



EBARA

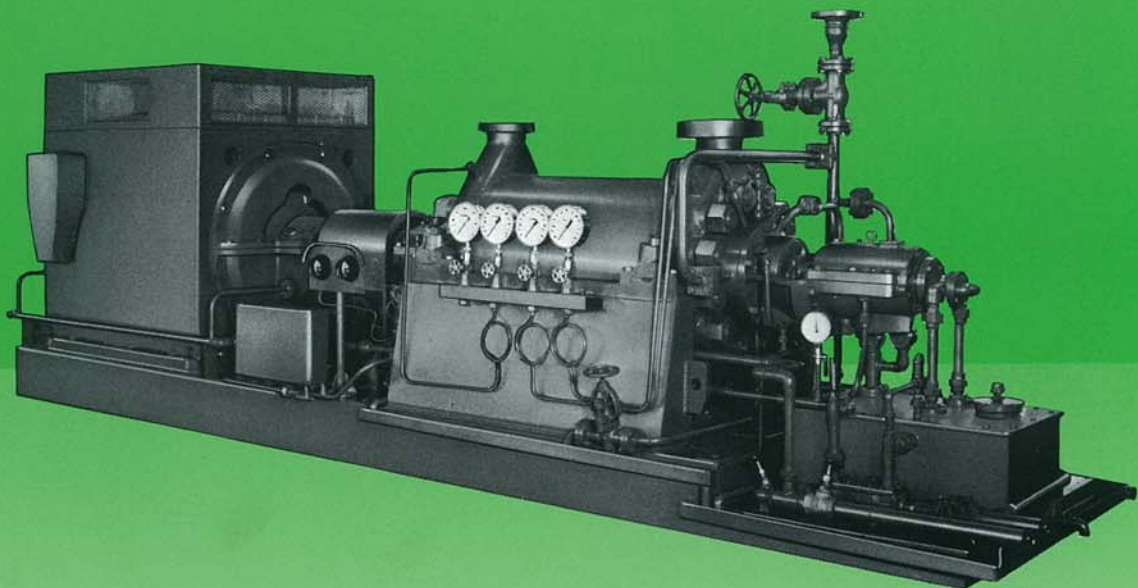
HORIZONTAL RING SECTION PUMP

CS1821 ED

Multi Stage, Diffuser Type For Boiler Feed, Mine Drainage,
Chemical Process and Other High Pressure Services

Models

SS/SSD



HORIZONTAL RING SECTION PUMP

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EBARA MODEL SS/SSD HORIZONTAL RING SECTION PUMP of multistage, diffuser type have been widely used in boiler feed, mine drainage, chemical process and other high pressure services for the past long years. Many

improvements have been recently made on this pump to enhance its performance.

Our modern tape controlled machines in conjunction with advanced quality control procedures insure that these pumps meet our high manufacturing standards.

Unique original design of this high performance pump provides for superior and extended low-cost operation.

Model SSD denotes double suction impeller type.

Applications

- Boiler Feed
- Mine Drainage
- Chemical Process
- Other High Pressure Services

Ratings

Capacities	To 12m ³ /min (3170 USGPM)
Heads	To 2500 m (8200 ft)
Discharge pressures	To 240 kgf/cm ² (3480 PSIG) {23.5 MPa} (Gauge)
Hydrostatic test pressures	To 360 kgf/cm ² (5220 PSIG) {35.3 MPa} (Gauge)
Speeds	50 Hz 2950 min ⁻¹
	60 Hz 3550 min ⁻¹
Max. allowable revolutions	7000 min ⁻¹
Rotation	Clockwise viewed from inboard side
Temperatures	~250°C (480°F)
Impeller type	Enclosed
Nozzles	Top-Top
Flanges	ANSI to 2500 standard, other standards also available
Shaft sealing	Conventional packing and mechanical seal

Features

- Centerline supported and compact design
- High efficiency, High reliability
- Flexibility of design handles wide range of liquids
- All components have been designed for maximum parts interchangeability.
- Low NPSH Performance.

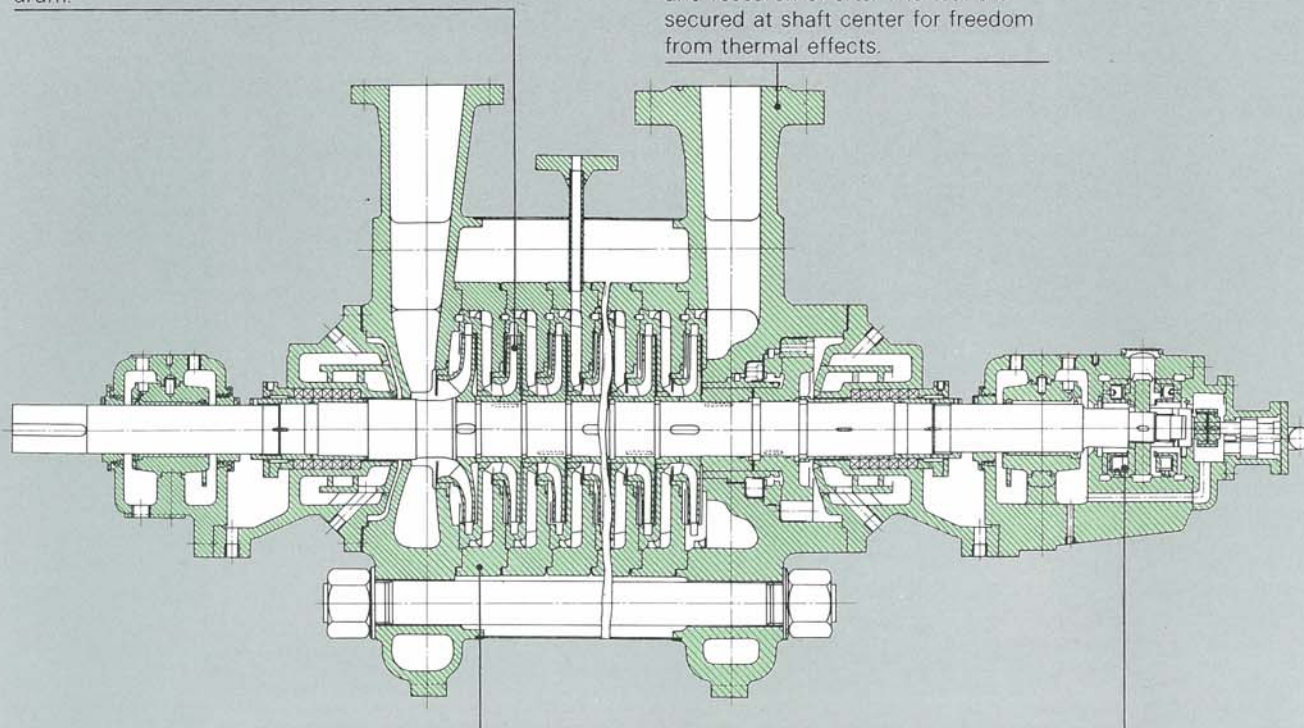
Construction

Impeller

The impellers are of closed type so finished overall that a maximum hydraulic efficiency can be obtained. They are perfectly balanced, both dynamically and statically. The impellers are all located in one direction, with thrust balanced by drum.

Casing

The discharge casing is a structure prudently designed and fabricated of carefully selected material for high-temperature and high-pressure services. Particularly, the balance chamber is of a unique construction achieved with years long experience and research efforts. The test are secured at shaft center for freedom from thermal effects.



Intermediate Casing

The intermediate casing is most simplified in construction for freedom from thermal deformations, and is overall finished for minimum frictional loss in fluid. The interfaces at the respective stages are superfinished for perfect seal without packing used.

Bearing

While this pump is structurally balanced in thrust, both axially and radially, a pivot shoe type thrust bearing with sufficient load capacity is used to receive thrust resultant from sudden change in load.

Metallurgy

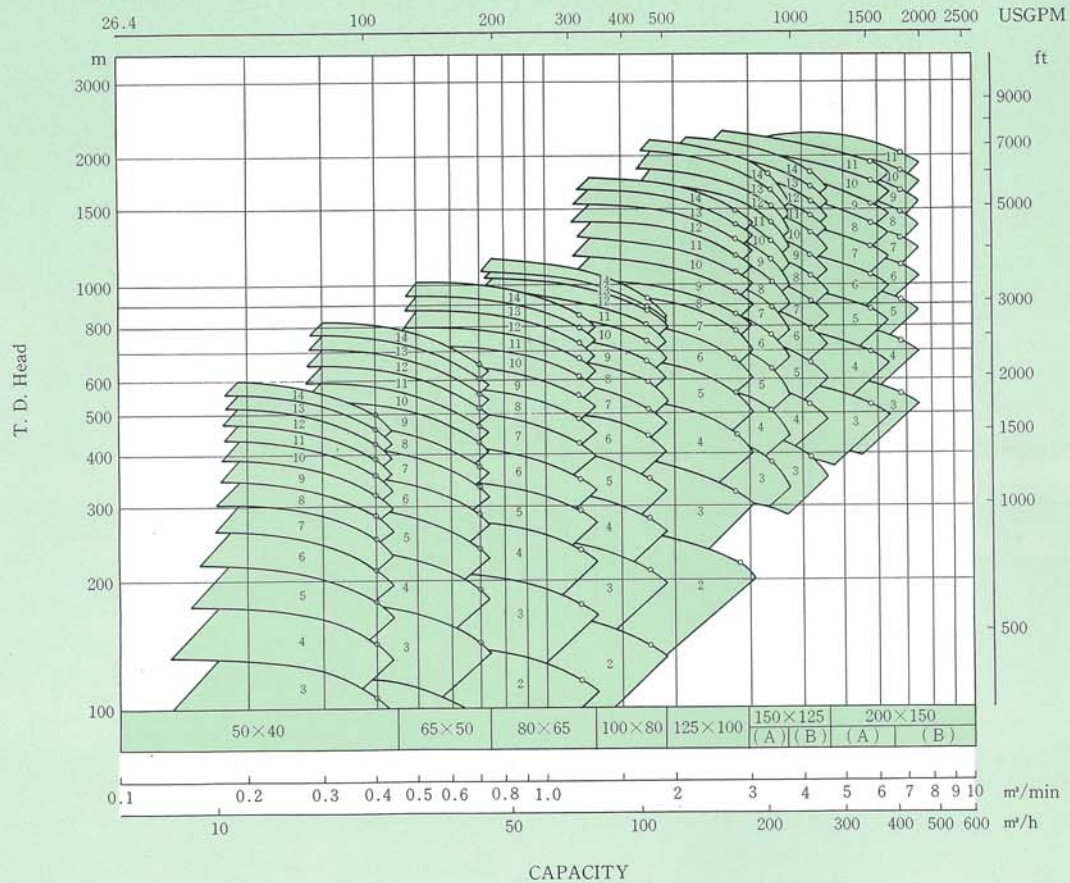
Part Name	Materials JIS/ASTM-AISI		
	C. Steel	13% Cr. Steel	316 S. Steel
Casing	SC480/A27	A743 CA6NM	SCS14/A743 CF8M
Intermediate casing	S30C/AISI 1030	SUS420JI/AISI420	SUS316/AISI316
Impeller	A743 CA6NM	A743 CA6NM	SCS14/A743 CF8M
Shaft	SUS420JI/AISI420	SUS420JI/AISI420	SUS316/AISI316
Shaft sleeve	SUS420JI/AISI420	SUS420JI/AISI420	SUS316/AISI316
Case wearing	A743 CA40	A73 CA40	SUS316/AISI316
Casing bolt	SCM435/AISI4135	SCM435/AISI4135	SCM435/AISI4135

Note: Supply of other materials on request.

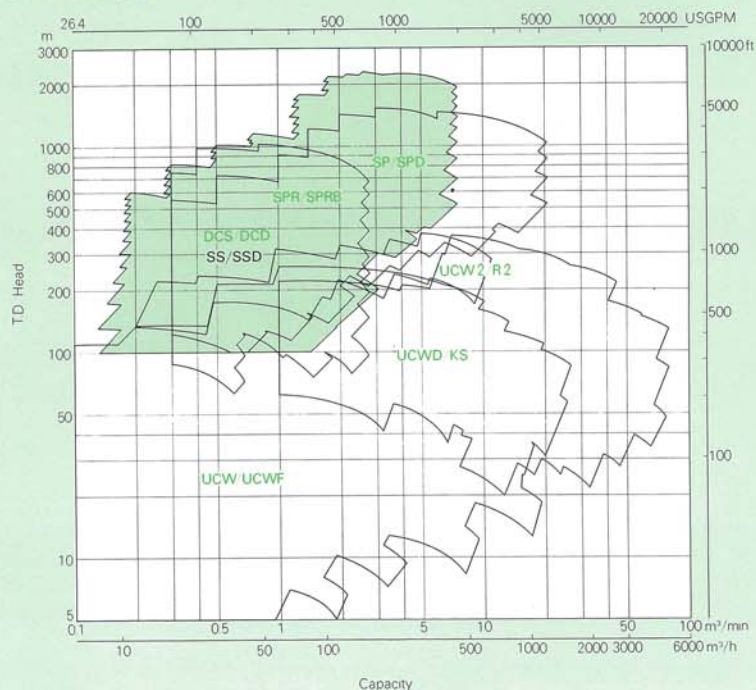
Performance Ranges

50Hz (2950 min⁻¹)

Models SS/SSD



General Process Pumps

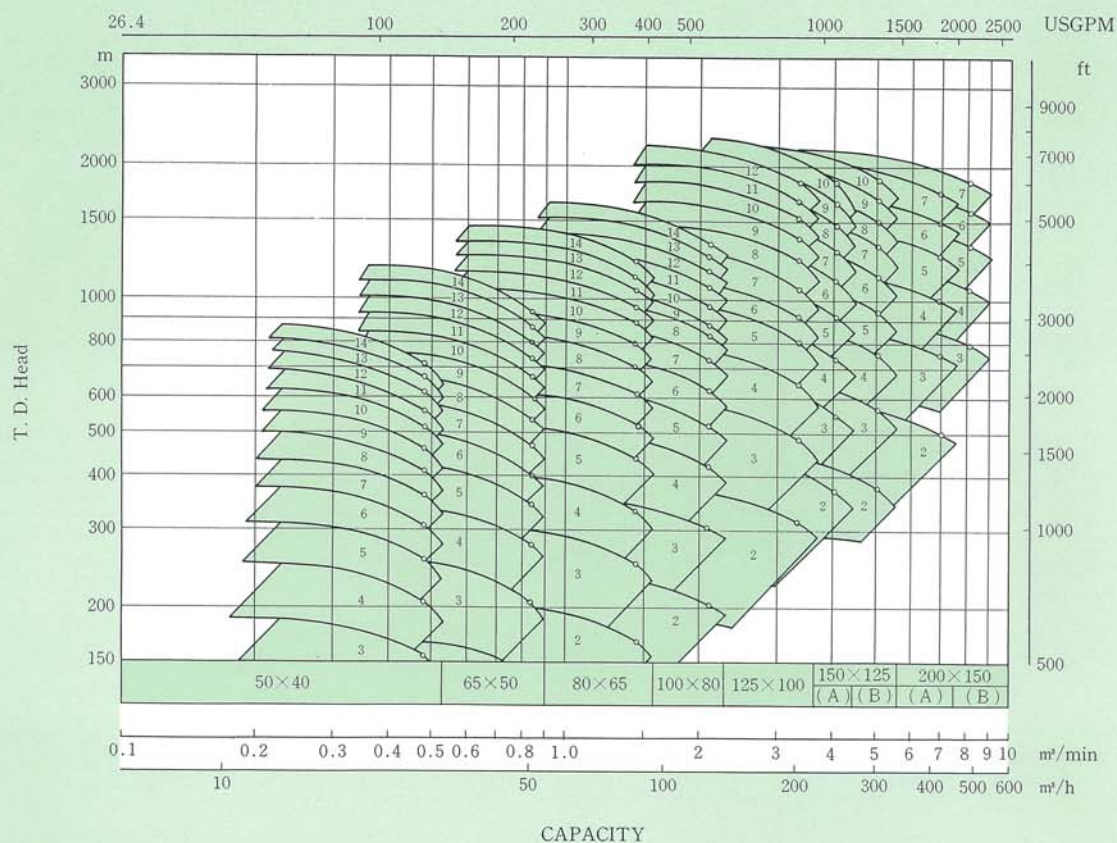


Performance ranges shown on this charts are for preliminary selection only.

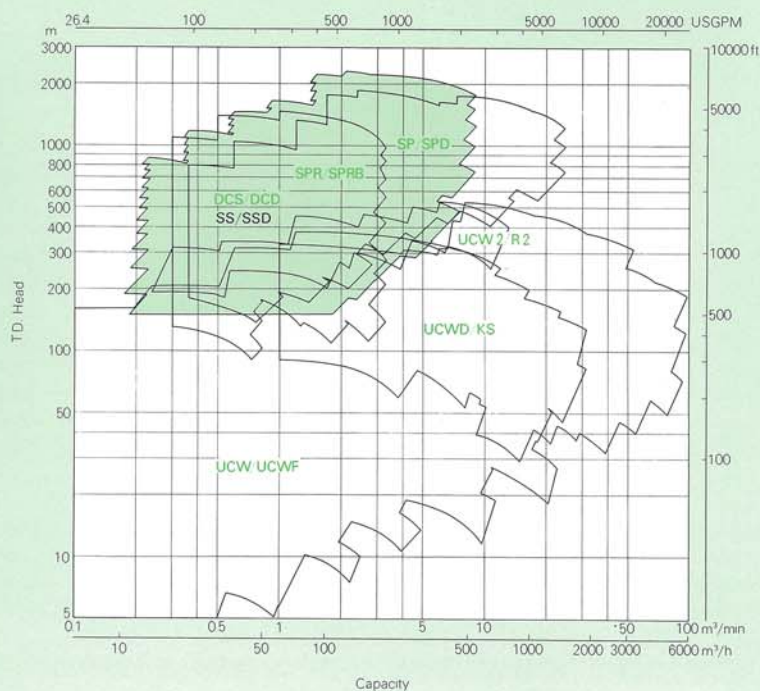
Performance Ranges

60Hz (3550 min⁻¹)

Models SS/SSD

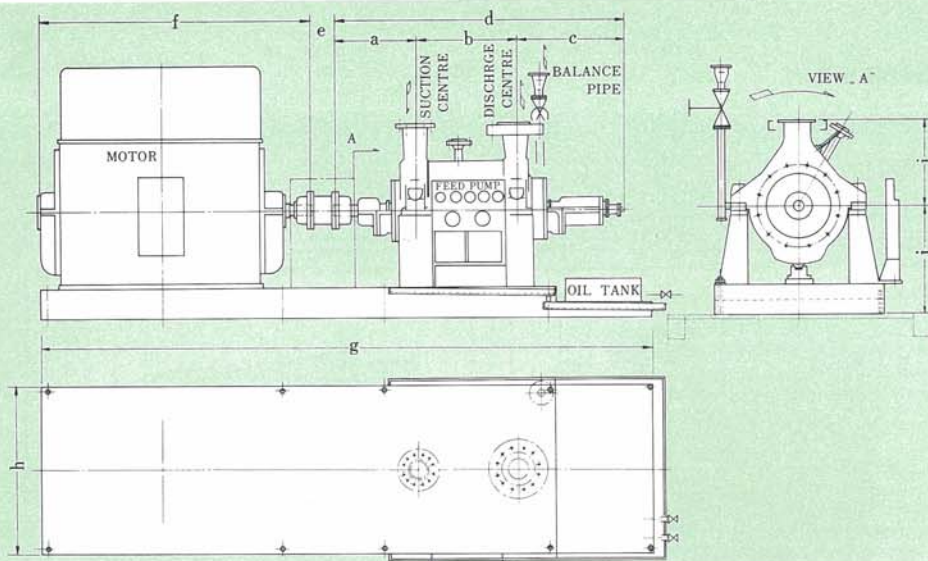


General Process Pumps



Performance ranges shown on this charts are for preliminary selection only.

Dimensions



Size	Stages	a	b	c	d	e	f	g	h	i	j
50X40 SS	6	410	338	391	1139	160	1000	2100	600	240	450
	7	410	390	391	1191	160	1000	2200	600	240	450
	8	410	442	391	1243	160	1000	2300	600	240	450
	9	410	494	391	1295	160	1000	2300	600	240	450
	10	410	546	391	1347	160	1000	2400	600	240	450
	11	385	598	385	1368	160	1100	2500	600	240	450
	12	385	650	385	1420	160	1100	2600	600	240	450
	13	385	702	385	1472	160	1200	2700	600	240	450
	14	385	754	385	1524	160	1200	2700	600	240	450
65X50 SS	5	419	328	392	1139	160	1100	2200	700	270	450
	6	419	384	392	1195	160	1100	2300	700	270	450
	7	419	440	392	1251	160	1200	2400	700	270	450
	8	419	496	392	1307	160	1200	2500	700	270	450
	9	419	552	392	1363	160	1200	2600	700	270	450
	10	419	608	392	1419	160	1400	2700	700	270	500
	11	419	664	392	1475	160	1400	2800	700	285	500
	12	419	720	392	1531	160	1400	2900	700	285	500
80X65 SS	13	419	776	392	1587	160	1400	3000	700	285	500
	14	419	832	392	1643	160	1400	3100	700	285	500
	4	424	287	406	1117	160	1200	2300	700	300	500
	5	424	351	406	1181	160	1200	2400	700	300	500
	6	424	415	406	1245	160	1400	2600	700	300	500
	7	424	479	406	1309	160	1400	2700	700	300	500
	8	424	543	406	1373	160	1500	2900	800	300	550
	9	461	607	454	1522	160	1500	3000	800	320	550
100X80 SS	10	461	671	454	1586	160	1500	3100	800	320	550
	11	461	735	454	1650	160	1500	3200	800	320	550
	12	461	799	454	1714	160	1500	3200	800	320	550
	13	461	863	454	1778	160	1500	3300	800	320	550
	14	461	927	454	1842	160	1500	3400	800	320	550
	3	466	250	456	1172	200	1384	2500	800	350	500
	4	466	320	456	1242	200	1384	2600	800	350	500
	5	466	390	456	1312	200	1485	2700	800	350	550
	6	466	460	456	1382	200	1485	2800	800	350	550
	7	466	530	456	1452	200	1485	2900	800	350	550
	8	466	600	456	1522	200	1485	3000	800	350	550
	9	466	670	456	1592	200	1485	3000	800	350	550
	10	466	740	456	1662	200	1485	3100	900	350	550
	11	466	810	456	1732	200	1485	3200	900	350	550
	12	466	880	456	1802	200	1485	3200	900	350	550
	13	500	977	514	1991	200	1485	3300	900	410	550
	14	500	1049	514	2063	200	1485	3400	900	410	550

Dimensions

Size	Stages	a	b	c	d	e	f	g	h	i	j
125X100 SS	6	505	565	505	1575	200	1500	3000	900	430	550
	7	505	650	505	1660	200	1500	3100	900	430	550
	8	540	748	846	2134	200	1800	4700	900	450	600
	9	540	833	846	2219	200	1800	4800	900	450	600
	10	591	918	855	2364	200	1900	5000	1000	450	600
	11	591	1003	855	2449	200	2000	5200	1000	450	650
	12	591	1088	855	2534	200	2000	5300	1000	450	650
	13	591	1173	855	2619	200	2100	5500	1100	450	650
	14	591	1258	855	2704	200	2200	5700	1100	450	650
150X125(A) SS	5	680	540	962	2182	220	1500	4400	1200	580	850
	6	680	628	962	2270	220	1500	4500	1200	580	850
	7	680	716	962	2358	220	1500	4600	1200	580	850
	8	680	804	962	2446	220	1900	5100	1200	580	850
	9	680	892	962	2534	220	2000	5300	1200	580	850
	10	680	980	962	2622	220	2000	5400	1200	580	850
	11	650	1068	962	2680	220	2100	5500	1200	585	850
	12	650	1156	962	2768	220	2100	5600	1200	585	850
	13	650	1244	962	2856	220	2200	5800	1200	585	850
	14	650	1332	962	2944	220	2200	5900	1200	585	850
150X125(B) SS	5	662	540	962	2164	220	1800	4700	1200	580	850
	6	662	628	962	2252	220	1900	4900	1200	580	850
	7	662	716	962	2340	220	2000	5100	1200	580	850
	8	662	804	962	2428	220	2000	5200	1200	580	850
	9	662	892	962	2516	220	2100	5400	1200	585	850
	10	662	980	962	2604	220	2200	5600	1200	585	850
	11	662	1068	962	2692	220	2300	5700	1200	585	850
	12	662	1156	962	2780	220	2300	5800	1200	585	850
	13	662	1244	962	2868	220	2300	5900	1200	585	850
	14	662	1332	962	2956	220	2300	6000	1200	585	850
200X150(A) SS	4	675	485	946	2106	220	2100	5000	1300	710	900
	5	675	580	946	2201	220	2100	5100	1300	710	900
	6	675	675	946	2296	220	2300	5400	1300	710	950
	7	675	770	946	2391	220	2300	5500	1300	710	950
	8	675	865	946	2486	220	2300	5600	1300	710	950
	9	675	960	946	2581	220	2300	5700	1300	710	950
	10	675	1055	946	2676	220	2300	5700	1300	710	1000
	11	675	1150	946	2771	220	2500	6000	1300	710	1000
200X150(B) SS	5	675	620	946	2241	220	2300	5300	1300	710	950
	6	675	725	946	2346	220	2300	5400	1300	710	950
	7	675	830	946	2451	220	2300	5500	1300	710	950
	8	675	935	946	2556	220	2300	5600	1300	710	950
	9	675	1040	946	2661	220	2500	5900	1300	710	950
	10	675	1145	946	2766	220	2500	6000	1300	710	1000
	11	675	1250	946	2871	220	2500	6100	1300	710	1000

Note: Dimensions are in mm and for guidance only.

Certified drawings will be provided for actual constructions, motor dimensions are approx. for a given IEC frame.



EBARA CORPORATION

Head Office:

11-1, Haneda Asahi-cho, Ota-ku,
Tokyo, 144 Japan
Phone: Tokyo 3743-6111
Cable: EBARAMAIN TOKYO
Int'l Telex: J22988 EBARA TYO
Fax: Tokyo 3745-3356

International Division:

Asahi Bldg., 6-7, Ginza 6-chome, Chuo-ku,
Tokyo, 104 Japan
Phone: Tokyo 3289-6111
Cable: EBARACO TOKYO
Int'l Telex: J26976 TOEBARA
Fax: Tokyo 3574-7080

Please send your enquiries to the above International Division

☐ Liaison Offices

☐ Subsidiary Companies or J/V

■ AMERICA

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Foster City (San Francisco), CA.

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Head Office: Sacramento, CA.

Offices: Los Angeles, CA. Houston, TX.
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Plant: Changwon

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☐ EBARA Engineering (Malaysia) Sdn Bhd

Kuala Lumpur

INDONESIA

☐ Jakarta Office: Jakarta

☐ P.T. EBARA Indonesia

Barat

INDIA

☐ KIRLOSKAR EBARA Pumps Ltd.

Head Office: Pune
Plant: Savantpur, Maharashtra