



EBARA

CF4405UC

STAINLESS STEEL VOLUTE PUMPS

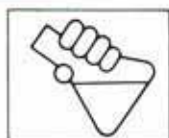
Model FSS



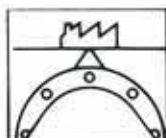
Numerous Models for a variety of applications

HIGH EFFICIENCY, COMPACT 2-POLE SERIES UNCOMPARABLE HIGH RELIABILITY—4-POLE SERIES

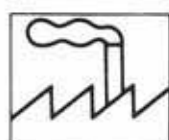
Applications



Liquid chemicals



Industrial use



Industrial water



Hot water supply

Features

- (1) Various models
Either 2-pole or 4-pole models can be selected in a wide range.
- (2) Easy maintenance
The pump is B.P.O. (Back-Pull-Out) type that can be disassembled or inspected without removing the piping or heat insulation.
- (3) Structure strongly to resistant piping loads
The discharge port is located at the center of the casing which is supported by the legs. Therefore, large piping loads can be applied to pump.
- (4) Limit load characteristics
Limit load characteristics effectively prevent overloading even with large discharge rates

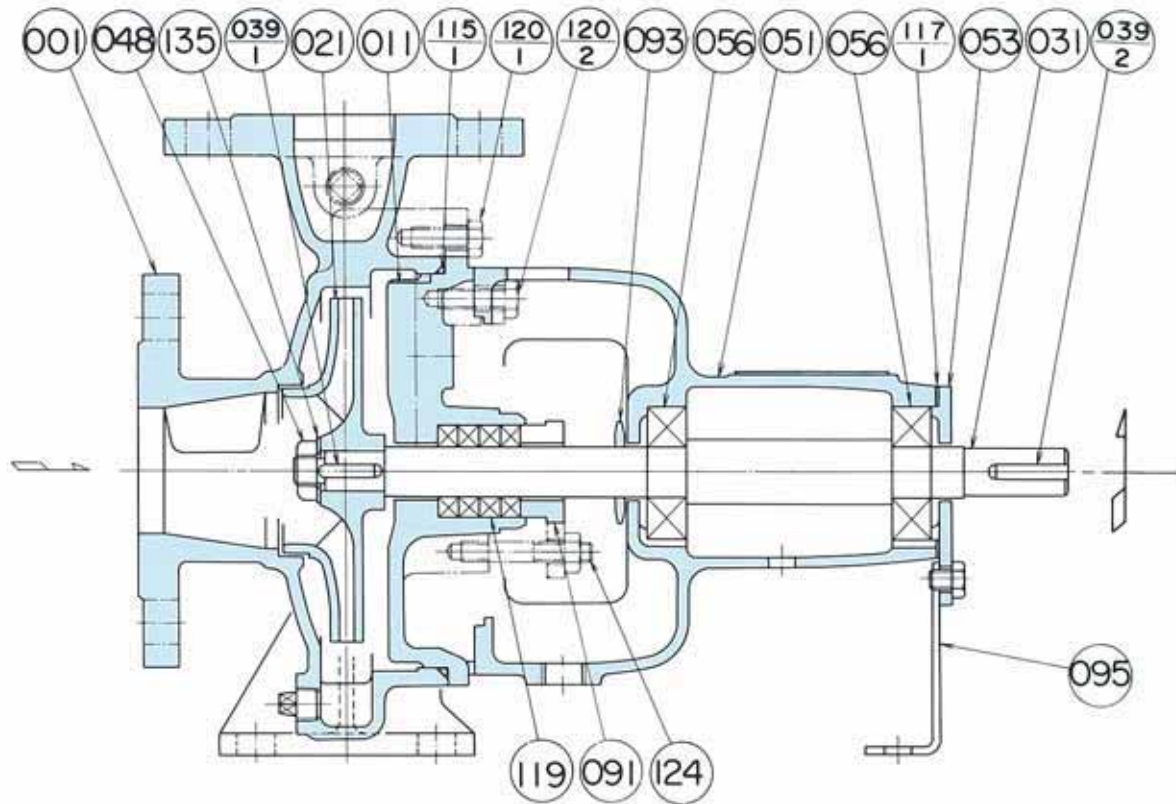
Specifications

		Standard		Optional	
		2 Pole model	4 Pole model	2 Pole model	4 Pole model
Liquid	Name	Water, oil, liquid chemicals. See the liquids list		For specifications other than at left contact Ebara	
	Temperature	0 to 100°C (32 to 212°F)			
	Viscosity	below 10 cst			
	Specific gravity	0.7 to 1.0			
Re. NPSH		4 m...Except for Model 100×80 (2 pole) 7 m...Model 100×80 (2 pole)			
Installation		Indoors		Outdoors	
Construction	Impeller	Enclosed		Mechanical Seal (0 ~ 90°C)	
	Shaft seal	Packing			
	Sealing	Self		External Mech. seal quenching	
	Bearing	Sealed ball bearing		Oil bath type ball bearing	
	Shaft Sleeve	No	No (up to 100×80) Yes (125×100 and over)	Yes	Yes (100×80)
	Casing Ring	No	No (up to 100×80) Yes (125×100 and over)		
Flange		JIS 10 kg/cm² R.F.			
Materials	Casing	18-8 Stainless steel			
	Impeller	18-8 Stainless steel			
	Shaft	304 Stainless steel			
	Sleeve	—	304SS (up to 125×100)	304SS	
	Casing ring	—	304SS (125×100 and over)	304SS	
	Casing gasket	Fluororubber		PTFE	
	Seal	Carbonized fiber		Ceramic/Carbon, Tungsten Carbide/Carbon	
Accessories	Bare shaft			Companion flange with bolts	
	With motor	Common base, Coupling, Coupling guard		Anchor bolts	

Note: (1) The 2-pole oil-bath type pump with shaft sleeve cannot be applied singly.
 (2) The 4-pole oil-bath type pump with shaft sleeve and mechanical seal quench can be applied singly.
 (3) The 2-pole mechanical seal quench can be applied only with the oil-bath type and shaft sleeve.

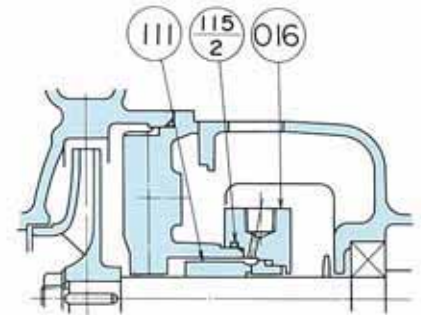
Sectional view

Packing type (Standard)



Mechanical seal type (Optional)

PART NO.	PART NAME	MATERIAL	MATERIAL	NO. FOR 1 UNIT
016	MECHANICAL SEAL COVER	304 STAINLESS	304 STAINLESS	1
111	MECHANICAL SEAL	CERAMIC/CARBON	TUNGSTEN CARBIDE/CARBON	1 SET
115-2	"O" RING	RUBBER (FPM)	RUBBER (FPM)	1

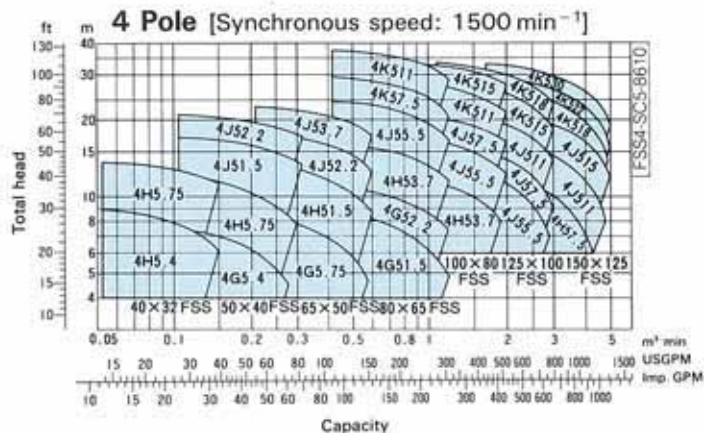
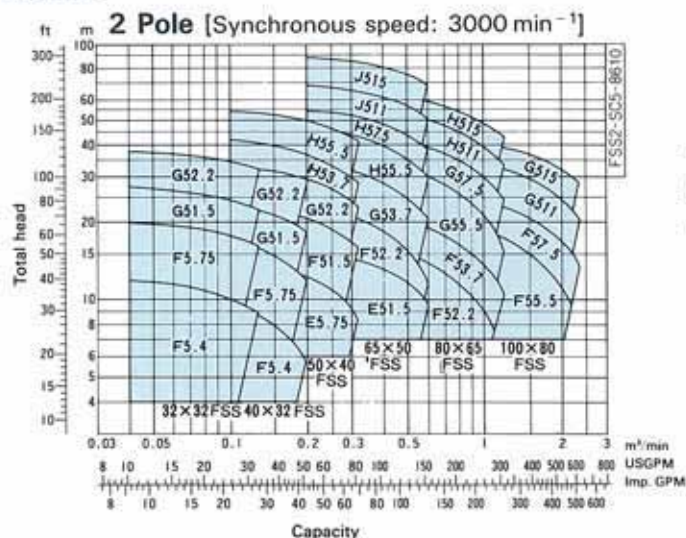


PART NO.	PART NAME	MATERIAL	NO. FOR 1 UNIT
001	CASING	STAINLESS STEEL CASTINGS	1
011	CASING COVER	STAINLESS STEEL CASTINGS	1
021	IMPELLER	STAINLESS STEEL CASTINGS	1
031	SHAFT	304 STAINLESS STEEL	1
039-1	KEY	304 STAINLESS STEEL	1
039-2	KEY	CARBON STEEL	1
048	IMPELLER NUT	304 STAINLESS STEEL	1
051	BEARING CASING	CAST IRON	1
053	BEARING COVER	CAST IRON	1
056	BALL BEARING		2

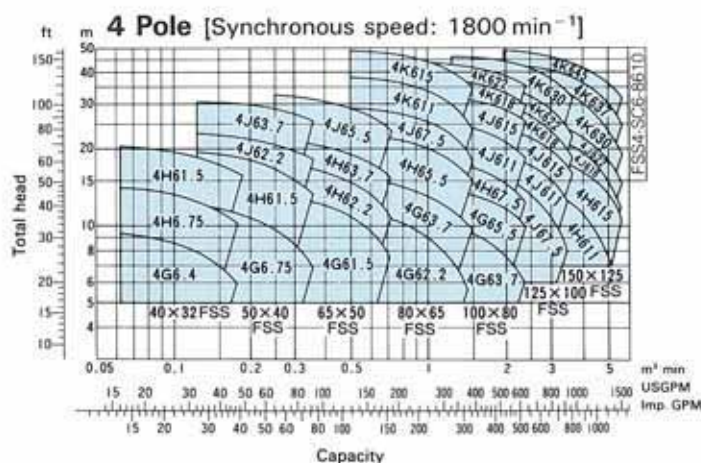
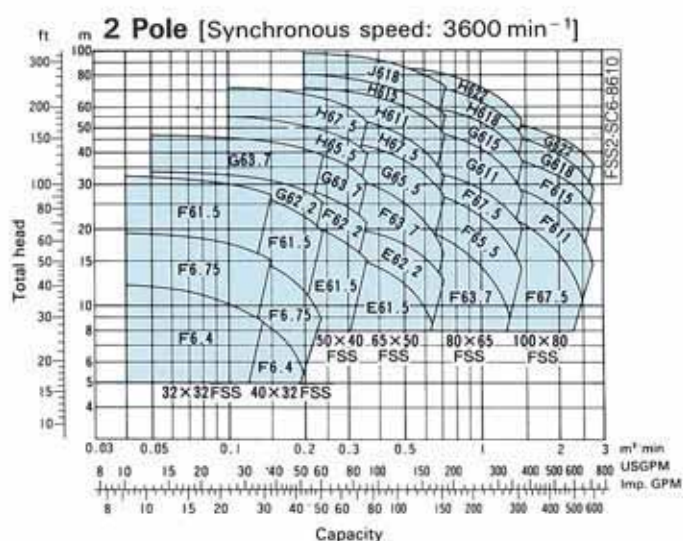
PART NO.	PART NAME	MATERIAL	NO. FOR 1 UNIT
091	GLAND	304 STAINLESS STEEL	1
093	DEFLECTOR	RUBBER	1
095	STAY	STEEL	1
115-1	"O" RING	RUBBER	1
117-1	GASKET	PRESS BOARD	1
119	PACKING	TEFLON IMPREGNATED ASBESTOS	4
120-1	BOLT	304 STAINLESS STEEL	1 SET
120-2	BOLT	STEEL	4
124	GLAND BOLT	304 STAINLESS STEEL	2
135	WASHER	304 STAINLESS STEEL	1

Selection charts

50 Hz



60 Hz



Symbols

40×32 FSSG 5 2.2

- Motor output kW
- Frequency 50 Hz: 5, 60 Hz: 6
- Model
- Discharge size mm
- Suction size mm

50 × 40 FSS4J 6 2.2

- Motor output kW
- Frequency 50 Hz: 5, 60 Hz: 6
- Model
- Discharge size mm
- Suction size mm

Note: These selection charts indicate liquid with 1.0 specific gravity.

Liquid handled

Liquid	Gasket	Gland packing	Mechanical Seal	Water Activation Method	Specific gravity	Density	Temperature
* A							
Acetaldehyde	T	C	1	S	○	○	○
Acetic acid	T	C	1	S	○	○	○
Acetic anhydride	T	C	1	S	○	○	○
Acetone	T	C	1	S	○	○	○
Acetonitrile	F	D	1	S	○	○	○
Acrylic acid	F	D	1	S	○	○	○
Acrylo nitrile	T	C	1	S	○	○	○
Alcoholic drinks	F	C	1	S	○	○	○
Allylacetate	T	D	1	S	○	○	○
Allyl acetone	T	C	1	S	○	○	○
Allyl alcohol	F	C	1	S	○	○	○
Allyl chloride	F	C	1	S	○	○	○
Ammonium carbonate	F	D	2	S+Q	○	○	○
Ammonium discarbonate	F	C	2	S+Q	○	○	○
Amyl acetate	T	C	1	S	○	○	○
Amyl alcohol	F	C	1	S	○	○	○
Amyl chloride	T	D	1	S	○	○	○
Amyl ether	F	C	1	S	○	○	○
Aqueous ammonia	F	C	2	S	○	○	○
* B							
Barium chloride	F	C	2	S+Q	○	○	○
Benzaldehyde	T	C	1	S	○	○	○
Benzene	T	C	1	S	○	○	○
Benzine	F	C	2	S	○	○	○
Benzyl acetate	T	D	1	S	○	○	○
Boric acid	F	C	2	S+Q	○	○	○
Brake oil	F	C	1	S	○	○	○
Butyl acetate	T	D	1	S	○	○	○
Butyl acetate diamyl	F	D	1	S	○	○	○
Butyl acetate dibutyl	T	D	1	S	○	○	○
Butyl acetate diethyl	F	D	1	S	○	○	○
Butyl alcohol	F	C	1	S	○	○	○
Butyl ether	C	C	S		○	○	○
Butyric acid	T	C	1	S	○	○	○
Butyric ethyl	T	D	1	S	○	○	○
Butyric methyl	T	D	1	S	○	○	○
* C							
Calcium carbonate	F	C	2	S+Q	○	○	○
Calcium hydroxide	F	C	2	S+Q	○	○	○
Carbolic acid	T	D	2	S+Q	○	○	○
Carbonate water	F	C	1	S	○	○	○
Caustic soda	F	D	2	S+Q	○	○	○
Cellosolve	T	D	1	S	○	○	○
Cellulose acetate	T	D	1	S	○	○	○
Chlorobenzene	T	C	1	S	○	○	○
Chrome alum	F	D	2	S+Q	○	○	○
Citric acid	F	C	2	S+Q	○	○	○
Coconut oil	F	C	1	S+Q	○	○	○
Coffee extract	F	C	1	S	○	○	○
Copper nitrate	F	D	2	S+Q	○	○	○
Corn oil	F	C	1	S	○	○	○
Creosote	F	D	1	S	○	○	○
Cresol	F	D	1	S+Q	○	○	○
Cyclohexane	F	C	1	S	○	○	○
* D							
Diacetone alcohol	T	C	1	S	○	○	○
Dichlorobenzene	F	C	1	S	○	○	○
Dichloropentane	F	D	1	S	○	○	○
Diethyl benzene	F	C	1	S	○	○	○
Diethylene glycol	F	C	1	S	○	○	○
Dioxane	T	D	1	S	○	○	○
Drain	F	C	2	S	○	○	○
Dyeing solution	F	D	2	S	○	○	○

Liquid	Gasket	Gland packing	Mechanical Seal	Water Activation Method	Specific gravity	Density	Temperature
* E							
Emulsified oil	F	C	2	S	○	○	○
Ethyl acetate	T	C	1	S	○	○	○
Ethyl acrylate	T	D	1	S	○	○	○
Ethyl alcohol	F	C	1	S	○	○	○
Ethyl benzene	F	C	1	S	○	○	○
Ethylene chloride	F	D	2	S	○	○	○
Ethylene glycol	F	C	1	S	○	○	○
Ethyl pyridine	T	D	1	S	○	○	○
* F							
Ferric nitrate	F	D	2	S+Q	○	○	○
Formaline	F	C	1	S	○	○	○
Fruit juice	F	C	1	S	○	○	○
Fruit oil	F	C	1	S	○	○	○
Fuel oil	F	C	1	S	○	○	○
Furfural	T	C	1	S	○	○	○
* G							
Gas oil	F	C	1	S	○	○	○
Gasoline	F	C	1	S	○	○	○
Glycerine	F	C	1	S	○	○	○
* H							
Heavy oil	F	C	1	S	○	○	○
Heptane	F	C	1	S	○	○	○
Hexane	F	C	2	S	○	○	○
Hexyl alcohol	F	C	1	S	○	○	○
Hydraulic fluids	F	C	1	S	○	○	○
* I							
Ink	T	D	1	S	○	○	○
Isoamil alcohol	F	C	1	S	○	○	○
Iso butyl alcohol	F	C	1	S	○	○	○
Iso butyl-methyl ketone	F	D	1	S	○	○	○
Iso octane	F	D	1	S	○	○	○
Isopropyl alcohol	F	C	1	S	○	○	○
Isopropyl benzene	T	D	1	S	○	○	○
* J							
Juice	F	C	1	S	○	○	○
* K							
Kerosene	F	C	1	S	○	○	○
* L							
Lactic acid	F	C	2	S	○	○	○
Linseed oil	F	C	1	S	○	○	○
Lubricating oil	F	C	1	S	○	○	○
* M							
Magnesium hydroxide	F	C	2	S+Q	○	○	○
Methyl acrylate	T	D	1	S	○	○	○
Methyl alcohol	F	C	2	S	○	○	○
Methyl chloride	F	D	2	S+Q	○	○	○
Methyl chloroform	F	C	1	S	○	○	○
Methyl ethyl ketone	T	D	1	S	○	○	○
Methyl isobutyl ketone	T	D	1	S	○	○	○
Milk	F	C	1	S	○	○	○
Mineral oil	F	C	1	S	○	○	○
Mineral spirits	F	C	1	S	○	○	○
Monoethylene glycol	F	C	1	S	○	○	○
Mustard oil	F	C	1	S	○	○	○
* N							
Naphtha	F	C	1	S	○	○	○
Naphtha solvent	F	C	1	S	○	○	○
Natrium carbonate	F	C	2	S+Q	○	○	○
Natrium discarbonate	F	C	2	S+Q	○	○	○
Nonyl phenol	F	D	1	S	○	○	○

Liquid	Gasket	Gland packing	Mechanical Seal	Water Activation Method	Specific gravity	Density	Temperature
* O							
Octane	F	D	1	S	○	○	○
Octanol	F	C	1	S	○	○	○
Oleic acid	F	C	1	S	○	○	○
* P							
Paraffine wax	F	C	2	S	○	○	○
Parilla oil	F	C	1	S	○	○	○
Petroleum	F	C	1	S	○	○	○
Petroleum benzine	F	C	1	S	○	○	○
Pinene	F	D	1	S	○	○	○
Potassium bromide	F	D	2	S+Q	○	○	○
Potassium carbonate	F	D	2	S+Q	○	○	○
Potassium Chloride	F	C	2	S+Q	○	○	○
Potassium dichromate	F	C	2	S+Q	○	○	○
Potassium iodide	F	D	2	S+Q	○	○	○
Potassium nitrate	F	C	2	S+Q	○	○	○
Propyl acetate	T	D	1	S	○	○	○
Propylene	F	C	1	S	○	○	○
* R							
Rapeseed oil	F	C	1	S	○	○	○
Refrigeration oil	F	C	1	S	○	○	○
* S							
Salad oil	F	C	1	S	○	○	○
Sea water	F	C	1	S	○	○	○
Soapsuds	F	C	2	S+Q	○	○	○
Soda bromide	F	D	2	S+Q	○	○	○
Soda nitrate	F	C	2	S+Q	○	○	○
Soda sulfate	F	D	2	S+Q	○	○	○
Sodium silicate	F	C	2	S+Q	○	○	○
Solar oil	F	D	1	S	○	○	○
Sour oil	F	C	1	S	○	○	○
Soya been oil	F	C	1	S	○	○	○
Soy sauce	F	C	1	S	○	○	○
Stylene	F	D	1	S	○	○	○
Sugar liquids	F	C	2	S	○	○	○
Sunflower oil	F	C	1	S	○	○	○
* T							
Tannic acid	F	D	2	S+Q	○	○	○
Thiophenol	F	D	1	S	○	○	○
Trichloroethylene	F	C	1	S	○	○	○
Triole	T	C	1	S	○	○	○
Turpentine oil	F	C	1	S	○	○	○
* U							
Urea	F	D	2	S+Q	○	○	○
* V							
Vegetable oil	F	C	1	S	○	○	○
* W							
Whale oil	F	C	1	S	○	○	○
Whisky	F	C	1	S	○	○	○
Wine	F	C	1	S	○	○	○
* X							
Xylene	F	C	1	S	○	○	○

Gasket material: F; Fluororubber,
T; PTFE

Gland packing material: C; Carbonized fiber,
D; Teflon

Mechanical seal material:
1; Ceramic/carbon
2; Superhard alloy/carbon

Water Activation (mechanical seal):
S; Self-injection

S+Q: Self-injection + quenching or external
injection

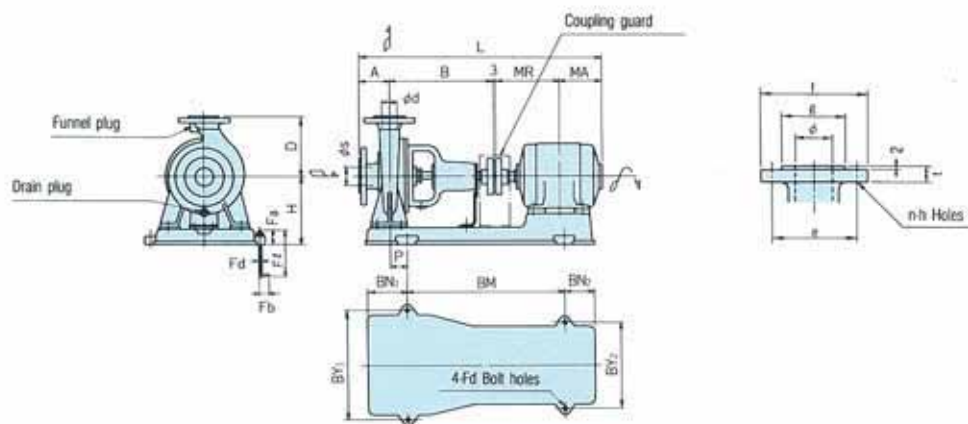
Specific gravity: ○; Check the value.

Density: ○; Check the value.

Temperature: ○; Check the value.

Note: The above chart is a general guide. Liquids have been listed according to the most commonly used classification, but corrosion resistance will vary considerably according to the nature of the liquid (temperature, density and purity) and the circumstances under which it is used.

Dimensions



Flange

Unit: mm

Size used	g	e	f	t	n	h
32	80	100	135	20	4	19
40	85	105	140	20	4	19
50	100	120	155	20	4	19
65	120	140	175	22	4	19
80	130	150	185	22	8	19
100	155	175	210	24	8	19
125	185	210	250	24	8	23
150	215	240	280	26	8	23

50 Hz 2 Pole

Unit: mm

Size	Model	Out put kW	Pump						Motor			Common base					Anchor bolt				Weight [Mass] kg	Max suction Pressure kgf/cm²
			A	B	H	D	L	P	Frame No	MR	MA	BM	BN ₁	BN ₂	BY ₁	BY ₂	Fd	Ff	Fa	Fb		
32	32 x 32FSS5.4	0.4	60	280	162	140	589	35	71	120	121	350	95	95	230	190	M10	200	40	40	37.5	6.9 (4.0)
	32 x 32FSS5.75	0.75	60	280	162	140	621	35	80	140	133	370	95	95	230	230	M10	200	40	40	45	6.0 (4.0)
	32 x 32FSSG51.5	1.5	80	280	182	160	690	45	90L	168.5	158.5	430	105	80	290	230	M10	200	40	40	59	7.6 (4.0)
	32 x 32FSSG52.2	2.2	80	280	182	160	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	60	6.5 (4.0)
40	40 x 32FSS5.4	0.4	65	280	162	140	589	35	71	120	121	350	95	95	230	190	M10	200	40	40	37.5	6.9 (4.0)
	40 x 32FSS5.75	0.75	65	280	162	140	621	35	80	140	133	370	95	95	230	230	M10	200	40	40	45	6.0 (4.0)
	40 x 32FSSG51.5	1.5	80	280	182	160	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	59	7.6 (4.0)
	40 x 32FSSG52.2	2.2	80	280	182	160	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	60	6.5 (4.0)
50	50 x 40FSS5.75	0.75	80	280	162	140	636	35	80	140	133	370	95	95	230	230	M10	200	40	40	45	6.6 (4.0)
	50 x 40FSS5.15	1.5	80	280	162	140	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	55	5.6 (4.0)
	50 x 40FSSG52.2	2.2	80	280	182	160	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	61	6.4 (4.0)
	50 x 40FSSH53.7	3.7	80	280	230	180	818	70	112M	200	175	540	130	60	290	290	M12	250	50	50	94	5.4 (4.0)
65	50 x 40FSSH55.5	5.5	80	280	230	180	887	55	132S	239	205	540	130	150	350	350	M12	250	50	50	121	4.1 (4.0)
	65 x 50FSS5.15	1.5	80	280	162	140	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	57	6.4 (4.0)
	65 x 50FSS5.75	2.2	80	360	162	140	770	55	90L	168.5	158.5	480	115	90	290	230	M10	200	40	40	62	5.7 (4.0)
	65 x 50FSSG53.7	3.7	80	360	202	160	818	70	112M	200	175	540	130	60	290	290	M12	250	50	50	88	6.4 (4.0)
80	65 x 50FSSH55.5	5.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	124	5.0 (4.0)
	65 x 50FSSH57.5	7.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	134	4.1 (4.0)
	65 x 50FSSJ51.1	11	100	360	225	225	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	196	2.8 (2.8)
	65 x 50FSSJ51.5	15	100	360	225	225	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	211	0.7 (0.7)
100	80 x 65FSS5.2	2.2	100	360	182	160	790	55	90L	168.5	158.5	480	115	90	290	230	M10	200	40	40	70	6.3 (4.0)
	80 x 65FSS5.75	3.7	100	360	202	160	838	70	112M	200	175	540	130	60	290	290	M12	250	40	40	89	5.8 (4.0)
	80 x 65FSSG55.5	5.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	123	6.6 (4.0)
	80 x 65FSSG57.5	7.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	133	5.6 (4.0)
125	80 x 65FSSH51.1	11	100	360	245	200	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	191	4.3 (4.0)
	80 x 65FSSG51.5	15	100	360	245	200	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	206	3.3 (3.3)
	100 x 80FSS5.5	5.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	124	5.8 (4.0)
	100 x 80FSS5.75	7.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	134	5.3 (4.0)
150	100 x 80FSSG51.1	11	100	360	245	200	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	190	6.1 (4.0)
	100 x 80FSSG51.5	15	100	360	245	200	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	205	5.5 (4.0)

50 Hz 4 Pole

Unit: mm

Size		Model	Out put kW	Pump						Motor			Common base				Anchor bolt			Weight [Mass] kg	Max suction Pressure kgf/cm²		
φs	φd			A	B	H	D	L	P	Frame No	MR	MA	BM	BN ₁	BN ₂	BY ₁	BY ₂	Fd	Ff			Fa	Fb
40	32	40 × 32FSS4H5.4	0.4	80	360	205	180	684	45	71	120	121	420	105	90	290	190	M12	250	45	50	45	7.1 (4.0)
		40 × 32FSS4H5.75	0.75	80	360	205	180	716	45	80	140	133	420	105	115	290	210	M12	250	45	50	54	6.6 (4.0)
50	40	50 × 40FSS4G5.4	0.4	80	360	172	160	684	45	71	120	121	420	105	90	290	190	M10	125	35	40	43	7.3 (4.0)
		50 × 40FSS4H5.75	0.75	100	360	205	180	736	45	80	140	133	420	105	115	350	210	M12	250	45	50	56	6.8 (4.0)
		50 × 40FSS4J51.5	1.5	100	360	230	225	790	40	90L	168.5	158.5	480	115	105	400	230	M12	250	45	50	77	6.3 (4.0)
		50 × 40FSS4J52.2	2.2	100	360	230	225	829	40	100L	193	173	480	115	145	400	260	M12	250	45	50	84	5.8 (4.0)
65	50	65 × 50FSSG5.75	0.75	100	360	205	180	736	45	80	140	133	420	105	115	350	210	M12	250	45	50	55	7.2 (4.0)
		65 × 50FSS4H51.5	1.5	100	360	210	200	790	55	90L	168.5	158.5	480	115	105	350	230	M12	250	45	50	71	6.7 (4.0)
		65 × 50FSS4J52.2	2.2	100	360	230	225	829	40	100L	193	173	480	115	145	400	260	M12	250	45	50	95	6.2 (4.0)
		65 × 50FSS4J53.7	3.7	100	360	230	225	846	40	112M	200	183	480	115	145	400	290	M12	250	45	50	106	5.7 (4.0)
80	65	80 × 65FSS4G51.5	1.5	100	360	210	200	790	40	90L	168.5	158.5	480	115	105	350	230	M12	250	45	50	73	7.2 (4.0)
		80 × 65FSS4G52.2	2.2	100	360	210	200	829	40	100L	193	173	480	115	145	350	260	M12	250	45	50	81	6.9 (4.0)
		80 × 65FSS4H53.7	3.7	100	360	230	225	846	40	112M	200	183	480	115	145	400	290	M12	250	45	50	105	6.4 (4.0)
		80 × 65FSS4J55.5	5.5	100	470	275	250	1022	80	132S	239	210	660	170	120	440	320	M16	315	60	63	158	5.6 (4.0)
		80 × 65FSS4K57.5	7.5	125	470	300	280	1085	80	132M	258	229	660	170	120	490	320	M16	315	60	63	189	5.0 (4.0)
		80 × 65FSS4K51.1	11	125	470	330	280	1201	100	160M	323	280	740	190	145	490	400	M16	315	60	63	237	4.2 (4.0)
		100 × 80FSS4H53.7	3.7	125	470	265	250	981	75	112M	200	183	600	150	115	440	290	M16	315	60	63	136	6.8 (4.0)
		100 × 80FSS4J55.5	5.5	125	470	300	280	1047	80	132S	239	210	660	170	120	490	320	M16	315	60	63	178	6.3 (4.0)
100	80	100 × 80FSS4J57.5	7.5	125	470	300	280	1085	80	132M	258	229	660	170	120	490	320	M16	315	60	63	184	5.9 (4.0)
		100 × 80FSS4K51.1	11	125	470	330	315	1201	100	160M	323	280	740	190	145	490	400	M16	315	60	63	254	5.1 (4.0)
		100 × 80FSS4K51.5	15	125	470	330	315	1245	100	160L	345	302	740	190	145	490	400	M16	315	60	63	271	4.5 (4.0)
		125 × 100FSS4J55.5	5.5	140	470	300	280	1062	80	132S	239	210	660	170	120	490	320	M16	315	60	63	181	6.6 (4.0)
125	100	125 × 100FSS4J57.5	7.5	140	470	300	280	1100	80	132M	258	229	660	170	120	490	320	M16	315	60	63	187	6.3 (4.0)
		125 × 100FSS4J51.1	11	140	470	330	280	1216	100	160M	323	280	740	190	145	490	400	M16	315	60	63	235	5.8 (4.0)
		125 × 100FSS4K51.8	15	140	470	330	315	1260	100	160L	345	302	740	190	145	490	400	M16	315	60	63	275	4.8 (4.0)
		125 × 100FSS4K51.8	18.5	140	470	340	315	1289.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	320	4.5 (4.0)

Dimensions

Size		Model	Out put kW	Pump						Motor			Common base				Anchor bolt				Weight (Mass) kg	Max suction Pressure kgf/cm ²	
os	od			A	B	H	D	L	P	Frame No	MR	MA	BM	BN ₁	BN ₂	BY ₁	BY ₂	Fd	Ff	Fa			Fb
150	125	150 × 125FSS4H57.5	7.5	140	470	325	315	1100	80	132M	258	229	660	170	120	490	320	M16	315	60	63	210	6.8 (4.0)
		150 × 125FSS4J511	11	140	470	330	355	1216	100	160M	323	280	740	190	145	490	400	M16	315	60	63	259	6.3 (4.0)
		150 × 125FSS4J515	15	140	470	330	355	1260	100	160L	345	302	740	190	145	490	400	M16	315	60	63	276	5.9 (4.0)
		150 × 125FSS4K518	18.5	140	530	375	355	1349.5	95	180M	351.5	325	840	205	230	600	490	M20	400	75	80	373	5.2 (4.0)
		150 × 125FSS4K522	22	140	530	375	355	1349.5	95	180M	351.5	325	840	205	230	600	490	M20	400	75	80	387	5.0 (4.0)
		150 × 125FSS4K530	30	140	530	375	355	1387.5	95	180L	370.5	344	840	205	230	600	490	M20	400	75	80	420	4.7 (4.0)

60 Hz 2 Pole

Unit: mm

Size		Model	Out put kW	Pump						Motor			Common base				Anchor bolt				Weight (Mass) kg	Max suction Pressure kgf/cm ²	
os	od			A	B	H	D	L	P	Frame No	MR	MA	BM	BN ₁	BN ₂	BY ₁	BY ₂	Fd	Ff	Fa			Fb
32	32	32 × 32FSSF6.4	0.4	65	280	162	140	589	35	71	120	121	350	95	95	230	190	M10	200	40	40	37.5	6.9 (4.0)
		32 × 32FSSF6.75	0.75	65	280	162	140	621	35	80	140	133	370	95	95	230	230	M10	200	40	40	45	6.2 (4.0)
		32 × 32FSSF6.15	1.5	65	280	162	140	675	45	90L	168.5	158.5	420	105	80	230	230	M10	200	40	40	54	4.8 (4.0)
40	32	40 × 32FSSF6.4	0.4	65	280	162	140	589	35	71	120	121	350	95	95	230	190	M10	200	40	40	37.5	6.9 (4.0)
		40 × 32FSSF6.75	0.75	65	280	162	140	621	35	80	140	133	370	95	95	230	230	M10	200	40	40	45	6.2 (4.0)
		40 × 32FSSF6.15	1.5	65	280	162	140	675	45	90L	168.5	158.5	420	105	80	230	230	M10	200	40	40	54	4.8 (4.0)
		40 × 32FSSG6.2	2.2	80	280	182	160	690	45	90L	168.5	158.5	420	105	80	290	230	M10	200	40	40	60	6.6 (4.0)
		40 × 32FSSG6.37	3.7	80	280	182	160	738	45	112M	200	175	420	105	120	290	230	M10	200	40	40	79	5.1 (4.0)
		50 × 40FSS6.15	1.5	80	280	162	140	690	45	90L	168.5	158.5	420	105	80	230	230	M10	200	40	40	54	5.7 (4.0)
	40	50 × 40FSSG6.37	3.7	80	280	182	160	738	45	112M	200	175	420	105	120	290	290	M10	200	40	40	80	5.2 (4.0)
		50 × 40FSSH6.5	5.5	80	280	230	180	887	55	132S	239	205	540	130	150	350	350	M12	250	50	50	121	4.1 (4.0)
		50 × 40FSSH6.75	7.5	80	280	230	180	887	55	132S	239	205	540	130	150	350	350	M12	250	50	50	131	2.2 (2.2)
		65 × 50FSS6.15	1.5	80	280	162	140	690	45	90L	168.5	158.5	420	105	80	230	230	M10	200	40	40	57	6.3 (4.0)
		65 × 50FSS6.2	2.2	80	280	162	140	690	45	90L	168.5	158.5	420	105	80	230	230	M10	200	40	40	58	5.8 (4.0)
		65 × 50FSSF6.37	3.7	80	360	162	140	818	55	112M	200	175	480	115	130	290	290	M10	200	40	40	81	4.6 (4.0)
	50	65 × 50FSSG6.5	5.5	80	360	202	160	887	70	132S	239	205	540	130	150	320	320	M12	250	50	50	116	5.2 (4.0)
		65 × 50FSSH6.75	7.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	134	4.0 (4.0)
		65 × 50FSSH6.11	11	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	187	2.4 (2.4)
		65 × 50FSSH6.15	15	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	202	1.5 (1.5)
		65 × 65FSSJ6.18	18.5	100	360	265	225	1083	95	160L	345	275	660	170	120	400	400	M16	315	65	63	221	0.3 (0.3)
		80 × 65FSSF6.37	3.7	100	360	202	160	838	70	112M	200	175	540	130	80	290	290	M12	250	50	50	89	5.6 (4.0)
		80 × 65FSSF6.5	5.5	100	360	202	160	907	70	132S	239	205	540	130	150	320	320	M12	250	50	50	117	4.7 (4.0)
		80 × 65FSSG6.75	7.5	100	360	202	160	907	70	132S	239	205	540	130	150	320	320	M12	250	50	50	127	4.2 (4.0)
		80 × 65FSSG6.11	11	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	186	4.7 (4.0)
	65	80 × 65FSSG6.15	15	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	201	3.3 (3.3)
		80 × 65FSSH6.18	18.5	100	360	245	200	1083	95	160L	345	275	660	170	120	400	400	M16	315	65	63	216	1.9 (1.9)
		80 × 65FSSH6.22	22	100	360	265	200	1139.5	95	180M	351.5	325	660	170	170	350	440	M16	315	65	63	263	0.9 (0.9)
		100 × 80FSSF6.75	7.5	100	360	230	180	907	55	132S	239	205	540	130	150	350	350	M12	250	50	50	134	5.1 (4.0)
		100 × 80FSSF6.11	11	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	187	4.4 (4.0)
		100 × 80FSSF6.15	15	100	360	245	180	1041	95	160M	323	255	660	170	120	400	400	M16	315	65	63	202	3.6 (3.6)
	80	100 × 80FSSG6.18	18.5	100	360	245	200	1083	95	160L	345	275	660	170	120	400	400	M16	315	65	63	215	4.6 (4.0)
		100 × 80FSSG6.22	22	100	360	265	200	1139.5	95	180M	351.5	325	660	170	170	350	440	M16	315	65	63	262	3.9 (3.9)

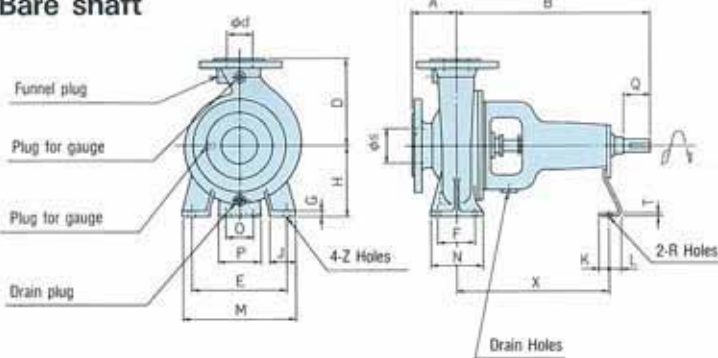
60 Hz 4 Pole

Unit: mm

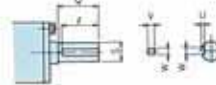
Size		Model	Out put kW	Pump						Motor				Common base						Anchor bolt				Weight (Mass) kg	Max suction Pressure kgf/cm ²
φs	φd			A	B	H	D	L	P	Frame No	MR	MA	BM	BN ₁	BN ₂	BY ₁	BY ₂	Fd	Ff	Fa	Fb				
40	32	40 × 32FSS4G6.4	0.4	80	360	172	160	684	45	71	120	121	420	105	90	290	190	M10	125	35	40	42	7.1 (4.0)		
		40 × 32FSS4H6.75	0.75	80	360	205	180	716	45	80	140	133	420	105	115	290	210	M12	250	45	50	54	6.6 (4.0)		
		40 × 32FSS4H6.15	1.5	80	360	210	180	770	55	90L	168.5	158.5	480	115	90	290	230	M12	250	45	50	63	6.0 (4.0)		
50	40	50 × 40FSS4G6.75	0.75	80	360	172	160	716	45	80	140	133	420	105	115	290	210	M10	125	35	40	52	6.8 (4.0)		
		50 × 40FSS4H6.15	1.5	100	360	210	180	790	55	90L	168.5	158.5	480	115	105	350	230	M12	250	45	50	67	6.0 (4.0)		
		50 × 40FSS4J6.2	2.2	100	360	230	225	829	40	100L	193	173	480	115	145	400	260	M12	250	45	50	84	5.6 (4.0)		
65	50	50 × 40FSS4J6.37	3.7	100	360	230	225	846	40	112M	200	183	480	115	145	400	290	M12	250	45	50	95	4.8 (4.0)		
		65 × 50FSS4G6.15	1.5	100	360	210	180	790	55	90L	168.5	158.5	480	115	105	350	230	M12	250	45	50	66	6.7 (4.0)		
		65 × 50FSS4H6.2	2.2	100	360	210	200	829	55	100L	193	173	480	115	145	350	260	M12	250	45	50	79	6.2 (4.0)		
80	65	65 × 50FSS4H6.37	3.7	100	360	210	200	846	55	112M	200	183	480	115	145	350	290	M12	250	45	50	90	5.8 (4.0)		
		65 × 50FSS4J6.5	5.5	100	360	255	225	912	40	132S	239	210	480	115	185	400	320	M12	250	55	50	139	4.7 (4.0)		
		80 × 65FSS4G6.2	2.2	100	360	210	200	829	40	100L	193	173	480	115	145	350	260	M12	250	45	50	81	6.8 (4.0)		
100	80	80 × 65FSS4G6.37	3.7	100	360	210	200	846	40	112M	200	183	480	115	145	350	290	M12	250	45	50	92	6.4 (4.0)		
		80 × 65FSS4H6.5	5.5	100	360	255	225	912	40	132S	239	210	480	115	185	400	320	M12	250	45	50	138	5.7 (4.0)		
		80 × 65FSS4J6.75	7.5	100	470	275	250	1060	80	132M	258	229	660	170	120	440	320	M16	315	60	63	164	5.0 (4.0)		
125	100	80 × 65FSS4K6.11	11	125	470	330	280	1201	100	160M	323	280	740	190	145	490	400	M16	315	60	63	237	4.1 (4.0)		
		80 × 65FSS4K6.15	15	125	470	330	280	1245	100	160L	345	302	740	190	145	490	400	M16	315	60	63	254	3.0 (3.0)		
		100 × 80FSS4G6.37	3.7	125	360	230	225	871	40	112M	200	183	480	115	145	400	290	M12	250	45	50	117	6.9 (4.0)		
150	125	100 × 80FSS4G6.5	5.5	125	360	255	225	937	40	132S	239	210	480	115	185	400	320	M12	250	45	50	150	6.5 (4.0)		
		100 × 80FSS4H6.75	7.5	125	470	275	250	1085	95	132M	258	229	660	170	120	440	320	M16	315	60	63	171	6.0 (4.0)		
		100 × 80FSS4J6.11	11	125	470	330	280	1201	100	160M	323	280	740	190	145	490	400	M16	315	60	63	232	5.3 (4.0)		
175	150	100 × 80FSS4J6.15	15	125	470	330	280	1245	100	160L	345	302	740	190	145	490	400	M16	315	60	63	249	4.6 (4.0)		
		100 × 80FSS4K6.18	18.5	125	470	340	315	1274.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	316	4.1 (4.0)		
		100 × 80FSS4K6.22	22	125	470	340	315	1274.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	330	3.5 (3.5)		
200	175	125 × 100FSS4J6.75	7.5	140	470	300	280	1100	80	132M	258	229	660	170	120	490	320	M16	315	60	63	187	6.2 (4.0)		
		125 × 100FSS4J6.11	11	140	470	330	280	1216	100	160M	323	280	740	190	145	490	400	M16	315	60	63	235	5.8 (4.0)		
		125 × 100FSS4J6.15	15	140	470	330	280	1260	100	160L	345	302	740	190	145	490	400	M16	315	60	63	252	5.3 (4.0)		
250	200	125 × 100FSS4K6.18	18.5	140	470	340	315	1289.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	320	4.3 (4.0)		
		125 × 100FSS4K6.22	22	140	470	340	315	1289.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	334	4.1 (4.0)		
		125 × 100FSS4K6.30	30	140	470	340	315	1327.5	115	180L	370.5	344	840	205	155	490	490	M20	400	75	80	367	3.3 (3.3)		
300	250	150 × 125FSS4H6.11	11	140	470	330	315	1216	100	160M	323	280	740	190	145	490	400	M16	315	60	63	252	6.5 (4.0)		
		150 × 125FSS4H6.15	15	140	470	330	315	1260	100	160L	345	302	740	190	145	490	400	M16	315	60	63	269	6.0 (4.0)		
		150 × 125FSS4J6.18	18.5	140	470	340	335	1289.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	321	5.6 (4.0)		
350	300	150 × 125FSS4J6.22	22	140	470	340	355	1289.5	115	180M	351.5	325	840	205	155	490	490	M20	400	75	80	335	5.3 (4.0)		
		150 × 125FSS4K6.30	30	140	530	375	355	1387.5	95	180L	370.5	344	840	205	230	600	490	M20	400	75	80	420	4.3 (4.0)		
		150 × 125FSS4K6.37	37	140	530	375	355	1475.5	95	200L	425.5	377	840	205	230	600	490	M20	400	75	80	481	3.6 (3.6)		
400	350	150 × 125FSS4K6.45	45	140	530	375	355	1475.5	95	200L	425.5	377	840	205	230	600	490	M20	400	75	80	561	3.0 (3.0)		

Dimensions

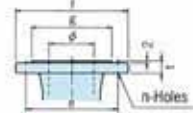
Bare shaft



Shaft



Flange (JIS10K R.F.)



Unit: mm

SIZE ϕ	g	e	f	t	n	h
32	80	100	135	16	4	19
40	85	105	140	16	4	19
50	100	120	155	16	4	19
65	120	140	175	18	4	19
80	130	150	185	18	8	19
100	155	175	210	18	8	19
125	185	210	250	20	8	23
150	215	240	280	22	8	23

2 Pole

Unit: mm

Size φs × φd	Model	Pump																Shaft						Gland in Packing	Weight [Mass] kg		
		A	B	D	E	F	G	H	J	K	L	M	N	O	P	R	T	X	Z	S	Q	r	U			V	W
32 × 32	32 × 32FSSF	65	280	140	140	70	8	112	50	—	—	190	100	—	—	—	—	—	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	19
	32 × 32FSSG	80	280	160	190	70	8	132	50	15	25	240	100	80	120	17	4.5	205	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	23
40 × 32	40 × 32FSSF	65	280	140	140	70	8	112	50	—	—	190	100	—	—	—	—	—	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	19
	40 × 32FSSG	80	280	160	190	70	8	132	50	15	25	240	100	80	120	17	4.5	205	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	23
50 × 40	50 × 40FSSS	80	280	140	140	70	8	112	50	—	—	190	100	—	—	—	—	—	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	19
	50 × 40FSSF	80	280	140	140	70	8	112	50	15	25	190	100	80	120	17	4.5	205	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	20
50 × 40	50 × 40FSSG	80	280	160	190	70	8	132	50	15	25	240	100	80	120	17	4.5	205	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	24
	50 × 40FSSH	80	360	180	190	70	10	160	50	25	15	240	100	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	30
65 × 50	65 × 50FSSS	80	280	140	140	70	8	112	50	15	25	190	100	80	120	17	4.5	205	15	19	40	31	3.5	6	6	20 × 36 × 8 ^[1]	22
	65 × 50FSSF	80	360	140	160	70	8	112	50	24	15	210	100	110	150	17	4.5	285	15	24	50	44	4	7	8	20 × 36 × 8 ^[1]	24
65 × 50	65 × 50FSSG	80	360	160	190	70	10	132	50	29	15	240	100	110	150	17	4.5	285	15	24	50	44	4	7	8	20 × 36 × 8 ^[1]	27
	65 × 50FSSH	100	360	180	212	70	10	160	50	25	15	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	33
80 × 65	65 × 50FSSJ	100	360	225	250	95	12	190	65	25	15	320	125	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	40
	80 × 65FSSF	100	360	160	190	70	10	132	50	24	20	240	100	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	28
80 × 65	80 × 65FSSG	100	360	180	212	70	10	160	50	25	15	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	32
	80 × 65FSSH	100	360	200	212	70	10	160	50	25	15	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	37
100 × 80	100 × 80FSSF	100	360	180	212	95	10	160	65	25	15	280	125	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	33
	100 × 80FSSG	100	360	200	212	95	10	160	65	25	15	280	125	110	150	17	4.5	285	15	24	50	44	4	7	8	25 × 41 × 8 ^[1]	36

4 Pole

Unit: mm

Size φs × φd	Model	Pump																Shaft						Gland in Packing	Weight [Mass] kg		
		A	B	D	E	F	G	H	J	K	L	M	N	O	P	R	T	X	Z	S	Q	r	U			V	W
40 × 32	40 × 32FSS4G	80	360	160	190	70	10	132	50	20	25	240	100	110	150	17	4.5	285	15	19	40	31	3.5	6	6	4-20 × 36 × 8 [□]	23
	40 × 32FSS4H	80	360	180	190	70	12	160	50	15	25	240	100	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	26
	50 × 40FSS4G	80	360	160	190	70	10	132	50	20	25	240	100	110	150	17	4.5	285	15	19	40	31	3.5	6	6	4-20 × 36 × 8 [□]	24
50 × 40	50 × 40FSS4H	100	360	180	212	70	12	160	50	15	25	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	28
	50 × 40FSS4J	100	360	225	250	95	14	180	65	15	25	320	125	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	36
	65 × 50FSS4G	100	360	180	212	70	12	160	50	15	25	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	27
65 × 50	65 × 50FSS4H	100	360	200	212	70	12	160	50	15	25	265	100	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	32
	65 × 50FSS4J	100	360	225	250	95	14	180	65	15	25	320	125	110	150	17	6	285	15	32	80	68	5	8	10	4-35 × 51 × 8 [□]	47
	80 × 65FSS4G	100	360	200	212	95	12	160	65	15	25	280	125	110	150	17	4.5	285	15	24	50	44	4	7	8	4-25 × 41 × 8 [□]	34
80 × 65	80 × 65FSS4H	100	360	225	250	95	15	180	65	15	25	320	125	110	150	17	6	285	15	32	80	68	5	8	10	4-35 × 51 × 8 [□]	46
	80 × 65FSS4J	100	470	250	260	120	15	200	80	15	25	360	160	110	150	17	6	370	19	32	80	68	5	8	10	4-35 × 51 × 8 [□]	58
	80 × 65FSS4K	125	470	280	315	120	16	225	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-35 × 51 × 8 [□]	81
100 × 80	100 × 80FSS4G	125	360	225	250	95	14	180	65	15	25	320	125	110	150	17	6	285	15	32	80	68	5	8	10	4-35 × 51 × 8 [□]	58
	100 × 80FSS4H	125	470	250	280	95	14	180	65	15	25	345	125	110	150	17	6	370	15	32	80	68	5	8	10	4-35 × 51 × 8 [□]	63
	100 × 80FSS4J	125	470	280	315	120	16	225	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-35 × 51 × 8 [□]	76
	100 × 80FSS4K	125	470	315	315	120	16	250	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-35 × 51 × 8 [□]	100
125 × 100	125 × 100FSS4J	140	470	280	315	120	16	225	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-45 × 65 × 10 [□]	79
	125 × 100FSS4K	140	470	315	315	120	16	250	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-45 × 65 × 10 [□]	104
150 × 125	150 × 125FSS4H	140	470	315	315	120	15	250	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-45 × 65 × 10 [□]	98
	150 × 125FSS4J	140	470	355	315	120	16	250	80	15	25	400	160	110	150	17	6	370	19	32	80	68	5	8	10	4-45 × 65 × 10 [□]	105
	150 × 125FSS4K	140	530	355	400	150	16	280	100	15	35	500	200	110	150	17	6	370	24	42	110	106	5	8	12	4-55 × 75 × 10 [□]	143

* All specifications subject to change without notice.
In this catalog, the particulars in [] are in accordance with the International System of Units (SI) and given for reference only.



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