



EBARA

CS1060EH

PROCESS PUMPS

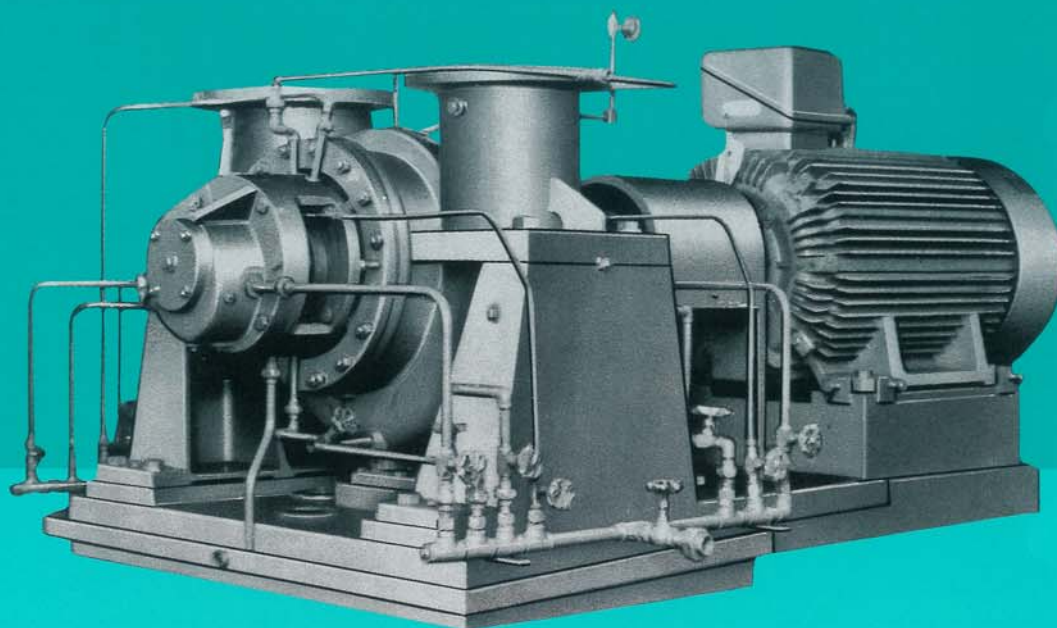
Single Stage, Double Suction, Centerline Support

Model

KS

API 610

API 682



PROCESS PUMPS

Single Stage, Double Suction, Centerline Support

Model

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API 610 API 682

EBARA offers between bearing designs of single-stage, double suction pumps that have been developed after many years of research.

These improved single-stage, double suction, centerline support process pumps have been used extensively by oil refineries and the chemical and petrochemical

industries. Featuring lower NPSH and higher performance values, these pumps are being widely used.

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

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

Model KS

Between bearing, horizontal, single stage, double suction centerline supported type.

Applications

- Petroleum Refineries
- The Petrochemical Industry
- Other Chemical Industries

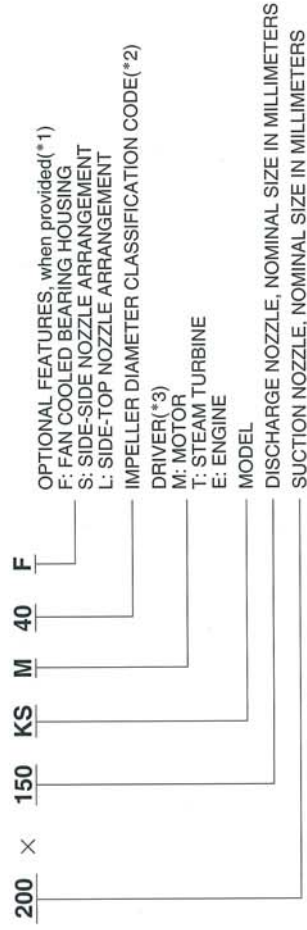
Ratings

Capacities	To 5500 m ³ /h (24200 USGPM)
Heads	To 550m (1800 Ft)
Max. working pressures	To gauge pressure 5.17MPa {52kgf/cm ² } (750 PSI)
Rotation	Clockwise (viewed from inboard side)
Temperature ranges	-100°C~-450°C(-150°F~850°F)
Impeller type	Enclosed
Nozzles	Top-Top
Flanges	ANSI, other standards also available
Shaft sealing	Mechanical seal, conventional packing & throttle bushing.

Features

- Centerline supported and heavy duty design.
- Single stage and double suction.
- Full compliance with API 610 and API 682 specifications.
- Flexibility of design handles wide range of liquids.
- All components have been designed for maximum parts interchangeability.
- Low NPSH performance and high efficiency.

Designation



Notes: (*1) When two features are involved, the codes are in alphabetical order.

(*2) The letters "A" and "B" following the impeller diameter classification code indicate different impeller designs.

To give an example, 350X350 KSM 50A and 350X250 KSM 50B have different impeller designs.

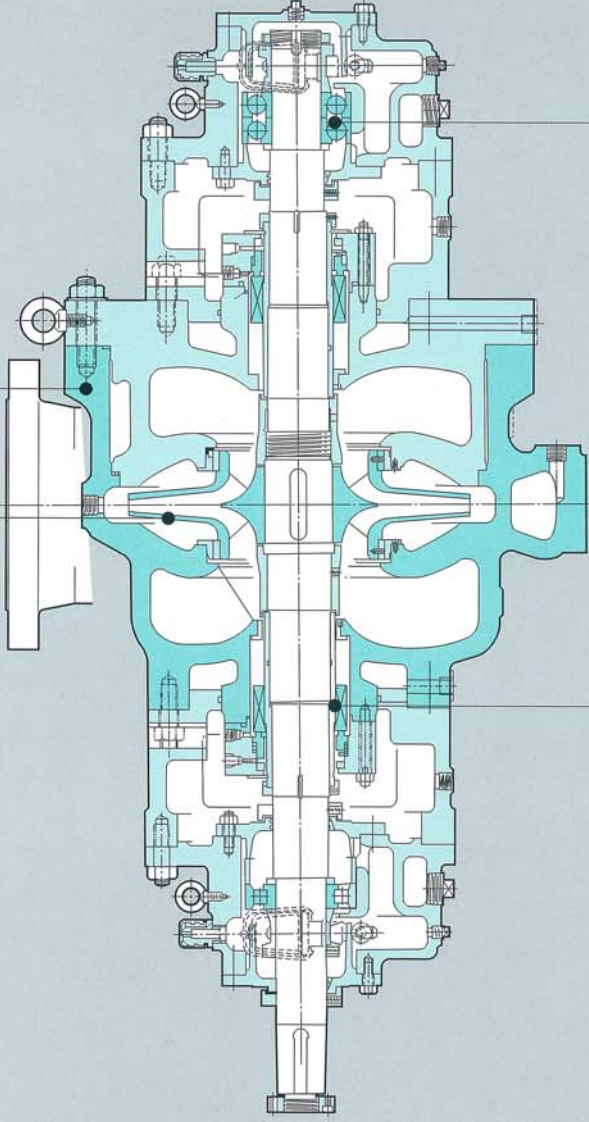
(*3) When a step up or step down gear is provided, the code letter "G" is added between model and driver. For example, 200X150 KSGM 40 means that the pump is driven by an electric motor through a separate gear.

Construction

Model KS

Impeller: Impeller is an enclosed, double suction type. Both the impeller and casing have easily replaceable impeller wear rings and case wear rings.

Casing: Radially split casing and centerline support construction reduces the effects of extreme temperatures.



Shaft Sealing: Mechanical seals are available from any mechanical seal-maker. Alternately, a deep ring stuffing box with six rings of packing plus one lantern ring can be applied.

Bearings: The thrust bearings consist of back-to-back angular contact bearings on the outboard side. A cylindrical roller radial bearing on the inboard side assures normal operation during differential expansion. These bearings are lubricated by an oil ring. Sleeve or tilting pad type bearings are also available.

Metallurgy

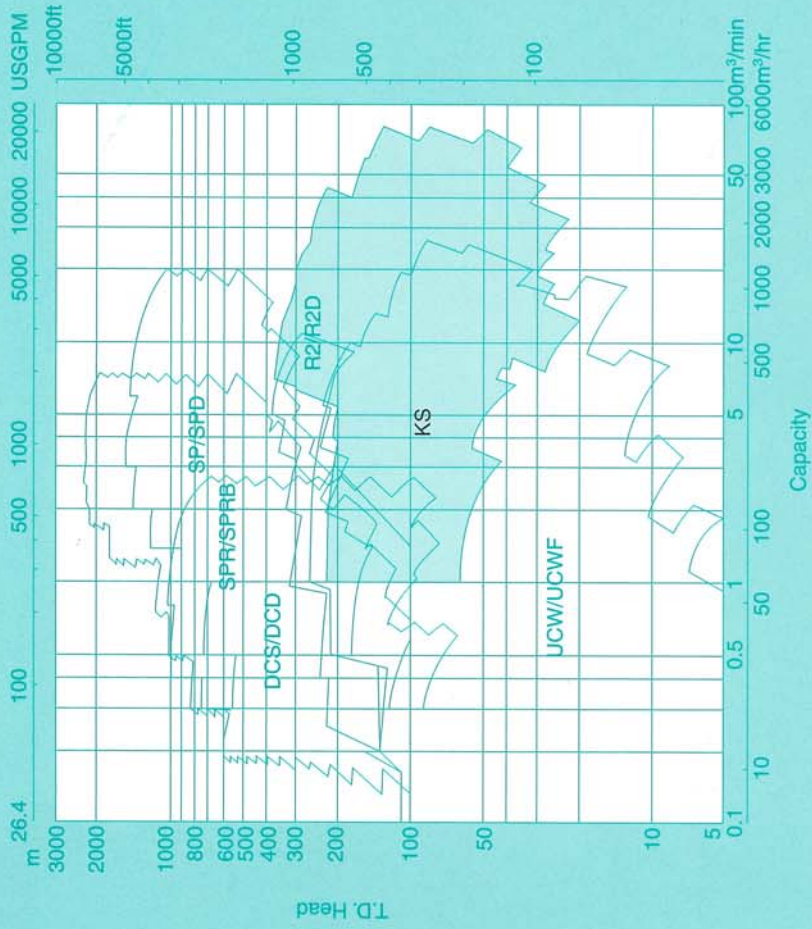
Name of Parts	Materials JIS/ASTM-AISI		
	C. Steel	12% Cr. Steel	316 S. Steel
Casing	SCPH2/A216WCB	SCS1/A487CA6NM	SCS14A/A351CF8M
Gland Cover	SCPH2/A216WCB	SCS1/A487CA6NM	SCS14A/A351CF8M
Impeller	SCS1/A487CA6NM	SCS1/A487CA6NM	SCS14A/A351CF8M
Impeller Wear Ring	SUS420J2/AISI420	SUS420J2/AISI420	SUS316/AISI316
Shaft	SCM440/AISI4140	SUS420J1/AISI420	SUS316/AISI316
Case Wear Ring	SUS420J1/AISI420	SUS420J1/AISI420	SUS316/AISI316
Shaft Sleeve	SUS420J2/AISI420	SUS420J2/AISI420	SUS316/AISI316
			C. Steel
			SCPL1/A352LCB
			SCPL1/A352LCB
			SCPL1/A352LCB
			SNC815/A322
			SNC815/A322
			SNC815/A322
			SNC815/A322

Notes: Following materials supplied on request: 304S. Steel, 304LS. Steel, Hastelloy, 20 Alloy, Monel.

Standard Material
Optional Materials

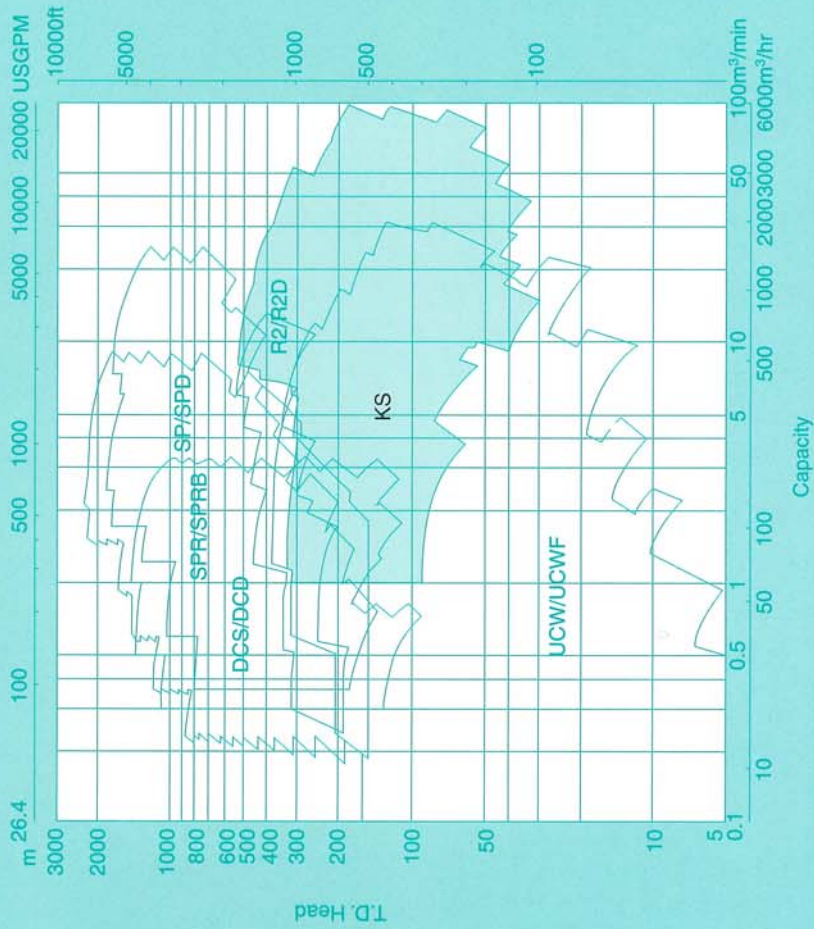
Model KS
General Process Pumps

50^{Hz}

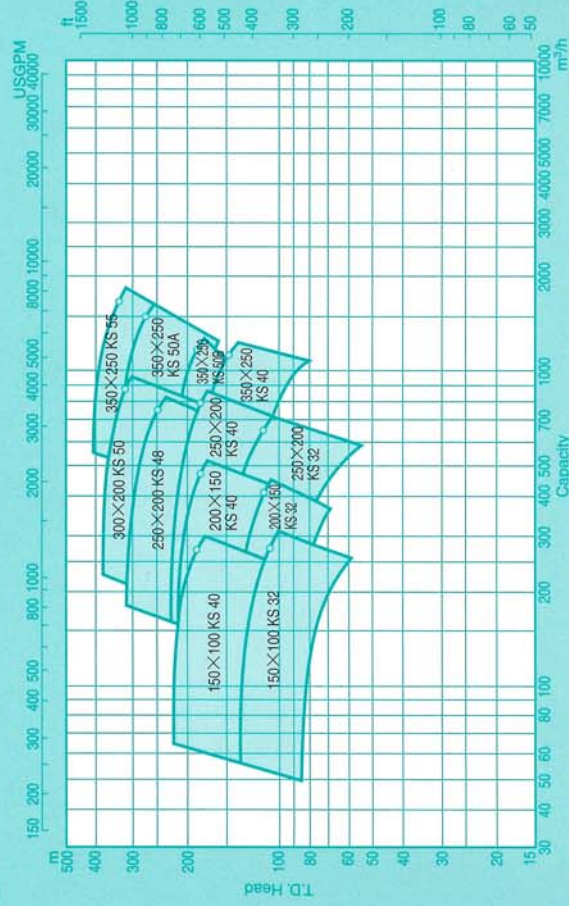
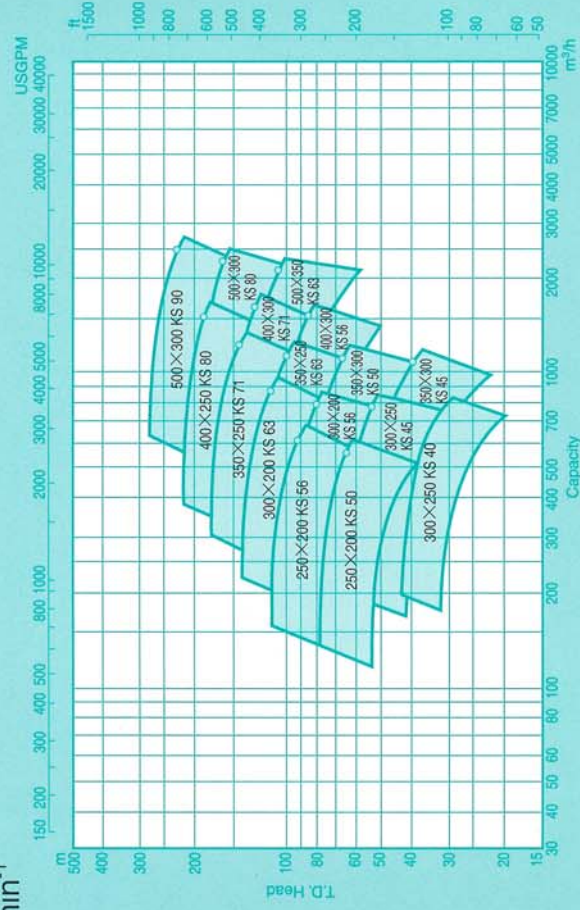
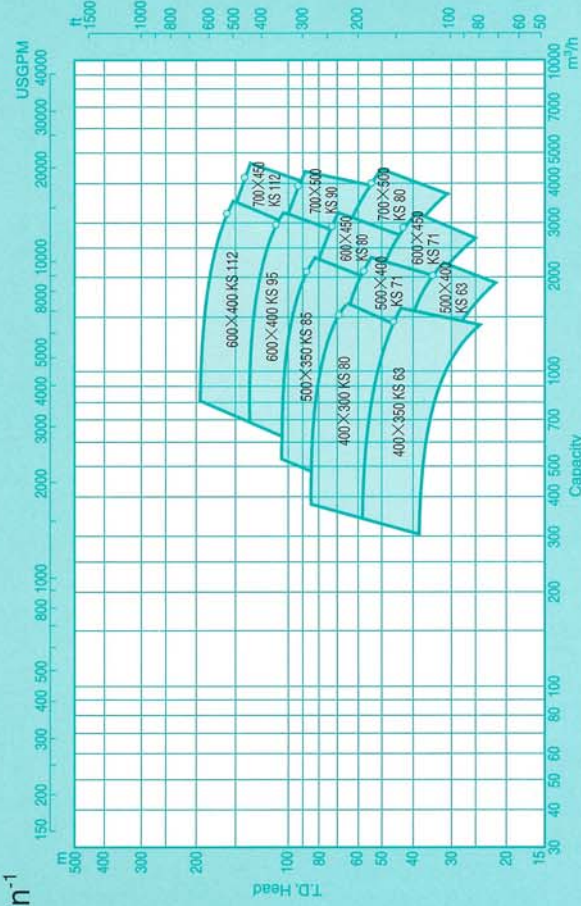


General Process Pumps

60^{Hz}



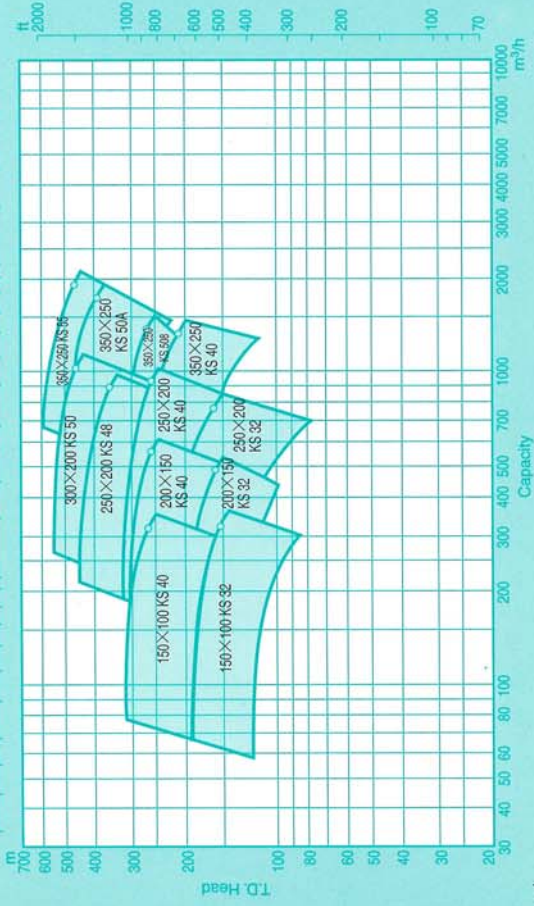
Performance ranges shown on these charts are for preliminary selection only.

2980min⁻¹50^{Hz}1480min⁻¹980min⁻¹

These selection charts are prepared for preliminary selection. Refer to individual performance curves for final selection. ϕ denotes B.E.P. of the performance with an impeller of maximum diameter. The number of stages is indicated in the circle.

3580min⁻¹

60Hz



Dimensions

SPACE FOR DISASSEMBLY



4P	PUMP SIZE		PUMP AND MOTER (mm)										BASE PLATE (mm)				APPROX. WEIGHT(kg)	
			P ₁	P ₂	P ₃	P ₄	H ₁	H ₂	X	ML	LA	R	A	BL	BW	PUMP		
	250×200KS	50	734	871	250	315	520	730	300	1624	3529	1250	440	2850	1410	1060	1080	
	250×200KS	56	760	907	275	350	530	770	300	1624	3591	1250	450	2900	1460	1380	1130	
	300×200KS	56	782	929	270	350	570	770	300	1624	3635	1350	470	2940	1520	1420	1170	
	300×200KS	63	802	974	300	405	600	850	300	1764	3840	1350	480	3240	1660	1880	1340	
	300×250KS	40	740	868	295	300	540	730	300	1281	3189	1300	480	2630	1440	900	1070	
	300×250KS	45	764	901	270	325	550	750	300	1624	3589	1350	480	2920	1480	1100	1170	
	350×250KS	63	828	1000	240	395	620	850	300	1764	3892	1400	510	3300	1660	1950	1520	
	350×250KS	71	899	1089	360	450	660	960	350	2014	4352	1550	520	3690	1800	2770	1800	
	350×300KS	45	797	934	315	335	580	780	300	1624	3655	1400	520	2990	1560	1240	1270	
	350×300KS	50	826	973	280	365	550	800	300	1764	3863	1450	510	3270	1590	1510	1310	
	400×250KS	80	978	1202	340	515	750	1030	350	2215	4745	1650	570	4020	1930	3750	2060	
	400×300KS	56	924	1111	280	410	600	930	350	1876	4261	1600	580	3650	1740	2080	1870	
	400×300KS	71	930	1120	330	455	650	970	350	2014	4414	1600	570	3770	1820	2860	1950	
	500×300KS	80	1020	1244	380	510	740	1030	350	2385	4999	1750	610	4280	1970	4000	2280	
	500×300KS	90	1071	1342	380	580	770	1160	400	2765	5578	1850	620	4610	2120	5460	2580	
	500×350KS	63	970	1160	370	460	690	990	350	2134	4674	1700	630	3990	1800	2900	2200	

The listed dimensions apply to roller/ball (ball/ball) bearing designs with the exception that the dimensions of 300×20KS50, 350×250KS50B, 350×250KS50A and 350×250KS55 are for sleeve/ball bearing designs.



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