



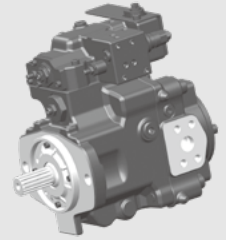
# HP6V SERIES Heavy-Duty

## Swash-plate Type Axial Piston Variable Displacement Pump

### (Original HP3V-S Series)

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



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## 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		HP6V 75
Displacement (cc/rev)		75
Speed	Rated speed (rpm) <sup>*1</sup>	2450
	Maximum speed (rpm) <sup>*2</sup>	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 <sup>2</sup> /s)		10~1000 <sup>*3</sup> (optimum viscosity range 16 ~ 36)
Temperature range (°C)		-30~80
Mass (Kg)		59

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- 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<sup>2</sup>/s, please allow system to warm up before using machine.

## Type introduction

HP6V	75	O	L	H	/	C2	S3	N	M	M
①	②	③	④	⑤	⑥		⑦	⑧	⑨	⑩

### Product series

①	Product series	HP6V
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### Displacement

②	Displacement cc/rev	75
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### Charge pump

③	without charge pump	O
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### Direction rotation

④	Counter-clockwise ( Counter-clockwise )	L
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### Control type

⑤	Electric proportional displacement + Hyperbolic torque control +Pressure Cut-off	EPD
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### Mounting flange

⑥	SAE C 127-2	C2
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## Type introduction

### Input shaft

⑦	SAE J744-32-4 14T-12/24DP	S3
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### Through drive

⑧	None	N
	JIS D2001 27×16×1.5	J1

### Connection type (except inlet and outlet port)

⑨	UNC port, ISO11926	○	A
	Metric port, ISO 6149	○	M
	BSPP G thread, JIS B2351	●	G

### Thread type of Flange Port

⑩	UNC threads (only for UNC port)	○	A
	Metric thread	●	M

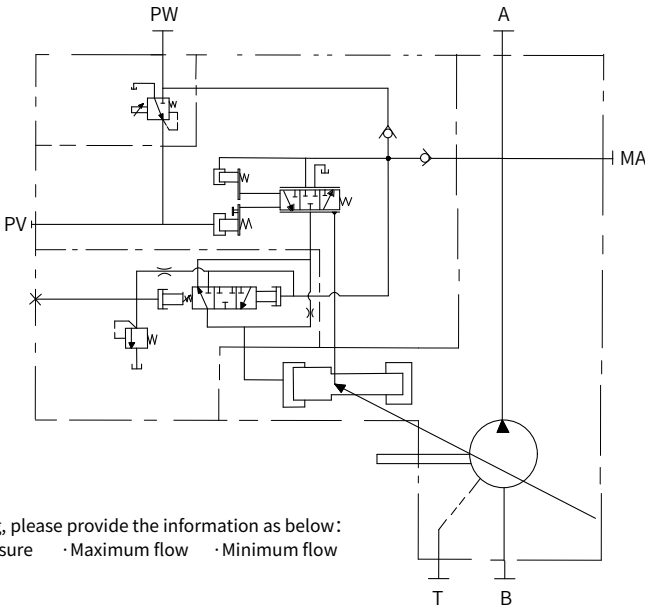
**Note:** Marked with "○" means under development.

# HP6V 75 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  $V_{min.}$

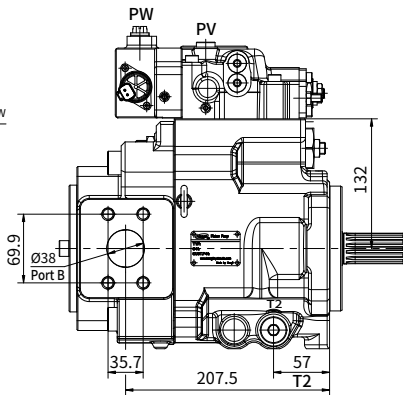
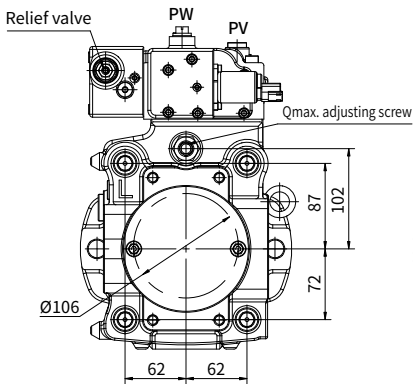
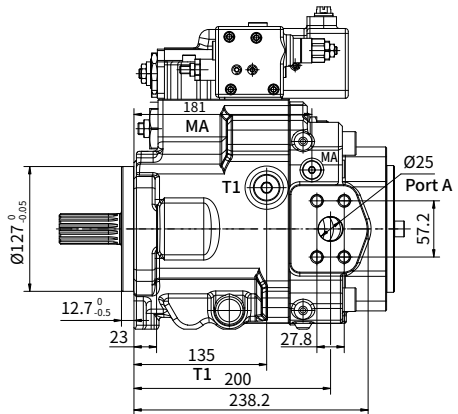
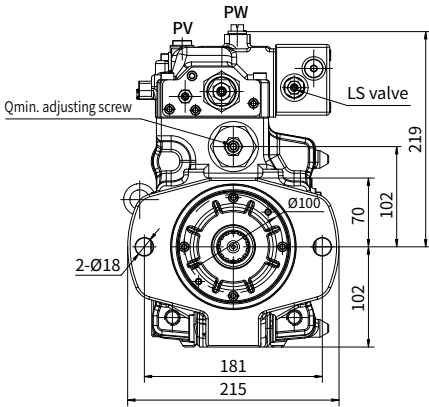
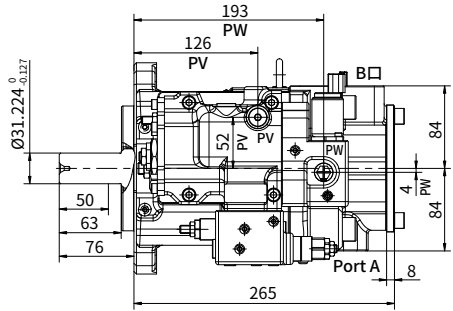
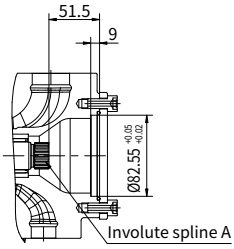


**Note:**

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

# Installation size

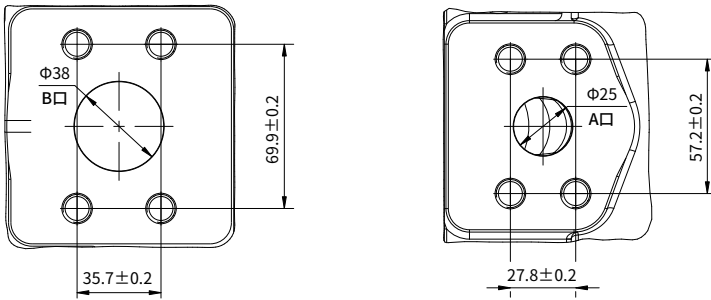
## HP6V 75 Installation size



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## Installation size

### • HP6V 75 Description of oil port

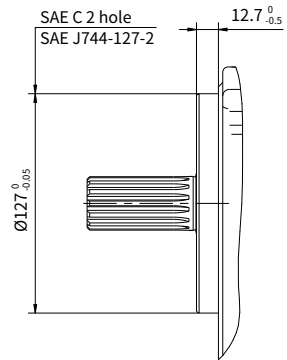
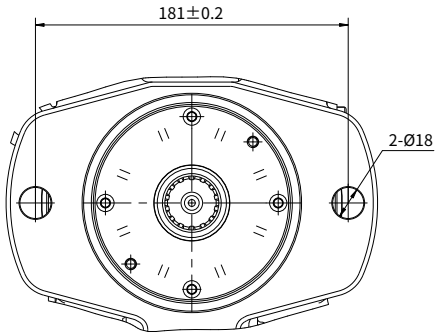


### • Port Details

	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 Measuring	G1/4 depth 15mm
Pv	Pressure Measuring	G1/4 depth 12mm

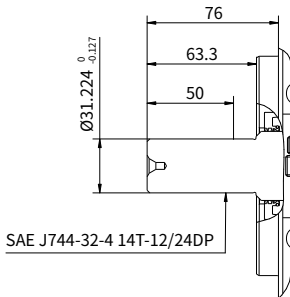
## Installation size

### • HP6V 75 Flywheel flange



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### • HP6V 75 Input shaft



"S3" type spline shaft