

SUPER UNIT

INVERTER HYDRAULIC UNIT

Excluded from high-efficiency motor regulations



INDEX

List of Hybrid Hydraulic Unit Models	P.3 to 4
List of Super Unit Models Nomenclature	P.5
Main Features and Functions Super Unit Hydraulic Circuits	P.6
Features	P.7 to 8
Functions	P.9
Function Option	P.10
Hardware Option	P.11 to 12
Pressure – Flow Rate Characteristics (Typical)	P.13 to 14
Specifications/External Dimension Diagram ▶ 7 MPa	P.15 to 24
Specifications/External Dimension Diagram ▶ 10 MPa	P.25 to 28
Specifications/External Dimension Diagram ▶ 16 MPa	P.29 to 32
Specifications/External Dimension Diagram ▶ 21 MPa	P.33 to 38
Operation Panel	P.39 to 40
Electric Wiring	P.41 to 43
Options (Separately available parts)	P.44. to 48
Method of Selection	P.49
Handling	P.50

Get more than energy savings!!

Saving energy is essential.

However, the Daikin hydraulic system goes one step further than conventional models.

Daikin practices environmentally friendly production by promoting energy savings in the production field and by reducing waste through recycling.

In the pursuit of higher usability and more diversified functions, Daikin combined its original high-efficiency IPM motors and pump switching control technology. The Super Unit incorporates the multi-stage pressure/flow rate control system as well as the functions of conventional hydraulic units, resulting in the use of fewer valves.

Daikin intends to promote energy savings through advanced hydraulic systems with the aim of contributing to improvement of factory environments, and to continuously introduce hydraulic systems that lead the industry.



Combining Daikin's original high-efficiency IPM motors and hydraulic technology enables an unparalleled energy-saving effect and advanced functions.

Movie of IPM motor for easy understanding



URL: https://www.daikinmc.com/en/mv/ipm_motor.html

Energy-saving technology that supports hybrid products

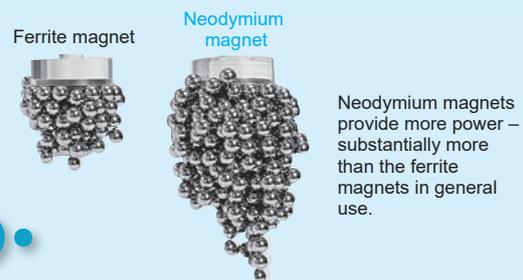
- ◆ Daikin was the first in the industry to introduce an interior permanent magnet synchronous motor (IPM motor) into air conditioners for household use. Daikin was also an early adopter in the industry of the IPM motor for use in industrial-use air conditioners. We have led the industry as a front runner in air conditioner energy-saving performance.
- ◆ Hybrid products equipped with variable speed motors, developed by making full use of Daikin's original energy-saving motor technology and its production capacity, help to achieve energy savings for factory equipment



Powerful neodymium magnets, the key to this improved energy-saving effect!

"Double torque" improves the energy-saving effect.

Combining two rotational forces, "magnetic torque" generated by a powerful neodymium magnet*¹ and "reluctance torque"*², generates more power with less electricity.



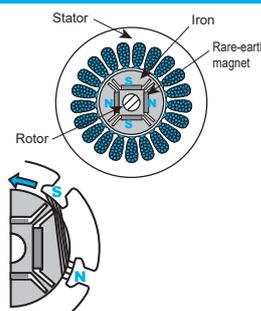
*1: A compound of neodymium (Nd, rare-earth element), iron (Fe), and boron (B). Neodymium magnets are known to have superior magnetic properties.
*2: Rotational force generated by attractive force (reluctance = magnetic resistance) between iron and a magnet.

Fundamental Principle of the IPM Motor

With a rare-earth permanent magnet deeply embedded in the rotor, the IPM motor uses an electromagnetic structure that maximizes magnetic torque (attractive/repulsive force between the coil and permanent magnet) and reluctance torque (force of the coil that attracts iron).

This structure achieves high torque and maximum efficiency while suppressing heat generation.

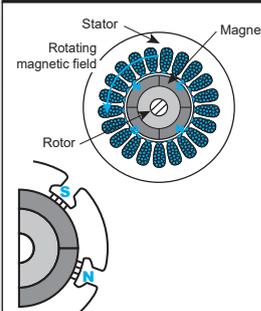
Structure of the IPM motor



IPM motor drive system
(Interior permanent magnet synchronous motor)

Since the magnetic field lines at the south pole side are made longer than those at the north pole side, the magnetic field lines at the south pole will try to shorten like a stretched rubber band contracts, resulting in rotational force due to reluctance torque in the direction indicated by arrow.

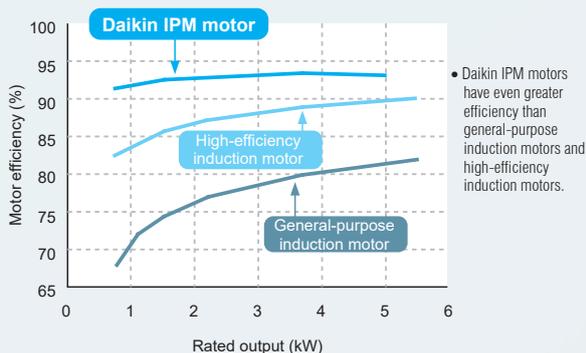
Structure of a conventional motor (AC servomotor)



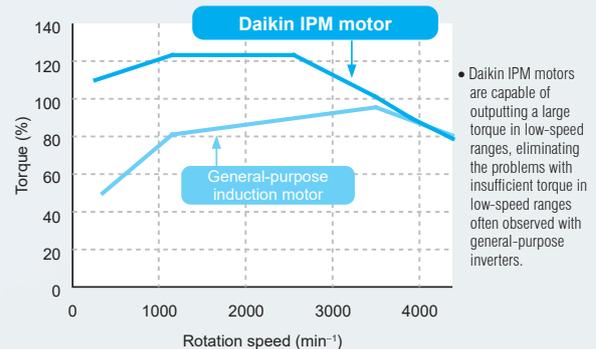
SPM motor
(Surface permanent magnet synchronous motor: e.g., servomotor, brushless DC motor)

The lengths of the magnetic field lines at the south and north poles are equivalent. Therefore, no reluctance torque that results in rotational force is generated.

[1] Comparison of motor efficiency



[2] Large torque at low speed



Hybrid Hydraulic Unit Model List

Specifications vary depending on the machine
The Daikin product lineup provides various

For machine tools

Maximum discharge rate

110 L/min

80 L/min

60 L/min

40 L/min

30 L/min

28.5 L/min

25 L/min

15 L/min

EcoRich

EcoRich R

Super Unit (high-performance type)

SUT00S11007



16 PQ

C

A

Hyb. Win

Equivalent to 11.0 kW

See Pages 23 to 24

SUT00S8007



16 PQ

C

A

Hyb. Win

SUT10S8007

Equivalent to 7.0 kW

See Pages 21 to 22

SUT00S6007



16 PQ

C

A

Hyb. Win

SUT06S6007

Equivalent to 5.0 kW

See Pages 19 to 20

SUT00S4007



16 PQ

C

A

Hyb. Win

SUT03S4007

Equivalent to 3.7 kW

See Pages 17 to 18

SUT00S3007



16 PQ

C

A

Hyb. Win

SUT03S3007

Equivalent to 2.8 kW

See Pages 15 to 16

SUT00S3010



16 PQ

C

A

Hyb. Win

SUT03S3010

Equivalent to 3.7 kW

See Pages 27 to 28

SUT00S1507



16 PQ

C

A

Hyb. Win

SUT03S1507

Equivalent to 2.2 kW

See Pages 15 to 16

SUT00S1510



16 PQ

C

A

Hyb. Win

SUT03S1510

Equivalent to 2.8 kW

See Pages 25 to 26

Maximum operating pressure

4 MPa

7 MPa

7 MPa

7 MPa

10 MPa

16 PQ 16-pattern PQ control

C Communication function

A Analog command input

Hyb. Win Hybrid-Win compatible
* Refer to Page 9.

type. functions and capacities according to the machine type.

For general industrial machines

Super Unit (high-performance type)

SUT00D11021 P-SUT20D11KW

Equivalent to **11.0 kW**
See Pages 37 to 38

SUT00D8021 SUT10D8021
SUT16D8021

Equivalent to **7.0 kW**
See Pages 35 to 36

SUT00D6021 SUT06D6021
SUT10D6021

Equivalent to **5.0 kW**
See Pages 33 to 34

SUT00D4016 SUT06D4016

Equivalent to **3.7 kW**
See Pages 31 to 32

SUT00S3016 SUT06S3016

Equivalent to **5.0 kW**
See Pages 29 to 30

SUT00S1516 SUT03S1516

Equivalent to **3.7 kW**
See Pages 29 to 30

Maximum discharge rate

300 L/min

220 L/min

200 L/min

150 L/min

130 L/min

80 L/min

50 L/min

30 L/min

Super Unit (high-precision type)



SUT00D30028 Equivalent to **37.0 kW**

SUT00D22028 Equivalent to **37.0 kW**

SUT00S20018 Equivalent to **22.0 kW**

SUT00D20021 S-SUT00D20021 Equivalent to **15.0 kW**

S-SUT00D20025 Equivalent to **22.0 kW**

SUT00S15018 Equivalent to **15.0 kW**

SUT00D15021 Equivalent to **15.0 kW**

SUT00S13018 Equivalent to **15.0 kW**

SUT00S13021 SUT00D13021 Equivalent to **15.0 kW**

S-SUT00D13025 Equivalent to **15.0 kW**

SUT00S8018 Equivalent to **11.0 kW**

SUT00D8021 Equivalent to **11.0 kW**

S-SUT00D8025 Equivalent to **11.0 kW**

SUT00S5021 Equivalent to **11.0 kW**

SUT00S5025 Equivalent to **15.0 kW**

SUT00S3018 Equivalent to **7.0 kW**

SUT00D3021 Equivalent to **7.0 kW**

16 MPa

21 MPa

Maximum operating pressure

18 MPa

21 MPa

25 MPa

28 MPa

*1: The above motor capacities are given for guidance only and do not represent the standard capacities of general motors.

*2: When selecting a Super Unit, verify the specifications of each model by referring to "Pressure – Flow rate Characteristics (Typical)" on Pages 13 and 14 and "How to Select a Super Unit" on Page 49. For the purpose of making improvements, the specifications given in this catalog are subject to change without prior notice. Be sure to see the latest model chart.

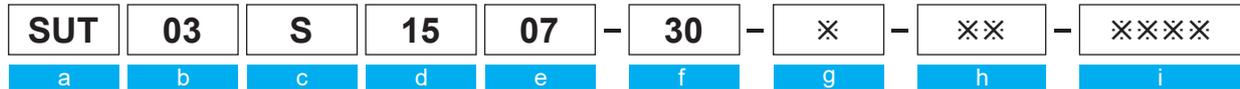
List of Super Unit models

Selecting the optimum model from a wide variety of Super Unit models

Series	Motor capacity Equivalent to 2.2 kW	Maximum operating pressure (MPa)	Maximum flow rate (L/min)	Maximum flow rate (L/min)											Motor pump type	Unit type	Tank capacity (L)	Page
				10	20	30	40	50	60	70	80	90	100	110				
Single pump type	2.2	7.0	15.2												SUT00S1507-30	SUT03S1507-30	30	15 to 16
	2.8	7.0	28.5												SUT00S3007-30	SUT03S3007-30	30	
	3.7	7.0	39.7												SUT00S4007-30	SUT03S4007-30	30	
	5.0	7.0	61.1												SUT00S6007-30	SUT06S6007-30	60	19 to 20
	7.0	7.0	83.0												SUT00S8007-30	SUT10S8007-30	100	21 to 22
	11.0	7.0	110.0												SUT00S11007-40	—	—	23 to 24
	2.8	10.0	15.2												SUT00S1510-30	SUT03S1510-30	30	25 to 26
	3.7	10.0	25.6												SUT00S3010-30	SUT03S3010-30	30	27 to 28
	3.7	16.0	15.2												SUT00S1516-30	SUT03S1516-30	30	29 to 30
	5.0	16.0	25.6												SUT00S3016-30	SUT06S3016-30	60	
Double pump type	3.7	7.0	Combination 41.0												SUT00D4016-30	SUT06D4016-30	60	31 to 32
		15.7	Independent 16.0															
	5.0	7.0	Combination 61.1												SUT00D6021-30	SUT06D6021-30	60	33 to 34
		20.6	Independent 21.2													SUT10D6021-30	100	
	7.0	7.0	Combination 83.0												SUT00D8021-30	SUT10D8021-30	100	35 to 36
		20.6	Independent 28.7													SUT16D8021-30	160	
	11.0	7.0	Combination 110												SUT00D11021-40	P-SUT20D11KW-40	200	37 to 38
		20.6	Independent 40.5															

Nomenclature

Equivalent to 2.2 to 7.0 kW



- a Model No.**
 - SUT: SUT series
- b Tank capacity**
 - 00: Motor pump type
 - 03: 30 L
 - 06: 60 L
 - 10: 100 L
 - 16: 160 L
- c Pump type**
 - D: Double pump type
 - S: Single pump type
- d Pump discharge rate**
 - 15: 15 L/min
 - 30: 25 L/min
 - 40: 40 L/min
 - 60: 60 L/min
 - 80: 80 L/min
- e Maximum operating pressure**
 - 07: 7.0 MPa
 - 10: 10.0 MPa
 - 16: 15.7, 16.0 MPa
 - 21: 20.6 MPa
- f Design No.**
 - Incremented at model changes 30,
- g Function Option**
 - C: With communication function (RS232C)
 - P: With analog input function
- h Hardware Option**

01	Unit cover (SUT06S3016 and 30 L tank excluded)
02	Controller cover (except for 7 kW)
03	DCL (except for 7 kW)
04	Separate power supplies for power system and control system
05	Water fill test compliant tank
06	Water leak test compliant tank
07	Level switch
08	Temperature switch
09	Thermometer
10	Micro separator
11	Combination of 1 to 10 above
- i Non-standard No.**
 - N※※※: Without control system
 - A※※※: With control system

Equivalent to 11 kW



- a Model No.**
 - SUT: SUT series
- b Tank capacity**
 - 00: Motor pump type
- c Pump type**
 - D: Double pump type
 - S: Single pump type
- d Pump discharge rate**
 - 110: 110 L/min
- e Maximum operating pressure**
 - 07: 7.0 MPa
 - 21: 20.6 MPa
- f Design No.**
 - Incremented at model changes 30,
- g Function Option**
 - C: With communication function (RS232C) Protocol: Daikin original protocol (conventional)/ Modbus-RTU (to be supported soon)
 - P: With analog input function
- h Non-standard No.**
 - N※※※: Without control system
 - A※※※: With control system

Main features and functions

Features

1

Energy-saving

Daikin's original energy-saving motor technology utilizing high-efficiency IPM motors provides an energy-saving ratio of 50%.

- The motor rotation speed control controls the flow rate and pressure of the fixed displacement pump.
- The highly-efficient motor adopted in this unit achieves energy savings even in applications for general industrial machinery where actuators have high duty ratios.
- The single pump type is a highly-functional series to make it more useful.
- The double pump type uses the autonomously-switching, fixed-displacement double pump system, which combines large- and small-capacity pumps in the low pressure, high flow rate range, and autonomously switches to the single operation of the high-pressure, small capacity pump in the high pressure, low flow rate range. In this way, the double pump type ensures a higher energy-saving effect.

2

Low noise

Low noise level of 60 dB (A)

(In the pressure retained operation at 20.6 MPa, with the double pump type unit)
Even over the full operation range, noise is less than 73 dB (A).

- By using double phase-differential pumps, the Super Unit reduces pulsation and the noise level.

* Data for SUT**D60L21

3

Excluded from high-efficiency motor regulations

The Super Units that incorporate a high-efficiency IPM motor are excluded from high-efficiency motor regulations.

4

Restricted oil temperature rise

Motor speed control also leads to restriction of the oil temperature rise.

- The restricted oil temperature rise inhibits deterioration of the hydraulic oil.
- This also lowers the heat load for air conditioning equipment

5

Fewer control valves required

A wide variety of control can be achieved by adjusting parameter settings.

- Acceleration/deceleration operations that have been accomplished using proportional control valves may be replaced by simply setting the acceleration/deceleration time.
- Pressure switch may be reduced by using the pressure switch function.

(Note that some kinds of control are not applicable depending on the customer's circuit. Care must be taken especially when controlling multiple axes.)

Functions

1

Multi-stage pressure/flow rate control

16
PQ

Sixteen pressure (P) - flow rate (Q) setting patterns are available for cylinder control.

- The proportional control valve and proportional pressure control valve, which are utilized in conventional actuator circuits, can be omitted.
- The pressure and flow rate can be set using the control unit's operation panel.
- The pressure and flow rate settings can be selected from among the sixteen patterns using external input signals.
- The Super Unit autonomously switches between the pressure control and flow rate control modes.

2

Maintenance/Management Function (Hybrid-Win)

Internal data of the Super Unit can be obtained by using PC connected to the unit.



- The pressure, flow rate, and other internal data of the controller can be monitored and displayed in graph form. This facilitates operation checks during test runs, adjustment of parameters such as time constants, and troubleshooting.
- The time required for setting can be slashed by editing the parameter settings on the PC and writing them to the unit in a batch. The ability to read and save settings facilitates management.

3

Communication function

(Available as an option with all models)



Remote control and setting changes are possible through RS232C serial communication.

- Using a commercially-available PLC or touch panel display with RS232C communication capabilities, parameters for the pressure, flow rate, acceleration time, deceleration time and so on can be set and viewed at the machine. This facilitates control of speeds and pressurizing forces and enables a wide variety of machine operations.

4

Analog command input

(Available as an option with single pump type models)



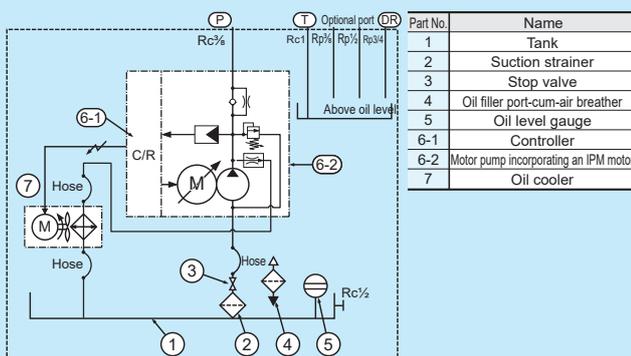
Enables continuous control of pressures and speeds as required.

- The pressure and flow rate can be controlled continuously at the desired values by inputting the pressure command voltage (0 to 10 V) and flow rate command voltage (0 to 10 V) from the machine side. This achieves a control system with a simple configuration for machinery that requires variable speed control or continuity of pressurizing forces.

Super Unit hydraulic circuits (example for the unit type)

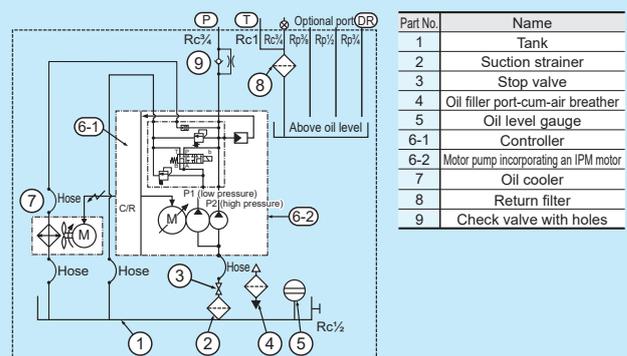
Single pump type

※Example with SUT03S1507-30. Refer to the Instruction Manual for each model for details because the port diameter varies depending on the model.



Double pump type

※Example with SUT06D4016-30. Refer to the Instruction Manual for each model for details because the circuit configuration varies depending on the model.





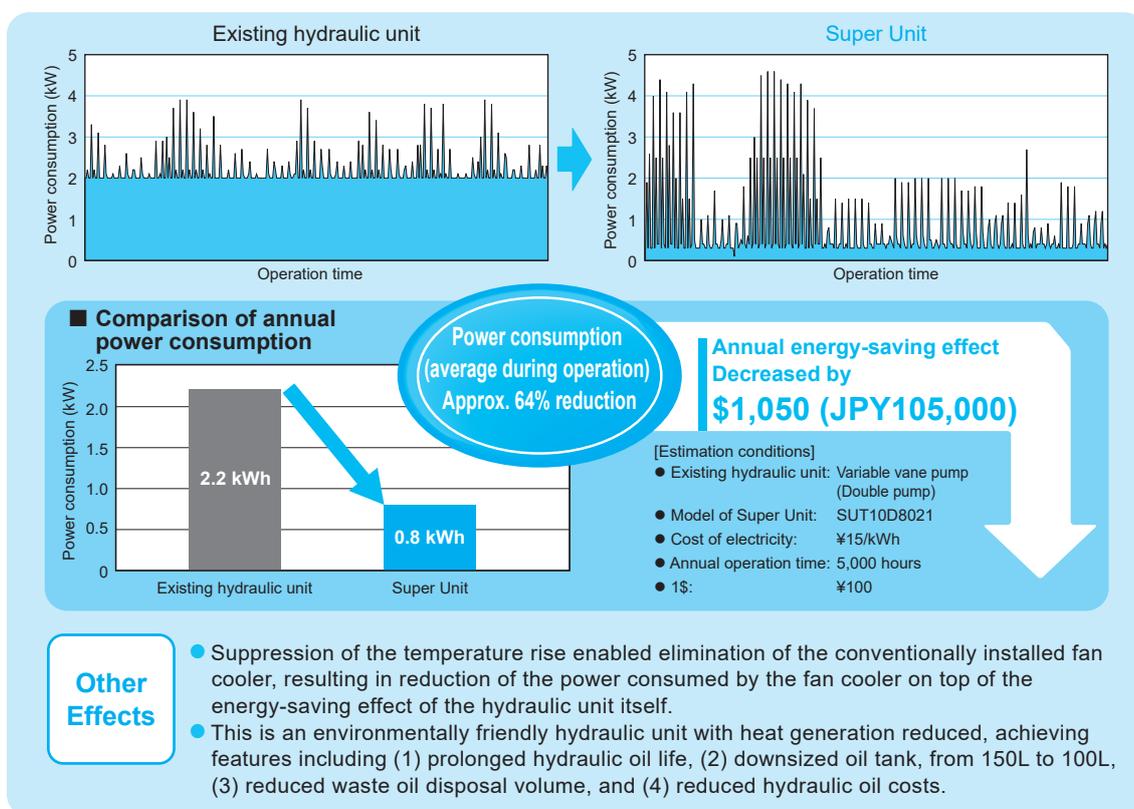
With excellent energy-saving technology, the Super Unit can substantially reduce electricity costs. The control system can be easily upgraded by combining various Super Unit functions.

Feature 1 Energy-saving

Excellent cost effectiveness with energy-saving ratio of 50%

(In pressure retained operation at 20.6 MPa)

- Through servo control of Daikin's original high-efficiency IPM motor, the Super Unit ensures both a high response speed and stable rotation speed control with fixed-displacement pumps. In pressure holding mode, the Super Unit autonomously reduces the motor rotation speed to the minimum value required to hold the pressure, thus ensuring energy savings of 50% or higher (compared with the conventional Daikin variable piston pump).
- The Super Unit can even provide an energy-saving effect with general industrial machinery in which actuators provide a high duty ratio, as well as in pressure holding mode.



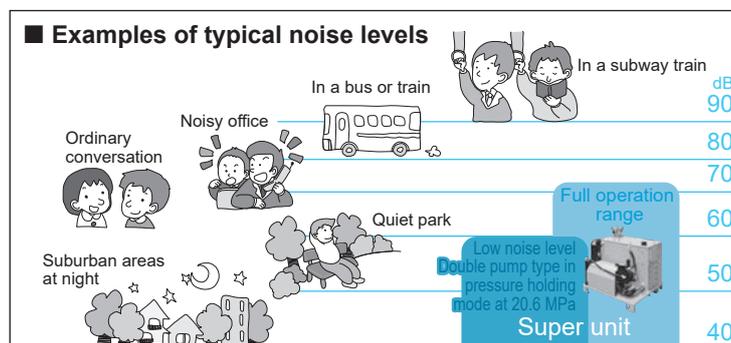
Feature 2 Low noise

Low noise level of 60 dB (A)

(In pressure retained operation at 20.6 MPa, with the double pump type unit)

Even over the full operation range, noise is less than 73 dB (A).

- Running the motor at the minimum required rotation speed in pressure holding mode achieves a remarkable noise level reduction.



It is generally known that ordinary conversation can be conducted with a person one meter away in an environment at a noise level of 60 dB (A).

Feature **3**

Excluded from high-efficiency motor regulations

- High-efficiency motor regulations came into effect in Japan in April 2015. These regulations apply to the hydraulic units equipped with general motors but the Super Units that incorporate a high-efficiency IPM motor are excluded from them.

Advantages of using hybrid hydraulic units

- Eliminates the need for replacement of motors for each destination
- Eliminates the need for design changes in accordance with amendments to the regulations
- Reduces design changes to spare parts, and the maintenance workload

Feature **4**

All models conforming to CE standards

- All models conform to the machinery directive, EMC directive, and low voltage directive. This facilitates CE approval of the main machine.

Feature **5**

Restricted oil temperature rise

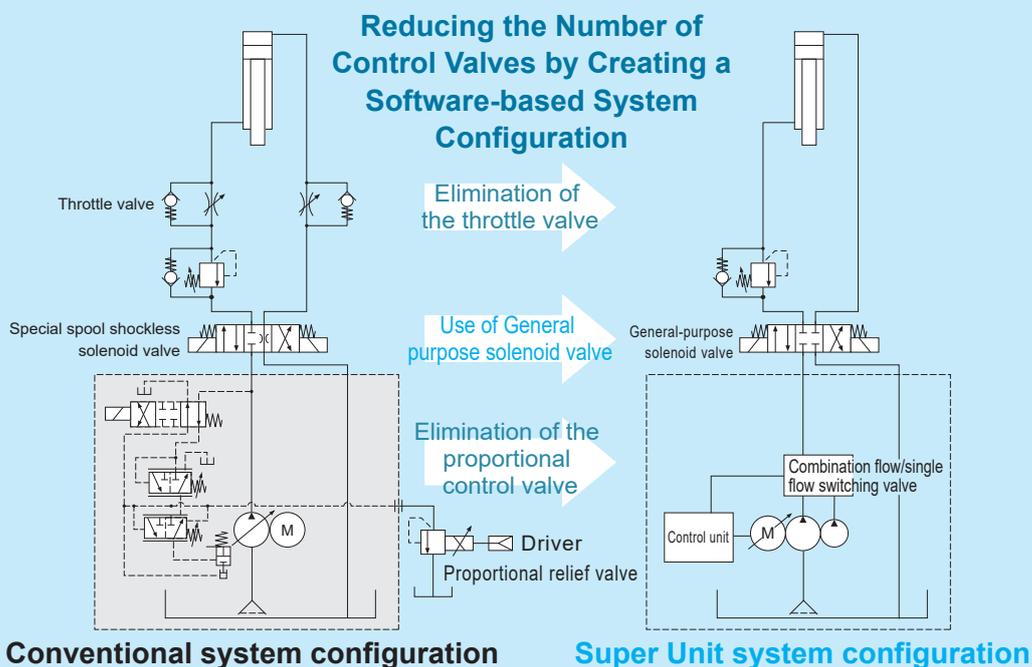
- Restriction of the temperature rise of the hydraulic fluid is one of the effects achieved by adopting Super Units. This generates the following advantages.

- Improved machining accuracy**
Reduced thermal distortion improves the machining accuracy.
- Reduced air-conditioning heat load**
The reduced heat load on the air conditioner achieves further energy savings.
- Extended service life of packing and other sealing materials**
Improved maintainability
Deterioration of the packing and other sealing materials that are made of rubber, used for hydraulic valves and hydraulic cylinders, is restricted.
- Extended service life of the hydraulic fluid**
Reduced environmental load and improved maintainability
Restricted deterioration of the hydraulic fluid extends its replacement interval.

Feature **6**

Fewer control valves required

Example hydraulic press circuit configuration





Multi-stage pressure/flow rate control (16 PQ control setting patterns)

Featured with standard models

16
PQ

- The force (pressure) and speed (flow rate) of the actuator (cylinder) can be controlled with 16 pressure (P) and flow rate (Q) setting patterns.

The proportional control valve and proportional pressure control valve, which are utilized in conventional actuator circuits, are not required. Once the pressure and flow rate have been set at the controller's operation panel, you can select 16 preset patterns using external input signals.

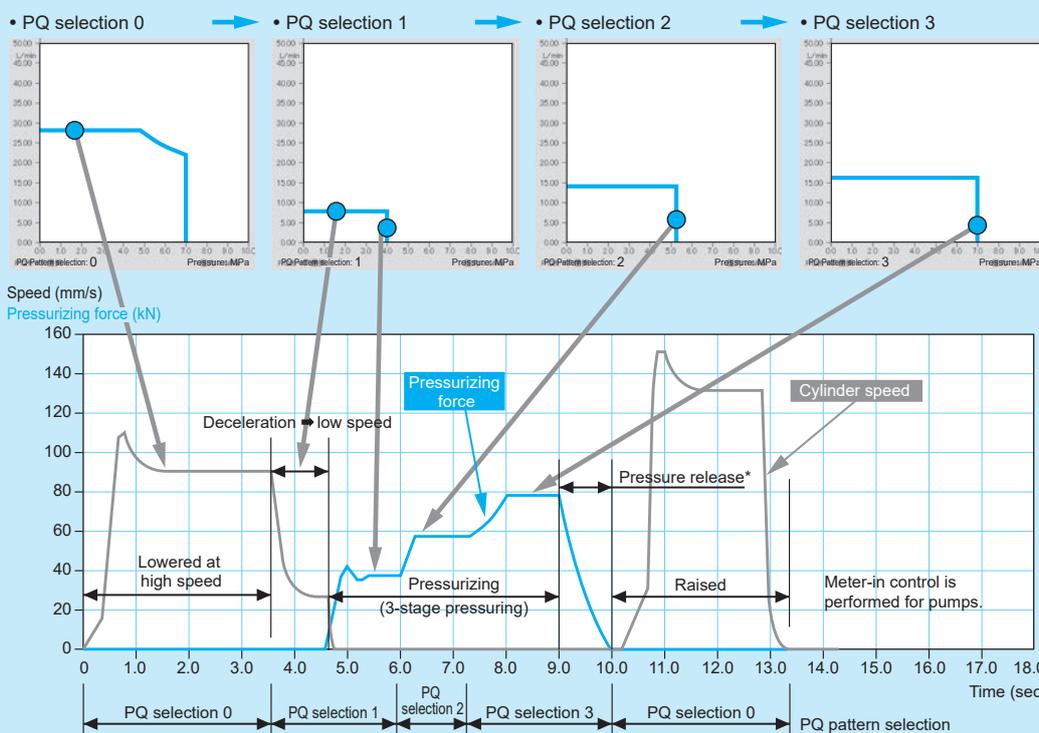
The Super Unit autonomously changes the control mode from flow rate control to pressure control (example: flow rate control is changed to pressure control at the cylinder stroke end).

The solenoid valve that actuates the cylinder must be turned ON/OFF at the machine.

- Smooth changing of force (pressure) and speed (flow rate)

Once acceleration time and deceleration time parameters are registered, the force or speed can be changed gradually during a pressure/flow rate setting change.

Example of PQ control setting patterns



*: When pressure release control is disabled, an additional pressure release circuit should be provided for the load side.

Maintenance/Management function (Hybrid-Win)

Featured with standard models



This PC utility reads data from Daikin hybrid systems (Super Unit, EcoRich, oil cooling unit, etc.) and manages it. Parameter setting and monitoring can be accomplished efficiently using the Windows application.

Main features

- Displaying graphs

The pressure, flow rate, and other internal data of the controller can be monitored and displayed in graph form. This facilitates operation checks during test runs, adjustment of parameters such as time constants, and troubleshooting.

- Reading, writing, editing, and saving parameters

The time required for setting can be slashed by editing the parameter settings on the PC and writing them to the unit in a batch. The ability to read and save settings facilitates management.

- Reading and saving the alarm history

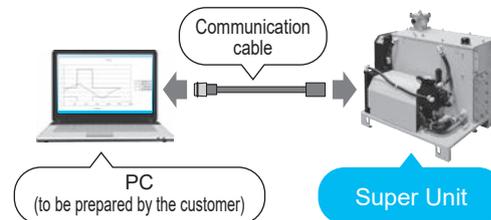
This function enables quick identification of the parts that require maintenance and reduction of the downtime. The operating time display can serve as the guide for the timing to replace consumable parts or to conduct maintenance. Troubleshooting information including the diagnosis results of the cause of an alarm and action to take can be displayed.

*: Hybrid-Win is utility software to monitor the internal status of Daikin hybrid systems using a PC. The software and its instruction manual can be downloaded from the website "https://www.daikinpmc.com/en/" free of charge by completing the user registration process.

*: The communication cable is separately available.

*: Some models require a dedicated separate monitor harness.

*: It is possible to connect to a smart phone or factory LAN by adding an optional WiFi module. This is useful to facilitate the user's daily inspection/maintenance work and for remote monitoring.



Optional
function

C

Communication function



Remote setting of operating conditions

- **Operating condition setting of the SUPER UNIT possible from a distance**

• Various settings such as acceleration/deceleration time and pressure switch settings, as well as the pressure and flow rate, can be set remotely.

This makes it possible to control the hydraulic pressure operating conditions in synchrony with the control of the machine.

IoT-ready

- **Managing the pressure and flow rate from a machine**

• The information that the SUPER UNIT outputs during machine operation, such as pressure and flow rate, can be displayed on the monitor at a machine.

• By continuously collecting data from the SUPER UNIT, it is possible to determine machining faults, diagnose machine failures, and utilize the data for predictive maintenance.

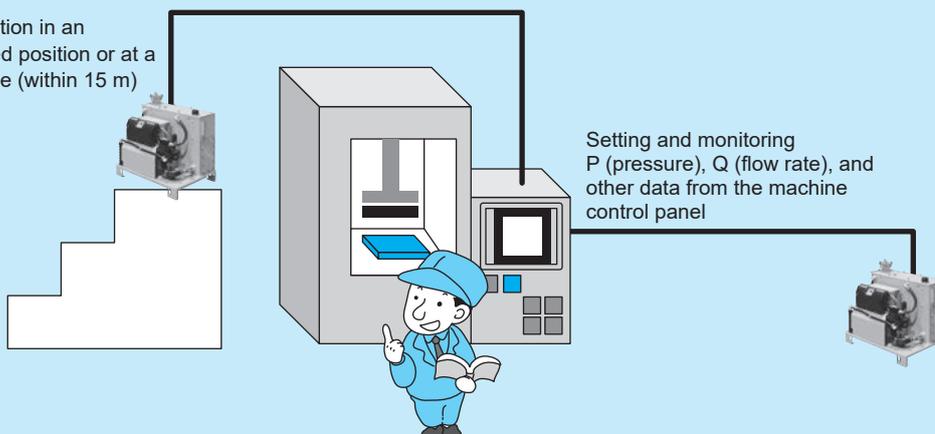
* RS232C is adopted for the serial communication interface. (For RS485, please consult us.)

Provide a controller such as a PLC or touch panel display with the RS232C communication function at the machine side.

* For details on the communication procedure, refer to the communication/remote control function instruction manual.

Application of Super Unit Remote Operation and Communication Functions

Installation in an elevated position or at a distance (within 15 m)



Setting and monitoring P (pressure), Q (flow rate), and other data from the machine control panel

Optional
function

P

Analog command input



The capability to specify the pressure and flow rate with voltage ranging from 0 to 10 V enables continuous hydraulic control as required. Real-time variation in response to commands facilitates condition settings at the machine side.

- A hydraulic control system for machinery that requires variable speed control or continuity of pressurizing forces can be realized with a simple configuration.

- A joystick or trimmer can be connected for real-time control.

Hardware Option

Hardware option

01 With unit cover

Optionally available for units with tank capacities of 60 L, 100 L, and 160 L (SUT06S3016-30 excluded)

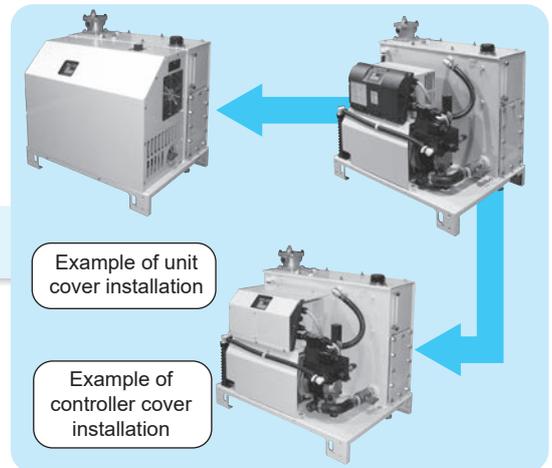
- The cover protects the controller unit and piping.

Hardware option

02 With controller cover

Optionally available for models with motor capacities equivalent to 2.2 kW, 2.8 kW, 3.7 kW, and 5 kW

- The metal cover protects the controller unit.



Hardware option

03 With DCL (DC reactor)

Optionally available for models with motor capacities equivalent to 2.2 kW, 2.8 kW, 3.7 kW, and 5 kW

- Appropriate when it is necessary to improve the power factor or reduce the harmonics of the power supply
- Optionally available for compact models with the capacity of 5 kW or smaller. Provided as standard for models with a capacity of 7 kW or greater.

Hardware option

04 Separate power supplies for power system and control system

Optionally available for units with motor capacities equivalent to 2.2 kW, 2.8 kW, 3.7 kW, 5 kW, and 7 kW

- When an error occurs, only the main power supply is shut down and control power supply continues to carry current, thereby enabling the alarm code and internal status on occurrence of an error to be checked on the operation panel or through serial communication.

Hardware option

05 Water fill test compliant tank

Hardware option

06 Water leak test compliant tank

Optionally available with all unit type models

- The water fill test, one of the adaptation criteria for the Fire Service Act, and the water leak test, Daikin original standard, are carried out. The tanks that pass the tests have compliance nameplates affixed and are delivered with the certificate. (Water fill test compliant tanks are not equivalent to Fire Service Act compliant tanks.)



Hardware option **07** **Level switch**

Hardware option **08** **Temperature switch**

Hardware option **09** **Thermometer**

Hardware option **10** **Micro separator**

Optionally available with all unit type models

- The accessories that can be fitted to the tank are provided as optional parts.
- The accessories can be purchased separately as optional parts. (See Page 44.)

List of Models with Options Installed

Pump specifications	Motor capacity	Model code	Function Option		Hardware Option				
			C	P	With unit cover (01)	With controller cover (02)	With DCL (03)	Separated power supply for power/control systems (04)	Tank inspection/unit accessory (*)
Single pump	Equivalent to 2.2kW	SUT00S1507-30	✓	✓	-	✓	✓	✓	-
		SUT03S1507-30			-	✓	✓	✓	✓
	Equivalent to 2.8 kW	SUT00S3007-30			-	✓	✓	✓	-
		SUT03S3007-30			-	✓	✓	✓	✓
		SUT00S1510-30			-	✓	✓	✓	-
		SUT03S1510-30			-	✓	✓	✓	✓
	Equivalent to 3.7 kW	SUT00S4007-30			-	✓	✓	✓	-
		SUT03S4007-30			-	✓	✓	✓	✓
		SUT00S3010-30			-	✓	✓	✓	-
		SUT03S3010-30			-	✓	✓	✓	✓
	Equivalent to 5.0 kW	SUT00S1516-30			-	✓	✓	✓	-
		SUT03S1516-30			-	✓	✓	✓	✓
		SUT00S3016-30			-	✓	✓	✓	-
		SUT06S3016-30			-	✓	✓	✓	✓
	Equivalent to 7.0 kW	SUT00S6007-30			-	✓	✓	✓	-
		SUT06S6007-30			✓	✓	✓	✓	✓
SUT00S8007-30		-	-	-	✓	-			
SUT10S8007-30		✓	-	-	✓	✓			
Double pump	Equivalent to 3.7 kW	SUT00D4016-30	-	-	-	✓	✓	✓	-
		SUT06D4016-30			✓	✓	✓	✓	✓
	Equivalent to 5.0 kW	SUT00D6021-30			-	✓	✓	✓	-
		SUT06D6021-30			✓	✓	✓	✓	✓
		SUT10D6021-30			✓	✓	✓	✓	✓
	Equivalent to 7.0 kW	SUT00D8021-30			-	-	-	✓	-
		SUT10D8021-30			✓	-	-	✓	✓
		SUT16D8021-30			✓	-	-	✓	✓

* Tank inspections : Water fill test compliant tank (05), water leak test compliant tank (06)
 Unit accessories : Level switch (07), temperature switch (08), thermometer (09), microseparator (10)

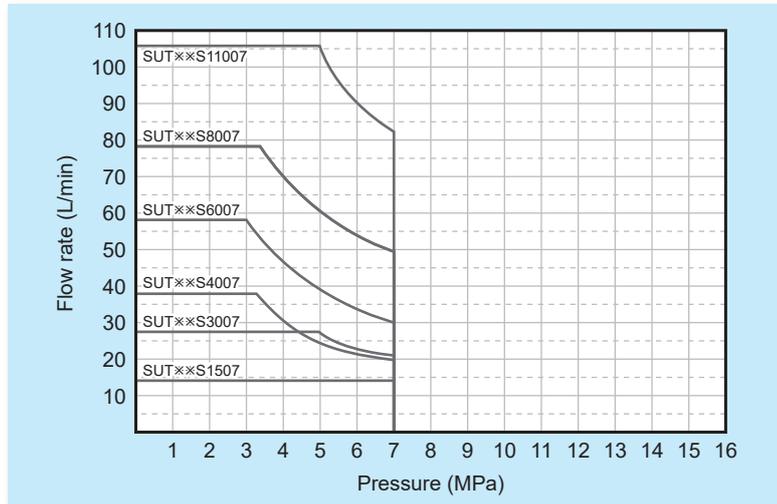
✓ Available - Not available

Hardware Option

Pressure – Flow Rate Characteristics (Typical)

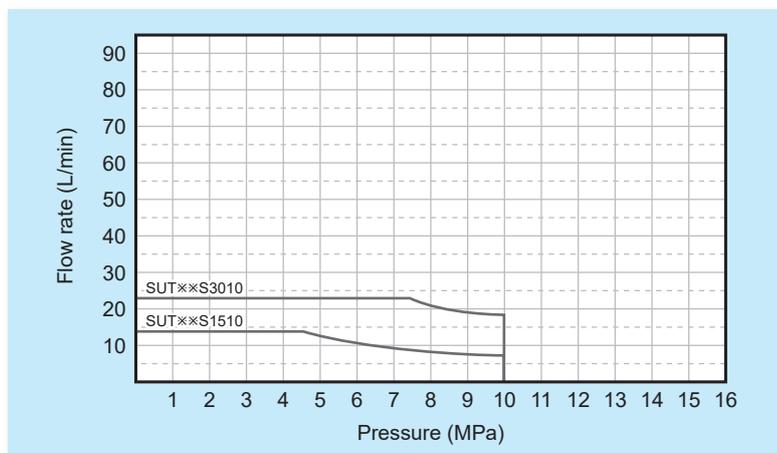
Single pump type

SUT**S1507, SUT**S3007, SUT**S4007,
SUT**S6007, SUT**S8007, SUT**S11007



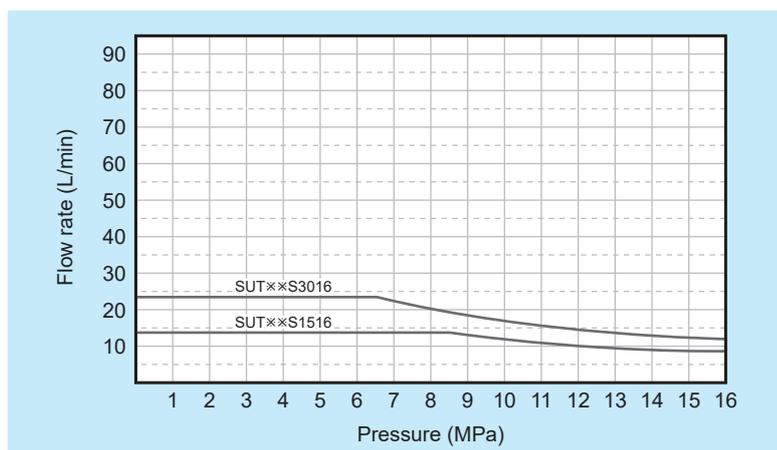
* Operating flow rate at the maximum pressure in continuous operation:
SUT**S1507: 3 L/min maximum
SUT**S3007: 5 L/min maximum
SUT**S4007: 8 L/min maximum
SUT**S6007: 14 L/min maximum
SUT**S8007: 19 L/min maximum
SUT**S11007: 16 L/min maximum

SUT**S1510, SUT**S3010



* Operating flow rate at the maximum pressure in continuous operation:
SUT**S1510: 3 L/min maximum
SUT**S3010: 5 L/min maximum

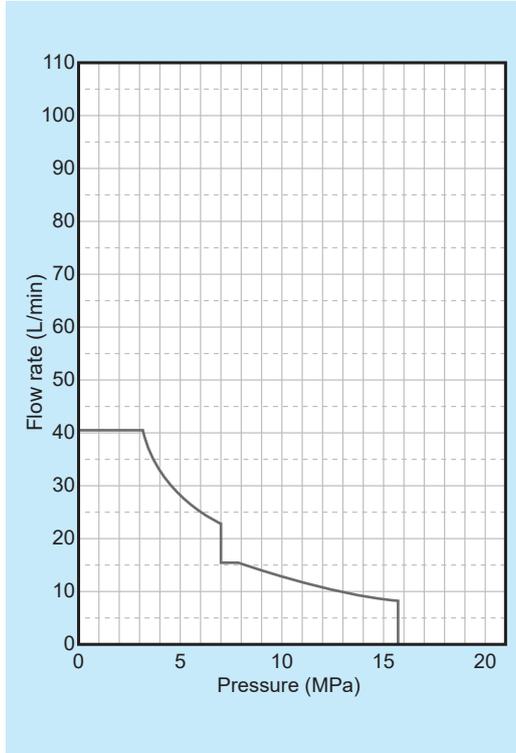
SUT**S3016, SUT**S1516



* Operating flow rate at the maximum pressure in continuous operation:
SUT**S1516: 5 L/min maximum
SUT**S3016: 5 L/min maximum

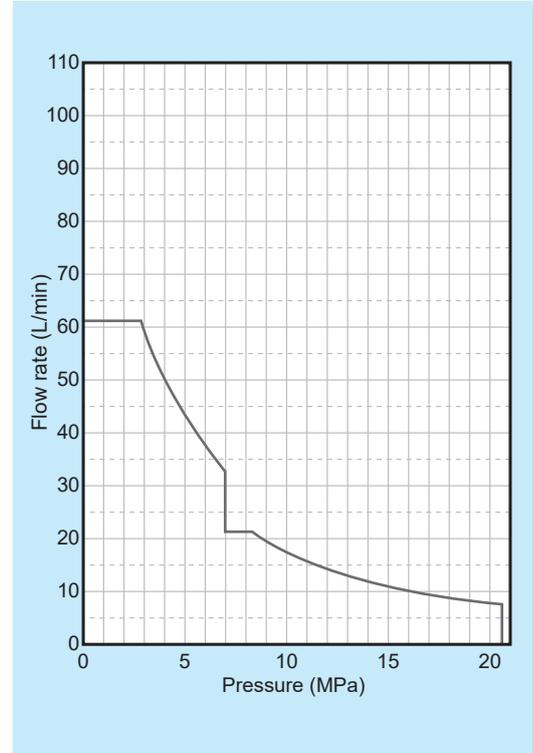
Double pump type

SUT××D4016



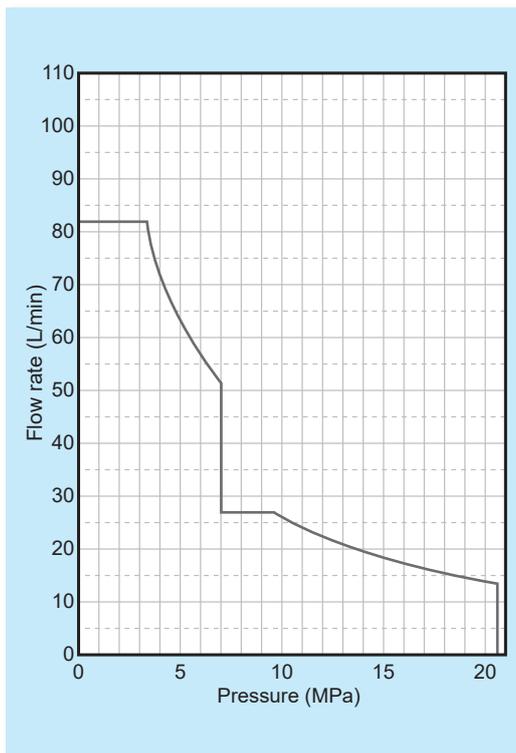
* Operating flow rate at the maximum pressure in continuous operation: 8 L/min maximum

SUT××D6021



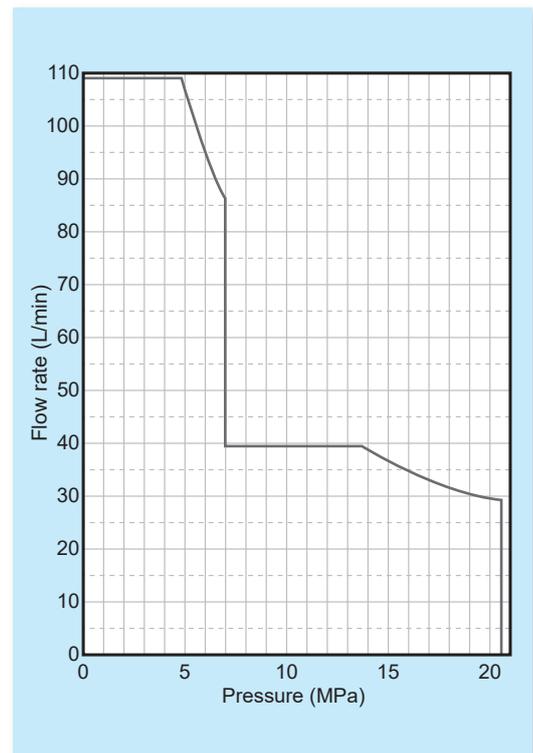
* Operating flow rate at the maximum pressure in continuous operation: 6.5 L/min maximum

SUT××D8021



* Operating flow rate at the maximum pressure in continuous operation: 14 L/min maximum

SUT××D11021



* Operating flow rate at the maximum pressure in continuous operation: 16 L/min maximum

Super Unit

[Single pump type]

Maximum operating pressure

7 MPa

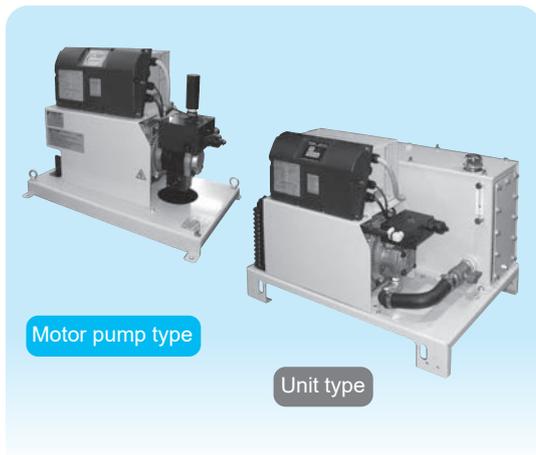
Maximum flow rate

15/30 L/min

Model code

SUTS1507-30**

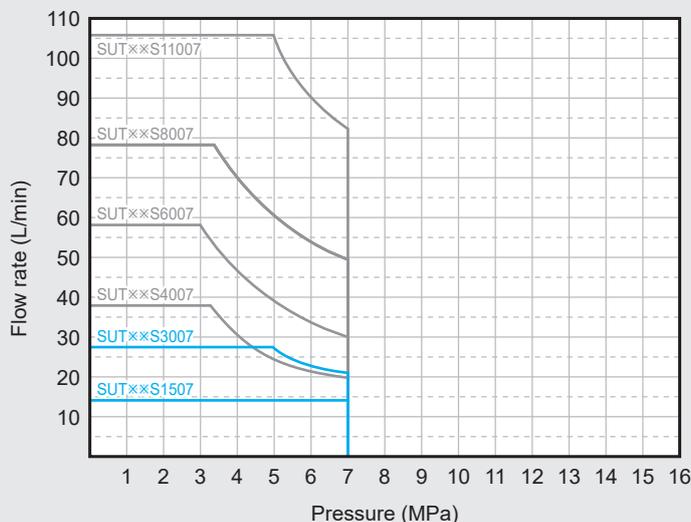
SUTS3007-30**



Motor pump type

Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:

SUTS1507: 3 L/min maximum**
SUTS3007: 5 L/min maximum**

Specifications

Model code		Motor pump type		Unit type	
		SUT00S1507-30	SUT00S3007-30	SUT03S1507-30	SUT03S3007-30
Pump	Maximum operating pressure (MPa)	7.0			
	Operating pressure adjustment range (MPa)	1.5 to 7.0			
	Maximum flow rate (theoretical value) (L/min)*1	15.2	28.5	15.2	28.5
	Operating flow rate adjustment range (L/min)	2.5 to 15.2	3.5 to 28.5	2.5 to 15.2	3.5 to 28.5
Motor	Motor capacity (equivalent kW)	2.2	2.8	2.2	2.8
Tank capacity (L)		-		30	
Power supply voltage	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)			
Rated current (A)	AC3 φ 200 V (50 Hz)	11.5	15.4	11.5	15.4
	AC3 φ 200 V (60 Hz)	11.3	15.1	11.3	15.1
	AC3 φ 220 V (60 Hz)	10.6	13.8	10.6	13.8
No-fuse breaker capacity (A)		15	20	15	20
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel			
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel			
	Contact output	1 channel (1 common contact), dry contact, Contact capacity: DC 30 V, 0.5 A (Resistance load)			
Operating conditions	Usable oil *2	General petroleum-based hydraulic oil (R&O) / Wear-resistant hydraulic oil • Viscosity grade: ISO VG32 to 68 • Viscosity range: 15 to 400 mm ² /s • Contamination: Within NAS class 9 • Volumetric water content: 0.1% maximum			
	Tank oil temperature	0 to 60°C (Recommended operating temperature range: 15 to 50°C)			
	Operating ambient temperature	0 to 40°C			
	Storage ambient temperature	-20 to 60°C			
	Operating ambient humidity	85% RH maximum (No condensation)			
	Waterproof protection rating	(Controller) IP44			
	Installation site	Indoors (Be sure to secure the unit with bolts.)			
Others	<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the controller's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 				
Standard coating color		Ivory white (Munsell code 5Y7.5/1)			
Mass (kg)		37	39	59	

Note) *1: The pump flow rate has been factory-set to the maximum flow rate. The maximum flow rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult DAIKIN about the use of hydraulic oils other than petroleum-based oil (e.g. hydrous/synthetic) such as water-glycol hydraulic oil.

*3: The unit incorporates a safety valve.

*4: When selecting a SUPER UNIT, refer to "Pressure-Flow rate characteristics" and the description of how to select a unit in the separate catalog for SUPER UNITS.

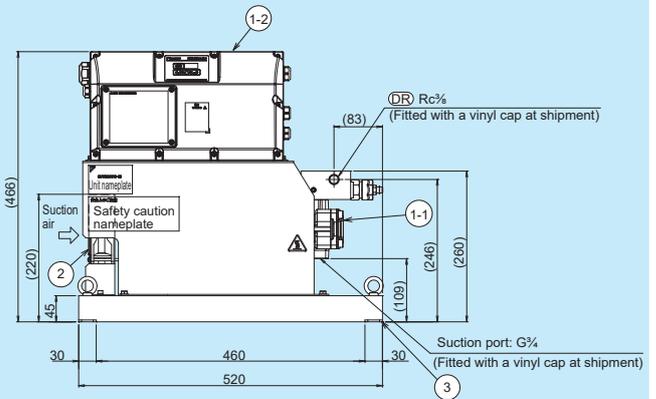
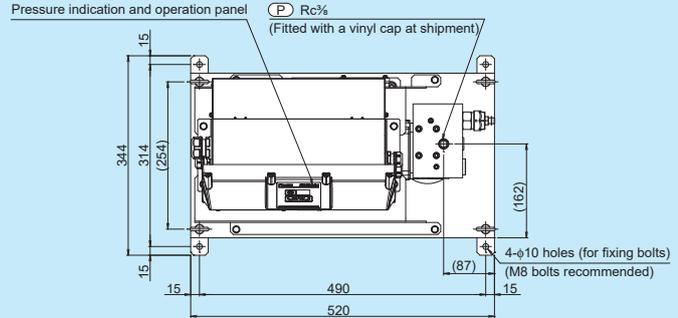
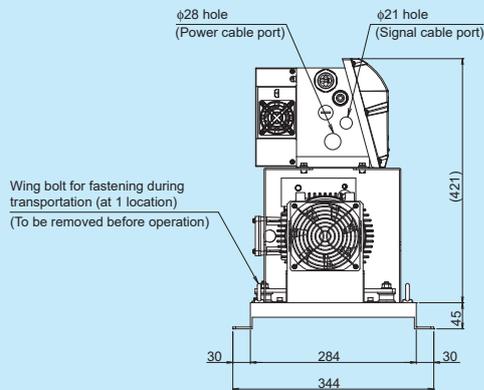
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

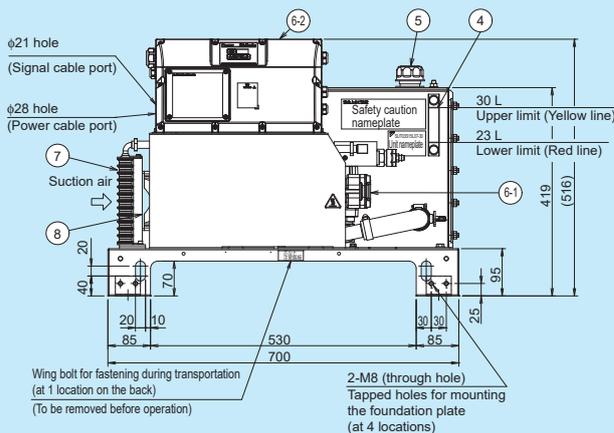
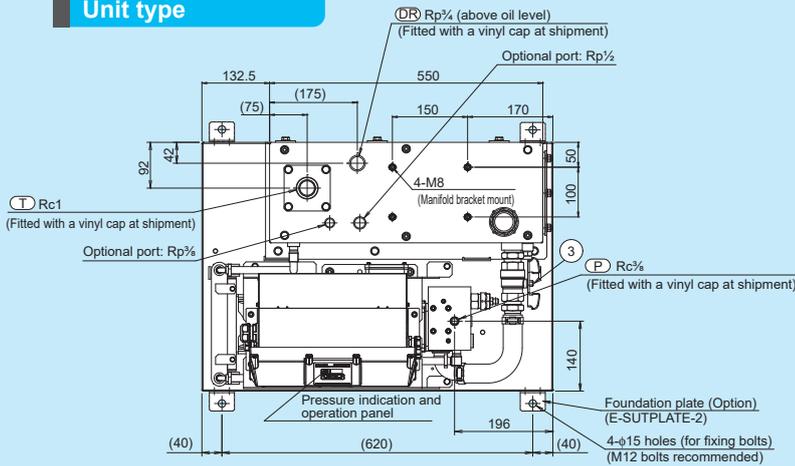
Motor pump type

SUT00S1507-30
SUT00S3007-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1

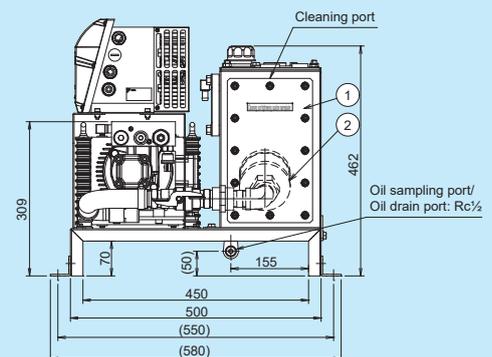


Unit type



SUT03S1507-30
SUT03S3007-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filter port-cum-air bleeder	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1



Super Unit

[Single pump type]

Maximum operating pressure

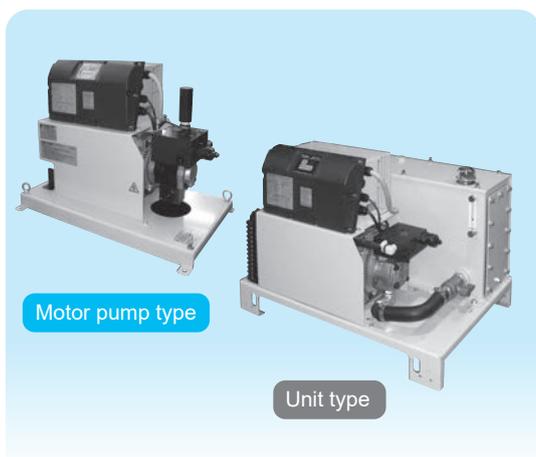
7 MPa

Maximum flow rate

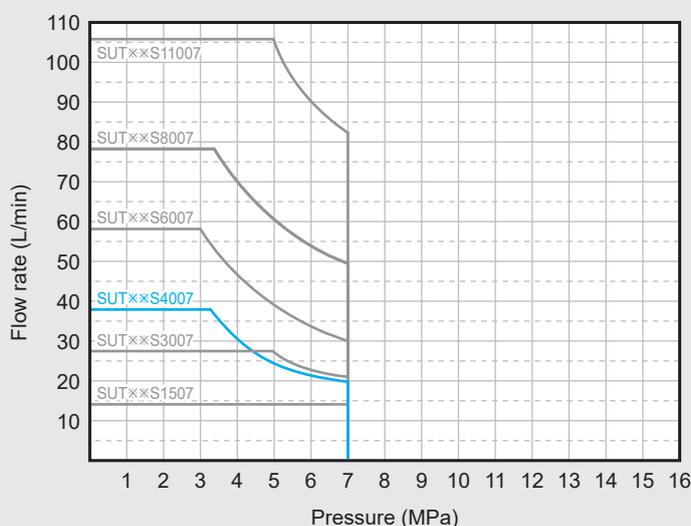
40 L/min

Model code

SUT××S4007-30



Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
8 L/min maximum

Specifications

Model code		Motor pump type	Unit type
Model code		SUT00S4007-30	SUT03S4007-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	39.7	
	Maximum operating pressure (MPa)	7.0	
	Operating flow rate adjustment range (L/min)	5.3 to 39.7	
	Operating pressure adjustment range (MPa)	1.5 to 7.0	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 3.7 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	16.1	
	AC3 φ200V (60 Hz)	15.8	
	AC3 φ220V (60 Hz)	14.8	
Power source breaker setting (A)		20	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		46	64
Operating conditions	Usable oil *2	Special mineral-oil base hydraulic oil/wear-resistant hydraulic oil • Viscosity grade: ISO VG32 to 68 • Viscosity range: 15 to 400 mm ² /s • Contamination: Within NAS class 10 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	30
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

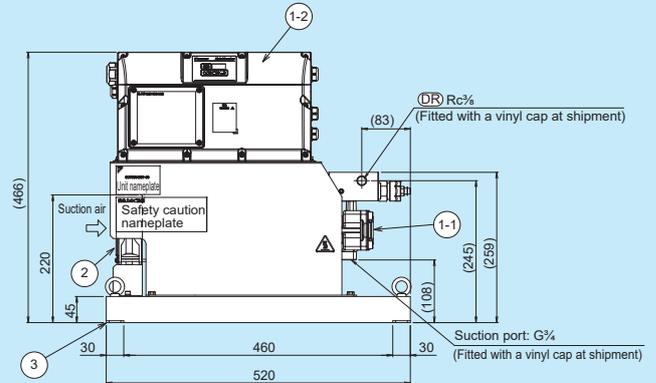
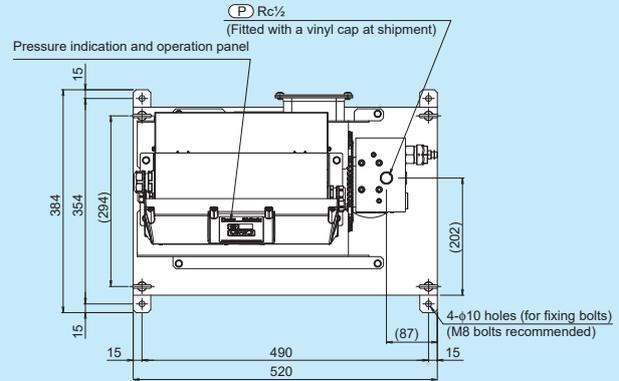
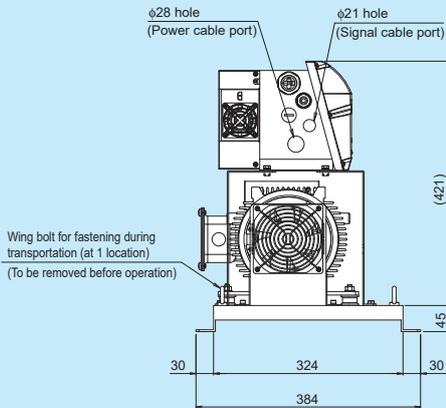
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

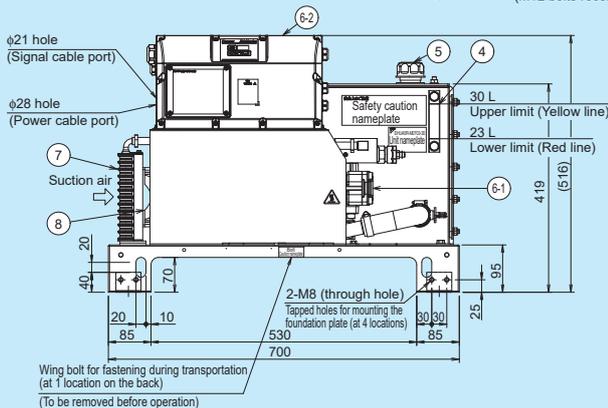
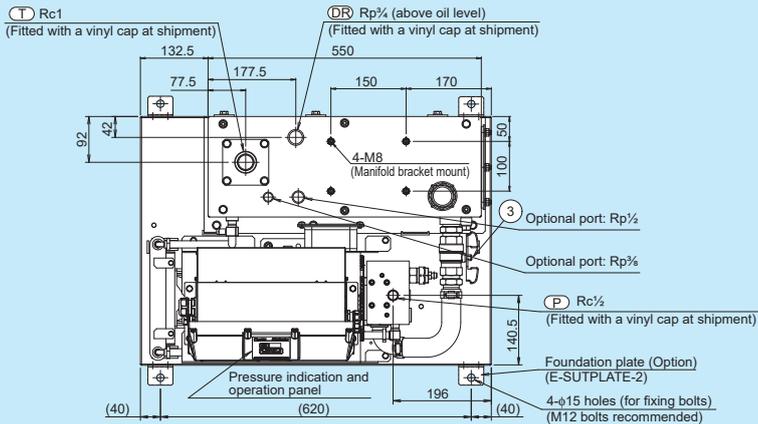
Motor pump type

SUT00S4007-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1

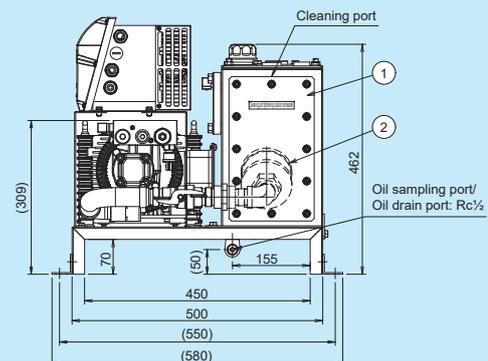


Unit type



SUT03S4007-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1



Super Unit

[Single pump type]

Maximum operating pressure

7 MPa

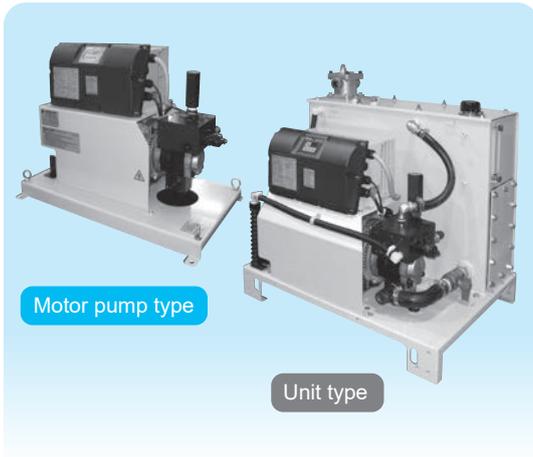
Maximum flow rate

60 L/min

Model code

SUT00S6007-30

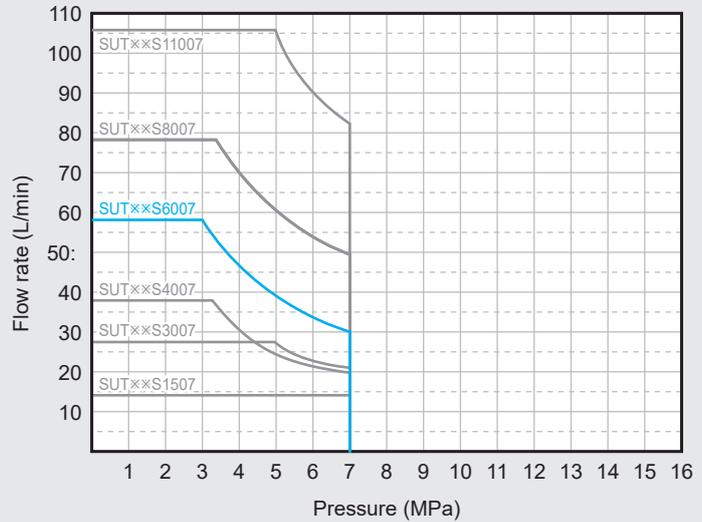
SUT06S6007-30



Motor pump type

Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
14 L/min maximum

Specifications

Model code		Motor pump type	Unit type
Model code		SUT00S6007-30	SUT06S6007-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	61.1	
	Maximum operating pressure (MPa)	7.0	
	Operating flow rate adjustment range (L/min)	8.7 to 61.1	
	Operating pressure adjustment range (MPa)	1.5 to 7.0	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 5.0 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	22.1	
	AC3 φ200V (60 Hz)	21.7	
	AC3 φ220V (60 Hz)	20.2	
Power source breaker setting (A)		30	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		56	97
Operating conditions	Usable oil *2	Special mineral-oil base hydraulic oil/wear-resistant hydraulic oil • Viscosity grade: ISO VG32 to 68 • Viscosity range: 15 to 400 mm ² /s • Contamination: Within NAS class 10 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	60
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

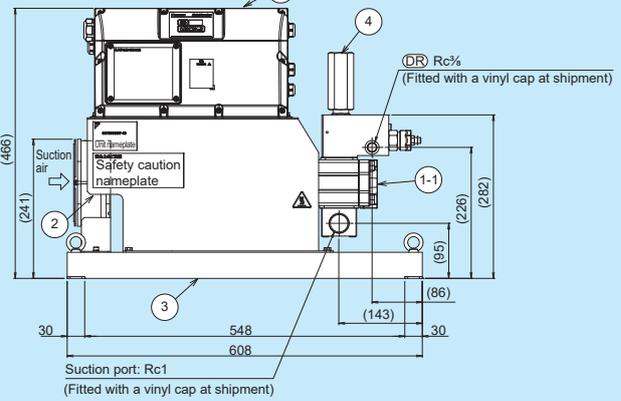
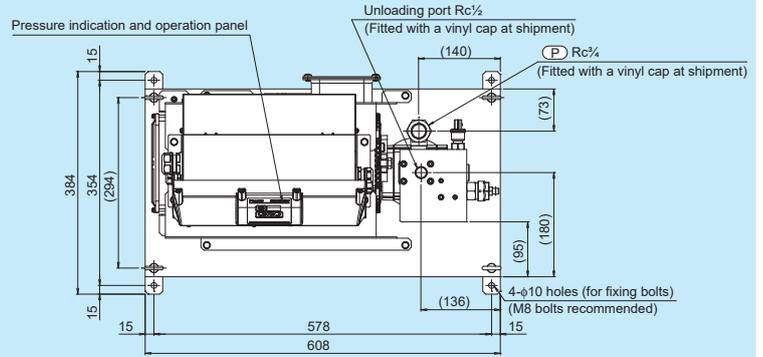
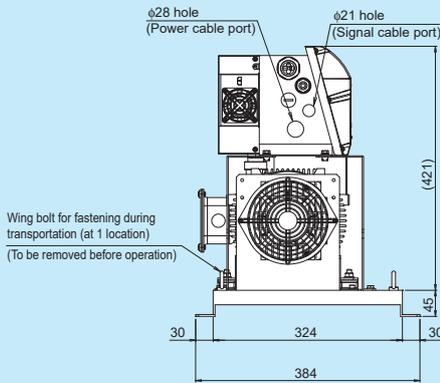
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

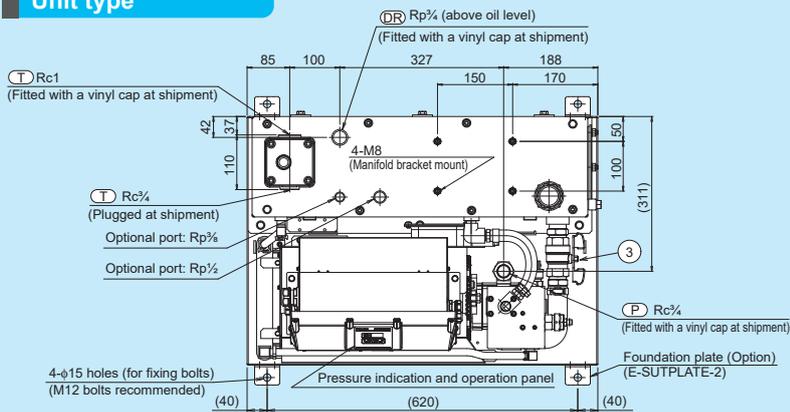
Motor pump type

SUT00S6007-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1
4	Check valve	1

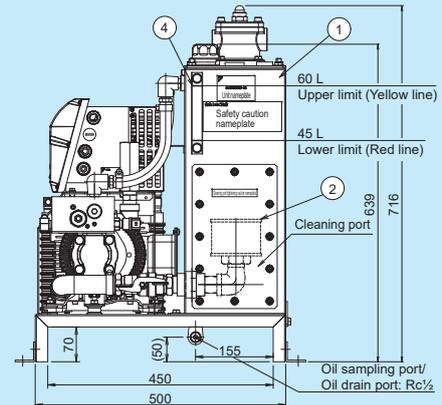
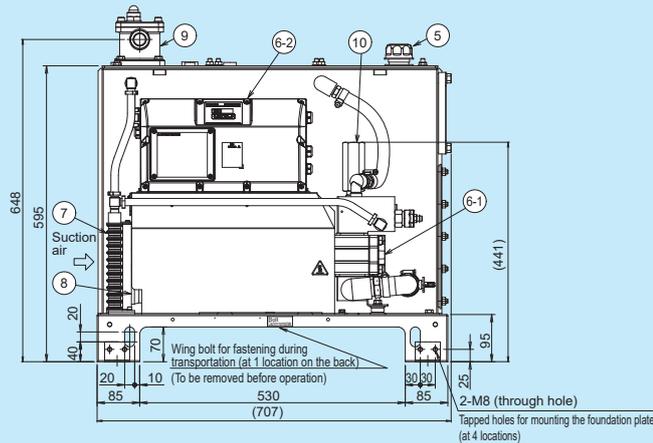


Unit type



SUT06S6007-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



Super Unit

[Single pump type]

Maximum operating pressure

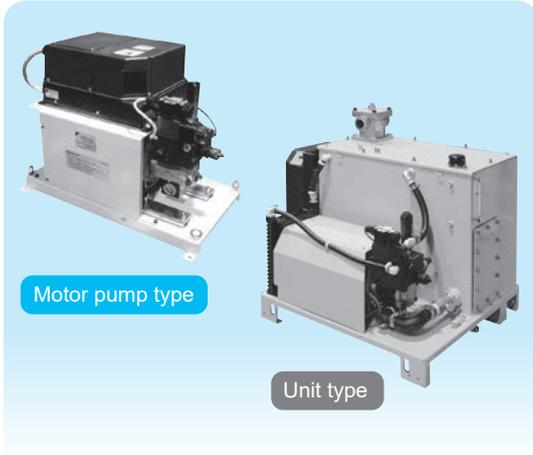
7 MPa

Maximum flow rate

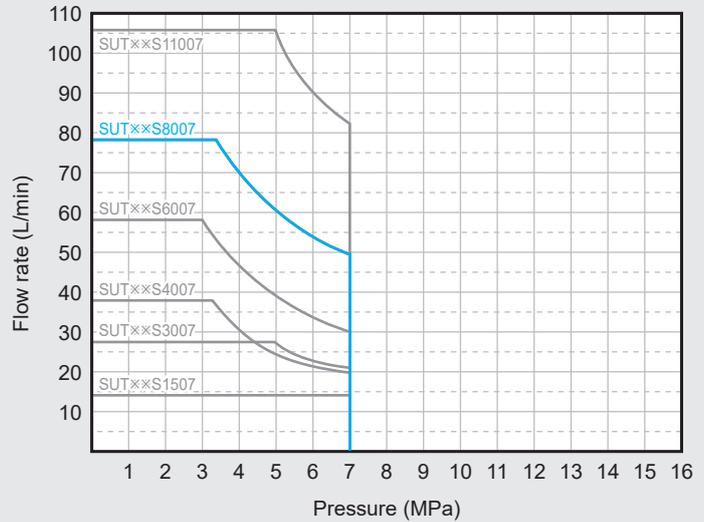
80 L/min

Model code

SUTS8007-30**



Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
19 L/min maximum

Specifications

Model code		Motor pump type	Unit type
Model code		SUT00S8007-30	SUT10S8007-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	83.0	
	Maximum operating pressure (MPa)	7.0	
	Operating flow rate adjustment range (L/min)	11.6 to 83.0	
	Operating pressure adjustment range (MPa)	1.5 to 7.0	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 7.0 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	25.5	
	AC3 φ200V (60 Hz)	24.8	
	AC3 φ220V (60 Hz)	22.7	
Power source breaker setting (A)		50	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		72	131
Operating conditions	Usable oil *2	Special mineral-oil base hydraulic oil/wear-resistant hydraulic oil • Viscosity grade: ISO VG32 to 68 • Viscosity range: 15 to 400 mm ² /s • Contamination: Within NAS class 10 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	100
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

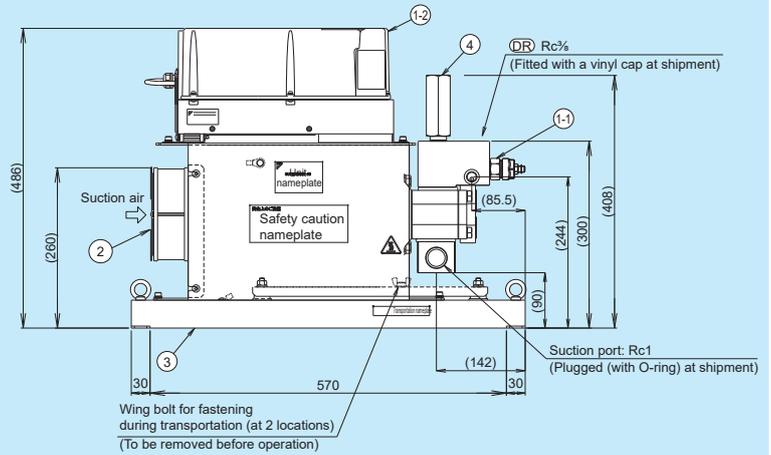
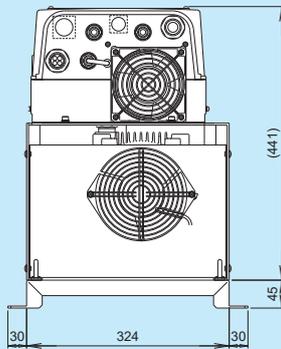
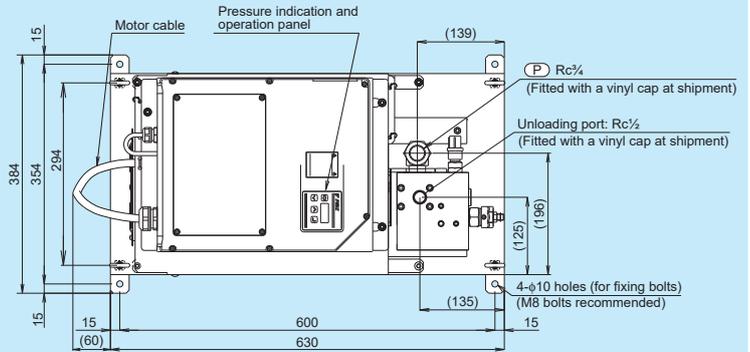
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

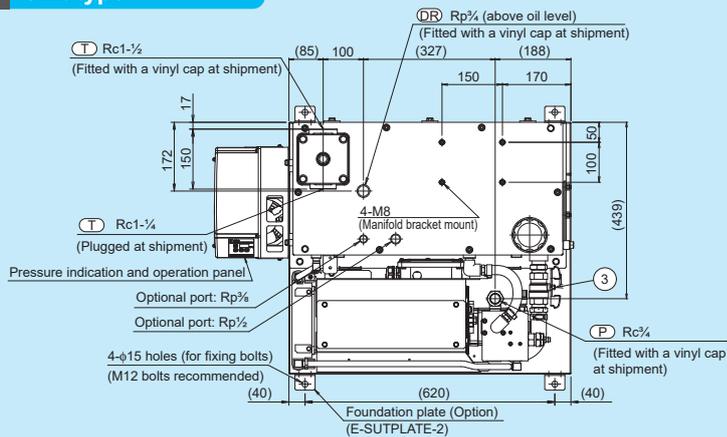
Motor pump type

SUT00S8007-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1
4	Check valve	1

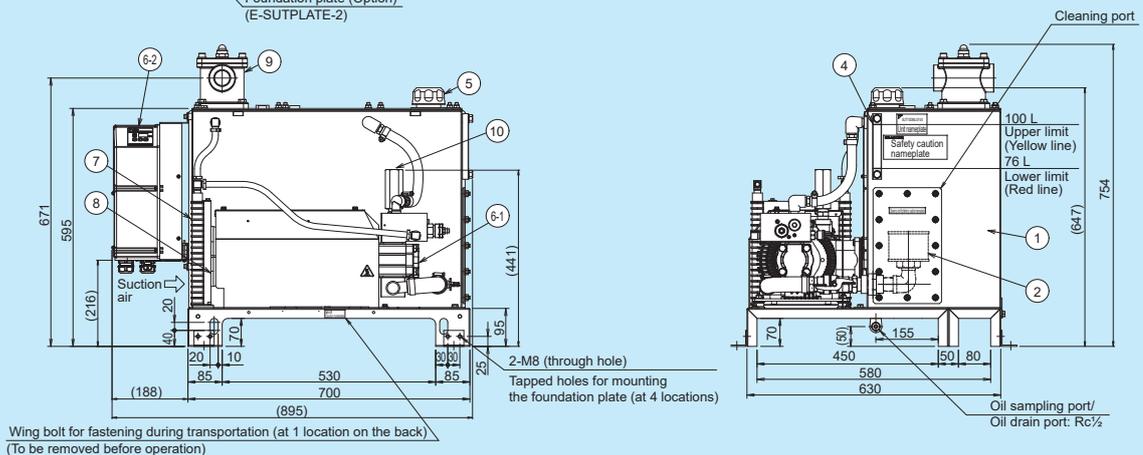


Unit type



SUT10S8007-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



Super Unit

[Single pump type]

Maximum operating pressure

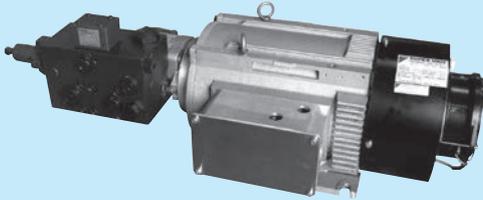
7 MPa

Maximum flow rate

110 L/min

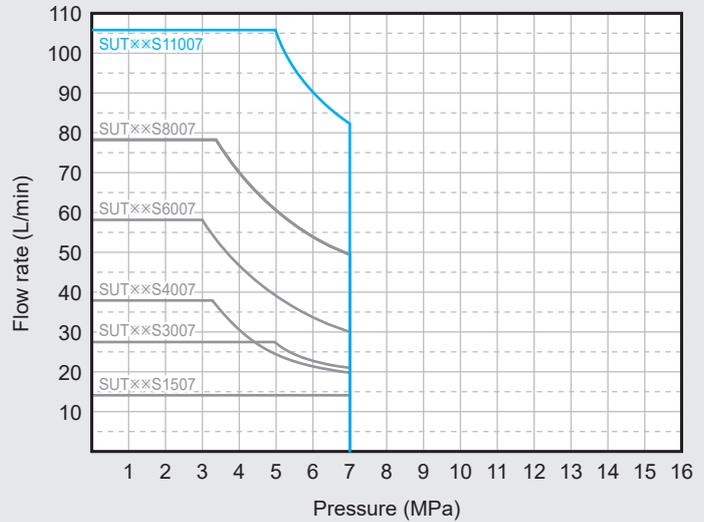
Model code

SUT00S11007-40



Motor pump type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:

16 L/min maximum

Specifications

Model code		Motor pump type
Model code		SUT00S11007-40
Pump unit	Maximum flow rate (theoretical value; L/min) *1	110
	Maximum operating pressure (MPa)	7.0
	Operating flow rate adjustment range (L/min)	13.3 to 110
	Operating pressure adjustment range (MPa)	1.5 to 7.0
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 11.0 kW
Power supply	Motor pump	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)
Rated current (A)	AC3 φ200V (50 Hz)	38.3
	AC3 φ200V (60 Hz)	37.8
	AC3 φ220V (60 Hz)	34.9
Power source breaker setting (A)		75
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)
Mass (kg)		112
Operating conditions	Usable oil *2	Special mineral-oil base hydraulic oil/wear-resistant hydraulic oil • Viscosity grade: ISO VG32 to 68 • Viscosity range: 15 to 400 mm ² /s • Contamination: Within NAS class 10 • Volumetric water content: 0.1% maximum
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)
	Operating ambient temperature	0 to 40°C
	Storage ambient temperature	-20 to 60°C
	Operating ambient humidity	85% RH max. (no condensation)
	Installation site	Indoors (Be sure to secure the unit with bolts.)
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal.
Tank capacity (L)		-
Standard coating color		Ivory white (Munsell code 5Y7.5/1)

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil.

*3: The unit incorporates a safety valve.

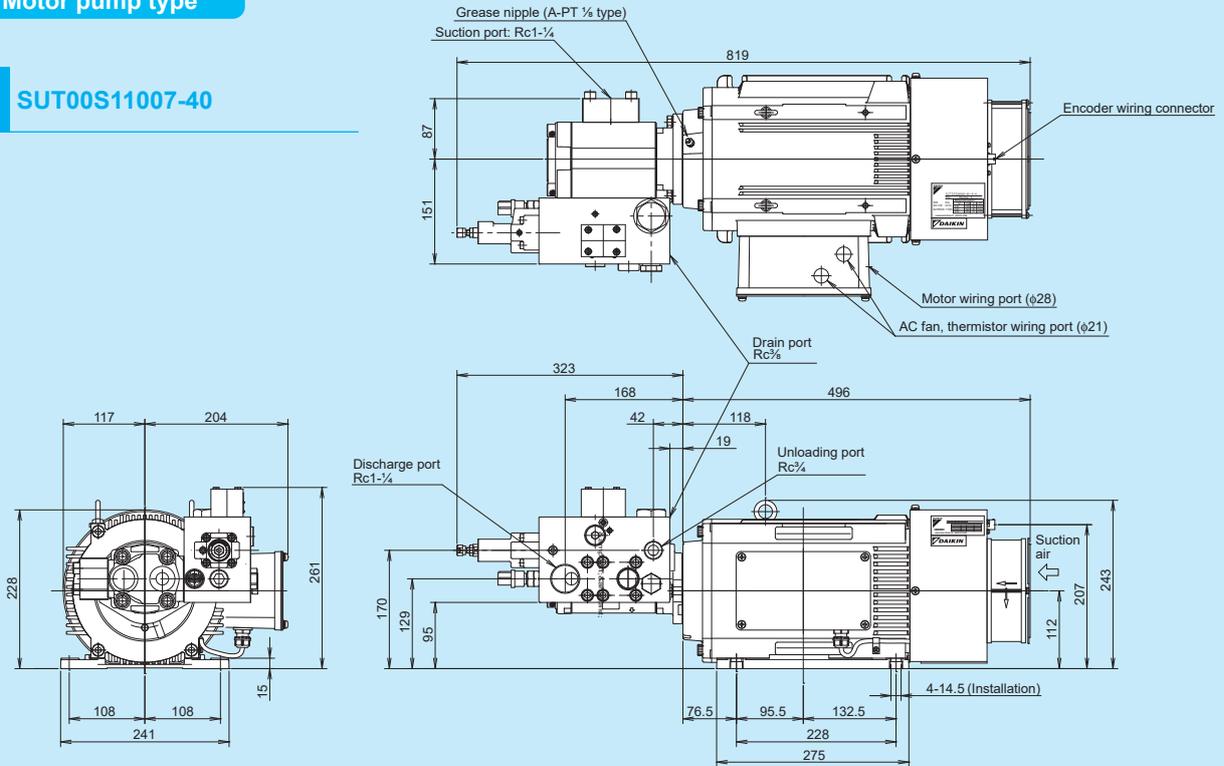
*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

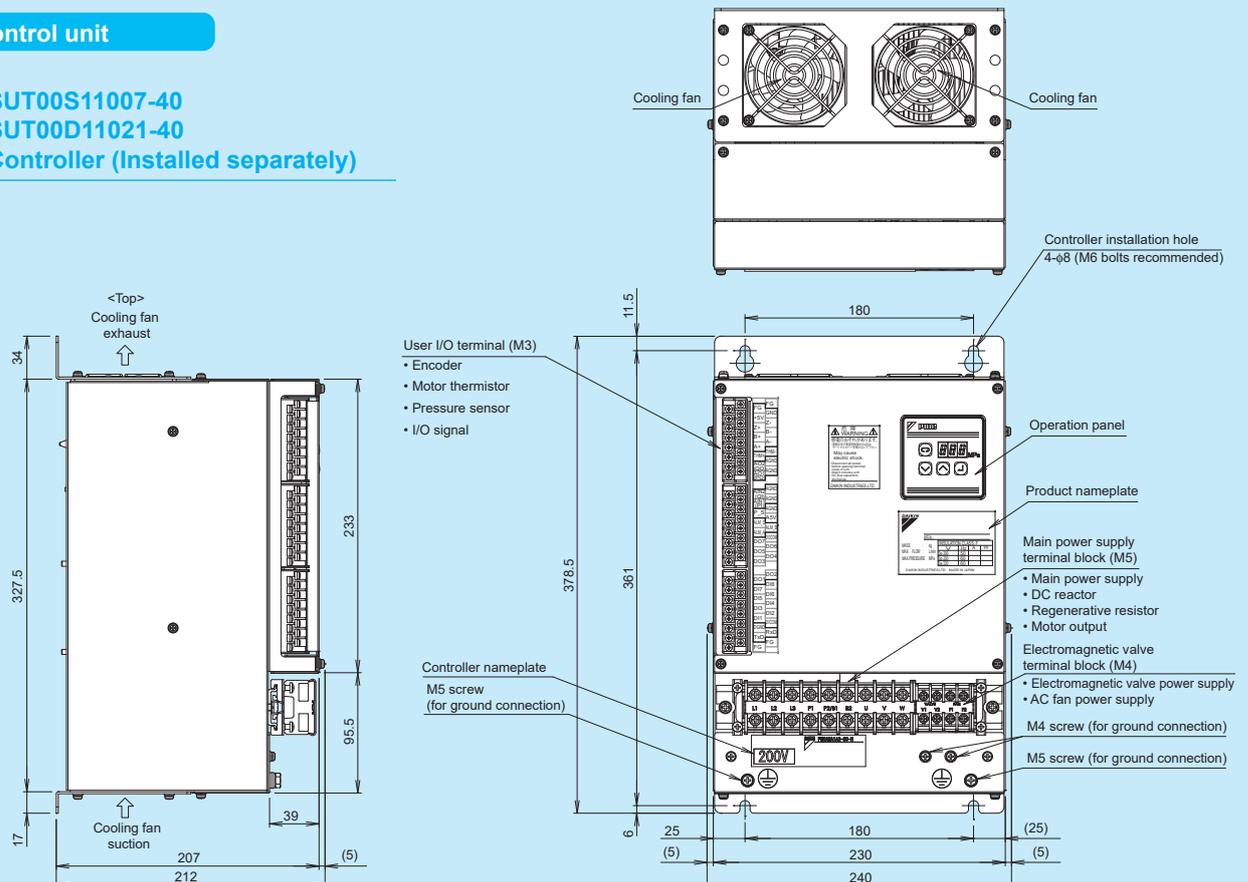
Motor pump type

SUT00S11007-40



Control unit

SUT00S11007-40
SUT00D11021-40
Controller (Installed separately)



Super Unit

[Single pump type]

Maximum operating pressure

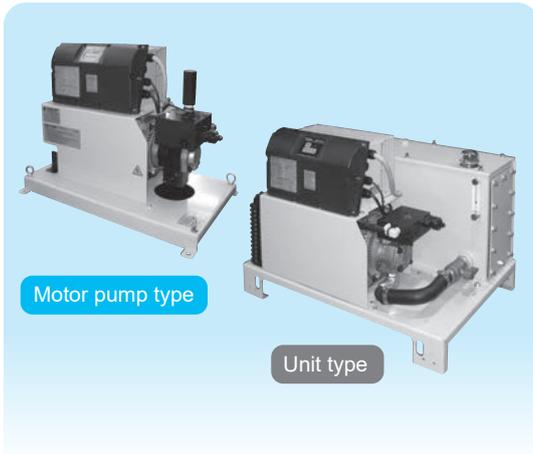
10 MPa

Maximum flow rate

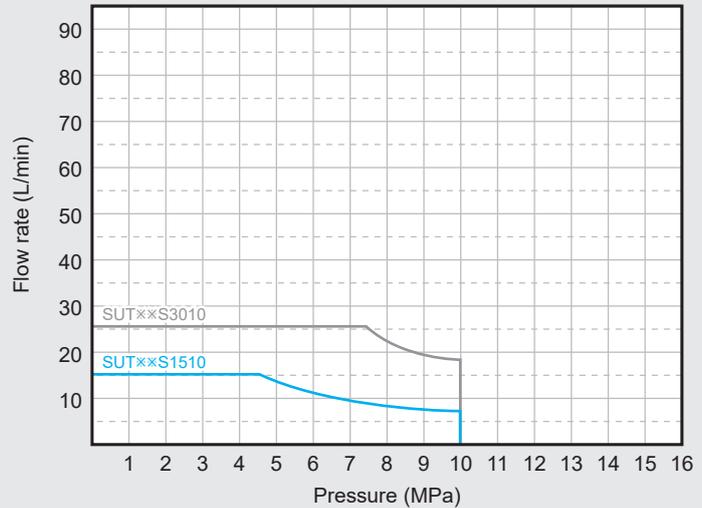
15 L/min

Model code

SUT××S1510-30



Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:

3 L/min maximum

Specifications

Model code		Motor pump type	Unit type
Model code		SUT00S1510-30	SUT03S1510-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	15.2	
	Maximum operating pressure (MPa)	10.0	
	Operating flow rate adjustment range (L/min)	2.5 to 15.2	
	Operating pressure adjustment range (MPa)	1.5 to 10.0	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 2.8 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	8.0	
	AC3 φ200V (60 Hz)	7.8	
	AC3 φ220V (60 Hz)	7.5	
Power source breaker setting (A)		15	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		39	59
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	30
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

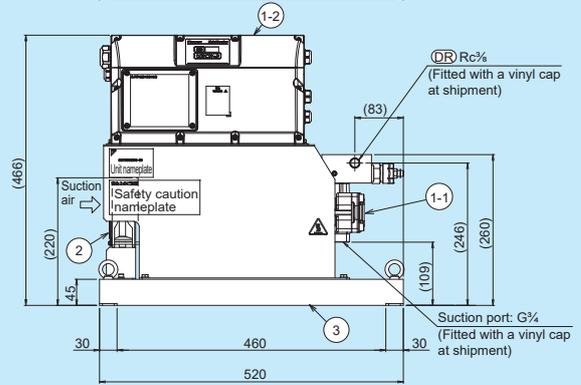
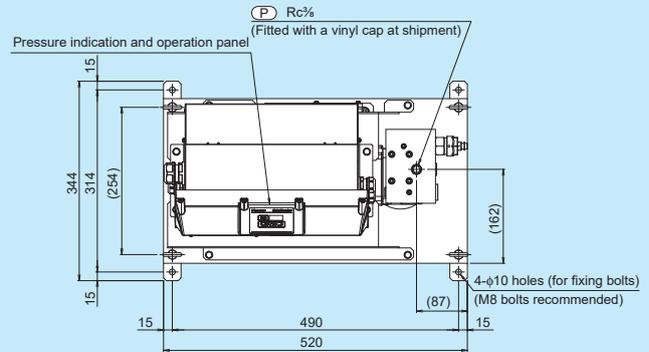
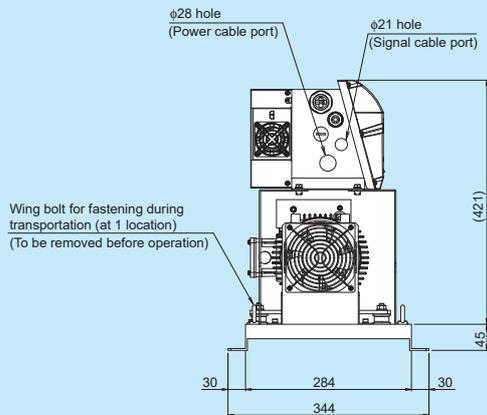
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

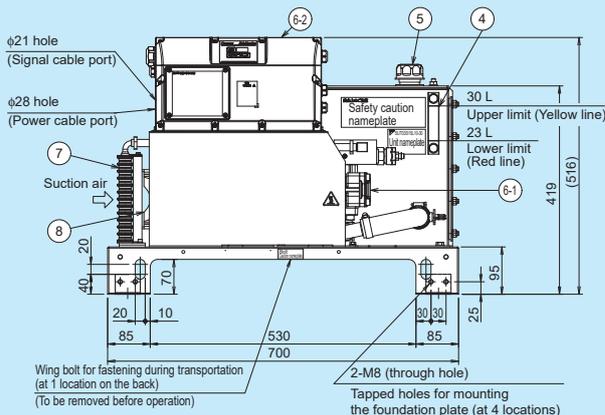
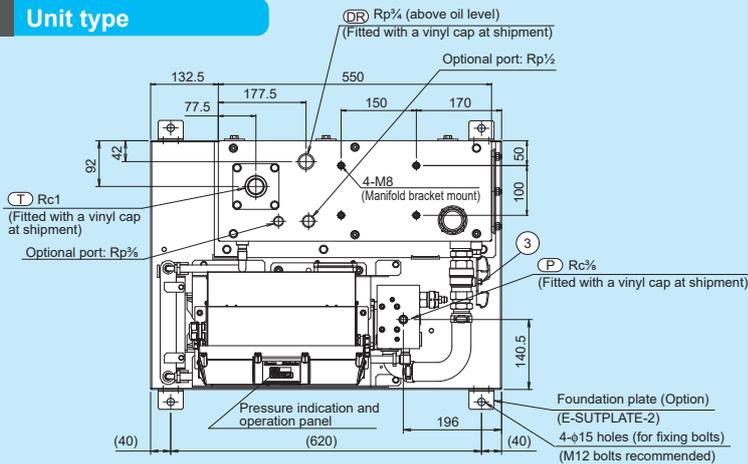
Motor pump type

SUT00S1510-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1

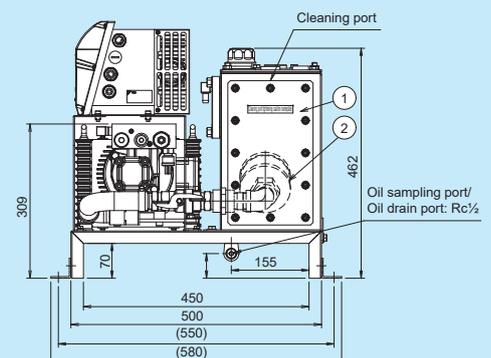


Unit type



SUT03S1510-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filter port-cum-air bleeder	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1



Super Unit

[Single pump type]

Maximum operating pressure

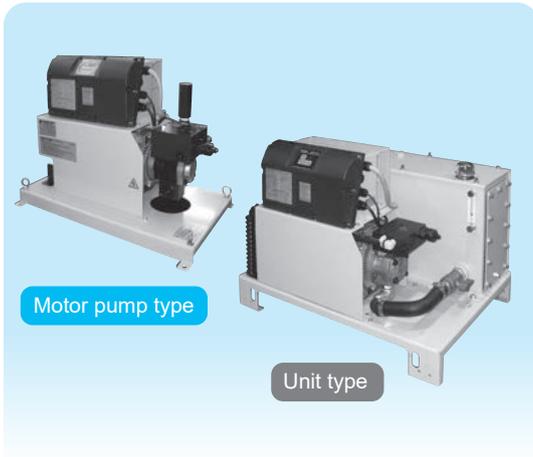
10 MPa

Maximum flow rate

30 L/min

Model code

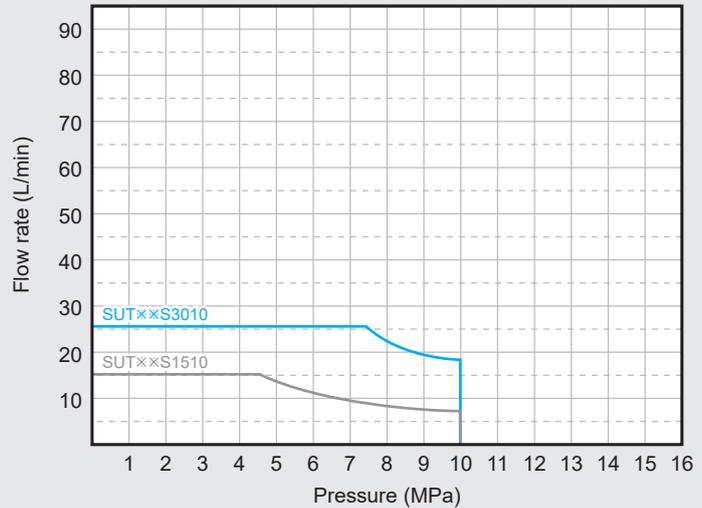
SUT××S3010-30



Motor pump type

Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
5 L/min maximum

Specifications

Model code		Motor pump type	Unit type
Model code		SUT00S3010-30	SUT03S3010-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	25.6	
	Maximum operating pressure (MPa)	10.0	
	Operating flow rate adjustment range (L/min)	3.4 to 25.6	
	Operating pressure adjustment range (MPa)	1.5 to 10.0	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 3.7 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	18.4	
	AC3 φ200V (60 Hz)	18.4	
	AC3 φ220V (60 Hz)	16.9	
Power source breaker setting (A)		20	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		46	64
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	30
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

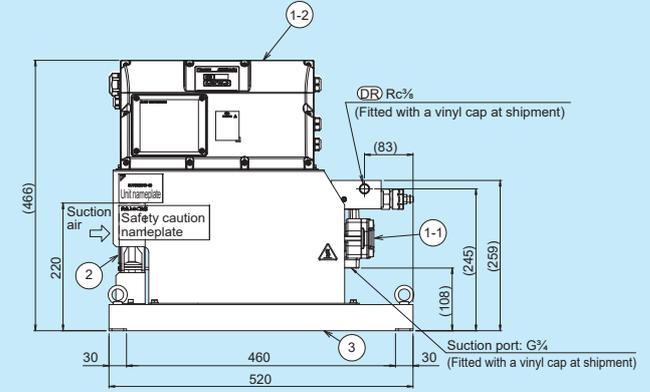
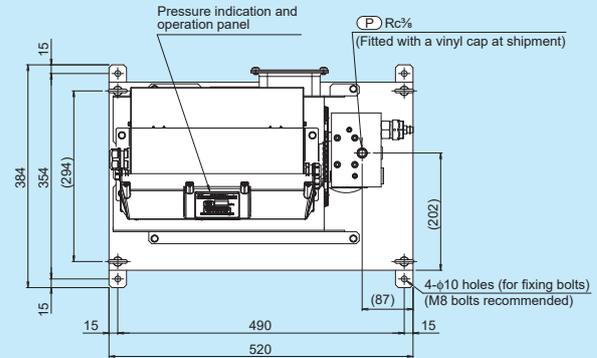
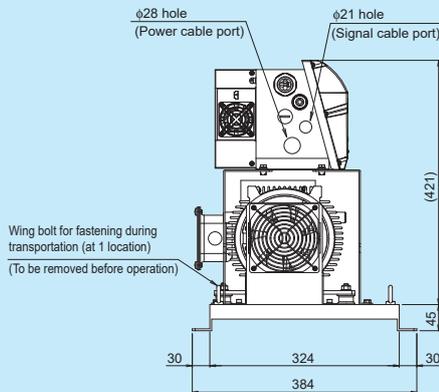
Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.
 *2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.
 *3: The unit incorporates a safety valve.
 *4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.
 For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

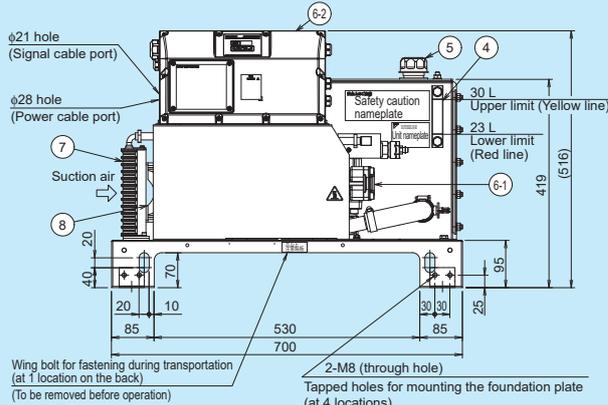
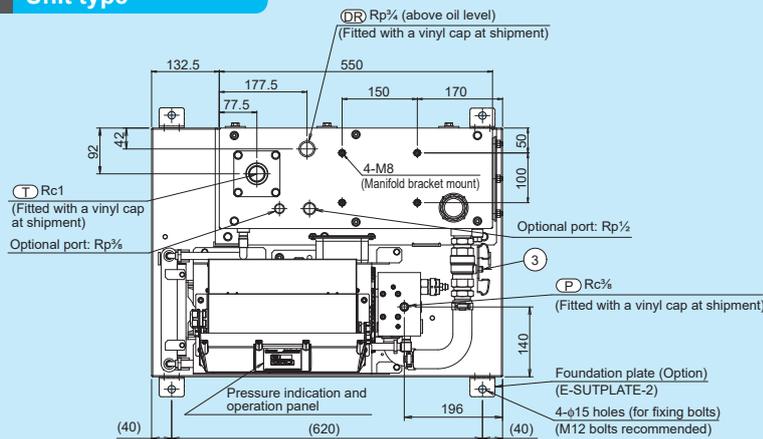
Motor pump type

SUT00S3010-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1

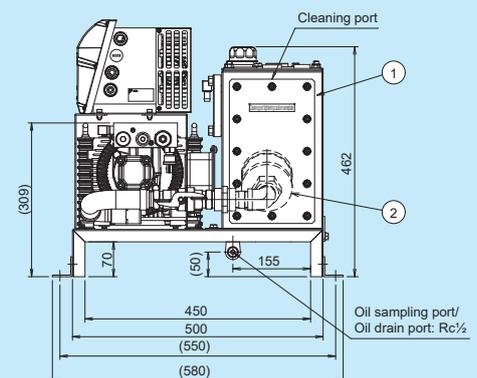


Unit type



SUT03S3010-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1



Super Unit

[Single pump type]

Maximum operating pressure

16 MPa

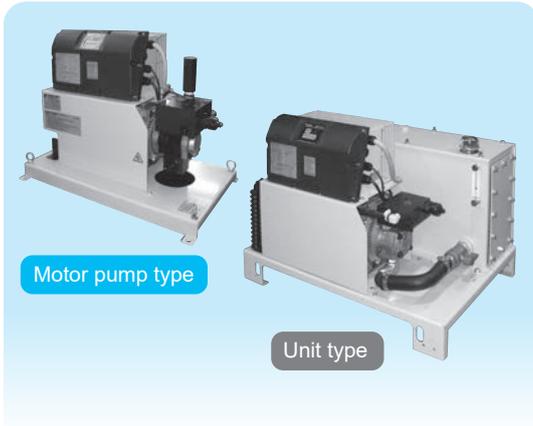
Maximum flow rate

15/30 L/min

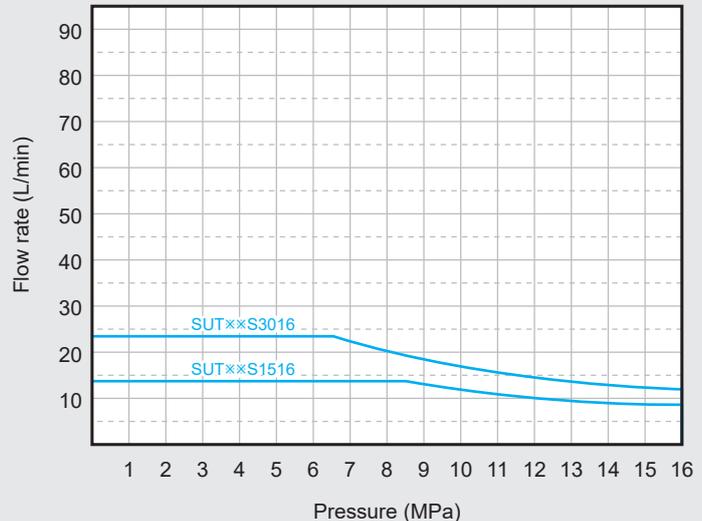
Model code

SUT××S1516-30

SUT××S3016-30



Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:

5 L/min maximum

Specifications

Model code		Motor pump type		Unit type	
		SUT00S1516-30	SUT00S3016-30	SUT03S1516-30	SUT06S3016-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	15.2	25.6	15.2	25.6
	Maximum operating pressure (MPa)	16.0			
	Operating flow rate adjustment range (L/min)	2.4 to 15.2	3.4 to 25.6	2.4 to 15.2	3.4 to 25.6
	Operating pressure adjustment range (MPa)	1.5 to 16.0			
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 3.7 kW	Equivalent to 5.0 kW	Equivalent to 3.7 kW	Equivalent to 5.0 kW
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)			
Rated current (A)	AC3 φ200V (50 Hz)	15.2	21.4	15.2	21.4
	AC3 φ200V (60 Hz)	15.2	21.4	15.2	21.4
	AC3 φ220V (60 Hz)	14.6	20.2	14.6	20.2
Power source breaker setting (A)		20	30	20	30
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel			
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel			
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)			
Mass (kg)		46	52	64	83
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum			
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)			
	Operating ambient temperature	0 to 40°C			
	Storage ambient temperature	-20 to 60°C			
	Operating ambient humidity	85% RH max. (no condensation)			
	Installation site	Indoors (Be sure to secure the unit with bolts.)			
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 			
Tank capacity (L)		-		30	60
Standard coating color		Ivory white (Munsell code 5Y7.5/1)			

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

Super Unit

[Double pump type]

Maximum operating pressure

16 MPa

Maximum flow rate

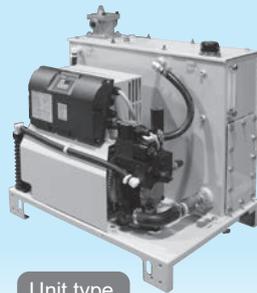
40 L/min

Model code

SUT××D4016-30

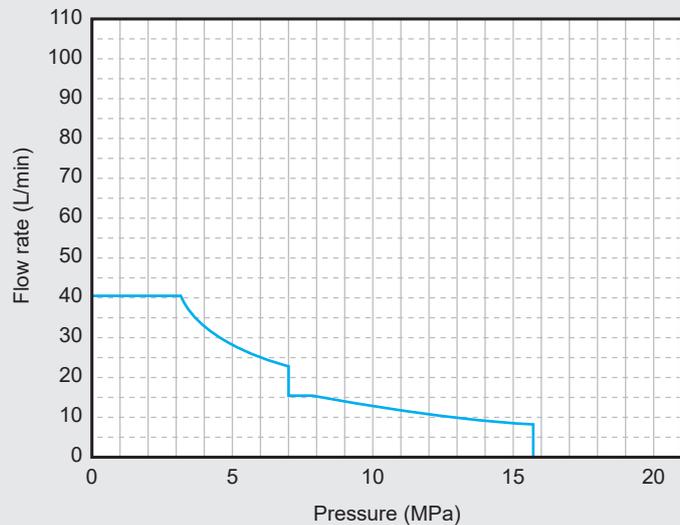


Motor pump type



Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:

8 L/min maximum

Specifications

		Motor pump type	Unit type
Model code		SUT00D4016-30	SUT06D4016-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	41.0 (41.0 for combination flow, 16.0 for independent flow)	
	Maximum operating pressure (MPa)	15.7	
	Operating flow rate adjustment range (L/min)	5.4 to 41.0	
	Operating pressure adjustment range (MPa)	1.5 to 15.7	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 3.7 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	17.9	
	AC3 φ200V (60 Hz)	17.7	
	AC3 φ220V (60 Hz)	16.5	
Power source breaker setting (A)		20	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		53	94
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	60
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

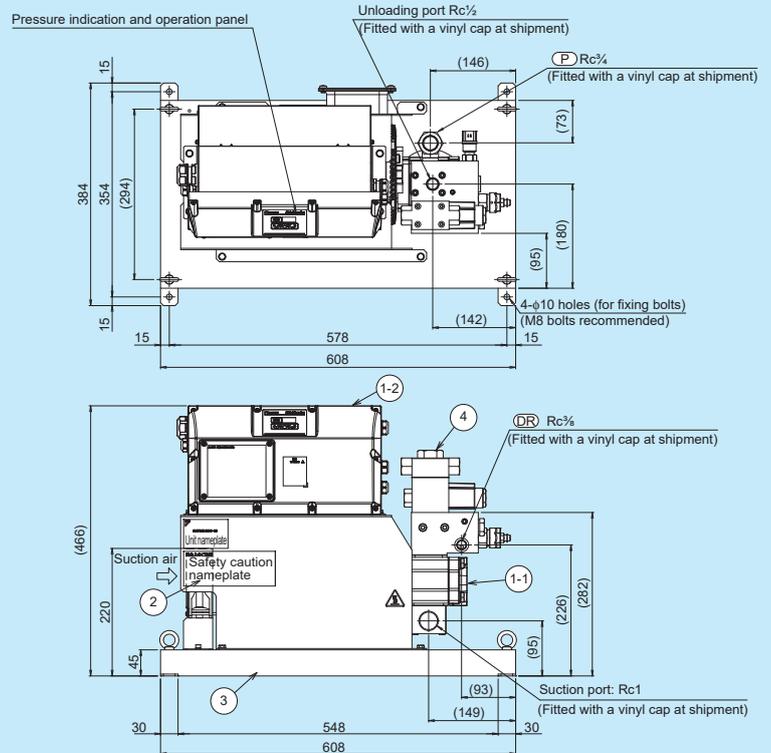
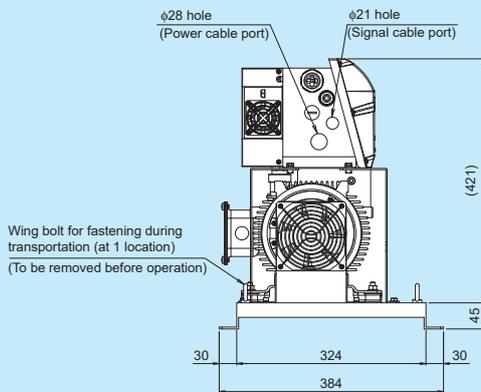
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

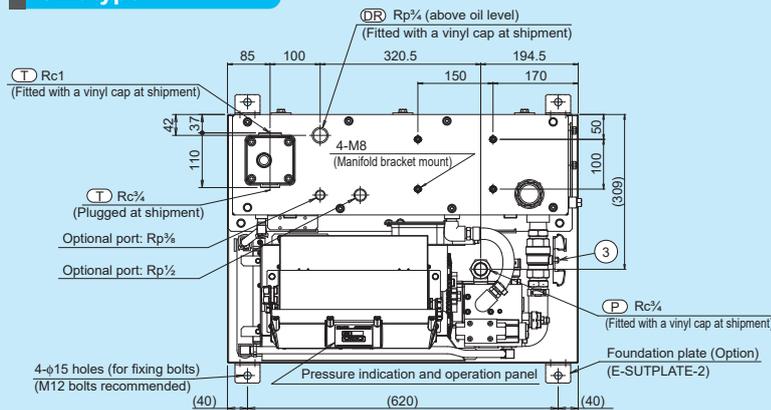
Motor pump type

SUT00D4016-30

Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1
4	Check valve	1

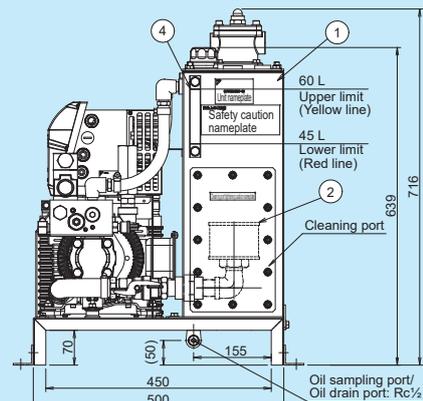
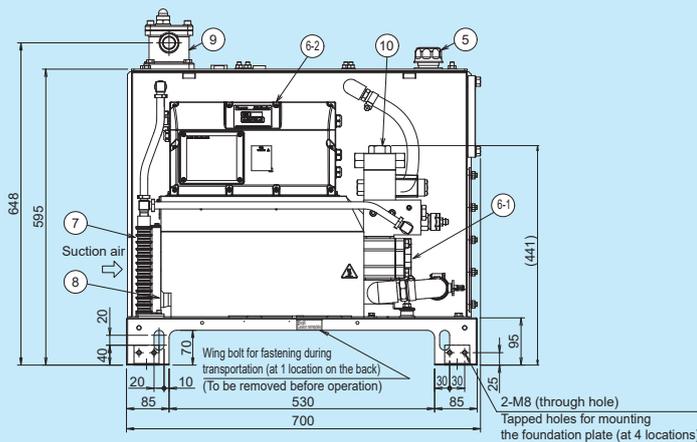


Unit type



SUT06D4016-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



Super Unit

[Double pump type]

Maximum operating pressure

21 MPa

Maximum flow rate

60 L/min

Model code

SUT××D6021-30

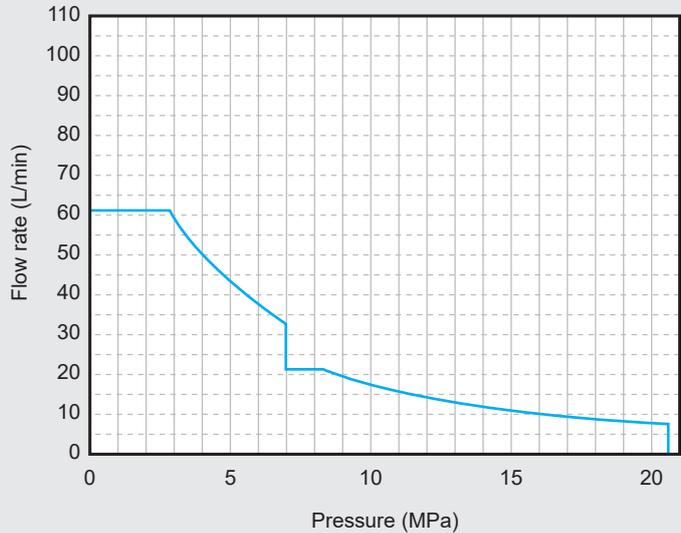


Motor pump type



Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
6.5 L/min maximum

Specifications

Model code		Motor pump type	Unit type	
		SUT00D6021-30	SUT06D6021-30	SUT10D6021-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	61.1 (61.1 for combination flow, 21.2 for independent flow)		
	Maximum operating pressure (MPa)	20.6		
	Operating flow rate adjustment range (L/min)	8.7 to 61.1		
	Operating pressure adjustment range (MPa)	1.5 to 20.6		
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 5.0 kW		
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)		
Rated current (A)	AC3 φ200V (50 Hz)	22.1		
	AC3 φ200V (60 Hz)	21.7		
	AC3 φ220V (60 Hz)	20.2		
Power source breaker setting (A)		30		
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel		
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel		
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)		
Mass (kg)		58	99	112
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum		
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)		
	Operating ambient temperature	0 to 40°C		
	Storage ambient temperature	-20 to 60°C		
	Operating ambient humidity	85% RH max. (no condensation)		
	Installation site	Indoors (Be sure to secure the unit with bolts.)		
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 		
Tank capacity (L)		-	60	100
Standard coating color		Ivory white (Munsell code 5Y7.5/1)		

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

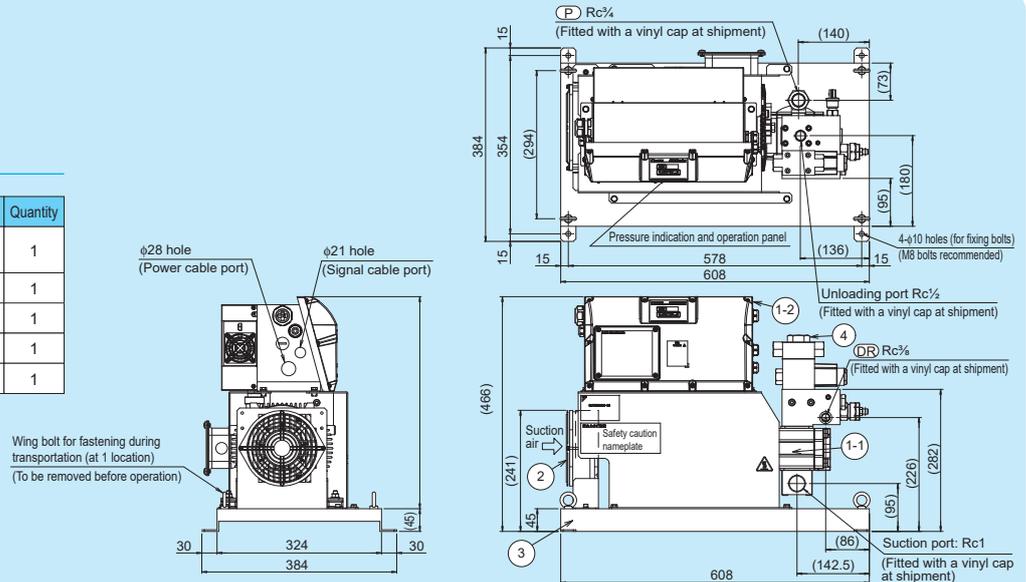
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

Motor pump type

SUT00D6021-30

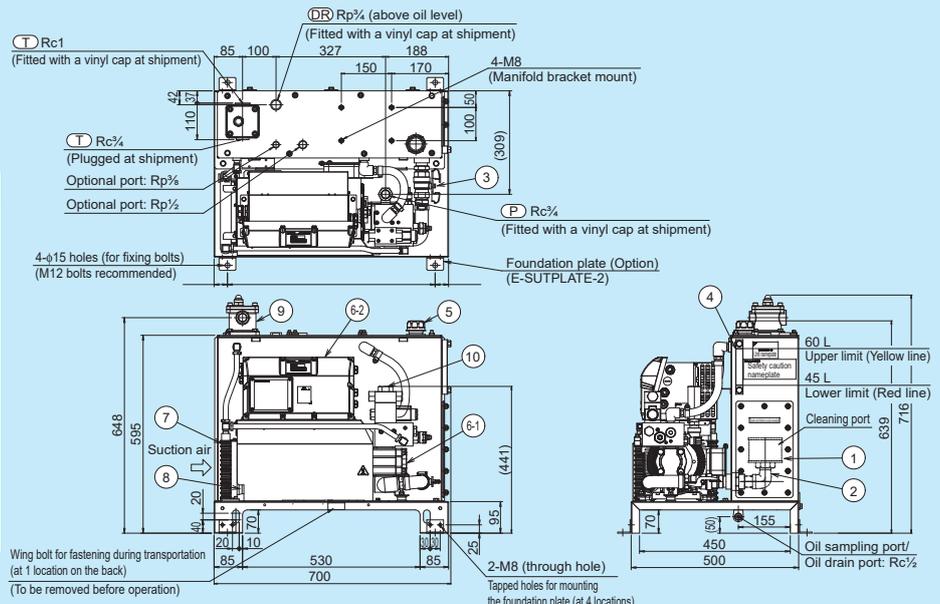
Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1
4	Check valve	1



Unit type

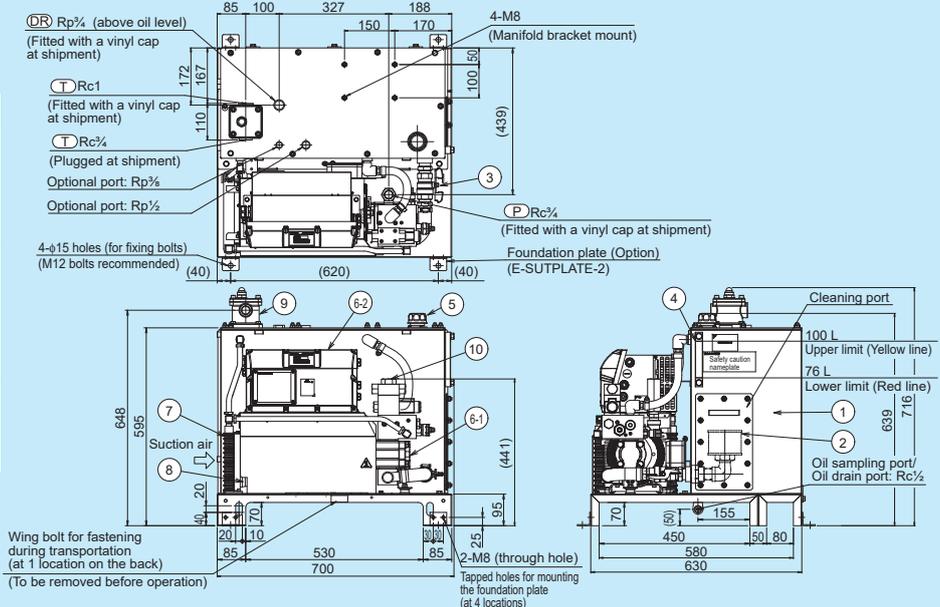
SUT06D6021-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



SUT10D6021-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



Super Unit

[Double pump type]

Maximum operating pressure

21 MPa

Maximum flow rate

80 L/min

Model code

SUT××D8021-30

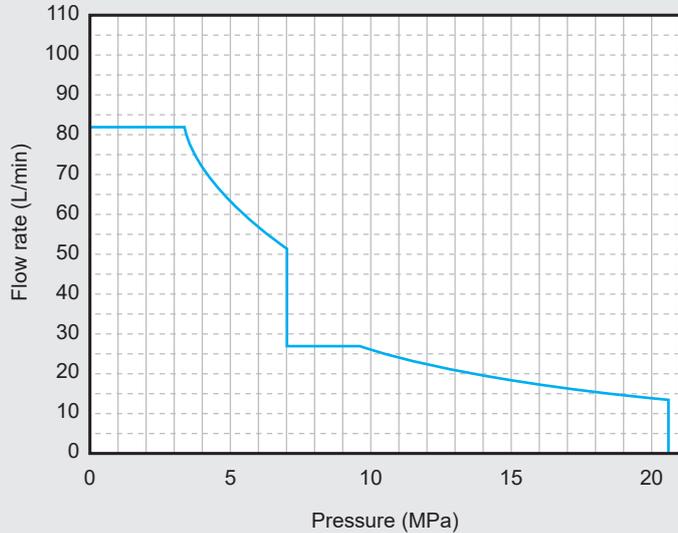


Motor pump type



Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
14 L/min maximum

Specifications

Model code		Motor pump type	Unit type	
		SUT00D8021-30	SUT10D8021-30	SUT16D8021-30
Pump unit	Maximum flow rate (theoretical value; L/min) *1	83.0 (83.0 for combination flow, 28.7 for independent flow)		
	Maximum operating pressure (MPa)	20.6		
	Operating flow rate adjustment range (L/min)	11.6 to 83.0		
	Operating pressure adjustment range (MPa)	1.5 to 20.6		
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 7.0 kW		
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)		
Rated current (A)	AC3 φ200V (50 Hz)	25.5		
	AC3 φ200V (60 Hz)	24.8		
	AC3 φ220V (60 Hz)	22.7		
Power source breaker setting (A)		50		
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel		
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel		
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)		
Mass (kg)		72	133	145
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum		
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)		
	Operating ambient temperature	0 to 40°C		
	Storage ambient temperature	-20 to 60°C		
	Operating ambient humidity	85% RH max. (no condensation)		
	Installation site	Indoors (Be sure to secure the unit with bolts.)		
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 		
Tank capacity (L)		-	100	160
Standard coating color		Ivory white (Munsell code 5Y7.5/1)		

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

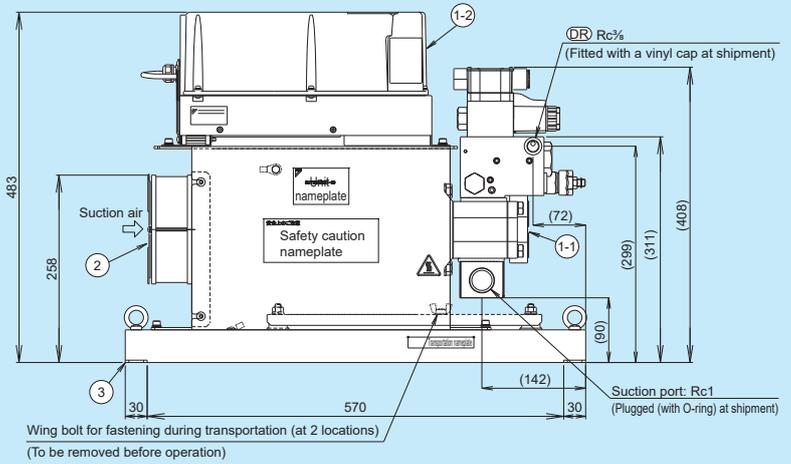
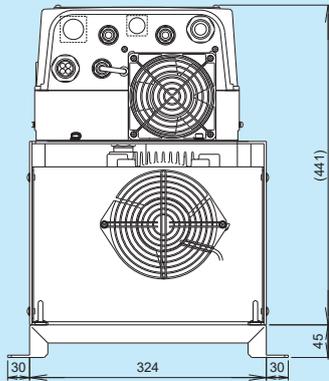
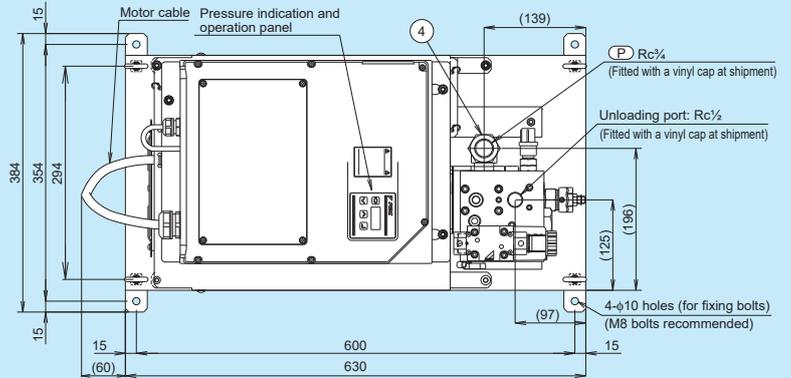
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

Motor pump type

SUT00D8021-30

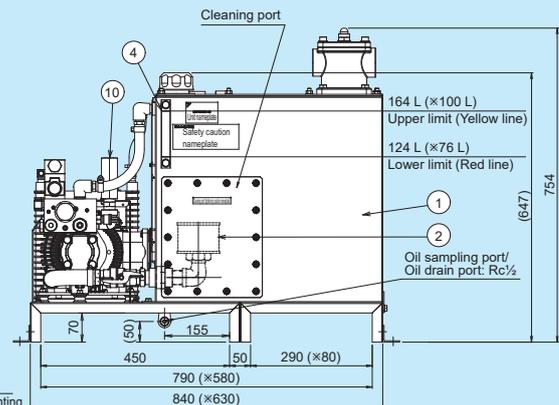
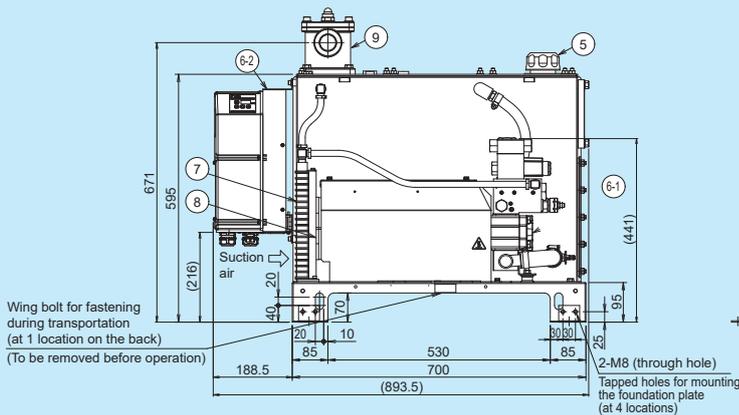
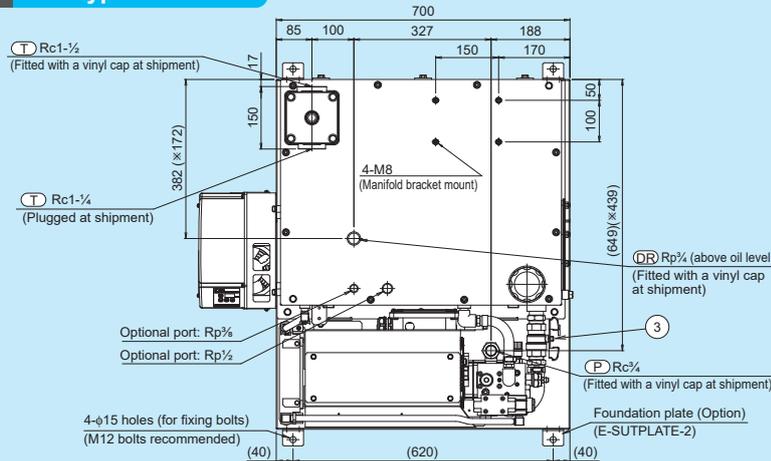
Part No.	Name	Quantity
1-1	Motor pump incorporating an IPM motor	1
1-2	Controller	1
2	AC fan	1
3	Base	1
4	Check valve	1



Unit type

SUT10D8021-30 SUT16D8021-30

Part No.	Name	Quantity
1	Oil tank	1
2	Suction strainer	1
3	Stop valve	1
4	Oil level gauge	1
5	Oil filler port-cum-air breather	1
6-1	Motor pump incorporating an IPM motor	1
6-2	Controller	1
7	Oil cooler	1
8	AC fan	1
9	Return filter	1
10	Check valve	1



(*): Dimensions for SUT10D8021-30

21 MPa

80 L/min

Super Unit

[Double pump type]

Maximum operating pressure

21 MPa

Maximum flow rate

110 L/min

Model code

SUT00D11021-40
P-SUT20D11KW-40

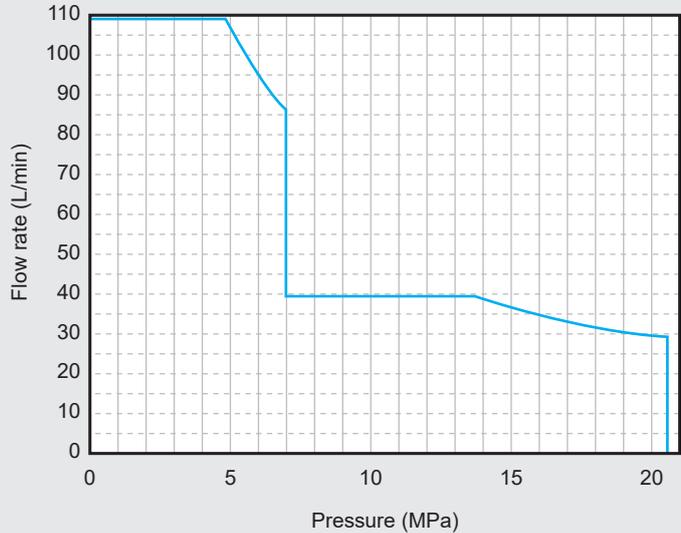


Motor pump type



Unit type

Pressure – Flow rate characteristics (Representative)



* The graph shows actual flow rates (representative values).

* Operating flow rate at the maximum pressure in continuous operation:
16 L/min maximum

Specifications

Model code		Motor pump type	Unit type
		SUT00D11021-40	P-SUT20D11KW-40
Pump unit	Maximum flow rate (theoretical value; L/min) *1	110 (110 for combination flow, 40.5 for independent flow)	
	Maximum operating pressure (MPa)	20.6	
	Operating flow rate adjustment range (L/min)	13.3 to 110	
	Operating pressure adjustment range (MPa)	1.5 to 20.6	
Motor capacity	Motor capacity (equivalent kW)	Equivalent to 11 kW	
Power supply	Motor pump/unit	3-phase, 200 V (50 Hz), 200 V (60 Hz), 220 V (60 Hz) (Permissible voltage fluctuation: ±10%)	
Rated current (A)	AC3 φ200V (50 Hz)	38.3	
	AC3 φ200V (60 Hz)	37.8	
	AC3 φ220V (60 Hz)	34.9	
Power source breaker setting (A)		75	
External input signal		5 channels Photo-coupler insulation, DC 24 V (DC 27 V maximum), 5 mA/channel	
External output signal	Digital output	2 channels, photo coupler insulation, FET output, DC 24 V, 50 mA maximum per channel	
	Contact output	1 channel (1 common contact), dry contact Contact capacity: DC 30 V, 0.5 A (resistance load)	
Mass (kg)		112	360
Operating conditions	Usable oil *2	Special mineral-oil base 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 • Volumetric water content: 0.1% maximum	
	Operating hydraulic oil temperature (in tank)	0 to 60°C (Recommended operating temperature range: 15 to 50°C)	
	Operating ambient temperature	0 to 40°C	
	Storage ambient temperature	-20 to 60°C	
	Operating ambient humidity	85% RH max. (no condensation)	
	Installation site	Indoors (Be sure to secure the unit with bolts.)	
Others		<ul style="list-style-type: none"> • Be sure to connect a circuit breaker for all (three) poles and the earth leakage breaker. • Make sure that the electrical wiring meets the requirements of European Standard EN60204-1. • Frequent turning this unit's power supply ON/OFF will considerably shorten the control unit's service life. To start or stop the unit at 8-minute or shorter intervals, use the unit's control stop function. • Be sure to connect the ground terminal. 	
Tank capacity (L)		-	200
Standard coating color		Ivory white (Munsell code 5Y7.5/1)	

Note) *1: The pump flow rate has been factory-set to the maximum discharge rate. The maximum discharge rate given in the table above is a theoretical value, not a guaranteed value.

*2: Consult Daikin about the use of hydraulic oils other than mineral-oil base type (e.g. hydrous/synthetic) such as water-glycol hydraulic oil. Keep the contamination level of the hydraulic fluid within NAS contamination class 10 for operating pressures of 7 MPa or lower.

*3: The unit incorporates a safety valve.

*4: When selecting a Super Unit, refer to "Pressure-Flow rate characteristics and how to select a unit" on Page 49.

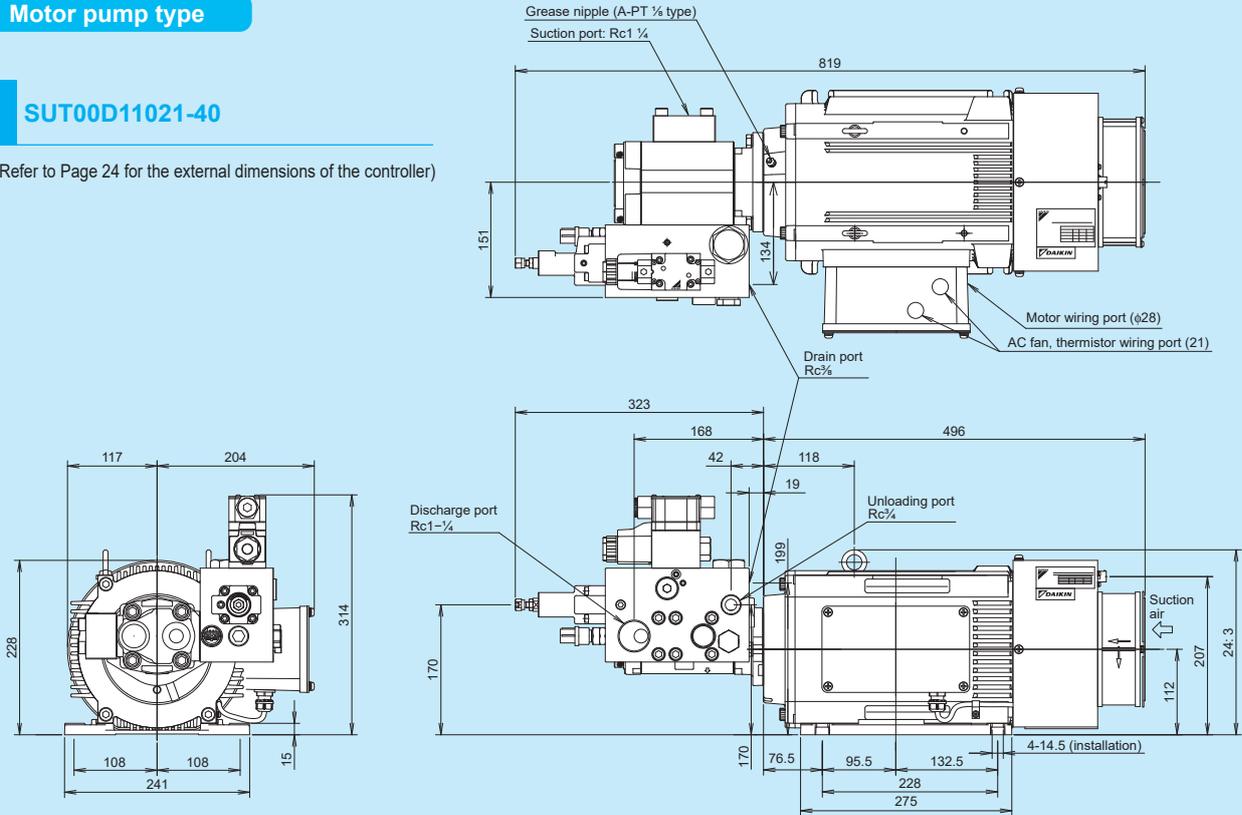
For the purpose of making improvements, the specifications given in catalogs are subject to change without prior notice. Be sure to refer to the latest outside drawing.

External Dimension Diagram

Motor pump type

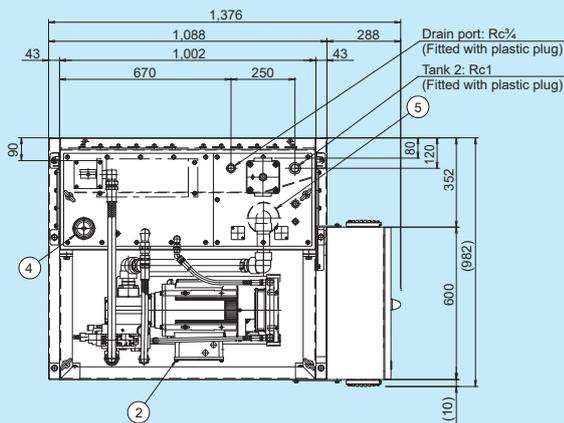
SUT00D11021-40

(Refer to Page 24 for the external dimensions of the controller)

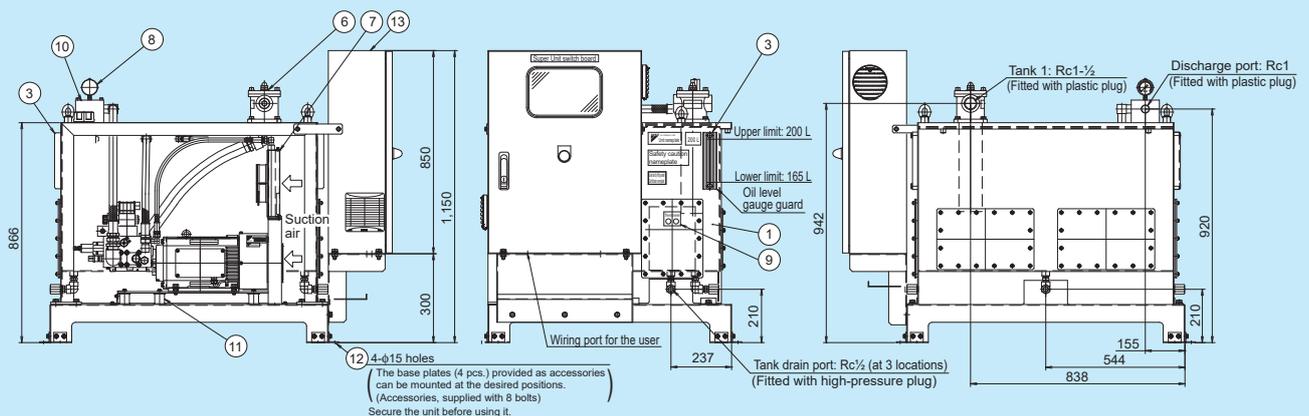


Unit type

P-SUT20D11KW-40



Part No.	Name	Quantity
1	Oil tank	1
2	Motor pump	1
3	Oil level gauge	2
4	Oil filler port-cum-air breather	1
5	Suction strainer	1
6	Return filter	1
7	Oil cooler	1
8	Pressure gauge	1
9	Thermometer	1
10	Outlet block	1
11	Vibration-absorbing rubber	6
12	Foundation plate	1
13	Electrical cabinet	1

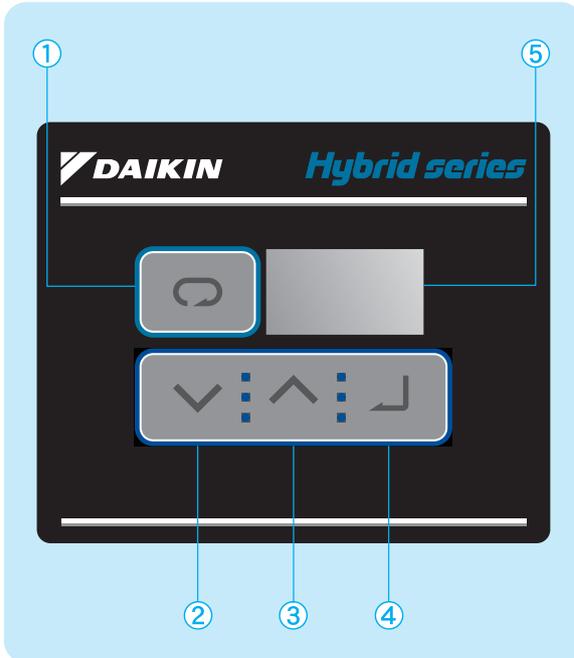


Operation Panel

Part names, functions, and the operation

Using the key switches on the Super Unit controller, you can monitor the pressure and flow rate and set or change parameters.

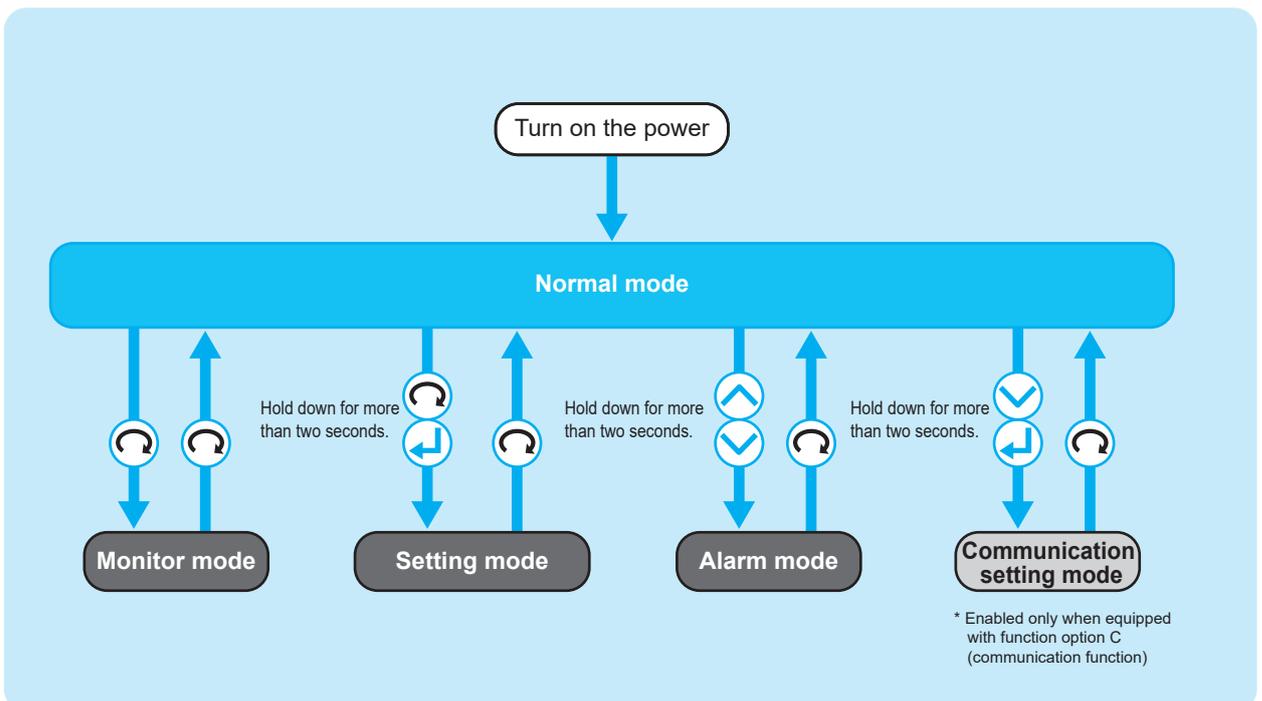
Outline of Functions



NO.	Item	Description
①	[MODE] key	Selects the operation mode.
②	[DOWN] key	Decrements a value set for the operation mode/monitor mode/data.
③	[UP] key	Increments a value set for the operation mode/monitor mode/data.
④	[ENT] key	Confirms the edited operation mode/monitor mode/data.
⑤	Data display	<p>Normal mode: Displays the actual pressure or alarm code.</p> <p>Monitor mode: Displays the pressure switch setting, each pressure setting, each flow rate setting, the actual flow rate, or the actual rotation speed.</p> <p>Setting mode: Set or change the pressure, flow rate, or other parameters.</p> <p>Alarm mode: Check the alarm history.</p> <p>Communication setting mode: Change communication settings.</p>

Mode selection

To go to the monitor mode or return to the normal mode from other modes, press the [MODE] key. To go to other modes, press and hold down a combination of relevant keys for 2 seconds.



Monitor mode

The following items can be checked in the monitor mode.

Item No.	Name	Unit	Description
n00 *1	Pressure switch setting	MPa ×10PSI	[When the PSI unit is selected: ×10 PSI] Displays the pressure switch setting.
n01 *1	Pressure setting	MPa ×10PSI	[When the PSI unit is selected: ×10 PSI] Alternately displays the high (single flow) and low (combination flow) pressure settings for the current P-Q selection number.
n02	Flow rate setting	L/min	Alternately displays the high (single flow) and low (combination flow) flow rate settings for the current P-Q selection number.
n03	Flow rate	L/min	Displays the current flow rate (theoretical value).
n04 *2	Latest alarm code	—	Displays the alarm code of the alarm that occurred most recently. The current power ON count can be checked by pressing the  key. Press the  key to check how many times the power has been turned on so far.
n05	Motor rotation speed	×10min ⁻¹	Displays the current rotation speed of the motor.
n06	Operation status	—	[SUT××D] Displays the solenoid valve switching status: "Low pressure [L]" (combination flow) or "High pressure [H]"(single flow), and the P-Q selection number. Example:  Combination flow (low pressure) - P-Q selection No. 1 [SUT××S] Displays the low pressure status [L] and P-Q selection number or the selected P-Q selection number only. Example:  Combination flow (low pressure) - P-Q selection No. 1 Example:  P-Q selection No. 2
n07	Reverse rotations at power OFF	min ⁻¹	Displays the total number of rotations of the motor when it rotates in the reverse direction due to reverse flow from the load when the power supply for the unit is turned OFF. This value is used to estimate the machine load volume.
n08	Regenerative load integration ratio	%	Displays the regenerative load integration ratio of the current regenerative braking resistance.
n10	Motor temperature	°C	Displays the temperature of the motor.
n11	Heat emission fin temperature	°C	Displays the temperature of the heat emission fins of the controller.
n12	Main circuit DC voltage	V	Displays the controller's internal circuit voltage. The indicated voltage is a value equivalent to "power supply voltage $\sqrt{2}$ ". The main circuit voltage may vary depending on the operating conditions and momentarily exceed 350 V due to a regenerative current during deceleration and other operations. However, this is not abnormal.
n13 *3	Pressure command	—	Displays the input voltage at analog input terminal AIN1.
n14 *3	Flow rate command		Displays the input voltage at analog input terminal AIN2.
n15 *3	Actual pressure		Displays the output voltage at analog output terminal AO1.
n16 *3	Actual flow rate		Displays the output voltage at analog output terminal AO2.

*1: The default setting is displayed in MPa (standard display unit). If you change the display unit to PSI, ensure that you indicate in some manner that the monitor value is displayed using the PSI unit (attach a label, etc). However, use of the PSI unit in Japan is subject to punishment under the Measurement Law. Users should supply their own unit indication labels.

*2: You can check the current power ON count by pressing the  key when an alarm code is displayed. For details on alarm codes, refer to the alarm descriptions in the Operation Manual.

*3: Enabled only when equipped with function option P (analog input function)

Setting mode

The following data can be set in the setting mode.

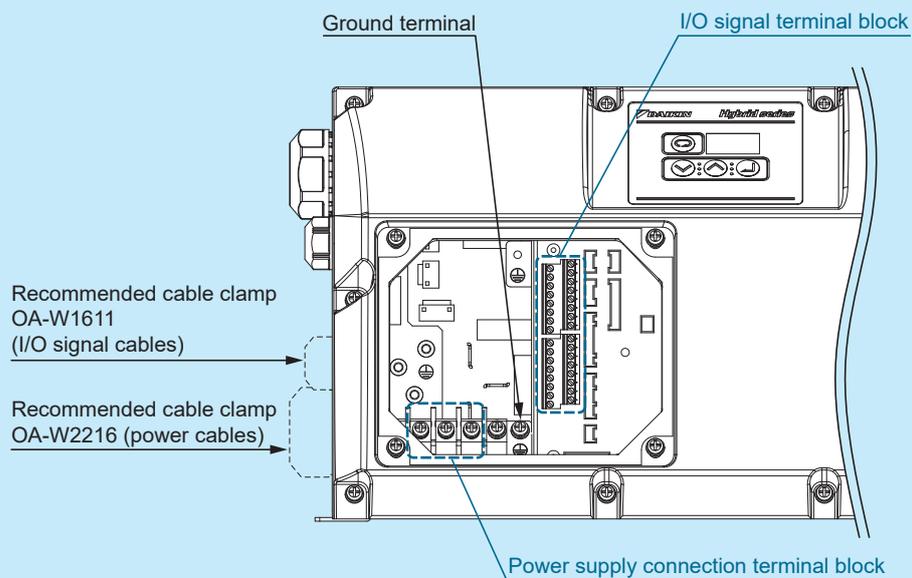
For details on the settings, refer to the Operation Manual of the relevant model since they vary depending on the model.

- The pressure, flow rate, acceleration time, deceleration time, etc., to be set for multi-stage pressure/flow rate control
- Enable/disable setting of pressure switch functions
- Display unit selection
- Dry run judging pressure, time, etc.
- Various control gains

Power supply and I/O signal cables

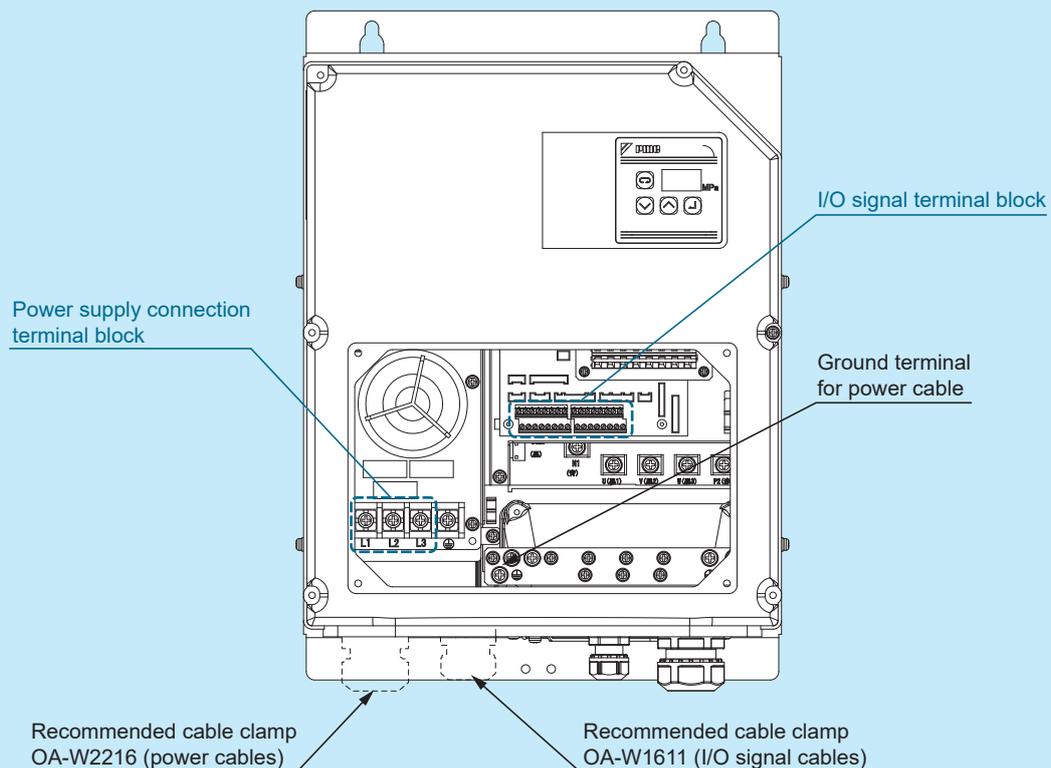
SUT**S1507-30, SUT**S3007-30, SUT**S1510-30
 SUT**S4007-30, SUT**S6007-30, SUT**S3010-30
 SUT**S1516-30, SUT**S3016-30
 SUT**D4016-30, SUT**D6021-30

Internal terminal layout (with the controller cover open)



SUT**S8007-30, SUT**D8021-30

Internal terminal layout (with the controller cover open)



* Main power supply connections: Connect a 3-phase AC power supply (200 V/50 Hz, 200 V/60 Hz, or 220 V/60 Hz) to the power supply terminals (L1, L2 and L3), and connect a ground cable to the ground terminal.

* I/O signal connections: Connect digital input terminals, digital output terminals, and contact output terminals as shown on Page 42.

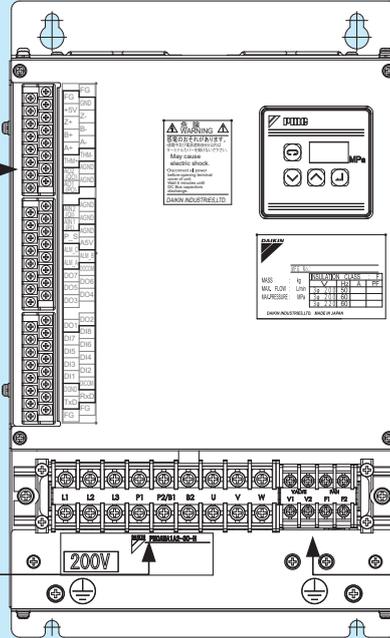
SUT00S11007-40, SUT00D11021-40, P-SUT20D11KW-40

User I/O terminal block (M3)

- Encoder
- Motor thermistor
- Pressure sensor
- I/O signal

Main power supply terminal block (M5)

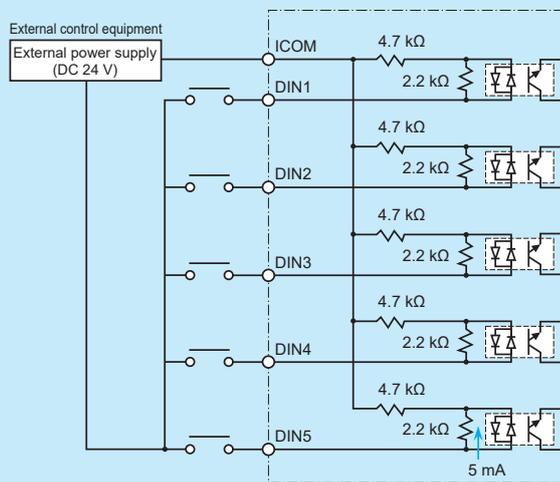
- Main power supply
- DC reactor
- Regenerative resistor
- Motor output



Solenoid valve terminal block (M4)

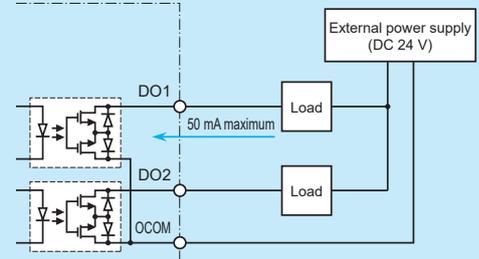
- Solenoid valve power supply
- AC fan power supply

Digital input signal



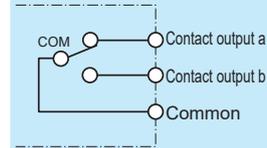
- * The digital input common terminal can be either positive or negative.
- * Prepare an external power supply (DC 24 V ± 1 V, 0.5 A or more).
- * The current of the input circuit is 5 mA per channel.

Digital output signal



- * The digital output common terminal can be either positive or negative.
- * Prepare an external power supply (DC 24 V ± 1 V, 0.5 A or more).
- * The maximum output current of the output circuit is 50 mA per channel.

Contact output signal

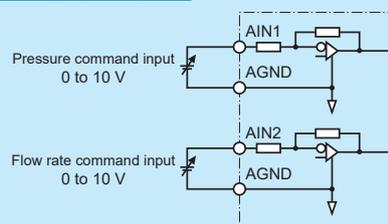


(The above figure shows the normal status of the relay contacts.)

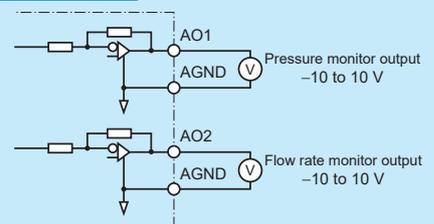
- * The switching capacity of the contact output is DC 30 V, 0.5 A (at resistance load).
- * The minimum applicable load of the contact output is DC 10 mV, 10 μA, but this is only a guide to the lower limit where switching is possible with a minute load. The value varies depending on the switching frequency, environmental conditions, etc., so it is advisable to check the actual value.

Enabled when equipped with function option P (analog input function)

Analog input signal



Analog output signal



Harness specifications(to be prepared by the customer)

The harnesses that need to be prepared by the customer are as follows.

Model code	Power supply cable				I/O signal cable		
	Cable size	Recommended cable	Recommended crimp terminal	Recommended cable clamp	Cable size	Recommended cable	Recommended cable clamp
SUT××S1507	2.5 mm ² or more (AWG14 or larger size)	CE362 2.5 mm ² × 4 wires (KURAMO ELECTRIC)	RBV2-4	OA-W2213 (OHM ELECTRIC) Applicable cable outer diameter: φ9 to φ13	0.3 to 0.5 mm ² (AWG20 to 22)		
SUT××S3007							
SUT××S1510							
SUT××S3010							
SUT××S1516							
SUT××S3016							
SUT××S6007	4.0 mm ² or more (AWG12 or larger size)	CE362 4.0 mm ² × 4 wires (KURAMO ELECTRIC)	RBV5.5-4	OA-W2216 (OHM ELECTRIC) Applicable cable outer diameter: φ13 to φ16			
SUT××S8007	6.0 mm ² or more (AWG10 or larger size)	CE362 6.0 mm ² × 4 wires (KURAMO ELECTRIC)	RBV5.5-5	OA-W2219 (OHM ELECTRIC) Applicable cable outer diameter: φ15 to φ19	0.3 to 1.0 mm ² (AWG16 to 22)	KVC-36SB 0.3 - 0.5 mm ²	OA-W1611 (OHM ELECTRIC) Applicable cable outer diameter: φ9 to φ11
SUT××D4016	2.5 mm ² or more (AWG14 or larger size)	CE362 2.5 mm ² × 4 wires (KURAMO ELECTRIC)	RBV2-4	OA-W2216 (OHM ELECTRIC) Applicable cable outer diameter: φ13 to φ16	0.3 to 0.5 mm ² (AWG20 to 22)		
SUT××D6021	4.0 mm ² or more (AWG12 or larger size)	CE362 4.0 mm ² × 4 wires (KURAMO ELECTRIC)	RBV5.5-5	OA-W2216 (OHM ELECTRIC) Applicable cable outer diameter: φ13 to φ16			
SUT××D8021	6.0 mm ² or more (AWG10 or larger size)	CE362 6.0 mm ² × 4 wires (KURAMO ELECTRIC)		OA-W2219 (OHM ELECTRIC) Applicable cable outer diameter: φ15 to φ19	0.3 to 1.0 mm ² (AWG16 to 22)		
SUT00S11007	10 mm ² or more	CE362 10.0 mm ² × 4 wires (KURAMO ELECTRIC)	R8-5	—	0.3 to 0.5 mm ² (AWG20 to 22)		—
SUT00D11021							

Model code	Power supply cable for solenoid valve output	
	Recommended cable	Recommended crimp terminal
SUT00S11007 SUT00D11021	CE362 0.5 mm ² × 3 wires (KURAMO ELECTRIC)	(Controller side) RBA1.25-4 (Solenoid valve side) RBA1.25-3

Model code	Motor cable		AC fan power supply cable		Motor thermistor harness	
	Recommended cable	Recommended crimp terminal	Recommended cable	Recommended crimp terminal	Recommended cable	Recommended crimp terminal
SUT00S11007 SUT00D11021	CE362 10 mm ² × 4 wires (KURAMO ELECTRIC)	(Controller side) R8-5 (Motor side) R8-6	CE362 0.5 mm ² × 3 wires (KURAMO ELECTRIC)	(Controller side) RBA1.25-3	KVC-36SB 0.3 to 0.5 mm ² (KURAMO ELECTRIC)	(Controller side) RBA1.25-3 (Motor side) RBA1.25-3.5

Harness specifications (options for SUT00S11007/SUT00D11021)

The encoder harness and pressure sensor harness for SUT00S11007/SUT00D11021 are options and can be ordered separately.

If preparing your own harnesses, make the harness length no greater than 5 m.

Name	Super Unit Design No.	Model code	Terminal specifications		Cable specifications			Ferrite core/ Ring core (recommended)
			SUT unit	Controller side	Cable type	Cable gauge	Cable length	
Encoder harness	10, 20, 30, 40	PM-SEH05-P22-A09R	Contact 170366-1 Housing 172169-1 (All manufactured by AMP)	Round terminal with a vinyl insulation sheath (PBA1.25-3) (Manufactured by JST)	KVC-36SB (KURAMO ELECTRIC)	AWG22 (0.3 mm ²)	5 m	Not required
Pressure sensor harness	10, 20	PM-SPH05 (with a ferrite core)	Contact 171630-1 Rubber cap 172746-1 Housing 174357-2 Double lock plate 1-174358-1	Round terminal with a vinyl insulation sheath (PBA1.25-3)	KVC-36SB (KURAMO ELECTRIC)	AWG20 (0.5 mm ²)	5 m	Ferrite core TFCM-16-8-16 (Kitagawa Industries) or equivalent
	30	PM-SPH05-003 (with a ring core)	(All manufactured by AMP)	(Manufactured by JST)				Ring core Equivalent to R-47/27/15 (A) MA055 (JFE)

Options (Separately available parts)

Unit accessory

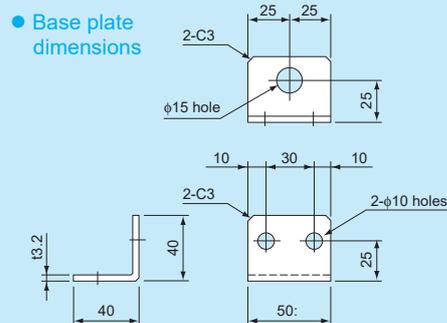
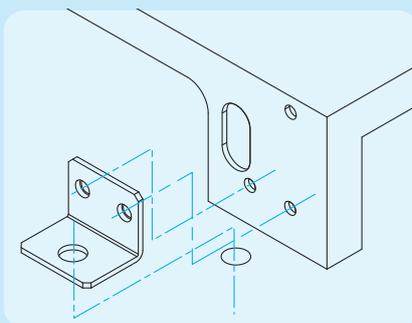
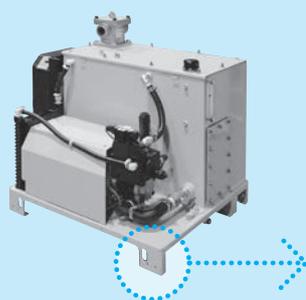
The following optional parts can be purchased separately from the Super Unit. These parts are to be mounted by the user.

■ Base plate set

These parts are used to fasten the Super Unit to a floor surface. The bolts for mounting the unit to the floor should be prepared by the user.

Model code	Applicable model		Color	Accessories
	Unit type: Single pump type	Unit type: Double pump type		
E-SUTPLATE-2	SUT03S1507-30 SUT03S3007-30 SUT06S6007-30 SUT10S8007-30 SUT03S1510-30 SUT03S3010-30 SUT03S1516-30 SUT03S4007-30 SUT06S3016-30	SUT06D4016-30 SUT06D6021-30 SUT10D6021-30 SUT10D8021-30 SUT16D8021-30	Ivory white (Munsell code 5Y7.5/1)	(1) Base plate (4 pcs) (2) Tank fastening bolt (8 pcs) (3) Plain and spring washers for the above parts (8 pcs each)

Example of installation



■ Level switch

Model code	Operating voltage	Operating current	Contact resistance	Protection class	Oil level triggering alarms	CE standard
E-DLSN-130L-A-10	AC 100/110 V DC 24 V	0.02 A 0.05 A	1 Ω maximum	IP65	SUT03 (with 30 L tank) 21 L maximum Closed	N/A
E-DLSN-130L-B-10					SUT06 (with 60 L tank) 50 L maximum Closed	
E-DLSN-170L-A-10					SUT10 (with 100 L tank) 83 L maximum Closed	
E-DLSN-170L-B-10					SUT16 (with 160 L tank) 135 L maximum Closed	
					SUT03 (with 30 L tank) 21 L maximum Open	
					SUT06 (with 60 L tank) 50 L maximum Open	
					SUT10 (with 100 L tank) 83 L maximum Open	
					SUT16 (with 160 L tank) 135 L maximum Open	
					SUT06 (with 60 L tank) 45 L maximum Closed	
					SUT10 (with 100 L tank) 75 L maximum Closed	
					SUT16 (with 160 L tank) 123 L maximum Closed	
					SUT06 (with 60 L tank) 45 L maximum Open	
					SUT10 (with 100 L tank) 75 L maximum Open	
					SUT16 (with 160 L tank) 123 L maximum Open	

* Directly mountable on the Rc1/2 option port on the top face of each tank.

■ Temperature switch

Model code	Operating voltage	Operating current	Contact resistance	Protection class	Oil level triggering alarms	CE standard
E-MQT83PD-L60X1-10	AC 100 V DC 24 V	2 A 50 mA	30 mΩ maximum	IP65	60°C	N/A

* Directly mountable on the Rc3/8 option port on the top face of each tank.

■ Thermometer

Model code	Thermometer specification	Temperature indication range	Size
E-RBT-100-200L	Bimetal type	0 to 100°C	φ45

■ Micro separator

Model code	Size
E-MSB-110	110 × 60 × 30

Bracket/Piping Set for Manifolds

In order to install a control system on the Super Unit, select a bracket and piping set for the manifold according to the control system's size and number of series. Please prepare a manifold block separately.

Super Unit			Installation of 02 Size Control Systems		
Model code	Tank capacity	Return filter	Manifold bracket	Piping set	
			Model code	Model code	Part Configuration
SUT03S1507-30	30 L	Not provided	E-SUT03BASE-402 (Maximum installable series : 4) [Mountable manifold blocks] BT-102-50 (1 series) to BT-402-50 (4 series) or BT-102-50-140 (1 series) to BT-402-50-140 (4 series)	E-SUT03S1507N-PIPE-02	①
SUT03S1510-30				E-SUT03S1510N-PIPE-02	
SUT03S1516-30				E-SUT03S1516N-PIPE-02	
SUT03S3007-30				E-SUT03S3007N-PIPE-02	
SUT03S3010-30				E-SUT03S3010N-PIPE-02	
SUT03S4007-30				E-SUT03S4007N-PIPE-02	
SUT06S3016-30	60 L	Provided	E-SUT06BASE-302 (Maximum installable series : 3) [Mountable manifold blocks] BT-102-50 (1 series) to BT-302-50 (3 series) or BT-102-50-140 (1 series) to BT-302-50-140 (3 series)	E-SUT06S3016F-PIPE-02	②
SUT06S6007-30				E-SUT06S6007F-PIPE-02	③
SUT06D4016-30				E-SUT06D4016F-PIPE-02	
SUT06D6021-30				E-SUT06D6021F-PIPE-02	
SUT10D6021-30	100 L	Provided	E-SUT06BASE-602 (Maximum installable series : 6) [Mountable manifold blocks] BT-102-50 (1 series) to BT-602-50 (6 series) or BT-102-50-140 (1 series) to BT-602-50-140 (6 series)	E-SUT10D6021F-PIPE-02	
SUT10S8007-30				E-SUT10S8007F-PIPE-02	
SUT10D8021-30				E-SUT10D8021F-PIPE-02	
SUT16D8021-30				E-SUT16D8021F-PIPE-02	

Super Unit			Installation of 03 Size Control Systems		
Model code	Tank capacity	Return filter	Manifold bracket	Piping set	
			Model code	Model code	Part Configuration
SUT03S1507-30	30 L	Not provided	E-SUT03BASE-203 (Maximum installable series : 2) [Mountable manifold blocks] BT-103-40 (1 series), BT-203-40 (2 series)	E-SUT03S1507N-PIPE-03	①
SUT03S1510-30				E-SUT03S1510N-PIPE-03	
SUT03S1516-30				E-SUT03S1516N-PIPE-03	
SUT03S3007-30				E-SUT03S3007N-PIPE-03	
SUT03S3010-30				E-SUT03S3010N-PIPE-03	
SUT03S4007-30				E-SUT03S4007N-PIPE-03	
SUT06S3016-30	60 L	Provided	E-SUT06BASE-203 (Maximum installable series : 2) [Mountable manifold blocks] BT-103-40 (1 series), BT-203-40 (2 series)	E-SUT06S3016F-PIPE-03	②
SUT06S6007-30				E-SUT06S6007F-PIPE-03	③
SUT06D4016-30				E-SUT06D4016F-PIPE-03	④
SUT06D6021-30				E-SUT06D6021F-PIPE-03	⑤
SUT10D6021-30	E-SUT10D6021F-PIPE-03				
SUT10S8007-30	E-SUT10S8007F-PIPE-03				
SUT10D8021-30	E-SUT10D8021F-PIPE-03				
SUT16D8021-30	160 L	Provided	E-SUT06BASE-403 (Maximum installable series : 4) [Mountable manifold blocks] BT-103-40 (1 series), BT-403-40 (4 series)	E-SUT16D8021F-PIPE-03	

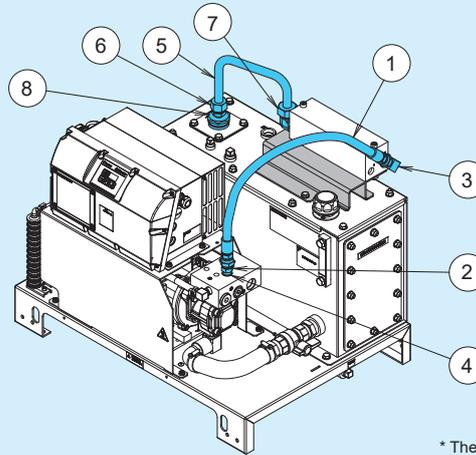
Component parts

Manifold bracket

Model code	Maximum installable series	Accessories	
E-SUT03BASE-402	4-series	<ul style="list-style-type: none"> Bracket body 1 pc. Hexagon bolt (M8 × 16) 4 pcs. Flat washer (M8) 4 pcs. 	Hexagon socket head cap bolt for mounting manifold (M8 × 85) 2 pcs.
E-SUT06BASE-302	3-series		
E-SUT06BASE-602	6-series		Hexagon socket head cap bolt for mounting manifold (M8 × 105) 4 pcs.
E-SUT03BASE-203	2-series		
E-SUT06BASE-203	2-series		
E-SUT06BASE-403	4-series		

● Piping set

Part Configuration 1



* The external shape differs depending on the model.

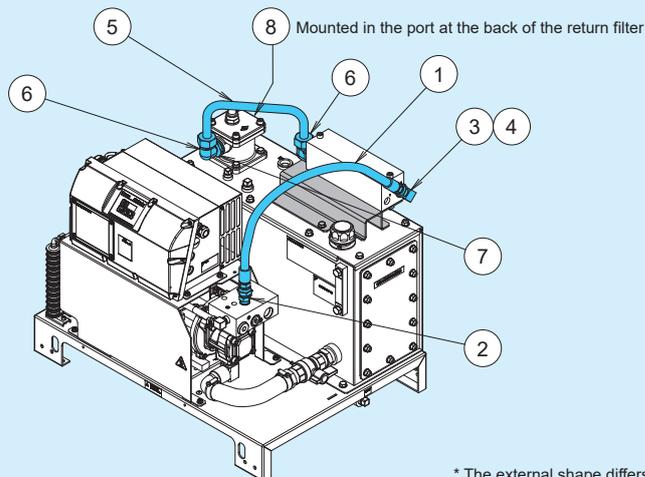
● For installing 02 size control systems

Model code	Name	Quantity	Tightening torque (N·m)
E-SUT03S1507N-PIPE-02 E-SUT03S1510N-PIPE-02 E-SUT03S1516N-PIPE-02 E-SUT03S3007N-PIPE-02 E-SUT03S3010N-PIPE-02	1 Hydraulic hose	1	54.0 to 66.0
	2 Hose adaptor (straight)	1	43.0 to 47.5
	3 Hose adaptor (elbow)	1	43.0 to 47.5
	4 —	—	—
	5 Steel pipe	1	100.0 to 120.0
	6 Steel piping joint (straight)	1	28.5 to 33.0
	7 Steel piping joint (elbow)	1	28.5 to 33.0
	8 Bushing	1	95.0 to 110.0
	9 Installation guide	1	—
E-SUT03S4007N-PIPE-02	1 Hydraulic hose	1	54.0 to 66.0
	2 Hose adaptor (straight)	1	64.0 to 70.0
	3 Hose adaptor (elbow)	1	43.0 to 47.5
	4 —	—	—
	5 Steel pipe	1	100.0 to 120.0
	6 Steel piping joint (straight)	1	28.5 to 33.0
	7 Steel piping joint (elbow)	1	28.5 to 33.0
	8 Bushing	1	95.0 to 110.0
	9 Installation guide	1	—

● For installing 03 size control systems

Model code	Name	Quantity	Tightening torque (N·m)
E-SUT03S1507N-PIPE-03 E-SUT03S1510N-PIPE-03 E-SUT03S1516N-PIPE-03 E-SUT03S3007N-PIPE-03 E-SUT03S3010N-PIPE-03	1 Hydraulic hose	1	54.0 to 66.0
	2 Hose adaptor (straight)	1	43.0 to 47.5
	3 Hose adaptor (elbow)	1	64.0 to 70.0
	4 Bushing	1	110.0 to 120.0
	5 Steel pipe	1	247.0 to 286.0
	6 Steel piping joint (straight)	1	95.0 to 110.0
	7 Steel piping joint (elbow)	1	57.0 to 66.0
	8 —	—	—
	9 Installation guide	1	—
E-SUT03S4007N-PIPE-03	1 Hydraulic hose	1	108.0 to 132.0
	2 Hose adaptor (straight)	1	64.0 to 70.0
	3 Hose adaptor (elbow)	1	110.0 to 120.0
	4 —	—	—
	5 Steel pipe	1	247.0 to 286.0
	6 Steel piping joint (straight)	1	95.0 to 110.0
	7 Steel piping joint (elbow)	1	57.0 to 66.0
	8 —	—	—
	9 Installation guide	1	—

Part Configuration 2



* The external shape differs depending on the model.

● For installing 02 size control systems

Model code	Name	Quantity	Tightening torque (N·m)
E-SUT06S3016F-PIPE-02	1 Hydraulic hose	1	54.0 to 66.0
	2 Hose adaptor (straight)	1	43.0 to 47.5
	3 Hose adaptor (elbow)	1	43.0 to 47.5
	4 —	—	—
	5 Steel pipe	1	100.0 to 120.0
	6 Steel piping joint (elbow)	2	28.5 to 33.0
	7 Bushing	1	57.0 to 66.0
	8 Plug	1	95.0 to 110.0
	9 Installation guide	1	—

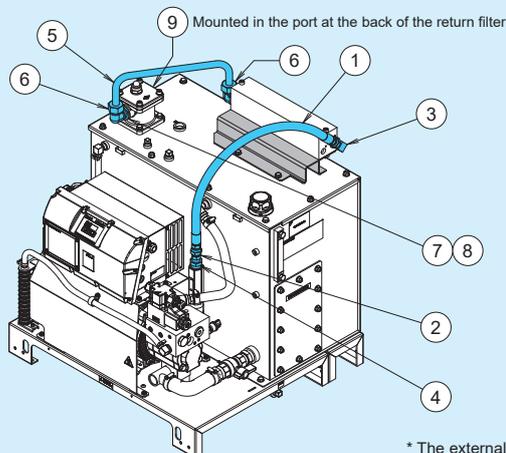
● For installing 03 size control systems

Model code	Name	Quantity	Tightening torque (N·m)
E-SUT06S3016F-PIPE-03	1 Hydraulic hose	1	54.0 to 66.0
	2 Hose adaptor (straight)	1	43.0 to 47.5
	3 Hose adaptor (elbow)	1	64.0 to 70.0
	4 Bushing	1	110.0 to 120.0
	5 Steel pipe	1	247.0 to 286.0
	6 Steel piping joint (elbow)	2	95.0 to 110.0
	7 —	—	—
	8 Plug	1	95.0 to 110.0
	9 Installation guide	1	—

Options
(Separately available parts)

• Piping set

Part Configuration 3



* The external shape differs depending on the model.

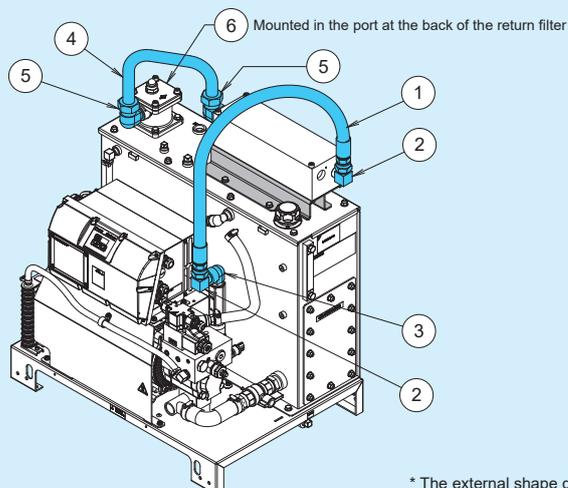
• For installing 02 size control systems

Model code	Name	Quantity	Tightening torque (N·m)	
E-SUT06S6007F-PIPE-02 E-SUT06D4016F-PIPE-02 E-SUT06D6021F-PIPE-02 E-SUT10D6021F-PIPE-02	1	Hydraulic hose	1 54.0 to 66.0	
	2	Hose adaptor (straight)	1 64.0 to 70.0	
	3	Hose adaptor (elbow)	1 43.0 to 47.5	
	4	High-pressure bushing	1 110.0 to 120.0	
	5	Steel pipe	1 100.0 to 120.0	
	6	Steel piping joint (elbow)	2 28.5 to 33.0	
	7	Low-pressure bushing	1 57.0 to 66.0	
	8	—	—	—
	9	Plug	1 95.0 to 110.0	
	10	Installation guide	1 —	—
E-SUT10S8007F-PIPE-02 E-SUT10D8021F-PIPE-02 E-SUT16D8021F-PIPE-02	1	Hydraulic hose	1 54.0 to 66.0	
	2	Hose adaptor (straight)	1 43.0 to 47.5	
	3	Hose adaptor (elbow)	1 43.0 to 47.5	
	4	High-pressure bushing	1 110.0 to 120.0	
	5	Steel pipe	1 100.0 to 120.0	
	6	Steel piping joint (elbow)	2 28.5 to 33.0	
	7	Low-pressure bushing (small)	1 57.0 to 66.0	
	8	Low-pressure bushing (large)	1 114.0 to 132.0	
	9	Plug	1 142.5 to 165.0	
	10	Installation guide	1 —	—

• For installing 03 size control systems

Model code	Name	Quantity	Tightening torque (N·m)	
E-SUT06S6007F-PIPE-03 E-SUT10D6021F-PIPE-03	1	Hydraulic hose	1 108.0 to 132.0	
	2	Hose adaptor (straight)	1 110.0 to 120.0	
	3	Hose adaptor (elbow)	1 110.0 to 120.0	
	4	—	—	—
	5	Steel pipe	1 247.0 to 286.0	
	6	Steel piping joint (elbow)	2 57.0 to 66.0	
	7	—	—	—
	8	—	—	—
	9	Plug	1 95.0 to 110.0	
	10	Installation guide	1 —	—
E-SUT10S8007F-PIPE-03 E-SUT10D8021F-PIPE-03 E-SUT16D8021F-PIPE-03	1	Hydraulic hose	1 108.0 to 132.0	
	2	Hose adaptor (straight)	1 110.0 to 120.0	
	3	Hose adaptor (elbow)	1 110.0 to 120.0	
	4	—	—	—
	5	Steel pipe	1 247.0 to 286.0	
	6	Steel piping joint (elbow)	2 57.0 to 66.0	
	7	Bushing	1 114.0 to 132.0	
	8	—	—	—
	9	Plug	1 142.5 to 165.0	
	10	Installation guide	1 —	—

Part Configuration 4



* The external shape differs depending on the model.

• For installing 03 size control systems

Model code	Name	Quantity	Tightening torque (N·m)
E-SUT06D4016F-PIPE-03 E-SUT06D6021F-PIPE-03	1	Hydraulic hose	1 108.0 to 132.0
	2	Hose adaptor (elbow)	2 110.0 to 120.0
	3	Female-male elbow	1 110.0 to 120.0
	4	Steel pipe	1 247.0 to 286.0
	5	Steel piping joint (elbow)	2 57.0 to 66.0
	6	Plug	1 95.0 to 110.0
	7	Installation guide	1 —

Memo

A large rectangular area with a light gray background and horizontal dashed lines, intended for handwritten notes.

Options
(Separately available parts)

Method of Selection

How to Select a Super Unit

How to Select a SUPER UNIT

- Determine the cylinder that requires the maximum pressure and flow rate.
- To operate several cylinders simultaneously, calculate the pump discharge rate required for each circuit. Refer to (6) below.

- Calculation of cylinder output (see the calculation formula for each load)
Calculate the force F (N) required for the cylinder.
- Calculation of the required pressure (P_u) of the cylinder ($P_u = F/A$)
Based on the force (F) and pressurized area (A), calculate the net pressure (P_u ; MPa) required for the cylinder.
- Calculation of the required pressure (P_p) of the pump ($P_p = P_u + \Delta P$)
Calculate the pressure P_p (MPa) required for the pump by adding the total pressure loss P to the pressure (P_u) required for the cylinder.
- Calculation of the net required discharge rate (Q_c) of the cylinder ($Q_c = A \times V \times 0.06$)
Based on the cylinder speed (V) and pressurized area (A), calculate the net discharge rate (Q_c ; L/min) of the cylinder.
- Calculation of the required discharge rate (Q_p) of the pump
Add the flow rate loss to the net discharge rate (Q_c) of the cylinder.
- Total required discharge rate (Q_p) of the pump
Calculate the maximum required discharge rate of the pump by totaling the (Q_p) values of the cylinders to be simultaneously operated.

F : Load (N)
 A : Pressurized area of the cylinder (cm^2)
* The pressurized area varies depending on the specifications of the hydraulic cylinder.

ΔP : Valve pressure loss + Piping pressure loss (MPa)

V : Speed (cm/sec)

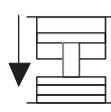
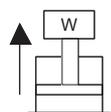
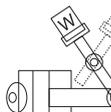
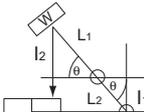
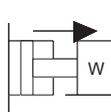
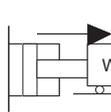
g_1 : Flow rate loss (L/min)
Set the flow rate loss according to (1) the pressure reducing valve type, and (2) the pressure reducing valve diameter.

- Based on the maximum required pump pressure (P_p) and pump discharge rate (Q_p), select the Super Unit size.

By referring to the "Pressure – Flow Rate Characteristics" charts (on Pages 13 and 14), select a model such that the P_p and Q_p values of all cylinders fall within the P-Q curve.

(Reference) Load analysis (cylinder output)

Calculate the cylinder force (F_s) depending on the operation and load type.

Operation/Load type		Calculation of force (F_s)
A. Mechanical load	 <p>Load requiring a pushing or pulling force (Examples: pressing, forming, cutting, shearing)</p>	User-defined value (Generally specified in tons)
B. Load driven under its own weight load	 <p>Load driven by negative force in a cylinder pushing or pulling operation to move a driven target (e.g., table lifter) up/down.</p>	$F_s = W$ The required force is equal to the weight of the driven target.
C. Inverting load	 <p>Load whose direction of force changes (+ → -) (Examples: down ender, workpiece rotation)</p>	$F_s = l_1/l_2 \times W$ $l_1 = L_1 \times \cos\theta$ $l_2 = L_2 \times \cos\theta$ 
D. Resistance load	 <p>Load driven by positive sliding force in both forward and backward operation (Examples: pusher, table slide)</p>	$F_s = W \times \mu$ Friction coefficient Standard setting: 0.3 Other cases: user-defined value
E. Inertial load	 <p>Load driven by large inertial force in high-speed operation with a heavy object (Example: Coil car travel)</p>	$F_s = W \times \mu$ Friction coefficient Standard setting: 0.1 Other cases: user-defined value

The following are the minimum requirements for use of the Super Unit.
For details, refer to the unit's Instruction Manual.

● Ambient conditions

1. Ambient temperature: 0 to 40°C, ambient humidity: 85%RH maximum (with no condensation), altitude: 1,000 m maximum, to be used indoors

● Hydraulic oil

1. Use general petroleum hydraulic oil (R&O) or wear-resistant hydraulic oil.
If use of hydrous or synthetic oil is intended, consult Daikin.
2. Use hydraulic oil equivalent to ISO VG32 to 68 and operate the unit within an oil viscosity range from 15 to 400 mm²/s and a tank oil temperature 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, or NAS class 10 for 7 MPa or lower pressure.

● Installation and piping

1. This hydraulic unit mounts the motor pump using vibration-absorbing rubber to prevent pump vibration being transmitted to the unit. Use hoses for piping to the unit to provide flexibility.
2. The unit is a stationary type. Fix it with bolts on a level location that is free of vibration.
3. Keep obstacles that will obstruct air intake and emission at least 100 mm away from the end face of the unit.
Install the unit at a location with good air flow so that heated air can be vented.
4. Use hoses for piping to provide flexibility.
5. Before operating the unit, be sure to remove the wing bolt and spacer for protecting the rubber vibration isolator.
If you fail to do so, the noise and vibration may be excessive.
6. Be sure to secure the space required to access the unit during electrical wiring at the noise filter box or control unit side.

● Electric wiring

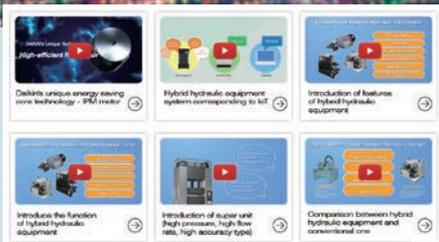
1. Install a no-fuse breaker and a ground fault interrupter compliant with European Standard EN60947-2 in the main power supply of this hydraulic unit, to protect the electrical circuits against shorting and overcurrent, and to prevent electric shocks.
2. Use suitable electric cable in accordance with the power supply capacity.
3. Be sure to provide a ground connection with a grounding resistance of 100 Ω maximum, and connect the grounding wire directly with no breaker in the line.
4. Take care not to leave waste metal such as screws and cutting chips, combustible matter such as wood waste or oil, or wiring debris inside the controller.
5. Use a commercial power supply for the power source. The use of an inverter power supply may cause burn damage to the unit.
6. Before accessing the interior of the controller, turn the unit's power supply OFF. Make sure that the circuit is turned OFF using the circuit breaker for the primary power supply, and then wait at least 5 minutes.

● Other precautions

1. If a failure occurs in the hydraulic unit, the system indicates an alarm and stops.
2. 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 used 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.
3. It takes approximately 3 seconds for this hydraulic unit to start up after being powered ON.
Depending on the piping conditions, the unit may take longer to increase the pressure to the pressure switch's preset level, resulting in pressure switch signal output. In this case, set the machine up so that it will not accept this alarm output during this period.
4. Do not turn the power OFF/ON with the main power breaker frequently. It may damage controller components.
(Use the "run/stop" digital input signals for frequent power OFF/ON control.)



[Official] Introducing a Video Site



We have opened a site where you can watch videos on the latest models of the DAIKIN Oil Hydraulics Division, including Super Unit, EcoRich, and oil cooling units, all in one place.

Everything from the energy-saving technology supporting hybrid products to the features and functions of each model is explained in an easy-to-understand manner.

By registering the page in the favorites on your computer or cell phone, you can find the latest information at your fingertips any time.



The site is also ready for smartphones and tablets!

URL <https://www.daikinpmc.com/en/mv/index.html>

Daikin Hydraulic

Search

DAIKIN INDUSTRIES, LTD.

Oil Hydraulic Equipment

Osaka Office

YODOGAWA PLANT

1-1, Nishi-Hitotsuya, Settsu, Osaka 566-8585, Japan

Phone: 81-6-6349-4475

Fax.: 81-6-6349-7862

Home Page: <https://www.daikinpmc.com/en/>