



EBARA

End Suction Volute Pump

Type GSS

APPLICATIONS

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 (Pulp concentration below 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

FEATURES

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.

SIMPLE MAINTENANCE

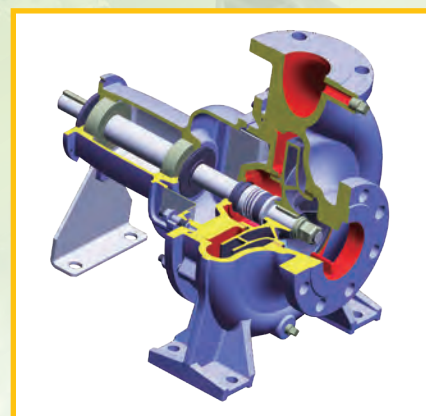
- Back pull-out structure enables disassembly and inspection without removal of suction and discharge piping.
- Shield bearings eliminate need for adding or exchanging lubricating oil.
- Shaft seal water injection piping not required for the standard application.
- Air-bleeding not required.
- Simplified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

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.

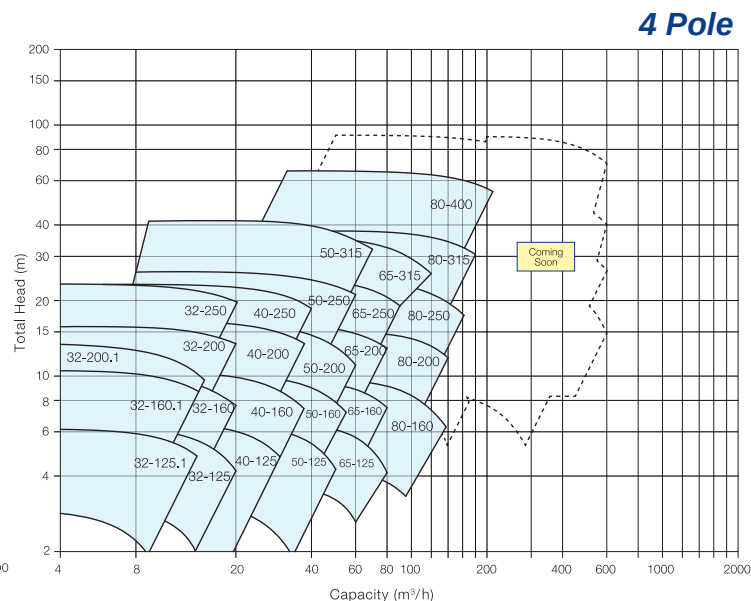
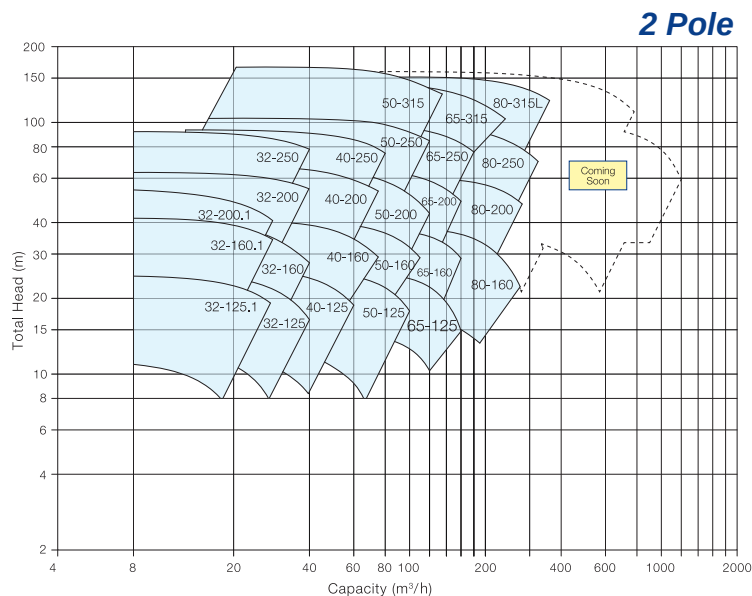
INTERNATIONAL STANDARDS

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



Ahead Beyond

PERFORMANCE CHART



SPECIFICATIONS

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

General Description

Capacities	To 1300 m³/hr
Heads	To 150 m
Liquid temperatures	-10°C to 140°C
Max.working pressures	Up to 25Bar (2.5MPa)
Materials	Casing: Stainless steel Impeller: Stainless steel
Standards	EN733
Rotation	Clockwise viewed from coupling end

SPECIFICATIONS

Design Details

Features

- Horizontal foot mounting
- Back pull-out design
- Single-stage
- Radially split volute casing

Applicable Flange Standard

- EN PN16
- EN PN25
- JIS 10K
- JIS 20K

Impeller Type

- Closed, single suction type and balancing holes to reduce axial thrust

Shaft Seal

- Gland packing
- Single mechanical seal based upon DIN24960 (Conical type)
- Single mechanical seal (Cylindrical type)
- Double mechanical seal (Cylindrical type)

Bearings And Lubrication

- Shield ball bearing (Grease lubrication)

PAINTING

1. Outer Surface

• Standard up to 120 °C

Primer coating	Cationic electro-deposition painting (Cation)
Final coating	Alkyd resin based enamel
Finish color	Munsell 2.5PB4/2 (Dark gray)

• Standard above to 120 °C up to 140 °C

Primer coating	Cationic electro-deposition painting (Cation)
Final coating	Non painting
Finish color	Black

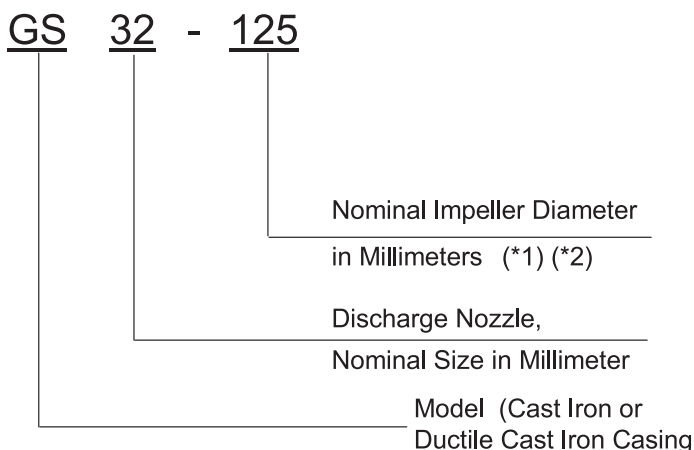
2. Inner Surface

• Standard up to 140 °C

Primer coating	Cationic electro-deposition painting (Cation)
Final coating	Non painting
Finish color	Black

SPECIFICATION - Designation

The following designation is system according to EN733.

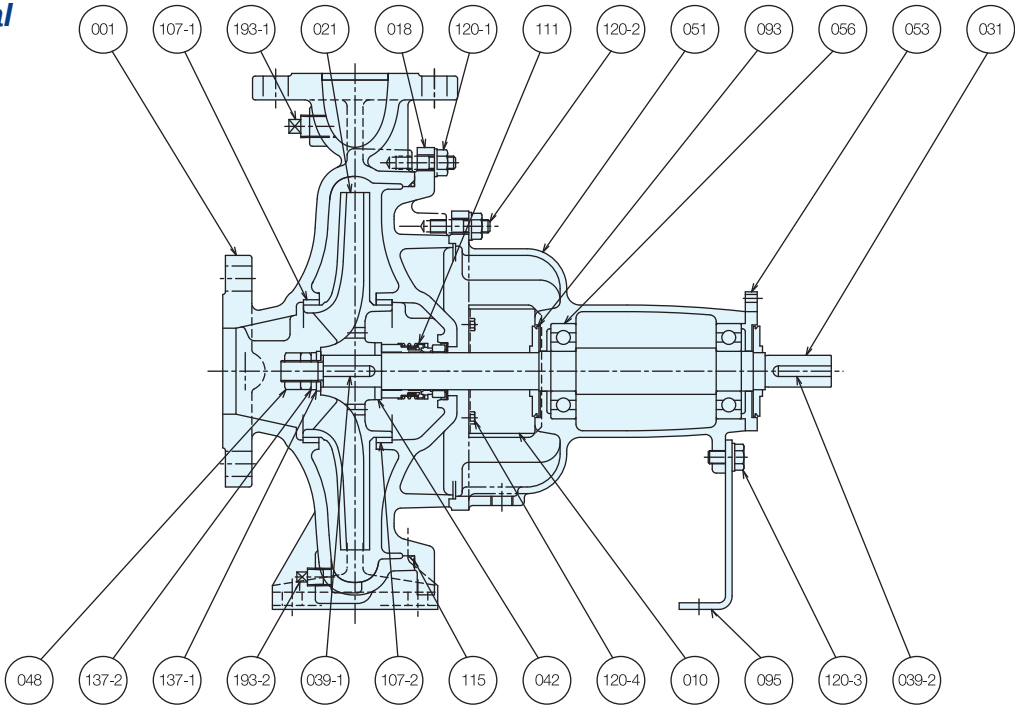


(*1) The letter "L" following the impeller classification code indicates different bearing designs. To give an example, GS80-315 and GS80-315L have different bearing designs and shaft size.

(*2) The letter ".1" following the impeller classification code indicates different casing and impeller designs. To give an example, GS32-125 and GS32-125.1 have different casing and impeller designs from one another.

SECTIONAL VIEW

Typical
Mechanical
Seal

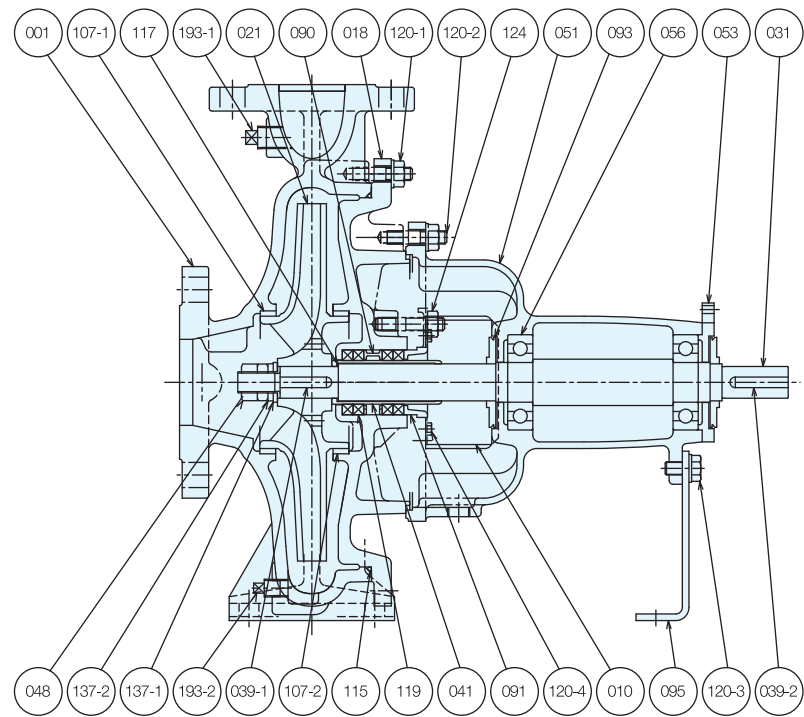


No.	Part name	Qty	Material (Casing Material FC Cast Iron)		Material (Casing Material Ductile Cast Iron)		Material (Casing Material Stainless Steel)	
001	CASING	1	FC250	EN-GJL-250(EN-JL1040)	FCD400	EN-GJS-400-15(5.3106)	SCS13	GX5CrNi19-10(1.4308)
010	PROTECTOR	2	SPCC	Hot-rolled mild steel	SPCC	Hot-rolled 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	X2CrNiMoN22-5-3(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

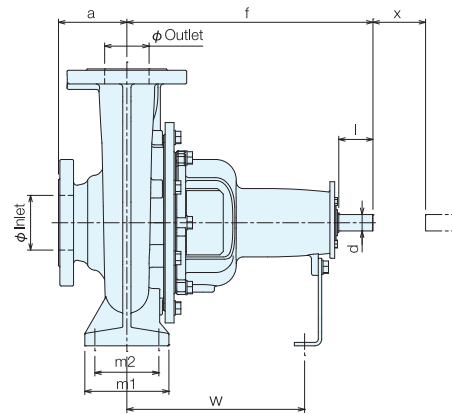
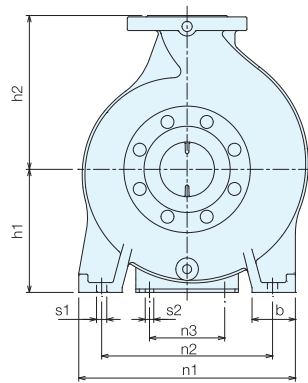
Typical
Gland
Packing



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	X2CrNiMoN22-5-3(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

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	l	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				240	190								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				240	190								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					100	180				225	65								125	95
40-315	65	50	100	360	125	160	65	125	95	240	190	110	260	M12	M12	24	50	100	32	80
50-125					132	160				265	212								44	43
50-160					160	180				320	250								50	49
50-200					180	225				345	280								86	86
50-250					200	250				400	315								90	89
50-315					125	225				280	435								355	162
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	225				320	250								41	40
65-200					225	280				400	315								90	89
65-250					125	250				315	435								355	162
65-315	100	80	125	360	180	225	65	125	95	280	212	110	260	M12	M12	24	50	100	46	48
80-160					200	225				320	250								67	67
80-200					225	280				400	315								90	89
80-250					250	315				435	355								162	160
80-315					280	355				435	355								162	160
80-315L	125	100	140	360	200	250	80	160	120	360	280	110	340	M16	M12	42	110	140	101	102
100-160					225	280				400	315								103	109
100-200					250	315				435	355								108	106
100-250					280	355				435	355								108	106
100-315					315	400				435	355								134	132
100-315L	150	125	140	360	200	250	80	160	120	360	280	110	340	M16	M12	42	110	140	120	118
100-400					225	280				400	315								103	109
125-200					250	315				435	355								108	106
125-250					280	355				435	355								108	106
125-250L					315	400				435	355								134	132
125-315	200	150	160	360	200	250	80	160	120	360	280	110	340	M20	M16	48	180	180	189	164
125-400					225	280				400	315								120	119
125-500					250	315				435	355								131	128
150-200					280	355				435	355								148	145
150-250					315	400				435	355								176	170
150-315	250	200	200	360	200	250	100	200	150	360	280	110	340	M20	M12	42	110	140	225	214
150-400					225	280				400	315								339	341
150-400L					250	315				435	355								363	365
150-500					280	355				435	355								491	504
200-400					315	400				435	355								508	-
200-500	250	200	200	360	200	250	100	315	250	660	560	140	500	M20 M24	M16	60	110	180	645	-
200-400					225	280				400	315								645	-
200-500					250	315				435	355								645	-

* Dimensional details are provided for reference only.

* All specifications are subject to change without prior notice.

