

Achievements and trusted in a wide range of fields

Energy and petroleum industry

Crude oil, Asphalt, Pitch, Surfactants, Emulsion fuel, Biofuel, Nuclear power, Various storage tanks, etc.

Coal industry

COM, CWM, Surfactants, etc.

Metal industry

Quenching tank, Heat resistant furnace material, Cooling water, Wire manufacturing, Aluminum hydroxide, Molten lead, Plating, etc.

Oil and fat industry

Soap, Animal and vegetable oil, Butter, Lard, Tallow, Margarine, Lubricant, Cooking oil, Various storage tanks, etc.

Synthetic resin industry

Vinyl chloride, Polyester, Adhesive, Cellulose, Plastic, Polypropylene, ABS resin, etc.

Dye industry

Colored powder, Titanium oxide, Viscose, Pigment, etc.

Paint industry

Ink, Paint, Solvent, etc.

Pharmaceutical industry

Dye, Perfume, Emulsion, Various medical products, Cosmetics, Synthetic medicines, etc.

Livestock agriculture industry

Fertilizer (Phosphoric acid, Potash, Ammonium sulfate, Lime) Feed, Ammonia, Insect repellent, Pesticide, etc.

Electronic industry

Ceramics, Magnetic iron powder, Iron oxide, Silicone, etc.

Rubber industry

Natural rubber, Synthetic rubber, Latex, Solvent, etc.

Textile industry

Acrylic fiber, Acetate, Nylon, Polyester, Vinylon, Solvent, Adhesive paste, etc.

Paper making industry

Pulp, Casein, Kaolin, Talc, Clay, Size, Aluminum sulfate, PVA, CMC, Black liquor, Green liquor, Paint, Rosin, Magnesium hydroxide, etc.

Ceramic engineering

Ceramic clay, Insulator, Glaze, etc.

Civil engineering and construction industry

Cement, Mortar, Paint, etc.

Food industry

Cream, Chocolate, Milk, Sauce, Mayonnaise, Dressing, Fruit juice, Ketchup, Coffee, Seasoner, Salt, Sugar, Flour, Food additives, Sweetener, Perfume, Colorant, etc.

Brewing industry

Sake, Whiskey, Beer, Shochu, Diatomite, etc.

Fermentation industry

Soy sauce, Vinegar, Miso, Unrefined sake, Bio reactor, etc.

Other plant equipment

Chemical dissolution, Coal, Heat transfer oil, Cutting oil, etc.

Prevention of air pollution

Caustic soda, Calcium carbonate, Flue gas desulfurization, etc.

Water purifying plant

City water, Industrial water, Active carbon, Chlorine, Caustic soda, Chemicals, etc.

Waste water and effluent treatment plant

Polymer coagulant, Diatomite, Aluminum sulfate, Ferric sulfate, Caustic soda, Sulfuric acid, Sludge tank, Biological reactor, Sodium hypochlorite, Rapid mixing, Moderate mixing, etc.

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ISO 9001 certificate acquisition
Tokyo office • Osaka office



Scope of review:
Development, design, manufacture,
repair, and sales management of
mixing devices

ISO 14001 certificate acquisition
Tokyo office • Osaka office
Chubu sales service center



Satake Multi-S Mixer® and Supermix® are registered trademarks of SATAKE MultiMix Corporation.

We are constantly committed to improve the quality of our products, thereby the design and specifications of our products may differ from those shown in the catalog. Please understand this in advance.

We are dedicated to manufacture products that satisfy our customers and are safe to use.



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SATAKE
MultiMix

SATAKE
MULTI
MIXERS

S0~S2 Series



with Supermix Impellers
HR700 & HS400

Consistently on the cutting edge

SATAKE MULTI S MIXERS

S0~S2 Series

More powerful and compact than ever before!

Discover the advanced Multi S Mixers.

The new Multi-S mixers are more compact, yet more powerful body than the previous model, as well also it come with a new Supermix® blade for the "impeller blade," the core part of a mixer.

Be sure to check out the new Multi S Mixers.

Compact Body Downsize about 15%

The overall height of the S2 gland packing type has been reduced by 15% compared to the previous type. It is suitable for a wide range of applications.



High reliability gear

A high reliability Bakelite gear has been used based on many years of experience. This gear has proven to be long-lasting and quiet operation.

High efficiency impeller

The novel high-performance of " Supermix® " HR700 impeller (for medium speed) and HS400 impeller (for low speed) are used. Experience the superior performance of these impellers.

Easy mechanical seal replacement

A simple detachable structure type has been added to the single, double, and dry mechanical seals. Therefore, maintenance for the replacement of mechanical seal has been improved.

Wide variety of seals lineup

A wide variety of seals are available, including open, gland packing, single, double, and dry mechanical seals.

Suitable for sanitary specifications

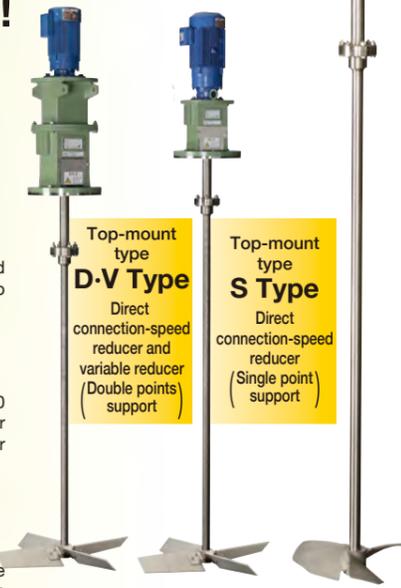
In addition to the mechanical seal, the structure of the main body has been improved, and SUS frame (optional) can be selected for the body.

Cost-down

By introducing automatic design programs and revising our production system, we were able to shorten delivery time and reduce costs.

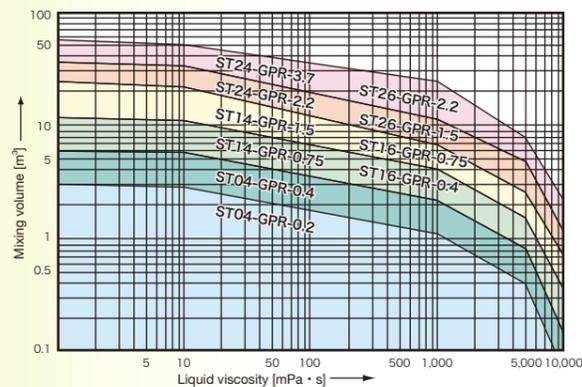
Hook hole for hanging

Standard type has a hole for a hook. This makes it easier to install and remove the unit.



To determine motor capacity from mixing volume

Mixing purpose, mixing time, and liquid viscosity are the most important factors in selecting the mixer type and motor capacity from the mixing volume. Below is a selection graph for the most common case of mild and uniform mixing of soluble liquid-liquid phase. In case of inquiry, please specify the details as much as possible.



* The graph shows the case of with baffles or off-center position.
 * The mixing time required is 5 minutes or less for liquid-liquid phase. However, the mixing volume may be increased or decreased depending on the mixing purpose.
 * Please consult us if the liquid viscosity is more than 1000 mPa·s or the specific gravity is more than 1.2.

* Please refer Satake Multi S Mixer (S3~S9 series) catalog for larger mixer.

Model variations

Top-mount type

G Type: Single step gear reducer

S1S, S2S is specification for shaft diameter size up

50Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
G Single step gear reducer	350	4.1	S0		S1/S1S			
	280	5						
	230	4.1(6P)				S2/S2S		
	190	5(6P)						

60Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
G Single step gear reducer	350	5	S0					
	280	4.1(6P)			S1/S1S		S2/S2S	
	230	5(6P)						

* The 2-stage gear reducer and 3-stage gear reducer of the previous model have been replaced by a direct connection to the reducer.

D·V Type: Direct connection-speed reducer and variable reducer (Double points support) [for Cyclo speed reducer]

50Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
D Direct connection-speed reducer (Double points support)	132	11						
	112	13						
	96.7	15	S0		S1/S1S		S2/S2S	
	85.3	17						
	69	21						
	58	25						
	50	29						
	41.4	35						
	33.7	43						
	28.4	51						
	24.6	59						
	20.4	71						
	16.7	87						

60Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
D Direct connection-speed reducer Double points support	159	11						
	135	13						
	117	15	S0					
	103	17						
	83.3	21			S1/S1S		S2/S2S	
	70	25						
	60.3	29						
	50	35						
	40.7	43						
	34.3	51						
	29.7	59						
	24.6	71						
20.1	87							

* Available in a wide range of model variations, allowing you to select one size smaller model compared to the previous one.

* Please consult us for V type of direct connection-variable reducer (double points support).

Legend: New SO Type (Green), Previous SO Type (Light Green), New S1 Type (Blue), Previous S1 Type (Light Blue), New S2 Type (Red), Previous S2 Type (Light Red)

S Type: Direct connection-speed reducer (Single point support) [for Cyclo speed reducer]

50Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
S Direct connection-speed reducer (Single point support)	132	11						
	112	13						
	96.7	15						
	85.3	17	S1		S2			
	69	21						
	58	25						
	50	29						
	41.4	35						
	33.7	43						
	28.4	51						
	24.6	59						
20.4	71							
16.7	87							

60Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
S Direct connection-speed reducer (Single point support)	159	11						
	135	13						
	117	15						
	103	17	S1		S2			
	83.3	21						
	70	25						
	60.3	29						
	50	35						
	40.7	43						
	34.3	51						
	29.7	59						
24.6	71							
20.1	87							

Side-mount type

G Type: Single step gear reducer

50Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
G Single step gear reducer	350	4.1	S0		S1		S2	
	280	5						
	230	4.1(6P)						
	190	5(6P)						

60Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
G Single step gear reducer	350	5	S0				S1	S2
	280	4.1(6P)						
	230	5(6P)						

B Type: Belt reducer

50Hz

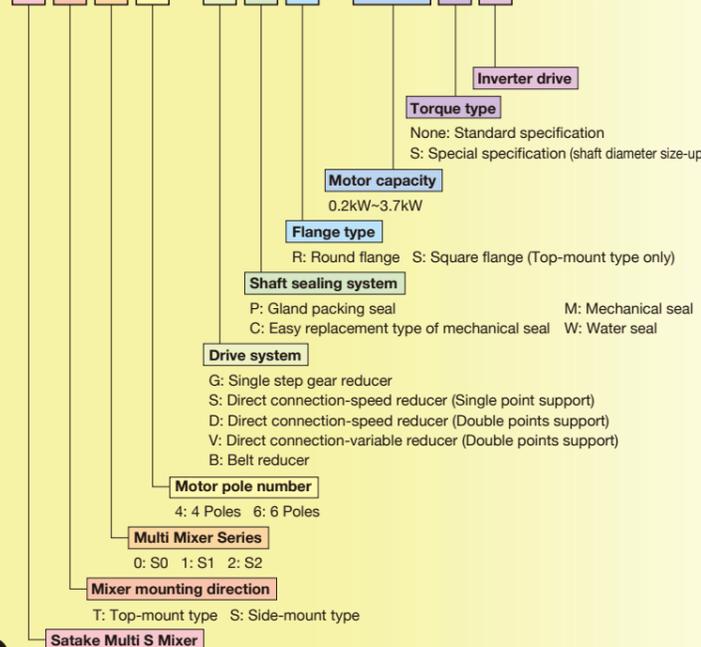
Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
B Belt reducer	350	4.1						
	280	5						
	230	4.1(6P)			S1		S2	
	190	5(6P)						

60Hz

Drive system	Impeller speed (min ⁻¹)	Gear ratio	Motor power (kW)					
			0.2	0.4	0.75	1.5	2.2	3.7
B Belt reducer	350	5						
	280	4.1(6P)			S1		S2	
	230	5(6P)						

Model coding

ST14-GPR-0.75SI (Example)

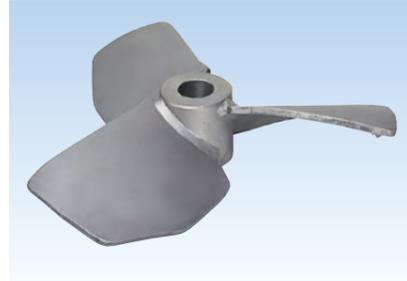


Bringing dreams to real design with advanced technology

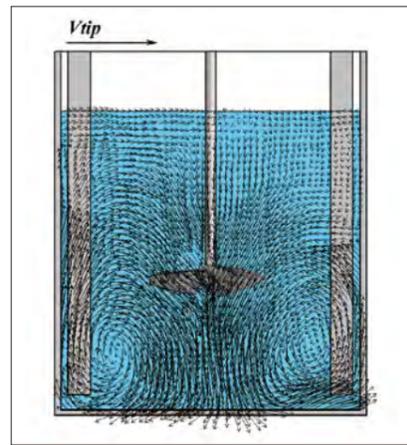
The impeller is selected according to the mixing purpose, mixing volume, physical properties, setting method, and impeller speed. The propeller and paddle types are often used to operate in low-viscosity liquids, whereas the Multi-S Mixer Series comes standard with the Supermix® HR700 and HS400 impellers (equipped with a single stage). These novel impellers are dream comes true based on various high-tech measurement and flow analysis methods such as Laser Doppler Velocimetry, P.T.V. and P.I.V.

Supermix HR700 Impeller

The HR700 impeller features a twisted down curved blade with a moderate advanced blade shape. The shape of blade surface (blade width), angle of attack (especially at the blade tip), and camber ratio (arrow height) are the important factors that affect the performance of the blade. To prevent flow separation at the blade tip, we investigated the optimum shape of blade surface and camber ratio, as well also the optimum curvature angle that contributes to the discharge performance. As a result, we succeeded in developing a high discharge type of HR700 impeller with extremely high discharge performance. This impeller is surely to satisfy the customer's needs for mixing in different phase systems, solid-liquid mixing, and the combination of the two, as well. The HR700 impeller also can be used as a corrosion-resistant material against strong acidic and alkaline liquids by applying various types of rubber lining, FRP lining, or resin coating to the metal body.

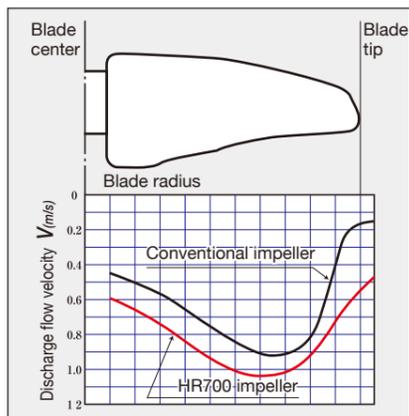


Flow pattern in a stirred tank using HR700 impeller



* The figure above shows the actual flow condition in a stirred tank captured by a CCD camera and analyzed by image processing (P.T.V.).
* High axial flow pattern can be well seen. (Flat discharge flow type shown in the high discharge impeller blade)

Discharge performance of HR700 impeller (at P/V constant)



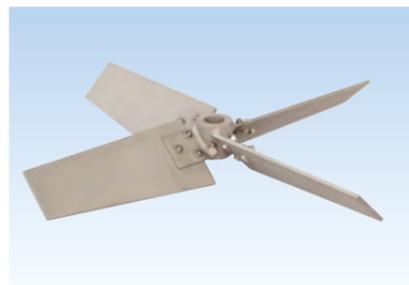
Performance of HR700 impeller

Impeller	Power number	Discharge flow rate	Discharge flow per unit power
	Np (-)	Nqd (-)	Nqd/Np ^{1/3} (-)
3-bladed propeller θ=25°	0.36	0.51	0.72
HR700 impeller	0.50	0.70	0.88

Performance UP by approx. 22%

Supermix HS400 Impeller

The HS400 impeller features a 4-bladed pitched paddle that has been modified to a tapered shape for maximum efficiency, resulting in low power consumption with improved discharge performance, while maintaining the characteristics of high discharge flow and slanted flow pattern. Additionally, the contact area between the impeller blade and the liquid surface gradually changes toward the center of the shaft when the liquid surface fluctuates, which has the advantage to reduce vibration. This impeller is surely to satisfy not only liquid-liquid mixing, but also solid-liquid suspension in general, as well also to prevent slurry from settling. Similar to the HR700 impeller, various types of rubber lining, FRP lining and resin coating are also available.

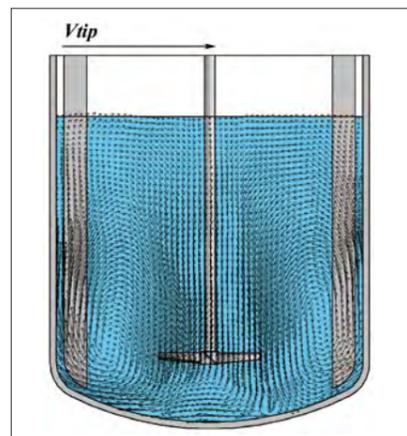


Performance of HS400 impeller

Impeller	Power number	Discharge flow rate	Discharge flow per unit power
	Np (-)	Nqd (-)	Nqd/Np ^{1/3} (-)
4-bladed pitched paddle	1.16	0.63	0.60
HS400 impeller	1.05	0.70	0.69

Performance UP by approx. 15%

Flow pattern in a stirred tank using HS400 impeller



* The figure above shows the actual flow condition in a stirred tank captured by a CCD camera and analyzed by image processing (P.T.V.).

Standard specifications

Standard specification for medium-speed type (Top-mount type)

Series No.	Model	Motor Power (kW)	HR700 Impeller		Shaft length (from flange and below)
			Impeller speed (min ⁻¹)	Impeller diameter (mm)	Overhung (Max. length) (mm)
S0	ST04-GPR(S)-0.2	0.2	350	250	1,950
	ST04-GPR(S)-0.4	0.4	350	300	1,750
S1	ST14-GPR(S)-0.75	0.75	350	360	2,350
	ST14-GPR(S)-1.5	1.5	350	360	2,200
	ST16-GPR(S)-0.4	0.4	230	360	2,500
	ST16-GPR(S)-0.75	0.75	230	440	2,500
S2	ST24-GPR(S)-2.2	2.2	350	440	2,900
	ST24-GPR(S)-3.7	3.7	350	440	2,600
	ST26-GPR(S)-1.5	1.5	230	530	3,000
	ST26-GPR(S)-2.2	2.2	230	530	2,900

* The dimensions in the table above are for a single stage setting of the standard HR700 impeller.

* The R (S) symbol has the same specifications in all cases.

Standard specification for medium-speed type (Top-mount and shaft diameter size up type)

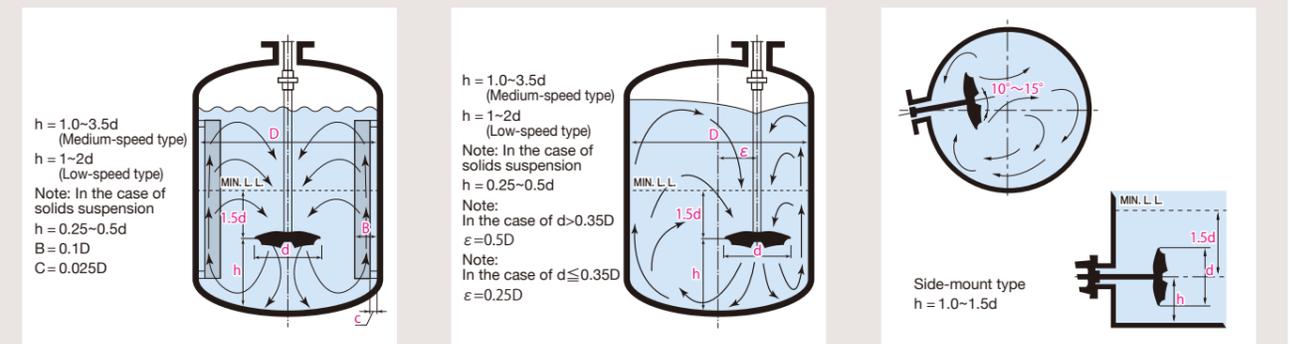
Series No.	Model	Motor Power (kW)	HR700 Impeller		Shaft length (from flange and below)
			Impeller speed (min ⁻¹)	Impeller diameter (mm)	Overhung (Max. length) (mm)
S1S	ST14-GPR(S)-0.75S	0.75	350	360	2,750
	ST14-GPR(S)-1.5S	1.5	350	360	2,700
	ST16-GPR(S)-0.4S	0.4	230	360	2,750
	ST16-GPR(S)-0.75S	0.75	230	440	2,750
S2S	ST24-GPR(S)-2.2S	2.2	350	440	3,200
	ST24-GPR(S)-3.7S	3.7	350	440	3,050
	ST26-GPR(S)-1.5S	1.5	230	530	3,300
	ST26-GPR(S)-2.2S	2.2	230	530	3,300

* The dimensions in the table above are for a single stage setting of the standard HR700 impeller.

* The R (S) symbol has the same specifications in all cases.

Mounting position and flow pattern

One of the factors that determines mixing efficiency is the mounting position of a mixer. To determine the mounting position of a mixer, decide the flow pattern that meets the mixing objective by considering the purpose, specific gravity, viscosity, and other properties of the liquid, as well as the mixing ratio, mixing time, etc.



Center mounting with baffles

The swirling flow is controlled by the baffles, thereby up-and-down flow becomes dominant. Since the flow becomes turbulent, the mixing effect is enhanced. Normally, two to four baffles are installed equally near the inner wall of the tank and perpendicular to the rotating flow is most suitable.

Off-center mounting

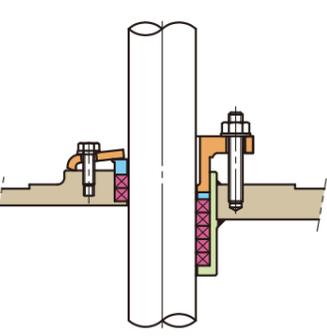
In the case of mixing in low viscosity liquid particularly, if the mixer is mounted off-center without baffles inside the tank, it eliminates the concentric flow against the tank, resulting in good turbulent flow.

Side-mounting mixer

Generally, similar as to the vertical type, except that the side-mount type is mostly used in deep tanks with medium viscosity or less. For installation in a tank, it is necessary to maintain an off-center angle about 10° as shown in the figure above. This eliminates the need of baffles and also enables to prevent swirling flow.

Shaft sealing system according to the purpose of use, operating conditions, and application

Shaft Sealing Systems - Top-mount type

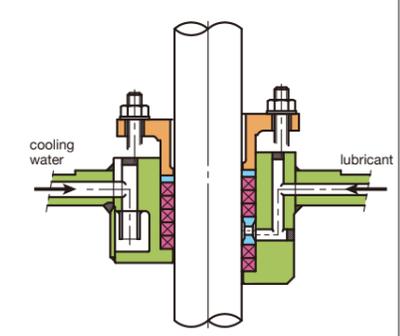


P1 type **P2 type**

Gland packing seal

- Inside tank temperature: 120°C or less
- Inside tank pressure: Atmosphere
- It is not designed for a pressure-tight seal, but it is ideal as a simple seal.

P1 type



P3 type **P4 type**

Gland packing seal

- Inside tank temperature: 120°C or less
- Inside tank pressure: 3×10^{-2} MPaG (0.3 kgf/cm²G) or less
- It is used for low pressure condition in the tank.

P2 type

Gland packing seal

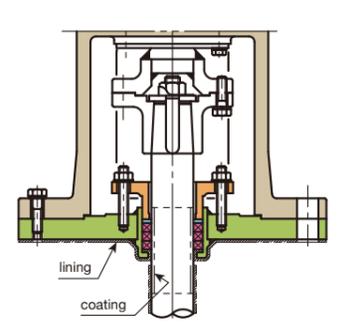
- Inside tank temperature: Between 121°C and 170°C
- Inside tank pressure: 3×10^{-2} MPaG (0.3 kgf/cm²G) or less
- It is ideal for inside tank temperature above 121°C.

P3 type

Gland packing seal

- Inside tank temperature: 120°C or less
- Inside tank pressure: 0.1 MPaG (1.0 kgf/cm²G) or less
- Inject lubricant periodically in the midsection of the gland packing. Seal the leaking fluid with the packing at the back of the lantern ring and the lubricant with the packing at the front.

P4 type

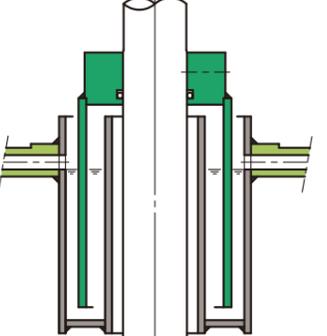


P5 type

Gland packing seal
(Lining and coating of various parts in contact with liquid and gas)

- Inside tank temperature: 120°C or less
- Inside tank pressure: Atmosphere
- Various types of metal lining and coatings (hastelloy, stellite, colmonoy, hard chrome plating, ceramic) are used on the sliding parts of the gland packing.

P5 type

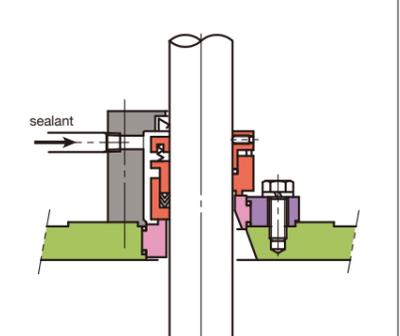


W1 type

Water seal

- Inside tank temperature: 100°C or less
- Inside tank pressure: 100mmAq (water column 100mm) About (1.0kPaG)
- Since there is no contact with the drive shaft, there is no damage to the shaft, less contamination by dust, and it is odor resistant, thereby making it easy to maintain.

W1 type



M1 type **M2 type**

Single mechanical seal
(For vacuum type mixing tank)

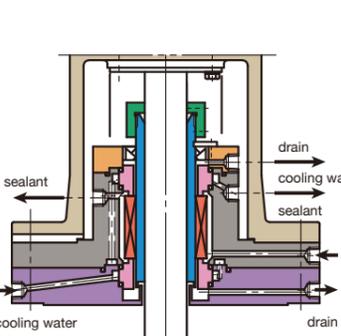
- Inside tank temperature: 100°C or less
- Inside tank pressure: F.V. $\sim 3 \times 10^{-2}$ MPaG (0.3 kgf/cm²G) or less
- It is generally used for vacuum type mixing tanks that are not tolerant of leaks and demonstrate excellent sealing performance.

M1 type

Dry mechanical seal

- Inside tank temperature: 175°C or less
- Inside tank pressure: F.V. ~ 0.19 MPaG (1.9 kgf/cm²G) or less
- This type of mechanical seal does not require sealant. It is used to prevent sealant from entering the tank, thereby prevent sealant from reacting with the gas or liquid in the tank.

M2 type



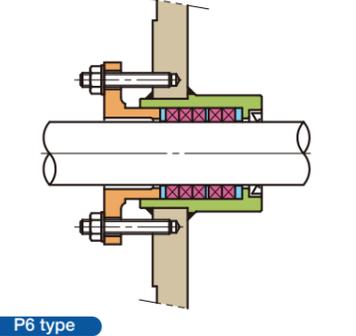
M3 type

Double mechanical seal

- Inside tank temperature: 300°C or less
- Inside tank pressure: F.V. ~ 0.99 MPaG (9.9 kgf/cm²G) or less
- Vacuum inside tank: 1.0PaAbs is possible
- It is generally used in applications where leakage is not tolerated, and provides excellent sealing performance even under high temperature, low temperature, high pressure, and vacuum conditions. The integrated seal case with shaft-sleeve system is easy to install and remove, as well also easy maintenance.

M3 type

Shaft Sealing Systems - Side-mount type

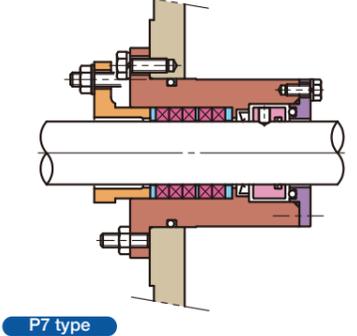


P6 type

Gland packing seal (standard)

- Inside tank temperature: 120°C or less
- Inside tank pressure: 0.1 MPaG (1.0 kgf/cm²G) or less

P6 type

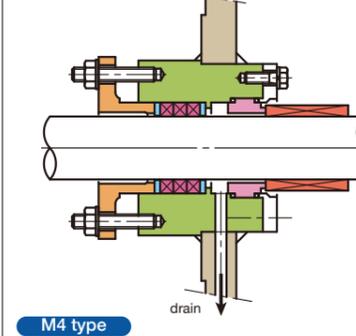


P7 type

Gland packing seal (temporary seal system)

- Inside tank temperature: 120°C or less
- Inside tank pressure: 0.1 MPaG (1.0 kgf/cm²G) or less
- Gland packing can be replaced while tank is full.

P7 type



M4 type

Single mechanical seal + Gland packing

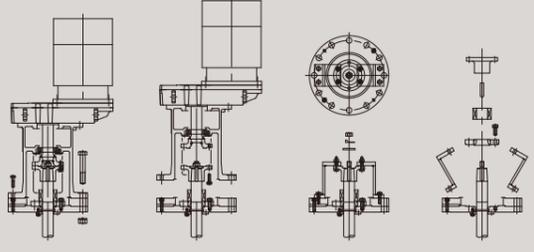
- Inside tank temperature: 120°C or less
- Inside tank pressure: 0.3 MPaG (3.0 kgf/cm²G) or less
- The gland packing seals the liquid in the tank when the mechanical seal starts to leak.

M4 type

Easy Replacement Type of Mechanical Seal

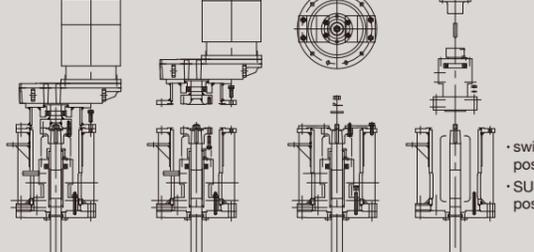
Example of Disassembly Procedures (Partial introduction)

Dry Mechanical Seal with Coupling Outside Tank (C1 Type)
(Support for S0, S1, S2 series)



Disassembly procedures

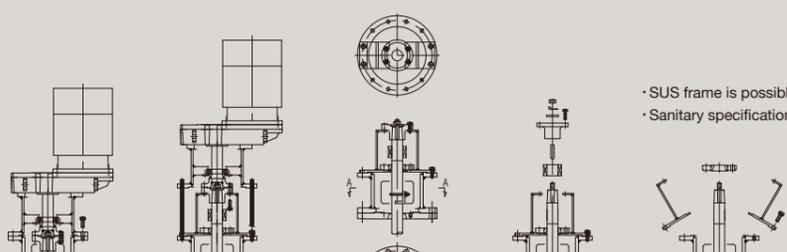
Double Mechanical Seal with Coupling Outside Tank (C3 Type)
(Support for S2 series only)



Disassembly procedures

- swing structure is possible
- SUS frame is possible

Dry Mechanical Seal with Coupling Outside Tank (C2 Type)
(Support for S1, S2 series)



Disassembly procedures

- SUS frame is possible
- Sanitary specification

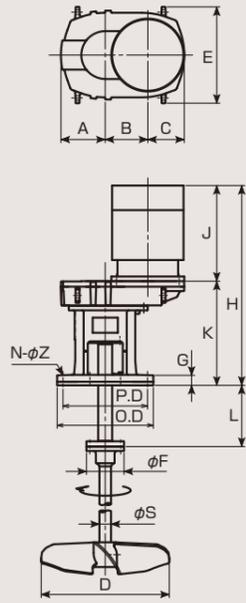


SUS frame specification (C3 Type)

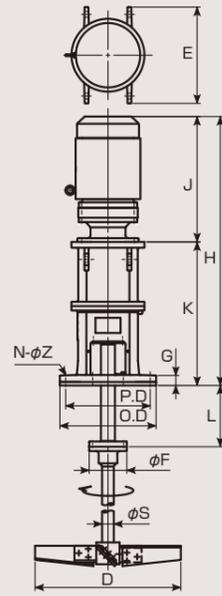
More compact and powerful

Dimensional drawings for Top-mount type

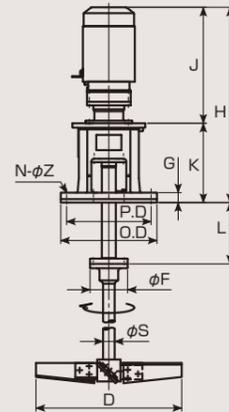
G Type: Single step gear reducer



D-V Type: Direct connection-speed-variable reducer (Double points support)



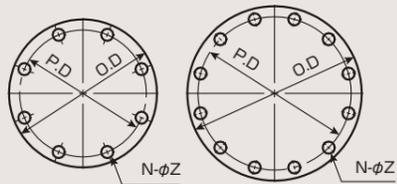
S Type: Direct connection-speed reducer (single point support)



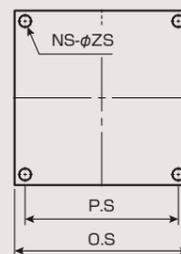
Round flange

S0,S1 series

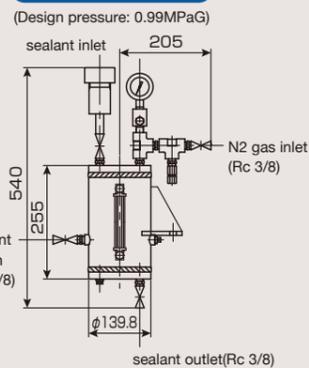
S2 series



Square flange (Option)



2.6L Pressure tank



Regarding the operation that the liquid level passes over impeller position and empty operation

What is the operation that the liquid level passes over impeller position?

In case of increasing or decreasing the liquid while running the mixer, the bottom impeller is from the stable condition without creating steady suction vortex (at the MIN.L.L. on the drawing) to the fully exposed in air condition (or conversely) within 10 minutes. Failure to do so may cause bending of the shaft. (Please check shaft runout, looseness of bolts, etc.)

What is empty operation?

A condition in which the bottom impeller is completely exposed in air due to operation through the liquid level. In the case of empty operation, there is no vibration control effect from the liquid, which can lead to shaft bending. Please stop the operation within 10 minutes.

Standard dimensions

Top-mount type

(Unit:mm)

Drive system	Series No.	Motor power (kW)		O.D	P.D	N-φZ	O.S	P.S	NS-φZS	G	φF	φS	J	K	H	L	A	B	C	E	D		Estimated weight (kg)
		4P	6P																				
G Type: Single step gear reducer	S0	0.2	-	210	175	8-19	□210	□175	4-19	23	79	20/25	206	258	464	160	95	86	80	216	250	-	35
		0.4	-										230	488							300	-	39
	S1	0.75	0.4	280	240	8-23	□280	□240	4-23	28	109	30/35	260	317	577	211	128	124	100	280	360	-	72
		1.5	0.75										302	619							360	440	81
	S2	2.2	1.5	330	290	12-23	□330	□290	4-23	33	129	40/45	328	357	685	210	152	146	125	330	440	530	121
		3.7	2.2										368	725							440	530	138
D-V Type: Direct connection-speed-variable reducer (Double points support)	S0	-	-	210	175	8-19	□210	□175	4-19	23	79	20/25	-	343	-	160				210	-	26	
	S1	-	-	280	240	8-23	□280	□240	4-23	28	109	30/35	-	426	-	211				320	-	51	
	S2	-	-	330	290	12-23	□330	□290	4-23	33	129	40/45	-	492	-	210				330	-	82	
S Type: Direct connection-speed reducer (Single point support)	S1	-	-	280	240	8-23	□280	□240	4-23	28	109	30/35	-	246	-	211				-	-	35	
	S2	-	-	330	290	12-23	□330	□290	4-23	33	129	40/45	-	272	-	210				-	-	53	

* The dimensions J and H (G type: Single step gear reducer), and estimated weight in the table are calculated based on the totally-enclosed-fan-cooled motor for outdoor use. Therefore, they may vary slightly depending on the brand and specifications of the motor. Also, the dimensions J and H for D-V type of direct connection-speed-variable reducer and S type of direct connection-speed reducer vary depending on the brand.

* The dimensions G, K, and H, and estimated weight in the table are for the P1 of gland packing with round flange.

* The dimension D for G type of single step gear reducer is for 4P-350min⁻¹ and 6P-230 min⁻¹. Also, please consult us since the dimension D for D-V type of direct connection-speed-variable reducer and S type of direct connection-speed reducer varies depending on the mixing purpose, volume and properties.

* The estimated weight in the table do not include the weight of the mixing shaft, impeller, variable speed reducer, and gear reducer.

* The standard paint color is approximately the value of 7.5GY6/3 of Munsell color system. The paint color of the motor is the manufacturer's standard color.

Shaft diameter size-up specification (Top-mount type)

(Unit:mm)

Drive system	Series No.	Motor power (kW)		O.D	P.D	N-φZ	O.S	P.S	NS-φZS	G	φF	φS	J	K	H	L	A	B	C	E	D		Estimated weight (kg)
		4P	6P																				
G Type: Single step gear reducer	S1S	0.75	0.4	280	240	8-23	□280	□240	4-23	39	109	35/40	260	328	588	200	128	102	122	280	360	80	
		1.5	0.75										302	630							360	440	89
	S2S	2.2	1.5	330	290	12-23	□330	□290	4-23	43	129	45/50	328	367	695	200	152	126	145	330	440	530	129
		3.7	2.2										368	735							440	530	146
D-V Type: Direct connection-speed-variable reducer (Double points support)	S1S	-	-	280	240	8-23	□280	□240	4-23	39	109	35/40	-	437	-	200				320	-	59	
	S2S	-	-	330	290	12-23	□330	□290	4-23	43	129	45/50	-	502	-	200				330	-	90	

* The dimensions J and H (G type: Single step gear reducer) and, estimated weight in the table are calculated based on the totally-enclosed-fan-cooled motor for outdoor use. Therefore, they may vary slightly depending on the brand and specifications of the motor. Also, the dimensions J and H for D-V type of direct connection-speed-variable reducer vary depending on the brand.

* The dimensions G, K, and H, and estimated weight in the table are for the P1 of gland packing with round flange.

* The dimension D for G type of single step gear reducer is for 4P-350min⁻¹ and 6P-230 min⁻¹. Also, please consult us since the dimension D for D-V type of direct connection-speed-variable reducer varies depending on the mixing purpose, volume and properties.

* The estimated weight in the table do not include the weight of the mixing shaft, impeller, variable speed reducer, and gear reducer.

* The standard paint color is approximately the value of 7.5GY6/3 of Munsell color system. The paint color of the motor is the manufacturer's standard color.

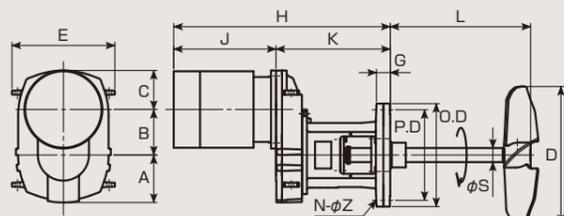
The mixer is for use in factory production.

Be sure to connect it to a power supply panel with safety functions (switch and protection device) before use.

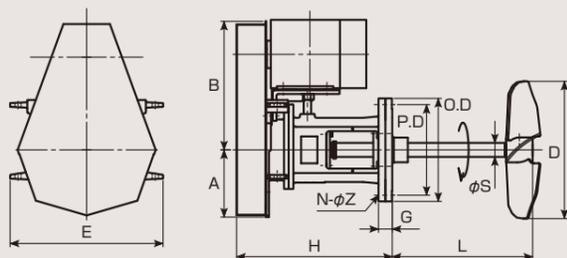
Cost savings through automated design and FMS production

Dimensional drawings for Side-mount type

Side-mount G type: Single step gear reducer

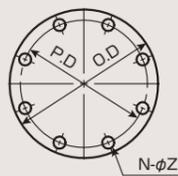


Side-mount B type: Belt reducer

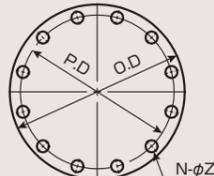


Round flange

S0,S1 series



S2 series



Standard dimensions

Side-mount type

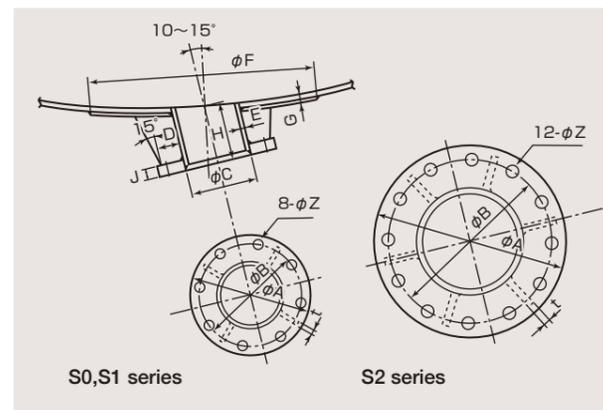
Drive system	Series No.	Motor power (kW)		O.D	P.D	N-φZ	G	φS	J	K	H	L	A	B	C	E	D		Estimated weight (kg)
		4P	6P																
G Type: Single step gear reducer	S0	0.2	-	210	175	8-19	33	25	206	268	474	300	95	86	80	216	250	-	39
		0.4	-														300	-	42
	S1	0.75	0.4	280	240	8-23	39	35	260	328	588	400	128	124	100	280	360		78
		1.5	0.75														360	440	87
	S2	2.2	1.5	330	290	12-23	43	45	328	367	695	450	152	146	125	330	440	530	131
		3.7	2.2														440	530	148
B Type: Belt reducer	S1	0.2	-	280	240	8-23	39	35	/	/	441	400	170	(340)	/	412	250	-	79
		0.4	-														300	-	82
	S1	0.75	0.4	280	240	8-23	39	35	/	/	441	400	170	(340)	/	412	360		89
		1.5	0.75														360	440	97
	S2	2.2	1.5	330	290	12-23	43	45	/	/	499	450	215	(420)	/	490	440	530	142
		3.7	2.2														440	530	166

* The dimensions J and H (G type: Single step gear reducer), B (Belt reducer), and estimated weight in the table are calculated based on the totally-enclosed-fan-cooled motor for outdoor use. Therefore, they may vary slightly depending on the brand and specifications of the motor.
 * The dimension D for G type of single step gear reducer is for 4P-350min⁻¹ and 6P-230 min⁻¹.
 * The standard paint color is approximately the value of 7.5GY6/3 of Munsell color system.

Nozzle dimensions for side-mount type mixer

Kindly refer to the table below when installing the side-mount mixer to a steel tank. Also, if the mixing tank is thin and insufficient strength, it is required to reinforce it with support legs or hanger bars.

Series No.	Nozzle size	φA	φB	φC	D	E	φF	G	H	J	t	φZ
S0	100A	210	175	114.3	40	6	400	6	100	18	6	19
S1	150A	280	240	165.2	50	7.1	550	9	100	22	9	23
S2	200A	330	290	216.3	50	8.2	650	9	100	22	12	23



● CAD: Computer-aided design



● FMS: MC machine



● Inspection: Water load



For inquiries... Please specify the following items as we will recommend the most suitable mixer type for you.

- Tank geometry: Dimension (Cylindrical tank, Conical tank, etc.)
- Tank condition: Open, Tightly close, Normal pressure, Internal pressure, Vacuum, With or without empty operation
- Liquid property: Name of liquid, Specific gravity, Viscosity, Operating liquid temperature
- Solid property: Name of solid, True density, Apparent density, Solids concentration, Particle size distribution (Mesh)
- Liquid volume: Maximum liquid volume, Minimum liquid volume, Liquid volume changing during mixing (increasing or decreasing)
- Operating condition: Batch type, Continuous flow in/out type, Liquid volume, Flow rate, Time lag
- Mixing purpose: Liquid-liquid mixing, Uniform mixing, Blending, Dissolution, Solids suspension, Reaction, Emulsification, Solid-liquid mixing, Suspension, Crystallization, Heat transfer, Dilution, Distribution, etc.
To what extent and in what condition do you want to achieve?
- Mixing time: Mixing time require for the above mixing purpose, number of times per day
- Material request for the impeller and mixing shaft:
We are ready to meet any material requirements, including acid-resistant steel, ordinary steel, and even rubber and various synthetic resin lining finishes.