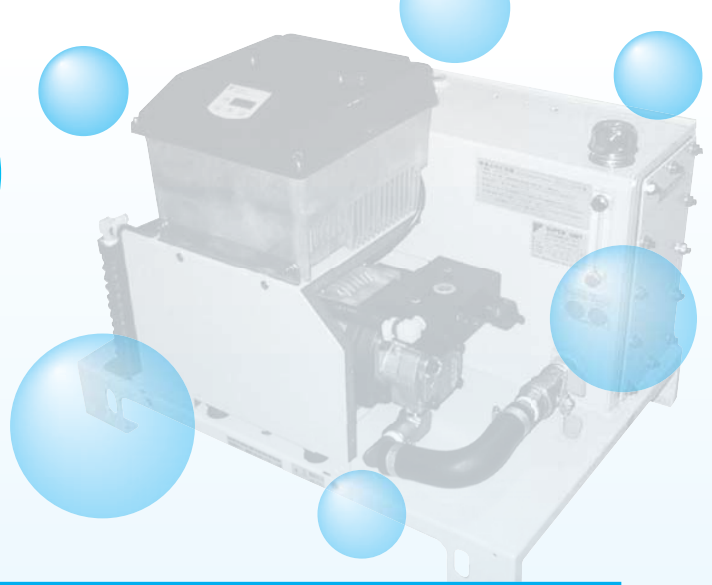


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HYBRID HYDRAULIC

Super EcoRich



Features

- **95% reduction in power consumption** (comparison with Daikin products)
The ultimate level of energy saving is realized by incorporating the idle stop function, which stops the motor in the pressure retained operation. This is an energy-saving hydraulic unit suitable for the clamp axes of machining centers and similar applications.
- **Reduced maintenance costs**
This unit does not incorporate an oil cooler, so no need to clean an oil cooler contaminated with dust and oil mist.

Nomenclature

EHU 30 S - M 07 5R ※ ※ - 10 - ※※

1 2 1 3 4 5 6 7 8 9

1 Model No.
EHU※※S: Super EcoRich

2 Maximum flow rate
30: 28.5 L/min

3 Applications
M: For machining centers

4 Maximum operating pressure
07: 7.0 MPa

5 Tank capacity
5R: 5 L

6 Number of axes selection
1 to 6: Number of axes equipped with a valve block
X: Valve block separately installed (4 axes maximum)
Y: Valve block separately installed (8 axes maximum)

7 Voltage designations for solenoid operated valves
A: 100 VAC (50/60 Hz), 110 VAC (60 Hz)
B: 200 VAC (50/60 Hz), 220 VAC (60 Hz)
P: 24 VDC

8 Design No.
(May change according to model changes.)

9 Non-standard incrementing No.

Specifications

Refer to the Delivery Specifications (outside drawing) for detailed specifications.

Model code		EHU30S-M075R
Maximum flow rate ^{*1}	(L/min)	28.5
Operating flow rate range	(L/min)	3.5 to 28.5 (factory setting: 2.5)
Maximum operating pressure ^{*2}	(MPa)	7.0
Operating pressure adjustment range	(MPa)	1.5 to 7.0 (factory setting: 1.5)
Operation specifications	Operation mode	Intermittent operation, simultaneous axes operation impossible
	Start/stop frequency	30 times/minute maximum
Power supply ^{*3}	Main circuit power supply	1-phase AC 200 V (50/60 Hz), AC 220 V (60 Hz) (Permissible power supply voltage fluctuation range: -15% to +10%)
	Control power	1-phase AC 200 V (50/60 Hz), AC 220 V (60 Hz)
	Electromagnetic valve power supply (To be selected based on the model code)	• AC 100 V (50/60 Hz), AC 110 V (60 Hz) • AC 200 V (50/60 Hz), AC 220 V (60 Hz) • DC 24 V
Digital input signal ^{*4}	(20 channels)	Photo-coupler insulation, DC 24 V 5 mA/channel Functions: Axis selection, operation command, speed command, alarm reset
Digital output signal	(11 channels)	PhotoMOS relay output (insulated), DC 24 V, 30 mA maximum, shared plus/minus common Functions: Operation ready signal output, alarm output, warning output, axis operation complete signal output
Usable oil ^{*5}	Oil type	Special mineral-oil based hydraulic oil/wear-resistant hydraulic oil
	Viscosity grade	ISO VG32 to 68
	Viscosity range	15 to 400 mm ² /s
	Contamination	Within NAS class 9
Operating conditions ^{*6}	Tank oil temperature	0 to 60°C (Recommended operating temperature range: 15 to 50°C)
	Operating ambient temperature	0 to 35°C (no condensation)
	Storage ambient temperature	-20 to 60°C (no condensation)
	Humidity	85% RH maximum (no condensation)
	Installation site	Indoors (Be sure to secure with bolts, etc.)
	Altitude	1,000 m maximum
Tank capacity	(L)	5.0
Paint color		Ivory white (Munsell code 5Y7.5/1)
Mass (kg)	Equipped with valve block (4 axes)	54 (hydraulic oil excluded)
Standards complied with		EU Directives: EMC directive, Low voltage directive

Note) *1 The maximum flow rate is the theoretical value, not the guaranteed value.

*2 The unit is equipped with a built-in safety valve and it is adjusted to operate at the maximum operating pressure +0.5 MPa.

*3 The permissible fluctuation range of the power supply voltage is from -15% to +10%. Note that the output characteristics are not guaranteed even within the permissible range if there is fluctuation into the negative range.

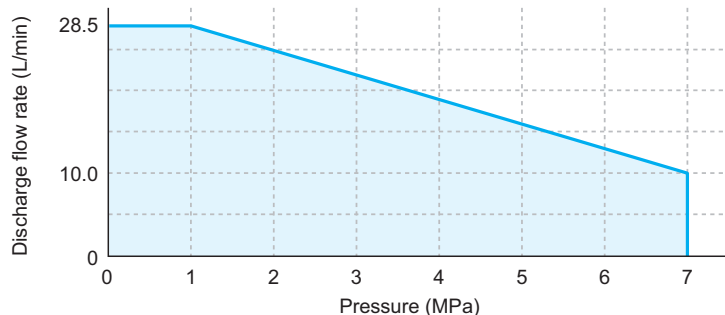
The main circuit power supply and the control power supply are input separately.

*4 Only transistor outputs can be connected as digital input signals.

*5 Use of hydraulic oils other than mineral-oil based type (e.g. hydrous/synthetic), water-glycol hydraulic oil for example, is prohibited.

*6 If the unit is operated at a temperature outside the recommended operating temperature range, there may be an increase in pressure pulsation or a reduction in the discharge rate, but this is not abnormal.

Pressure – Flow rate characteristics



* The figure shows the range of the short-term theoretical rated output. (Representative characteristics with a power supply of 220 V at 60 Hz)

Handling

- **Ambient conditions**

1. Ambient temperature: 0 to 35°C, ambient humidity: 85% RH maximum (with no condensation), altitude: 1,000 m maximum, to be used indoors

- **Hydraulic oil**

1. Use mineral-oil based hydraulic oil.
Use of hydraulic oils other than mineral-oil based type (e.g. hydrous/synthetic) is prohibited.
2. Use hydraulic oil equivalent to ISO VG32 to 68. Keep the viscosity of the hydraulic oil within the range from 15 to 400 mm²/s, and keep tank oil temperatures within the range from 0 to 60°C.
The recommended operating range is from 15 to 50°C (20 to 200 mm²/s).
3. Keep contamination of hydraulic oil within NAS class 9.

- **Installation and piping**

1. To transport the unit, use eyebolts on its top. The unit may fall or topple over if it is hoisted by using the pump piping, for example.
Take care not to subject the unit to strong impact due to dropping or a collision during transportation.
2. The unit is a stationary type. Fix it with bolts on a level location that is free of vibration.
3. Install the unit at a location with good air flow so that heated air can be vented and the stipulated condition for ambient temperature (35°C maximum) is satisfied.
4. Use hoses for piping to provide flexibility.

- **Electric wiring**

1. Install a no-fuse breaker and a ground fault interrupter compliant with European Standard EN60947-2.
Make sure that the electrical wiring meets the requirements of European Standard EN60204-1.
2. Securely connect wires with appropriate gauges in accordance with the wiring diagram on the back of the user cover.
Be sure to provide a ground connection with a grounding resistance of 100 Ω maximum.
3. Before accessing the interior of the control unit, turn OFF the unit's power supply and then wait at least 5 minutes.
4. Use a commercial power supply for the power source. The use of an inverter power supply may cause burn damage to the unit.

- **Other precautions**

1. If failure or malfunction of this unit is expected to cause death or pose a danger to human beings, adopt appropriate safety measures in the facilities.
If this unit is applied in an important facility, also adopt appropriate safety measures in the facility to ensure that a failure of the equipment will not lead to a serious accident or loss.
2. It takes approx. 3 seconds for the unit to start up after being powered ON and the alarm output in the digital output signal is unstable during this period.
Set the machine tool to ignore the alarm output from Super Unit during this period.
3. Do not turn the main power supply ON/OFF frequently. It may damage inverter components.
To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function.

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