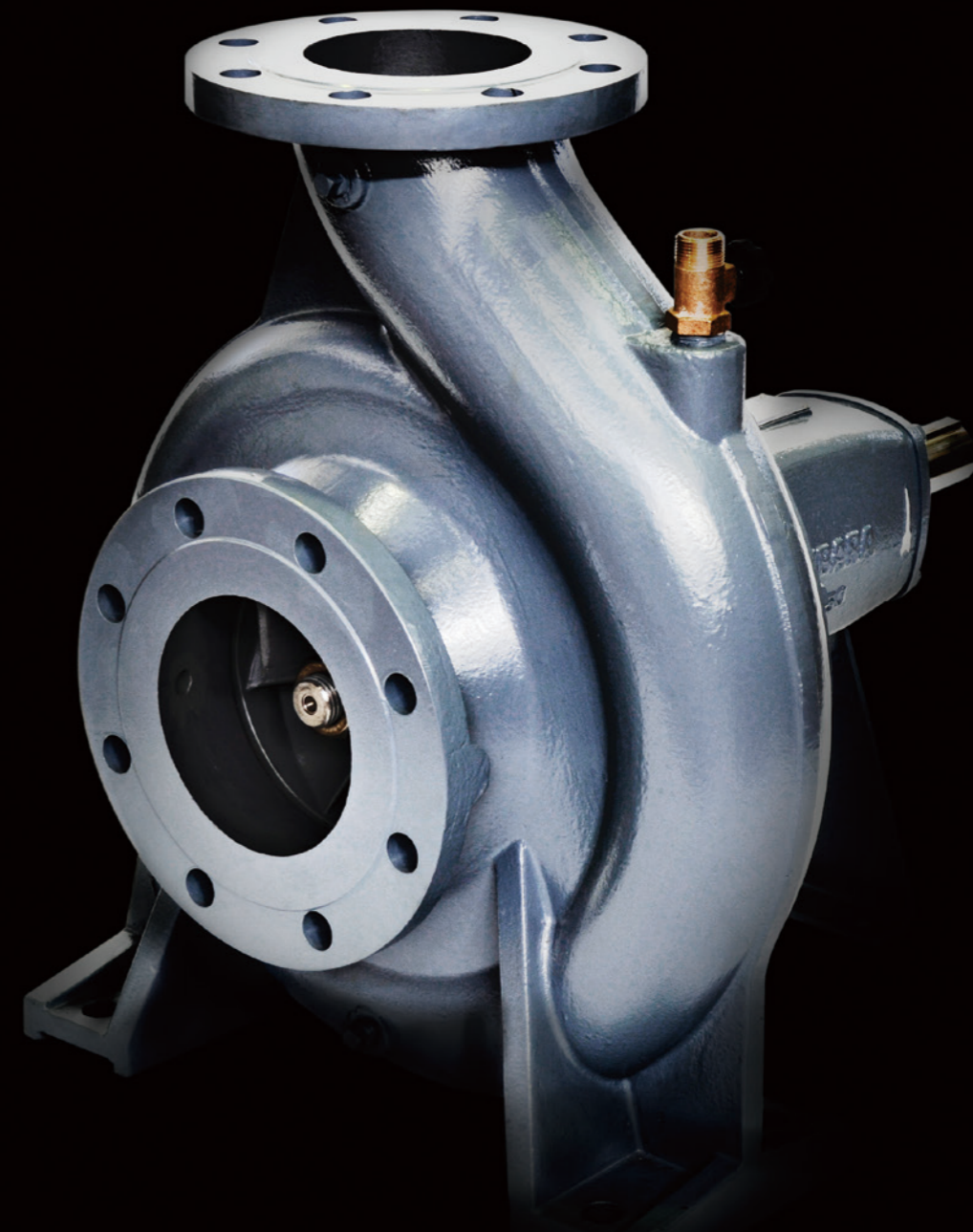


EBARA END SUCTION VOLUTE PUMP Model GS/GSS



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.

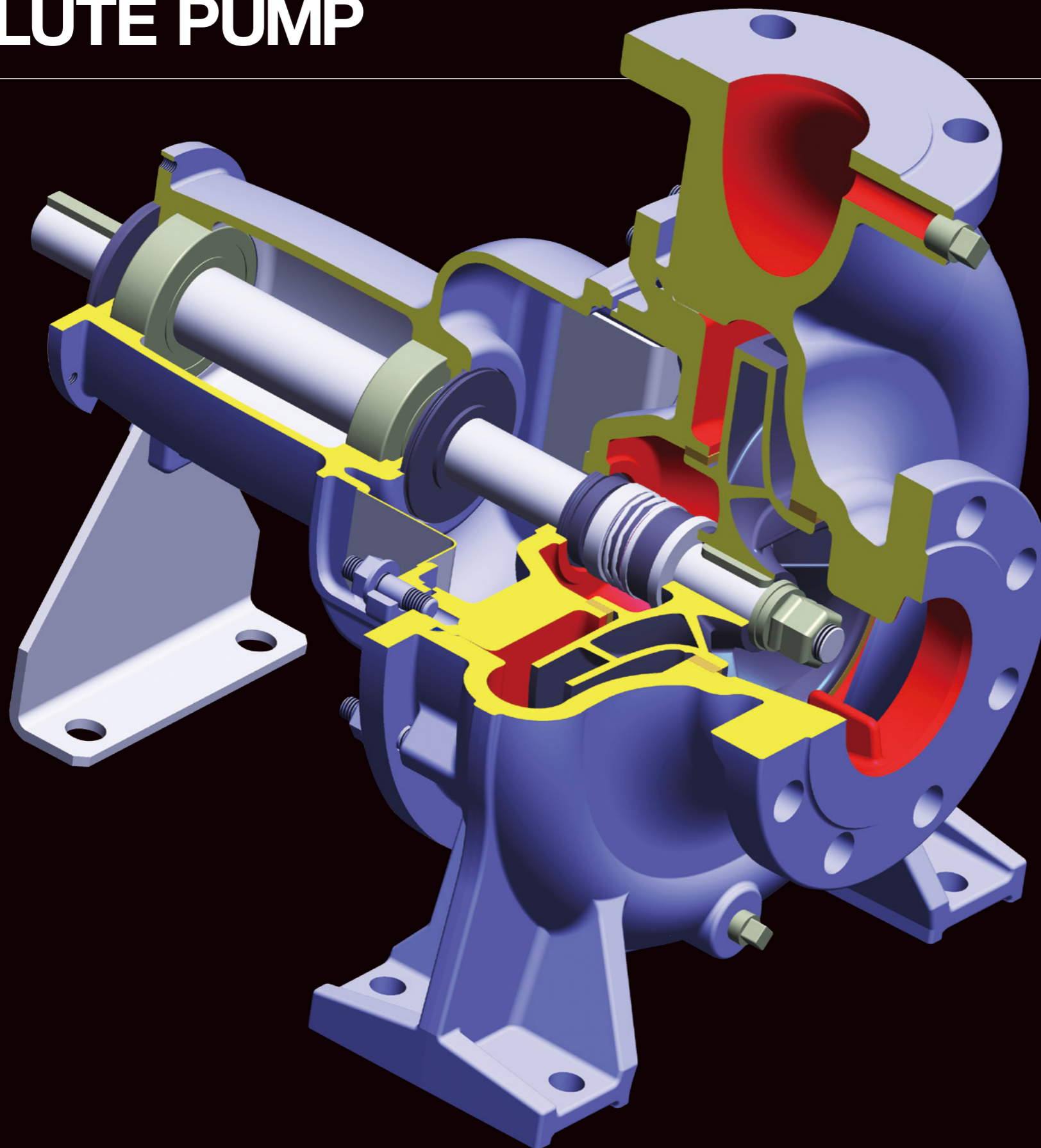


EBARA Corporation

11-1, Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan
Phone:+81-3-3743-6111 FAX:+81-3-5736-3100
HP:<http://www.ebara.co.jp/en/>

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

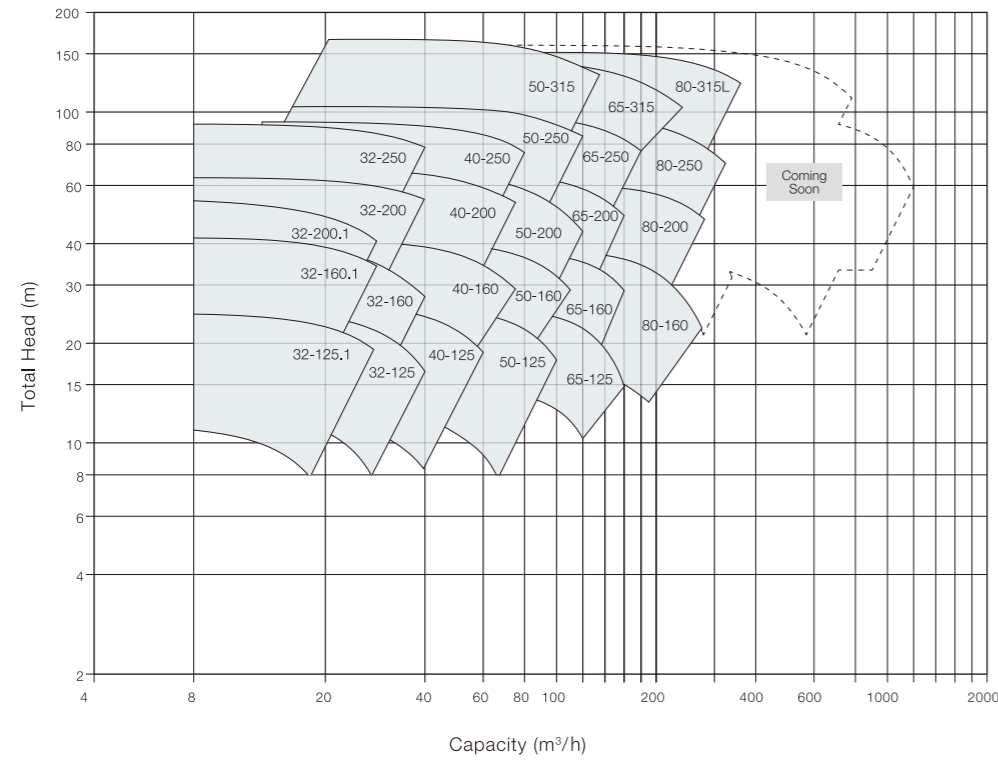
- Water supply duties for municipalities
- Irrigation
- Drainage clean water
- Fire protection
- Swimming pool

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

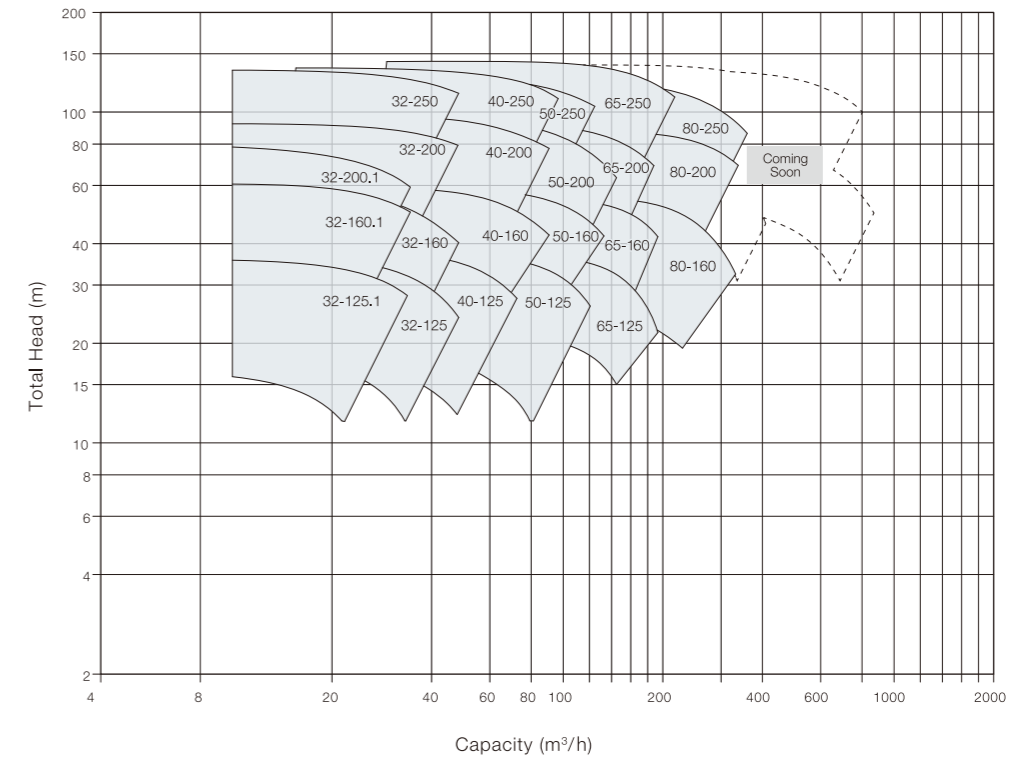
PERFORMANCE CHART

2P/50Hz

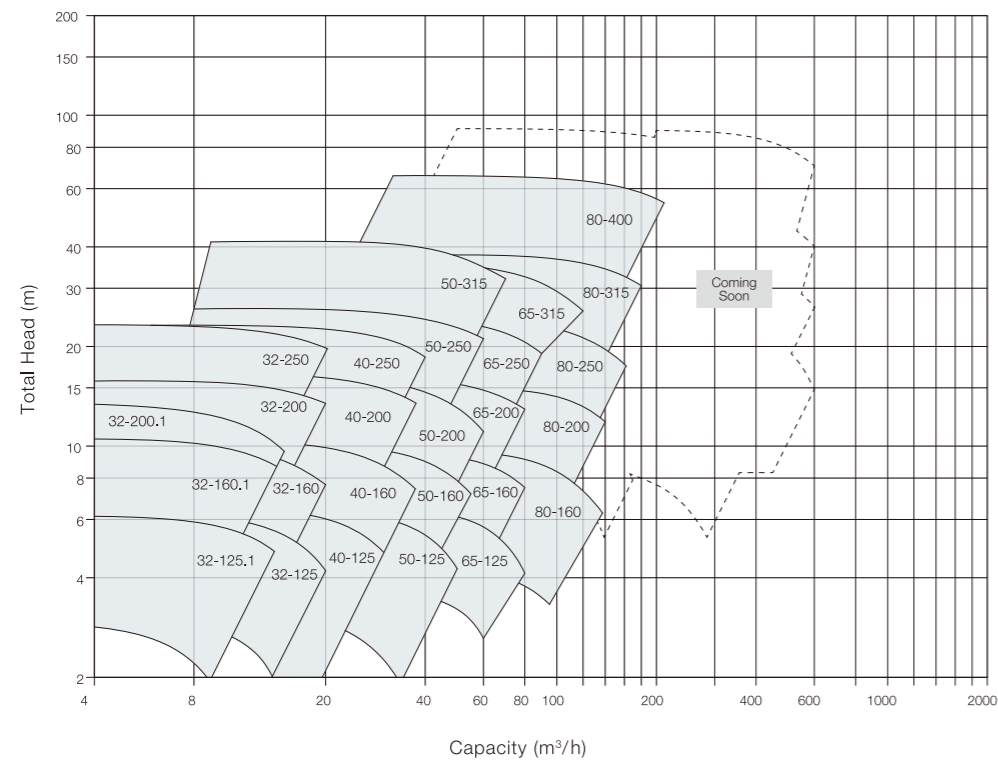


PERFORMANCE CHART

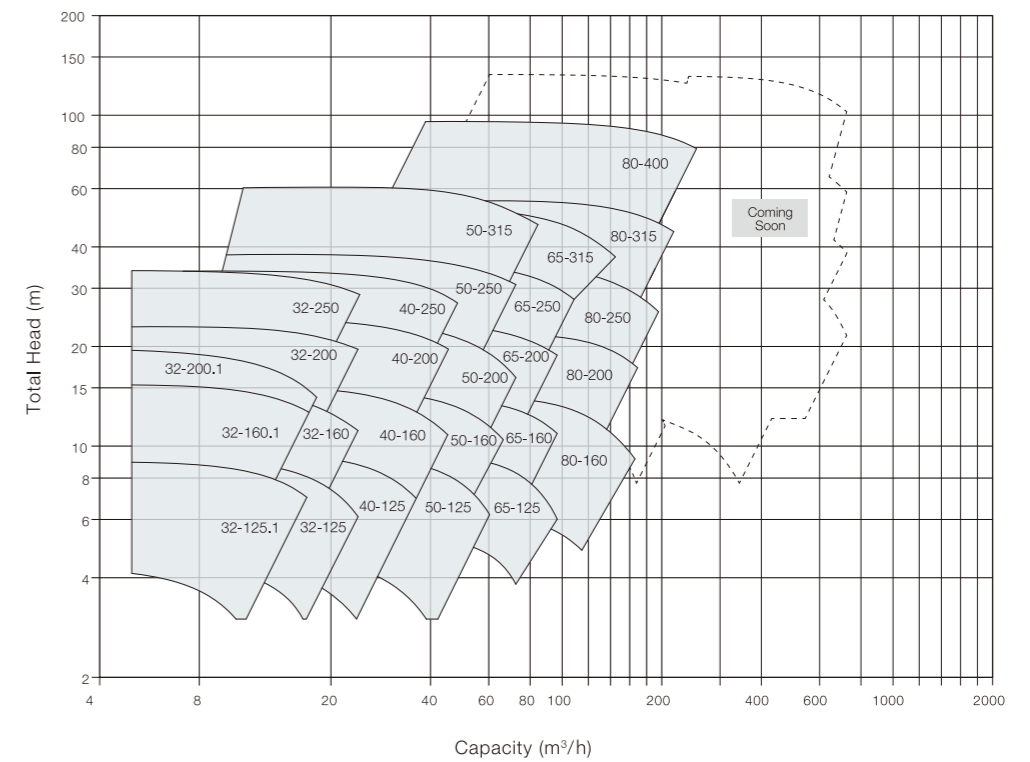
2P/60Hz



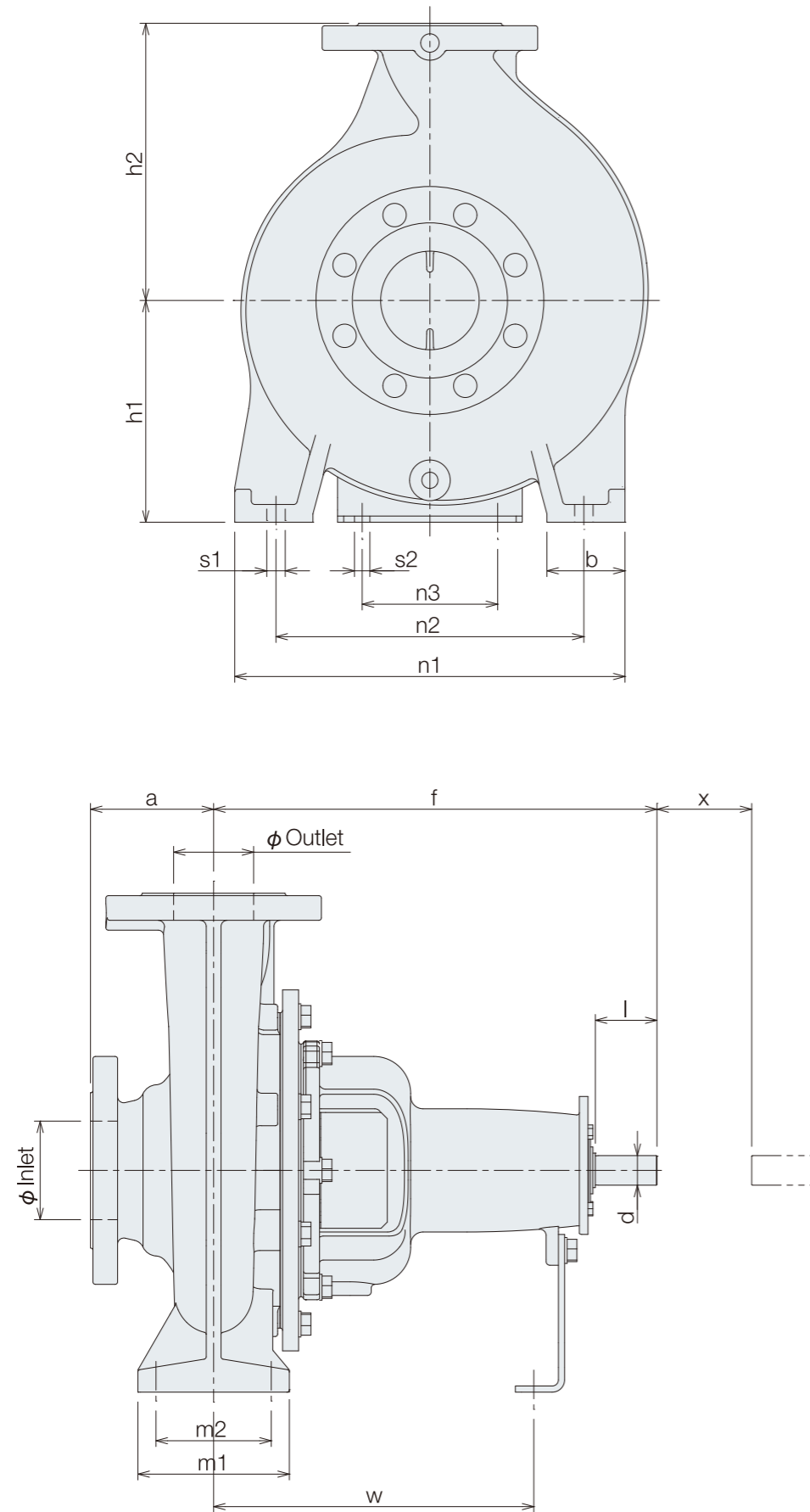
4P/50Hz



4P/60Hz



DIMENSION

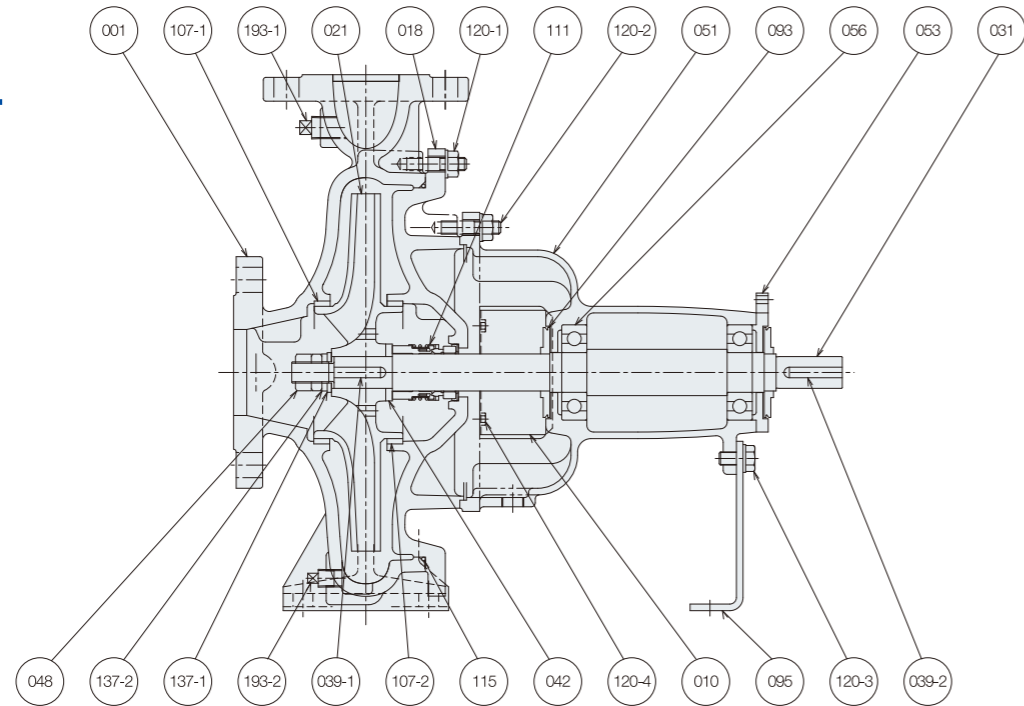


DIMENSION

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
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
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	225				320	250								50	49
50-250					200	250				340	280								86	86
50-315					125	470				225	280								65	125
65-125	80	65	100	360	160	180	65	125	95	280	212	110	260	M12	M12	24	50	100	37	37
65-160					200	212				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								90	89
80-160					100	80				125	360								180	225
80-200	250	280	345	280			67	67												
80-250	200	280	340	280			77	77												
80-315	250	315	400	315			101	102												
80-315L	530	250	370	250			112	112												
80-400	280	355	435	355			162	160												
100-160	125	100	125	470			200	250	80			160	120	360	280	110	340	M16	M12	32
100-200					225	280	340	280		103	109									
100-250					225	280	340	280		108	106									
100-250L					530	225	370	225		120	118									
100-315					140	470	340	250		109	107									
100-315L					140	470	340	250		134	132									
100-400					530	280	370	355		189	164									
125-200					150	125	140	470		250	315			80	160					
125-250	355	400	340	280					131	128										
125-250L	530	280	370	280					148	145										
125-315	530	280	370	280					176	170										
125-400	180	670	375	450					218	202										
125-500	180	670	375	450					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				370	280								171	153
150-315					315	400				370	315								225	214
150-400					315	450				370	315								339	341
150-400L					670	375				500	450								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

SECTIONAL VIEW

TYPICAL MECHANICAL SEAL



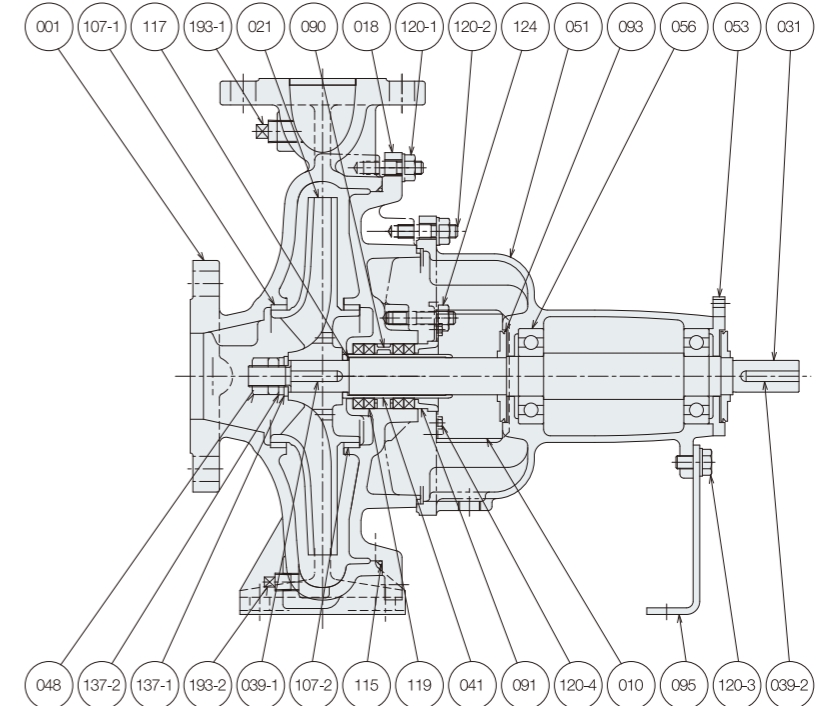
Mechanical Seal Type

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