

Energy-Saving Power Unit

Variable Displacement Piston Pumps Driven by AC Servo Motor
Precise Pressure Flow Control Based on Machine Motion

POWER-FIT



Features

Energy-Saving

80% Energy Savings
Over Conventional Units

High Pressure

25MPa (3625PSI) (PVS Type)
28MPa (4060PSI) (PZS Type)

High Flow

90L/min (23.8GPM) (PVS Type)
140L/min (37.0GPM) (PZS Type)

Pressure and Flow Settings

16 Patterns of Settings of Pressure
and Flow Combinations

Compact

60% Less Space
15.9, 21.2GAL Reservoir

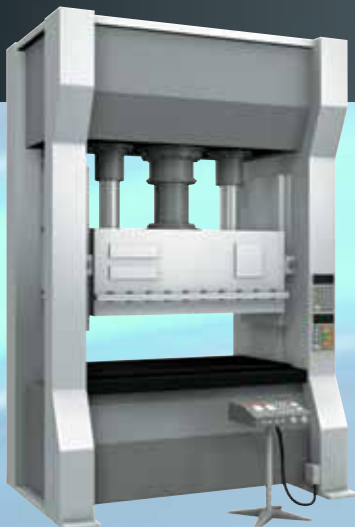
Low Noise

60dB(A)
at 3045PSI

Low Temperature

10°C (50°F) + Ambient
Temp.*

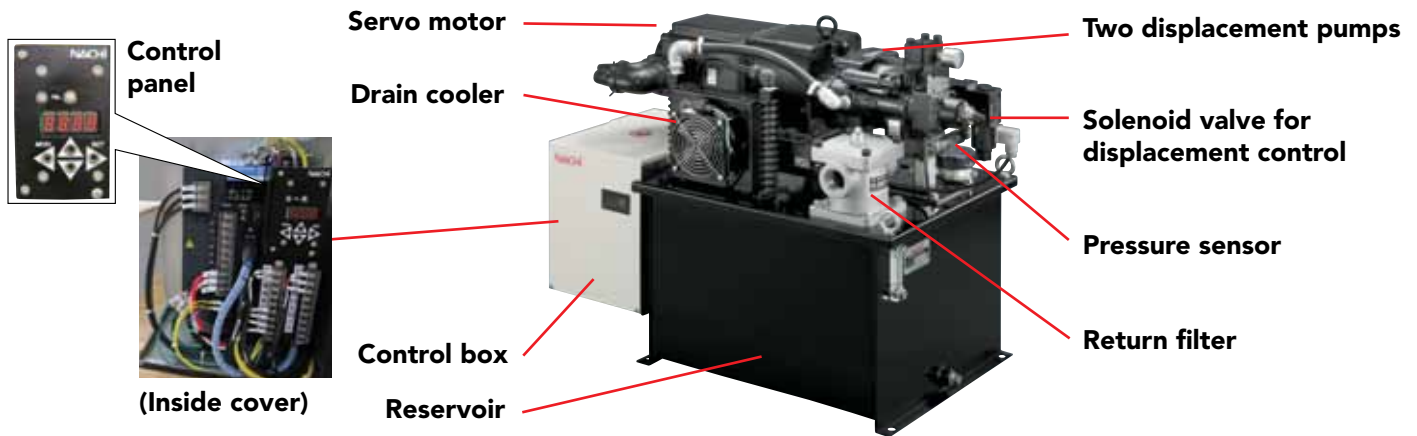
* Saturation temp. at constant
pressure 21Mpa (3000PSI),
15.9GAL reservoir



Suitable for Hydraulic Source of Press Machines
Compact • High Pressure • High Flow

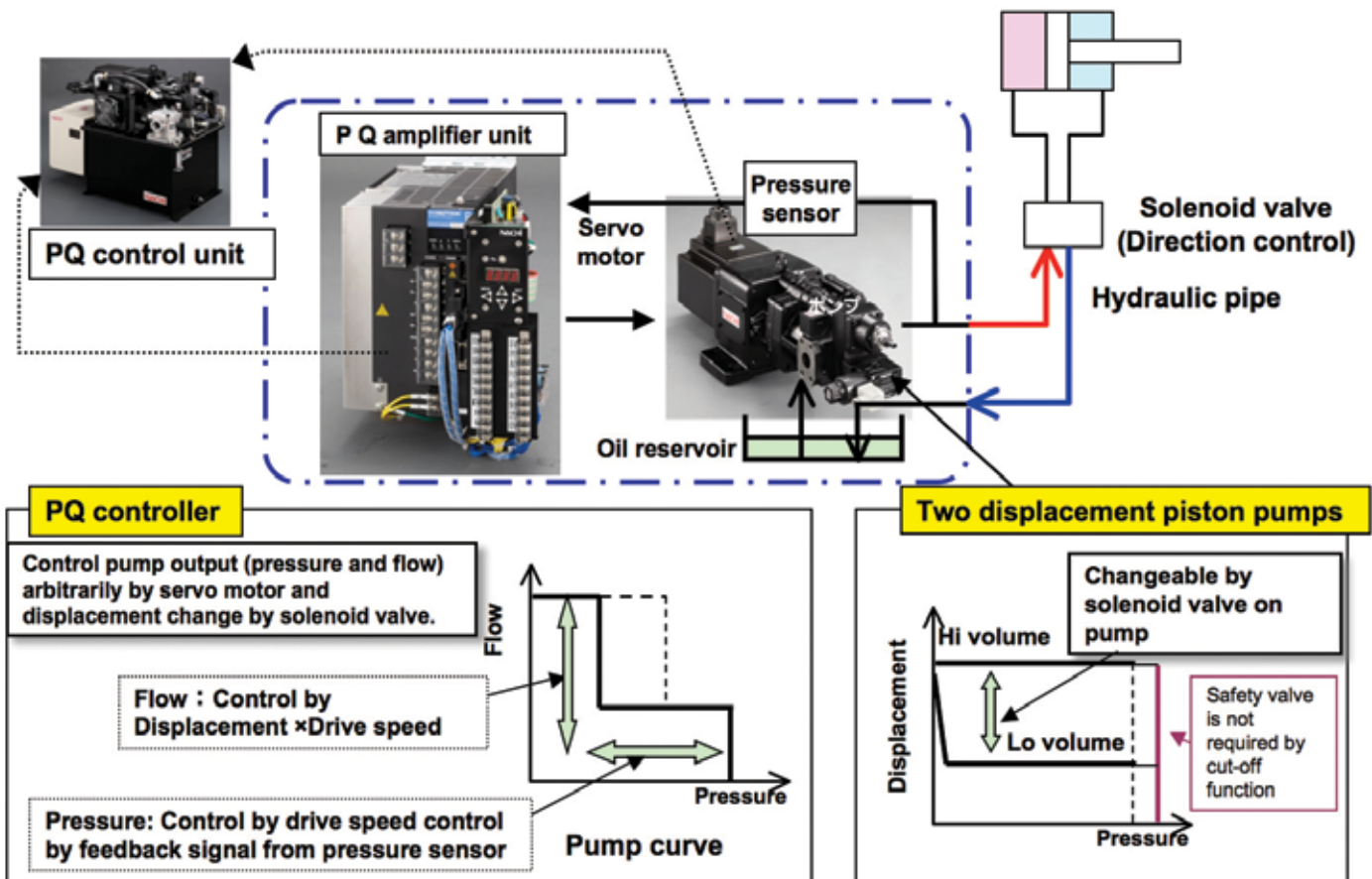
Features

- Energy saving type power unit with two displacement piston pumps driven by AC servo motor.
- Pressure and flow is controlled by motor drive speed and pump displacement. Pressure and flow can be set digitally at given value by control panel.
- Multiple settings of pressure and flow are possible by an external signal input.



Configuration

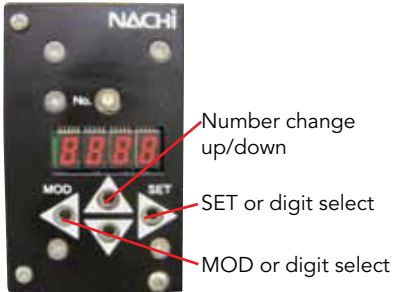
Two Displacement Pumps + Servo Motor + PQ Amplifier Unit



Pressure and Flow Setting

16 patterns of settings are possible as pressure and flow combinations. Setting operation is very easy by using control panel in control box.

1. Select mode "u.XXX" by "MOD button" on control panel (Mode changes by every push of "MOD button")
2. When input pressure setting of pattern 0, show "u.100" and push "SET" button for 1 second.
3. Input pressure by 0.1MPa resolution and then push "SET" button for 1 second. Then 4 digit data flush and setting is complete.



Pattern No.	Flow Setting			Change over time			Pressure Setting		General Output	
	Parameter	units: 0.1 l/m in		Parameter	Flow	Pressure	Parameter	units: 0.1 MPa	Parameter	XXXX XXXX
Pattern 0	u.110			u.120			u100		u.200	
Pattern 1	u.111			u.121			u.101		u.201	
Pattern 2	u.112									
Pattern 3	u.113									
Pattern 4	u.114									
Pattern 5	u.115			u.125			u.105		u.205	

For pattern 0 to 15, pressure, flow and time of setting shift can be set.

External Input of Pressure and Flow (Multiple Step Control)

Selection of a combination pressure and flow by an external signal input. Multiple step control of pressure and flow is possible by choosing pattern number set with control panel by an external signal (4 discrete contacts). Some pattern numbers can be set on control panel. Due to select external signal input (4-points), multiple combinations of pressure and flow can be generated.



The rotary switch has 1~9 and A~F channels. It is also available to select 16 patterns by setting parameter. (Manual operation mode)

Simply remove a screw to open the panel and access wiring. You can then connect the external signal wire on the right side of the control panel.



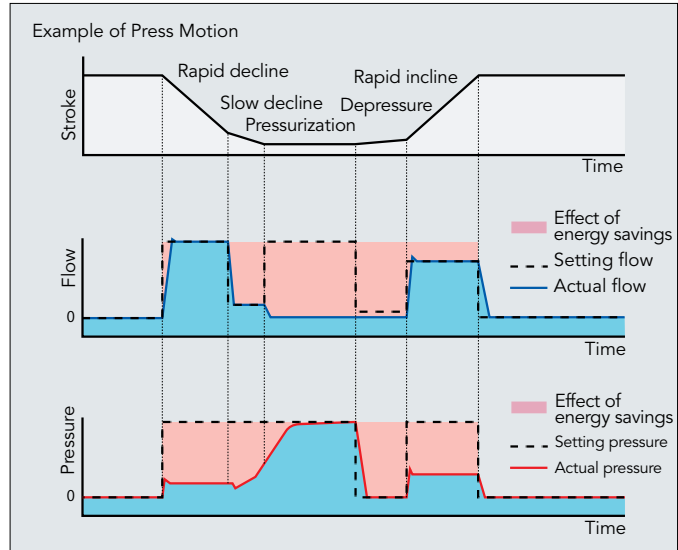
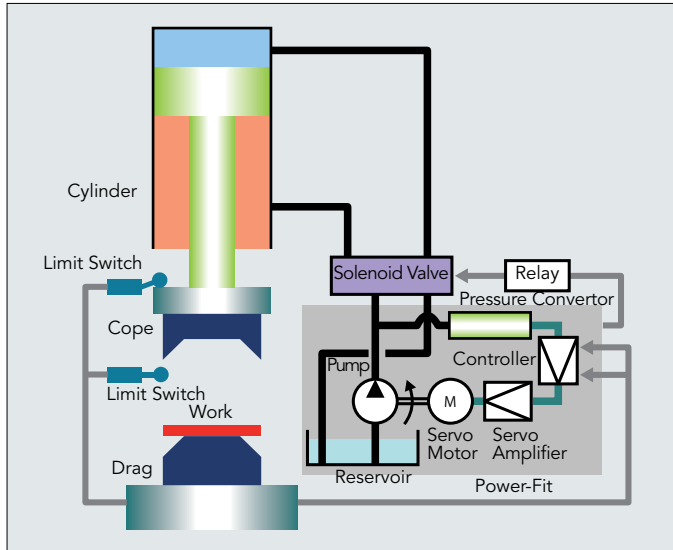
Specifications

Model	Max. pressure	Max. flow	Pump Displacement Hi/Lo (initial setting)	Servo motor	Reservoir
NPQ-60E-55PV45N3A2-6161A	3625PSI (25MPa)	23.8GPM (90 L/min)	2.74 / 0.73" cuin (45 / 12cm³/rev)	7.37HP (5.5kW)	15.85GAL (60L)
NPQ-80E-75PZ70N4A2-6161A	4061PSI (28MPa)	37GPM (140 L/min)	4.27 / 1.04" cuin (70 / 17cm³/rev)	10.05HP (7.5kW)	21.13GAL (80L)

Power unit without control box is also possible. In that case, separated PQ amplifier unit (in customer's control box) and cable kit are required.

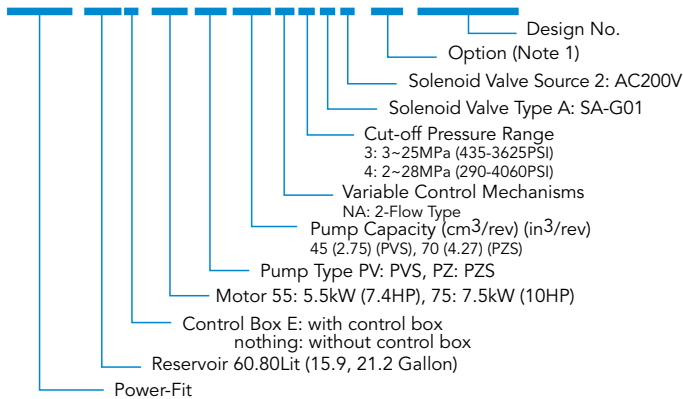
Outline

- Speed (flow) and force (pressure) are automatically controlled by controller based on load situation
- No need to use additional valves for flow and pressure control



Model Number Coding

NPQ-60E-55PV45N3A2--6161A**



Notes: G: Guard Level Gauge H: Thermostat M: Microseparator P: Oil Pan
S: Float Switch (for lower) T: Level Gauge with Thermometer

Amplifier unit for power unit without control box



Pump with servo motor



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