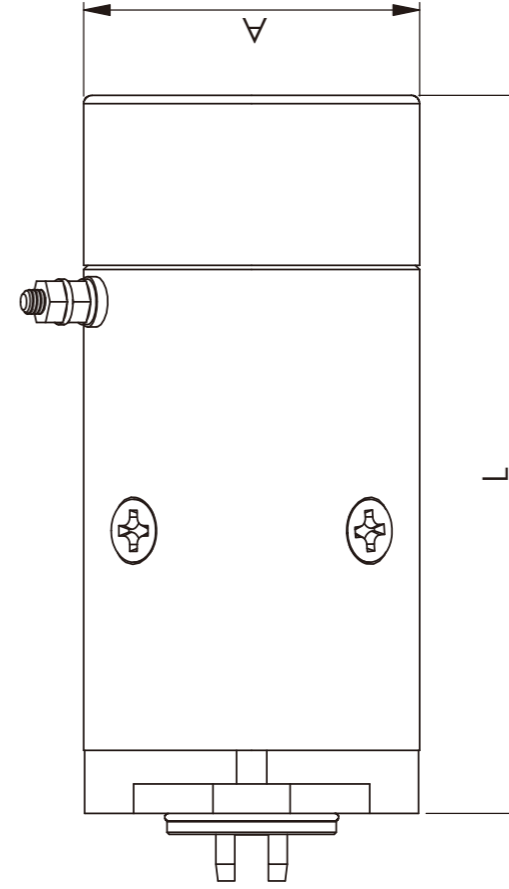
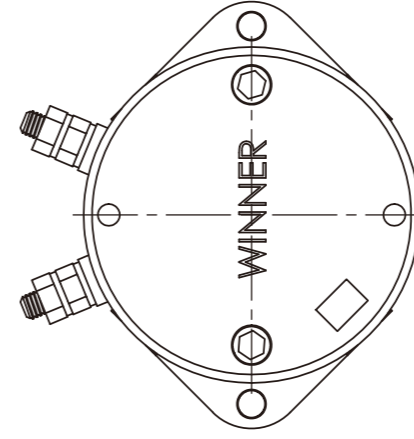


Unit : mm

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

Series **2N12** **2N24**
3N12 **3N24**

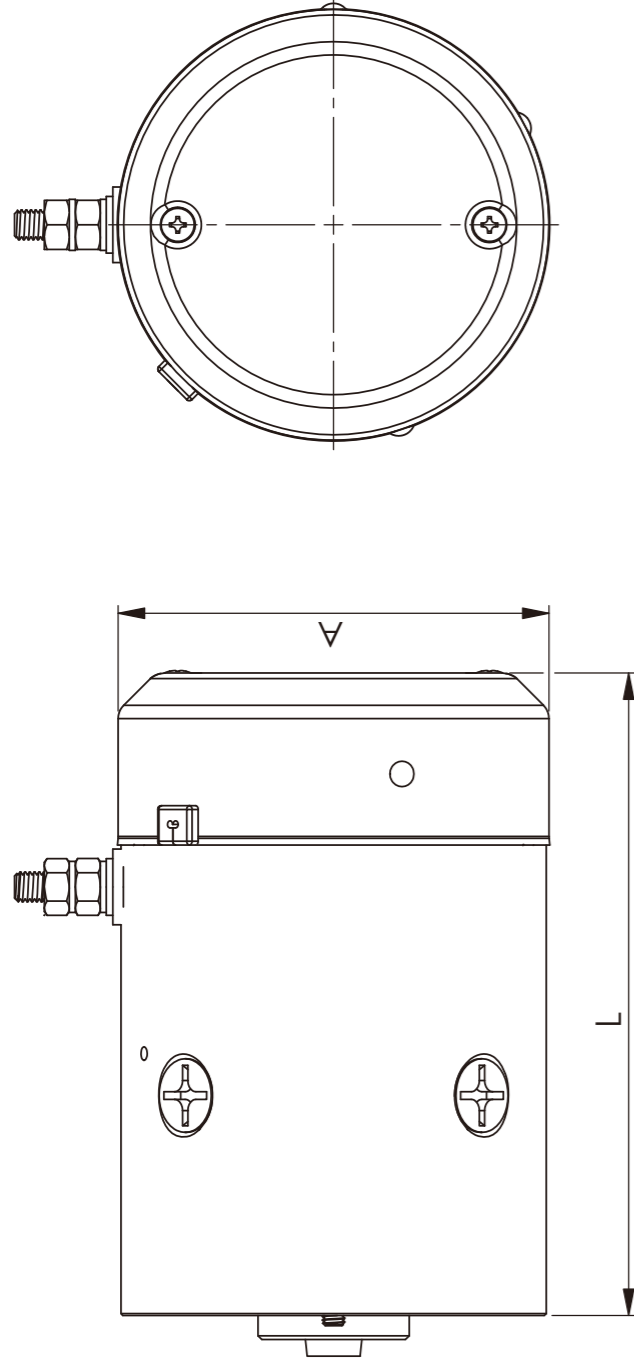
IP65
RoHS



Unit : mm

MOTOR REFERENCES	POWER	VOLTAGES	WIRING	A	L
2N12	550W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	ϕ 80	171
2N24	550W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	ϕ 80	171
3N12	800W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	ϕ 80	171
3N24	800W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	ϕ 80	171

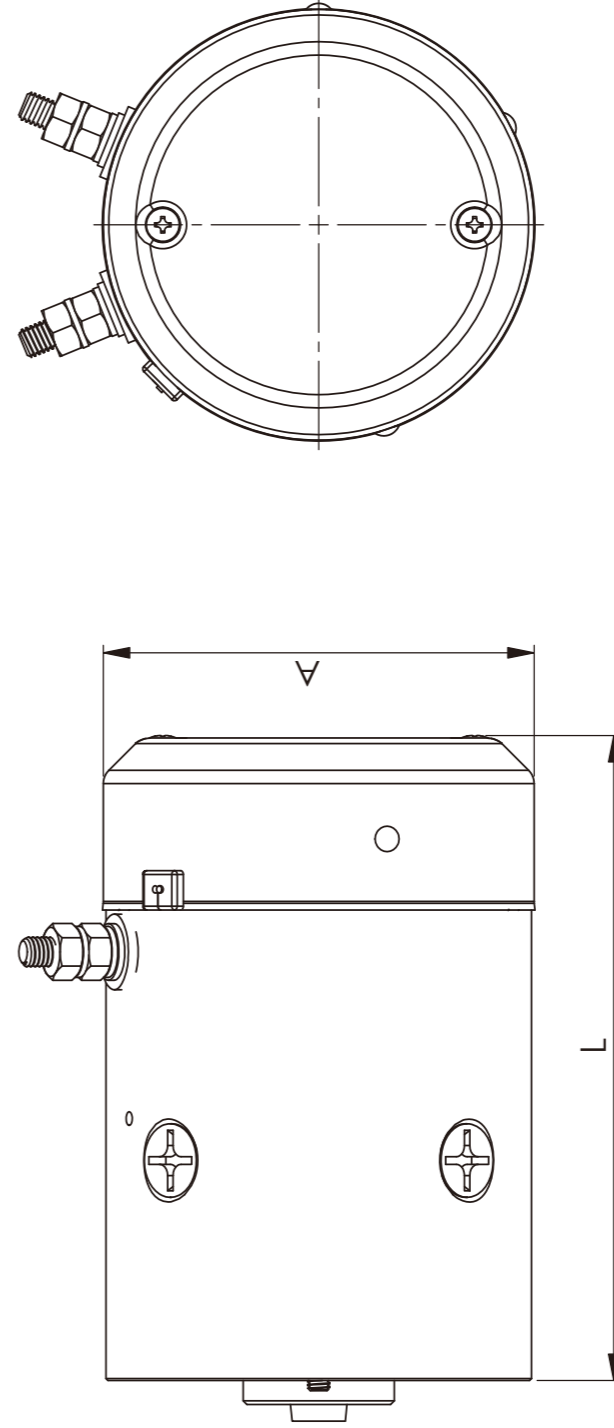
Series	CE12	CE24
	SE12	SE24



Unit : mm

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

Series	CN12	CN24
	SN12	SN24

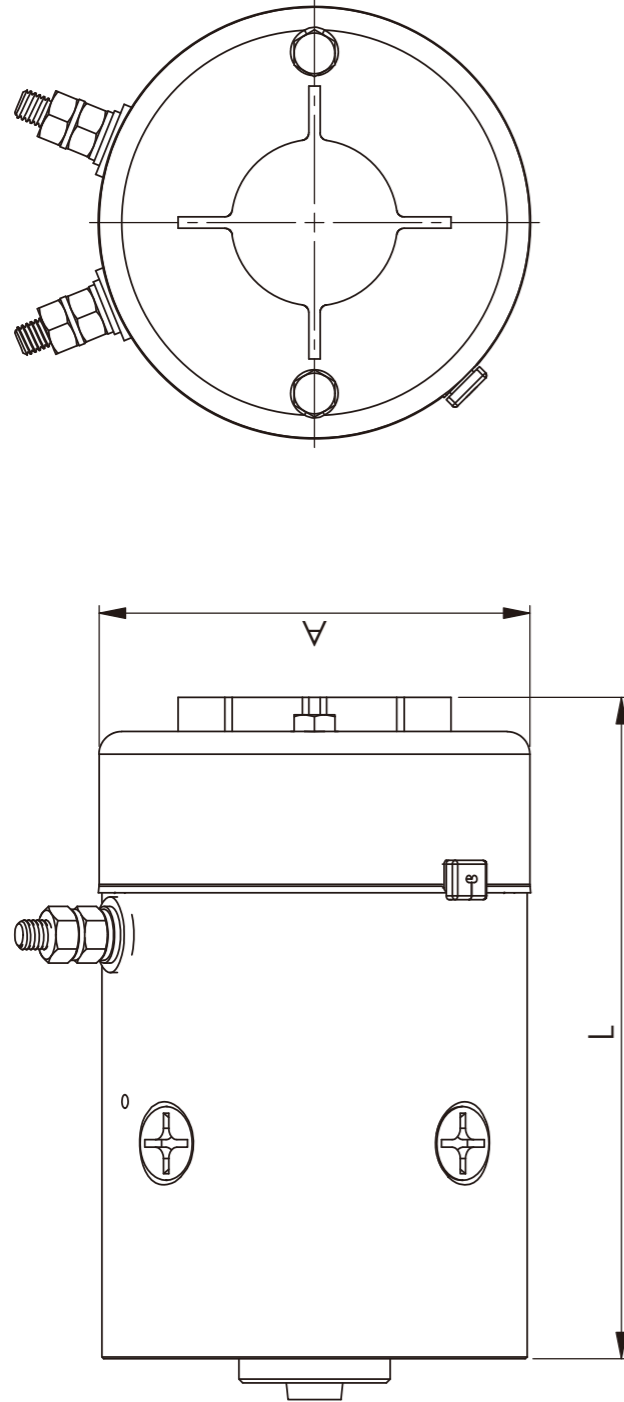


Unit : mm

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

RoHS

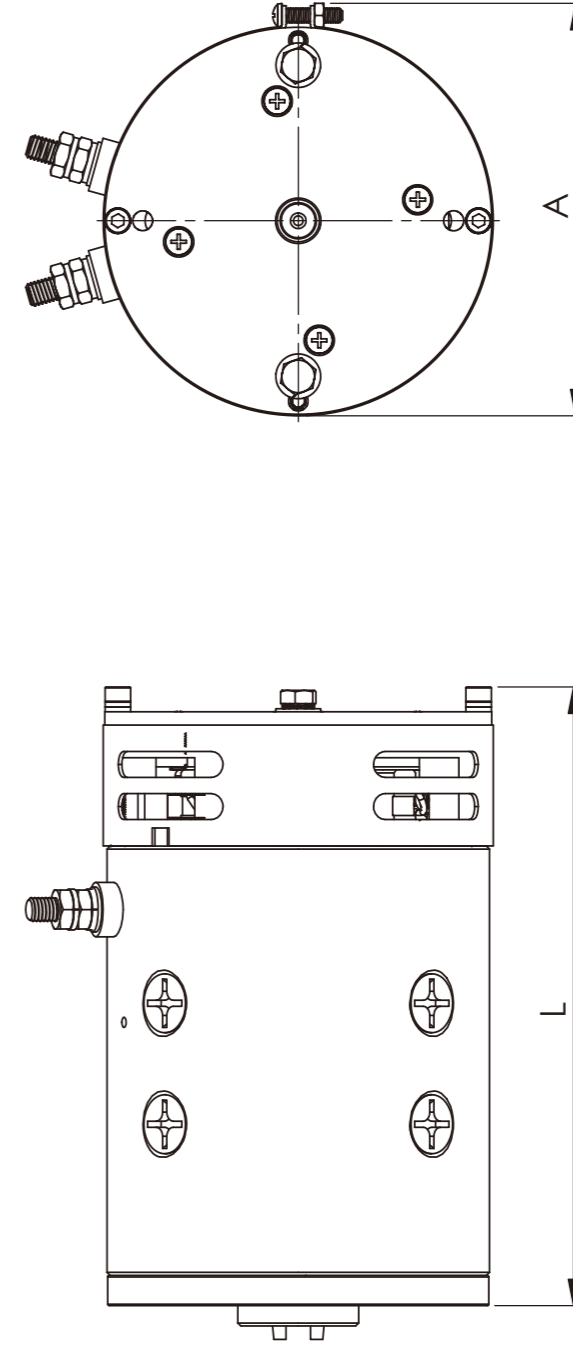
Series **PN12**
PN24



Unit : mm

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

Series **LN12**
LN24



Unit : mm

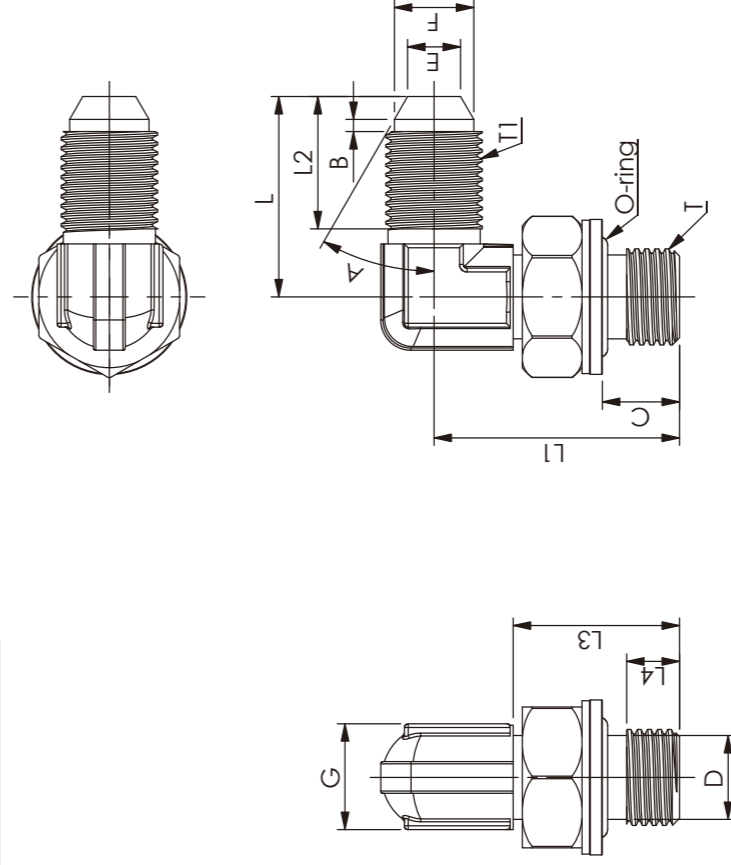
MOTOR REFERENCES	POWER	VOLTAGES	WIRING	A	L
LN12	W800663	2500W	12	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	204.6
LN24	W800664	3000W	24	INSULATE RETURN (MOTOR WITH 2 TERMINALS)	204.6

Not Supply	Ordering Code 5AAZ1ACZ001	Ordering Code 5AAZ2AEZ001
	Unit : mm	Unit : mm
Motor Type :	Apply To Motor Type :	Apply To Motor Type :
2N12 DC 12V / 550W	CE12 DC 12V / 1500W	CE24 DC 24V / 2000W
2N24 DC 24V / 550W	CN12 DC 12V / 1500W	CN24 DC 24V / 2000W
3N12 DC 12V / 800W	SE12 DC 12V / 1500W	SE24 DC 24V / 2000W
3N24 DC 24V / 800W	SN12 DC 12V / 1500W	SN24 DC 24V / 2000W

Ordering Code 5AAZ1ADZ001	Ordering Code 5AAZ2ADZ001
Unit : mm	Unit : mm
Apply To Motor Type :	Apply To Motor Type :
PN12 DC 12V / 1600W	PN24 DC 24V / 2200W

Ordering Code 5AAZ1AGZ001	Ordering Code 5AAL2AHB003
Unit : mm	Unit : mm
Apply To Motor Type :	Apply To Motor Type :
LN12 DC 12V / 2500W	LN24 DC 24V / 3000W

ADJUSTABLE ELBOW (90°) FITTINGS

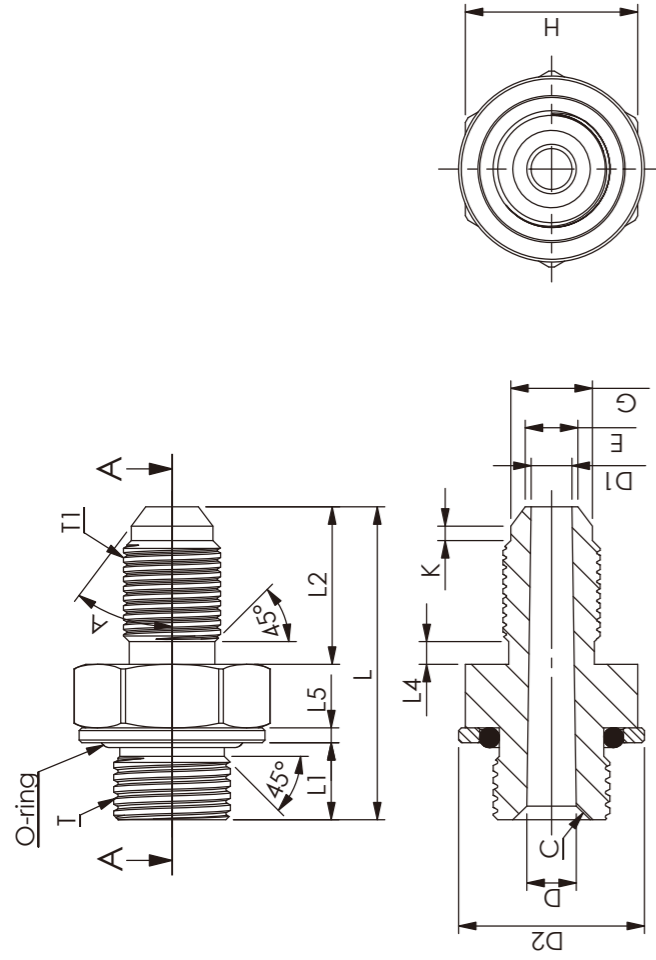


Unit : mm

CODE NO.	T	T1	Series ELBOW (90°) FITTINGS											
			L (±0.1)	L1 (±0.1)	L2 (±0.1)	L3 (±0.1)	L4 (±0.1)	A	B (±0.1)	C	D (±0.1)	E (±0.1)	F (±0.1)	G
W801501-01	1/4"PF(G)	1/4"PF(G)	26.5	32.5	17.5	22.0	7.0	30°	1.6	10.2	11.1	7.0	10.5	14.0
W801501-03	1/4"PF(G)	7/16"-20UNF (SAE04)	26.5	31.5	16.0	22.0	7.0	37°	1.6	10.2	11.2	5.8	9.0	14.0
W801502-01	3/8"PF(G)	1/4"PF(G)	30.0	37.0	17.5	24.0	8.0	30°	1.6	10.4	14.4	7.0	10.5	19.0
W801502-02	3/8"PF(G)	3/8"PF(G)	30.0	37.0	18.0	24.0	8.0	30°	1.8	10.4	14.4	10.0	14.2	19.0
W801502-03	3/8"PF(G)	7/16"-20UNF (SAE04)	30.0	37.0	16.0	24.0	8.0	37°	1.6	10.4	14.4	5.8	9.0	19.0
W801502-04	3/8"PF(G)	9/16"-18UNF (SAE06)	30.0	37.0	17.0	24.0	8.0	37°	1.8	10.2	14.4	8.5	12.0	19.0

Series **STRAIGHT FITTINGS**

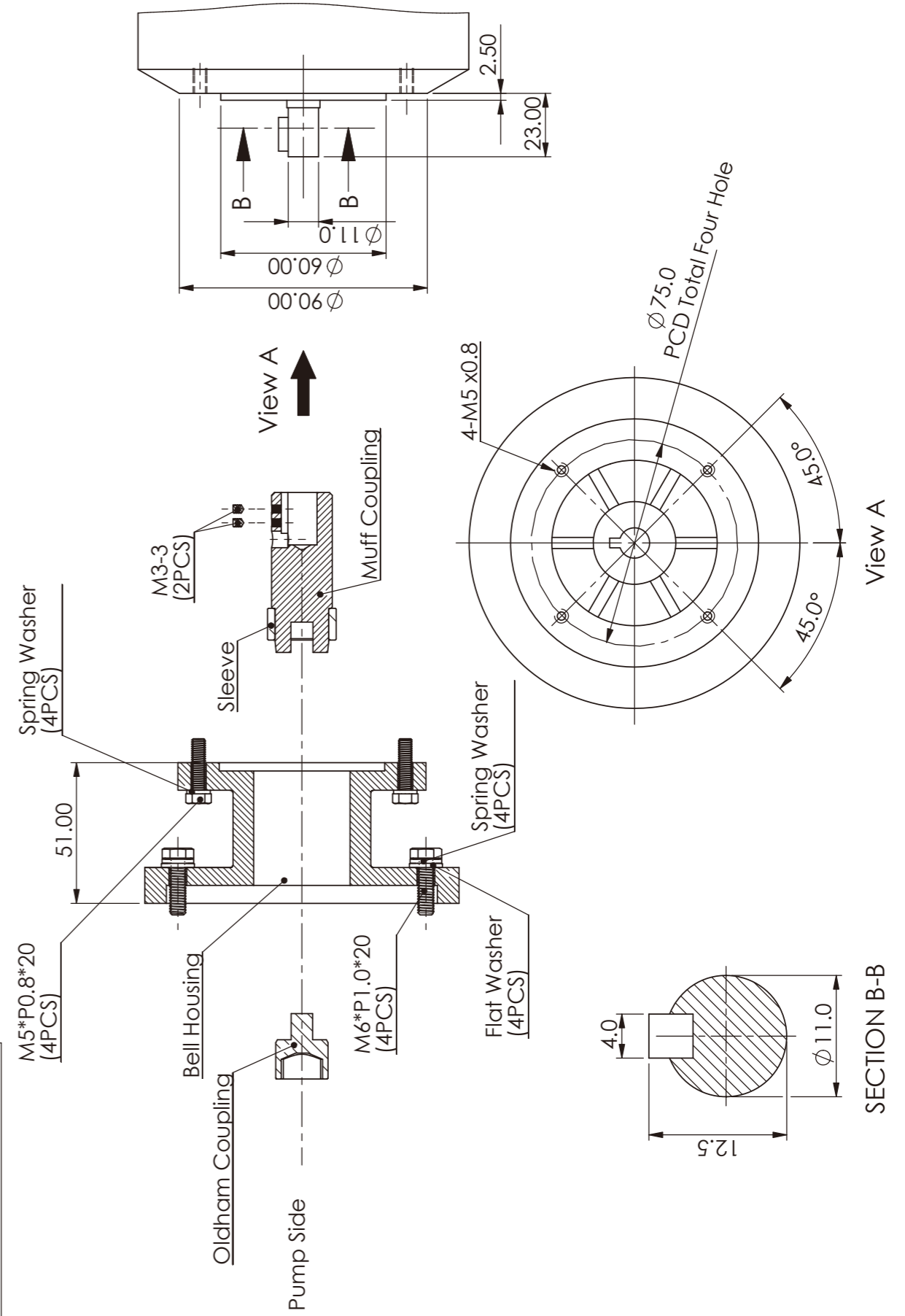
STRAIGHT FITTINGS

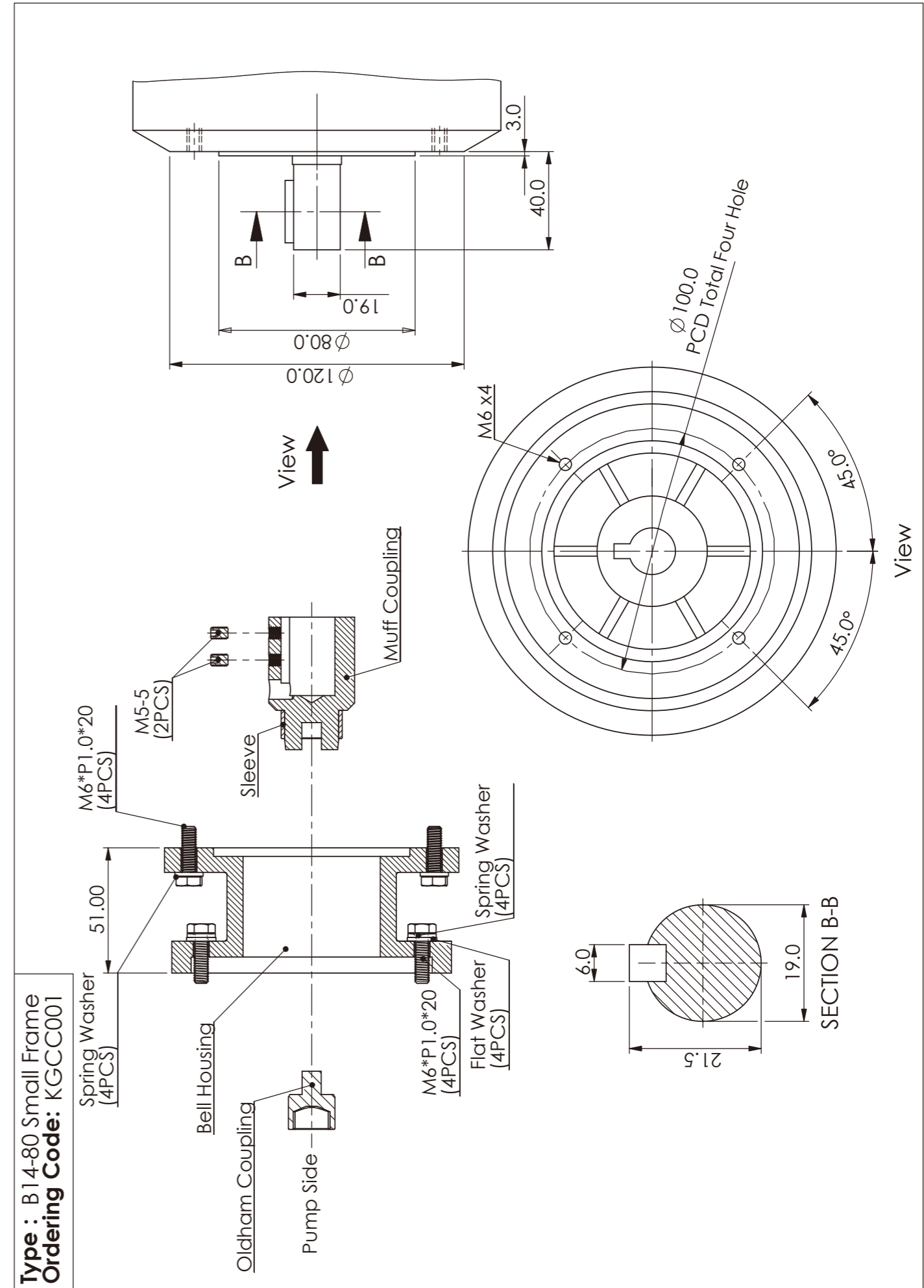
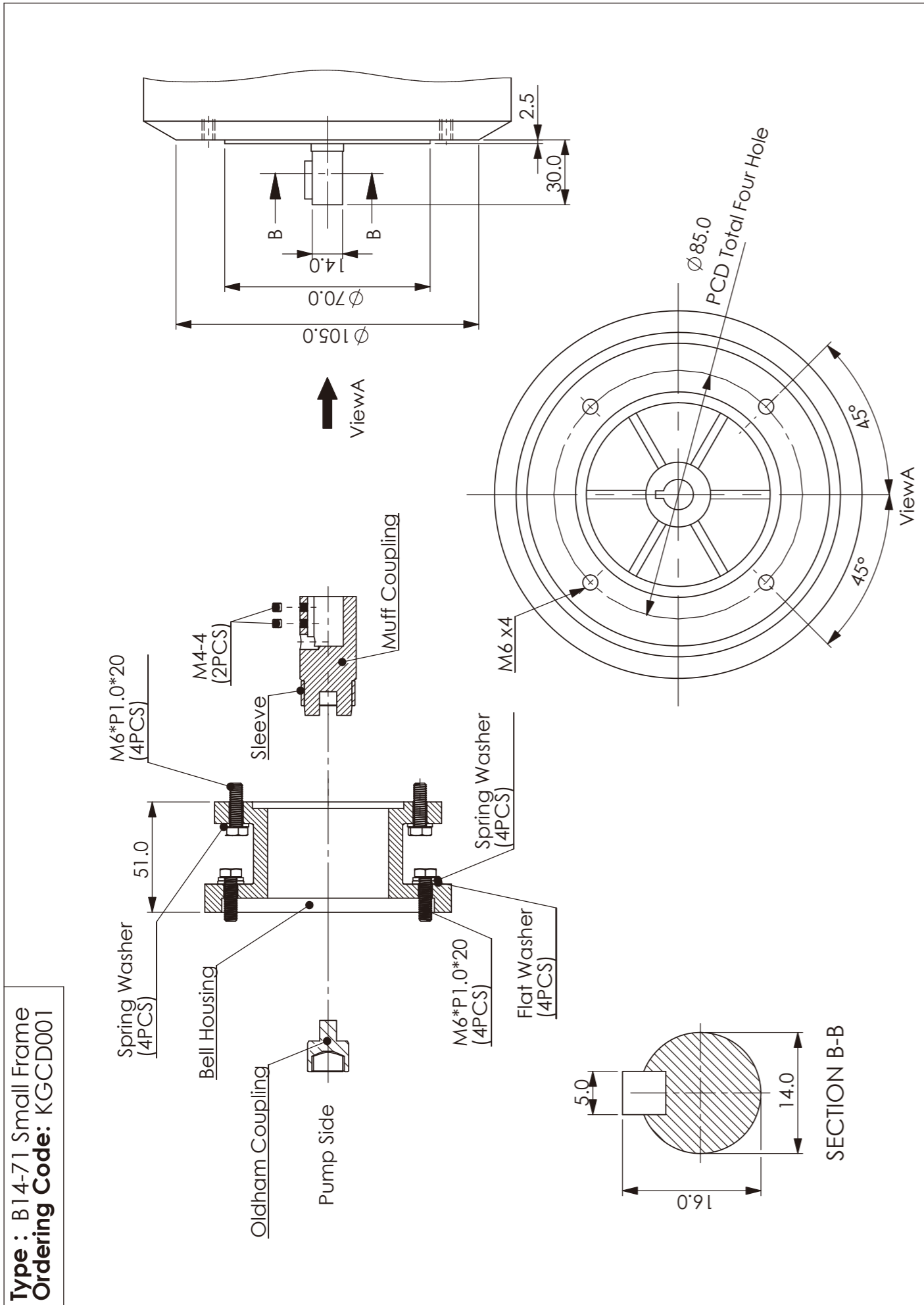


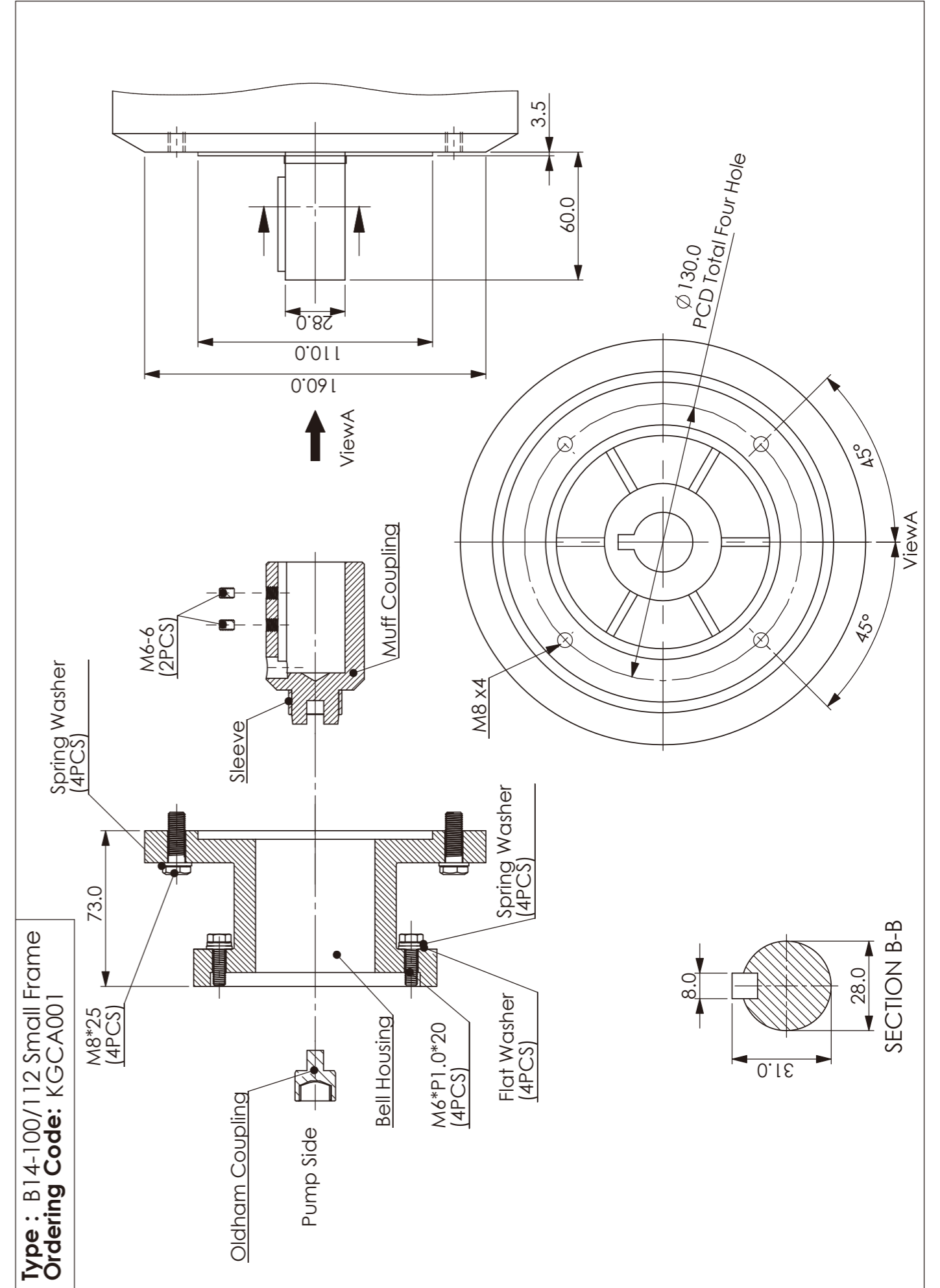
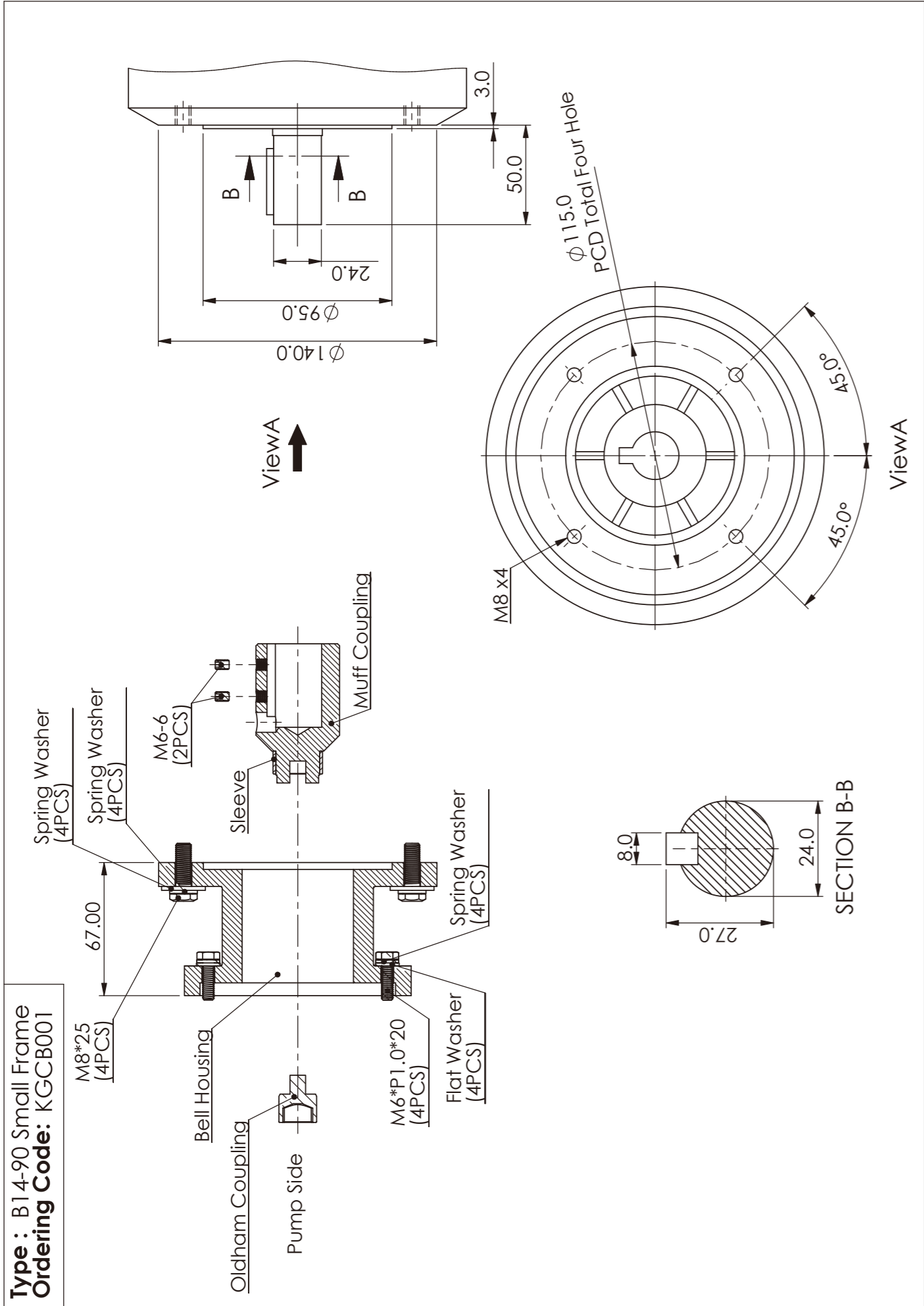
Unit : mm

CODE NO.	T	T1	L (±0.1)	L1 (±0.1)	L2 (±0.1)	L4 (±0.1)	L5 (+0.00 -0.04)	A	D	D1	D2 (±0.05)	E (±0.1)	G (±0.1)	K (±0.1)	C	H
W801503-01	1/4"PF(G)	1/4"PF(G)	34.0	8.5	16.0	3.0	1.64	30°	6.5	5.5	20.5	7.0	11.0	1.6	1.5	19.0
W801503-03	1/4"PF(G)	7/16"-20UNF (SAE04)	34.5	8.5	17.4	2.5	1.64	37°	5.5	4.5	20.5	5.8	9.0	1.6	1.5	19.0
W801504-01	3/8"PF(G)	1/4"PF(G)	34.8	9.3	16.0	3.0	1.64	30°	6.5	5.5	24.0	7.0	11.0	1.6	1.5	21.0
W801504-02	3/8"PF(G)	3/8"PF(G)	36.3	9.3	17.5	3.0	1.64	30°	8.5	8.5	24.0	10.0	14.2	1.8	1.5	21.0
W801504-03	3/8"PF(G)	7/16"-20UNF (SAE04)	37.0	9.3	17.7	2.5	1.64	37°	5.5	4.5	24.0	5.8	9.0	1.6	1.5	21.0
W801504-04	3/8"PF(G)	9/16"-18UNF (SAE06)	38.0	9.3	15.0	3.0	1.64	37°	8.5	6.8	24.0	8.5	12.0	1.8	1.5	21.0

Type : B14-63 Small Frame
Ordering Code: KGCE002







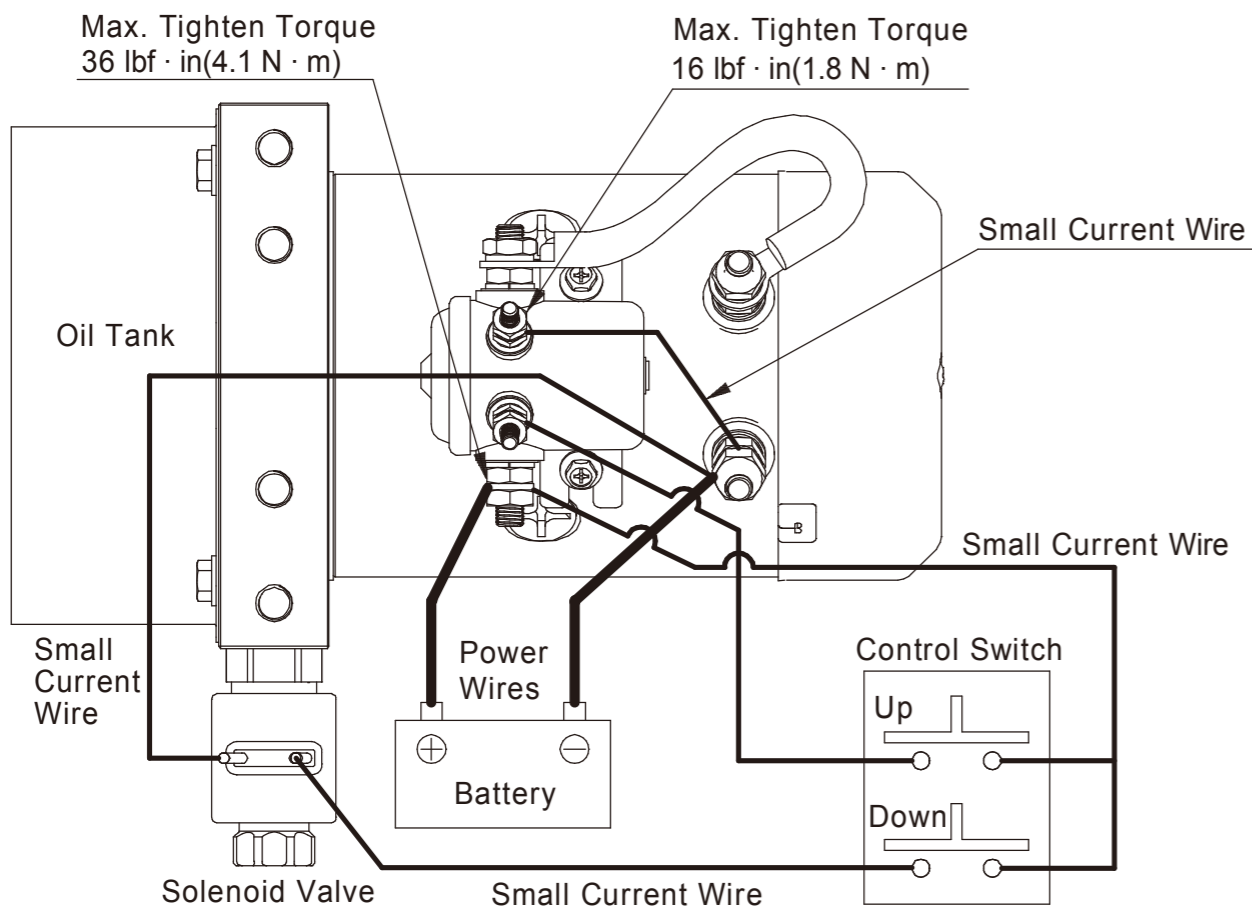
How to Connect Various Wires to the DC Hydraulic Power Pack (I) (INSULATE RETURN MOTOR)

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.

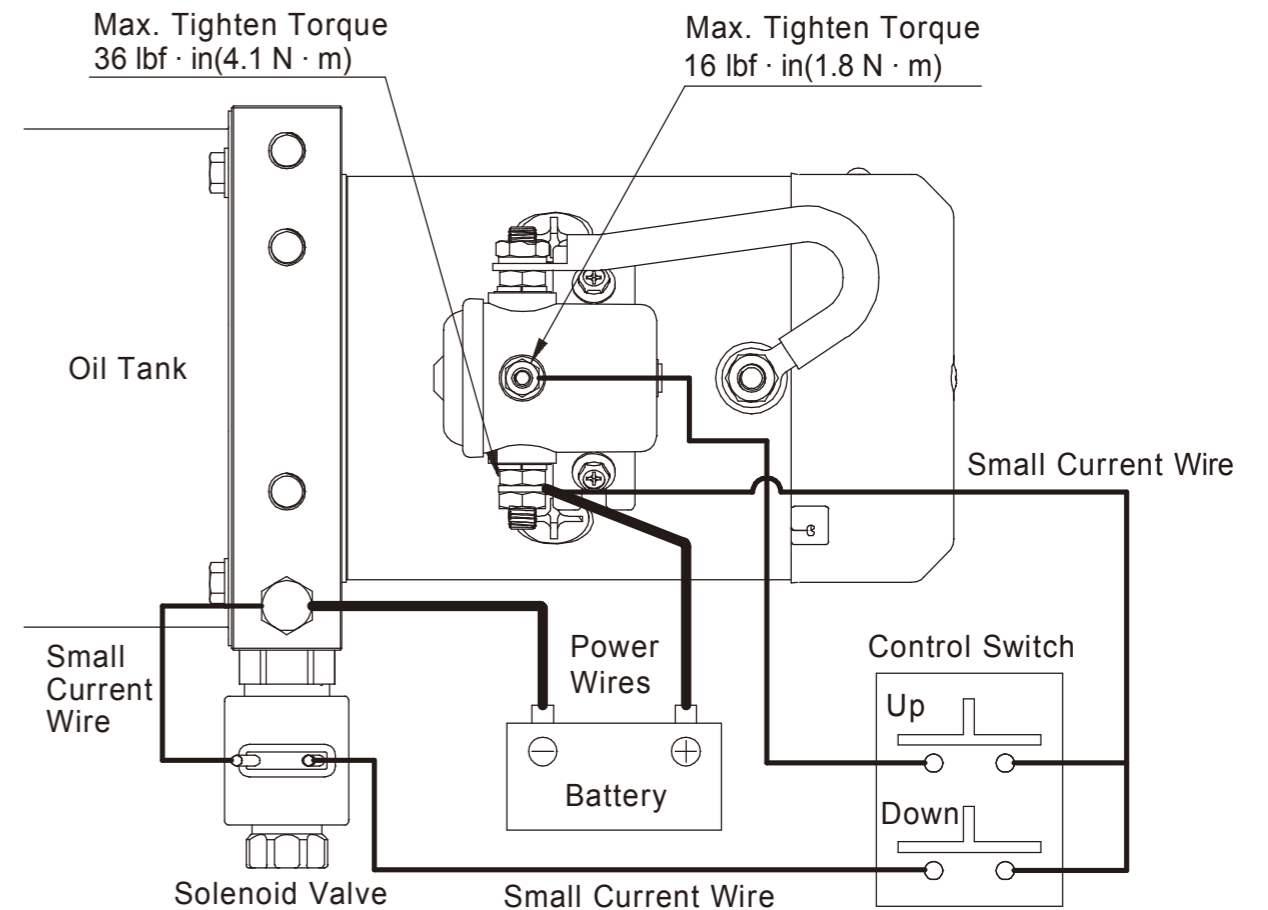
How to Connect Various Wires to the DC Hydraulic Power Pack (II) (EARTH RETURN MOTOR)

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)

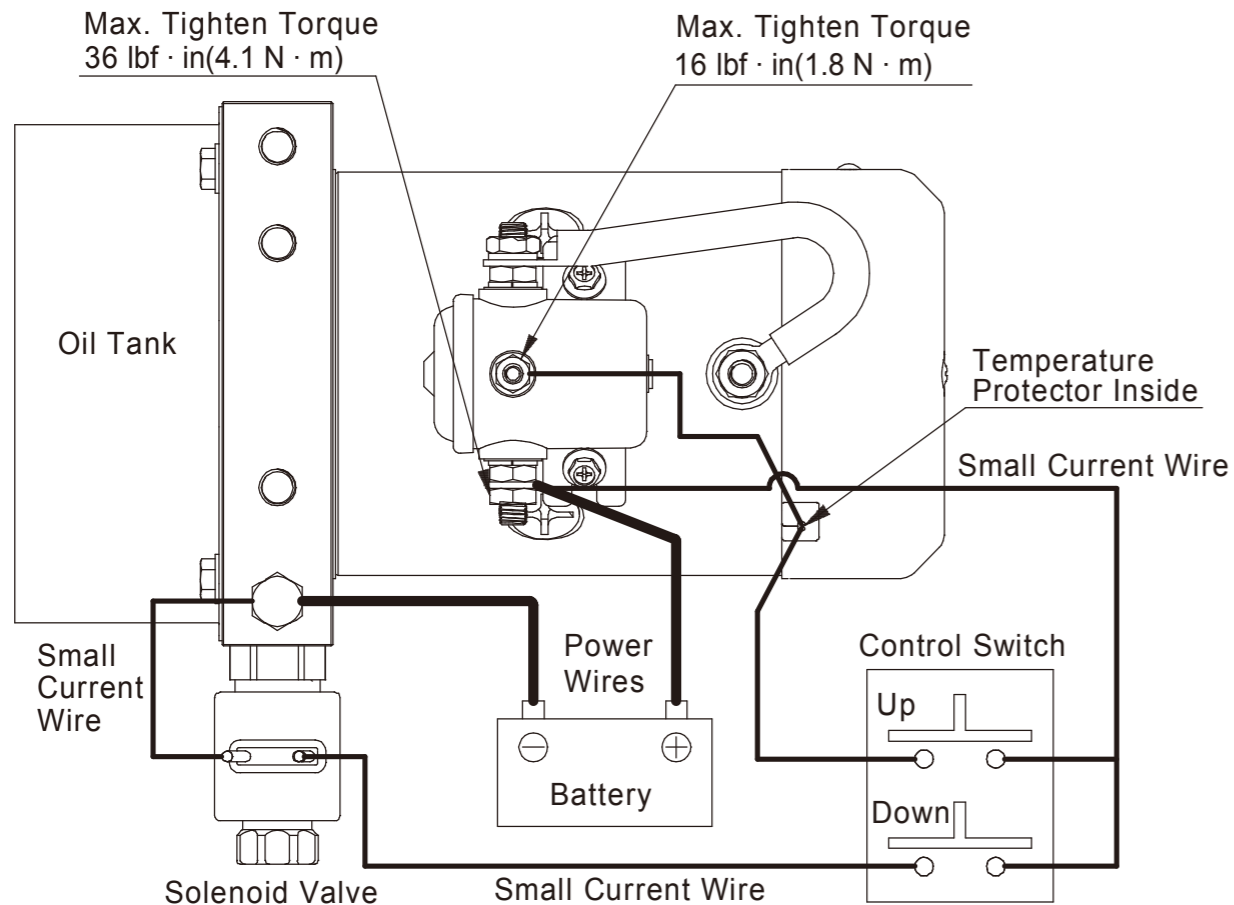
(EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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)

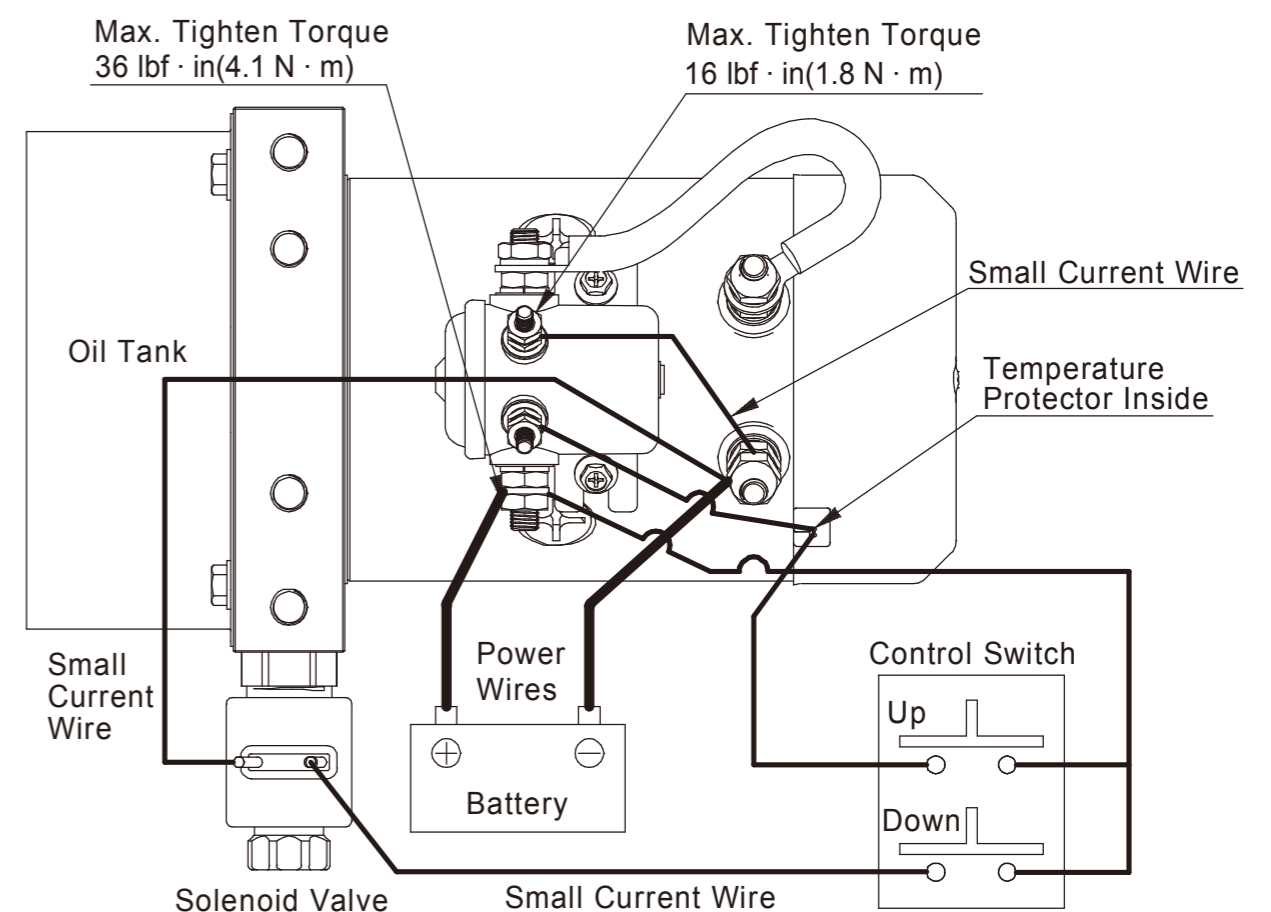
(INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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.

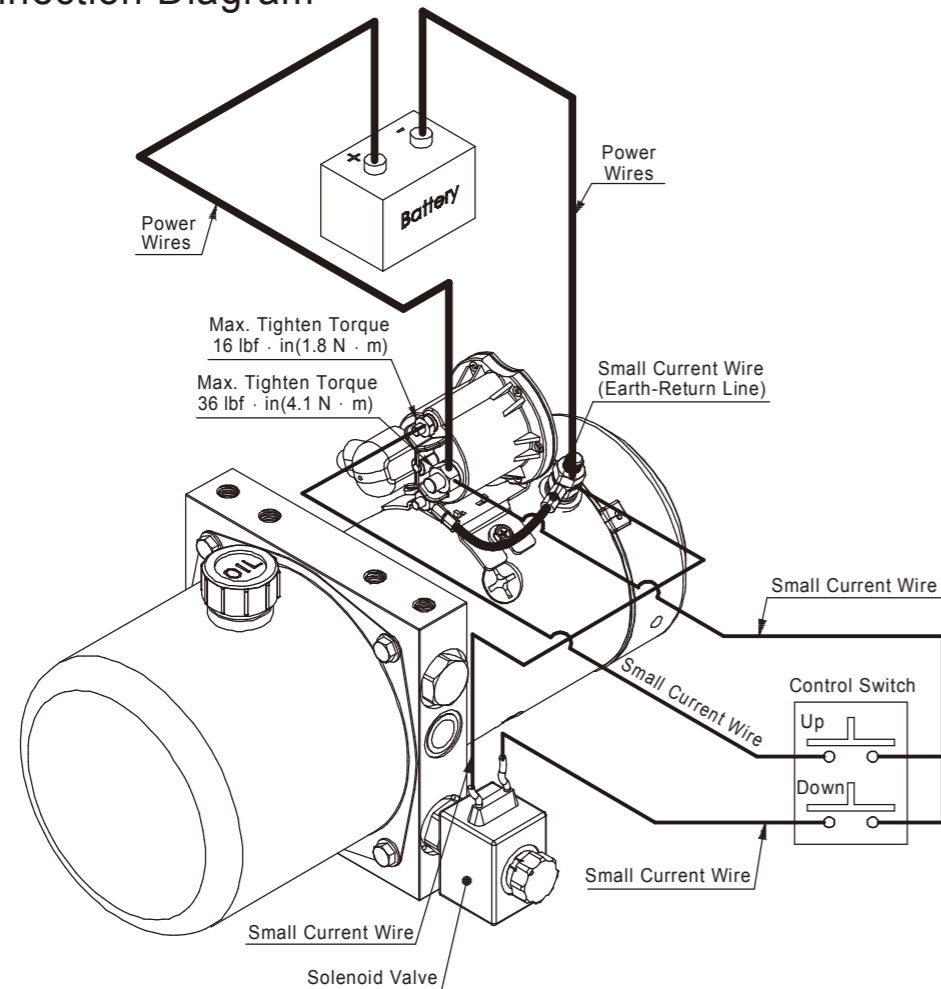
How to Connect Various Wires to the DC Hydraulic Power Pack (I) (INSULATE RETURN MOTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx. 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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.

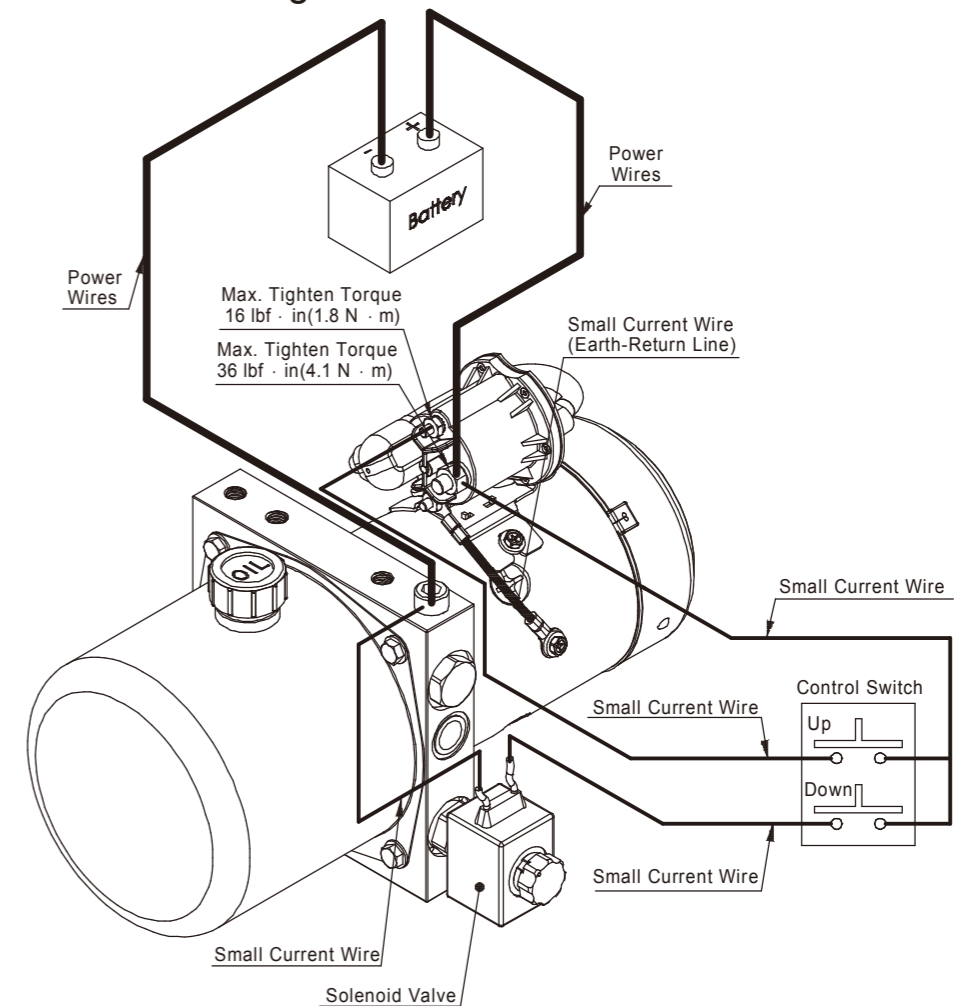
How to Connect Various Wires to the DC Hydraulic Power Pack (II) (EARTH RETURN MOTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx. 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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)

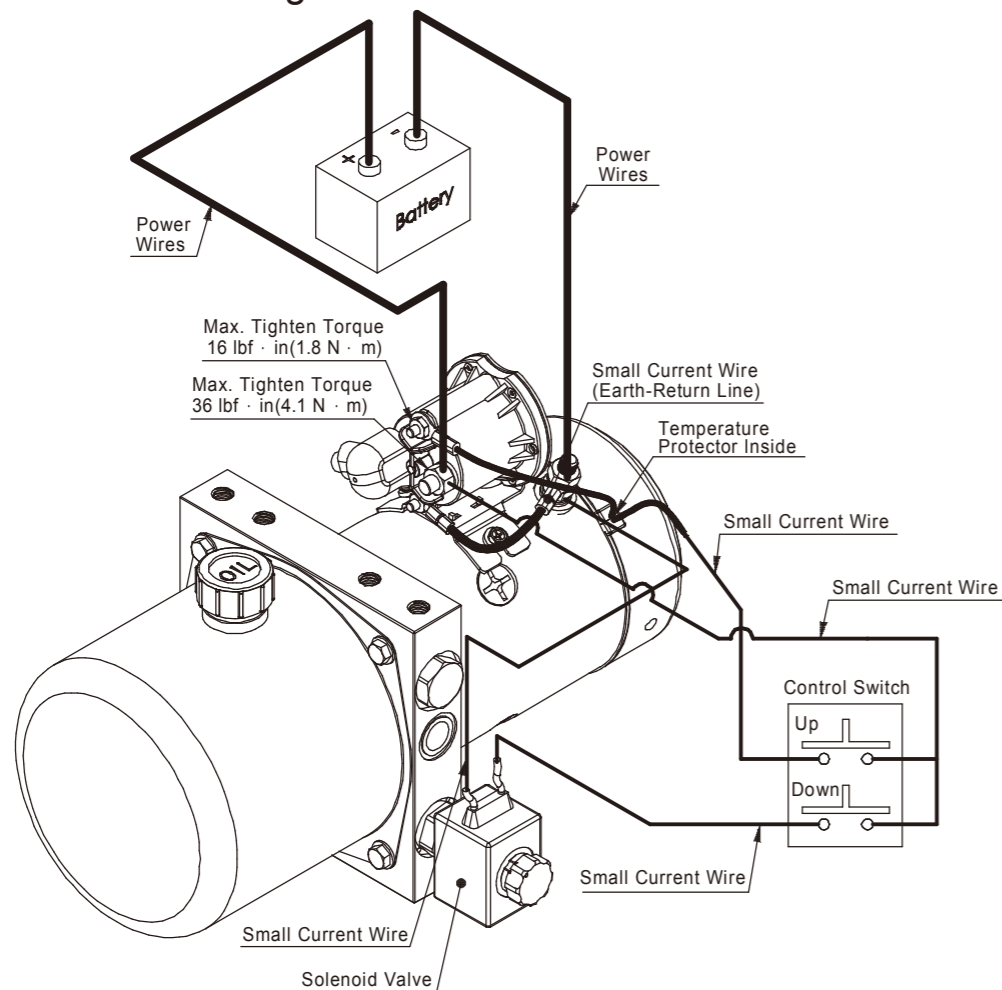
(EARTH RETURN MOTOR WITH TEMPERATURE PROTECTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx. 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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)

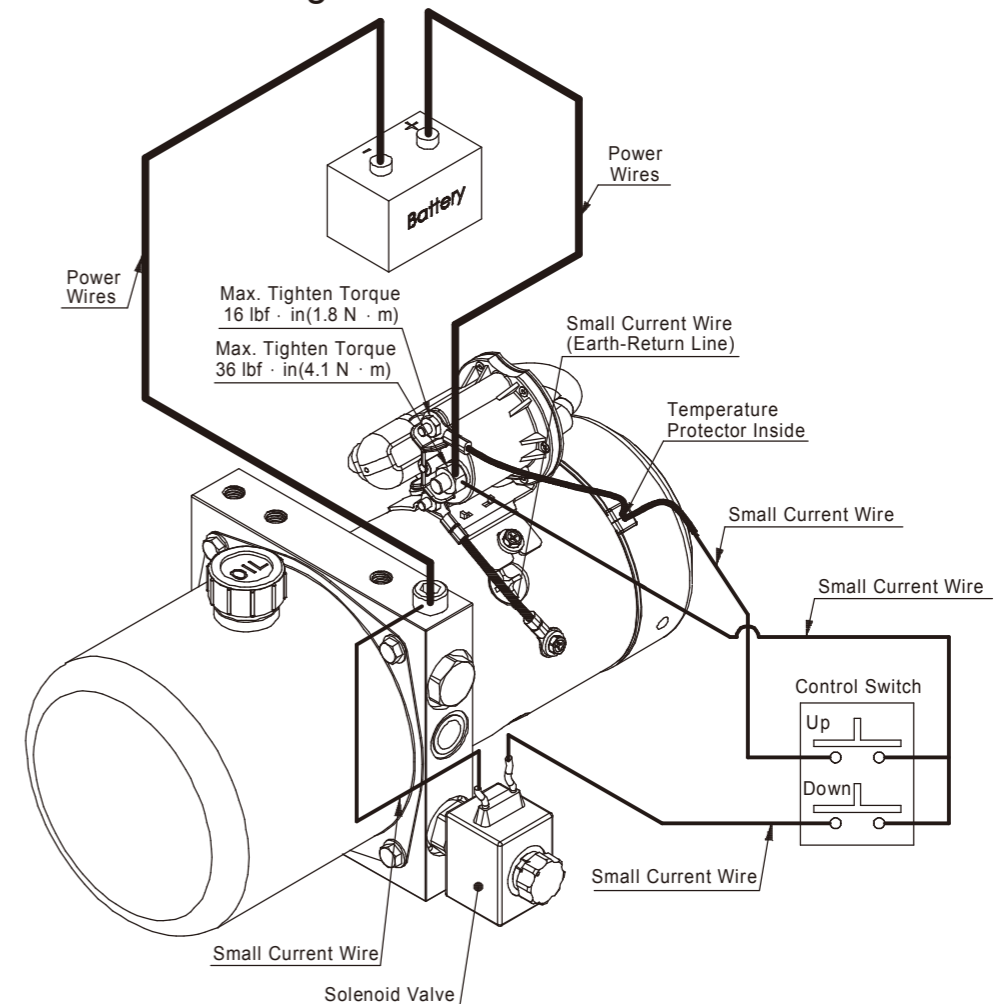
(INSULATE RETURN MOTOR WITH TEMPERATURE PROTECTOR)

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
120(A)	8.0(mm ²)	
180(A)	14 (mm ²)	Working time: approx. 30 sec.
230(A)	22 (mm ²)	
280(A)	30 (mm ²)	Wire length: 1m
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.

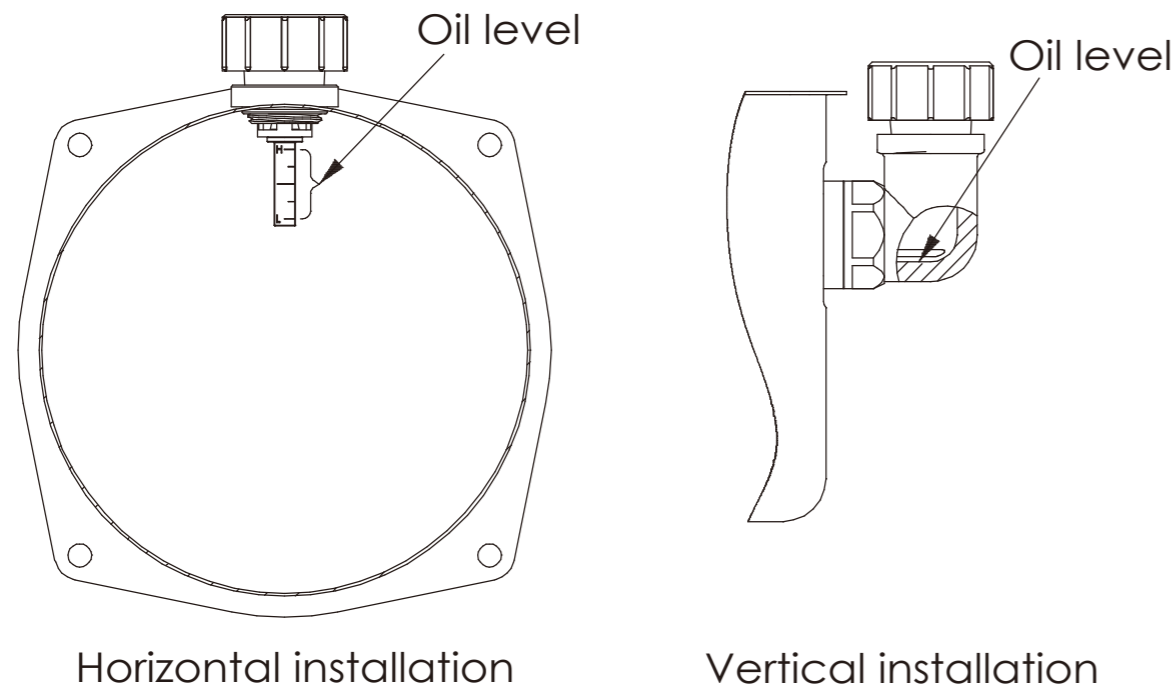
Filling the Hydraulic Oil Tank(|)

- 1.Ensure the hydraulic oil that is used is the correct viscosity and is not contaminated. Using an inferior hydraulic oil will cause a short lift span, poor performance and possibly many malfunctions.
- 2.Suggestions:(MINERAL BASED HYDRAULIC OILS)
 - (1).For normal temperatures use ISO VG22-46
 - (2).For lower temperatures use ISO VG22-32,
For higher temperatures use ISO VG32-46(68)
 - (3).The maximum temperature for use is 60°C

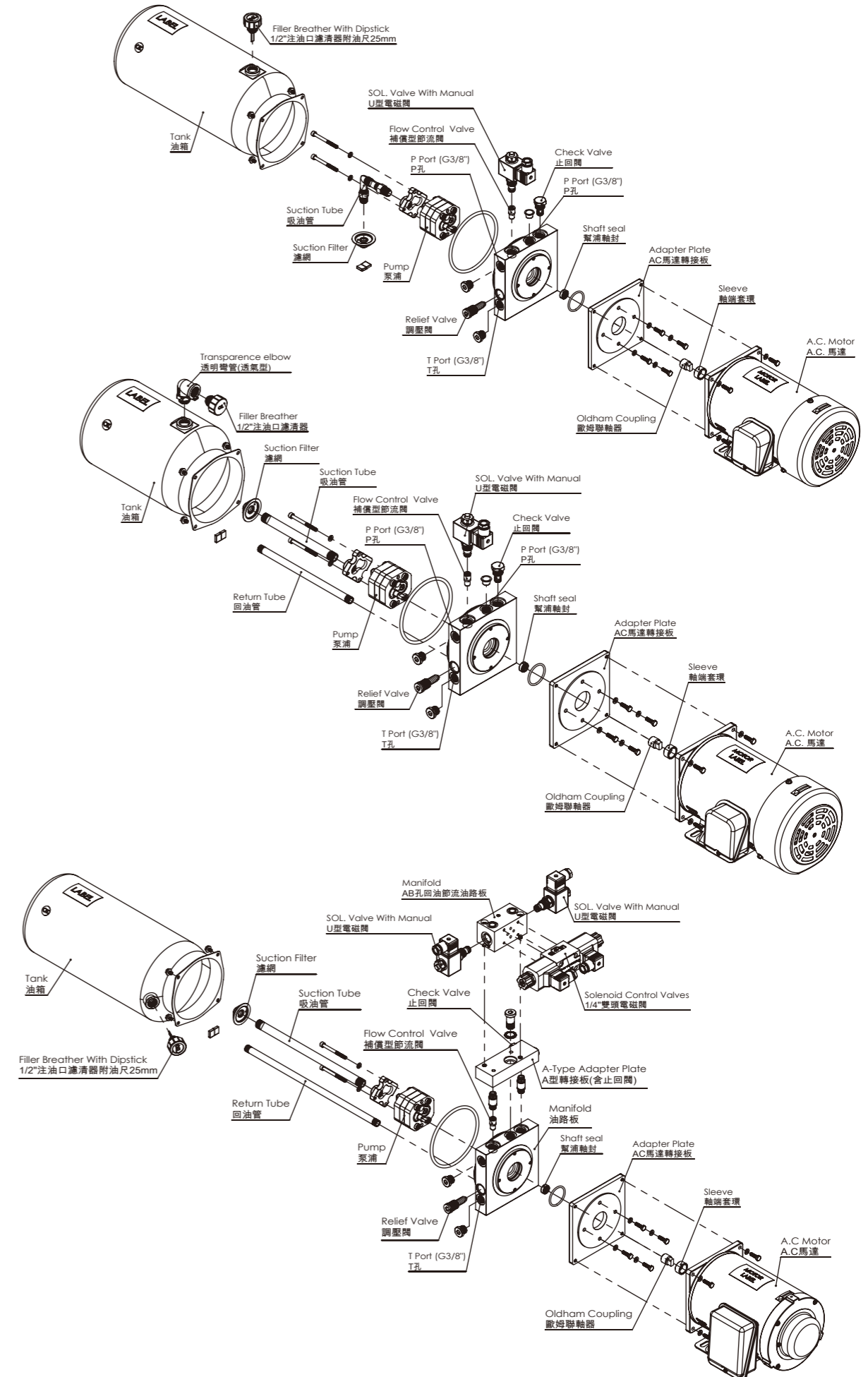
The hydraulic oil viscosity will directly effect lowering speed.

*Winner Hydraulics testing conditions:ISO VG46 hydraulic oil at a constant 40°C

3.Pouring Volume



4.Whe installed horizontal or vertical, please refer to the oil level markers on diagram when filling.





CENTRALA ELBLĄG

Ul. Rawska 19B
82-300 Elbląg

tel. /+48/ 55 625 51 00

fax /+48/ 55 625 51 01

Dział Handlowy

tel. /+48/ 55 625 51 51

elblag@hydropress.pl



www.hydropress.pl

ODDZIAŁ GDAŃSK

tel. /+48/ 55 625 51 21

fax /+48/ 55 625 51 22

ODDZIAŁ RUMIA

tel. /+48/ 58 679 34 15

fax /+48/ 55 625 51 25

ODDZIAŁ TYCHY

tel. /+48/ 32 787 52 88

fax /+48/ 55 625 51 38

ODDZIAŁ OLSZTYN

tel. /+48/ 89 532 01 05

fax /+48/ 89 715 21 42

ODDZIAŁ WARSZAWA

tel. /+48/ 22 468 86 97

fax /+48/ 55 625 51 32

BIURO HANDLOWE WROCŁAW

tel. /+48/ 782 838 000

fax /+48/ 55 625 51 35

BIURO HANDLOWE KIELCE

tel. /+48/ 885 995 501

fax /+48/ 55 625 51 01

BIURO HANDLOWE KRAKÓW

tel. /+48/ 885 995 019

fax /+48/ 55 625 51 01

BIURO HANDLOWE OPOLE

tel. /+48/ 885 995 011

fax /+48/ 55 625 51 01

BIURO HANDLOWE BYDGOSZCZ

tel. /+48/ 790 222 771

fax /+48/ 55 625 51 01