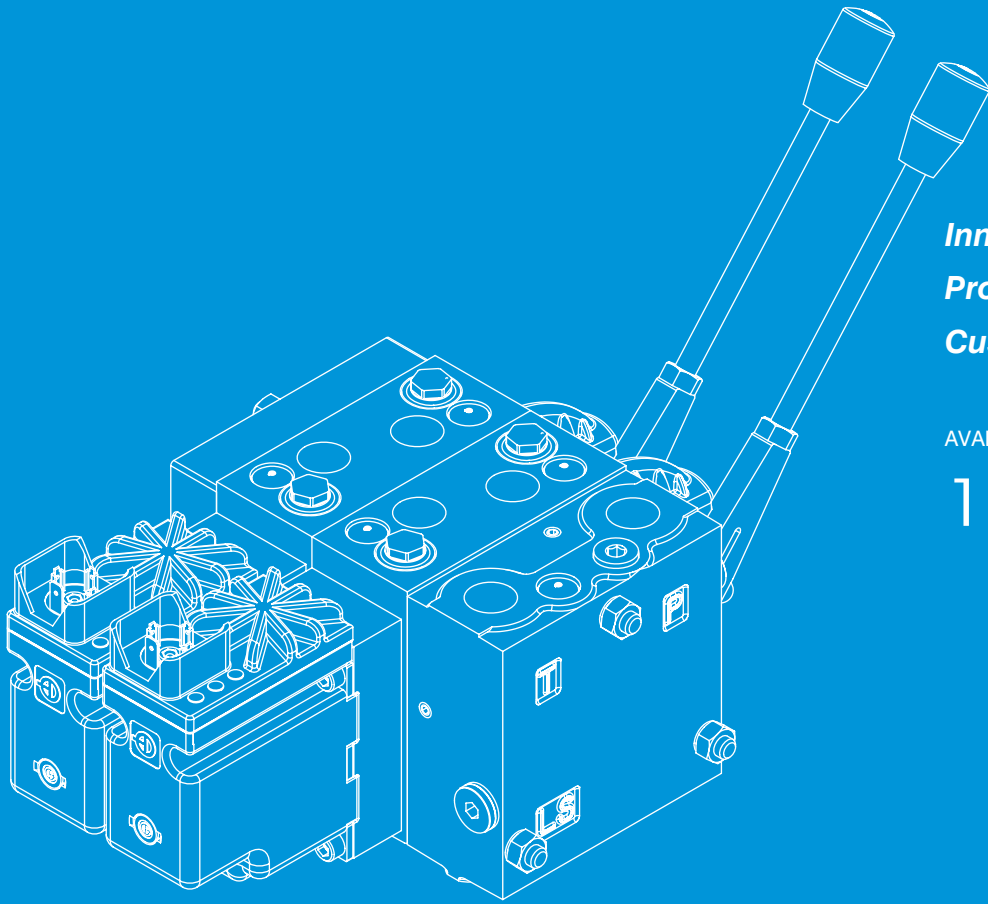

P-4 Contents

Proportional Valve

Pump side module	P.5
End plate	P.6
Basic module	P.7
General dimensions	P.12
Pump side module options	P.13
Plug for external pilot oil supply	P.16
LS Solenoid Unloading vavle	P.17
End plate options	P.18
Spool options	P.19
A side options	P.21
B side options	P.22
Suction valve options	P.24
Basic module options	P.25
Accessories	P.29
Order specification sheet	P.30



Innovative Designs
Professional Quality
Customer Satisfaction !

AVAILABLE SECTIONS FROM

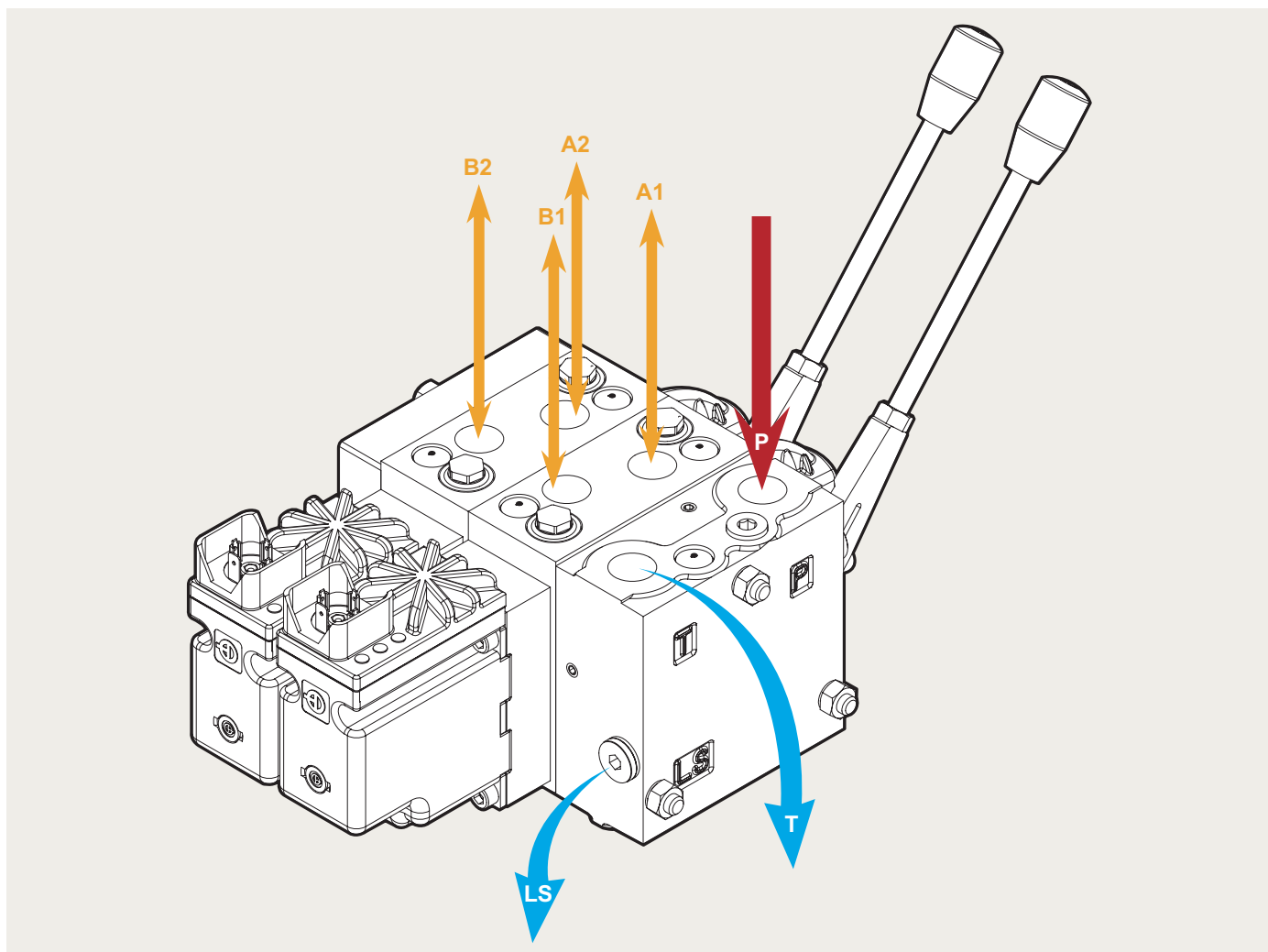
1 TO **10**

P-4 Proportional Valve



P-4 Technical Data

Proportional Valve



P-4 Proportional valve Data			
Max pressure	P	350 bar	5075 psi
	A/B	350 bar	5075 psi
	T	40 bar	580 psi
Oil Temperature (Inlet Temperature)		from -20 to 90 °C	from -4 to 194 °F
Oil Viscosity	Operating range	from 15 to 75 mm ² /s	from 15 to 75 cst
	min	12 mm ² /s	12 cst
	max.	4 mm ² /s	4 cst
Ambient Temperature		from -30° to 60°C	from -22° to 140° F

• All specifications, dimensions and design characteristic shown in this catalogue are subject to change without notice.

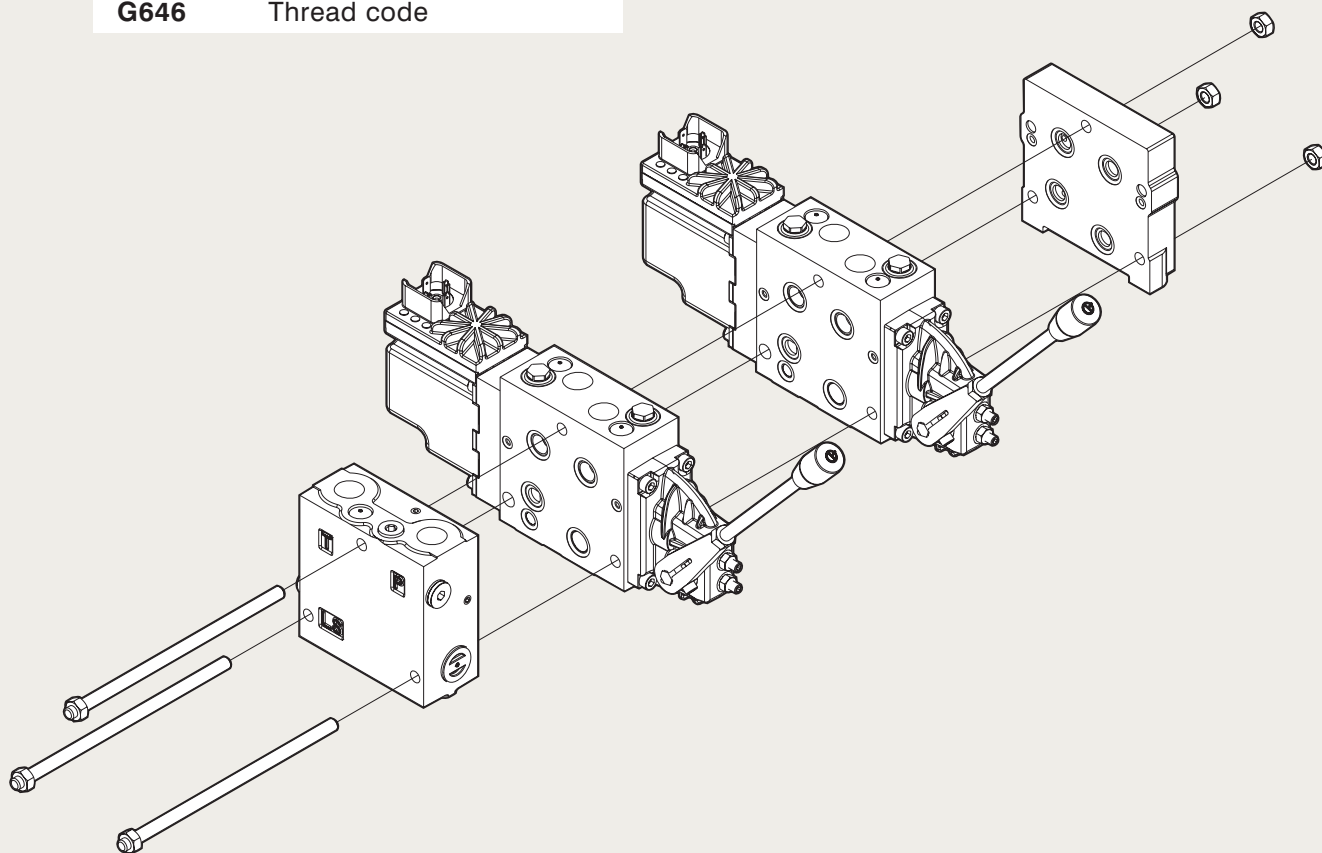
P-4 Complete Assembled Proportional Valve

P-4 / ※※※※ / G 646

P-4 Series code

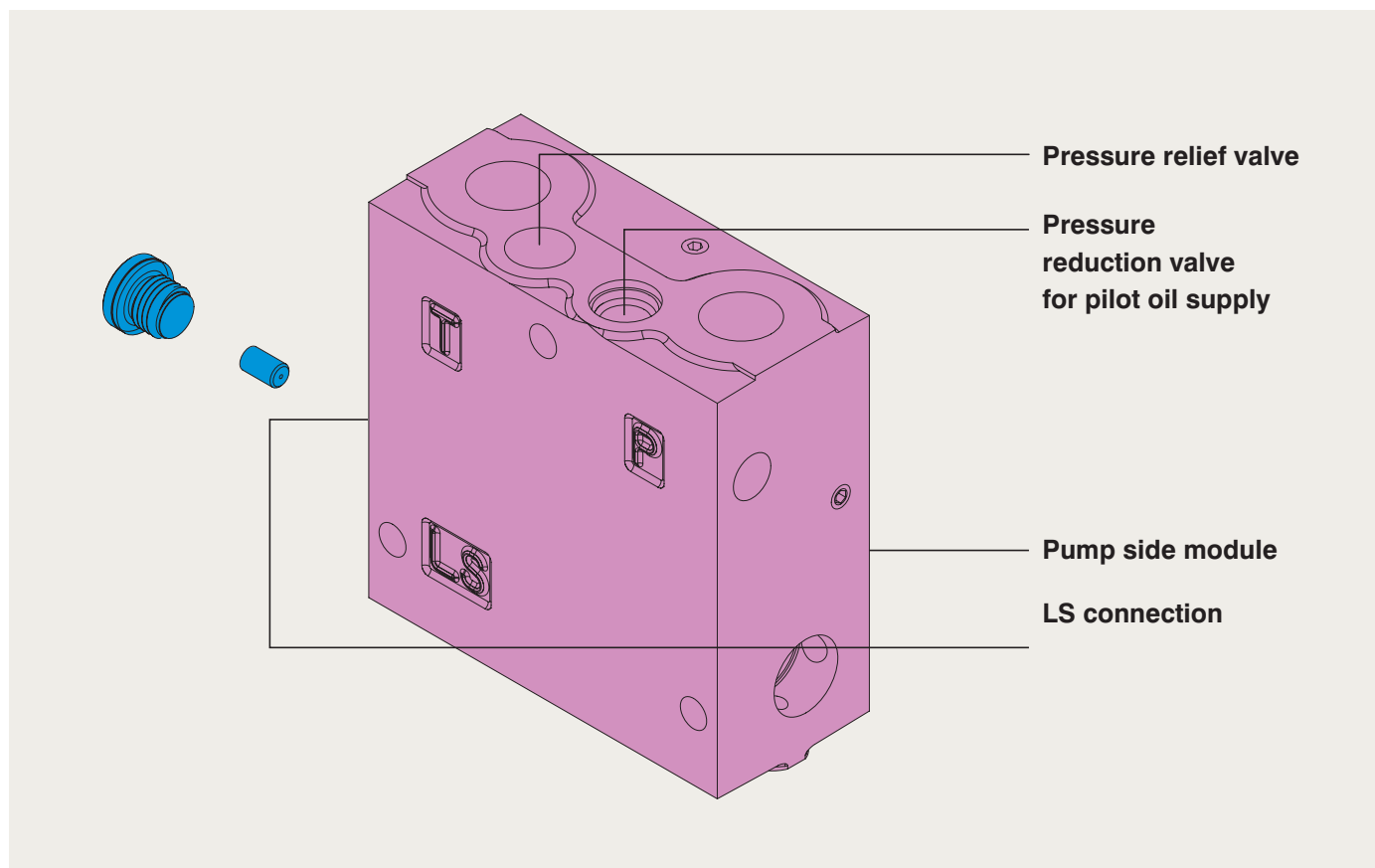
※※※※ Reference code

G646 Thread code



P-4 Pump Side Module

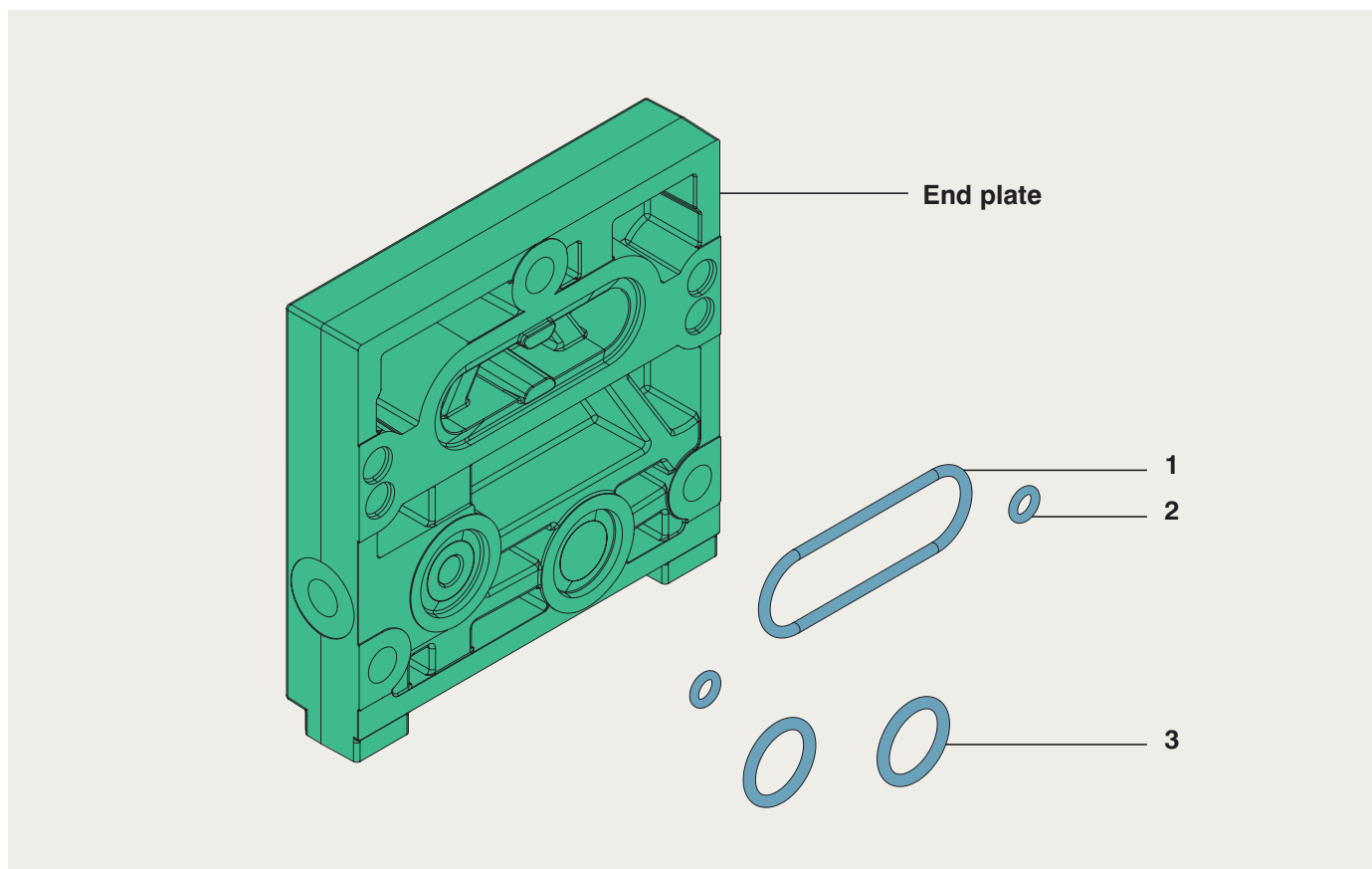
Proportional Valve



Pump Side Module		
CODE	DESCRIPTION	PAGE
PV4P0101	Open centre pump side module for pumps with fixed displacement. For mechanically actuated valves.	P. 13
PV4P0201	Closed centre pump side module for pumps with variable displacement. For mechanically actuated valves.	P. 13
PV4P0102	Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrically actuated valves.	P. 13
PV4P0202	Closed centre pump side module for pumps with variable displacement. With pilot oil supply for electrically actuated valves.	P. 13
PV4P0103	Open center pump side module for pumps with fixed displacement. For mechanically actuated valves. Connection for LS unloading valve.	P. 14
PV4P0203	Closed centre pump side module for pumps with variable displacement. For mechanically actuated valves. Connection for LS unloading valve.	P. 14
PV4P0104	Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrically actuated valves. Connection for electrical LS unloading valve.	P. 14
PV4P0204	Closed centre pump side module for pumps with variable displacement. With pilot oil supply. for electrically actuated valves. Connection for electrical LS unloading valve.	P. 14
PV4P0105	Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrical actuated and connection for pilot oil pressure.	P. 15
PV4P0205	Closed centre pump side module for pumps with variable displacement. With pilot oil supply for electrical actuated and connection for pilot oil pressure.	P. 15
PV4P0106	Open centre pump side module for pumps with fixed displacement. With pilot oil supply for hydraulic actuated and connection for pilot oil pressure.	P. 15
PV4P0206	Closed centre pump side module for pumps with variable displacement. With pilot oil supply for hydraulic actuated and connection for pilot oil pressure.	P. 15

P-4 End Plate

Proportional Valve



End Plate		
CODE	DESCRIPTION	PAGE
PV4C0101	Aluminum casting, No connection. Max pressure: 300 bar (4351 psi)	P. 18
PV4C0102	Aluminum casting, LS G1/8 external connection. Max pressure: 250 bar (3625 psi)	P. 18
PV4C0201	Iron casting, No connection. Max pressure:350 bar (5057 psi)	P. 18
PV4C0202	Iron casting, LS G1/4 external connection. Max pressure: 350 bar (5075 psi)	P. 18

Seal For End Plate		
CODE	CODE	QTY
1	PV-ORN-001	1
2	P5	2
3	AS114	2

P-4 Basic Modules

Proportional Valve

1: Spool		
CODE	DESCRIPTION	PAGE
YLWPV4202040FD	40 l/min, without LS A/B shuttle valve, with friction detent A,B open to Tank in neutral position.	P. 19~20
YLWPV4202040ABFD	40 l/min, with LS A/B shuttle valve, with friction detent A,B open to Tank in neutral position.	P. 19~20
YLWPV4201025FD	25 l/min, without LS A/B shuttle valve, with friction detent A,B closed in neutral position.	P. 19~20
YLWPV4201025ABFD	25 l/min, with LS A/B shuttle valve, with friction detent A,B closed in neutral position.	P. 19~20
YLWPV4202025FD	25 l/min, without LS A/B shuttle valve, with friction detent A,B open to Tank in neutral position.	P. 19~20
YLWPV4202025ABFD	25 l/min, with LS A/B shuttle valve, with friction detent A,B open to Tank in neutral position.	P. 19~20
YLWPV4201010FD	10 l/min, without LS A/B shuttle valve, with friction detent, closed in neutral position.	P. 19~20
YLWPV4201010ABFD	10 l/min, with LS A/B shuttle valve, with friction detent, closed in neutral position.	P. 19~20
YLWPV4202010FD	10 l/min, without LS A/B shuttle valve, with friction detent, A,B to Tank in neutral position.	P. 19~20
YLWPV4202010ABFD	10 l/min, with LS A/B shuttle valve, with friction detent, A,B to Tank in neutral position.	P. 19~20
YLWPV4201005FD	5 l/min, without LS A/B shuttle valve, with friction detent, closed in neutral position.	P. 19~20
YLWPV4201005ABFD	5 l/min, with LS A/B shuttle valve, with friction detent, closed in neutral position.	P. 19~20
YLWPV4202005FD	5 l/min, without LS A/B shuttle valve, with friction detent, A,B to Tank in neutral position.	P. 19~20
YLWPV4202005ABFD	5 l/min, with LS A/B shuttle valve, with friction detent, A,B to Tank in neutral position.	P. 19~20

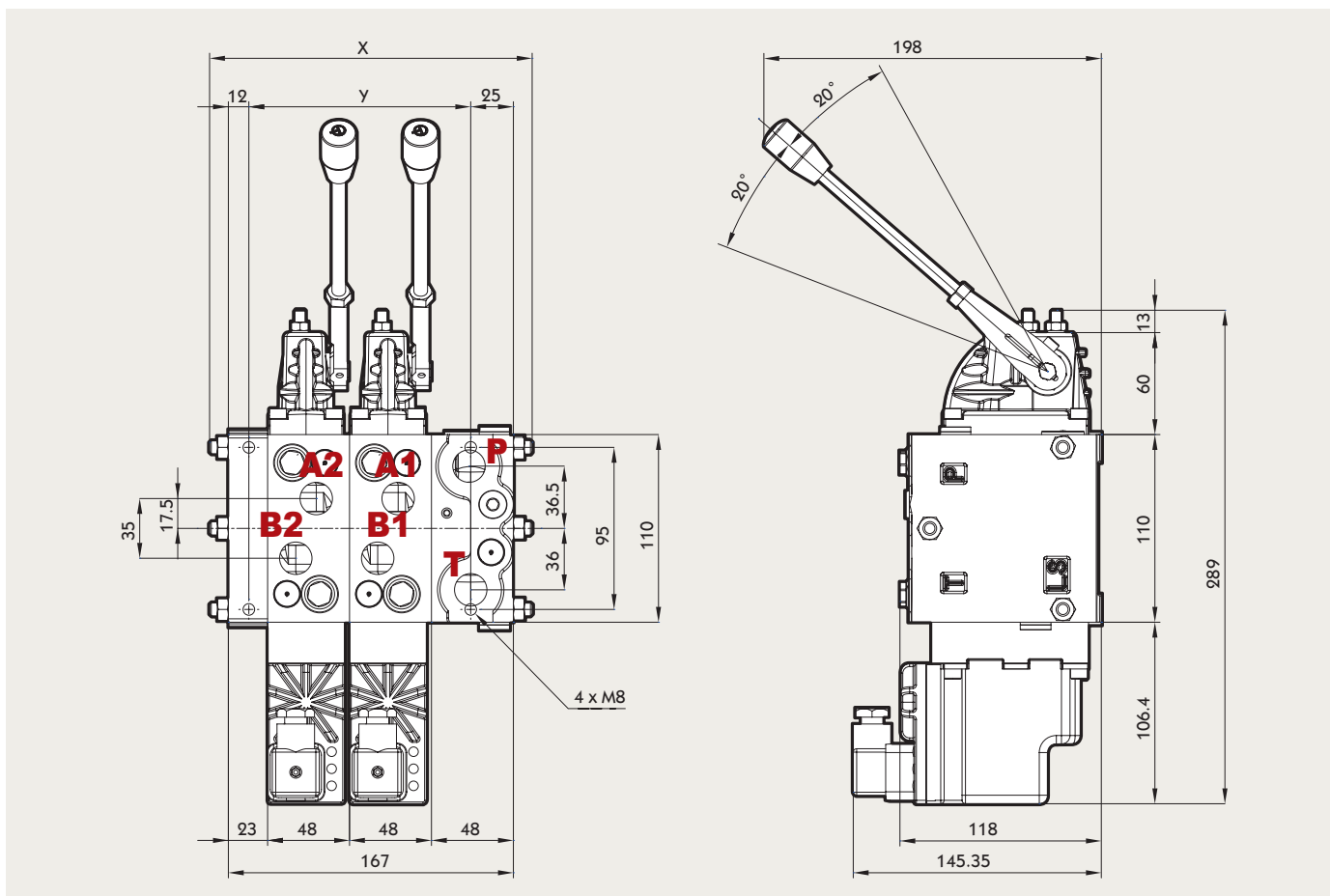
2: "B" Sides Options		
CODE	DESCRIPTION	PAGE
CO	Standard cover	P. 22
FD	Friction detent	P. 22
HA-G2	Hydraulic actuation, thread G1/4, 12 mm deep	P. 22
HA-E6	Hydraulic actuation, thread 9/16-18UNF, 0.45 in deep	P. 22
EPVE 12V	Electro-hydraulic Actuation, 12 VDC	
EPVE 24V	Electro-hydraulic Actuation, 24 VDC	
EPVO 12V	ON-OFF Electrical actuation, 12VDC	P. 23
EPVO 24V	ON-OFF Electrical actuation, 24VDC	P. 23

3: "A" Sides Options		
CODE	DESCRIPTION	PAGE
L	Standard lever, spring centered	P. 21
LM	Standard lever, spring centered; Individual oil flow adjustment to ports A and B	P. 21

6: Suction valve		
TYPE: A	DESCRIPTION	PAGE
C	Suction valve for port A, B	P. 24
U	Shock and suction valve for port A,B	P. 24

P-4 General Dimensions

Proportional Valve



Standard dimensions

Ports	P	A and B	T
BSP	G1/2 \ G3/4	G1/2	G3/4
UN-UNF	7/8-14 UNF (SAE10) \ 1 1/16-12 UNF (SAE12)	7/8-14 UNF (SAE10)	1 1/16-12 UNF (SAE12)

• G-1/2 : G4 G-3/4 : G6
SAE10 : E10 SAE12 : E12

Standard dimensions

Item	X		Y		Item	X		Y	
	mm	in	mm	in		mm	in	mm	in
PV4 /1S	140	5.51	82	3.23	PV4 /6S	385	15.16	322	12.68
PV4 /2S	189	7.44	130	5.12	PV4 /7S	434	17.09	370	14.57
PV4 /3S	238	9.37	178	7.01	PV4 /8S	483	19.02	418	16.46
PV4 /4S	287	11.3	226	8.9	PV4 /9S	527	20.95	466	18.35
PV4 /5S	336	13.23	274	10.79	PV4 /10S	576	22.87	514	20.24

P-4 Pump Side Module Options

Proportional Valve

PV4P0101		
<p>Open centre pump side module for pumps with fixed displacement. For mechanically actuated valves.</p>	PV4P0101-G4 P port: G1/2 PV4P0101-E10 P port: 7/8-14UNF PV4P0101-G6 P port: G3/4 PV4P0101-E12 P port: 1-1/16UNF	
PV4P0201		
<p>Closed centre pump side module for pumps with variable displacement. For mechanically actuated valves.</p>	PV4P0201-G4 P port: G1/2 PV4P0201-E10 P port: 7/8-14UNF PV4P0201-G6 P port: G3/4 PV4P0201-E12 P port: 1-1/16UNF	
PV4P0102		
<p>Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrically actuated valves.</p>	PV4P0102-G4 P port: G1/2 PV4P0102-E10 P port: 7/8-14UNF PV4P0102-G6 P port: G3/4 PV4P0102-E12 P port: 1-1/16UNF	
PV4P0202		
<p>Closed centre pump side module for pumps with variable displacement. With pilot oil supply for electrically actuated valves.</p>	PV4P0202-G4 P port: G1/2 PV4P0202-E10 P port: 7/8-14UNF PV4P0202-G6 P port: G3/4 PV4P0202-E12 P port: 1-1/16UNF	

P-4 Pump Side Module Options

Proportional Valve

PV4P0103		
<p>Open center pump side module for pumps with fixed displacement. For mechanically actuated valves. Connection for LS unloading valve.</p>	<p>PV4P0103-G6 P port: G3/4</p>	
PV4P0203		
<p>Closed centre pump side module for pumps with variable displacement. For mechanically actuated valves. Connection for LS unloading valve.</p>	<p>PV4P0203-G6 P port: G3/4</p>	
PV4P0104		
<p>Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrically actuated valves. Connection for electrical LS unloading valve.</p>	<p>PV4P0104-G4 P port: G1/2 PV4P0104-E10 P port: 7/8-14UNF PV4P0104-G6 P port: G3/4 PV4P0104-E12 P port: 1-1/16UNF</p>	
PV4P0204		
<p>Closed centre pump side module for pumps with variable displacement. With pilot oil supply for electrically actuated valves. Connection for electrical LS unloading valve.</p>	<p>PV4P0204-G4 P port: G1/2 PV4P0204-E10 P port: 7/8-14UNF PV4P0204-G6 P port: G3/4 PV4P0204-E12 P port: 1-1/16UNF</p>	

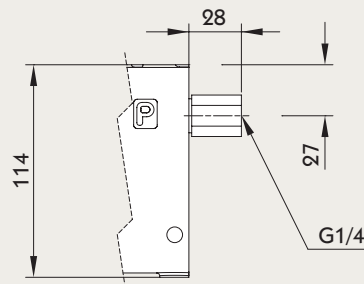
P-4 Pump Side Module Options

Proportional Valve

PV4P0105		
<p>Open centre pump side module for pumps with fixed displacement. With pilot oil supply for electrical actuated and connection for pilot oil pressure.</p>	<p>PV4P0105-G6 P port: G3/4</p> <p>PV4P0105-E10 P port: 7/8-14UNF</p>	
PV4P0205		
<p>Closed centre pump side module for pumps with variable displacement. With pilot oil supply for electrical actuated and connection for pilot oil pressure.</p>	<p>PV4P0205-G6 P port: G3/4</p> <p>PV4P0205-E10 P port: 7/8-14UNF</p>	
PV4P0106		
<p>Open centre pump side module for pumps with fixed displacement. With pilot oil supply for hydraulic actuated and connection for pilot oil pressure.</p>	<p>PV4P0106-G6 P port: G3/4</p> <p>PV4P0106-E10 P port: 7/8-14UNF</p>	
PV4P0206		
<p>Closed centre pump side module for pumps with variable displacement. With pilot oil supply for hydraulic actuated and connection for pilot oil pressure.</p>	<p>PV4P0206-G6 P port: G3/4</p> <p>PV4P0206-E10 P port: 7/8-14UNF</p>	

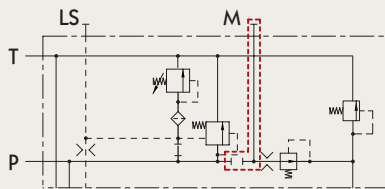
P-4 Plug For External Pilot Oil Supply Proportional Valve

Dimension



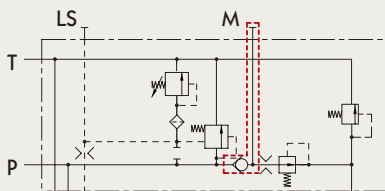
Symbol

Code



PV4-PO

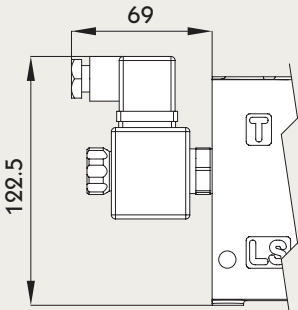

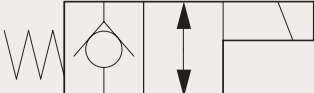
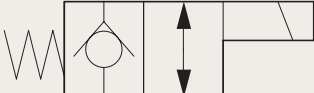
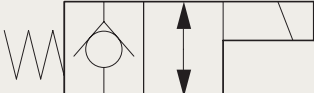
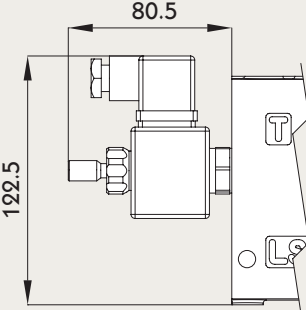



Plug for external pilot oil supply, it's suitable for fixed displacement or variable displacement.



PV4-PC

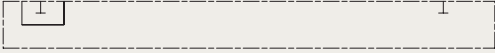
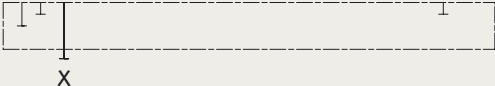
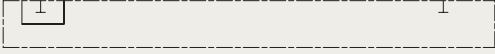

Plug for external pilot oil supply with check valve. It's suitable for fixed displacement.

P-4 LS Solenoid Unloading Valve Proportional Valve

Dimension	Symbol	Code
<p>Hirschmann connector</p> 	<p>Normally Open (NO)</p> 	<p>PV4-ELN12 Rated Voltage 12VDC</p>
	<p>Normally Closed (N C)</p> 	<p>PV4-ELN24 Rated Voltage 24VDC</p>
	<p>Normally Closed (N C)</p> 	<p>PV4-ELF12 Rated Voltage 12VDC</p>
	<p>Normally Closed (N C)</p> 	<p>PV4-ELF24 Rated Voltage 24VDC</p>
<p>Hirschmann connector</p> 	<p>Emergency bottom for Normally Open (NO)</p> 	<p>PV4-ELNM12 Rated Voltage 12VDC</p>
	<p>Emergency bottom for Normally Open (NO)</p> 	<p>PV4-ELNM24 Rated Voltage 24VDC</p>
	<p>Emergency bottom for Normally Open (NO)</p> 	<p>PV4-ELNM26 Rated Voltage 26VDC</p>

P-4 End Plate Options

Proportional Valve

PV4C0101	
<p>Aluminum casting, No connection.</p> <p>Max pressure: 300 bar (4351 psi)</p>	
PV4C0102	
<p>Aluminum casting, LS G1/8 external connection</p> <p>Max. pressure: 250 bar (3625 psi)</p>	
PV4C0201	
<p>Iron casting</p> <p>No connection</p> <p>Max. pressure: 350 bar (5057 psi)</p>	
PV4C0202	
<p>Iron casting, LS G1/4 external connection.</p> <p>Max. pressure: 350 bar (5075 psi)</p>	

P-4 Spool Options Proportional Valve

YLWPV42 01 ※ ※ ※ AB FD

01 Spool circuit ※※※ Spool flow AB Shuttle valve FD Friction detent

YLWPV4201 ※※※※※		
	<p>P → A B → T</p>	
	<p>P & T & A & B closed</p>	
	<p>P → B A → T</p>	
YLWPV4201 ※※※※※		
	<p>P → A B → T</p>	
	<p>A & B → T P closed</p>	
	<p>P → B A → T</p>	

P-4 Spool Options

Proportional Valve

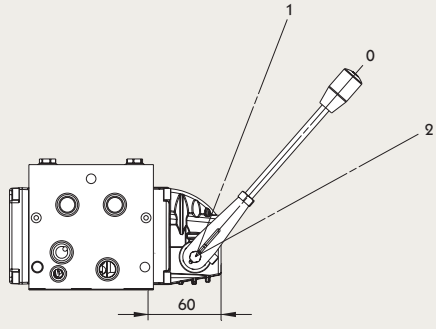

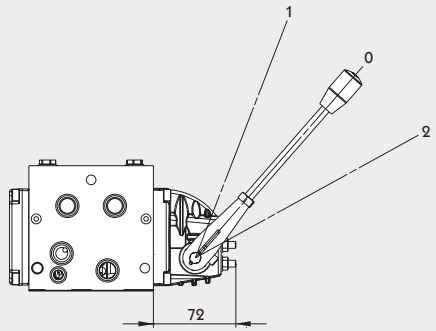

YLWPV42 01 ※ ※ ※ AB FD

01 Spool circuit ※ ※ ※ Spool flow AB Shuttle valve FD Friction detent

YLWPV4201 ※ ※ ※ ※ FD		
	<p>P → A</p> <p>B → T</p>	<p>1 0 2</p>
	<p>P & T & A & B closed</p>	<p>1 0 2</p>
	<p>P → B</p> <p>A → T</p>	<p>1 0 2</p>
YLWPV4201 ※ ※ ※ ※ FD		
	<p>P → A</p> <p>B → T</p>	<p>1 0 2</p>
	<p>A & B → T</p> <p>P closed</p>	<p>1 0 2</p>
	<p>P → B</p> <p>A → T</p>	<p>1 0 2</p>

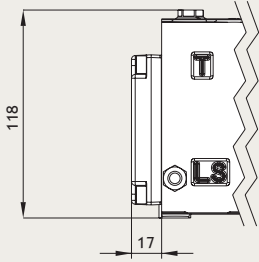
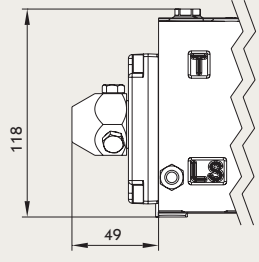
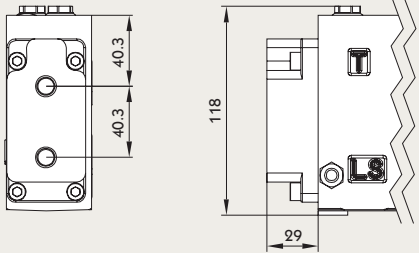
P-4 A Side Options

Proportional Valve

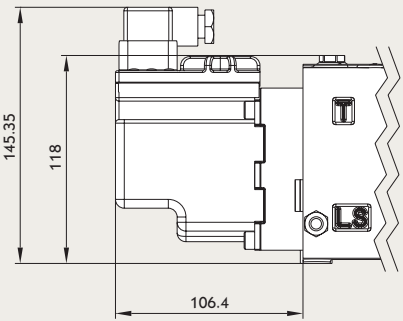
Type L		
		<p>Standard lever, spring centered.</p>
Type LM		
		<p>Standard lever, spring centered; Individual oil flow adjustment to ports A and B.</p>

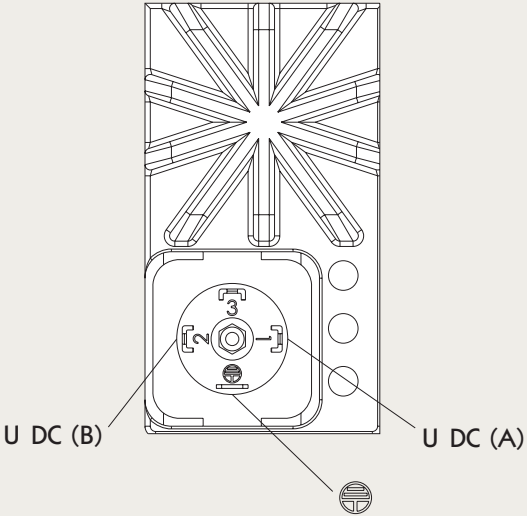
P-4 B Side Options

Proportional Valve

Type CO	
	<p>Standard Cover</p>
Type FD	
	<p>Friction detent</p>
Type HA-G2	<p>Thread G 1/4, 12 mm deep</p>
Type HA-E6	<p>Thread 9/16-18/ UNF, 0.45 in deep</p>
	<p>Hydraulic Actuation</p>

P-4 B Side Options Proportional Valve

Type EPVO	
	<p>EPVO 12 ON-OFF Electrical actuation, 12VDC Hirschmann connector</p>
	<p>EPVO 24 ON-OFF Electrical actuation, 24VDC Hirschmann connector</p>



Function	A(Pin 1)	B(Pin 2)
Neutral position	0	0
P → A	UDC	0
P → B	0	UDC

P-4 Suction Valve Options

Proportional Valve

Type C	
	Suction valve

Type U	
	Shock and suction valve

Shock and suction valve options

Setting pressure		Code	Setting pressure		Code
bar	psi		bar	psi	
32	460	U32	190	2755	U190
50	725	U50	210	3045	U210
60	914	U60	230	3335	U230
80	1160	U80	240	3480	U240
100	1450	U100	250	3625	U250
125	1813	U125	265	2843	U265
140	2031	U140	280	4061	U280
150	2175	U150	300	4351	U300
160	2320	U160	320	4641	U320
175	2538	U175	350	5075	U350

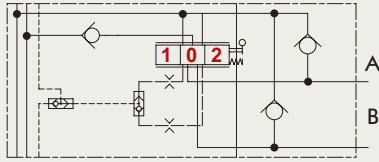
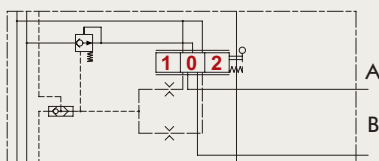
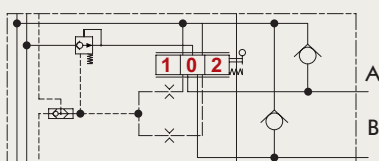
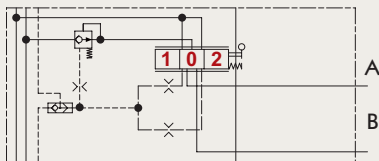
P-4 Basic Module Options

Proportional Valve

PV4V01		
Without load drop check valve and pressure compensated valve.	PV4V01-G4 A,B port: G1/2	
	PV4V01-E10 A,B port: 7/8-14UNF	
PV4V01U		
Without load drop check valve and pressure compensated valve. With ports for suction valve or shock and suction valve.	PV4V01U-G4 A,B port: G1/2	
	PV4V01U-E10 A,B port: 7/8-14UNF	
PV4V02		
With load drop check valve.	PV4V02-G4 A,B port: G1/2	
	PV4V02-E10 A,B port: 7/8-14UNF	
PV4V02U		
With load drop check valve. With ports for suction valve or shock and suction valve.	PV4V02U-G4 A,B port: G1/2	
	PV4V02U-E10 A,B port: 7/8-14UNF	

P-4 Basic Module Options

Proportional Valve

PV4V03U		
<p>With load drop check valve, LS A/B shuttle valve.</p> <p>With ports for suction valve or shock and suction valve.</p>	<p>PV4V03U-G4 A,B port: G1/2</p> <p>PV4V03U-E10 A,B port: 7/8-14UNF</p>	
PV4V04		
<p>With non-damped pressure compensated valve.</p>	<p>PV4V04-G4 A,B port: G1/2</p> <p>PV4V04-E10 A,B port: 7/8-14UNF</p>	
PV4V04U		
<p>With non-damped pressure compensated valve.</p> <p>With ports for suction valve or shock and suction valve.</p>	<p>PV4V04U-G4 A,B port: G1/2</p> <p>PV4V04U-E10 A,B port: 7/8-14UNF</p>	
PV4V05		
<p>With damped pressure compensated valve.</p>	<p>PV4V05-G4 A,B port: G1/2</p>	

P-4 Basic Module Options

Proportional Valve

PV4V05U		
<p>With damped pressure compensated valve.</p> <p>With ports for suction valve or shock and suction valve.</p>	<p>PV4V05U-G4 A,B port: G1/2</p>	
PV4V06		
<p>With non-damped pressure compensated valve.</p> <p>Adjustable LS A/B pressure relief valve.</p>	<p>PV4V06-G4 A,B port: G1/2</p> <p>PV4V06-E10 A,B port: 7/8-14UNF</p>	
PV4V06U		
<p>With non-damped pressure compensated valve.</p> <p>Adjustable LS A/B pressure relief valve.</p> <p>With ports for suction valve or shock and suction valve</p>	<p>PV4V06U-G4 A,B port: G1/2</p> <p>PV4V06U-E10 A,B port: 7/8-14UNF</p>	
PV4V07		
<p>With damped pressure compensated valve.</p> <p>Adjustable LS A/B pressure relief valve.</p>	<p>PV4V07-G4 A,B port: G1/2</p>	

P-4 Basic Module Options

Proportional Valve

<p>PV4V07U</p>		
<p>With damped pressure compensated valve.</p> <p>Adjustable LS A/B pressure relief valve.</p> <p>With ports for suction valve or shock and suction valve</p>	<p>PV4V07U-G4 A,B port: G1/2</p>	

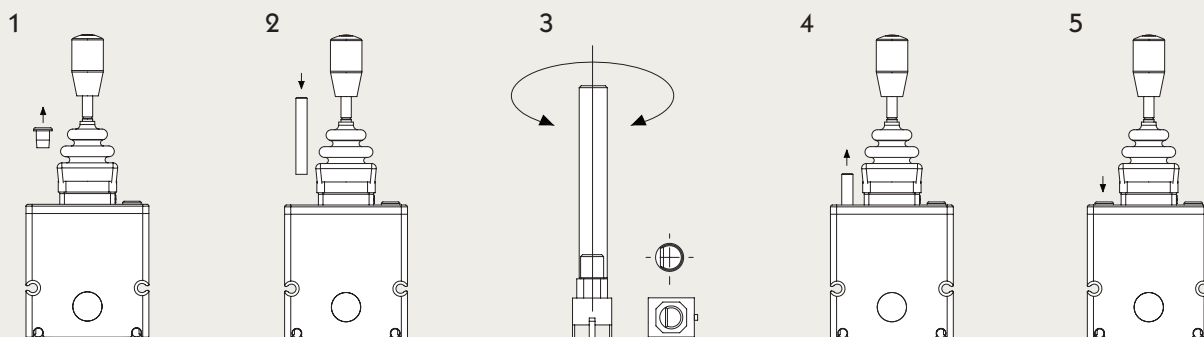
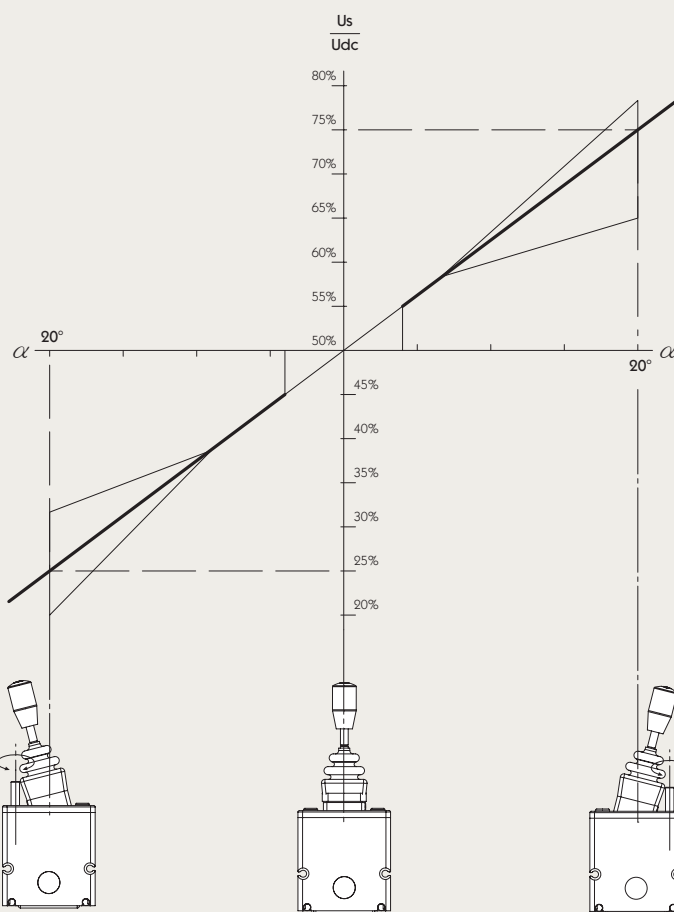
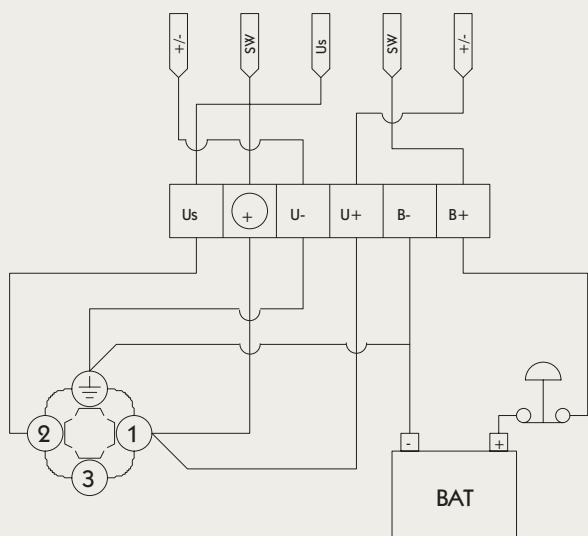
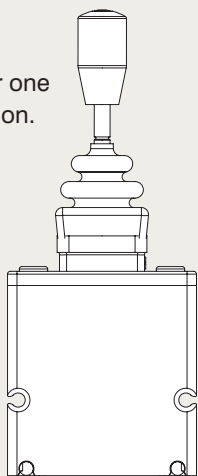
P-4 Accessories

PVH proportional Lever

PVH-1

TYPE PVH

1. Single lever for one section operation.



Note: Please make sure by traverse operating when adjustment.

P-4 Other

PV Order Specification

	[A1]	[A]			[A2]
1	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
2	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
3	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
4	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
5	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
6	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
7	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
8	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
9	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
10	[B]	[C1]	[E]	[D2]	[G]
		[D1]	[F]	[C2]	
[I]		[H]			

Specification sheet: [A] Pump side module [A1] Plug for external pilot oil supply [A2] LS Solenoid Unloading vavle
 [B] A side options [C1/2] LS A/B Pressure relief valve [D1/2] Shock and suction valve
 [E] Basic moldules [F] Spool [G] B side options [H] End plate [I] Tie rod kit



PV-4 *SERIES*

Proportional Valve

FOR MOBILE AND INDUSTRIAL
HYDRAULIC APPLICATIONS



油力油壓工業股份有限公司
YOULI HYDRAULIC INDUSTRIAL CO.,LTD.