

Inverter Drive NSP Series Energy-saving Variable Pump Unit with Inverter Drive

The "Inverter Drive NSP Series" is a hydraulic unit that reduces energy consumption by approximately 60% (dwelling, in-house comparison) compared to the standard unit by adding an energy saving NSP Series inverter drive. They are great for jobs that need to dwell for long periods.

Features

Hydraulic fluid temperature is kept at room temperature +1.5°C

The NSP series benefits your entire system by lowering oil temperature to improve machining accuracy, lengthen the life of seals and hydraulic fluid, and reduce factory air conditioning costs.

NSP-20E-22V1A4-13

6.0MPa maintained while dwelling

Quiet operation at only 53dB (A)

NSP-20E-22V1A4-13

6.0MPa dwelling

4-directional average

Standard unit sound level is 64dB (A)

Easy Operation

Starts up as soon as the power is turned on

Absolutely no external commands or delicate electrical adjustments needed because the pump's RPMs are controlled automatically in response to the load.

Operates with the inverter removed also

Can operate as an NSP unit just by switching out the wiring in case of emergencies.

Production lines continue running even if there is trouble with the inverter because it is based on our reliable NSP unit and keeps running as a regular NSP unit.

Inverter drive function can be installed separately later

If you are already using an NSP unit, you can add the inverter drive function by installing the inverter control box kit, which is sold separately.

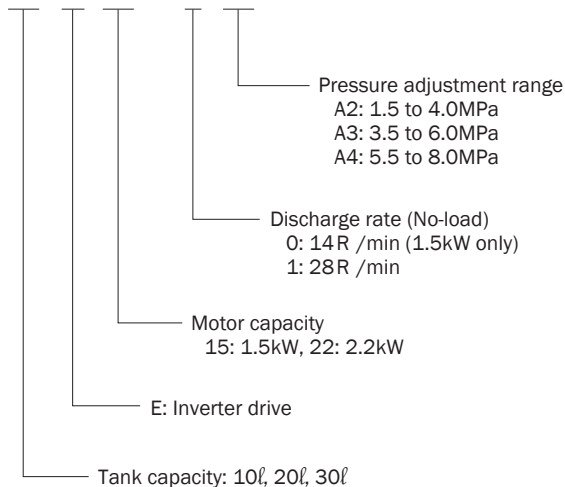
Specifications

1. Power Supply Rated Input Current	3φAC200 to 220V, 50/60Hz 9.7A/1.5kW, 13.4A/2.2kW 22.4A/3.7kW	
2. Pressure Adjustment Range	8, 16cm ³ /rev series A2: 1.5 to 4.0MPa A3: 3.5 to 6.0MPa A4: 5.5 to 8.0MPa	26cm ³ /rev series A2: 2.0 to 4.0MPa A3: 3.5 to 6.0MPa A4: 5.5 to 7.0MPa
3. Output Flow (at No-load)	0A*: 14ℓ /min, 1A*: 28ℓ /min 2A*: 46ℓ /min	
4. Hydraulic Fluid	Standard mineral-based hydraulic fluid (equivalent to ISO VG32)	
5. Hydraulic Fluid Temperature	10 to 60:	
6. Color of Paint	Munsell number 5B 6/3 (NACHI color)	
7. Ambient Temperature/ Humidity	0 to 35 / 20 to 85%RH (non-condensation) (Keep the unit away from water-soluble cutting fluid mist.)	

Understanding Model Numbers

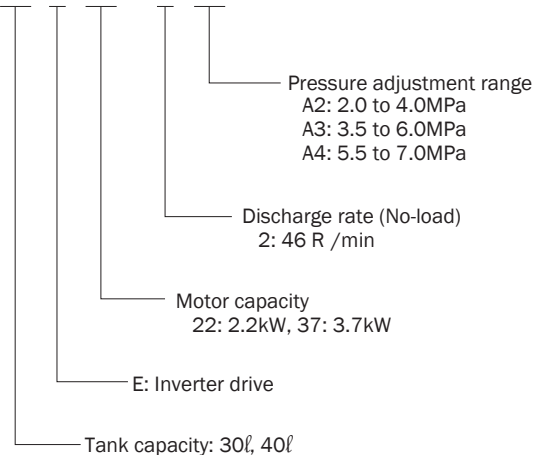
8.0, 16.0 cm³/rev Series

NSP - 20 - E - 15 V - 0 - A2 - 13



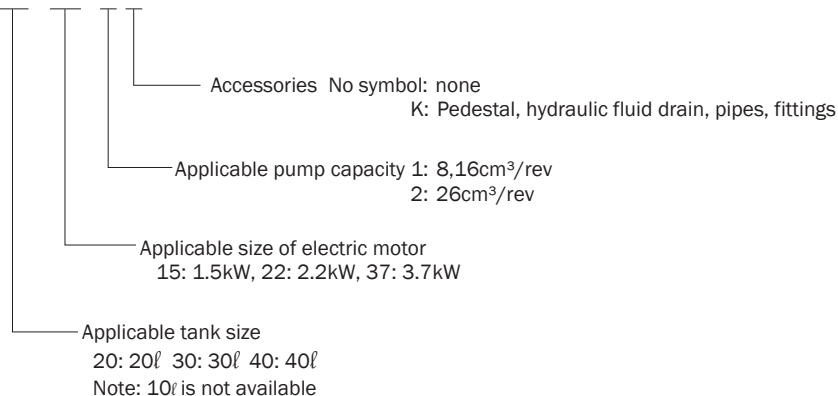
26.0 cm³/rev Series

NSP - 30 - E - 22 V - 2 - A2 - 13



Inverter Control Box Kit Specifications

EBK - 20 - 22 - 1 K - 10

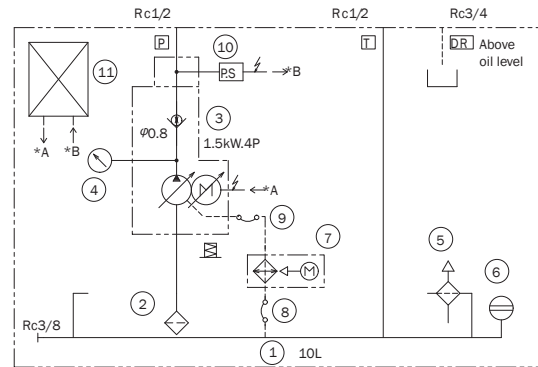
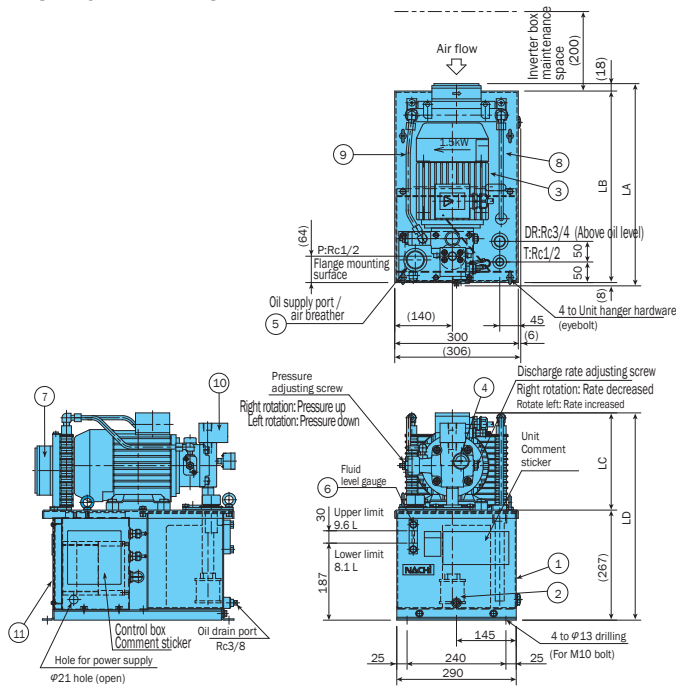


Design Drawings, Dimension Tables

8.0, 16.0cm³/rev Series

NSP-10E-**V*A-13

Note: See the following page for dimensions.

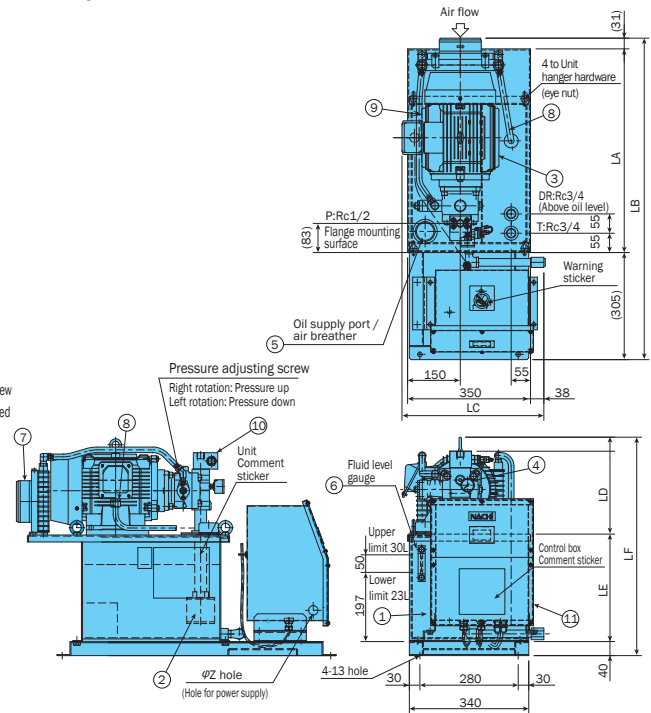
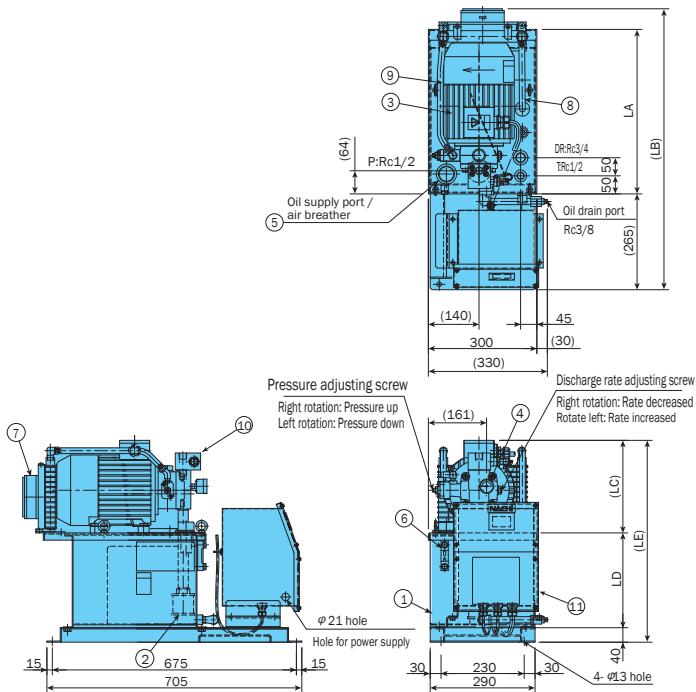


Part No.	Part Name	Part No.	Part Name
1	Oil tank	7	Fan cooler
2	Suction strainer	8	Flexible hose
3	Uni-pump	9	Flexible hose
4	Pressure gauge	10	Pressure sensor
5	Fluid supply port/air breather	11	Inverter control box
6	Fluid level gauge		

NSP- 20 E-**V*A*-13

26.0cm³/rev Series

NSP- 30 E-**V2A*-13



8.0, 16.0cm³/rev Series

Model No.	Dimensions					Approximate Weight (kg)
	LA	LB	LC	LD	LE	
NSP-10E-15V*A*-13	465	491	211	503	-	51
NSP-10E-22V1A*-13	485	521	221	523	-	56
NSP-20E-15V*A*-13	425	750	211	262	545	65
NSP-20E-22V1A*-13	455	780	221		564	71
NSP-30E-15V*A*-13	425	750	211	364	647	70
NSP-30E-22V1A*-13	455	780	221		666	76

26.0cm³/rev Series

Model No.	Dimensions							Approximate Weight (kg)
	LA	LB	LC	LD	LE	LF	Z	
NSP-30E-22V2A*-13	555	895	409	229	306	582	21	84
NSP-30E-37V2A*-13	580	915	415	241			27	96
NSP-40E-22V2A*-13	555	895	409	229	385	661	21	89
NSP-40E-37V2A*-13	580	915	415	241			27	101

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.
- Do not change or adjust any switches except the inverter parameter settings and the pressure setting switches.
- Use a flexible hose with a 1/2 inch inner diameter that is 2 meters long and is rated for maximum pressure of 14MPa to connect the hydraulic unit's P port (output port) and the external manifold (or actuator).
- Maximum peak pressure (set pressure + surge pressure) must be 14MPa or below for the 8 and 16cm³/rev series, and 13MPa or below for the 26cm³/rev series.
Install a relief valve to cut surges in the circuit if the maximum peak pressure exceeds these figures.

[For 10ℓ tanks]

- Leakage amount in the hydraulic circuits must be 1ℓ/min or less. Contact us if leakage in the hydraulic circuit exceeds 1ℓ/min.
- Level of hydraulic fluid in the tank must stay within the visible range on the fluid level meter (approximately 1.5ℓ).