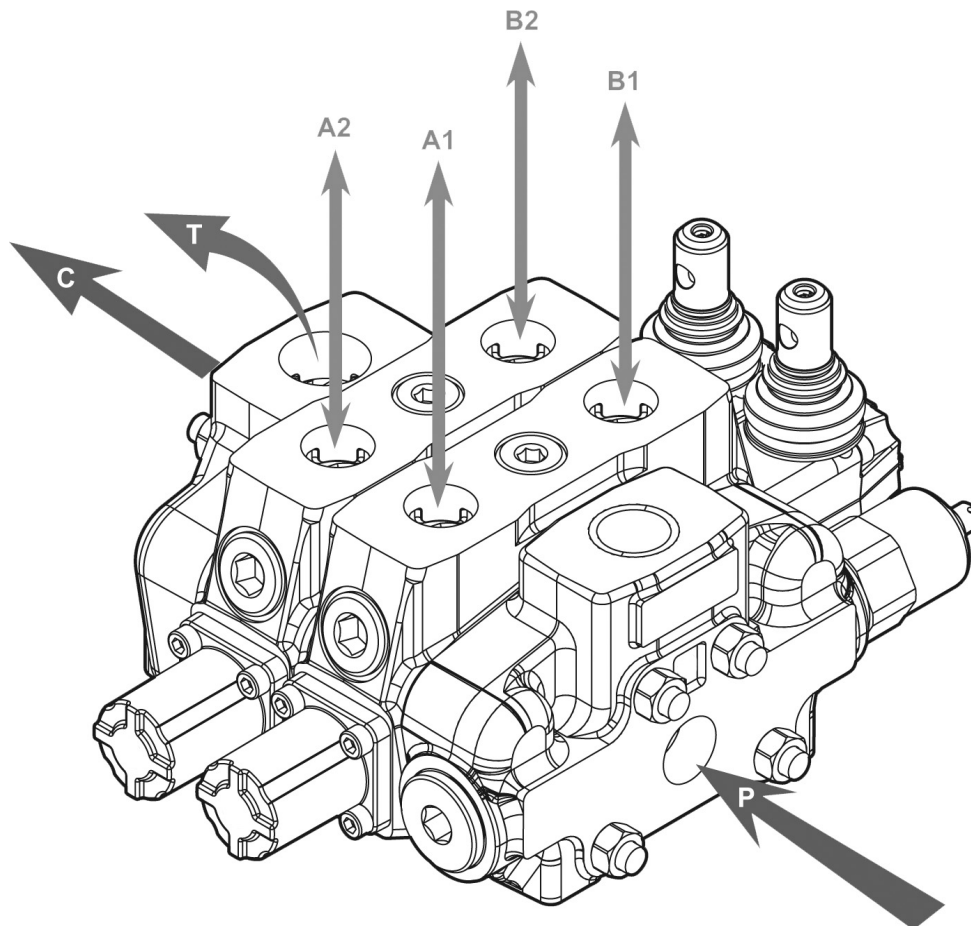


VS6

Sectional Directional Control Valves



VS6 Specifications

Nominal flow rate		140 l/min	37 US gpm
Operating pressure (maximum)	parallel or tandem circuit	315 bar	4600 psi
	series circuit	210 bar	3050 psi
Back pressure (maximum)	on outlet port T	25 bar	360 psi
Fluid temperature range	with NBR(BUNA-N) seals	from -20°C to 80°C	from -4° to 176° F
	with FPM(VITON) seal	from -20°C to 100°C	from -4° to 212° F
Viscosity	operating range	from 15 to 75 mm ² /s	from 15 to 75 cst
	min	12 mm ² /s	12 cst
	max.	400 mm ² /s	400 cst
Ambient temperature range		from -40°C to 60°C	from -40° to 140° F

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

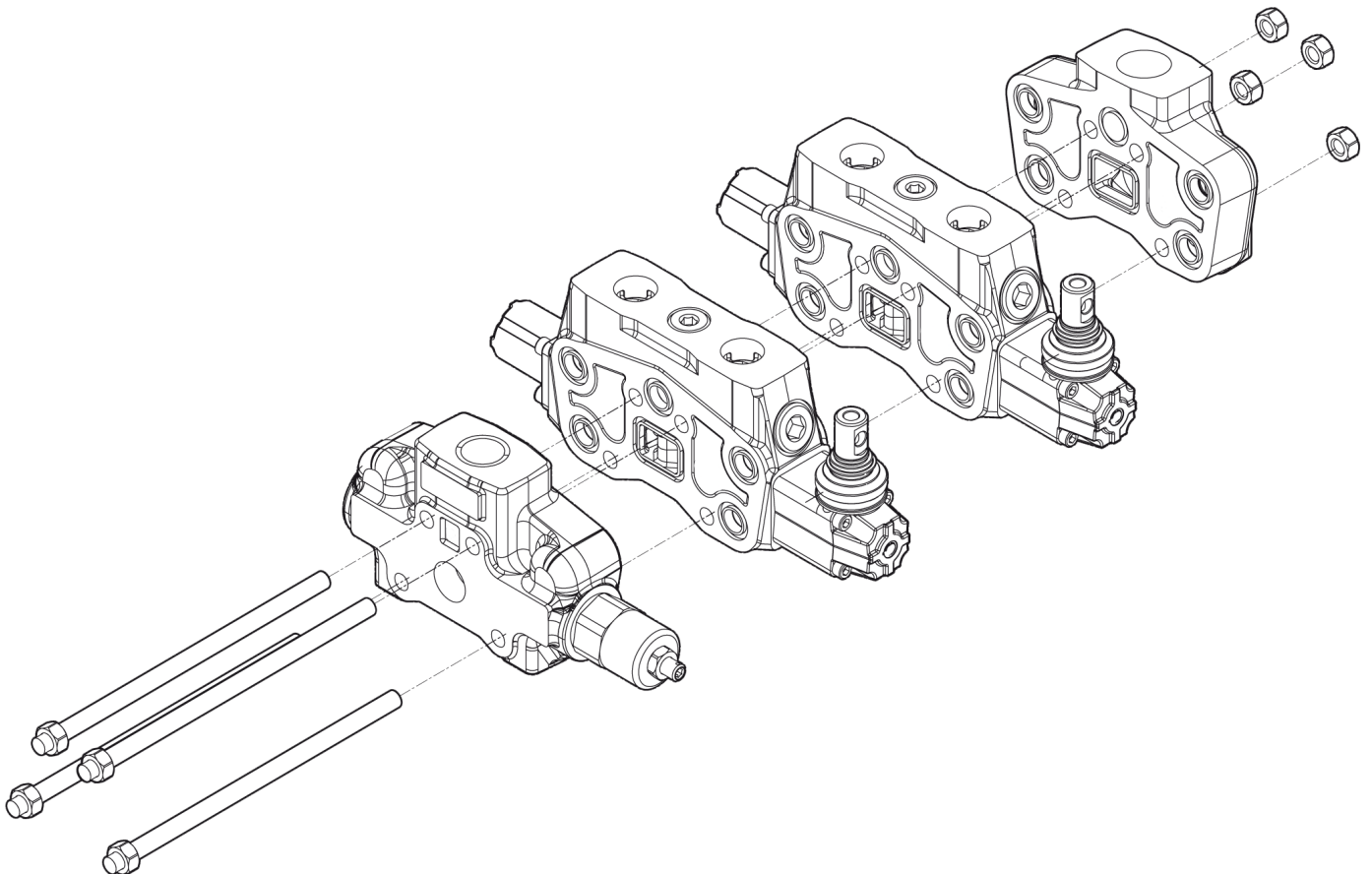
VS6 Complete

Sectional Directional Control Valves

HOW TO ORDER FOR A COMPLETE ASSEMBLED VALVE

VS6 / **2S** - **3** / **18L** / **28L** / **G-6-1** / **M3**

- 2S** No. of working section
- 3** Inlet cover with a main pressure relief valve
- 18L** 1st section (complete working section)
- 28L** Following section (complete working section)
- G-6-1** BSP ports
- M3** Outlet cover





VS6 Inlet Section

Sectional Directional Control Valves

FP VS6 / FG-3 / G-6

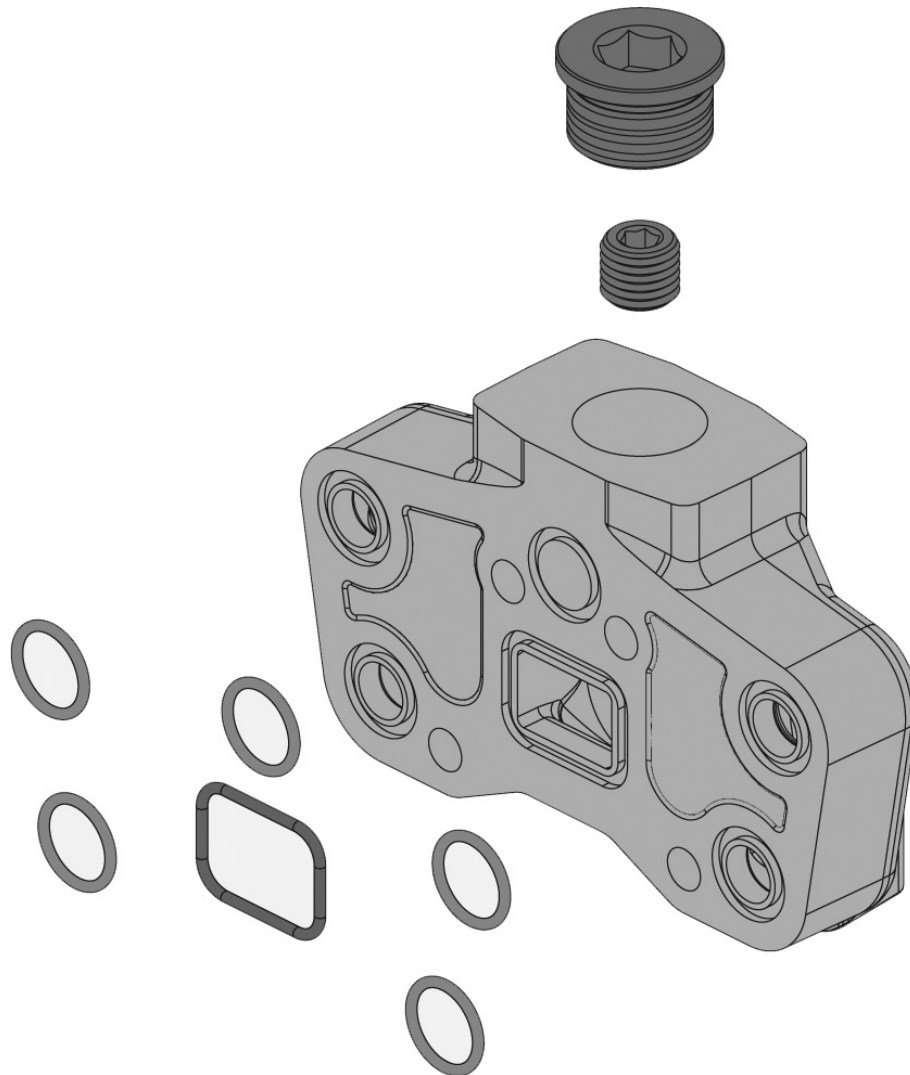
Inlet relief

Inlet Relief			
TYPE	CODE	DESCRIPTION	
FG-2	VS63002	Range 80 to 160 bar / 1150 to 2300 psi, standard setting 125 bar / 1800 psi	
FG-3	VS63003	Range 125 to 250 bar / 1800 to 3600 psi, standard setting 175 bar / 2500 psi	
SV	VS64000	Relief valve blanking plug	
XFG	VS63000	Pilot operated pressure relief valve Range 25 to 315 bar/360 to 4600 psi, standard setting 125 bar/1800 psi	

VS6 Outlet Section

Sectional Directional Control Valves

FT VS6 / G-1 / M3





VS6 Working Section

Sectional Directional Control Valves

EW VS6 / 1S / **1 8 L** / **P1 (G3-100)** / G-6
 1 2 3 **4**

- 1** Spool options
- 2** "B" side Spool positioners
- 3** "A" side controls
- 4** Port relief

1: Spool Symbol		
TYPE	CODE	DESCRIPTION
1	VS62001	Double acting, 3 positions, with A and B closed in neutral position
2	VS62002	Double acting, 3 positions, with A and B open to tank in neutral position
3	VS62003	Single acting on A closed in neutral position, 3 positions, B plugged
4	VS62004	Single acting on B closed in neutral position, 3 positions, A plugged
5	VS62005	Double acting, 3 positions, with B open to Tank in neutral position
6	VS62006	Double acting, 3 positions, with A open to Tank in neutral position
5PY	VS62051	Double acting, 4 positions, floating circuit in 4th position with A, B open to Tank by pushing the lever

VS6 Working Section

Sectional Directional Control Valves

EW VS6 / 1S / **1 8 L** / **P1 (G3-100)** / G-6
 1 2 3 **4**

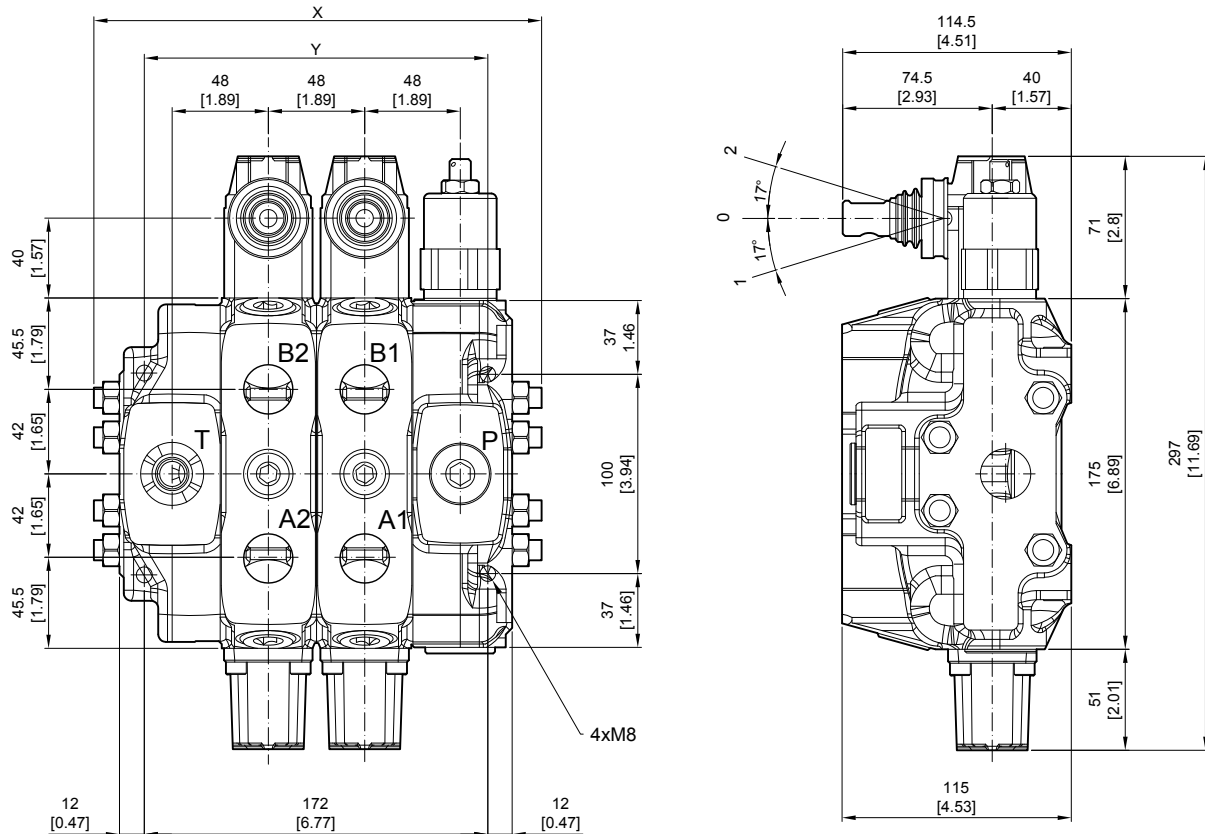
- 1** Spool symbol
- 2** "B" side Spool positioners
- 3** "A" side controls
- 4** Port relief

2: B Side Spool Positioners		
TYPE	CODE	DESCRIPTION
6-1	VS63061	Detent in pos. 1-0-2, without spring centered
6-2	VS63062	2 positions, detent in pos. 0-2, without spring centered
6-3	VS63063	2 positions, detent in pos. 1-0, without spring centered
8D2	VS63082	With spring return to neutral position and pin with M8 male thread for dual control
8P	VS63080	ON/OFF Pneumatic actuator
8EP3	VS64300	ON/OFF Electro-Pneumatic actuator
8MG1 (NO)	VS63801	Microswitch kit operated in pos. 1 (Normally Open)
8MG2 (NO)	VS63802	Microswitch kit operated in pos. 2 (Normally Open)
8MG3 (NO)	VS63803	Microswitch kit operated in pos. 1&2 (Normally Open)
MG(NO)	VS63804	Microswitch with NO terminal
8MG1 (NC)	VS638011	Microswitch kit operated in pos. 1 (Normally Closed)
8MG2 (NC)	VS638021	Microswitch kit operated in pos. 2 (Normally Closed)
8MG3 (NC)	VS638031	Microswitch kit operated in pos. 1&2 (Normally Closed)
MG(NC)	VS638041	Microswitch with NC terminal
8	VS63008	With spring return to neutral position
8-1	VS64081	2 positions, with spring centered from pos. 1
8-2	VS64082	2 positions, with spring centered from pos. 2
9-1	VS63091	Detent in pos. 1, 2 with spring centered
9-2	VS63092	Detent in pos. 2 with spring centered
9-3	VS63093	Detent in pos. 1 with spring centered

2: B Side Spool Positioners		
TYPE	CODE	DESCRIPTION
8ED3+RV-KE1R3	VS63201	1S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE2R3	VS63202	2S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE3R3	VS63203	3S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE4R3	VS63204	4S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE5R3	VS63205	5S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE6R3	VS63206	6S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE7R3	VS63207	7S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE8R3	VS63208	8S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE9R3	VS63209	9S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE10R3	VS63210	10S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE11R3	VS63211	11S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ED3+RV-KE12R3	VS63212	12S: ON/OFF Electro-Hydraulic control kit with pilot and drain line+backpressure valve (12/24 VDC)
8ER3+KE1SO	VS63401	1S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE2SO	VS63402	2S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE3SO	VS63403	3S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE4SO	VS63404	4S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE5SO	VS63405	5S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE6SO	VS63406	6S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE7SO	VS63407	7S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE8SO	VS63408	8S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE9SO	VS63409	9S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE10SO	VS63410	10S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE11SO	VS63411	11S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
8ER3+KE12SO	VS63412	12S: ON/OFF Electro-hydraulic control kit with collector kit for external pilot and drain
3: A Side controls		
TYPE	CODE	DESCRIPTION
L	VS64000	Standard lever
SLP	VS64001	Without lever, with dust proof plate
LCB	VS64002	Joystick lever for 2 section operation
TQ	VS64003	Flexible cable connection
4: Port Relief		
TYPE	CODE	DESCRIPTION
P (G2-63)	VS65002	Anti-shock valve, range 63 to 125 bar / from 900 to 1800 psi standard setting 63 bar / 900 psi
P (G3-100)	VS65003	Anti-shock valve, range 100 to 250 bar / from 1450 to 3600 psi standard setting 100 bar / 1450 psi
P (G4-200)	VS65004	Anti-shock valve, range 200 to 315 bar / from 2900 to 4600 psi standard setting 200 bar / 2900 psi
U (G2-63)	VS65012	Anti-shock valve and Anti-cavitation valve, range 63 to 125 bar / from 900 to 1800 psi standard setting 63 bar / 900 psi
U (G3-100)	VS65013	Anti-shock valve and Anti-cavitation valve, range 100 to 250 bar / from 1450 to 3600 psi standard setting 100 bar / 1450 psi
U (G4-200)	VS65014	Anti-shock valve and Anti-cavitation valve, range 200 to 315 bar / from 2900 to 4600 psi standard setting 200 bar / 2900 psi
C	VS65100	Anti-cavitation

VS6 Dimensions

Sectional Directional Control Valves



Standard threads

Ports	Inlet P and carry-over C	A and B	Outlet T
BSP	G3/4	G3/4	G1
UN-UNF	1 5/16-12 UN-2B (SAE 16)	1 1/16-12 UN-2B (SAE 12)	1 5/16-12 UN-2B (SAE 16)

Pilot ports	Hydraulic	Pneumatic
BSP	G1/4	NPTF 1/8-27
UN-UNF	9/16-18 UNF-2B (SAE 6)	NPTF 1/8-27

• G-1/2 : G4 G-3/8 : G3 G-3/4 : G6 G-1 : G1

• SAE 8 : E8 SAE 10 : E10 SAE 12 : E12 SAE 16 : E16

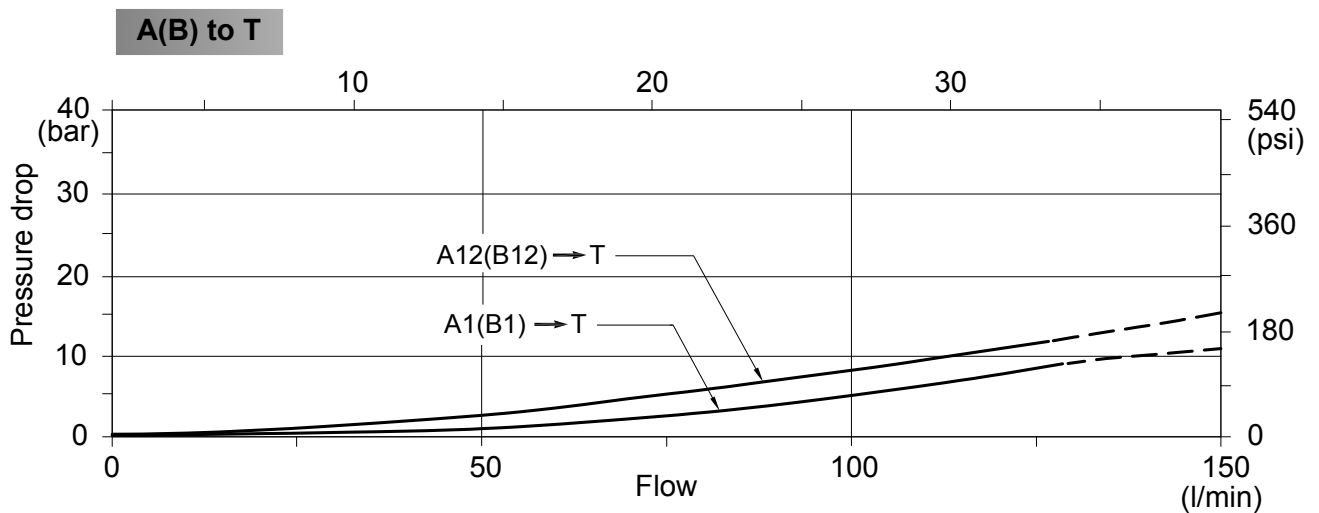
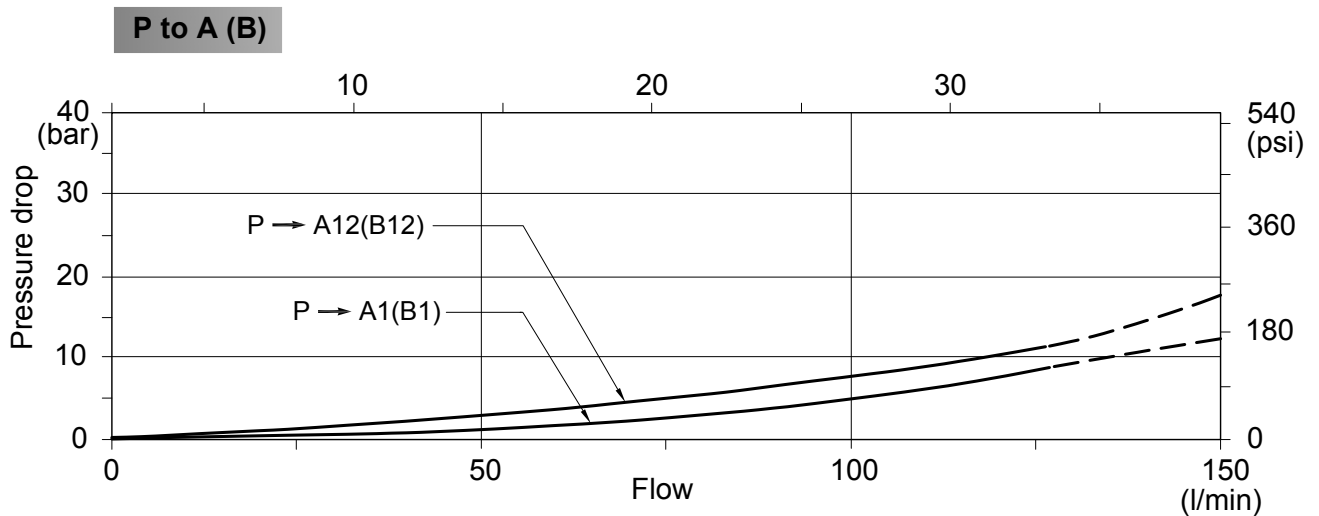
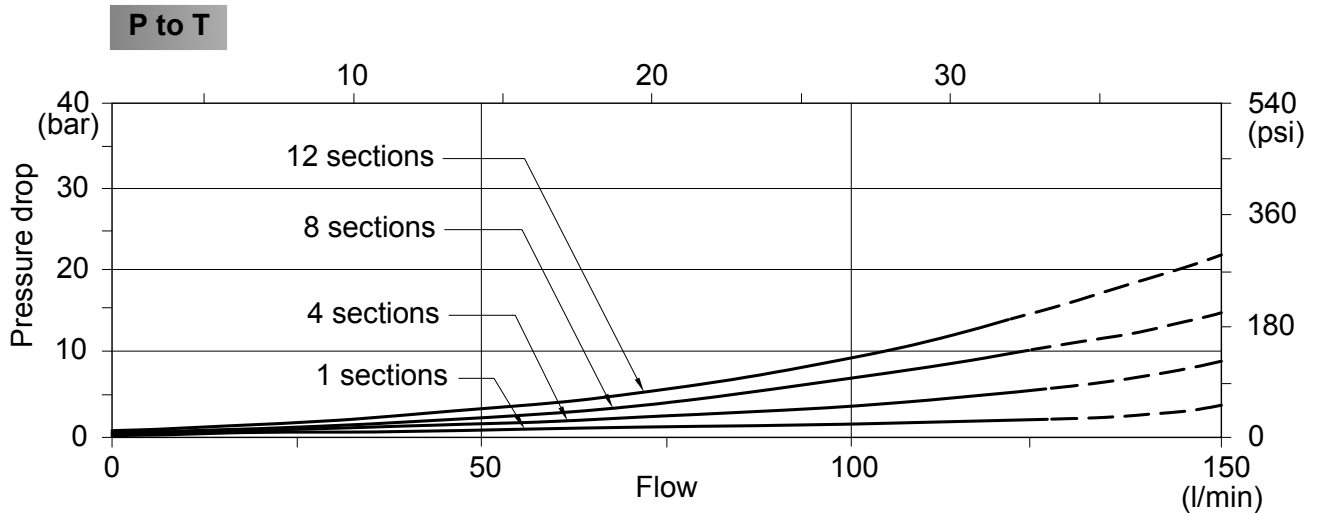
Standard dimensions

TYPE	X		Y	
	mm	in	mm	in
VS6/1S	176	6.63	124	4.88
VS6/2S	224	8.82	172	6.77
VS6/3S	272	10.71	220	8.66
VS6/4S	320	12.60	268	10.55
VS6/5S	368	14.49	316	12.44
VS6/6S	416	16.38	364	14.33

TYPE	X		Y	
	mm	in	mm	in
VS6/7S	464	18.27	412	16.12
VS6/8S	512	20.16	460	18.11
VS6/9S	560	22.05	508	20
VS6/10S	608	23.94	556	21.89
VS6/11S	656	25.83	604	23.78
VS6/12S	704	27.72	652	25.67

VS6 Performance Curve Chart

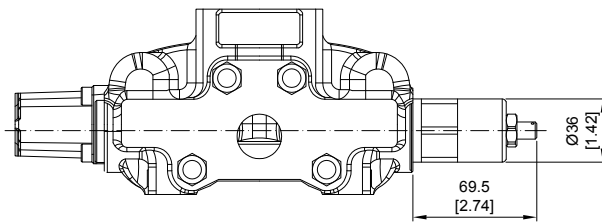
Sectional Directional Control Valves



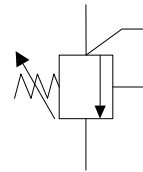
VS6 Inlet Relief (Optional)

Sectional Directional Control Valves

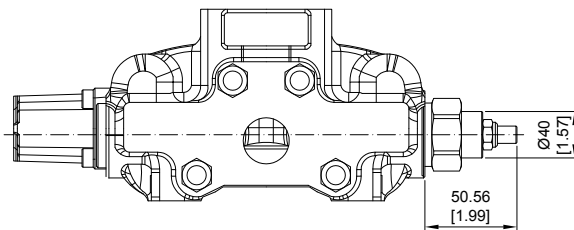
Type FG



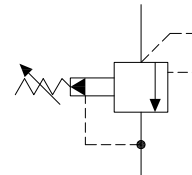
Direct pressure relief valve:



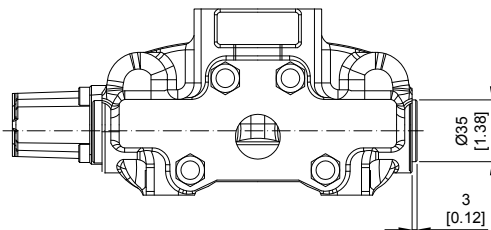
Type XFG



Pilot operated pressure relief valve:



Type SV



Relief valve blanking plug:



VS6 Spool Options

Sectional Directional Control Valves

TYPE 1		
	<p>P → A B → T C closed</p>	
	<p>P & A & B & T closed C open</p>	
	<p>P → B A → T C closed</p>	
TYPE 2		
	<p>P → A B → T C closed</p>	
	<p>A & B → T P closed C open</p>	
	<p>P → B A → T C closed</p>	

VS6 Spool Options

Sectional Directional Control Valves

TYPE 3		
	<p>P → A T & C closed</p>	<p>1 0 2</p> <p>"B" port plugged</p>
	<p>P & A & T closed C open</p>	<p>1 0 2</p> <p>"B" port plugged</p>
	<p>A → T P closed C open</p>	<p>1 0 2</p> <p>"B" port plugged</p>
TYPE 4		
	<p>B → T P closed C open</p>	<p>1 0 2</p> <p>"A" port plugged</p>
	<p>P & B & T closed C open</p>	<p>1 0 2</p> <p>"A" port plugged</p>
	<p>P → B T & C closed</p>	<p>1 0 2</p> <p>"A" port plugged</p>

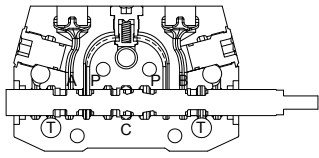
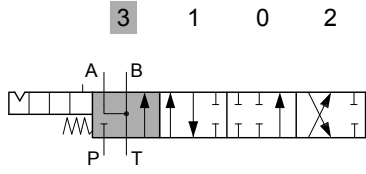
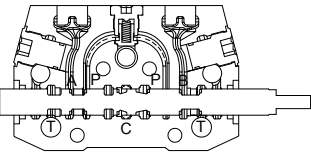
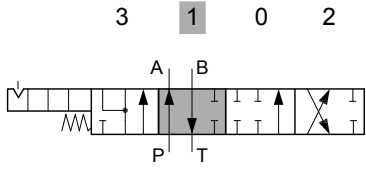
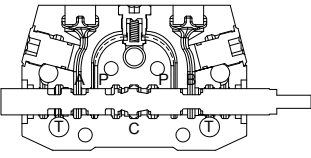
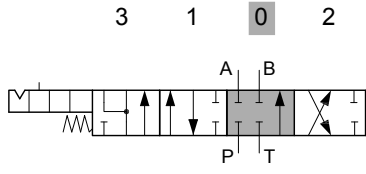
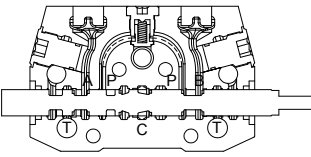
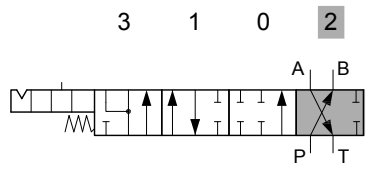
VS6 Spool Options

Sectional Directional Control Valves

TYPE 5		
	<p>P → A B → T C closed</p>	
	<p>B → T P & A closed C open</p>	
	<p>P → B A → T C closed</p>	
TYPE 6		
	<p>P → A B → T C closed</p>	
	<p>A → T P & B closed C open</p>	
	<p>P → B A → T C closed</p>	

VS6 Spool Options

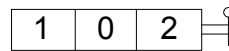
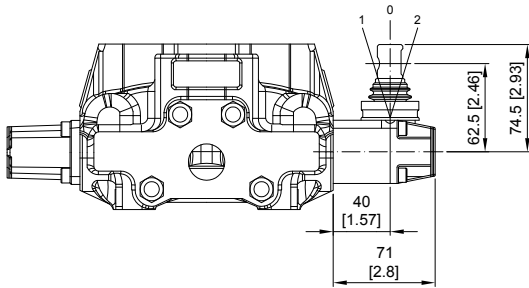
Sectional Directional Control Valves

TYPE 5PY		NOTE: WITH SPECIAL BODY AND SPECIAL POSITIONER
	<p>A & B → T P closed C open</p>	<p>3 1 0 2</p> 
	<p>P → A B → T C closed</p>	<p>3 1 0 2</p> 
	<p>P & T & A & B closed C open</p>	<p>3 1 0 2</p> 
	<p>P → B A → T C closed</p>	<p>3 1 0 2</p> 

VS6 A Side

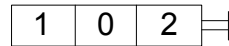
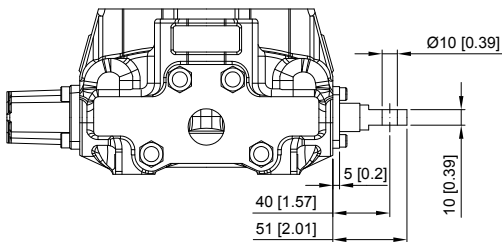
Sectional Directional Control Valves

Type L



Type L:
STANDART LEVER KIT

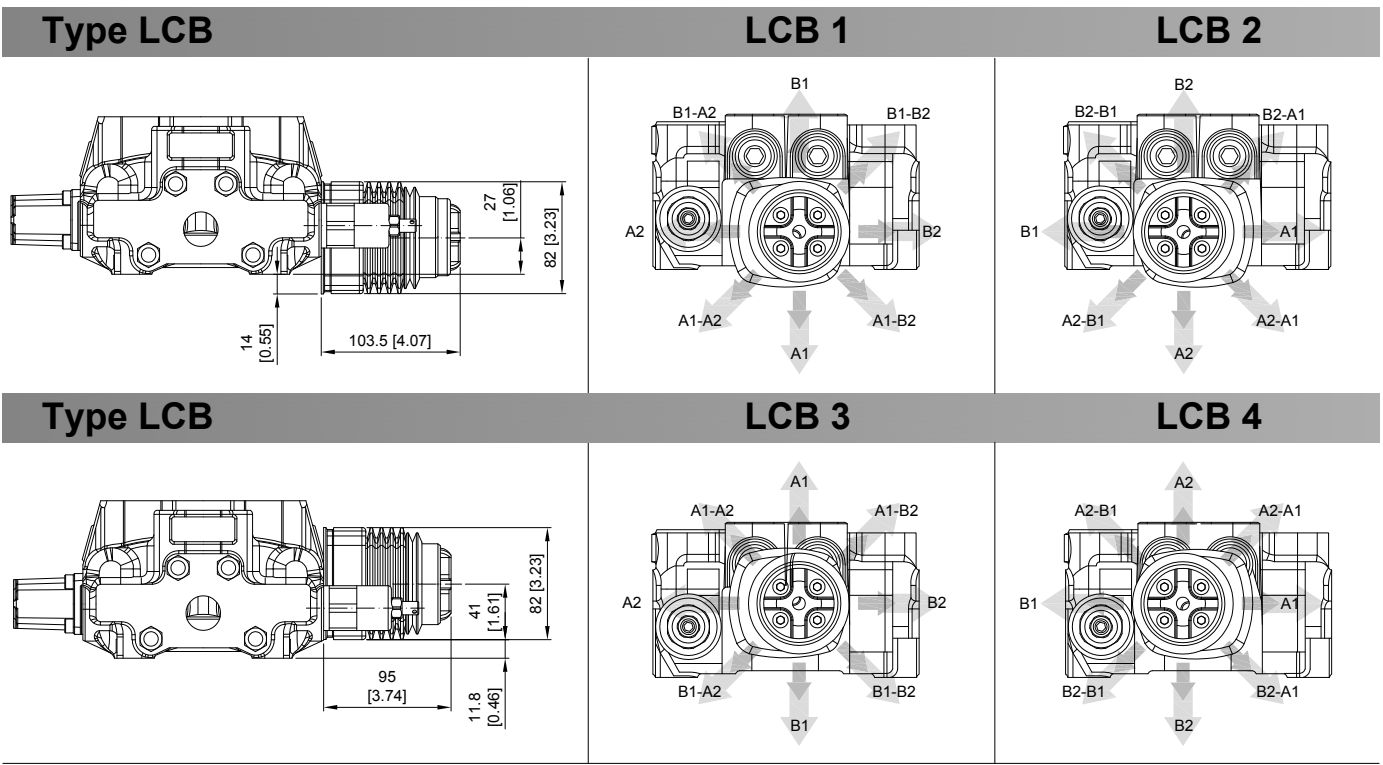
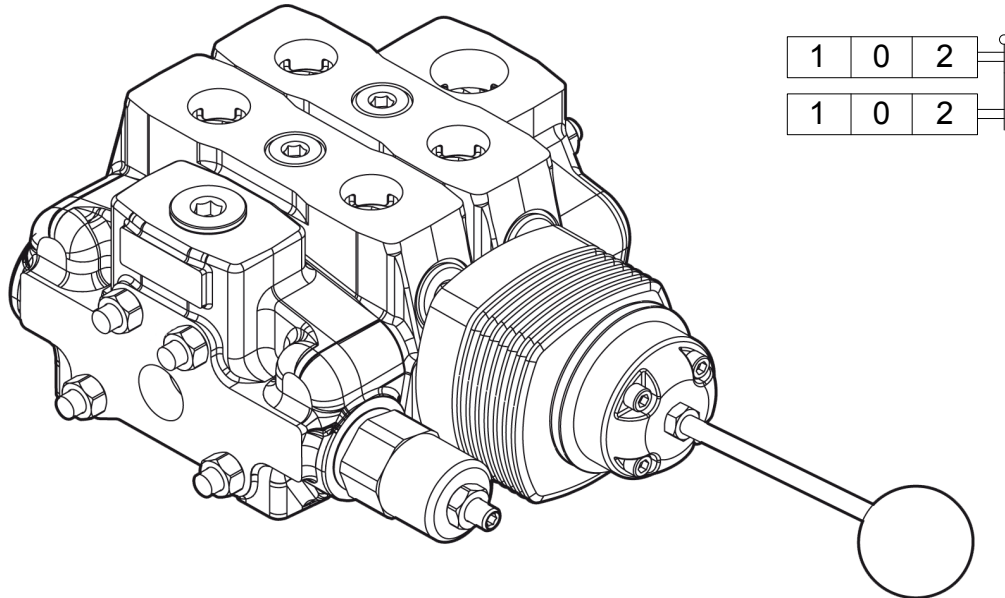
Type SLP



Type SLP:
WITH DUST-PROOF PLATE

VS6 A Side Sectional Directional Control Valves

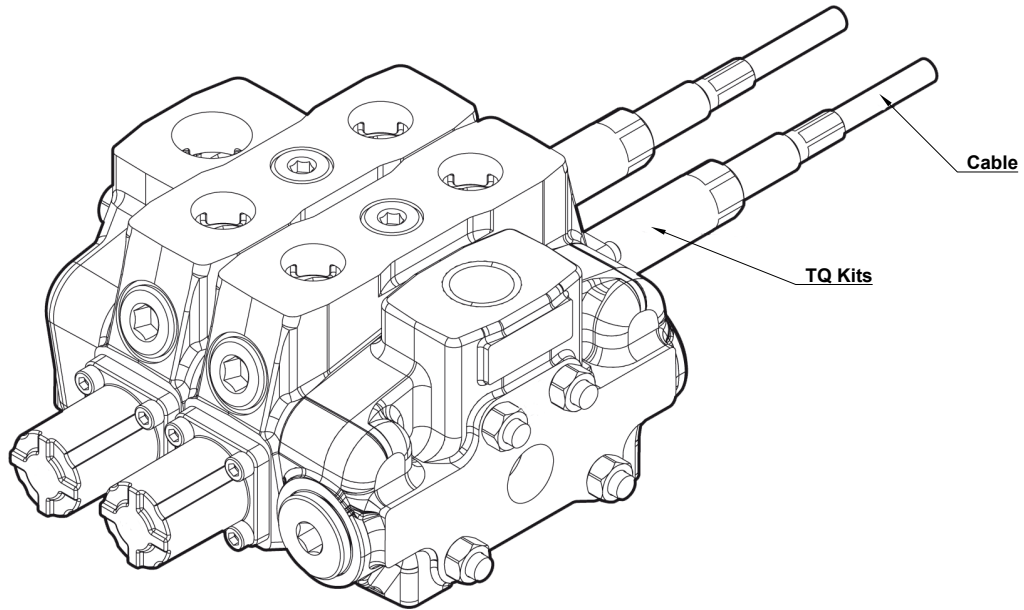
LCB: Joystick control



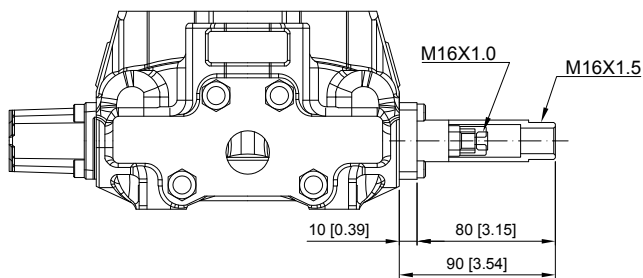
VS6 A Side

Sectional Directional Control Valves

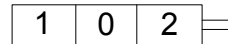
Note : CONNECTION KIT NOT INCLUDE CABLE



Type TQ



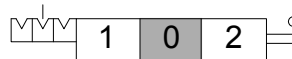
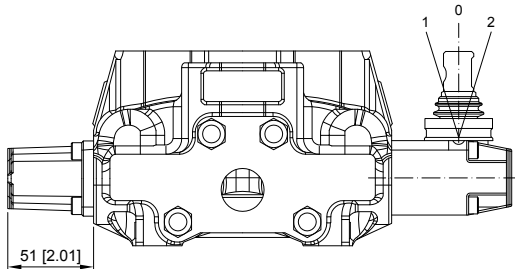
TQ Kit:



VS6 B Side

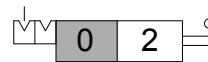
Sectional Directional Control Valves

Type 6



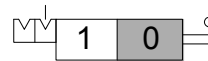
6-1 Kit:

DETENT IN POS. 1-0-2, WITHOUT SPRING CENTERED



6-2 Kit:

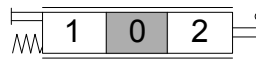
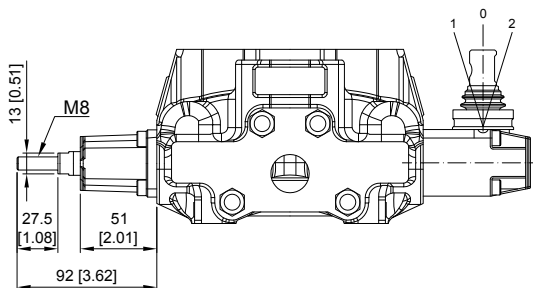
2 POSITIONS, DETENT IN POS. 0-2, WITHOUT SPRING CENTERED



6-3 Kit:

2 POSITIONS, DETENT IN POS. 1-0, WITHOUT SPRING CENTERED

Type 8D2



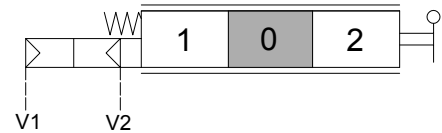
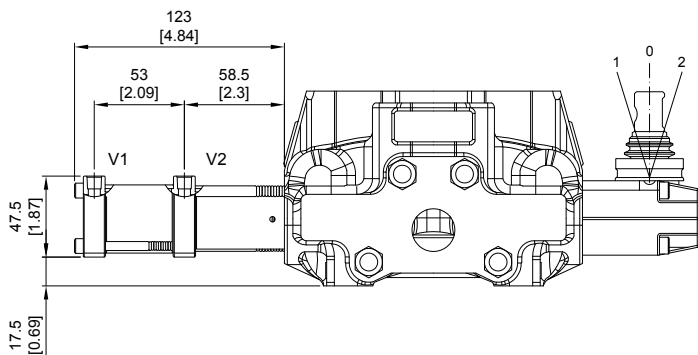
8D2 Kit:

WITH SPRING RETURN TO NEUTRAL POSITION AND PIN WITH M8 MALE THREAD FOR DUAL CONTROL

VS6 B Side Sectional Directional Control Valves

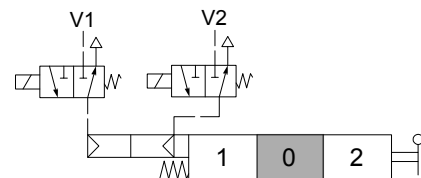
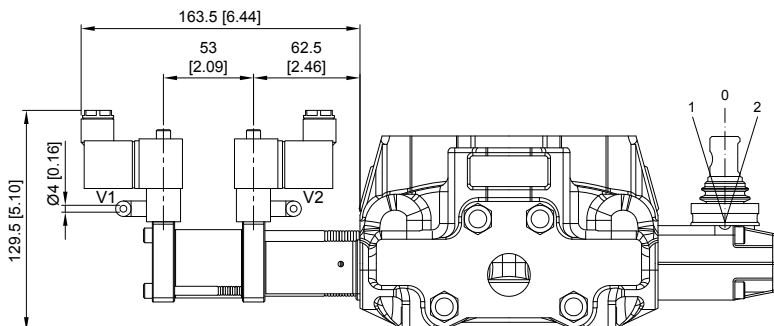
Type 8P

V1 & V2: NPT 1/8 - 27



Pilot pressure: FROM 7 TO 10 BAR / 101 TO 145 PSI

Type 8EP3



Solenoid operating features:

NOMINAL VOLTAGE: 24VDC

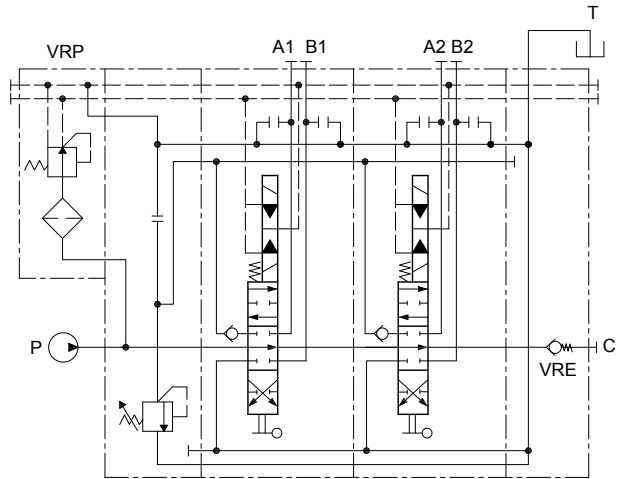
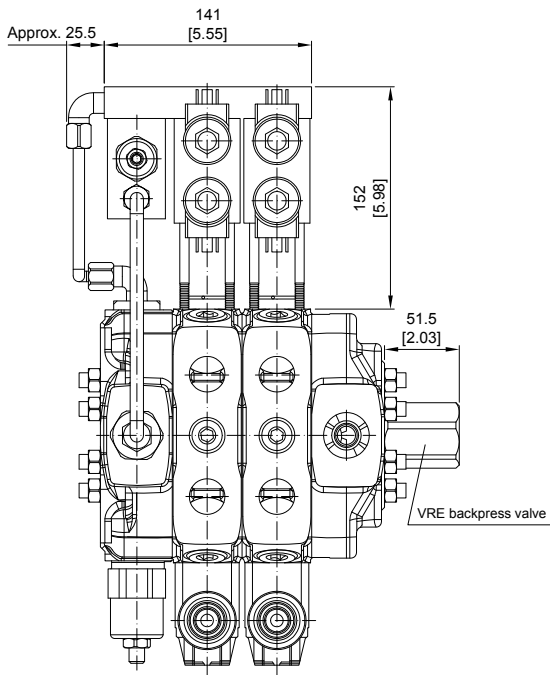
NOMINAL VOLTAGE TOLERANCE: $\pm 10\%$

POWER RATING: 5W

VS6 B Side

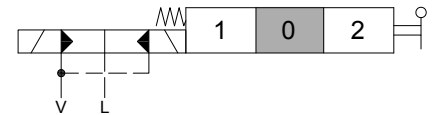
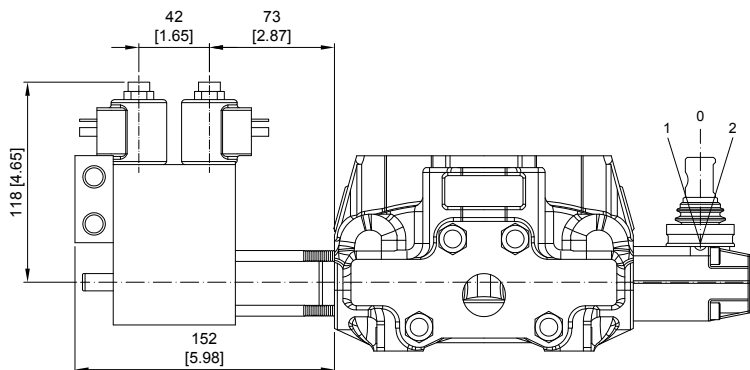
Sectional Directional Control Valves

Type 8ED3



VRP valve operating features:

OUTLET PRESSURE: 25 BAR / 363 PSI
 MAX. FLOW: 8 L/MIN / 2.1 US GPM
 FILTERING: 80 μ



Operating features:

PILOT PRESSURE: • MIN. 10 BAR / 145 PSI
 • MAX. 50 BAR / 725 PSI

MAX. BACKPRESSURE ON DRAIN L:
 25 BAR / 360 PSI

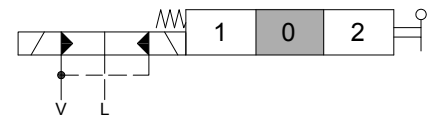
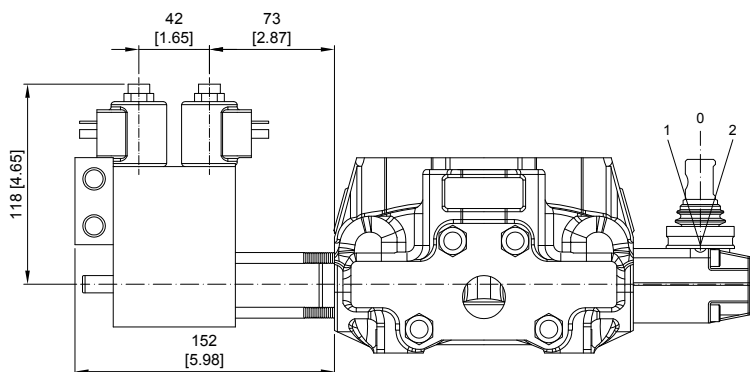
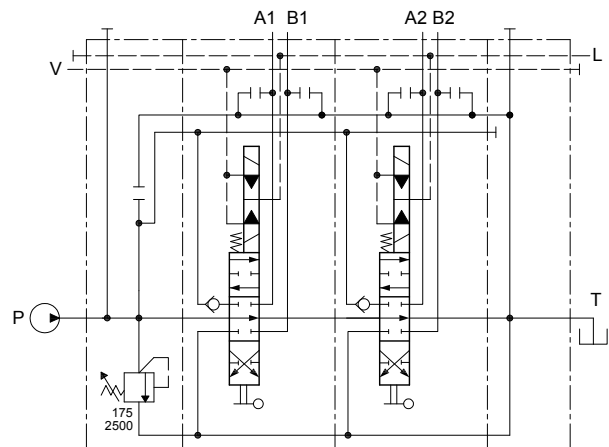
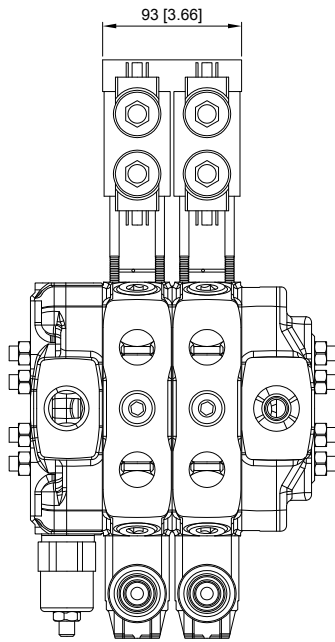
Solenoid operating features:

NOMINAL VOLTAGE: 12 VDC / 24 VDC
 POWER RATING: 21 W
 DUTY CYCLE: 100%

VS6 B Side

Sectional Directional Control Valves

Type 8ER3



Operating features:

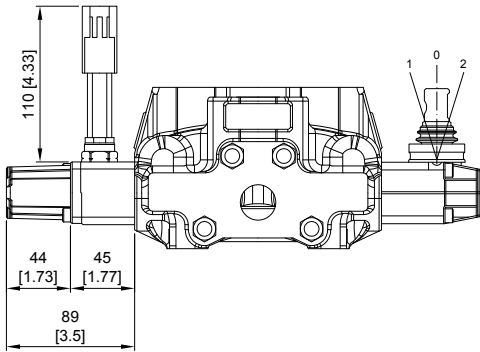
PILOT PRESSURE: • MIN. 10 BAR / 145 PSI
 • MAX. 50 BAR / 725 PSI
 MAX. BACKPRESSURE ON DRAIN L:
 25 BAR / 360 PSI

Solenoid operating features:

NOMINAL VOLTAGE: 12 VDC / 24 VDC
 POWER RATING: 21 W
 DUTY CYCLE: 100%

VS6 B Side Sectional Directional Control Valves

Type 8MG



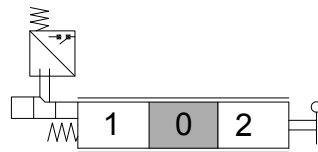
MICROSWITCH

Operating features:

MECHANICAL LITE: • 5X10⁵ OPERATIONS

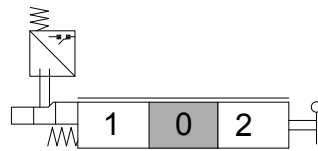
ELECTRICAL LITE (RESISTIVE LOAD):

- 10⁵ OPERATIONS - 7A / 13.5 VDC
- 5X10⁴ OPERATIONS - 10A / 12 VDC
- 5X10⁴ OPERATIONS - 3A / 28 VDC



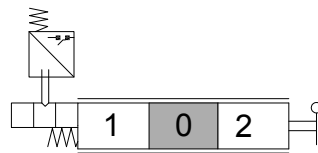
8MG1 Kit:

MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1



8MG2 Kit:

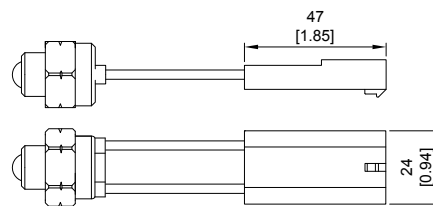
MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 2



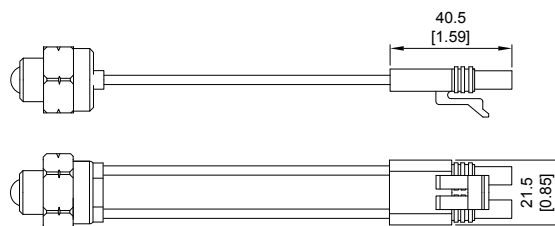
8MG3 Kit:

MICROSWITCH WITH MALE/FEMALE CONNECTOR, OPERATED IN POS. 1 AND POS. 2

With NO contact (female connector with male end)

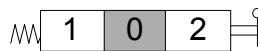
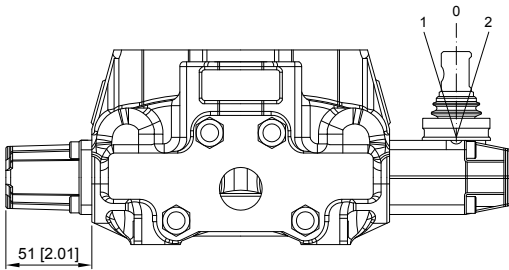


With NC contact (male connector with female end)



VS- 6 B Side Sectional Directional Control Valves

Type 8



8 Kit:

SPRING RETURN TO NEUTRAL POSITION.



8-1 Kit:

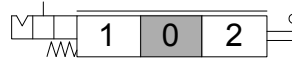
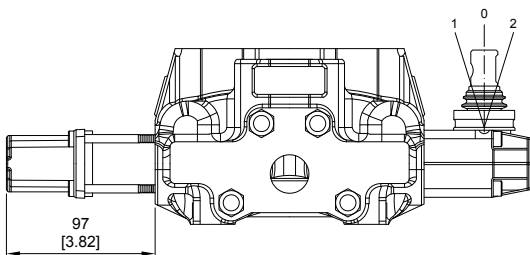
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)



8-2 Kit:

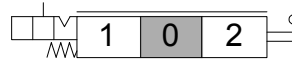
SPRING RETURN TO NEUTRAL POSITION.
(2 POSITIONS)

Type 9



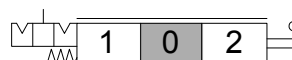
9-1 Kit:

DETENT IN POS. 1, 2 WITH SPRING CENTERED



9-2 Kit:

DETENT IN POS. 2 WITH SPRING CENTERED



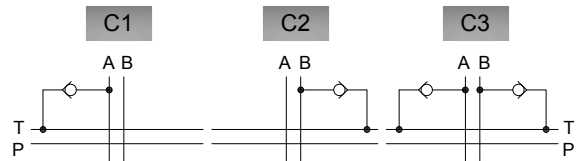
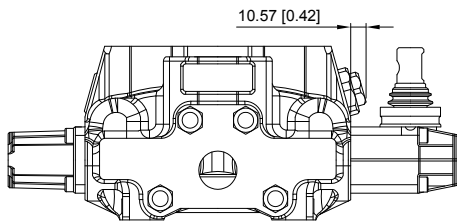
9-3 Kit:

DETENT IN POS. 1 WITH SPRING CENTERED

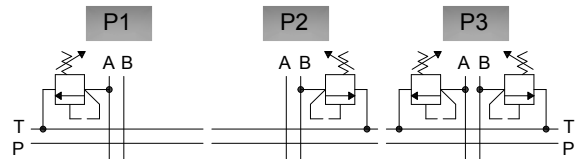
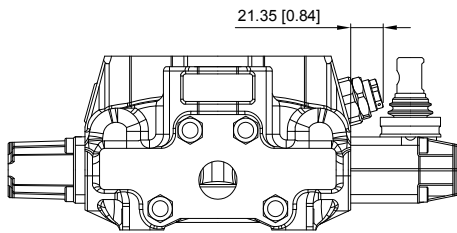
VS6 Port Relief

Sectional Directional Control Valves

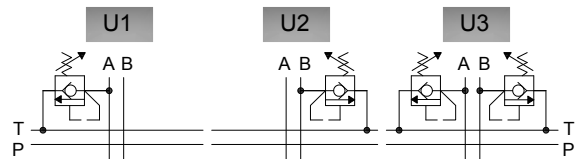
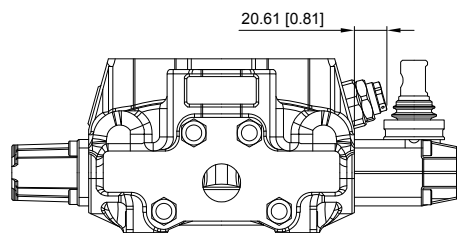
TYPE C



TYPE P



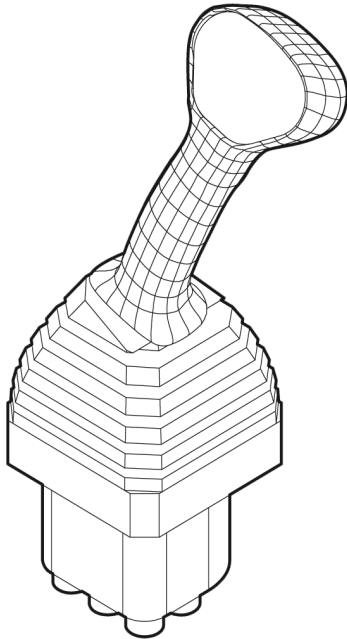
TYPE U



VS6 Accessories

Sectional Directional Control Valves

Type JS

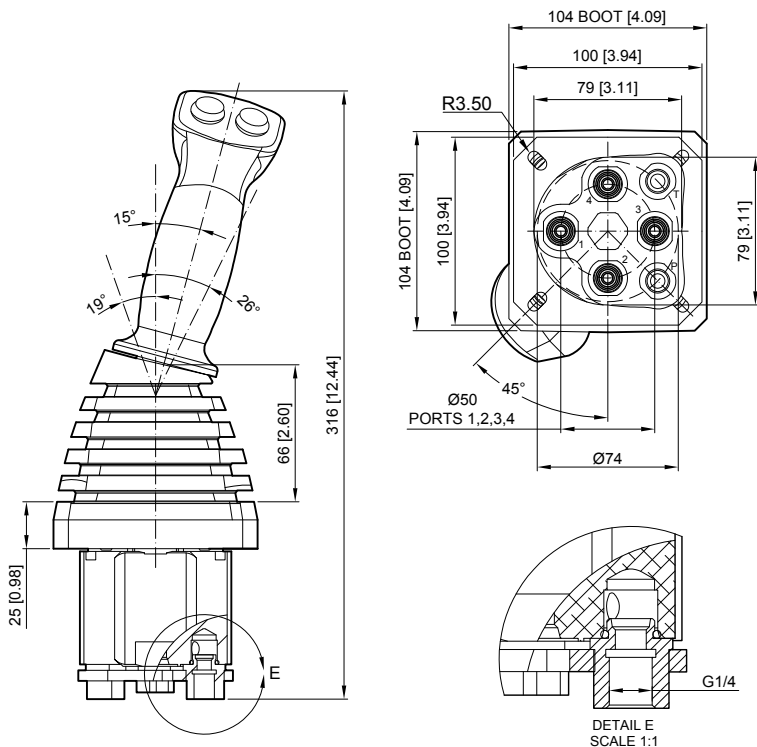


CODE: VSJS446

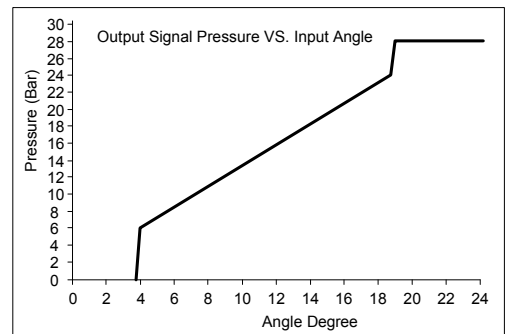
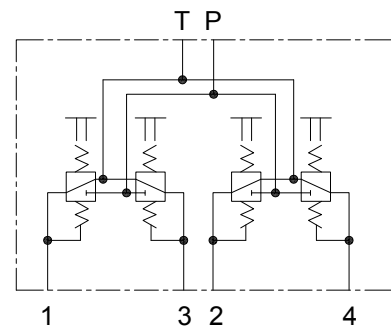
Hydraulic Pilot Valve - handle type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow: 5~20 LPM
- Feeding pressure: 30~100 bar
- Max. backpressure: 3 bar
- Output pressure: see diagram
- Internal leakage at 30 bar: 18~24 cm³/min
- Fluid: mineral oil
- Fluid temperature: -10~80°C
- Ambient temperature: -40~60°C



HYDRAULIC SCHEME:



VS6 Accessories

Sectional Directional Control Valves

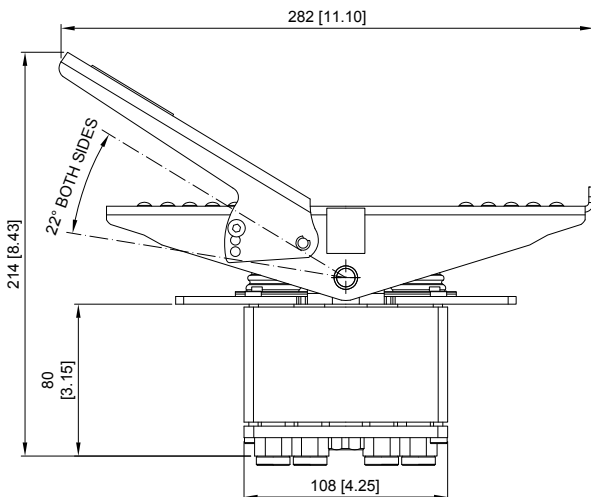
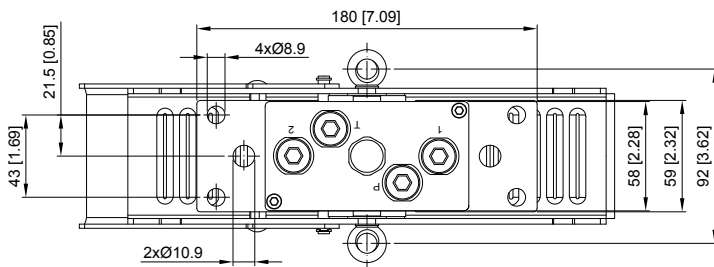
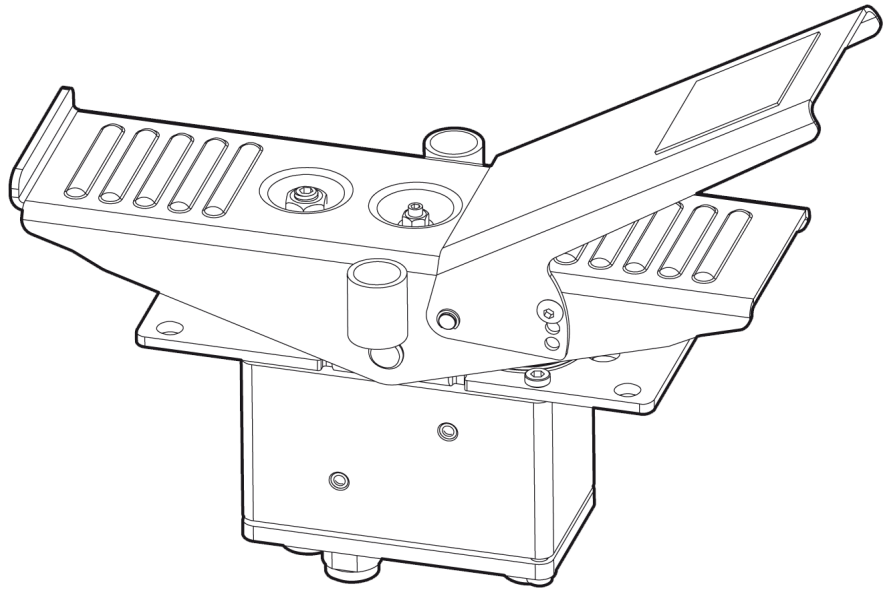
Type FP

CODE: VSFP246

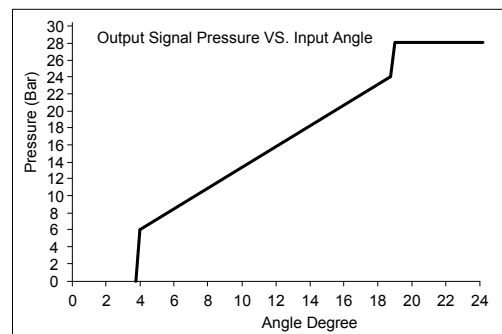
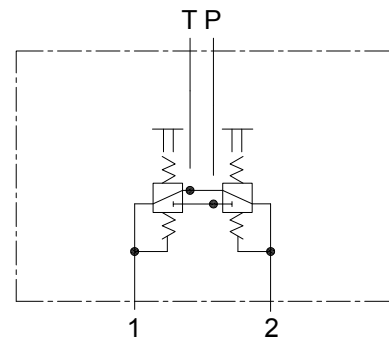
Hydraulic Pilot Valve - pedal type

Specifications:

- This data sheet shows technical spec. with mineral oil of 46 mm²/s (cSt) viscosity at 40°C (104°F)
- Flow: 5~20 LPM
- Feeding pressure: 30~100 bar
- Max. backpressure: 3 bar
- Output pressure: see diagram
- Internal leakage at 30 bar: 18~24 cm³/min
- Fluid: mineral oil
- Fluid temperature: -10~80°C
- Ambient temperature: -40~60°C



HYDRAULIC SCHEME:



VS6 Outlet

Sectional Directional Control Valves

Power Beyond Conversion plug
(Closed center plug)

