

EBARA END SUCTION VOLUTE PUMP Model GS/GSS



The Products described herein fall under "the goods listed in row 16 of the appended table 1 of the Export Trade Control Order of Japan", so in cases of export of such Products, you need to confirm "use" and "purchaser and/or end-user" and, as case may be, obtain the approval of the Minister of Economy, Trade and Industry. (Please confirm these conditions on your own.) Furthermore, some of the Products fall under row 1-15 of the appended table 1(listed items). In case of export of these listed items, you are required to obtain the export license from the Minister of Economy, Trade and Industry. For more information, please contact our sales office located near you.

CAUTION

- Do not attempt to operate, inspect or service this pump before you have read and understood manual of pump.
- Wiring and grounding work must NOT be performed by unqualified persons. It is extremely dangerous for unqualified persons to perform such work. The user should install electrical leakage breakers and overload safety devices to prevent electric shock and fire.

※1 "Model GS" in this catalog is our model code

※2 All specifications subject to change without notice.

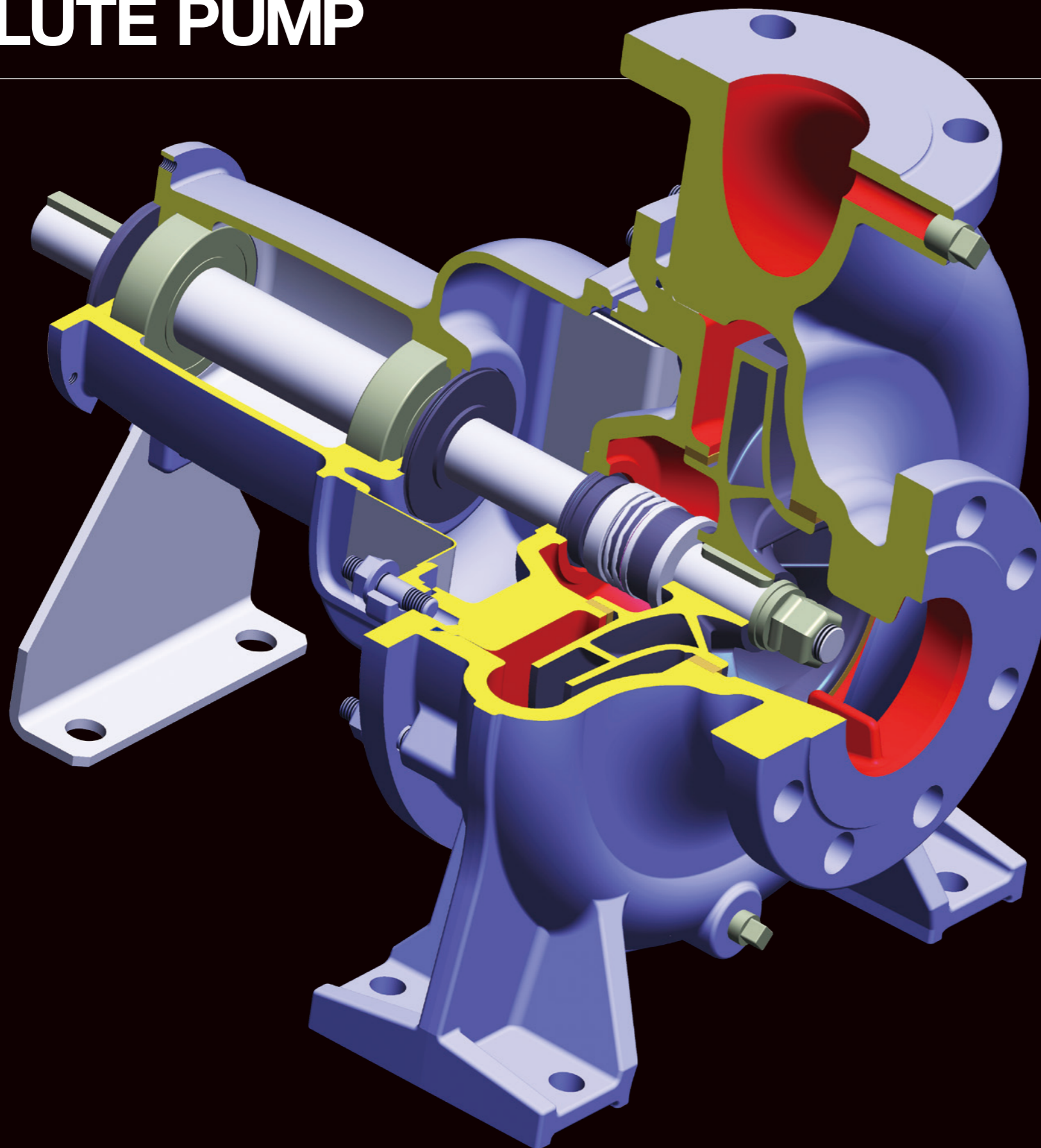


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Contact to

EBARA END SUCTION VOLUTE PUMP



PRODUCT FEATURES

1 ENERGY-SAVING DESIGN

- World top class pump efficiency achieved.
- Major improvement over our previous models by hydro parts designed using our proprietary 3D inverse design technology.
- Higher efficiency means lower energy consumption and motor output, and more compact size.

2 SIMPLE MAINTENANCE

- Back pull-out structure enables disassembly and inspection without removal of suction and discharge piping.
- Shield bearings eliminate need for adding or exchanging lubricating oil.
- Shaft seal water injection piping not required for the standard application
- Air-bleeding not required.
- Simplified bearings and shaft seal enable easy assembly.

3 PUMP SPECIFICATIONS

- Maximum operating pressure: 25 bar
- Liquid temperature range expansion: -25°C to 140°C
- Compatible with multiple flange standards.
- Able to meet customer specifications with many combinations of shaft seals and materials.

4 INTERNATIONAL STANDARDS

- Pump dimensions adopt EN733
- Mechanical seal adopts EN12756
- Bearing cover plate fitted in accordance with EN294.

PUMP SPECIFICATION

Model GS Casing Material FC250

Description		Standard		Optional	
		2 poles/4 poles		2 poles/4 poles	
Liquid	Temperature	-10 -120°C		-15°C -140°C	
	Density	To be discussed each time			
	Viscosity				
Max. Operating Pressure		Up to 16bar (1.6MPa) for standard flange DIN-PN16		Up to 14bar (1.4Mpa) for standard flange JIS10K	
Construction	Impeller	Closed		-	
	Shaft seal	Mechanical Seal		Gland Packing P#6502L	
	Flushing	N/A		External	
	Bearing	Sealed ball bearing (grease lubricated)		-	
Flange Standard		EN1092-2		JIS B 2239	
Material	Casing	FC250		-	
	Impeller	FC200/FCD400		CAC406/SCS13/SCS14A	
	Shaft	SUS431 *1		SUS329J3L *1	
	Casing ring	CAC406		FC150	
	Shaft sleeve	N/A		SUS304 *Only Gland Packing	
	O-ring	NBR		EPDM/FKM	

*1 Liquid side
JIS:Japanese Industrial Standard

Model GS Casing Material FCD400 $\phi > 100 \times 80$

Description		Standard		Optional	
		2 poles/4 poles		2 poles/4 poles	
Liquid	Temperature	-10°C -120°C		-15°C -140°C	
	Density	To be discussed each time			
	Viscosity				
Max. Operating Pressure		Up to 25bar (2.5MPa) for standard flange DIN-PN25		Up to 25bar (2.5MPa) for standard flange JIS20K	
Construction	Impeller	Closed		-	
	Shaft seal	Mechanical Seal		-	
	Flushing	N/A		-	
	Bearing	Sealed ball bearing (grease lubricated)		-	
Flange Standard		EN1092-2		JIS B 2239	
Material	Casing	FCD400		-	
	Impeller	FC200/FCD400		CAC406/SCS13/SCS14A	
	Shaft	SUS431 *1		SUS329J3L *1	
	Casing ring	CAC406		FC150	
	Shaft sleeve	N/A		-	
	O-ring	NBR		EPDM/FKM	

*1 Liquid side
JIS:Japanese Industrial Standard

PUMP SPECIFICATION

Model GSS Casing Material SCS13

Description		Standard		Optional	
		2 poles/4 poles		2 poles/4 poles	
Liquid	Temperature	-10°C -120°C		-25°C -140°C	
	Density	To be discussed each time			
	Viscosity				
Max. Operating Pressure		Up to 16bar (1.6MPa) for standard flange DIN-PN16		Up to 14bar(1.4Mpa) for standard flange JIS10K	
Construction	Impeller	Closed		-	
	Shaft seal	Mechanical Seal		Mechanical Seal *Ask Gland Packing P#6502L	
	Flushing	N/A		Self/External	
	Bearing	Sealed ball bearing (grease lubricated)		-	
Flange Standard		EN1092-1		JIS B 2220	
Material	Casing	SCS13		SCS14A	
	Impeller	SCS13		SCS14A	
	Shaft	SUS329J3L *1		-	
	Casing ring	SUS316		-	
	Shaft sleeve	N/A		SUS304/316	
	O-ring	FKM		EPDM	

*1 Liquid side
JIS:Japanese Industrial Standard

APPLICATION

BUILDING

- Air conditioning·District heating & cooling
- General water supply
- Brine (antifreeze liquid)
- Hot water circulation
- High boost pressure

WATER SUPPLY

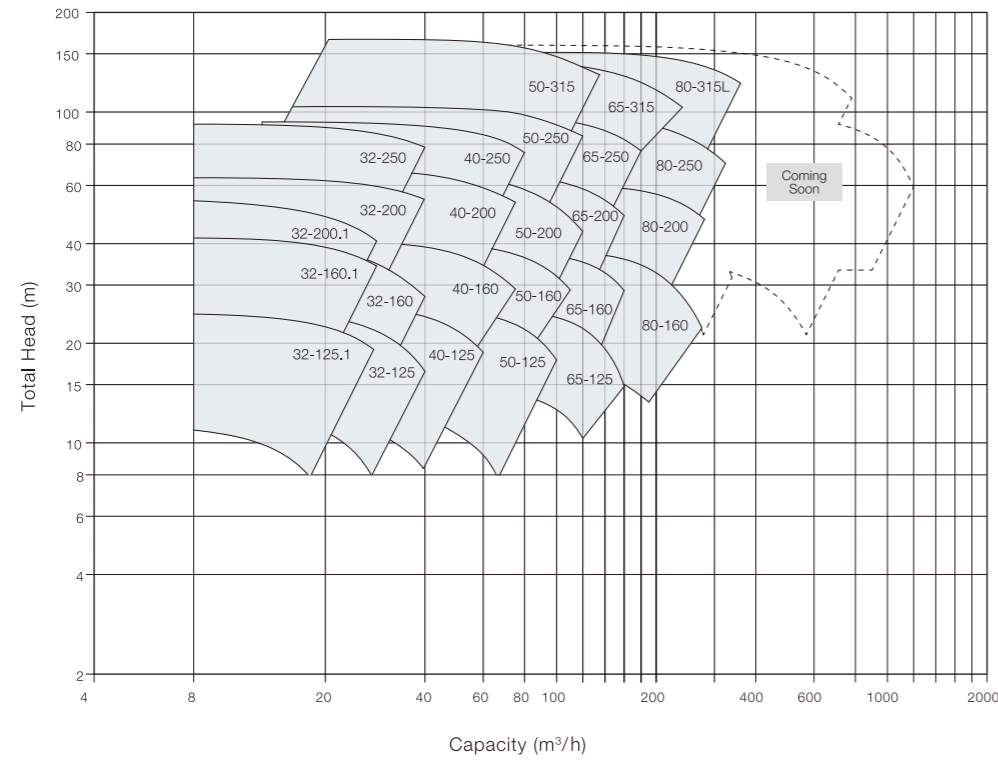
- Water supply duties for municipalities
- Irrigation
- Drainage clean water
- Fire protection
- Swimming pool

GENERAL INDUSTRY

- Semiconductor Industry
- Pure water
- Food industry
- General water(Cooling water,Recycling water)
- General water(Filtered water)
- CIP(Caustic soda)
- Pulp and Paper Industry
- White water(bellow pulp conc. of 0.3%)
- Automobile industry
- Water(without slurry)
- Detergent(without slurry)
- Steel industry·Non-ferrous metals industry
- Coolant
- Cooling Water
- Garbage incineration
- Cooling Water
- Deaerater
- Condensate water

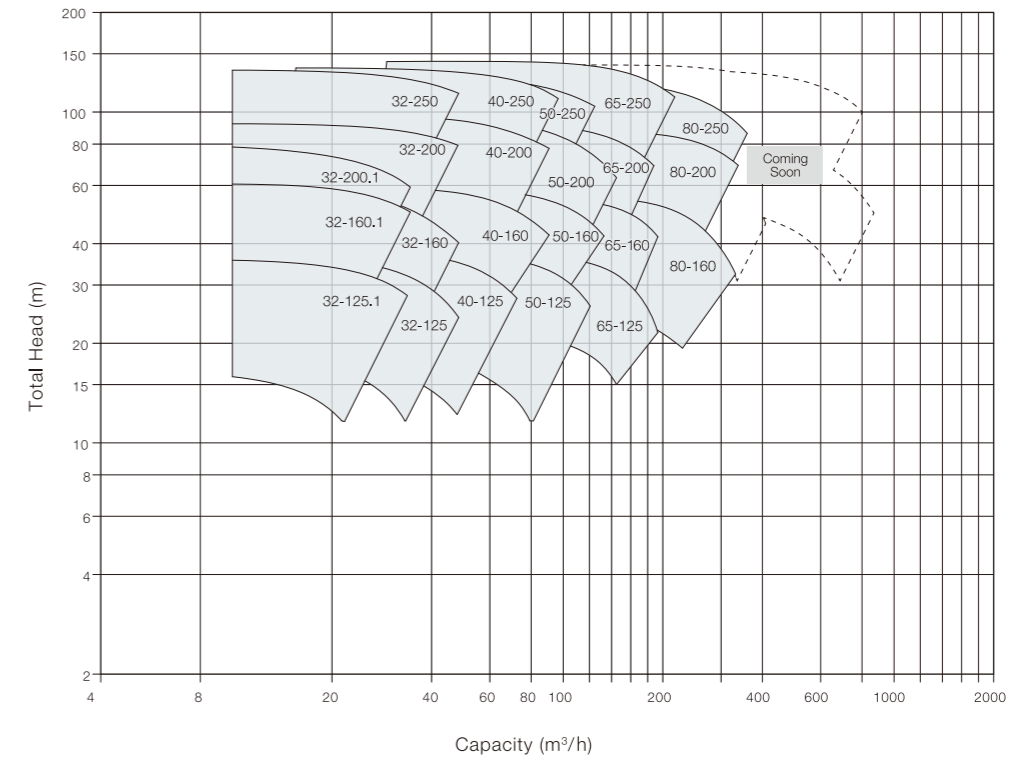
PERFORMANCE CHART

2P/50Hz

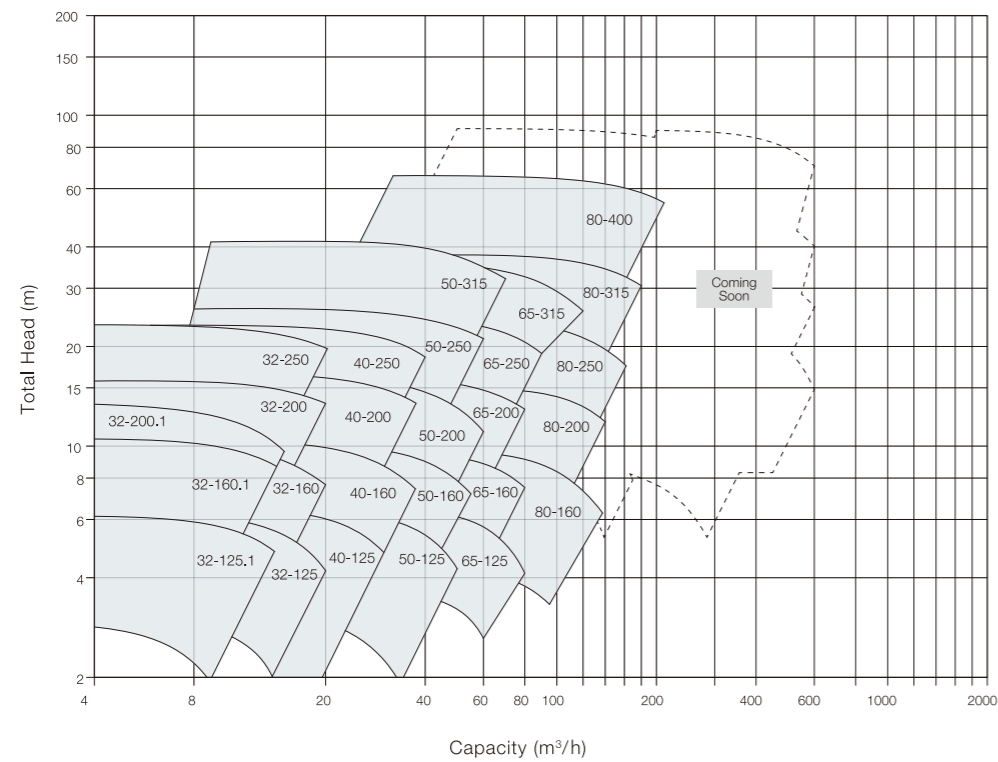


PERFORMANCE CHART

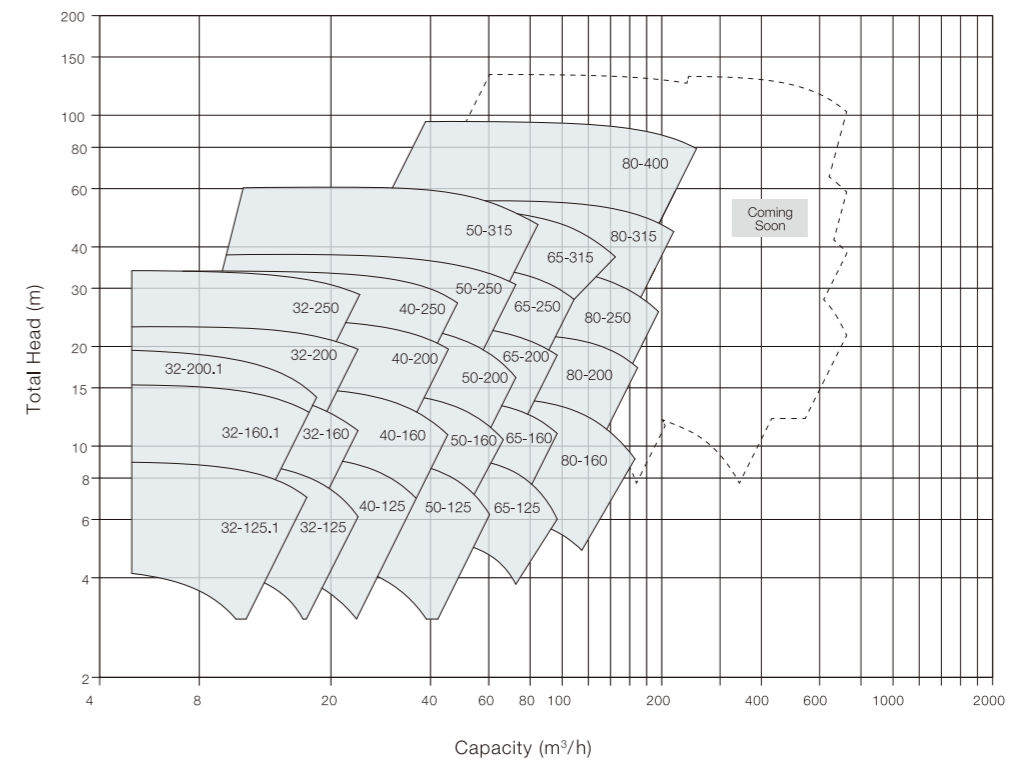
2P/60Hz



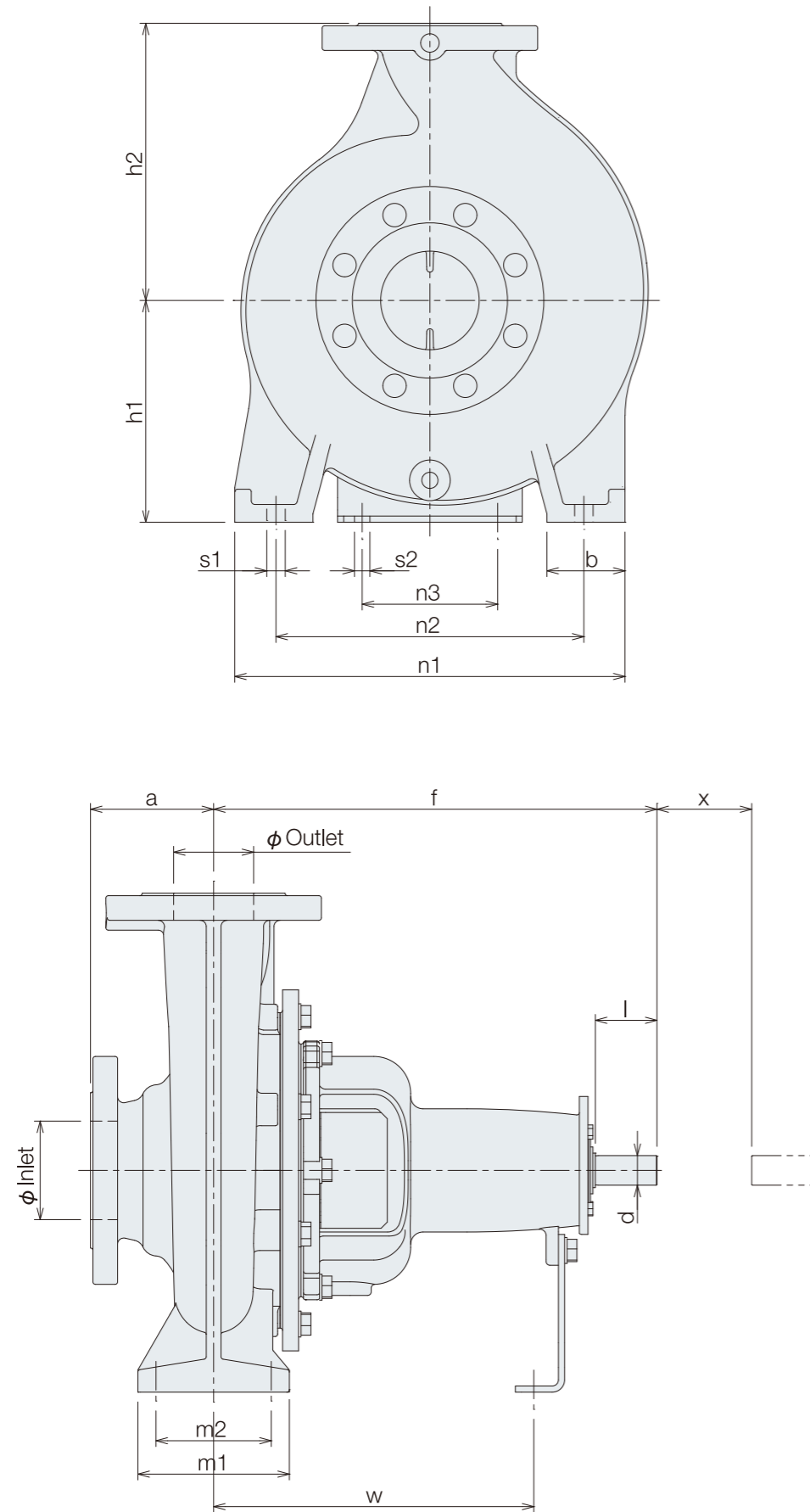
4P/50Hz



4P/60Hz



DIMENSION

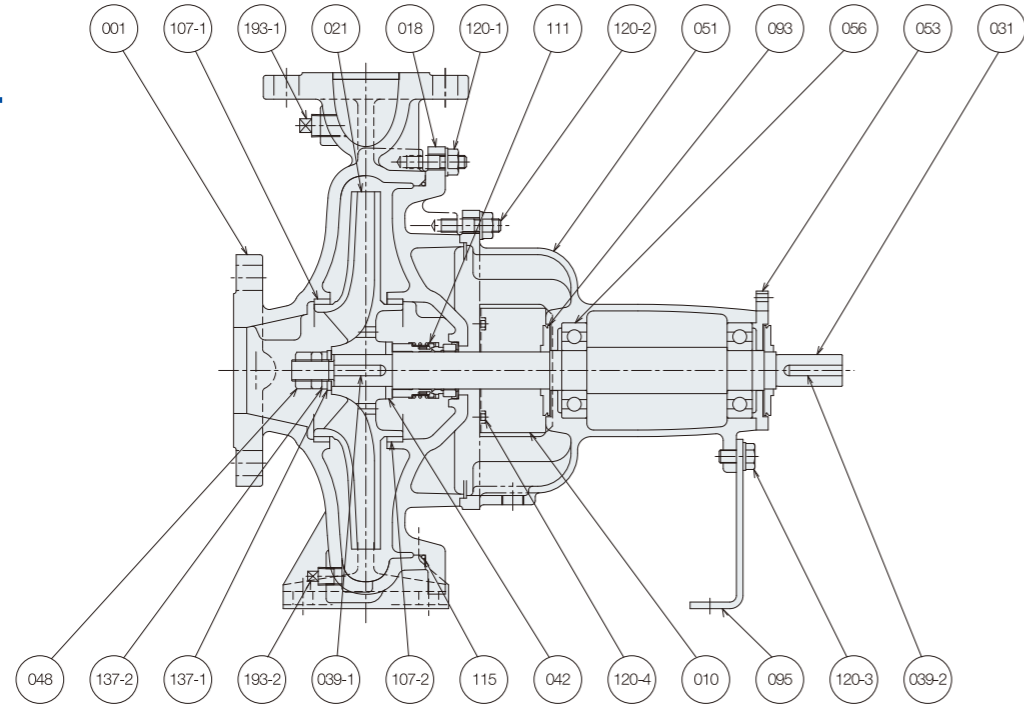


DIMENSION

MODEL	ϕ inlet (mm)	ϕ outlet (mm)	Pump dimensions (mm)				Foot dimensions (mm)						Holes for bolts (mm)		Shaft end dimensions (mm)			Mass(kg)															
			a	f	h1	h2	b	m1	m2	n1	n2	n3	W	s1	s2	d	I	X	FC/FCD	SCS													
32-125.1	50	32	80	360	112	140	50	100	70	190	140	110	260	M12	M12	24	50	100	28	30													
32-160.1					132	160				240	190								29	28													
32-200.1					160	180				39	38																						
32-125	50	32	80	360	112	140	50	100	70	190	140	110	260	M12	M12	24	50	100	28	27													
32-160					132	160				240	190								29	28													
32-200					160	180				39	37																						
32-250					100	180				225	65								125	95	320	250	46	46									
40-125	65	40	80	360	112	140	50	100	70	210	160	110	260	M12	M12	24	50	100	30	29													
40-160					132	160				240	190								31	30													
40-200					160	180				265	212								41	40													
40-250					180	225				320	250								48	48													
40-315					125	470				225	250								65	125	95	345	280	82	83								
50-125	65	50	100	360	132	160	50	100	70	240	190	110	260	M12	M12	24	50	100	33	34													
50-160					160	180				265	212								44	43													
50-200					180	200				320	250								50	49													
50-250					180	225				320	250								50	49													
50-315					125	470				225	280								65	125	95	345	280	86	86								
65-125	80	65	100	360	160	180	65	125	95	280	212	110	260	M12	M12	24	50	100	37	37													
65-160					160	200				280	212								41	43													
65-200					180	225				320	250								47	45													
65-250					200	250				360	280								73	72													
65-315					125	470				225	280								80	160	120	400	315	90	89								
80-160					100	80				125	360								180	225	65	125	95	320	250	110	260	M12	M12	24	50	140	46
80-200	180	250	345	280			67	67																									
80-250	200	280	345	280			77	77																									
80-315	250	315	400	315			101	102																									
80-315L	250	315	400	315			112	112																									
80-400	530	280	355	435			162	160																									
100-160	125	100	125	470			200	250	80			160	120	360	280	110	340	M16	M12	32				80	140								91
100-200					200	280	360	280		103	109																						
100-250					225	280	360	280		108	106																						
100-250L					530	225	280	80		160	120			400	315						110	370	M16			M12	42	110	140	120	118		
100-315					140	470	250	315		109	107																						
100-315L					140	470	250	315		134	132																						
100-400					530	280	355	100		200	150			500	400						370	M20	42			110	189	164					
125-200					150	125	140	470		315	80			160	120						400	315	110			340	M16	M12	32	80	140	120	119
125-250	250	355	340	280					131	128																							
125-250L	530	280	355	80					160	120		400	315			110	370	M20	42	110				140	148							145	
125-315	530	280	355	80					160	120		400	315			110	370	M20	42	110				140	176							170	
125-400	180	670	375	450					100	200		150	500			400	140	500	M16	48				110	180							218	202
125-500	180	670	375	450					100	200		150	500			400	140	500	M16	48				110	180							365	361
150-200	200	150	160	470	280	355	100	200	150	500	400	110	340	M20	M12	32	80	140	154	157													
150-250					280	375													340	280	171	153											
150-315					315	400													340	280	225	214											
150-400					315	450													340	280	339	341											
150-400L					315	450													340	280	363	365											
150-500	180	670	375	560	491	504																											
200-400	250	200	180	670	385	560	100	315	250	660	560	140	500	M20	M16	60	110	180	508	-													
200-500					200	820													435	630	160	630	M24	75	125	645	-						

SECTIONAL VIEW

TYPICAL MECHANICAL SEAL



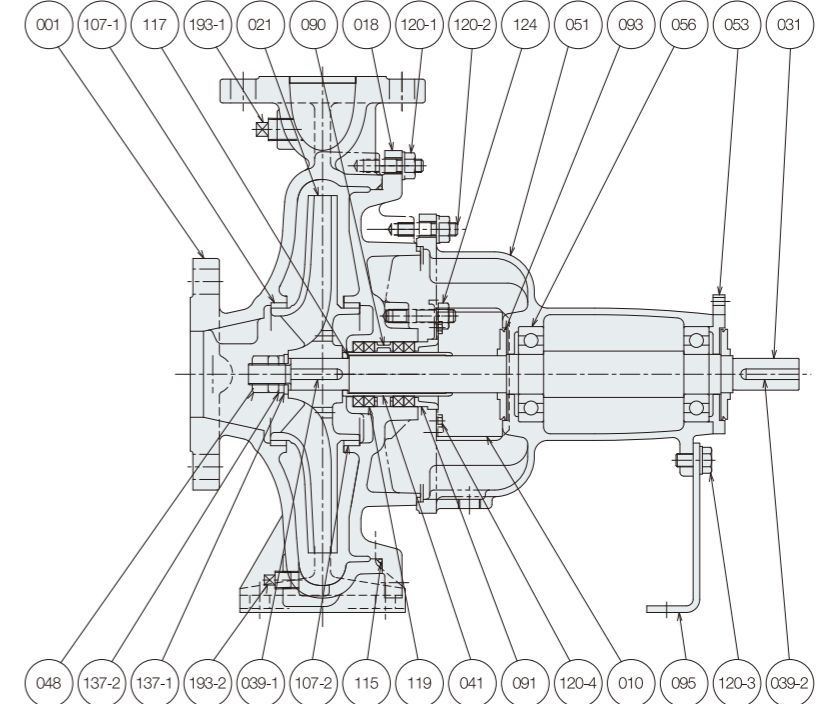
Mechanical Seal Type

No.	Part name	Qty	Material (Casing Material FC Cast Iron)		Material (Casing Material Ductile Cast Iron)		Material (Casing Material Stainless Steel)	
001	CASING	1	FC250	EN-GJL-250(EN-JL1040)	FCD400	EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
010	PROTECTOR	2	SPCC	Hot-rolled mild steel	SPCC	Hot-rolled mild steel	SPCC	Hot-rolled mild steel
018	CASING COVER	1	FC250	EN-GJL-250(EN-JL1040)	FCD400	EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
021	IMPELLER	1	FC200 or FCD400	EN-GJL-200(EN-JL1030) or EN-GJS-400-15(5.3106)	FC200 or FCD400	EN-GJL-200(EN-JL1030) or EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
031	SHAFT	1	SUS431 *1	X17CrNi16-2(1.4057) *1	SUS431 *1	X17CrNi16-2(1.4057) *1	SUS329J3L *1	X2CrNiMo22-5-3(1.4462) *1
039-1	KEY	1	SUS420J2	X30Cr13(1.4028)	SUS420J2	X30Cr13(1.4028)	SUS316	X5CrNiMo17-12-2(1.4401)
039-2	KEY	1	S50C	C50(1.0540)	S50C	C50(1.0540)	S50C	C50(1.0540)
042	SPACER	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
048	IMPELLER NUT	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
051	BEARING HOUSING	1	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)
053	BEARING COVER	1	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)
056	BALL BEARING	2	-	-	-	-	-	-
093	DEFLECTOR	2	EPDM	Rubber/EPDM	EPDM	Rubber/EPDM	EPDM	Rubber/EPDM
095	STAY	1	SPHC	Hot-rolled mild steel	SPHC	Hot-rolled mild steel	SPHC	Hot-rolled mild steel
107-1	CASING RING	1	CAC406	CuSn5Zn5Pb5(CC491K)	CAC406	CuSn5Zn5Pb5(CC491K)	SUS316	X5CrNiMo17-12-2(1.4401)
107-2	CASING RING	1	CAC406	CuSn5Zn5Pb5(CC491K)	CAC406	CuSn5Zn5Pb5(CC491K)	SUS316	X5CrNiMo17-12-2(1.4401)
111	MECHANICAL SEAL	1	-	-	-	-	-	-
115	O-RING	1	NBR	Rubber/NBR	NBR	Rubber/NBR	FKM	Rubber/FKM
120-1	BOLT	-	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-2	BOLT	6	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-3	BOLT	1	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-4	BOLT	4	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
137-1	PLAIN WASHER	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
137-2	SPRING LOCK WASHER	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
193-1	PLUG	1	SS400	Rolled steel	SS400	Rolled steel	SUS304	X5CrNi18-10(1.4301)
193-2	PLUG	1	SS400	Rolled steel	SS400	Rolled steel	SUS304	X5CrNi18-10(1.4301)

*1 Liquid side

SECTIONAL VIEW

TYPICAL GLAND PACKING



Gland Packing Type

No.	Part name	Qty	Material (Casing Material FC Cast Iron)		Material (Casing Material Ductile Cast Iron)		Material (Casing Material Stainless Steel)	
001	CASING	1	FC250	EN-GJL-250(EN-JL1040)	FCD400	EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
010	PROTECTOR	2	SPCC	Hot-rolled mild steel	SPCC	Hot-rolled mild steel	SPCC	Hot-rolled mild steel
018	CASING COVER	1	FC250	EN-GJL-250(EN-JL1040)	FCD400	EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
021	IMPELLER	1	FC200 or FCD400	EN-GJL-200(EN-JL1030) or EN-GJS-400-15(5.3106)	FC200 or FCD400	EN-GJL-200(EN-JL1030) or EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
031	SHAFT	1	SUS431 *1	X17CrNi16-2(1.4057) *1	SUS431 *1	X17CrNi16-2(1.4057) *1	SUS329J3L *1	X2CrNiMo22-5-3(1.4462) *1
039-1	KEY	1	SUS420J2	X30Cr13(1.4028)	SUS420J2	X30Cr13(1.4028)	SUS316	X5CrNiMo17-12-2(1.4401)
039-2	KEY	1	S50C	C50(1.0540)	S50C	C50(1.0540)	S50C	C50(1.0540)
041	SHAFT SLEEVE	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
048	IMPELLER NUT	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
051	BEARING HOUSING	1	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)
053	BEARING COVER	1	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)	FC150	EN-GJL-150(EN-JL1020)
056	BALL BEARING	2	-	-	-	-	-	-
090	LANTERN RING	1	SCS13	GX5CrNi19-10(1.4308)	SCS13	GX5CrNi19-10(1.4308)	SUS316	X5CrNiMo17-12-2(1.4401)
091	GLAND	1	SCS13	GX5CrNi19-10(1.4308)	SCS13	GX5CrNi19-10(1.4308)	SUS316	X5CrNiMo17-12-2(1.4401)
093	DEFLECTOR	2	EPDM	Rubber/EPDM	EPDM	Rubber/EPDM	EPDM	Rubber/EPDM
095	STAY	1	SPHC	Hot-rolled mild steel	SPHC	Hot-rolled mild steel	SPHC	Hot-rolled mild steel
107-1	CASING RING	1	CAC406	CuSn5Zn5Pb5(CC491K)	CAC406	CuSn5Zn5Pb5(CC491K)	SCS14A	GX5CrNiMo19-11-2(1.4408)
107-2	CASING RING	1	CAC406	CuSn5Zn5Pb5(CC491K)	CAC406	CuSn5Zn5Pb5(CC491K)	SCS14A	GX5CrNiMo19-11-2(1.4408)
115	O-RING	1	NBR	Rubber/NBR	NBR	Rubber/NBR	FKM	Rubber/FKM
117	GASKET	1	V#6500AC	V#6500AC	V#6500AC	V#6500AC	V#6500AC	V#6500AC
119	GLAND PACKING	4	P#6502L	P#6502L	P#6502L	P#6502L	P#6502L	P#6502L
120-1	BOLT	-	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-2	BOLT	6	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-3	BOLT	1	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
120-4	BOLT	4	SS400	Rolled steel	SS400	Rolled steel	SS400	Rolled steel
124	GLAND BOLT	-	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
137-1	PLAIN WASHER	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
137-2	SPRING LOCK WASHER	1	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)	SUS304	X5CrNi18-10(1.4301)
193-1	PLUG	1	SS400	Rolled steel	SS400	Rolled steel	SUS304	X5CrNi18-10(1.4301)
193-2	PLUG	1	SS400	Rolled steel	SS400	Rolled steel	SUS304	X5CrNi18-10(1.4301)

*1 Liquid side