

### Power Fit

❖ Power fit is an energy-saving hydraulic unit that operates the variable piston pump with two capacities using an AC servo motor.

#### Features

##### ① Energy-saving, low-noise

Energy-savings and low noise are achieved by rotating the pump for the required number of times only when it is necessary by the AC servo motor .

##### ② High pressure, large flow rate

By using the variable piston pump with two capacities, the two pump capacities switch between the low pressure large flow rate and high pressure small flow rate to control.

##### ③ Easy control of multi-stage pressure and flow rate

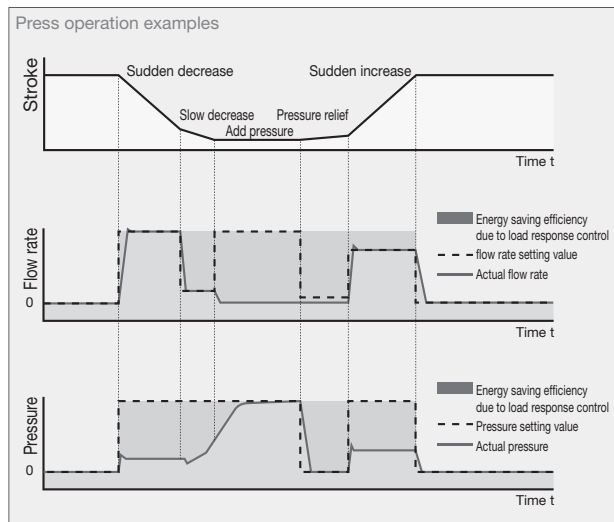
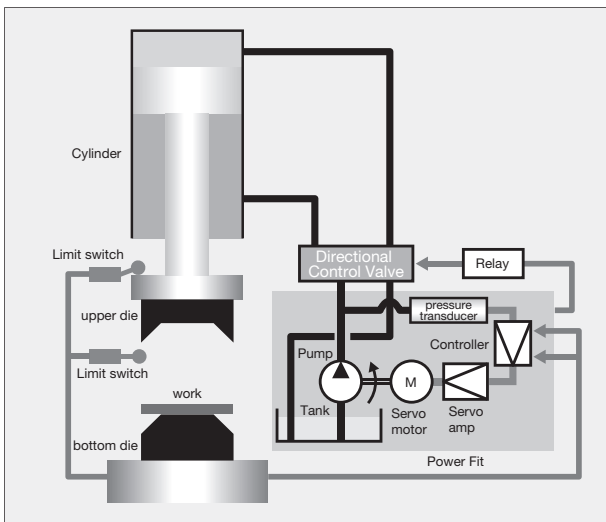
By using external signals, 16 patterns of changeover controls are possible. The pressure and flow rate can be freely set with the operation panel inside the control box.

##### ④ Compact

By making the Power Fit energy-saving, the oil quantity will be reduced.

#### Overview

- Power Fit can be used to replace the existing hydraulic unit.
- The operating direction of the cylinder can be switched by the external directional control valve.
- Cylinder speed (flow rate) and load (pressure) can be controlled freely by the controller. (Valves for controlling speed and pressure are unnecessary.)
- The controller automatically switches the flow rate control and pressure control according to the loaded condition.
- External signals (Open Collector signals) can be output in conjunction with the flow rate and pressure command. The directional control valve can be switched in conjunction with the commands.



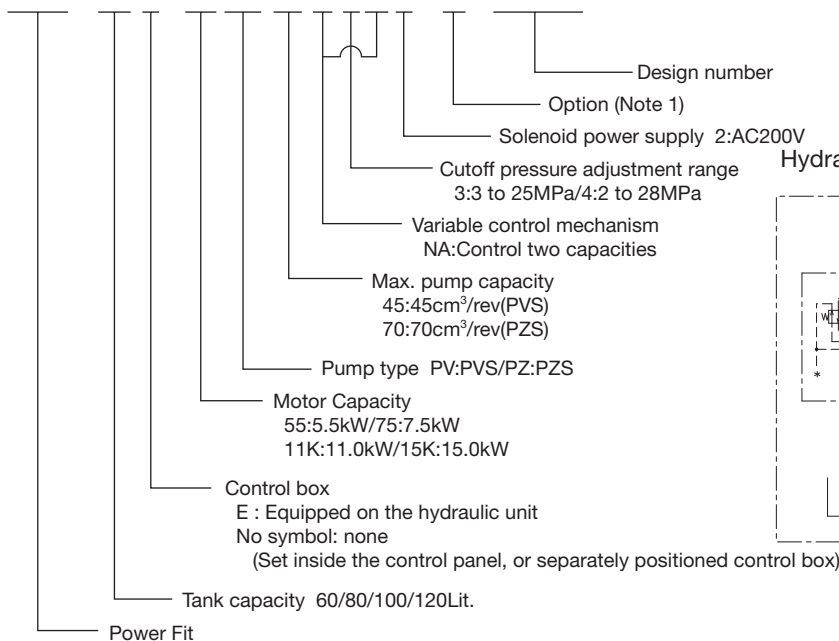
# Specifications

Model No.	NPQ-60*-55PV 45N3A2-6161B	NPQ-80*-75PZ 70N4A2-6161B	NPQ-100-11KPZ 70N4A2-6161B	NPQ-120-15KPZ 70N4A2-6161B
Motor capacity kW	5.5	7.5	11.0	15.0
Pump	PVS-2B-45		PZS-3B-70	
Max. pump capacity cm <sup>3</sup> /rev	45		70	
Pump adjustment range high volume cm <sup>3</sup> /rev	20 to 45 <sup>(Note 1)</sup> (Factory default : 45)		5 to 70 <sup>(Note 1)</sup> (Factory default : 70)	
Pump adjustment range small volume cm <sup>3</sup> /rev	3 to 24 <sup>(Note 1)</sup> (Factory default : 12)		5 to 40 <sup>(Note 1)</sup> (Factory default : 17)	
Maximum RPM min <sup>-1</sup>	2000			
Maximum flow rate ℓ/min	90		140	
Pressure Rating MPa	21			
Maximum Working Pressure MPa	25		28	
Tank Size Lit.	60	80	100	120
Power supply	Main circuit	3φ AC200 to 220V, 50/60Hz		
	control circuit	1φ AC200 to 220V, 50/60Hz		
Power Supply Capacity KVA	8.4	12.6	15.7	21.4
Ambient Temperature/Humidity	10 to 35°C/20 to 90%PH(non-condensation)			
Temperature Range of Hydraulic Fluid	10 to 60°C			
Recommended Hydraulic Fluid	Standard mineral-based hydraulic fluid (equivalent to ISO VG46s)			

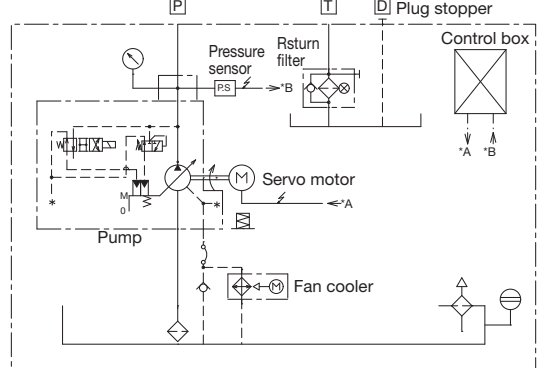
Note 1) The adjustment range of the pump high volume changes according to the setting of the small volume. For details see the user documentation.

# Explanation of model No.

## NPQ-80 E-75 PZ 70 N 4 A 2-\*\*-6161B



### Hydraulic Circuit Diagram

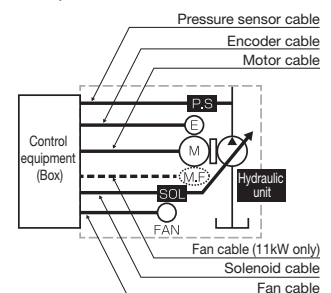


Note 1) G:Fluid Level Gauge With Guard, H:With Thermostat, M:With Microseparator, P:With Oil Pan  
S:Float Switch (Low fluid level detection), T:Fluid Level Gauge With Temperature Gauge (with guard)  
W:Self Leak Test (The return filter is standard equipment)

### Hydraulic unit (Control box non-equipped type), Control equipment, Cable Kit Combinations List

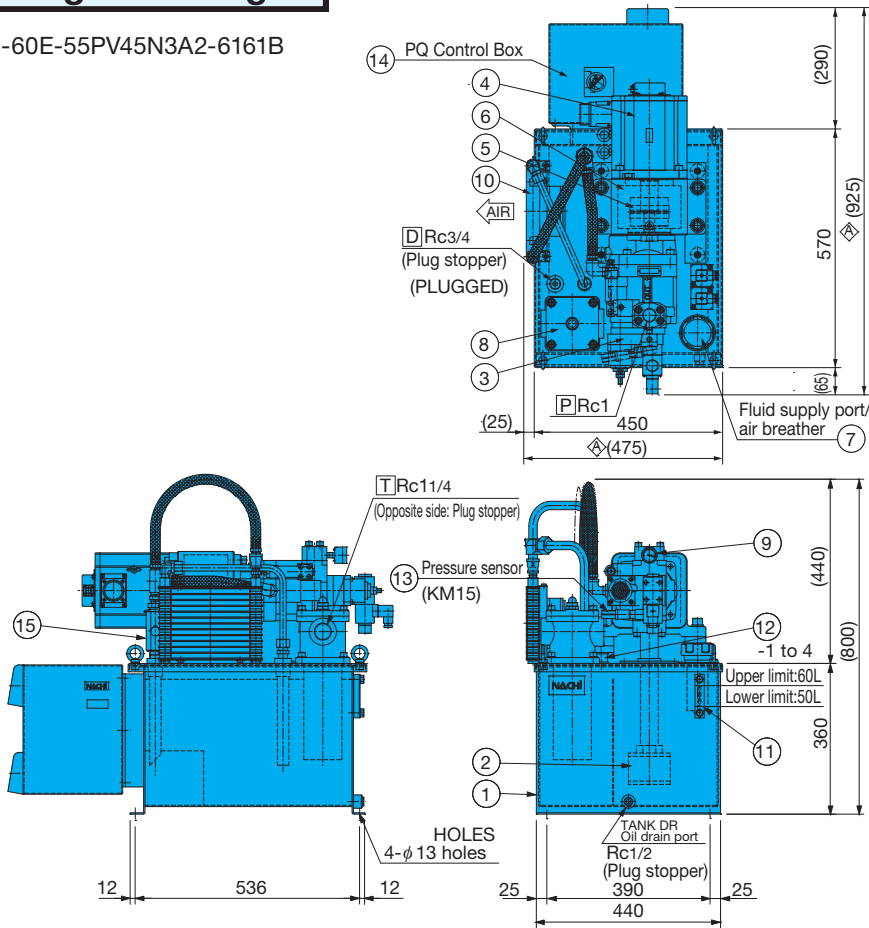
Hydraulic unit (Control box non-equipped type) Model No. (PQ Bellmount pump Model No.)	Motor capacity (kW)	Control equipment Select from the following ① PQ Amplifier unit ② Separately positioned control box	Cable Kit <sup>(Note 1)</sup> (Select from 3m or 5m)
NPQ-60-55PV45N3A2-6161B (UPQ-2A-45N3A2-55PV-6331B)	5.5	① EPQ-55R-8671A ② EPQ-B55R-8685A	JAQ-03PQR-55-8682(3m) JAQ-05PQR-55-8682(5m)
NPQ-80-75PZ70N4A2-6161B (UPQ-3A-70N4A2-75PZ-6331B)	7.5	① EPQ-75R-8671A ② EPQ-B75R-8685A	JAQ-03PQR-75-8682(3m) JAQ-05PQR-75-8682(5m)
NPQ-100-11KPZ70N4A2-6161B (UPQ-3A-70N4A2-11KPZ-6331B)	11.0	① EPQ-11KR-8671A ② EPQ-B11KR-8685A	JAQ-03PQR-11K-8682(3m) JAQ-05PQR-11K-8682(5m)
NPQ-120-15KPZ70N4A2-6161B (UPQ-3A-70N4A2-15KPZ-6331B)	15.0	① EPQ-15KR-8671A ② EPQ-B15KR-8685A	JAQ-03PQR-15K-8682(3m) JAQ-05PQR-15K-8682(5m)

Note 1) Cable Kit details



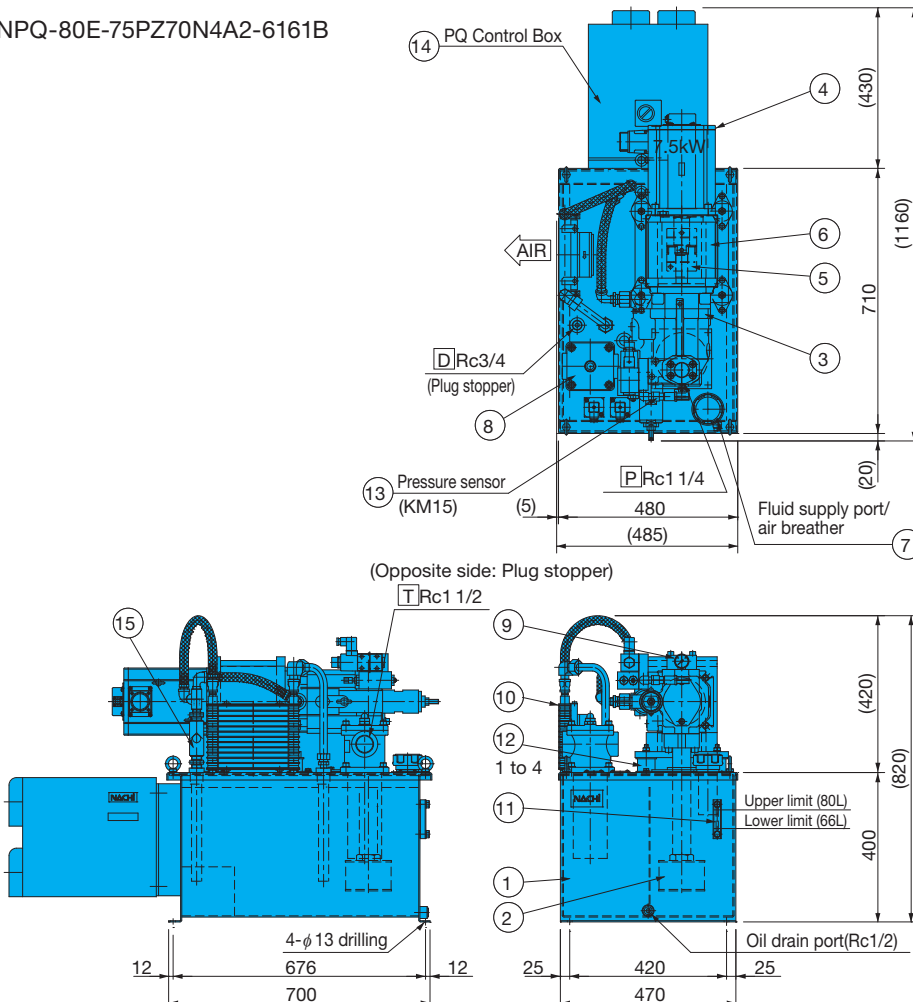
# Design Drawings

NPQ-60E-55PV45N3A2-6161B



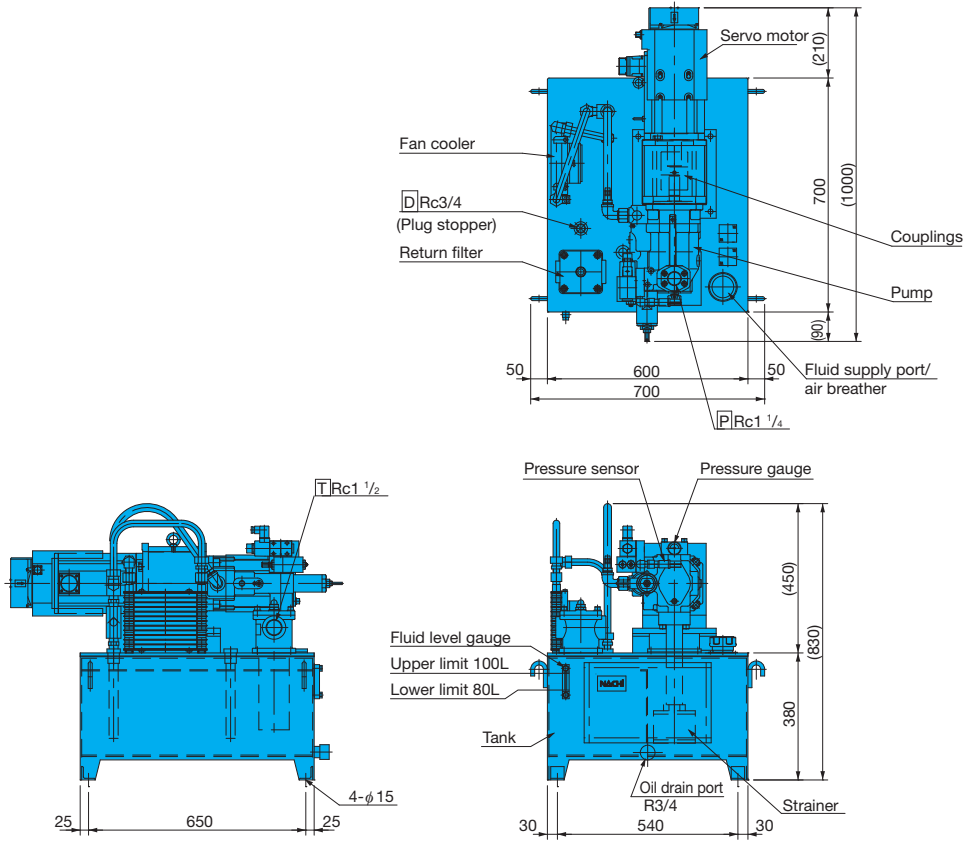
Part No.	Part Name	Q'ty
1	Tank	1
2	Strainer	1
3	Uni-pump	1
4	Servo motor	1
5	Coupling	1
6	Bracket	1
7	Fluid supply port/air breather	1
8	Return filter	1
9	Pressure gauge	1
10	Fan cooler	1
11	Fluid level gauge	1
12	Anti-vibration rubber	4
13	Pressure sensor	1
14	Servo control box	1
15	Check valve	1

NPQ-80E-75PZ70N4A2-6161B

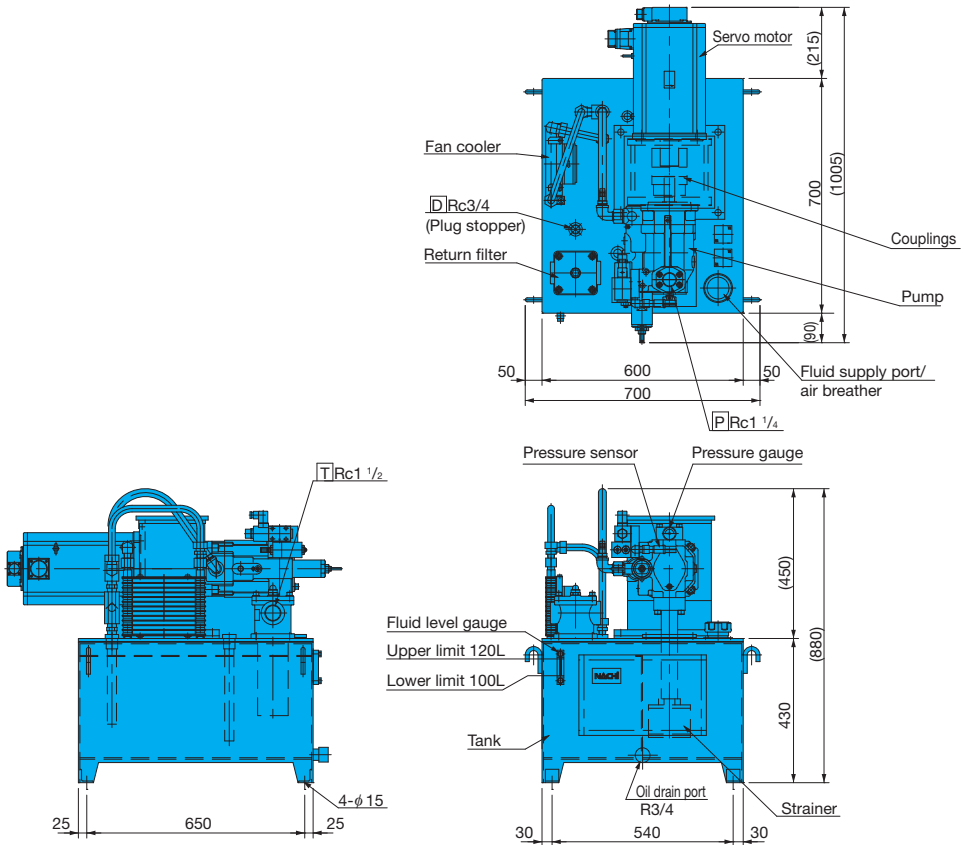


Part No.	Part Name	Q'ty
1	Tank	1
2	strainer	1
3	Uni-pump	1
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6	Bracket	1
7	Fluid supply port/air breather	1
8	Return filter	1
9	Pressure gauge	1
10	Fan cooler	1
11	Fluid level gauge	1
12	Anti-vibration rubber	4
13	Pressure sensor	1
14	PQ Control Box	1
15	Check valve	1

NPQ-100-11KPZ70N4A2-6161B



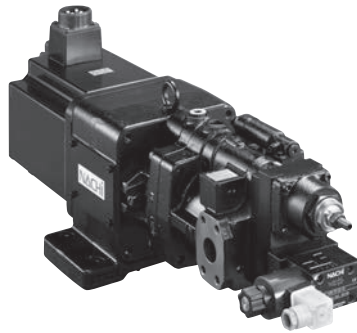
NPQ-120-15KPZ70N4A2-6161B



## PQ Bellmount pump, PQ Amplifier unit

PQ Bellmount pumps, PQ Amplifier units of Power Fit are also available.  
Please contact our sales agent.

PQ Amplifier unit for setting  
inside the control panel



PQ Bellmount pump made by combining  
a pump and servo motor.

