



1.7

HVSM25(WL) SERIES

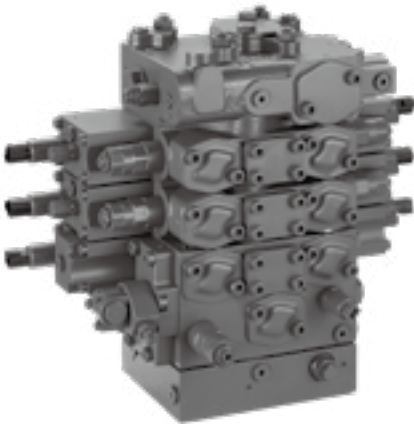
FLOW SHARING VALVE

HVSM25(WL):

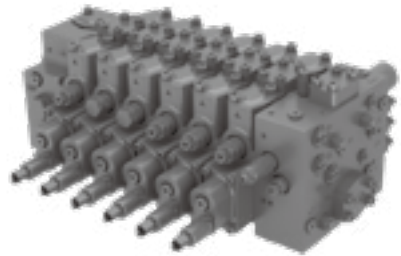
Nominal size	28
Rated pressure(bar)	350
Rated flow(L/min)	400

Benefits:

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



HVSM25WL



HVSM25

Contents

	Page
Features	03
Section view	04
Technical data	05
Ordering code	06
Ordering details	07
Principle	08
Inlet section assembly	09
Spool section assembly—hydraulic	09
Spool section assembly—electro-hydraulic	10
Endlet section assembly	10
Endlet option	11
Spool type	11
Unit dimensions	12
Port connection	13

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, $\Delta P=15\text{bar}$
- 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

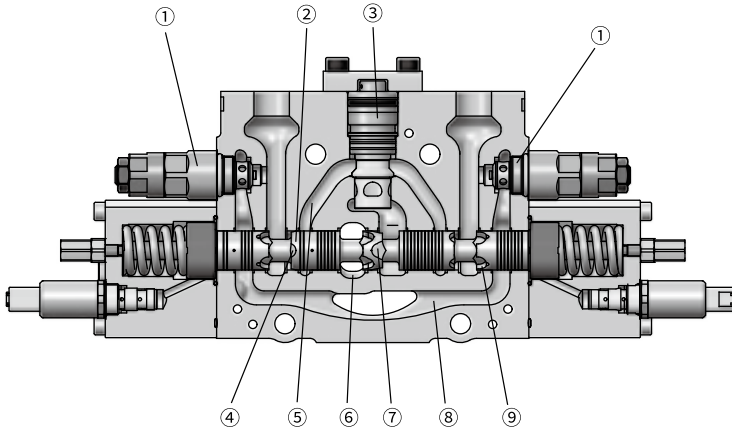


Backhoe loaders



Wheel loaders

Section view



1. Secondary pressure/anti-cavitation valve
2. Main spool
3. Pressure compensator
4. Meter-in control (M/I → A/B)
5. M/I flow channel
6. Pump port
7. Metering control
8. Tank port
9. Meter-out control
10. Plug for relief valve cavity

Technical data

General

Structure	Sandwich plate design	
Connection type	BSP Pipe thread (JIS B2351-1)	
Mass (kg)		Nominal Size
		25
	Inlet section	21
	Spool section hydraulic control	18.1
	Spool section E - H control	19

Hydraulic

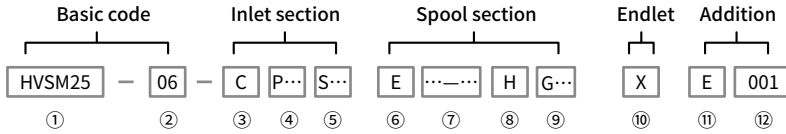
Nominal size		28
Rated flow	Q (L/min)	400
Max. operating pressure at port	P /LS (bar)	320
	A/B (bar)	350
	T (bar)	30
	TS (bar)	Less than 2
Pilot pressure	a/b (bar)	Less than 35
Pilot control pressure range		8 to 22 bar

Using environment

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 ν (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 $\beta_{10} \geq 75$

(For applications outside above mentioned parameters, please consult our sales dept.)

Ordering code



① Structure	HVSM (general), Sandwich plate design, post pressure compensated HVSM25WL (special for loaders), Sandwich plate design, post pressure compensated
② Number of blocks	06
③ Circuit types	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
⑥ Spool function code	E Please refer to " Page 11/14" J Please refer to " Page 11/14"
⑦ Flow of 'A/B' port	...-... Flow in L/min of 'A/B' port
⑧ Operator type	H Hydraulic proportional W21 Electro-hydraulic proportional, 24V W23 Electro-hydraulic proportional, 12V W41 Electro-hydraulic on/off, 24V W43 Electro-hydraulic on/off, 12V
⑨ Second relief valve	Blank Without second relief valve G... G320G320, pressure details of second relief valve in 3 digits (bar)
⑩ Pilot pressure supply	Q Plug X Internal pilot pressure supply Y External pilot pressuresupply
⑪ Connection dimensions types	E English BSP Pipe thread (JIS B2351-1) M Other connection versions please contact us.
⑫ Design code	001

Ordering details

- Example:**
- Pump flow $Q_{max}=380L/min$
 - 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

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

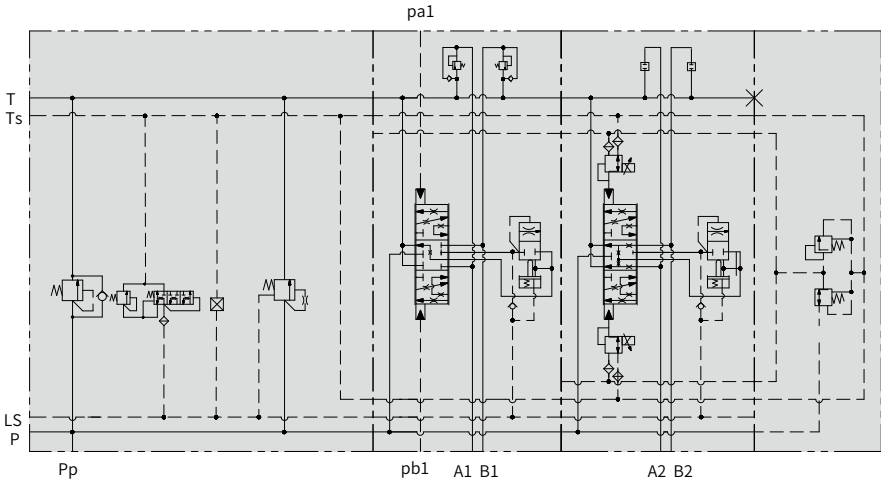
Addition —

E001

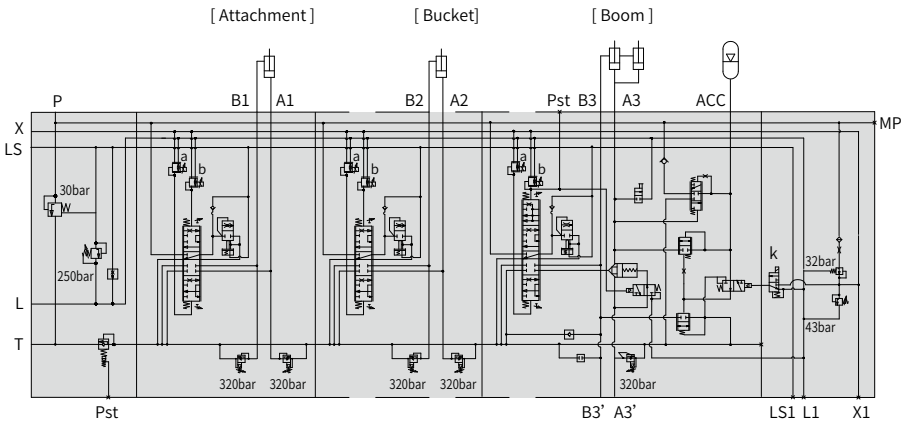
English BSP Pipe thread (JIS B2351-1)

Principle

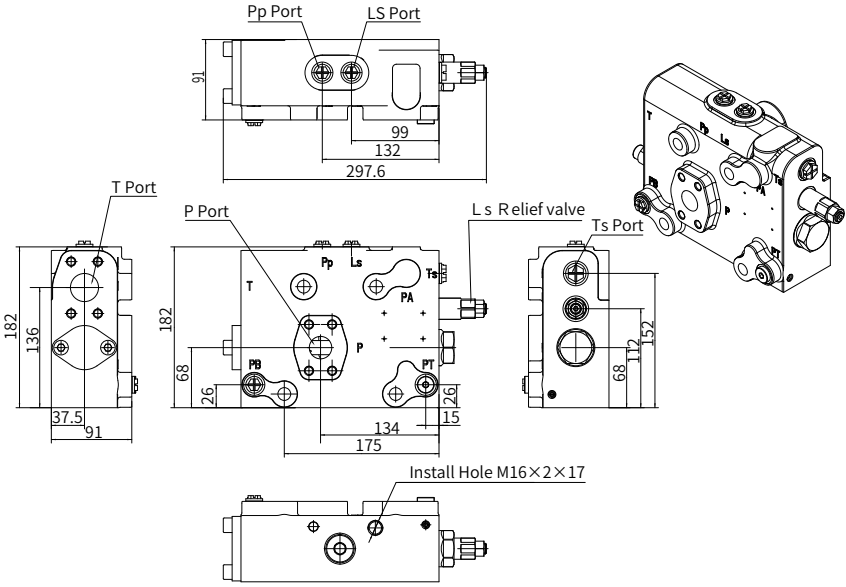
· General



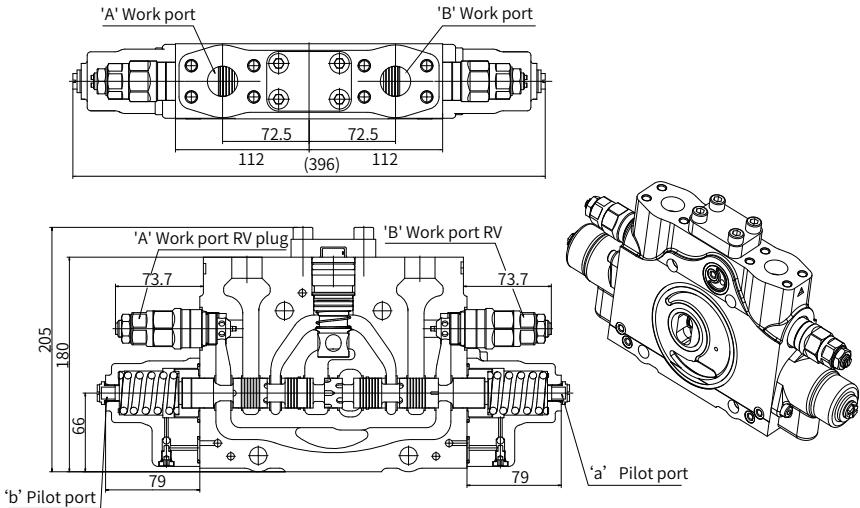
· Special for loaders



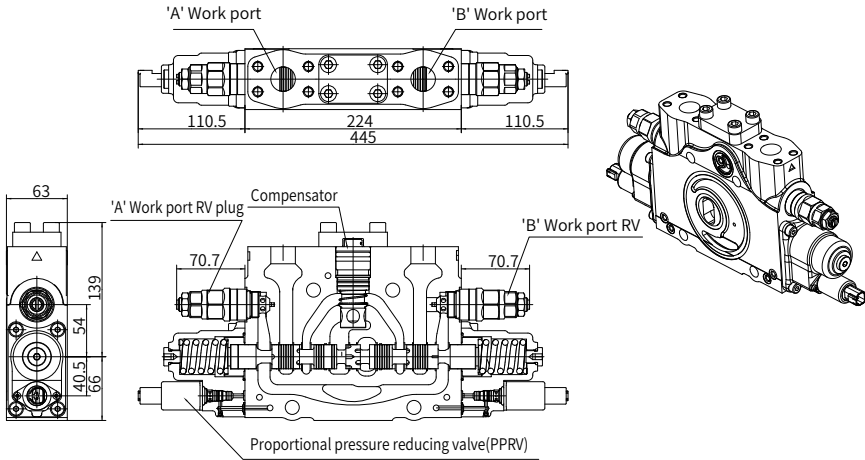
Inlet section assembly



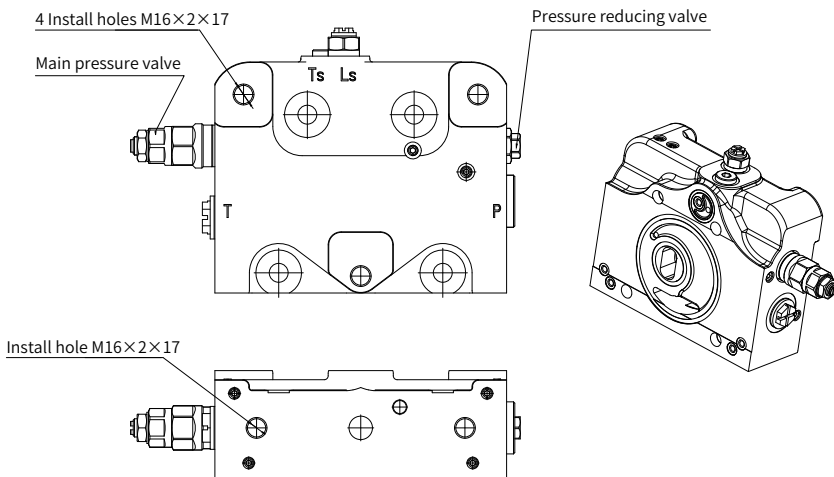
Spool section assembly—hydraulic



Spool section assembly—electro-hydraulic



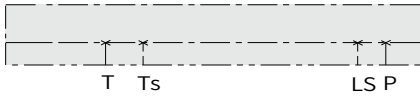
Endlet section assembly



Endlet option

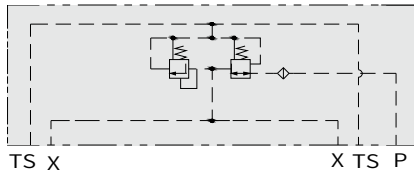
'Y' type : External pilot pressure supply

- 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.

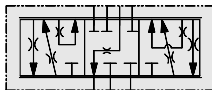


Spool type

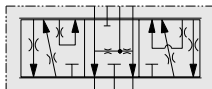
Spool type

Spool function type

E



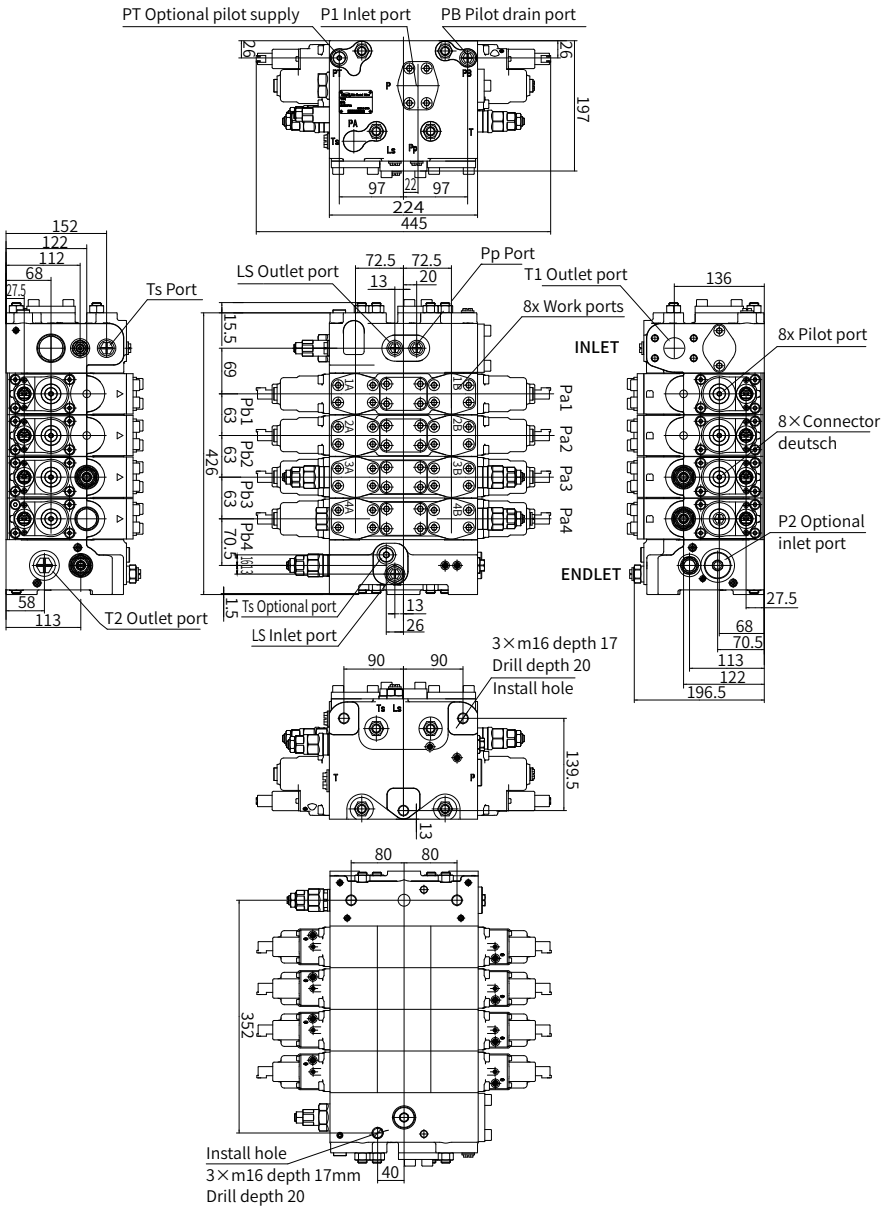
J



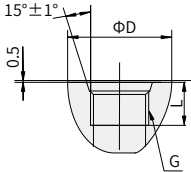
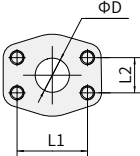
Note:
Please contact us for more information regarding spool flow data.

Unit dimensions

HVSM 25



Port connection

	Port JIS B2351-1		Thread	ΦD	L	
	T2	Outlet Port	G3/4	45	20	
	Ts	Outlet Port	G3/8	28	12	
	a/b Port LS Port Pp, Px Pc1, Pc2 PA Port PB Port PT Port	Pilot port Load sense Port Pp Port, Px Port Pc1 Port, Pc2 Port PA Port PB Port PT Port	G1/4	24	12	
	Port SAE J518		Nominal Flange Size	ΦD	L1	L2
	A/B Port P1(P2)	Work port Inlet port	1'	25.4	52.4	26.2
	T1	Outlet Port	1-1/4	31.8	58.7	30.2

01

China

+86 400 101 8889

America

+01 630 995 3674

Germany

+49 (30) 72088-0

Japan

+81 03 6809 1696



© This brochure can be reproduced, edited, reproduced or transmitted electronically without the authorization of Hengli Hydraulic Company. Due to the continuous development of the product, the information in this brochure is not specific to the specific conditions or applicability of the industry, thus, Hengli does not take any responsibility for any incomplete or inaccurate description.