



1.5

V92N

Swash-plate Type Axial Piston Variable Displacement Double Pump

V92N variable axial piston double pump, unique joint bearing structure, is designed for the high pressure open circuit.

Displacement (cc/rev):	120×2
Nominal pressure (bar):	350
Max. pressure (bar):	400



Contents

Technical Data	02
Type introduction	03-04
V92N 120 Type	
• Control principle	05
• Installation size	06-08

Features

- Variable axial piston double pump design for the open circuit.
- High working pressure (400 bar) and long lifetime.
- Advantages such as high load capacity, strong impact resistance, wear resistance, and self centering.
- Combination of control methods, optional installation of angle sensor, achieving closed-loop flow control and higher control accuracy.
- More suitable for mobile machinery like excavators, cranes, drilling rigs and so on.

Technical data

Size		V92N 120
Displacement(cc/rev)		120×2
Speed	Rated speed (rpm) ¹	2350
	Maximum speed (rpm) ²	2700
Pressure	Rated pressure (bar)	350
	Maximum pressure (bar)	400
Maximum torque (N.m) @Vgmax and Δp=380bar		1452
Case volume (L)		2.7
Suction port pressure (abs bar)		0.7 ~ 2
Drain pressure (bar)		1
Max. drain pressure (bar)		3
Mass (Kg)		127
Temperature range (°C)		-20 ~ 95
Hydraulic fluid viscosity range (mm ² /s)		10 ~ 1000* ³ (optimum viscosity range 16 ~ 36)

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 200-1000mm²/s, please allow system to warm up before using machine.

Type introduction

V92N	120	T	V	R	E1	/	G4	J1	K0	N	G	M	S
①	②	③	④	⑤	⑥		⑦	⑧	⑨	⑩	⑪	⑫	⑬

Product series

①	Double pump, variable swash-plate design, open circuit	V92N
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Displacement

②	Displacement cc/rev	120
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Structure type

③		120	Code
	Structure type	Tandem double pump	● T

Seals

④		120	Code
	FKM	●	V

Direction rotation

⑤		120	Code
	Clockwise	●	R

Control type

⑥		120	Code
	Electric proportional displacement	Pilot operated proportional displacement control (positive control), 24V	● E1
	Negative displacement control	Hydraulic pilot negative flow + Proportional increasing power control + (total power control)	● H1

Mounting flange

⑦		120	Code
	4-hole flange	●	G4

Input shaft

⑧		120	Code
	JIS B 1603 40×14×2.5	●	J1

Type introduction

Through drive and pilot pump

		120	Code
⑨	None	●	N
	With pilot gear pump and pressure relief valve (only for none through drive)	●	K0

PTO Power port drive

		120	Code
⑩	No pressurization, no force extractor	●	N

Connection type (except inlet and outlet port)

		120	Code
⑪	BSPP G thread, JIS B2351	●	G

Thread type of Flange Port

		120	Code
⑫	Metric thread	●	M

Standard / special version

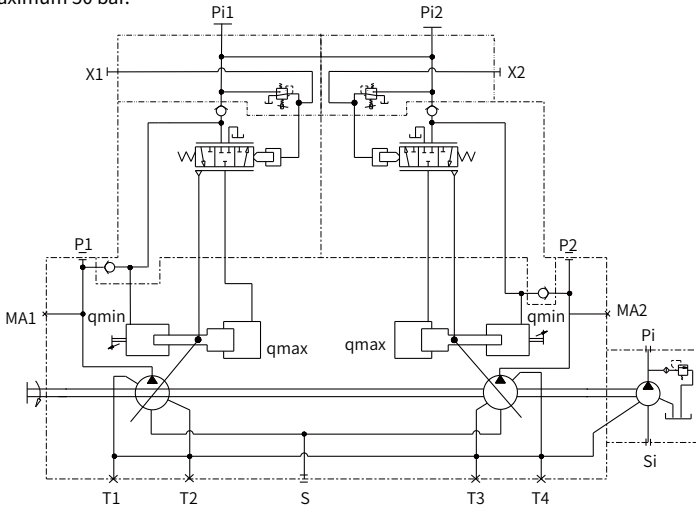
		120	Code
⑬	Standard version	●	None
	Special version	○	S

Remark: ● = Available; ○ = On request

V92N 120 Control principle

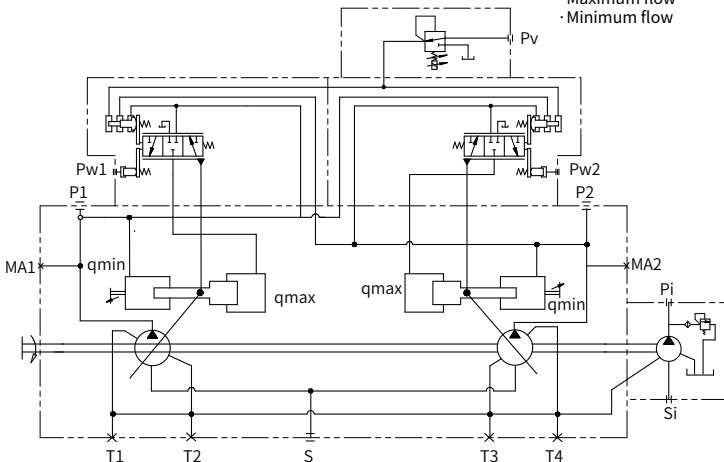
·E1 Electro-proportional displacement control principle

Electro-proportional displacement control: With pilot-pressure-related control, the pump displacement is adjusted in proportion to the pilot pressure. Basic position without pilot signal is $V_{g\ min}$, which includes the mechanically depressurized basic position $V_{g\ min}$. 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.



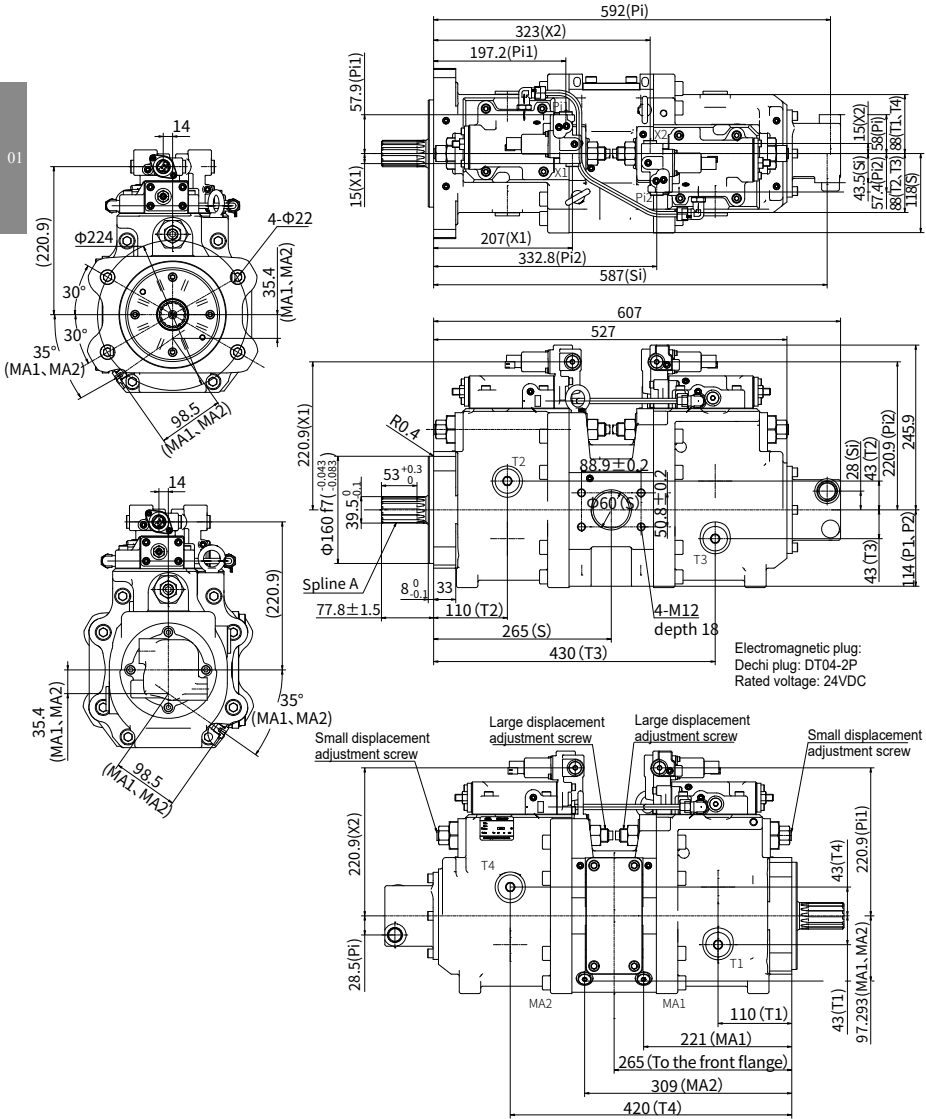
Note:
When ordering, please provide the information as below:
· Working pressure
· Maximum flow
· Minimum flow

·H1 Negative flow control schematic



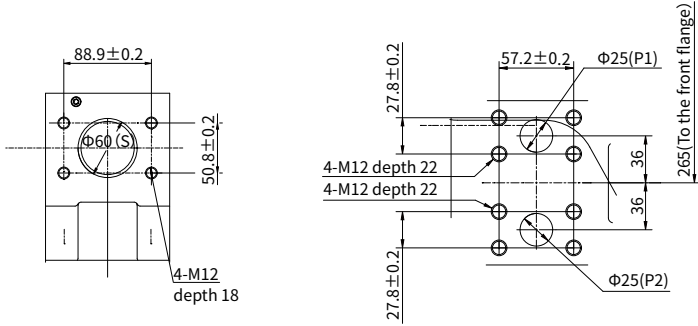
Installation size

V92N 120 Type



Installation size

·V92N 120 Description of oil port

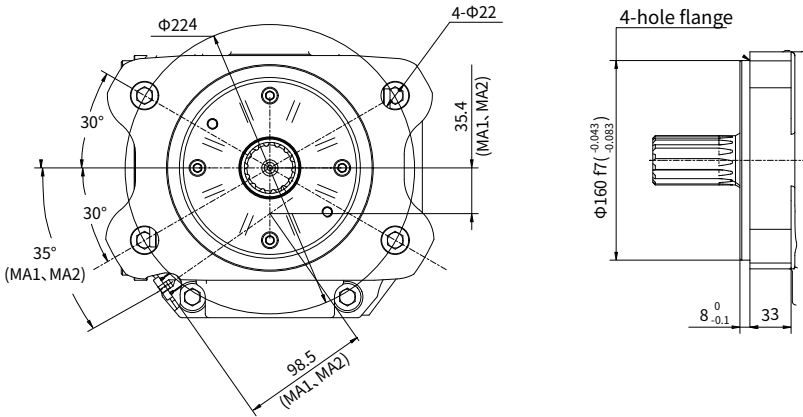


Port Details

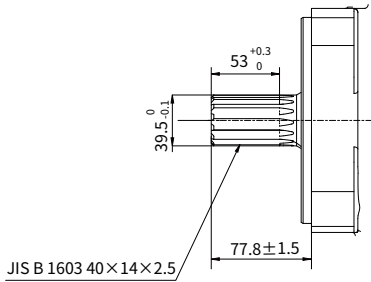
	Port Name	Port Size and Description
P1,P2	Output Port	SAE 1" 4-M12×1.5, depth22mm
S	Input Port	SAE 2-1/2" 4-M12×1.75, depth18mm
T1,T2,T3,T4	Drain Port	G 3/4 depth20mm
Pi1,Pi2	Pilot Port	G 1/4 depth12mm
X1,X2	Pressure sensor port	G 1/4 depth12mm
MA1,MA2	Pressure Measuring	G 1/4 depth15mm
Pi	Pilot Pump Output Port	G 1/2 depth19mm
Si	Pilot Pump Input Port	G 3/4 depth20.5mm

Installation size

·V92N 120 Flange



·V92N 120 Input shaft



“J1” type spline shaft

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