1.8

HVSM(WL) SERIES

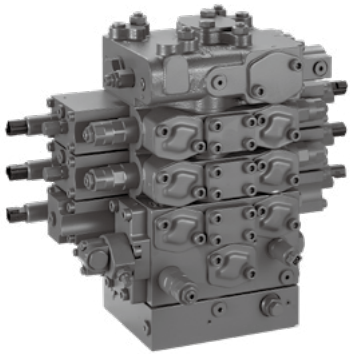
FLOW SHARING VALVE

HVSM(WL):

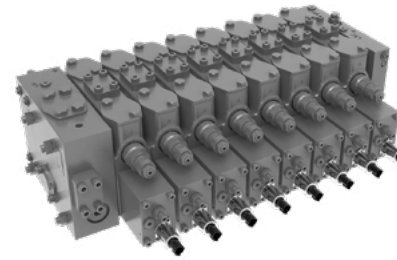
Nominal size	25	32
Rated pressure(bar)	350	350
Rated flow(L/min)	300	500

Benefits:

- High efficiency
- Less volume, lighter weight
- Precise controllability
- Less pressure drop, low fuel consumption
- Perfect flow distribution



HVSM25WL



HVSM32

Contents

Features

1. System:

Flow pressure independent flow distribution

Open center, for fixed displacement pump.

Closed center, for load-sensing variable displacement pump.

· Load holding function

· Regeneration function

· Priority function

· Less control pressure, ΔP=15bar

· Each movements priorities adjustable

· Hydraulic control, Electro-hydraulic control

2. Structure

· Sandwich plate of design

· Max. 8 sectional blocks (Other forms please contact our sales dept.)

3. Pressure

· Primary and secondary pressure relief valve

· LS relief and throttle valve

4. Flow

· Load pressure compensated

· High repeatability accuracy

· Low hysteresis

5. Applications

Horizontal directional drilling

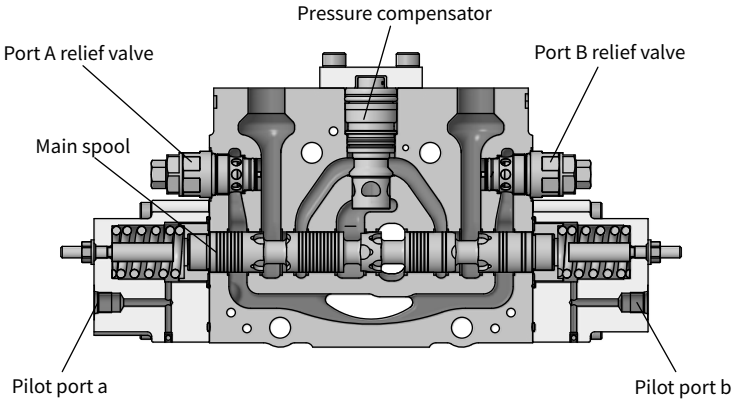
Cranes

Backhoe loaders

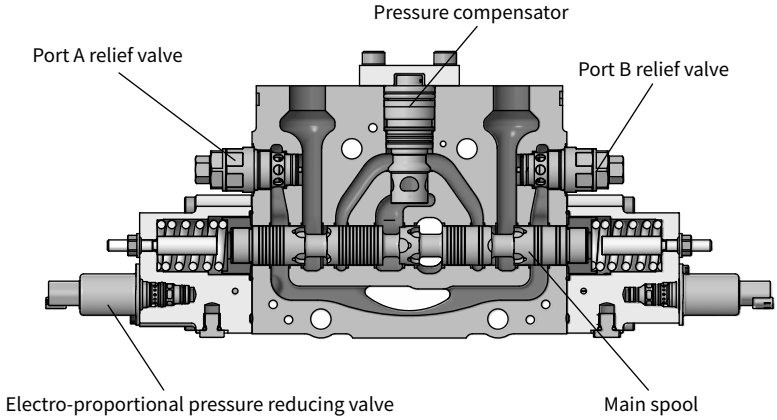
Wheel loaders

Section view

·HVSM25-H

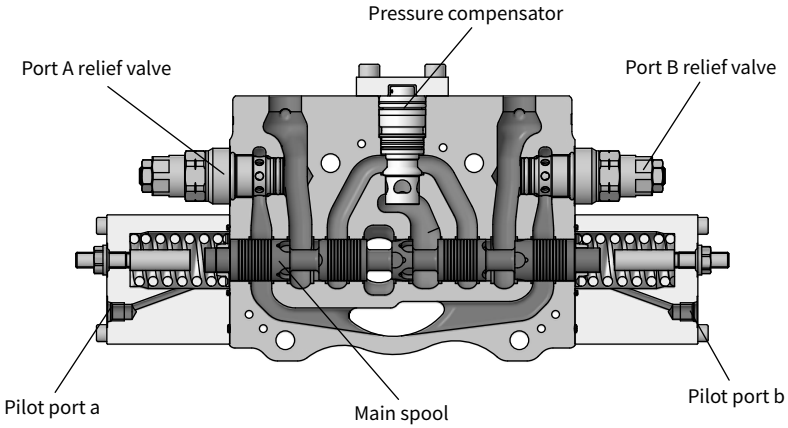


·HVSM25-E

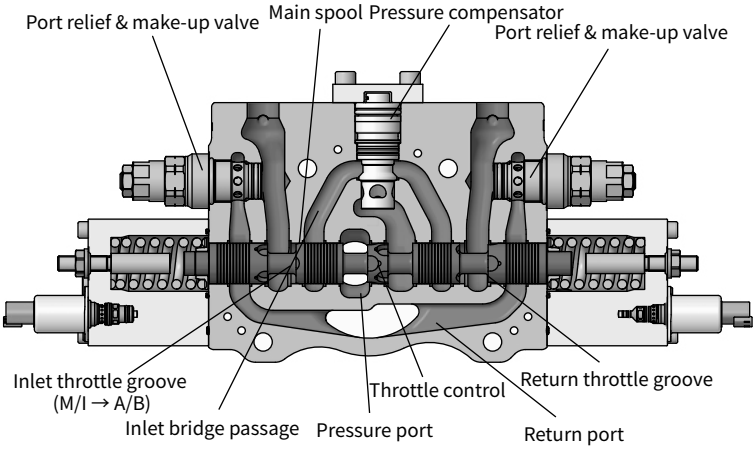


Section view

·HVSM32-H



·HVSM32-E



Technical data

General

Size		25	32
Nominal Size		28	32
Structure		Sandwich plate design	
Connection type		BSP Pipe thread (JIS B2351-1)	
Mass (kg)	Inlet section	21	35.04
	INTL. CONN.-H	18.1	32.26
	INTL. CONN.-E	19	32.66

Hydraulic

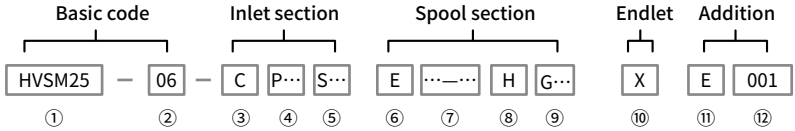
Size		25	32
Rated flow	Q (L/min)	300	500
Max. operating pressure at port	P /LS (bar)	320	320
	A/B (bar)	350	350
	T (bar)	30	30
	TS (bar)	Less than 2	Less than 2
Pilot pressure	a/b (bar)	Less than 35	Less than 35
Pilot control pressure range		8 to 22 bar	8 to 25 bar

Using environment

Size	25	32
Hydraulic fluid	Mineral oil (HL, HLP) according to DIN 51524. Other hydraulic fluids, such as HEES (Synthetic Ester) according to VDMA 24568.	
Pressure fluid temperature range (°C)	-20 to +90	
Viscosity range v (mm^2/s)	10 to 380	
Maximum permissible degree of contamination of the pressure fluid cleanliness class to ISO 4406 (C)	Class 20/18/15, we therefore recommend a filter with a minimum retention rate of $\beta 10 \geqslant 75$	Class 20/18/15, we therefore recommend a filter with a minimum retention rate of $\beta 10 \geqslant 70$

(If the usage exceeds the parameters specified in the table, please consult our company.)

Ordering code



Basic Model	① Structure	HVSM25/32(general), Sandwich plate design, post pressure compensated	
		HVSM25WL/32WL(special for loaders), Sandwich plate design, post pressure	
	② No. of intermediate sections	06/01~08	
Inlet Section	③ Circuit type	C	Closed center, for variable piston pump system
		O	Open center, for fixed displacement pump system
	④ Main relief valve	Blank	Without pump relief valve
		P…	Setting pressure value, P320, Max pressure in bar of pump relief valve
	⑤ LS relief valve	S…	Setting pressure value, S280, Max pressure in bar of LS relief valve
Intermediate Section	⑥ Spool function code	E	Please refer to " Page 26/26"
		J	Please refer to " Page 26/26"
	⑦ A/B flow rate	...—...	Flow in L/min of 'A/B' port
	⑧ Control type	H	Hydraulic proportional
		W21	Electro-hydraulic proportional, 24V
		W23	Electro-hydraulic proportional, 12
		W41	Electro-hydraulic on/off, 24V
		W43	Electro-hydraulic on/off, 12V
	⑨ Port relief valve	QQ	Relief valve plug (port relief valve can be retrofitted)
		GG	Make-up valve, anti-cavitation
		H...H...	H320H320, relief valve pressure setting indicated by a three-digit number, unit: bar
End Section	⑩ Pilot pressure supply	X	Internal pilot supply
		Y	External pilot supply
Additional	⑪ Port connection type	E	British BSP pipe thread (JIS B2351-1)
		M	Other thread port types, please contact us
	⑫ Design series no.	001	

Ordering details

Example:
- Pump flow Qmax=380L/min
- 2 actuators
- Hydraulic proportional control and electro-hydraulic control

Basic code — HVSM25 | -02

Inlet section — C | P300 | S280
- Closed center, for load-sensing variable displacement pump
- With pump relief valve of pressure value 300bar
- With LS relief valve of pressure value 280bar

01

Spool section

NO.1 — E | 200-200 | H | G220 | G200
- Spool function 'E'
- Flow in L/min of 'A/B' port: 200L/min
- Operator type 'H': Hydraulic pilot control
- With second relief valve: A port: 220bar, B port: 200bar

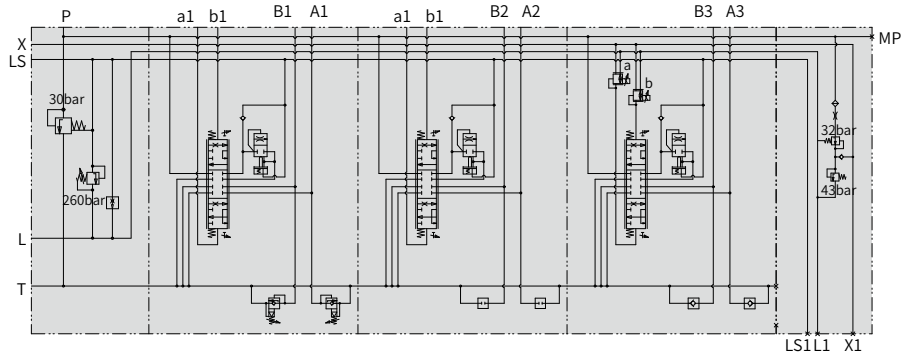
NO.2 — J | 200-180 | W21 | Q
- Spool function 'J'
- Flow in L/min of 'A/B' port: A-200L/min; B-180L/min
- Operator type 'W21': electro-hydraulic proportional control of 24V
- With plug replace of second relief valve

Outlet section - X
Internal pilot pressure supply

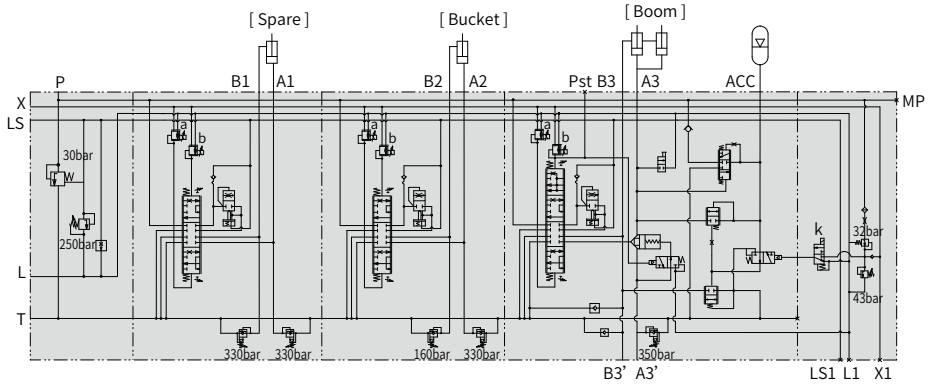
Addition — E001
English BSP Pipe thread (JIS B2351-1)

Section view

·General version HVSM25



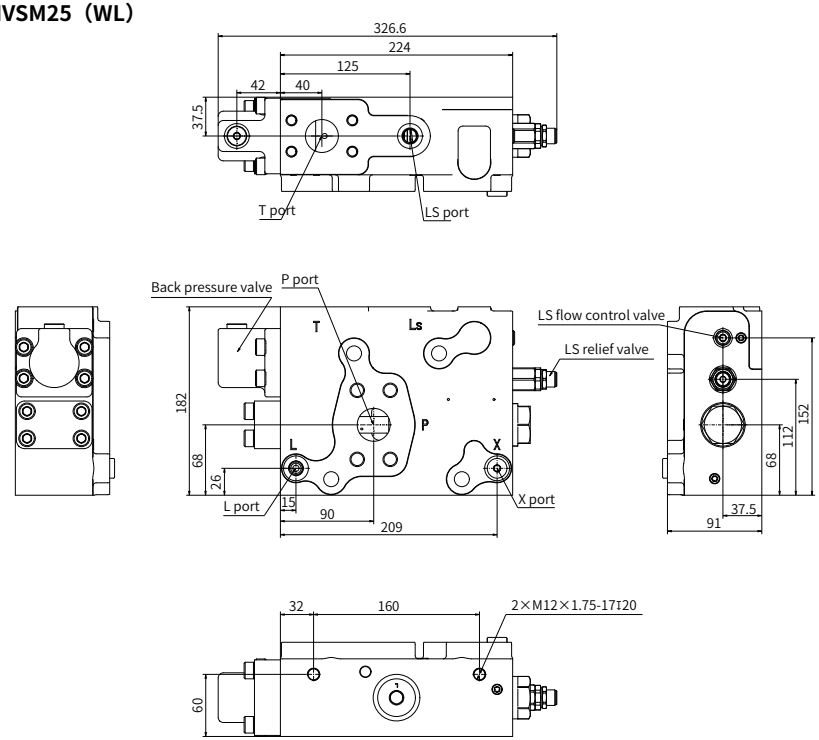
·Wheel loader version HVSM25(WL)



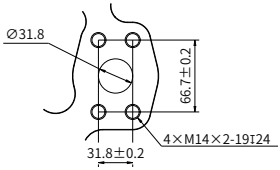
01

Inlet Section Subassembly

· **HVSM25（WL）**

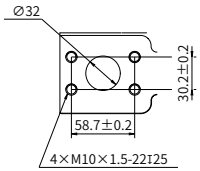


P port

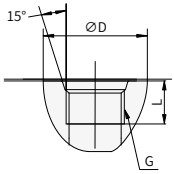


1-1/4" Port Flange Connection
(6000Psi)

T port



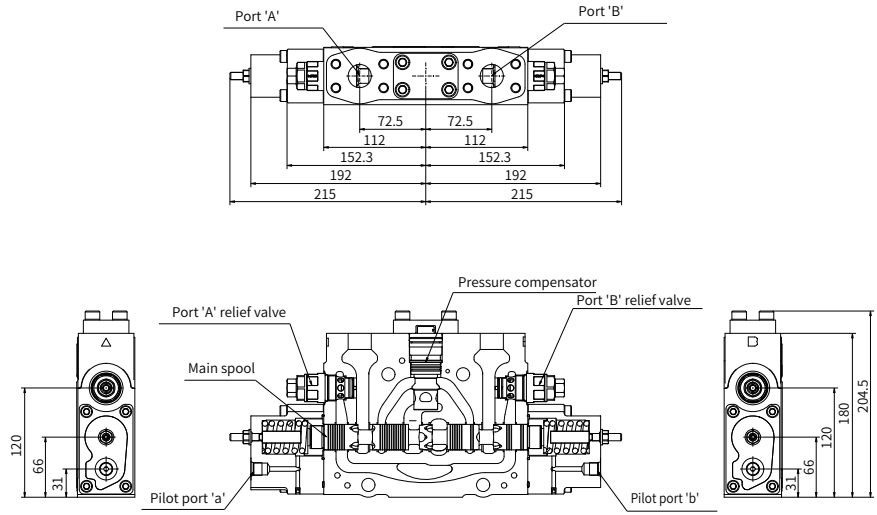
1-1/4" Port Flange Connection
(3000 Psi)



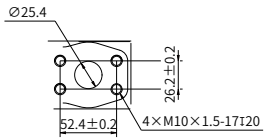
Port dimension	**Thread dimensions**
LS/X/L port：G1/4	G1/4： ∅ D 20 L 12.5

Intermediate Section Subassembly – Hydraulic Control

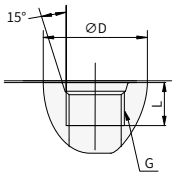
· HVSM25（WL）



A/B port



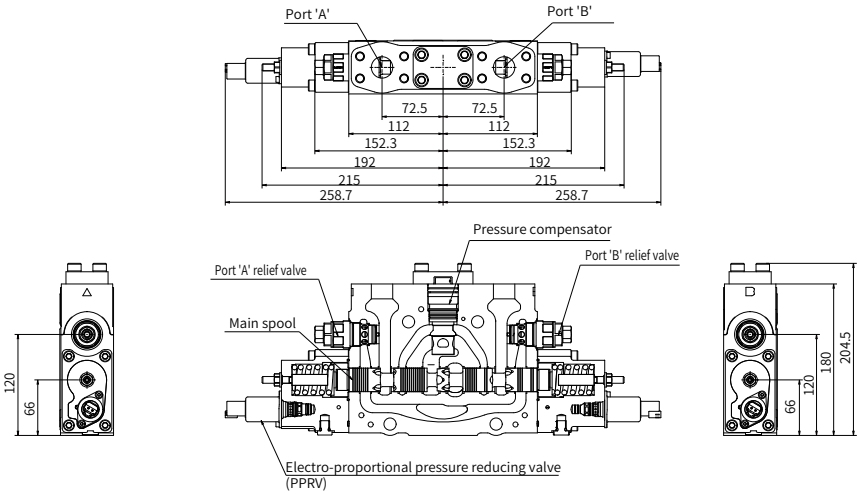
1" Port Flange Connection (3000Psi)

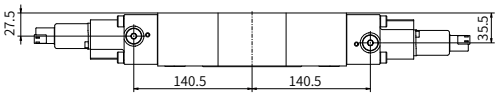


Port dimension	Thread dimensions
a/b Pilot port：G1/4	G1/4： ∅ D 20 L 12.5

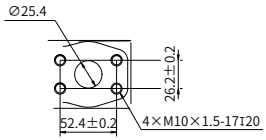
Intermediate Section Subassembly – Electro-hydraulic Control

· HVSM25（WL）





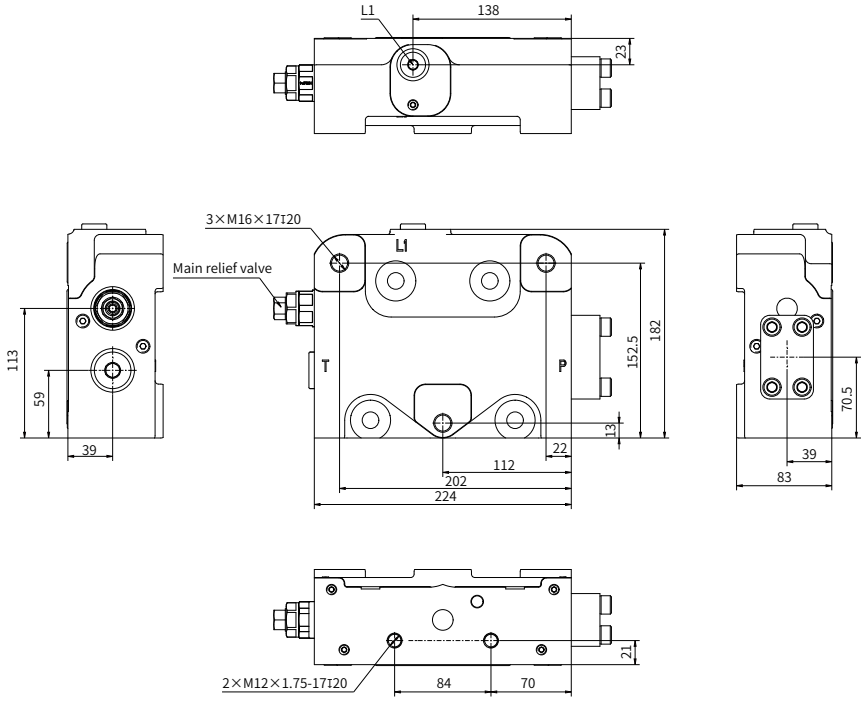
A/B port



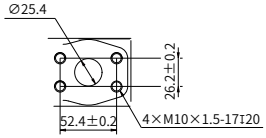
1" Port Flange Connection(3000Psi)

End Section Subassembly – External Pilot

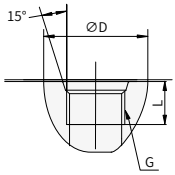
· HVSM25（WL）



P port



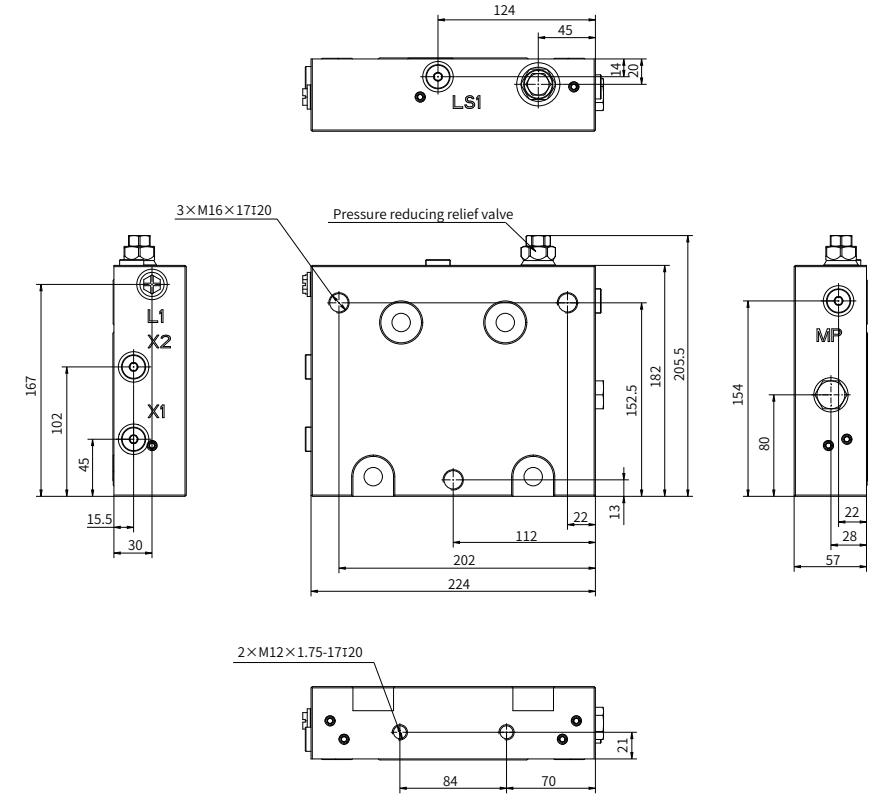
1-1/4" Port Flange Connection (3000 Psi)

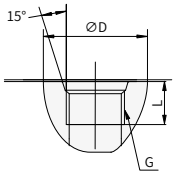


Port dimension	Thread dimensions
T port：G3/4	G1/2： ⌀ D 45 L 20
L port：G3/8	G3/8： ⌀ D 23 L 12.5

End Section Subassembly – Internal Pilot

· HVSM25（WL）

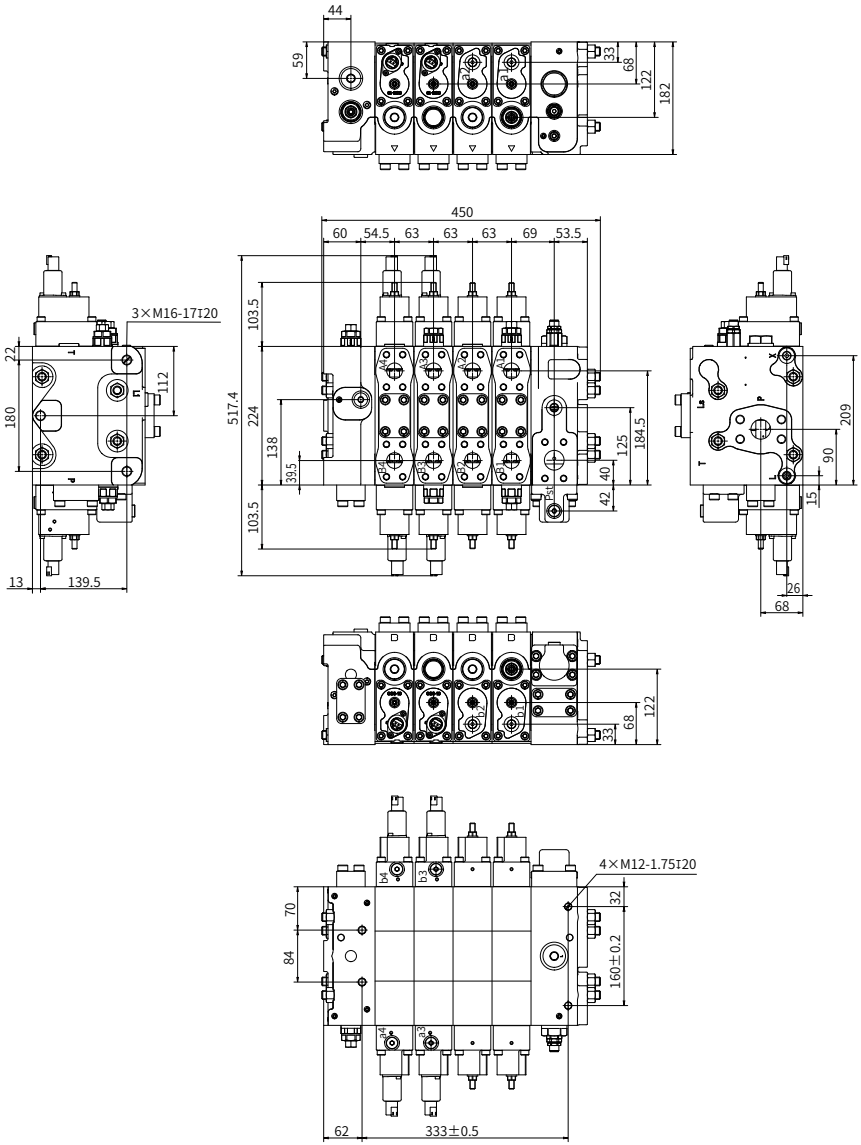




Port dimension	Thread dimensions
LS1/L1/X1/X2/MP port： G1/4	G1/4: ∅ D 20 L 12.5

Unit dimensions

· HVSM25



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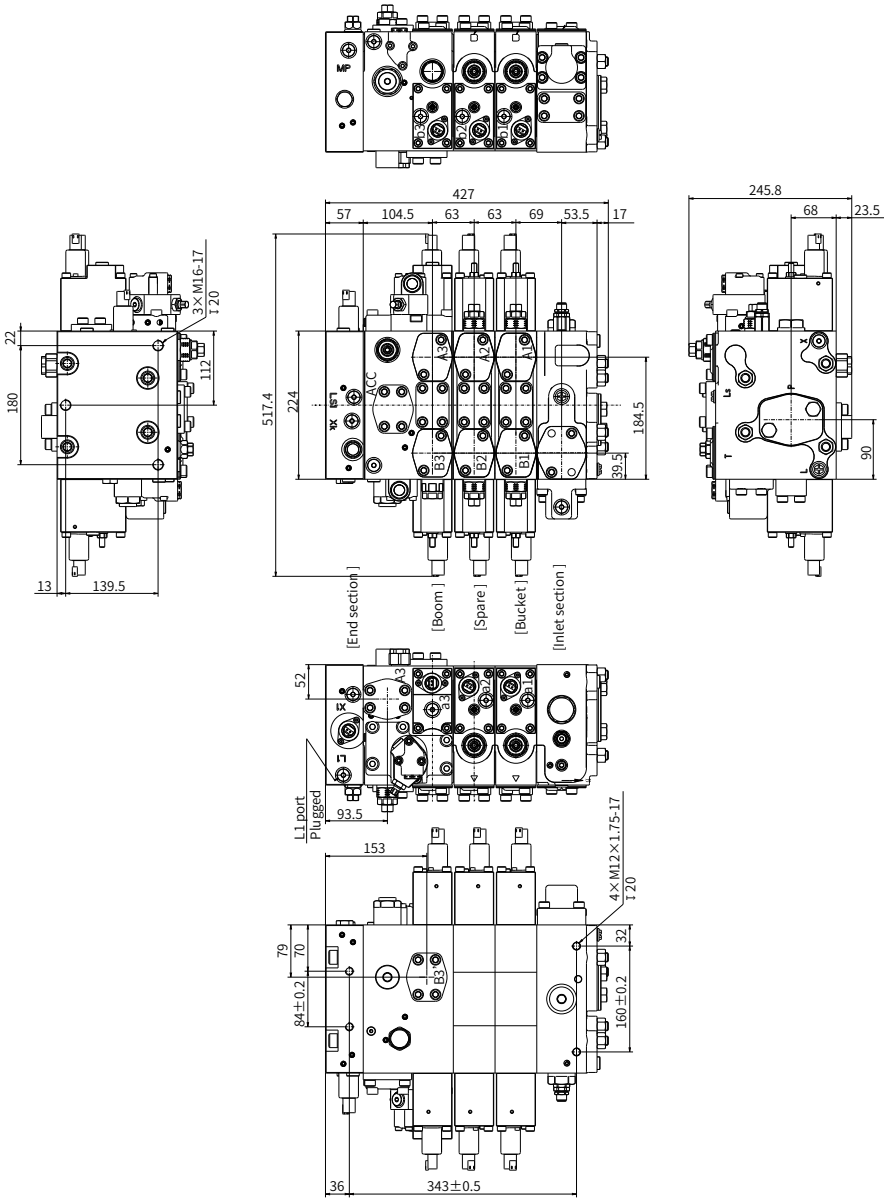
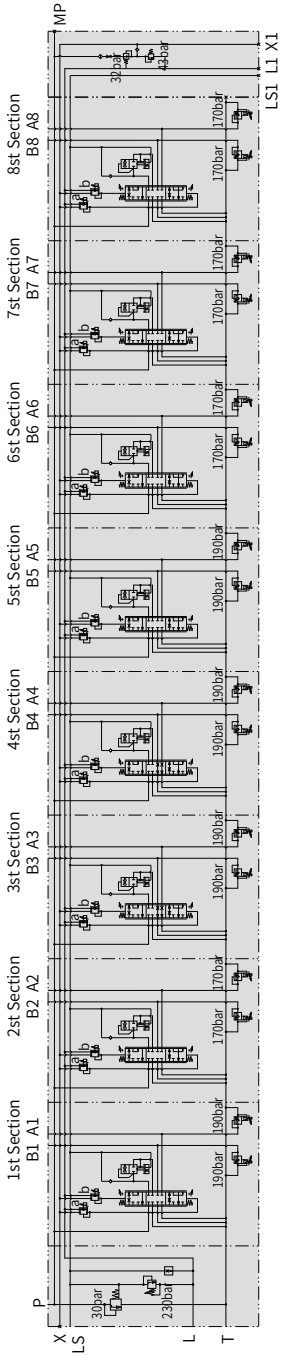
Unit dimensions

· HVSM25（WL）



Hydraulic diagram

· General version HVSM32



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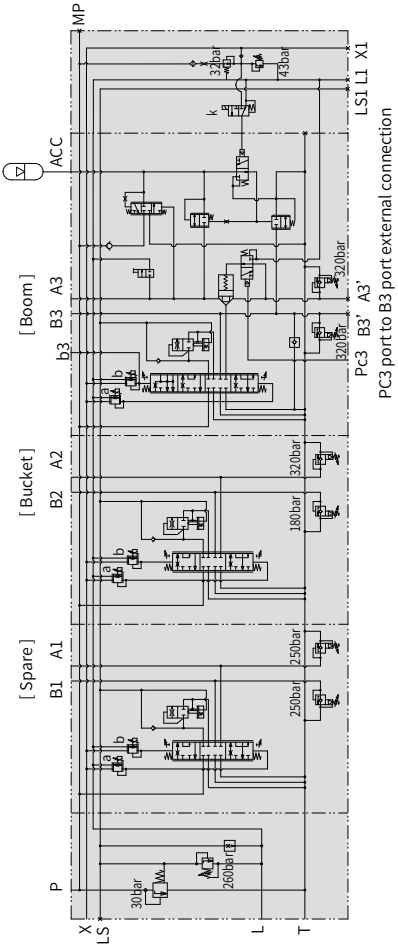
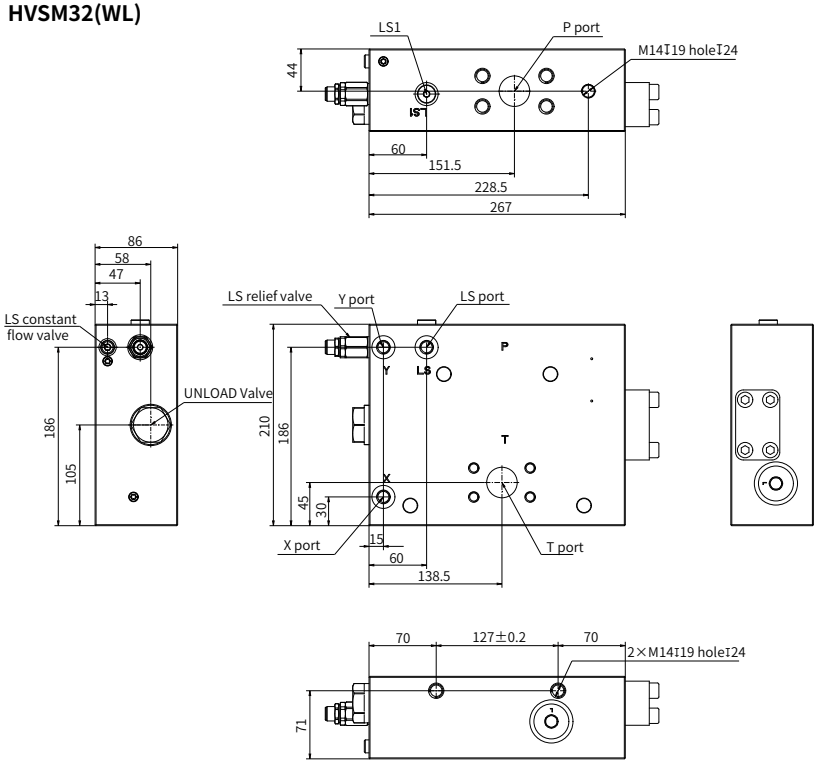
Hydraulic diagram

·Wheel loader version HVSM32(WL)

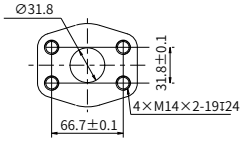


Inlet Section Assembly

· HVSM32(WL)

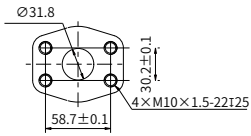


P port

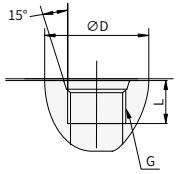


1-1/4" Port Flange Connection (6000Psi)

T port



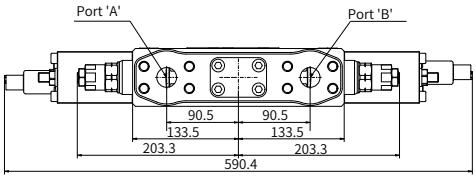
1-1/4" Port Flange Connection (3000Psi)

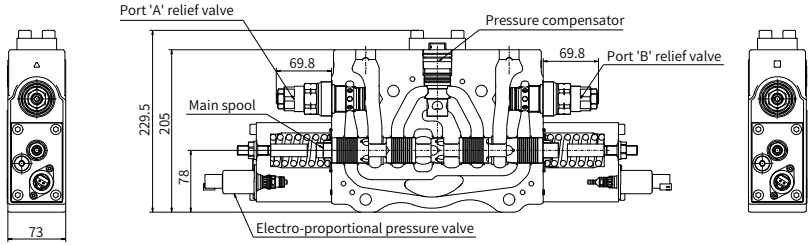


Port dimension	Thread dimensions
LS/LS1/X/Y port: G1/4	G1/4: ∅ D 20 L 12.5

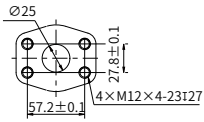
Intermediate Section Subassembly – Electro-hydraulic Control

· HVSM32(WL)





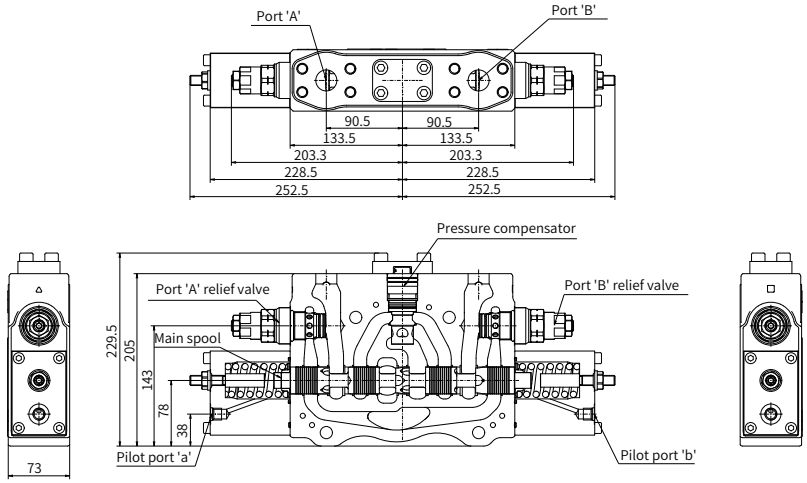
A/B port



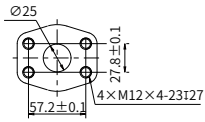
1" Port Flange Connection (6000 Psi)

Intermediate Section Subassembly – Hydraulic Control

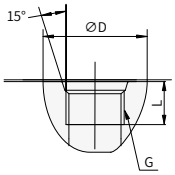
· HVSM32（WL）



A/B port



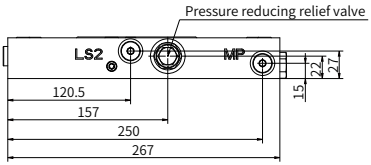
1" Port Flange Connection (6000 Psi)

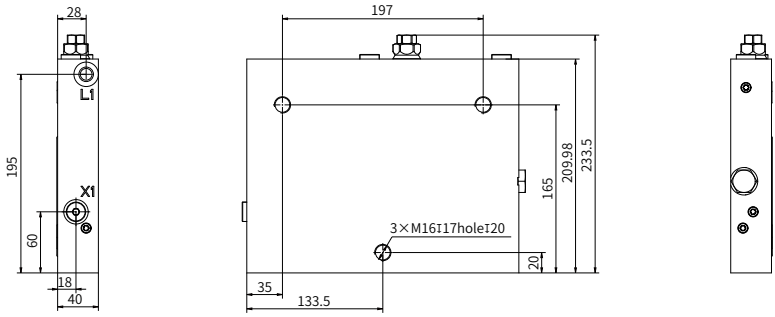


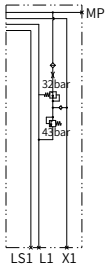
Port dimension	Thread dimensions
a/b Pilot port：G1/4	G1/4： ∅ D 20 L 12.5

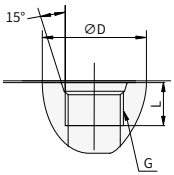
End Section Subassembly – Internal Pilot Supply

· HVSM32（WL）





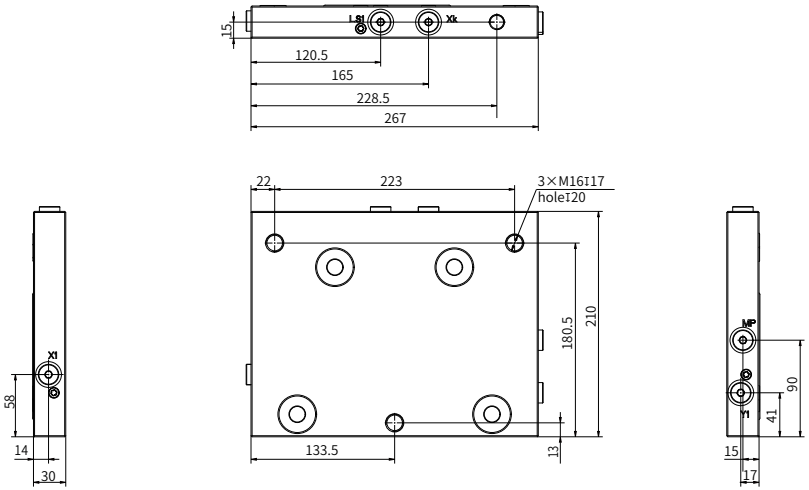


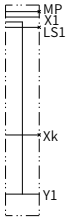


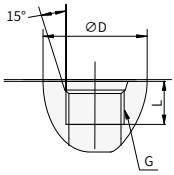
Port dimension	Thread dimensions
LS2/MP/X1/L1 port：G1/4	G1/4： Ø D 20 L 12.5

End Section Subassembly – External Pilot Supply

· HVSM32（WL）





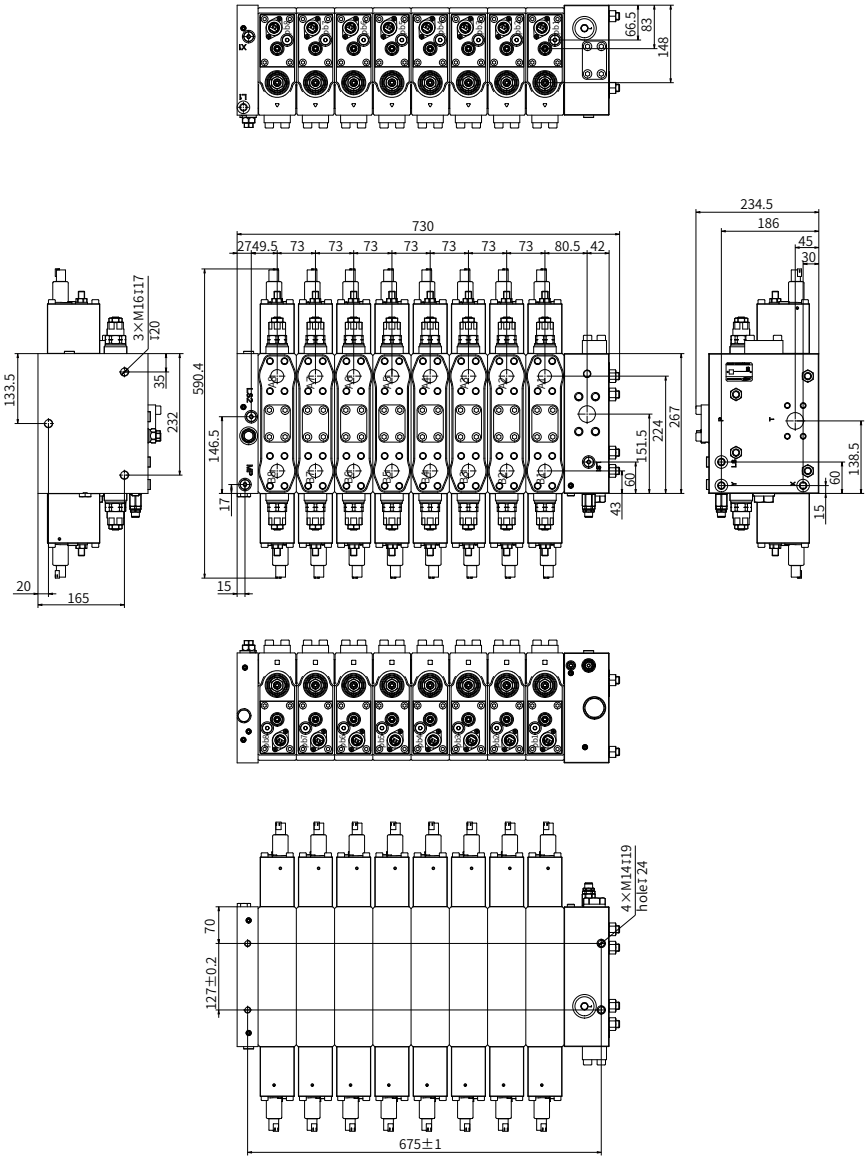


Port dimension
LS1/Xk/X1/MP/Y1 port：G1/4

Thread dimensions
G1/4： ∅ D 20 L 12.5

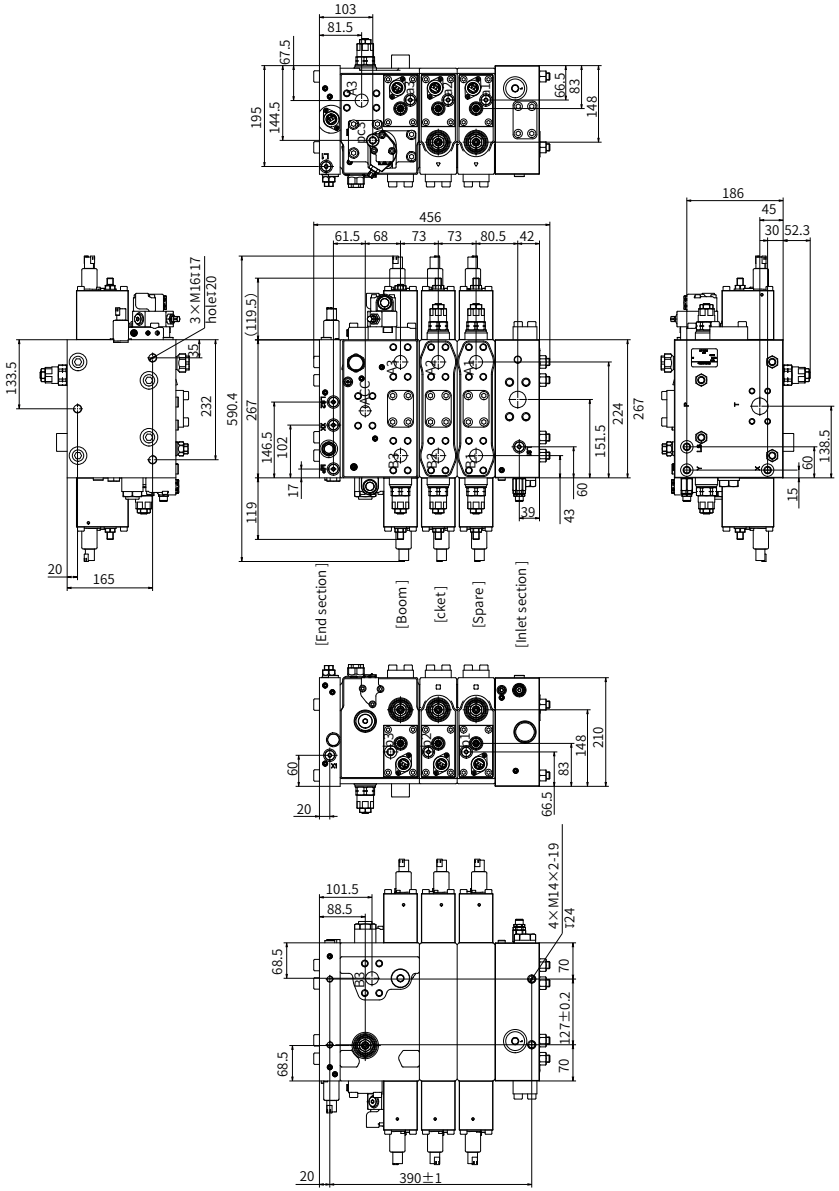
Unit dimensions

· HVSM 32



Unit dimensions

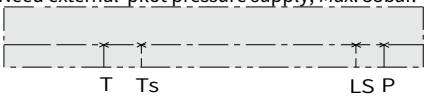
· HVSM 32(WL)



Endlet option

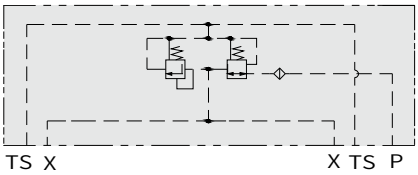
'Y' type : External pilot pressure supply

· Need external pilot pressure supply; Max: 35bar.

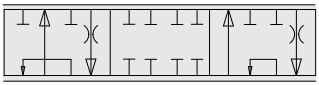
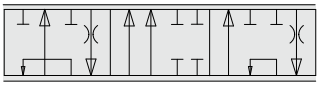


'X' type : Internal pilot pressure supply

· The pilot pressure is generated by pressure reducing valve which reduces inlet pressure down to lower pressure pilot pressure, 30bar.



Spool type

Spool type	Spool function type
E	
J	

Note:
Please contact us for more
information regarding spool flow data.