

## Inverter Drive NCP/NNP Series Energy-saving Variable Pump Unit with Inverter Drive

By adding an inverter drive to our NCP/NNP series standard variable pump unit, we created the inverter drive NCP/NNP series hydraulic units to achieve great energy savings.

They are great for jobs that need to dwell for long periods.

### Features

#### Low increase in hydraulic oil temperature

Maintained at room temperature +2.5°C.

- NNP-60E-55P35N1-21
- 7MPa maintained while dwelling

#### 40% energy savings compared to the NCP unit

- NCP-60E-3.7PV16N3-C1R2-13
- 21MPa while dwelling (in contrast to standard unit)

#### Quiet

Sound level is 52dB (A).

- NNP-20E-22P16N1-21
- 7MPa while dwelling
- One meter behind pump

#### Easy Operation

Can start as soon as power is turned on.

Absolutely no external commands or delicate electrical adjustments needed.

◎ Operates even with the inverter removed in emergencies.

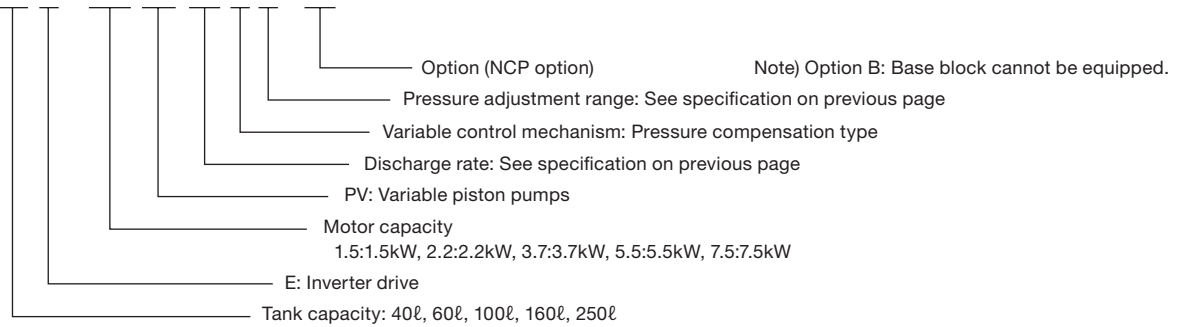
### Specifications

|  |   |
|--|---|
| 1. Power Supply<br>Rated Input Current           | 3φ AC200 to 220V, 50/60Hz<br>9.8A/1.5kW (NCP series only)<br>13.5A/2.2kW<br>22.5A/3.7kW<br>21.4A/5.5kW<br>29.1A/7.5kW (NCP series only) |
| 2. Pressure Adjustment Range                     | N0: 2.0 to 3.5MPa<br>N1: 2.0 to 7.0MPa<br>N2: 3.0 to 14.0MPa<br>N3: 3.0 to 21.0MPa  |
| 3. Output Flow<br>(Theoretical Value at No-load) | 8: 14.4ℓ/min<br>16: 29.7ℓ/min<br>22: 39.6ℓ/min<br>35: 63.0ℓ/min<br>45: 81.0ℓ/min  |
| 4. Hydraulic Fluid                               | Standard mineral-based hydraulic fluid<br>ISO VG32 or 46  |
| 5. Hydraulic Oil Temperature                     | 0 to 60°C   |
| 6. Ambient Temperature/Humidity                  | 10 to 35°C/20 to 85%RH (non-condensation)   |
| 7. Color of Inverter Box                         | Munsell No. 2.5Y9/1 (cream)   |

## Explanation of model No.

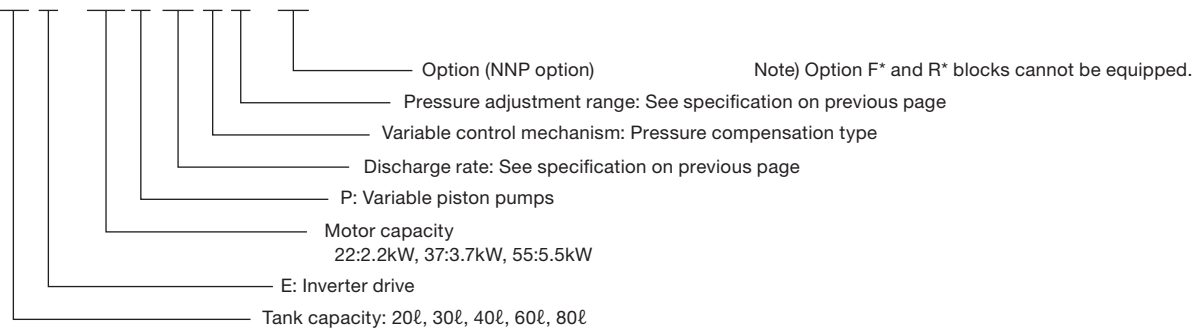
Inverter Drive NCP Series

**NCP - 60 E - 3.7 PV 16 N 2 - \*\* - 13**



Inverter Drive NNP Series

**NNP - 20 E - 22 P 16 N 2 - \*\* - 21**



## Design Drawings, Dimension Tables

Contact us for more information.

## Precautions

- Turning the inverter on and off by cutting the main power supply (circuit breaker) significantly reduces the life of the inverter and should be limited to once an hour.  
Contact us if you need to start and stop operations frequently.
- Use only the wiring methods described in the user documentation.
- Do not change any settings, regarding the inverter parameters, except the parameters described in the setting procedures in the user documentation.
- Allow for sufficient flexibility in the piping between the inverter-driven hydraulic unit and external manifolds or actuators.

(Recommended) Flexible hose that is at least 1 meter long and has the following inside diameters.

| Pump Capacity                      | Inside diameter |
|------------------------------------|-----------------|
| 8cm <sup>3</sup> /rev .....        | 3/8 or 1/2 inch |
| 16 or 22cm <sup>3</sup> /rev ..... | 3/4 inch        |
| 35 or 45cm <sup>3</sup> /rev ..... | 1 inch          |

\*If the piping has a low capacity, the inverter's alarm may sound when the load fluctuates and the motor may stop.

- Some options are not compatible with the inverter drive models, contact us for more information.
- Contact us if excessive leakage in the external hydraulic circuit limits energy saving efficiency.