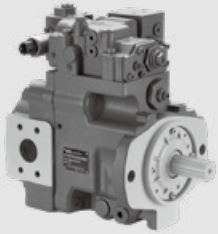
HP3V-S SERIES

Heavy-Duty Swash-plate Type
Axial Piston Variable Displacement Pump

Designed for open loop concrete pump and crane applications. Shorter pump suitable for limit installation space. The HP3V-75S series pump is capable of tandem pump to work with other pumps. The developed various controllers can meet requirements of all kinds of applications.

Apply to open hydraulic circuit
Displacement (cc/rev): 75
Nominal pressure (bar): 350
Maximum pressure (bar): 400



Contents

Features

- Higher working pressure, rated working pressure up to 350 bar.
- Higher efficiency, improved by 2% ~ 3% than similar products.
- Compact design to meet tight installation space requirements, optimized axial structure with 10% shorter total length than the last generation HP3V series.
- Optimized port plate, lower noise.
- Heavy-duty bearings and increased drive shaft dimension for higher load and longer life time.
- Various controllers suitable for requirements of all kinds of applications.

Technical data

Size		HP3V 75S
Displacement (cc/rev)		75
Speed	**Rated speed** (rpm) *1	2450
	Maximum speed (rpm) *2	3000
Pressure	**Rated pressure** (bar)	350
	Maximum pressure (bar)	400
Maximum torque (N•m)		415
Case volume (L)		1.3
Suction port pressure (abs bar)		0.8
Drain pressure	**Rated pressure** (bar)	1
	Maximum pressure (bar)	3
Hydraulic fluid viscosity range (mm^2/s)		10~1000 *3 (optimum viscosity range 16 ～ 36)
Temperature range (°C)		-30~80
Mass (Kg)		59

1 Steady state suction pressure should be 0 bar and above (at normal condition);

2 If suction pressure less than 0 bar, Boost pressure should be required;

3 In case of 200-1000mm^2/s, please allow system to warm up before using machine.

Type introduction

HP3V	75	S	O	L	EPD	/	C2	S3	N	M	M
①	②	③	④	⑤	⑥		⑦	⑧	⑨	⑩	⑪

Product series

①	Product series	HP6V

Displacement

②	Displacement cc/rev	75

Structure type

③	Single pump	S

Charge pump

④	without charge pump	O

Direction rotation

⑤	Clockwise	R
	Counter-clockwise	L

Control type

⑥	Electric proportional displacement + Hyperbolic torque control +Pressure Cut-off	EPD
	Electric proportional displacement	E0

Mounting flange

⑦	SAE C 127-2	C2

Type introduction

Input shaft

⑧	SAE J744-32-4 14T-12/24DP	S3

Through drive

⑨	None	N
	JIS D2001 27×16×1.5	J1

Connection type (except inlet and outlet port)

⑩	UNC port, ISO11926	○	A
	Metric port, ISO 6149	○	M
	BSPP G thread, JIS B2351	●	G

Thread type of Flange Port

⑪	UNC threads (only for UNC port)	○	A
	Metric thread	●	M

Note: Marked with " ○ " means under development.

HP3V 75S Control principle

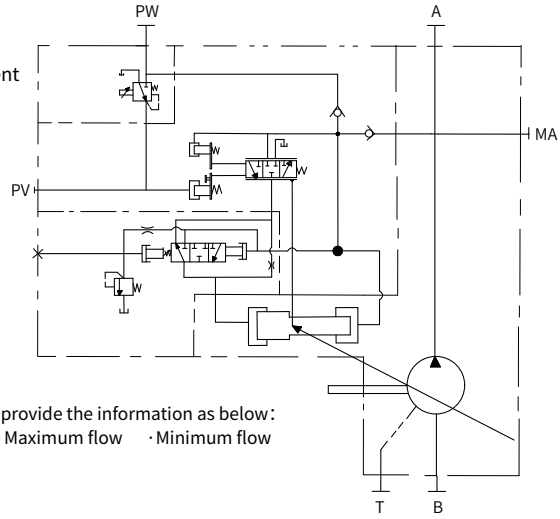
The torque limiting module is equipped with two springs to overcome the spool thrust generated by the system pressure; the appropriate input torque can be set by the adjusting screws of the inner and outer springs.

Electro-proportional displacement control: With pilot-pressure-related control, the pump displacement is adjusted in proportion to the pilot pressure. With increasing pilot pressure the pump swivels to a larger displacement. The necessary control power is taken from the operating pressure or the external control pressure applied to port P. If the pump is to be adjusted from the zero basic setting or from a low operating pressure, port P must be supplied with an external control pressure of at least 30 bar, maximum 50 bar.

When the pressure set value is reached, the pressure cut-off valve adjusts the displacement of the pump back to Vmin.。

·EPD

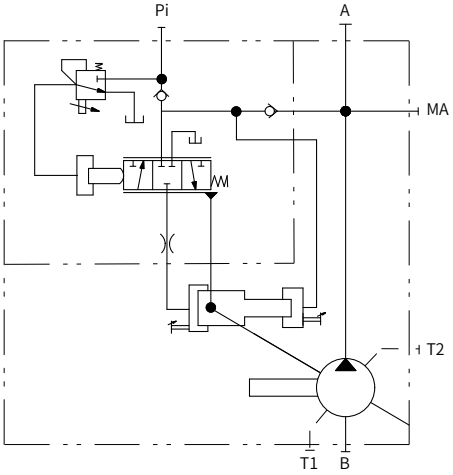
Electric proportional displacement
+ Hyperbolic torque control
+Pressure Cut-off



Note:
When ordering, please provide the information as below:
·Working pressure ·Maximum flow ·Minimum flow

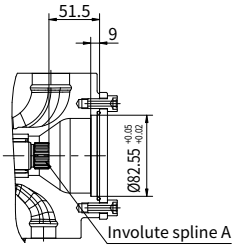
·E0

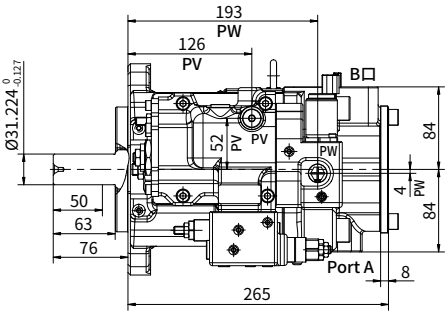
Electric proportional displacement

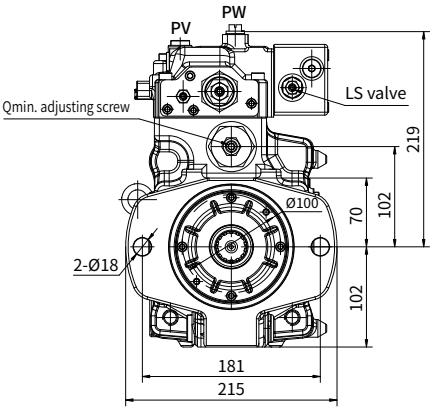


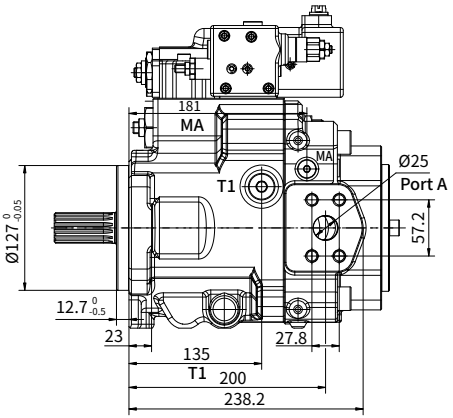
Installation size

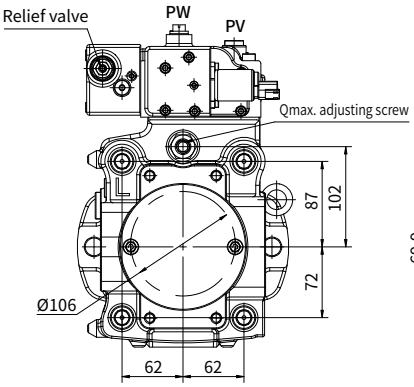
HP3V 75S Installation size

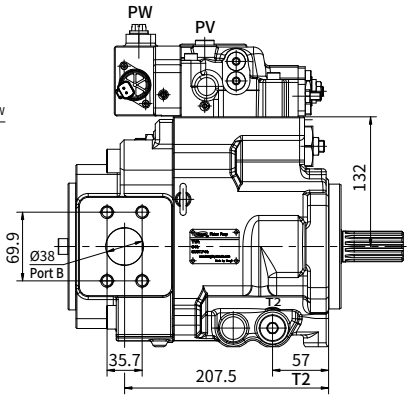






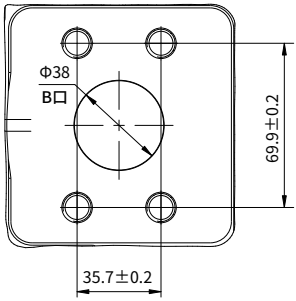


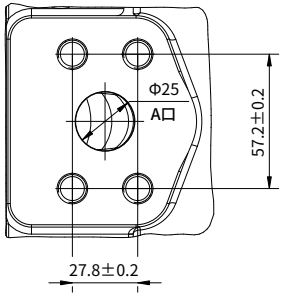




Installation size

·HP3V 75S Description of oil port



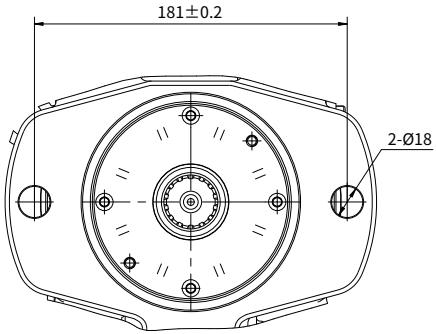


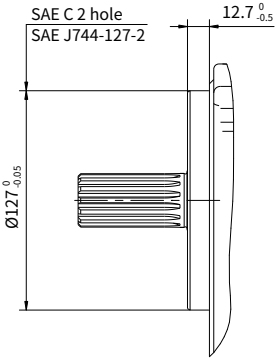
·Port Details

	Port Name	Port Size and Description
A	Output Port	SAE 1" 4-M12 depth 19mm
B	Input Port	SAE 1-1/2" 4-M12 depth 19mm
T1,T2	Drain Port	G1/2 depth 19mm
Pw	Pilot Port	G1/4 depth 12mm
MA	Pressure Measureing	G1/4 depth 15mm
Pv	Pressure Measureing	G1/4 depth 12mm

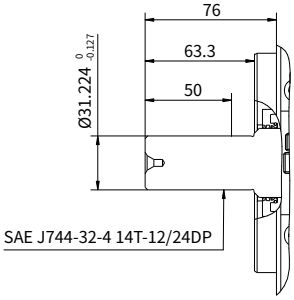
Installation size

· HP3V 75S Flywheel flange





· HP3V 75S Input shaft



"S3" type spline shaft

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