

CDX

APPLICATIONS

Single impeller centrifugal pumps with hydraulic components manufactured from stainless steel AISI 304, suitable for pressure boosting, water supply, treatment & irrigation, air conditioning system and general water pumping including moderately aggressive liquids.

MATERIALS

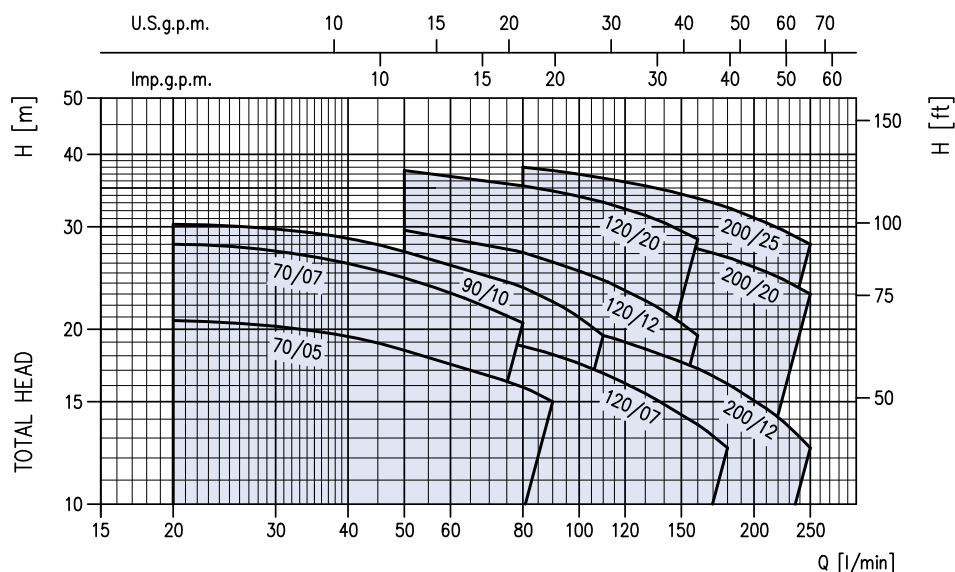
- Pump body, impeller, diffuser and casing cover in AISI 304
- Shaft in AISI 303
- Bracket and motor casing in aluminium
- Mechanical seal in carbon/ceramic/NBR
- Special mechanical seal are available on demand

SPECIFICATIONS

- Maximum working pressure : 8 bar
- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
60°C for other uses of CDX 70/05-70/07-90/10
90°C for other uses
110°C for H version

TECHNICAL DATA

- T.E.F.C. 2 pole motor
- Insulation: Class F
- Protection degree: IP55
- 1~230V ± 10% 50Hz, 3~230/400V ± 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version.
- DNM 1"


PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		
Single-phase 230V 50Hz	Three-phase 400V 50Hz		μF	V _c	Single-phase	Three-phase 230V	400V
CDXM 70/05	CDX 70/05	0,37	12,5	450	3,1	2,4	1,4
CDXM 70/07	CDX 70/07	0,55	16	450	4,6	3,5	2,0
CDXM 90/10	CDX 90/10	0,75	20	450	5,6	4,0	2,3
CDXM 120/07	CDX 120/07	0,55	16	450	4,6	3,2	1,9
CDXM 120/12	CDX 120/12	0,9	31,5	450	6,9	5,2	3,0
CDXM 120/20	CDX 120/20	1,5	40	450	9,3	7,0	4,0
CDXM 200/12	CDX 200/12	0,9	31,5	450	6,3	4,7	2,7
CDXM 200/20	CDX 200/20	1,5	40	450	10,7	7,0	4,0
	CDX 200/25	1,8	-	-	-	8,2	4,8

CENTRIFUGAL PUMPS - TWIN IMPELLER in AISI 304

2CDX
2CDX

SPECIFICATIONS

- Maximum working pressure : 8 bar
- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
60°C for other uses
110°C for H version

APPLICATIONS

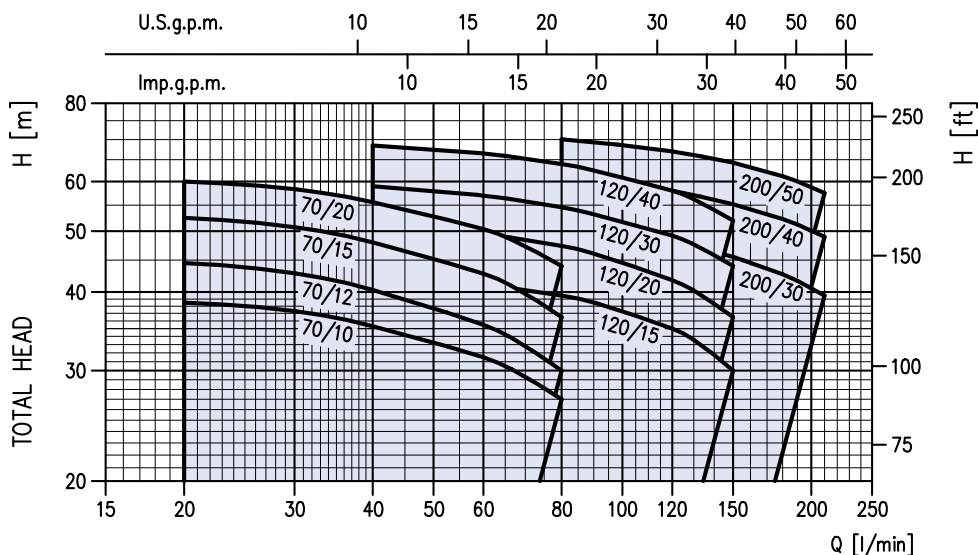
Twin impeller centrifugal pumps with hydraulic components constructed in stainless steel AISI 304, suitable for pressure boosting, water supply, water treatment & irrigation, air conditioning systems and general water pumping including moderately aggressive liquids.

MATERIALS

- Pump body, impeller, diffuser and casing over in AISI 304
- Shaft in AISI 303
- Bracket and motor casing in aluminium
- Mechanical seal in carbon/ceramic/NBR
- Special mechanical seal are available on demand

TECHNICAL DATA

- T.E.F.C. 2 pole motor
- Insulation: Class F
- Protection degree: IP55
- 1~230V ± 10% 50Hz, 3~230/400V ± 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 1"


PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		
Single-phase 230V /50Hz	Three-phase 400V /50Hz		μF	V _c	Single-phase	Three-phase 230V	400V
2CDXM 70/10	2CDX 70/10	0,75	20	450	6,0	4,0	2,3
2CDXM 70/12	2CDX 70/12	0,9	31,5	450	7,0	5,0	2,9
2CDXM 70/15	2CDX 70/15	1,1	35	450	8,0	5,6	3,2
2CDXM 70/20	2CDX 70/20	1,5	40	450	9,9	7,0	4,0
2CDXM 120/15	2CDX 120/15	1,1	35	450	8,3	5,6	3,2
2CDXM 120/20	2CDX 120/20	1,5	40	450	10,2	7,0	4,0
-	2CDX 120/30	2,2	-	-	-	8,7	5,0
-	2CDX 120/40	3,0	-	-	-	10,8	6,2
-	2CDX 200/30	2,2	-	-	-	10,4	6,0
-	2CDX 200/40	3,0	-	-	-	11,4	6,6
-	2CDX 200/50	3,7	-	-	-	15	8,7

SELF PRIMING PUMPS in AISI 304

JESX-JEX

JESX-JEX



APPLICATIONS

Self-priming electropump manufactured in stainless steel AISI 304 suitable for water supply, domestic pressure boosting and small irrigation systems, pool and tank emptying and general clean water pumping.

MATERIALS

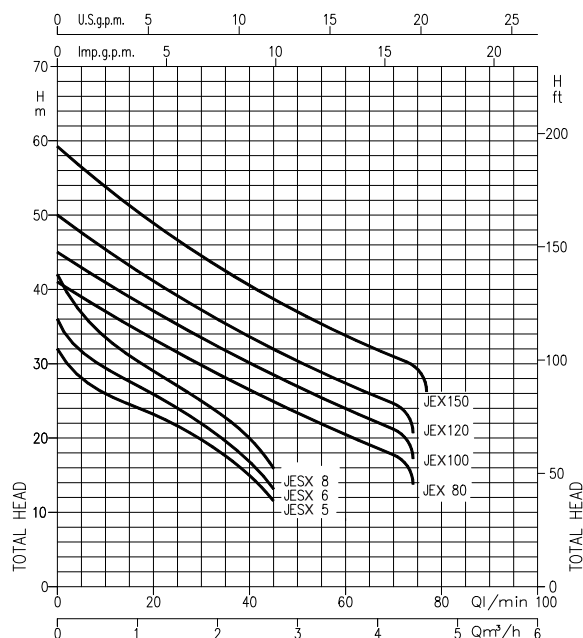
- Pump body, casing cover in AISI 304
- Shaft in AISI 303
- Impeller in AISI 304 for JEX, in technopolymer for JESX
- Mechanical seal in carbon/ceramic/NBR

SPECIFICATIONS

- Maximum working pressure : 6 bar
- Maximum liquid temperature : 35°C according EN 60335-2-41 for domestic uses 60°C for other uses

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP54
- 1~230V ± 10% 50Hz, 3~230/400V ± 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version.
- Thermal protection to be provided by the user for three-phase version
- DNA 1" for JESX, 1 1/4" for JEX
- DNM 1"



PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)			l/min m³/h	Q=Capacity									
Single-phase 230V 50Hz	Three-phase 400V 50Hz		µF	V _c	Single-phase	Three-phase 230V	Three-phase 400V		5	20	30	40	45	50	60	70	75	
									0,3	1,2	1,8	2,4	2,7	3	3,6	4,2	4,5	
									H=Total head									
JESXM 5	JESX 5	0,37	10	450	2,1	1,5	0,85	28	23	20	15	11,5	-	-	-	-	-	
JESXM 6	JESX 6	0,44	10	450	2,4	1,9	1,1	31,5	26	22	17	13,5	-	-	-	-	-	
JESXM 8	JESX 8	0,6	12,5	450	3,0	2,3	1,3	37	29	25	20	16	-	-	-	-	-	
JEXM 80	JEX 80	0,6	16	450	4,7	3,3	1,9	39	33	29	26,5	25	23,5	20,5	18	-	-	
JEXM 100	JEX 100	0,75	20	450	6,4	4,5	2,6	43	37	33,5	30	28	27	24	21	-	-	
JEXM 120	JEX 120	0,88	20	450	6,7	4,7	2,7	47,5	41	37	34	32	30,5	27,5	24,5	-	-	
JEXM 150	JEX 150	1,1	31,5	450	8,0	5,6	3,3	56	49	44,5	40,5	38,5	37	34	31	29,5	-	

3 SERIES

APPLICATIONS

End suction centrifugal pumps in accordance with DIN 24255 made of stainless steel AISI 304, applications include water boosting, heating systems, air-conditioning, washing systems and many other industrial applications. WRAS approved pumps are available upon request.

SPECIFICATIONS

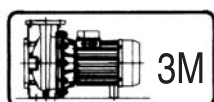
- Maximum working pressure : 10 bar
- Maximum liquid temperature : from -20°C to +110°C

MATERIALS

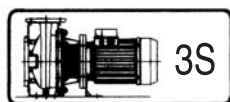
- Pump body, impeller, casing cover and shaft in AISI 304
- Mechanical seal in carbon/ceramic/ NBR for standard version
- Mechanical seal in carbon/ceramic/FPM for H version
- Mechanical seal on SiC/SiC/FPM for HS version

TECHNICAL DATA

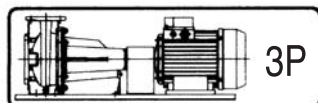
- 2 and 4 pole motor
- Insulation: Class F
- Protection degree: IP55
- 3~230/400V \pm 10% 50Hz up to 4 kW included, 400/690V \pm 10% above
- Thermal protection to be provided by the user
- Available in 5 different versions, 2 and 4 pole



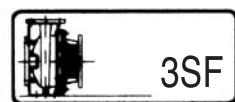
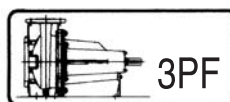
monobloc with
extended motor shaft



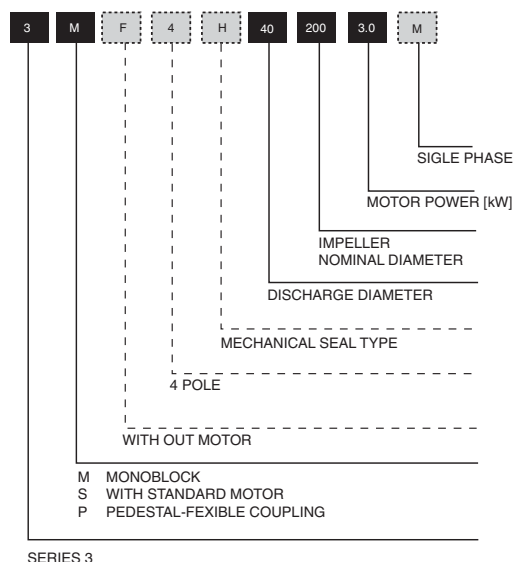
monobloc with standard
motor and rigid coupling



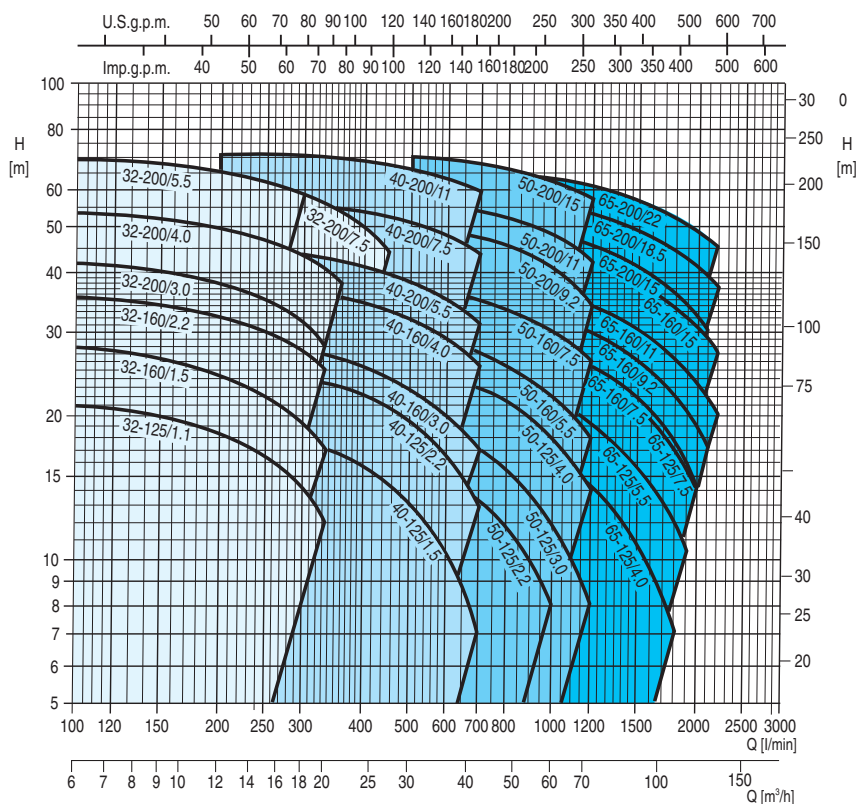
pump on baseplate with
standard motor and coupling



bareshaft pump

MODEL CODE


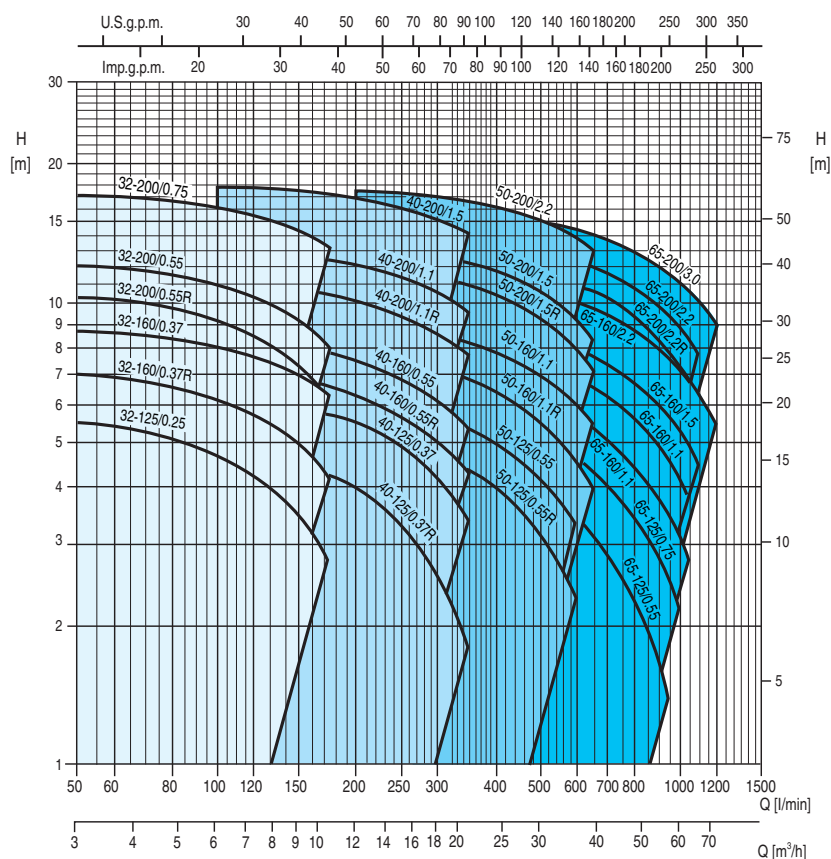
SELECTION CHART

2900 min⁻¹


PERFORMANCE TABLE

Model 3(L)M	kW	HP	Abs. current (A)			l/min m³/h	Q= Capacity																							
							H= Total Head																							
			230V	Three-phase 400V	690V		0	100	150	200	300	333	360	400	450	500	600	700	800	1000	1200	1500	1800	1900	2000	2100	2200			
							0	6	9	12	18	20	22	24	27	30	36	42	48	60	72	90	108	114	120	126	132			
32-125/1.1 (M)	1.1	1.5	5.0	2.9	-	22.5	21	19.9	18.4	14.1	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-160/1.5 (M)	1.5	2	5.9	3.4	-	29.5	28	26.5	24.5	19.2	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-160/2.2 (M)	2.2	3	8.3	4.8	-	37	35.5	34	32	27	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-200/3.0	3.0	4	11.8	6.8	-	44	42	40	37.5	31	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-200/4.0	4.0	5.5	15.6	9.0	-	55	53.5	52	49.5	43.5	40.5	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-200/5.5	5.5	7.5	-	11.8	6.8	70.5	69	67.5	65	58.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
32-200/7.5	7.5	10	-	-	-	70.5	69	67.5	65	58.3	55.5	53	49	44	-	-	-	-	-	-	-	-	-	-	-	-				
40-125/1.5 (M)	1.5	2	5.9	3.4	-	20	-	-	19	17.6	17	16.5	15.7	14.5	13.2	10.3	7	-	-	-	-	-	-	-	-	-				
40-125/2.2 (M)	2.2	3	8.3	4.8	-	26.5	-	-	25.5	24	23.5	23	22	21	19.5	16.4	13	-	-	-	-	-	-	-	-	-				
40-160/3.0	3.0	4	11.8	6.8	-	31	-	-	29.5	27.5	27	26.5	25.5	24	22.5	20	17	-	-	-	-	-	-	-	-	-				
40-200/4.0	4.0	5.5	15.9	9.2	-	40	-	-	38.5	37	36	35.5	34.5	33	32	29	25.5	-	-	-	-	-	-	-	-	-				
40-200/5.5	5.5	7.5	-	11.1	6.4	47	-	-	45.5	44	43	42.5	41	39.5	38	35	31	-	-	-	-	-	-	-	-	-				
40-200/7.5	7.5	10	-	15.1	8.7	58	-	-	57	55.5	55	54.5	53.5	52.5	51	47.5	44	-	-	-	-	-	-	-	-	-				
40-200/11	11	15	-	20.0	11.6	72	-	-	71	70	70	69.5	68.5	67.5	66	63	59	-	-	-	-	-	-	-	-	-				
50-125/2.2 (M)	2.2	3	8.1	4.7	-	19	-	-	-	-	-	-	17.5	17	16.3	14.9	13.4	11.7	8	-	-	-	-	-	-	-				
50-125/3.0	3.0	4	11.8	6.8	-	22	-	-	-	-	-	-	20.5	20	19.6	18.4	17	15.4	11.8	8	-	-	-	-	-	-				
50-125/4.0	4.0	5.5	15.9	9.2	-	26.5	-	-	-	-	-	-	26	25.5	25	24	22.5	21.5	17.9	14	-	-	-	-	-	-				
50-160/5.5	5.5	7.5	-	11.5	6.6	33	-	-	-	-	-	-	31	30.5	30	28.5	27	25.5	22	18	-	-	-	-	-	-				
50-160/7.5	7.5	10	-	15.5	9.0	40	-	-	-	-	-	-	38.5	38	37.5	36	35	33.5	30	26	-	-	-	-	-	-				
50-200/9.2	9.2	12.5	-	17.4	10.0	53	-	-	-	-	-	-	-	-	50	49	47.5	45.5	40.5	34	-	-	-	-	-	-				
50-200/11	11	15	-	22.0	12.7	59	-	-	-	-	-	-	-	-	56	55	54	52	48	42	-	-	-	-	-	-				
50-200/15	15	20	-	31.3	18.0	72	-	-	-	-	-	-	-	-	70	69	68	66	62	57	-	-	-	-	-	-				
65-125/4.0	4	5.5	13.8	8	-	22.5	-	-	-	-	-	-	-	-	20	19.4	18.5	16.5	14.3	10.7	7	-	-	-	-	-				
65-125/5.5	5.5	7.5	-	11	6.3	27	-	-	-	-	-	-	-	-	-	25	24.5	23.5	21.5	19.1	15.5	11.7	10.4	-	-	-				
65-125/7.5	7.5	10	-	14.9	8.6	32	-	-	-	-	-	-	-	-	-	-	30.5	29.5	29	27	24.5	21	16.8	15.4	14	-				
65-160/7.5	7.5	10	-	14.9	8.6	32	-	-	-	-	-	-	-	-	-	-	30	29	27	25.5	21.5	17.5	16	14.5	-	-				
65-160/9.2	9.2	12.5	-	20.8	12.1	36.5	-	-	-	-	-	-	-	-	-	-	34.5	34	32	29.5	26	21.5	20	18.6	17	-				
65-160/11	11	15	-	27	15.6	40.5	-	-	-	-	-	-	-	-	-	-	38.5	38	36	34	30.5	26	24.5	23	21.5	20				
65-160/15	15	20	-	30.5	17.6	48	-	-	-	-	-	-	-	-	-	-	45.5	45	43	41	37.5	33.5	32	30.5	29	27				
65-200/15	15	20	-	30.5	17.6	54	-	-	-	-	-	-	-	-	-	-	51	50	48	45.5	41	36	34	32	30	-				
65-200/18.5	18.5	25	-	36.9	21.3	60.5	-	-	-	-	-	-	-	-	-	-	58.5	57.5	55.5	53	49	44	42.5	40.5	39	37				
65-200/22	22	30	-	40.8	23.5	67	-	-	-	-	-	-	-	-	-	-	65.5	65	63	60.5	56.5	52	50.5	48.5	47	45				

SELECTION CHART

1450 min⁻¹


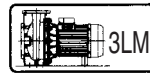
PERFORMANCE TABLE

Pump type 3M	kW	HP	Q= Capacity																	
			l/min 50	100	160	200	250	300	350	400	500	600	650	800	950	1000	1050	1100	1200	
			m³/h 3	6	9.6	12	15	18	21	24	30	36	39	48	57	60	63	66	72	
H= Total manometric head in meters																				
32-125/0.25	0.25	0.33	5.6	4.9	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-160/0.37R	0.37	0.5	7.2	6.3	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-160/0.37	0.37	0.5	8.7	8	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-200/0.55R	0.55	0.75	10.5	9.3	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-200/0.55	0.55	0.75	12	11	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-200/0.75	0.75	1	17.3	16.5	14.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40-125/0.37R	0.37	0.5	-	4.5	4	3.6	3	2.3	1.5	-	-	-	-	-	-	-	-	-	-	-
40-125/0.37	0.37	0.5	-	6.2	5.7	5.2	4.6	3.8	3	-	-	-	-	-	-	-	-	-	-	-
40-160/0.55R	0.55	0.75	-	7.2	6.7	6.3	5.7	5	4.3	-	-	-	-	-	-	-	-	-	-	-
40-160/0.55	0.55	0.75	-	8.5	7.9	7.5	6.9	6.2	5.4	-	-	-	-	-	-	-	-	-	-	-
40-200/1.1R	1.1	1.5	-	11	10.5	10.1	9.6	9	8.3	-	-	-	-	-	-	-	-	-	-	-
40-200/1.1	1.1	1.5	-	12.7	12.3	11.9	11.2	10.4	9.4	-	-	-	-	-	-	-	-	-	-	-
40-200/1.5	1.5	2	-	17.8	17.4	16.9	16.2	15.3	14.2	-	-	-	-	-	-	-	-	-	-	-
50-125/0.55R	0.55	0.75	-	-	-	4.9	4.7	4.4	4.2	3.8	3	2	-	-	-	-	-	-	-	-
50-125/0.55	0.55	0.75	-	-	-	5.8	5.6	5.4	5.2	4.9	4.1	3.2	-	-	-	-	-	-	-	-
50-160/1.1R	1.1	1.5	-	-	-	7.7	7.5	7.2	6.9	6.5	5.6	4.5	-	-	-	-	-	-	-	-
50-160/1.1	1.1	1.5	-	-	-	9	8.8	8.5	8.2	7.8	6.9	5.8	-	-	-	-	-	-	-	-
50-200/1.5R	1.5	2	-	-	-	12.1	11.8	11.5	11.1	10.6	9.5	8	-	-	-	-	-	-	-	-
50-200/1.5	1.5	2	-	-	-	13	12.7	12.3	11.9	11.5	10.5	9.1	-	-	-	-	-	-	-	-
50-200/2.2	2.2	3	-	-	-	17.7	17.5	17.2	16.8	16.4	15.4	14	-	-	-	-	-	-	-	-
65-125/0.55	0.55	0.75	-	-	-	-	-	4.8	4.6	4.4	4.0	3.5	3.2	2.3	1.4	-	-	-	-	-
65-125/0.75	0.75	1	-	-	-	-	-	6	5.8	5.7	5.2	4.6	4.4	3.5	2.5	2.2	-	-	-	-
65-125/1.1	1.1	1.5	-	-	-	-	-	7.2	7	6.8	6.3	5.8	5.4	4.5	3.5	3.2	2.8	-	-	-
65-160/1.1	1.1	1.5	-	-	-	-	-	-	8.1	8.0	7.4	7.0	6.6	5.7	4.6	4.2	3.8	-	-	-
65-160/1.5	1.5	2	-	-	-	-	-	-	9.2	9	8.5	8	7.7	6.7	5.7	5.3	4.9	4.5	-	-
65-160/2.2	2.2	3	-	-	-	-	-	-	11.3	11.1	10.6	10	9.8	8.8	7.6	7.2	6.8	6.4	5.5	-
65-200/2.2R	2.2	3	-	-	-	-	-	-	12.4	12.2	11.6	11	10.6	9.3	7.8	7.3	6.8	-	-	-
65-200/2.2	2.2	3	-	-	-	-	-	-	13.9	13.7	13.0	12.4	12	10.8	9.3	8.8	8.3	7.8	-	-
62-200/3.0	3	4	-	-	-	-	-	-	15.8	15.6	15.06	14.5	14.1	12.9	11.6	11.1	10.6	10.1	9	-

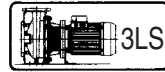
CENTRIFUGAL PUMPS in AISI 316

3L Series

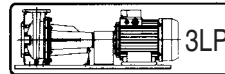
3L Series - wetted parts in AISI 316



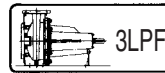
monobloc with extended motor shaft



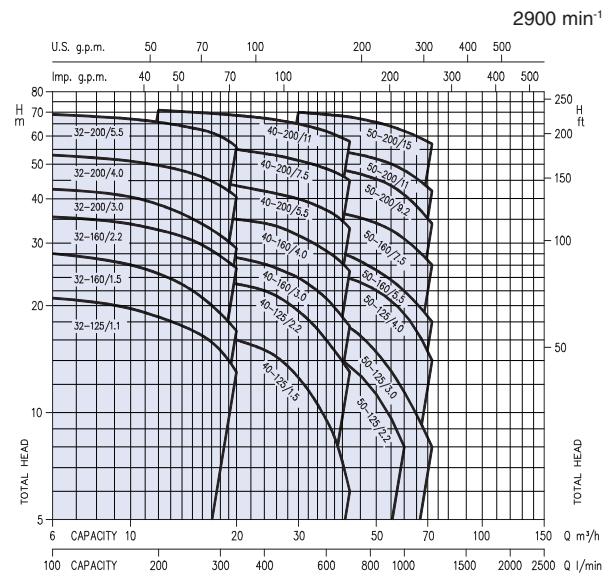
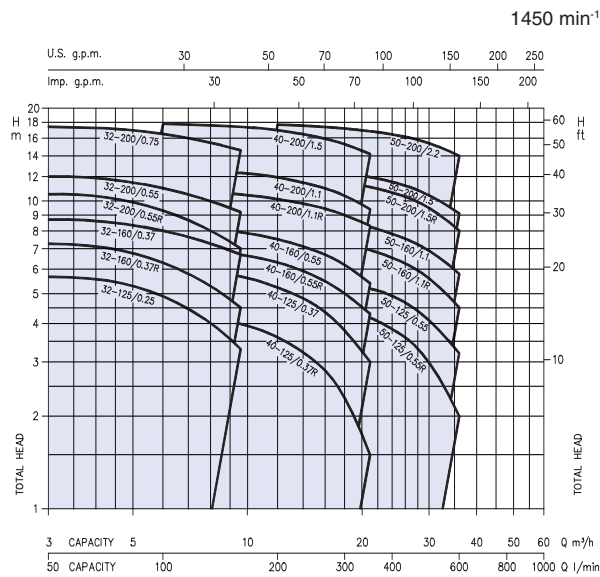
monobloc with standard motor and rigid coupling



pump on baseplate with standard motor and coupling



bareshaft pump



PERFORMANCE TABLE

1450 min⁻¹

Pump type 3LM4	kW	Absorbed Current (A)		l/min m³/h	Q=Capacity											
		Three-phase			50	100	160	200	250	300	350	400	500	600	H=Total head	
		230V	400V		3	6	9.6	12	15	18	21	24	30	36		
32-125/0.25	0.25	1.4	0.8		5.6	4.9	3.3	-	-	-	-	-	-	-	-	-
32-160/0.37R	0.37	1.4	0.8		7.2	6.3	4.5	-	-	-	-	-	-	-	-	-
32-160/0.37	0.37	1.6	0.9		8.7	8	6.7	-	-	-	-	-	-	-	-	-
32-200/0.55R	0.55	1.9	1.1		10.5	9.3	7	-	-	-	-	-	-	-	-	-
32-200/0.55	0.55	2.1	1.2		12	11	9.2	-	-	-	-	-	-	-	-	-
32-200/0.75	0.75	3.1	1.8		17.3	16.5	14.6	-	-	-	-	-	-	-	-	-
40-125/0.37R	0.37	1.5	0.9			4.5	4	3.6	3	2.3	1.5	-	-	-	-	-
40-125/0.37	0.37	1.6	0.9			6.2	5.7	5.2	4.6	3.8	3	-	-	-	-	-
40-160/0.55R	0.55	1.9	1.1			7.2	6.7	6.3	5.7	5	4.3	-	-	-	-	-
40-160/0.55	0.55	2.1	1.2			8.5	7.9	7.5	6.9	6.2	5.4	-	-	-	-	-
40-200/1.1R	1.1	3.5	2.0			11	10.5	10.1	9.6	9	8.3	-	-	-	-	-
40-200/1.1	1.1	3.8	2.2			12.7	12.3	11.9	11.2	10.4	9.4	-	-	-	-	-
40-200/1.5	1.5	6.4	3.7			17.8	17.4	16.9	16.2	15.3	14.2	-	-	-	-	-
50-125/0.55R	0.55	1.7	1.0				4.9	4.7	4.4	4.2	3.8	3	-	-	-	-
50-125/0.55	0.55	2.1	1.2				5.8	5.6	5.4	5.2	4.9	4.1	3.2	-	-	-
50-160/1.1R	1.1	3.5	2.0				7.7	7.5	7.2	6.9	6.5	5.6	4.5	-	-	-
50-160/1.1	1.1	3.8	2.2				9	8.8	8.5	8.2	7.8	6.9	5.8	-	-	-
50-200/1.5R	1.5	5.2	3.0				12.1	11.8	11.5	11.1	10.6	9.5	8	-	-	-
50-200/1.5	1.5	5.5	3.2				13	12.7	12.3	11.9	11.5	10.5	9.1	-	-	-
50-200/2.2	2.2	8.7	5.0				17.7	17.5	17.2	16.8	16.4	15.4	14	-	-	-

2900 min⁻¹

Pump type 3LM	kW	Absorbed Current (A)			l/min m³/h	Q=Capacity															
		Three-phase				100	150	200	250	300	333	400	450	500	550	600	650	700	800	1000	1200
		230V	400V	690V		6	9	12	15	18	20	24	27	30	33	36	39	42	48	60	72
		H=Total head																			
32-125/1.1	1.1	5.0	2.9	-	21	20	18.5	17	15	13	-	-	-	-	-	-	-	-	-	-	
32-160/1.5	1.5	5.9	3.4	-	28	26.5	24.5	22	19	17	-	-	-	-	-	-	-	-	-	-	
32-160/2.2	2.2	8.3	4.8	-	35.5	34.5	32.5	30.5	27.5	25.5	-	-	-	-	-	-	-	-	-	-	
32-200/3.0	3.0	11.8	6.8	-	42.5	41	38.5	35	31.5	29	-	-	-	-	-	-	-	-	-	-	
32-200/4.0	4.0	15.6	9.0	-	53	51.5	49.5	47	43.5	40.5	-	-	-	-	-	-	-	-	-	-	
32-200/5.5	5.5	-	11.8	6.8	69	67.6	65.5	63	60	56	-	-	-	-	-	-	-	-	-	-	
40-125/1.5	1.5	5.9	3.4	-	-	-	18	17.5	17	16	15	14	12.5	11	9.5	8	6.5	-	-	-	
40-125/2.2	2.2	8.3	4.8	-	-	-	26	25	24.2	23	22	21	19	17.5	16	14.3	13	-	-	-	
40-160/3.0	3.0	11.8	6.8	-	-	-	30	29	28.5	27.3	26.2	25.4	24	22.5	21	19.2	17.5	-	-	-	
40-160/4.0	4.0	15.9	9.2	-	-	-	38	37	36	35	34	33	31.3	30	28.5	27	25	-	-	-	
40-200/5.5	5.5	-	11.1	6.4	-	-	46	45	44	43.5	42	41	40	38.5	37	35.1	33	-	-	-	
40-200/7.5	7.5	-	15.1	8.7	-	-	56.5	56	55.3	55	53.5	52.5	51.2	49.8	48.5	47	45	-	-	-	
40-200/11	11	-	20.0	11.6	-	-	71	70	69.3	68.8	67.5	66.2	65	63.5	62	60	58	-	-	-	
50-125/2.2	2.2	8.3	4.8	-	-	-	-	-	-	-	17	16.6	16.1	15.5	14.9	14.2	13.4	11.8	8	-	
50-125/3.0	3.0	11.8	6.8	-	-	-	-	-	-	-	20.5	20	19.5	19	18.5	18	17.3	15.5	12.3	8	
50-125/4.0	4.0	15.9	9.2	-	-	-	-	-	-	-	26	25.9	25.7	25.3	24.7	24.2	23.3	22.2	19	14	
50-160/5.5	5.5	-	11.5	6.6	-	-	-	-	-	-	31	30.5	30	29.5	29	28	27.6	26	22.5	18	
50-160/7.5	7.5	-	15.5	9.0	-	-	-	-	-	-	39	38.5	38	37.5	37	36.5	36	34.5	31	26	
50-200/9.2	9.2	-	17.4	10.0	-	-	-	-	-	-	50	49.5	49	48.5	48	47.5	46	44.5	41	34	
50-200/11	11	-	22.0	12.7	-	-	-	-	-	-	56	55.5	55	54.5	54	53.8	52	48	42	34	
50-200/15	15	-	31.3	18.0	-	-	-	-	-	-	70	69.5	69	68.5	68	66	62	57	48	37	

CENTRIFUGAL PUMPS - OPEN IMPELLER in AISI 304 **DWO**

DWO



APPLICATIONS

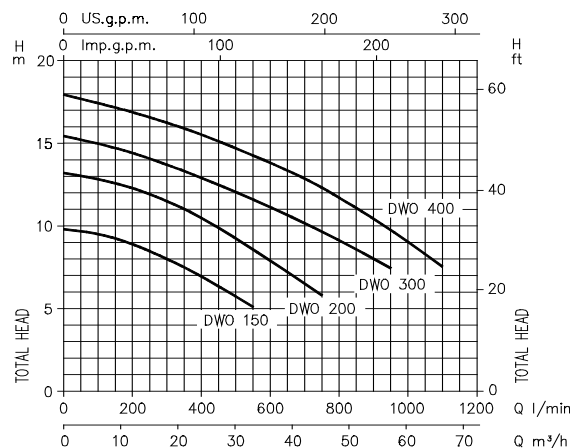
Open impeller centrifugal pumps with the hydraulic element manufactured from stainless steel AISI 304, suitable for suspended solids handling food process e.g. washing vegetables, meats and fishes. Industrial washing machines that may contain solids e.g. bottles, jars, glasses & crates. Process applications such as paint plants & general dirty liquid handling.

MATERIALS

- Pump body, casing cover, impeller and shaft in AISI 304
- Bracket and motor casing in cast iron
- Mechanical seal in carbon/ceramic/NBR
- Special mechanical seal are available on demand

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP55
- 1~230V \pm 10% 50Hz, 3~230/400V \pm 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 2"



PERFORMANCE TABLE

Pump type		kW	Q=Capacity								
Single-phase 230V 50Hz	Three-phase 400V 50Hz		l/min	100	200	300	400	500	600	700	800
			m³/h	6	12	18	24	30	36	42	48
				Net Total head							
DWO 150M	DWO 150	1.1		9.5	8.8	7.8	6.9	6.1	-	-	-
DWO 200M	DWO 200	1.5		12.7	12.3	11.5	10.5	9.8	9.1	-	-
-	DWO 300	2.2		15	14.5	13.6	12.6	11.7	10.7	9.8	-
-	DWO 400	3.0		17.5	16.9	16.1	15.1	14.3	13.4	12.4	11.5

CENTRIFUGAL PUMPS - CLOSED IMPELLER in AISI 304 **DWC**

DWC

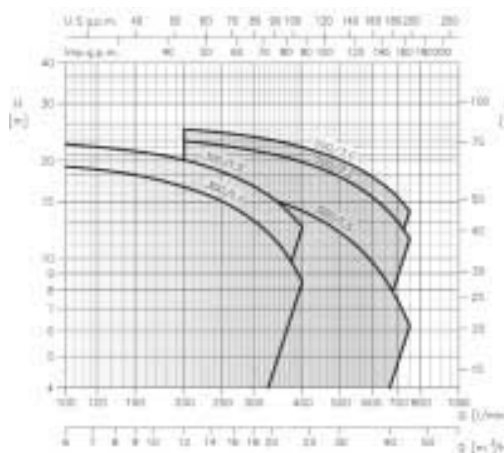


APPLICATIONS

- Chillers
- Refrigeration
- Conditioning and heating
- Transferring of industrial liquids
- Domestic and industrial water supply
- Irrigation
- Swimming pools
- Washing systems
- Drainage

FEATURES / BENEFIT

- Hydraulic robust construction, enhance pumping operation.
- High performance and efficiency design, thus energy saving.
- Ebara exclusive patent for hydraulic volute obtained from hydro-forming process.
- EPDM mechanical seal and elastomers as standard.
- Connections: - Female thread G2
- Hose-Union
- Stainless steel AISI304 for all wetted parts ensure long lasting operation.



PERFORMANCE TABLE

Pump Type Three phase	Power		Q=Capacity													
	kW	HP	l/min	0	100	150	200	250	300	350	400	500	600	700	750	
			m³/h	0	6	9	12	15	18	21	24	30	36	42	45	
DWC 300/1.1	1.1	1.5		21.0	19.2	18.1	18.6	15.0	13.1	11.0	8.5	-	-	-	-	
DWC 300/1.5	1.5	2		24.5	22.5	20.1	18.5	16.7	14.6	14.6	12.0	-	-	-	-	
DWC 500/1.5	1.5	2		18.5	-	-	17.0	16.4	15.7	14.9	14.0	12.0	9.8	7.4	6.2	
DWC 500/2.2	2.2	3		24.5	-	-	23.0	22.3	21.5	20.7	19.8	17.8	15.5	13.0	11.5	
DWC 500/3.0	3	4		26.3	-	-	25.0	24.4	23.7	22.9	22.0	20.0	17.6	15.0	13.6	

PERIPHERAL TURBINE PUMPS

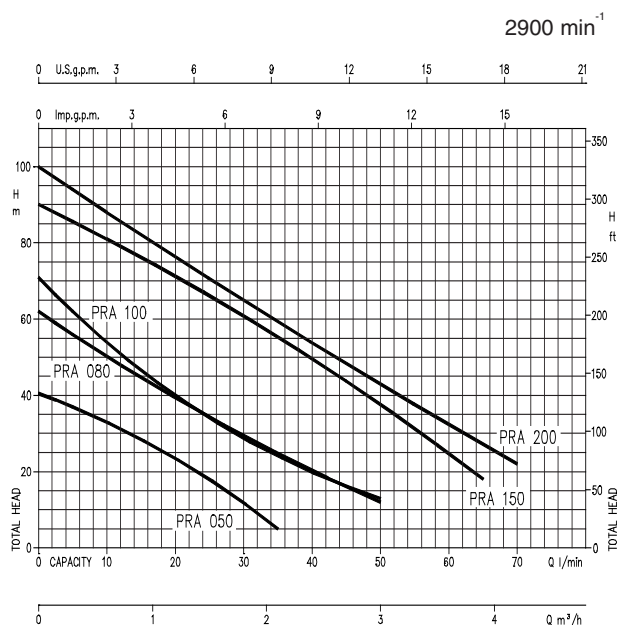
PRA
PRA


APPLICATIONS

Peripheral turbine pumps constructed from cast iron and bronze suitable for hot and cold water boosting.

SPECIFICATIONS

- Maximum working pressure : 6 bar for PRA 0.50
7,5 bar for PRA 0.80
12 bar for the other models
- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
80°C for other uses



PERFORMANCE TABLE

Pump type	Versions 50Hz	Amp.	Power	
			HP	kW
PRA 050 M	1/230V	2,5	0,5	0,37
PRA 050 T	3/415V	1	0,5	0,37
PRA 080 M	1/230V	4,9	0,8	0,59
PRA 080 T	3/415V	2,1	0,8	0,59
PRA 100 M	1/230V	5,6	1	0,74
PRA 100 T	3/415V	2,4	1	0,74
PRA 150 M	1/230V	10	1,5	1,1
PRA 150 T	3/415V	3,6	1,5	1,1
PRA 200 M	1/230V	10,9	2	1,5
PRA 200 T	3/415V	4,0	2	1,5

SWIMMING POOL PUMPS

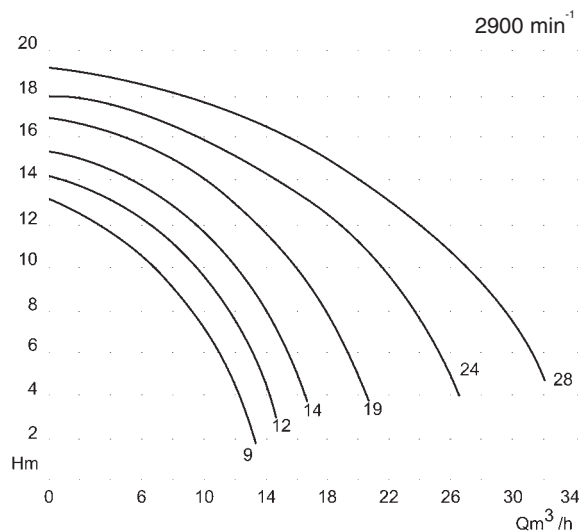
SWA
SWA


APPLICATIONS

SWA is a horizontal centrifugal, self priming pump particularly suitable for water circulation in swimming-pool systems.

TECHNICAL DATA

- Capacity up to 32 m³/h
- Total head up to 19 m
- Power up to 1,5 kW
- Maximum working pressure : 3 bar
- Maximum water temperature : 40°C
- Motor : 2 pole, Class F insulation, IP 55 protection, continuously rated
- Single phase version : from 0.5 up to 2HP:
230V-50Hz permanent split capacitor build in overload motor protection with automatic reset
- Three phase version : from 0.6 up to 2HP:
400V overload protection must be provided by the user



PERFORMANCE TABLE

Pump type		HP	CAPACITOR		ABSORBED CURRENT (A)		Q=Capacity									
							H=Total head (m)									
Single phase	Three phase			Single phase	Three phase	l/min	50	100	160	200	250	300	350	400	500	
							3	6	9.6	12	14	18	21	24	30	
SWA 9M		0.5	12.5	3.5	-	-	12	10.5	7.6	4.3						
SWA 12M	SWA 12T	0.6	14	3.9	2.6	1.5	13.1	12.4	10	7.4	4.4					
SWA 14M	SWA 14T	0.8	20	4.2	2.8	1.6	14.8	13.6	12	10	8					
SWA 19M	SWA 19T	1	20	5.4	3.2	1.8	16.7	15.8	14	12.8	11.7	8	5			
SWA 24M	SWA 24T	1.5	31.5	8	5.6	3.2	17.8	17	16	15	14.4	12.5	11	9.6		
SWA 28M	SWA 28T	2	35	9.8	6.5	3.7	19	18.6	17.9	17	16.3	15	14	13	7.5	

HORIZONTAL MULTI-STAGE PUMPS

COMPACT

COMPACT



SPECIFICATIONS

- Maximum working pressure : 10 bar
- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
40°C for other uses

APPLICATIONS

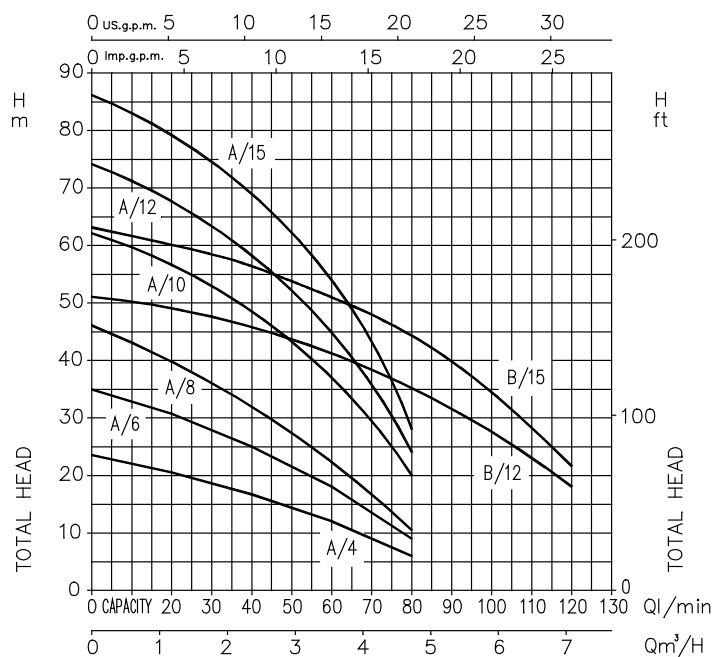
Horizontal centrifugal multi-stage pumps suitable for pressure boosting systems, car washing, small garden irrigation and general clean water pumping.

MATERIALS

- Pump body and bracket in cast iron
- External casing in AISI 304
- Impeller and diffuser in technopolymer
- Shaft in AISI 416
- Mechanical seal in carbon/ceramic/NBR

TECHNICAL DATA

- 2 pole motor
- Insulation : Class F
- Protection degree : IP44
- 1~230V ±10% 50Hz, 3~230/400V ±10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 1"-DNA 1" 1/4 for COMPACT B/12 and B/15, 1" for other models



PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)			l/min m³/h	Q=Capacity							
Single-phase 230V 50Hz	Three-phase 230/400V 50Hz		μF	Vc	Single-phase	Three-phase 230V	400V		20	30	40	50	60	80	100	120
									1,2	1,8	2,4	3	3,6	4,8	6	7,2
									H=Total head							
COMPACT AM/4	COMPACT A/4	0,3	10	450	2,5	1,9	1,1		20,5	18,7	16,7	14,4	11,9	6	-	-
COMPACT AM/6	COMPACT A/6	0,44	12,5	450	3,0	2,3	1,3		30,7	28,2	25,2	21,8	18	9	-	-
COMPACT AM/8	COMPACT A/8	0,6	14	450	4,0	2,6	1,5		39,7	36,1	32	27,4	22,4	10,5	-	-
COMPACT AM/10	COMPACT A/10	0,75	20	450	6,0	4,2	2,4		56,5	53	48,6	43,4	37,1	20	-	-
COMPACT AM/12	COMPACT A/12	0,9	31,5	450	6,2	4,7	2,4		67,5	63,4	58,4	52,3	44,9	24	-	-
COMPACT AM/15	COMPACT A/15	1,1	31,5	450	7,3	5,7	3,3		79	74,6	69,1	62,3	54	28	-	-
COMPACT BM/12	COMPACT B/12	0,9	31,5	450	5,8	4,7	2,7		-	47,5	45,9	43,7	41,3	35,2	27,6	18
COMPACT BM/15	COMPACT B/15	1,1	31,5	450	7,3	5,9	3,4		-	58	56	54	51,5	44,5	34,5	22

COMPACT BOOSTER MODEL AM-PT

COMPACT BOOSTER AM-PT



APPLICATIONS

Horizontal centrifugal multistage pumps suitable for pressure boosting systems, car washing, small garden irrigation and general clean water pumping.

FEATURES / BENEFITS

- **Fully tested & assembled unit**
Ensure trouble-free operation.
- **Stainless steel pumpset used**
Hygiene and corrosion-free water.
- **EBARA 1 year warranty on all components used**
More value for money.
- **Quiet operation**
Good and enjoyable pressure expected.
- **Nationwide Dealers representation**
After-sale services assurance.

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP44
- 1~230V±10% 50Hz, 3~230/400±10% 50HZ
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version

COMPACT BOOSTER MODEL AM-PC

COMPACT BOOSTER AM-PC




APPLICATIONS

PC controller is an electronic device ensuring optimum control of automatic water pressure system. An intelligent combination of hydraulic and electronic know-how, PC controller monitors both pressure and flow and automatically controls the pump efficiently. No pressure tank required and no adjustment of pressure setting is required. Any risk of pump damages as a result of dry running is eliminated, as the device will automatically cut-off should the incoming water supply is insufficient.


FEATURES

- Extremely quiet operation, thanks to EBARA design that makes this possible.
- Start and stops the pump when the tap is opened or closed.
- Maintain pressure at the constant level during operation, eliminating hot/cold shower fluctuations.
- Shuts off the pump if loss of prime or dry-running occurs.
- Sets your pump system to optimum performance automatically.
- Absolutely quiet, durable and easy to install.



Presscontrol is the most economical solution for controlling electric pumps


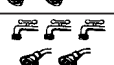

- Starts and stops the pump when the service is opened or closed, activated or deactivated.
- Maintains pressure at a constant level during operation.
- Shuts off the pump in the event of water failing to reach the inlet.
- Attenuates the effects of hammering.




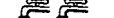

Fully in compliance with current EEC directives, Presscontrol is approved and certified VDE.

PERFORMANCE TABLE

COMPACT BOOSTER type AM-PT






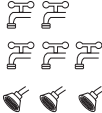
Model	kW	*Application	l/min m³/h	Q = Capacity						Connection
				20	30	40	50	60	80	
				1,2	1,8	2,4	3	3,6	4,8	
H = Total head (m)										
AM 4-PT	0.3			20,5	18,7	16,7	14,4	11,9	6	1" x 1"
AM 6-PT	0.4		30,7	28,2	25,2	21,8	18	9	1" x 1"	
AM 8-PT	0.6		39,7	36,1	32	27,4	22,4	10,5	1" x 1"	

COMPACT BOOSTER type AM-PC

Model	kW	*Application	l/min m³/h	Q = Capacity						Connection
				20	30	40	50	60	80	
				1,2	1,8	2,4	3	3,6	4,8	
H = Total head (m)										
AM 4-PC	0.3			Head in m	20,5	18,7	16,7	14,4	11,9	6
AM 6-PC	0.4		30,7		28,2	25,2	21,8	18	9	1" x 1"
AM 8-PC	0.6		39,7		36,1	32	27,4	22,4	10,5	1" x 1"

* For guidance only

PRA-BOOSTER & E-BOOSTER PUMP
BOOSTER PUMP

APPLICATION	TYPE	MODEL		SERVICE*	CONNECTION
For average homes with modern appliances.	PRA-BOOSTER			 Max. Capacity: 35 lit/min	1" x 1"
		0.37 kW PRA-BOOSTER PT	0.37 kW PRA-BOOSTER PC		
Large Double storey homes/ Semi-D/ Bungalow	E-BOOSTER 9 series			 Max. Capacity: 120 lit/min	1 1/4" x 1"
		0.75 kW E-BOOSTER 9010 PT	0.75 kW E-BOOSTER 9010 PC		

* For guidance only.

COMFORTJET BOOSTER PUMP
COMFORTJET



Operative Features
EBARA ComfortJet Booster

- Quiet operation, thanks to EBARA design that makes this possible.
- Fully automatic starts/stop when tap opened/closed.
- Leakage-free design.
- Maintain pressure at a constant level during operation, eliminating hot/cold shower fluctuations.
- Auto shuts off if dry-running occurs.
- IP68 electric motor used for weather-proof operation.
- Outdoor installation possible.

Ebara PC Controller

Ebara Presscontrol (PC) is an electronic device ensuring optimum control of automatic water pressure system.

- ✓ Automatically control the pump efficiently.
- ✓ Monitor both pressure and flow.
- ✓ No adjustment of pressure setting is required.
- ✓ Any risk of pumps damages as a result of dry running is eliminated, as the device will automatically cut-off when incoming water supply is insufficient.
- ✓ Much more compact, absolutely quiet, durable and simple to install.

Model	kW	*Application	ℓ/min m³/h	Q = capacity					Connection
				20	30	40	60	80	
				H = Total head (m)					
ComfortJet M08	0.6		Head in m	43.3	40.2	36.3	26.1	13.4	1¼" x1¼"
ComfortJet M12	0.9			-	45.6	44	38.8	32	1¼" x1¼"

* For guidance only.

MONOBLOC PUMPS

MD
MD


SPECIFICATIONS

- Maximum working pressure : 10 bar
- Liquid temperature : 90°C

APPLICATIONS

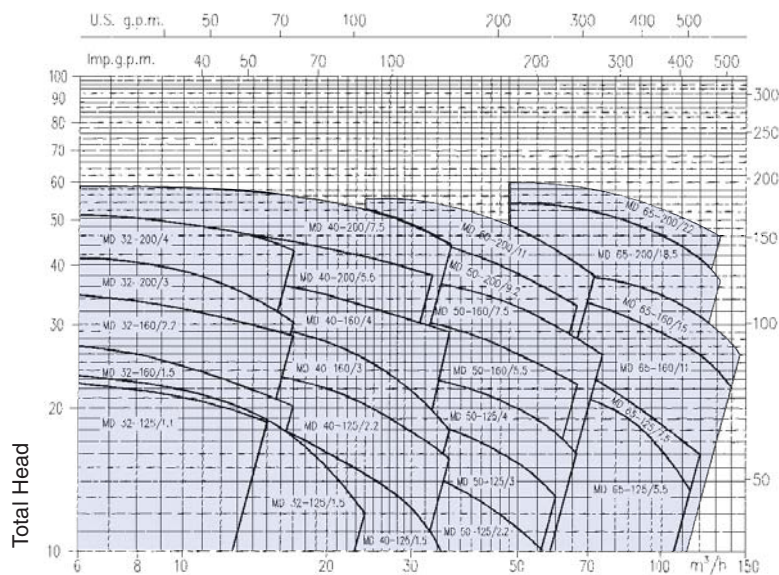
End suction mono-bloc centrifugal pump in accordance to DIN 24255 made of cast iron. Applications include water boosting, heating systems, air-conditioning, washing systems and many other industrial applications.

MATERIALS

- Pump body, bracket and impeller in cast iron
- Shaft in AISI 304
- Mechanical seal : Carbon/ceramic/NBR

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP55
- Single phase 230V $\pm 10\%$ 50Hz;
Three phase 230/400V 10% 50Hz up to 4 kW included;
400/690V $\pm 10\%$ above
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version



PERFORMANCE TABLE

Pump type	kW	Q= Capacity															
		H=Total head[m]															
		100	200	250	280	400	550	600	667	800	1000	1100	1200	1250	1400	1600	2000
		l/min	6	12	15	17	24	33	36	40	48	60	66	72	75	84	144
MD 32-125/1.1	1.1		22.5	20.3	18.5	-	-	-	-	-	-	-	-	-	-	-	-
MD 32-125/1.5	1.5		23.5	21.4	19.7	18.5	12	-	-	-	-	-	-	-	-	-	-
MD 32-160/1.5	1.5		27	23.9	21.9	20.5	-	-	-	-	-	-	-	-	-	-	-
MD 32-160/2.2	2.2		34.5	32	30	28.5	-	-	-	-	-	-	-	-	-	-	-
MD 32-200/3	3.0		41	38.3	32.9	30.5	-	-	-	-	-	-	-	-	-	-	-
MD 32-200/4	4.0		50.5	48.9	44.3	42.5	-	-	-	-	-	-	-	-	-	-	-
MD 40-125/1.5	1.5		19.5	18.4	17.7	17.2	14.6	10.3	8.5	-	-	-	-	-	-	-	-
MD 40-125/2.2	2.2		25	23.2	22.9	22.5	20.4	16.9	15.5	-	-	-	-	-	-	-	-
MD 40-160/3	3.0		30.5	29.1	28.3	27.8	25.3	21.5	20	-	-	-	-	-	-	-	-
MD 40-160/4	4.0		38	36.7	36	35.5	33.4	30.2	28	-	-	-	-	-	-	-	-
MD 40-200/5.5	5.5		49	47.5	46.5	45.6	42.9	38	-	-	-	-	-	-	-	-	-
MD 40-200/7.5	7.5		58.5	57.2	56.3	55.6	52.3	46.4	44	-	-	-	-	-	-	-	-
MD 50-125/2.2	2.2		-	-	-	-	16	14.8	14	13.3	11.7	8.5	-	-	-	-	-
MD 50-125/3	3.0		-	-	-	-	20	18.9	18.4	17.7	16.1	13	-	-	-	-	-
MD 50-125/4	4.0		-	-	-	-	24.5	23.5	23.1	22.4	20.9	17.8	16	-	-	-	-
MD 50-160/5.5	5.5		-	-	-	-	32.5	31.2	30.7	30	28.1	24.6	22.5	-	-	-	-
MD 50-160/7.5	7.5		-	-	-	-	38	36.9	36.4	35.7	34.1	31	28.1	27.1	26	-	-
MD 50-200/9.2	9.2		-	-	-	-	47.5	45.6	44.8	43.7	41.1	36	33	-	-	-	-
MD 50-200/11	11.0		-	-	-	-	55	53.3	52.6	51.5	49	44.2	41.3	38	-	-	-
MD 65-125/5.5	5.5		-	-	-	-	-	24	23.7	23.1	22	21.3	20.8	-	20.2	18.9	13.5
MD 65-125/7.5	7.5		-	-	-	-	-	27	26.7	26.2	25.1	24.5	23.8	23.4	22.2	17.2	16
MD 65-160/11	11.0		-	-	-	-	-	34	33.6	32.8	32.3	31.8	31.5	30.5	26.4	25.4	23.2
MD 65-160/15	15.0		-	-	-	-	-	-	38.2	37.4	36.9	36.4	36.1	35.2	31.2	30.3	28.3
MD 65-200/18.5	18.5		-	-	-	-	-	-	53.5	52.3	51.5	50.7	50.2	48.7	42.2	40.6	37
MD 65-200/22	22.0		-	-	-	-	-	-	59.5	58.4	57.8	57.1	56.7	55.5	50.1	48.8	46

MONOBLOCK END SUCTION PUMPS

FSDA
FSDA


FEATURES

- Easy maintenance BPO (Back Pull Out) feature allows all rotating element to be removed without disconnecting the suction and discharge pipework.
- Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads.
- High operating efficiency over a wider range of capacities, lowers operational cost.
- No alignment required.
- Space saving with compact construction.

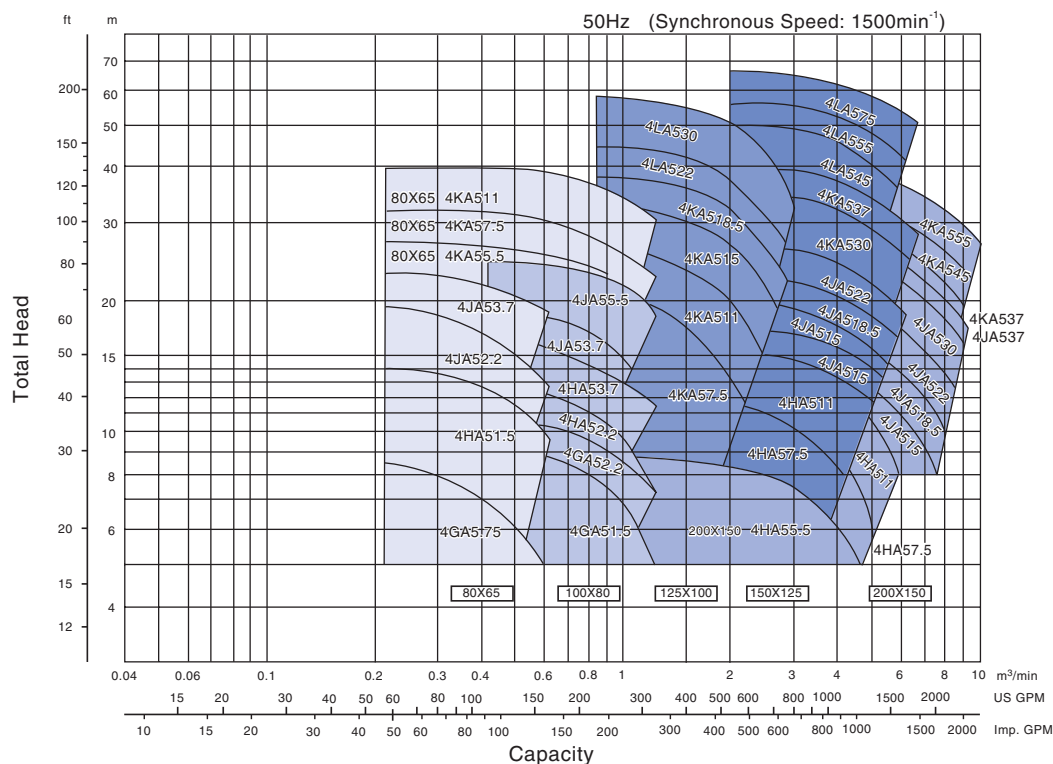
APPLICATIONS

- Water supply.
- Hot and cold water circulation.
- For swimming pool.
- Sprinkling
- Air conditioning.
- Industrial use.

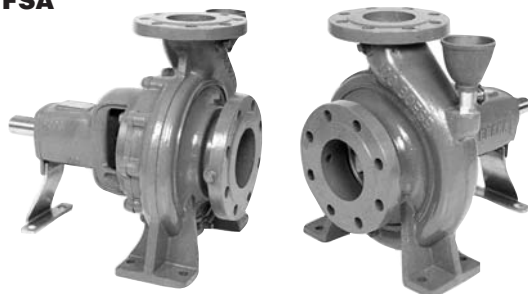
SPECIFICATIONS

Description		Standard
Pump Model		FSDA
No. of Pole		-
Liquid Handled	Type of liquid	Clean Water
	Temperature	0°C - 100°C (32°F - 212°F)
	Viscosity	1 cst
	Specific gravity	1.0
Location		Indoor, Optional : Outdoor
Construction	Impeller	Enclosed
	Pump Shaft	Stub Shaft
	Shaft seat	Mechanical Seal
	Sealing	Self
	Bearing	-
Material	Casing	Cast Iron
	Impeller	Bronze
	Shaft	316 Stainless Steel
	Bracket	Cast Iron
	Seal	M.Seal : Ceramic / Carbon
Flange	Suction & Discharge	JIS 10 K RF
Accessories	Bare Shaft	-
	With motor	-
Motor		
Type		IEC Standard Flange Type
No. of Pole		4
Synchronous speed		1500 min ⁻¹
Insulation Class		F
Protection		IP 54, Optional : IP 55
Voltage / Phase / Hz		415 V / 3 phase / 50Hz
Material		Frame
		Cast Iron

SELECTION CHART



END SUCTION VOLUTE PUMPS

FSA
FSA


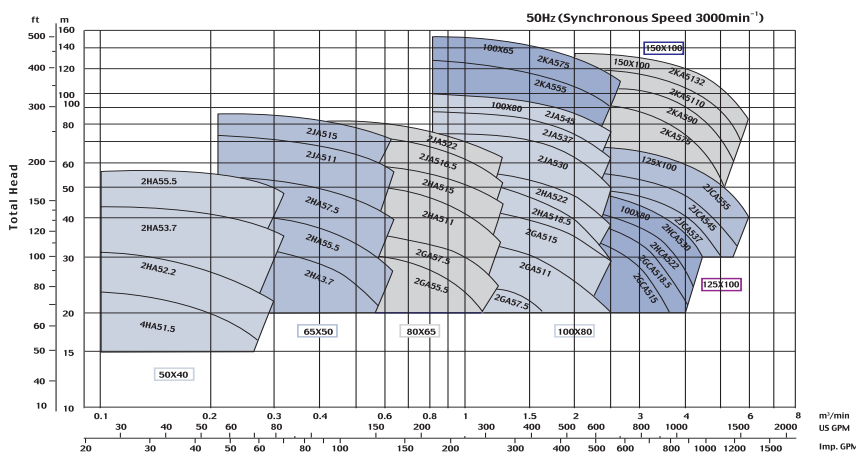
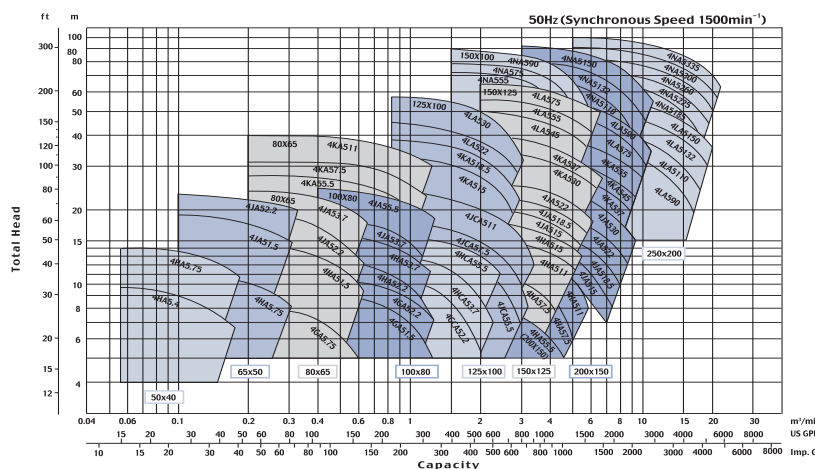
- Easy maintenance BPO (Back Pull Out) feature allows all rotating element to be removed without disconnecting the suction and discharge pipework.
- Higher operating efficiency over a wider range of capacities, lowers operational cost.
- Non-overload design to ensure stable performance for all applications.
- Wide range application with flow capacity up to 22 m³/min

APPLICATIONS

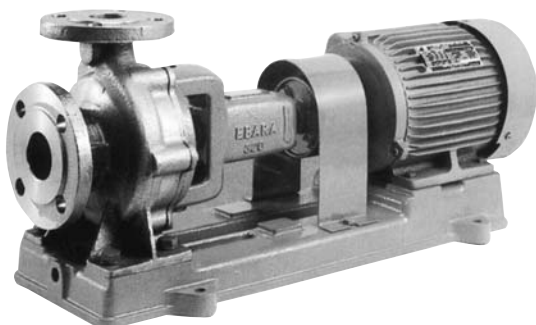
- Water supply
- Hot and cold water circulation
- For cooling tower
- Fire-fighting application
- Irrigation
- Industrial use
- Drainage
- Sprinkling
- Air-conditioning
- For swimming pool

SPECIFICATIONS

Description		Standard		Optional	
		2 poles model	4 poles model	2 poles model	4 poles model
Liquid	Name	Clean water			
	Temperature	0 to 100° C (32 to 212 °F)			
Max. Working Pressure		10 bar (10.2kgf/cm ²) for standard flange JIS 10K RF 16 bar (16.3kgf/cm ²) for standard flange JIS 16K RF		16 bar (16.3 kgf/cm ²)	
Sync. Speed	50Hz	3000 min ⁻¹	1500 min ⁻¹		
	60Hz	3600 min ⁻¹	1800 min ⁻¹		
Installation		Indoors		Outdoors	
Construction	Impeller	Enclosed			
	Shaft seal	Mechanical seal		Gland Packing	
	Sealing	Self flushing		External flushing	
	Bearing	Sealed ball bearing		Oil bath	
Flange	Suction & Discharge	Suction-φ150mm, except 100X65 FSKA : JIS 10K RF 100X65 FSKA : JIS 16K RF		16 bar : JIS 16K RF: DIN PN-16 DIN PN-16	
		Suction-φ150mm, except below models : JIS 10K RF 150X100 FSKA; 150X100 FSNB : JIS 16K RF		16 bar : JIS 16K RF: DIN PN-16 DIN PN-16	
		Suction-φ200mm, except below models : JIS 10K RF 200X150 FSLA; 200X150 FSNB : JIS 16K RF		16 bar : JIS 16K RF: DIN PN-16 DIN PN-16	
		Suction-φ250mm : JIS 16K RF		DIN PN-16	
Material	Casing	Cast Iron		Ductile Cast Iron (FCD)	
	Impeller	Bronze Casting (CAC406/BC6)		Cast Iron; Ductile Cast Iron (FCD)	
	Shaft	403 Stainless steel		304; 316 Stainless steel	
	Seal	Mechanical Seal: Ceramic/Carbon/NBR		Gland Packing: Teflon (PTFE) impregnated Mechanical seal: SiC/SiC	
Accessories	Bare shaft			Priming funnel : valve; Companion Flange	
	With motor	Common base, Coupling, Coupling guard		Priming funnel : valve; Companion Flange	



STAINLESS STEEL VOLUTE PUMP - 316SS Version

FSSA
FSSA


FEATURES

- Pump portion contacting liquid is made of high grade SS316 stainless steel.
- BPO (Back Pull Out) system allows all rotating elements to be removed without disconnecting suction and discharge pipework.
- Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads.
- Non-overload design to ensure stable performance for all applications.
- Compact construction, applicable for two-poles high speed motor provides a compact unit and minimizes installation area.
- Wide range application due to 316 stainless steel material.

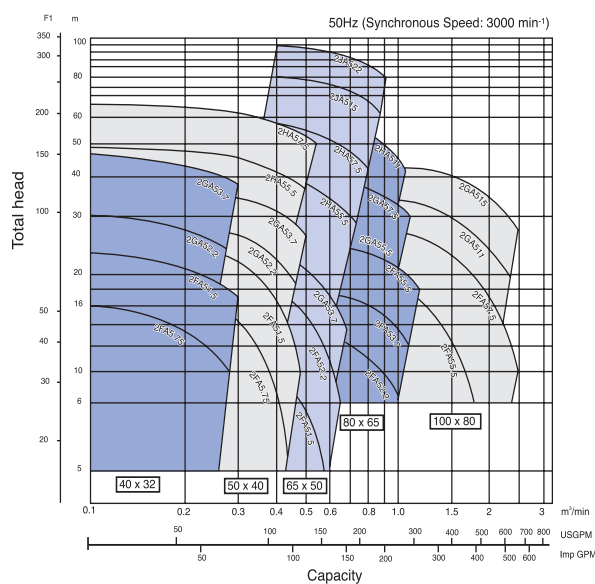
APPLICATIONS

- Industrial use
- Chemical Solutions
- Industrial drainage
- Hot and cold water supply
- Sea water
- Water supply
- For swimming pool
- Sprinkling
- Air conditioning
- Drinking Water

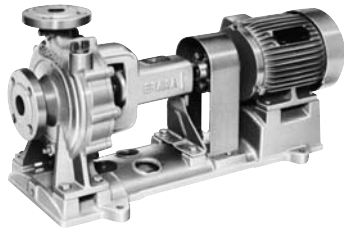
SPECIFICATIONS

Description		Standard		Optional	
Liquid Handled	Type of liquid	Water, oil, liquid chemicals		For other specifications, please contact Ebara	
	Temperature	0°C to 100°C (32 to 212 °F)			
	Viscosity	below 10 cst			
	Specific gravity	0.7 to 1.0			
Synchronous speed		3000 min-1	1500 min-1	3000 min-1	1500 min-1
Location		Indoors		Outdoors	
Construction	Impeller	Enclosed		Mechanical seal (0-90°C)	
	Shaft seal	Gland Packing			
	Sealing	Self			
	Bearing	Sealed ball bearing			
	Casing Ring	No			
Material	Casing	SCS-14 Stainless steel (SS 316)		Teflon (PTFE) M. Seal : SiC / SiC	
	Impeller	SCS-14 Stainless steel (SS 316)			
	Shaft	316 Stainless steel			
	Casing O-ring	Fluororubber (viton)			
	Seal	Teflon (PTFE)			
Flange	Suction & Discharge	JIS 10 K RF			
Accessories	Bare shaft			-	
	With motor	Common base, Coupling, Coupling guard		-	

PERFORMANCE CHART



END SUCTION VOLUTE PUMPS

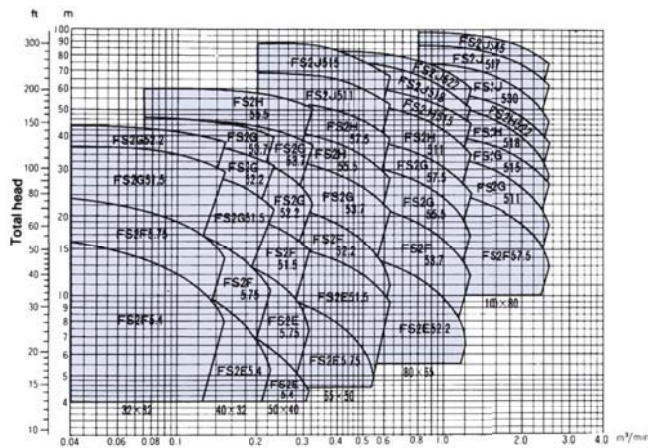
FS
FS


FEATURES

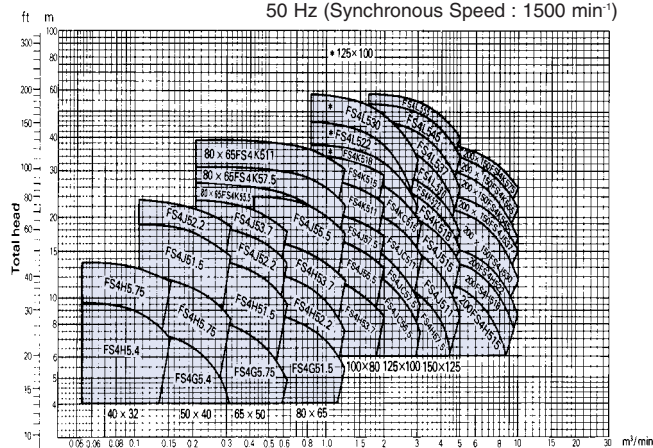
- Conforms to JIS Standard JIS B8313, 2 pole and 4 pole type pumps conforming to JIS Standards.
- Compared to the conventional type, the 2 pole type consumes less energy and is more compact.
- Back Pull Out type - can be disassembled and inspected without removing the suction/discharge piping or the thermal insulation materials.
- Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads.

SELECTION CHART

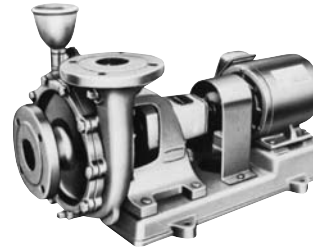
2 Pole

50 Hz (Synchronous Speed : 3000 min⁻¹)


4 Pole

50 Hz (Synchronous Speed : 1500 min⁻¹)


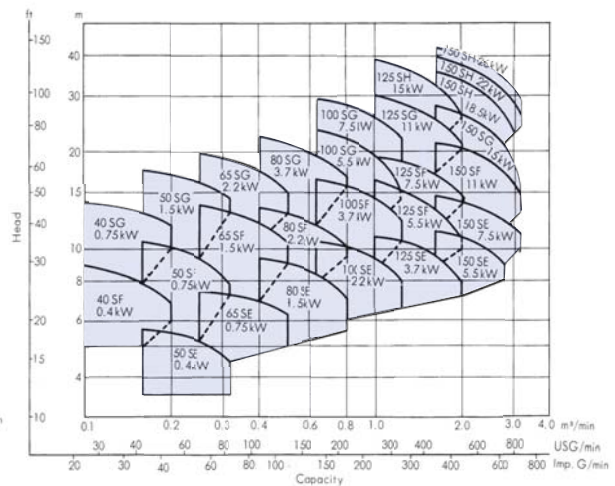
END SUCTION VOLUTE PUMPS

S
S


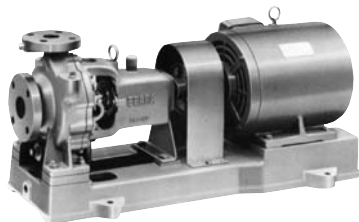
FEATURES

- Special pump design prevents motor overload and ensures stable performance for all ranges of operation.
- Precision cast iron casing and impeller ensure high efficiency.
- High suction head produced by unique design of impeller inlet.
- Sealed ball bearings require no lubrication or cooling.
- Uniform pump quality assured through mass production using transfer machine process.

SELECTION CHART

50 Hz (Synchronous Speed : 1500 min⁻¹)


END SUCTION VOLUTE PUMPS

IBL
IBL


FEATURES

- Back Pull Out type - can be disassembled and inspected without removing the suction/discharge piping or the thermal insulation materials.
- High efficiency across a wide range of capacity.
- Can be used for suction pressure up to 7 kgf/cm² (for detail, see selection charts)
- Quiet operation
- Conforms to Japanese Industrial Machinery Standard (JIMS) and International Standard (ISO 2858)

VERTICAL IN-LINE PUMPS

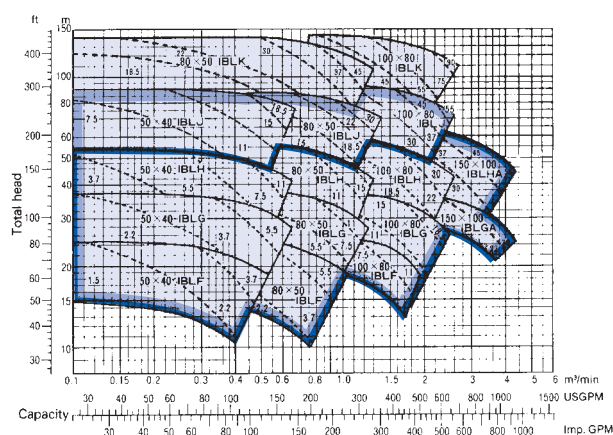
LPD
LPD


FEATURES

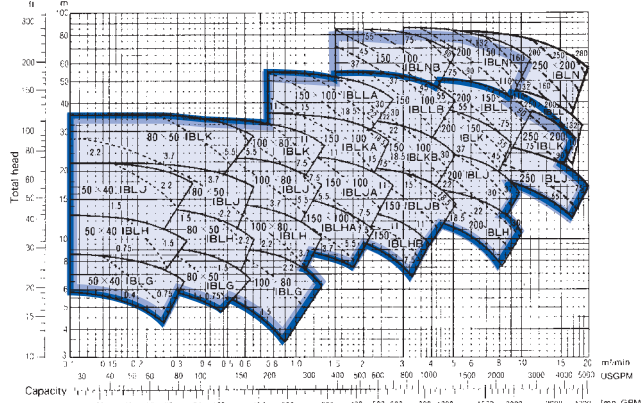
- The two-pole speed system makes the pump compact, light weight and minimizes installation space.
- No floor space is required for installation.
- High allowable temperature (Max. 100°C) and high suction pressure (Max. 0.69MPa) are available.
- Sealed ball bearing eliminates need of lubrication.
- Mechanical seal facilitates maintenance.

SELECTION CHART

2 Pole

3000 min⁻¹


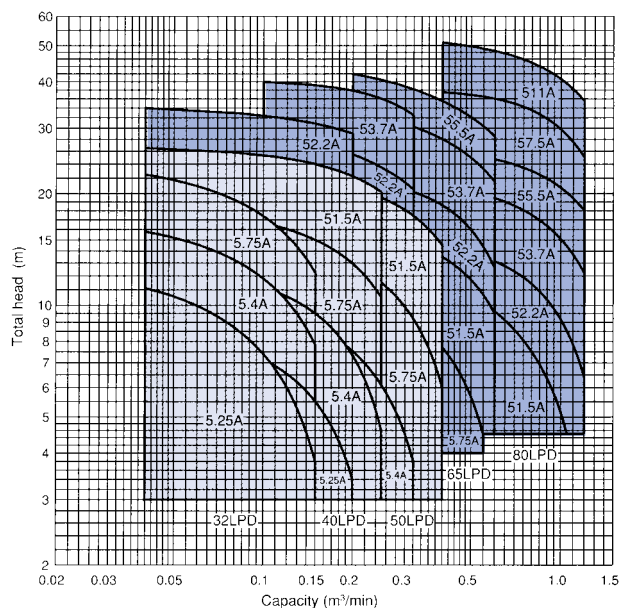
4 Pole

1500 min⁻¹


*1) Impeller material
 Standard: ☐ Cast iron, Except ☐ Ductile cast iron
 Option: ☐ Bronze, Except ☐ 304 stainless steel casting

*2) Shaft material
 Standard: Except ☐ Carbon steel, ☐ Cr. Mo. steel
 Option: ☐ 420 stainless steel

SELECTION CHART

3000 min⁻¹


STAINLESS STEEL VERTICAL IN-LINE PUMPS in AISI 304

LPS
LPS


MATERIALS

- Pump casing, impeller and casing cover in AISI 304
- Shaft in AISI 303
- Bracket and motor casing in aluminium
- Mechanical seal in carbon/ceramic/NBR

SPECIFICATIONS

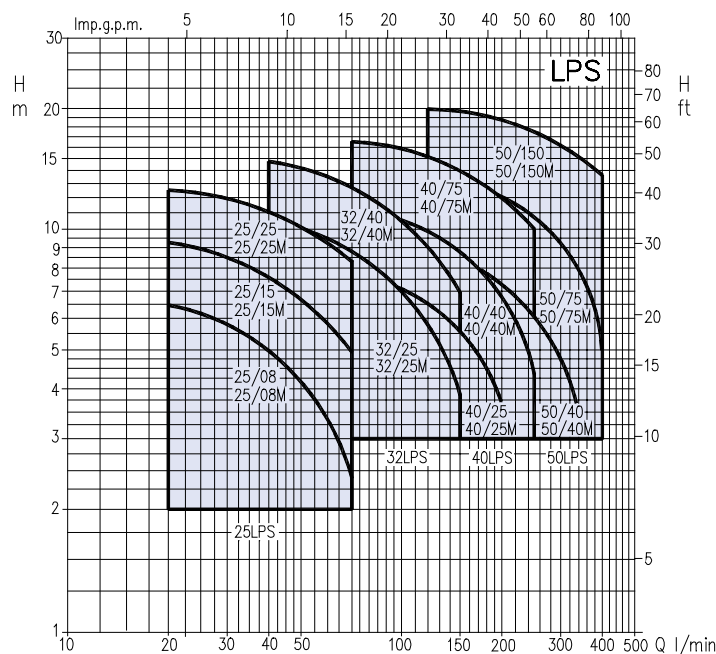
- Maximum positive suction pressure :
2 bar for all single-phase and for LPS 25 three-phase,
4 bar for LPS 32-40-50 three-phase
- Maximum liquid temperature : 100°C

APPLICATIONS

Inline centrifugal pumps made of stainless AISI 304. Applications include chilled water, air-conditioning systems and heating systems for secondary hot water and general low-pressure applications in industry. It is light construction means installation can be achieved with 1 person where conventionally heavy cast iron & bronze pumps require additional personnel and lifting equipment. [cast iron LPC-LPCD range: see catalogue]

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP55
1~230V $\pm 10\%$ 50Hz - 3~400V $\pm 10\%$ 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- Flange: PN10



PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)			l/min m³/h	Q=Capacity											
Single-phase 230V 50Hz	Three-phase 230/400V 50Hz		µF	V _c	1~	3~ 230V	400V		20	40	70	100	120	150	200	250	320	400		
									1,2	2,4	4,2	6	7,2	9	12	15	19,2	24		
									H=Total head											
LPS 25/08 M	LPS 25/08	0,08	12,5	450	1,51	1,7	1,01		6,5	5	2,4	-	-	-	-	-	-	-		
LPS 25/15 M	LPS 25/15	0,15	12,5	450	1,67	1,8	1,03		9,3	7,8	4,9	-	-	-	-	-	-	-		
LPS 25/25 M	LPS 25/25	0,25	12,5	450	2,04	1,9	1,11		12,5	11,1	8,4	-	-	-	-	-	-	-		
LPS 32/25 M	LPS 32/25	0,25	12,5	450	2,0	1,8	1,03		-	10,7	9,1	7,2	5,9	3,9	-	-	-	-		
LPS 32/40 M	LPS 32/40	0,4	12,5	450	2,74	2,2	1,25		-	14,5	12,7	10,6	9,2	7	-	-	-	-		
LPS 40/25 M	LPS 40/25	0,25	12,5	450	1,98	1,9	1,09		-	-	7,8	7,1	6,6	5,6	3,7	-	-	-		
LPS 40/40 M	LPS 40/40	0,4	12,5	450	2,75	2,2	1,25		-	-	11,3	10,4	9,9	8,7	6,9	4,4	-	-		
LPS 40/75 M	LPS 40/75	0,75	25	450	4,86	4,0	2,29		-	-	16,6	16	15,2	14,1	12,3	10,1	-	-		
LPS 50/40 M	LPS 50/40	0,4	12,5	450	2,74	2,2	1,25		-	-	-	-	9,1	8,8	7,4	5,9	3,5	-		
LPS 50/75 M	LPS 50/75	0,75	25	450	4,9	3,9	2,26		-	-	-	-	13,8	13,3	12,3	10,7	8,2	5		
LPS 50/150 M	LPS 50/150	1,5	35	450	8,07	5,7	3,31		-	-	-	-	19,8	19,3	18,7	17,8	16	13,7		

VERTICAL IN-LINE PUMPS

ELINE / ELINE-D

ELINE / ELINE-D



APPLICATIONS

- Pressure heating systems.
 - Cold water circuits.
 - Cooling circuit/towers.
 - Water supply (non-drinking).
 - Pressure increase.
 - Distribution of domestic hot water supply.
- Mainly used in industry for pumping clear liquids, free of abrasive particles in suspension and chemically neutral.

TECHNICAL DATA

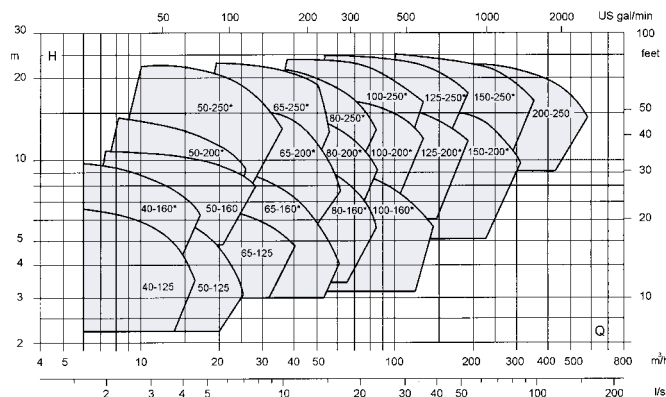
- Threephase IP 55, with flange
- Rotation speed: 1,450 - 2,900 r.p.m.
- Frequency: 50 Hz (60 Hz upon request)
- Insulation: Class F
- Ambient temperature: 40°C Max

MATERIALS

Designation	Standard Material	Optional
Casing	Cast Iron (GG-25)	Bronze
Spacer	Cast Iron (GG-25)	
Impeller	Cast Iron (GG-20)	
Shaft	Stainless steel (1.4401)	
O-rings	KLINGERIT	
Mechanical seal	Carbon/Ceramic	

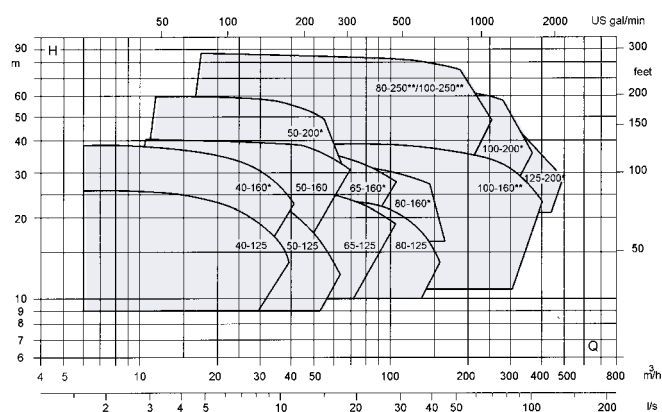
SELECTION CHART

1.450 R.P.M.



(*) Model available in single and twin executions.

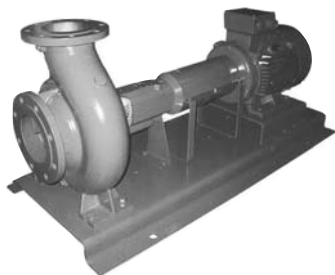
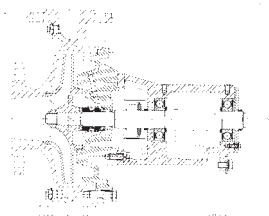
2.900 R.P.M.



(*) Model available in single and twin executions.

(**) Model only available in twin execution.

END SUCTION CENTRIFUGAL PUMP

ENR
ENR


EBARA ENR pump is designed for pumping water or fluid according to DIN 24255 (EN733) standard. The B.P.O design of the pump allows the complete drive unit to be removed from the casing without disturbing the attached pipe work.

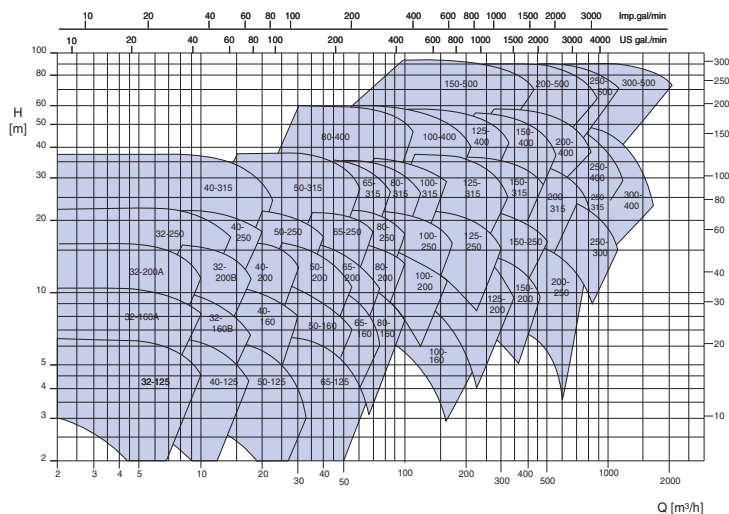
FEATURES OF ENR:

- Single-stage end suction centrifugal pump.
- Volute pump casing with cast pump feet.
- Bearing support with foot.
- Axial suction and radial discharge upwards.
- Totally enclosed radial impeller.
- Hydraulic balance by means of wearing ring and balancing holes.
- Lifetime lubricated ball bearings.
- Mechanical shaft seal according to DIN 24960.
(Gland packing optional)

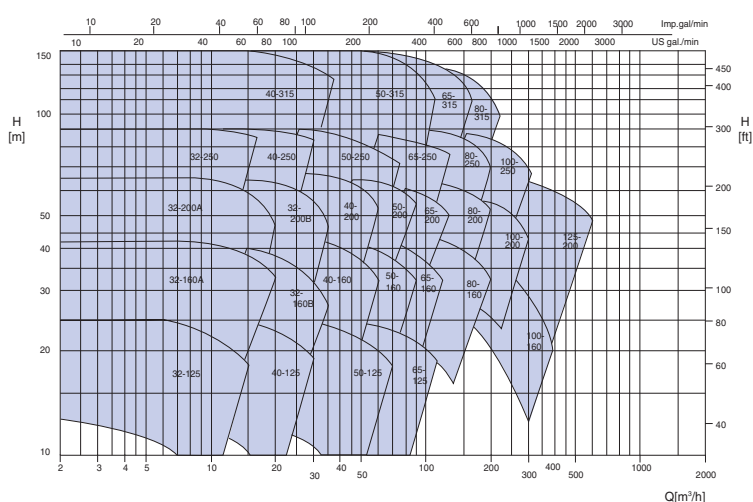
APPLICATIONS

- Water supply duties for municipalities and industries.
- Irrigation
- Drainage
- Heating and air conditioning.
- Hot and chilled water.
- Fresh and sea water.
- Fire protection.

SELECTION CHART
at 1.450 r.p.m.



SELECTION CHART
at 2.900 r.p.m.



VERTICAL MULTI-STAGE PUMPS

MULTIGO

MULTIGO



APPLICATIONS

Low noise Vertical Multi-stage Pump, the motor is cooled by pumped liquid, whilst simultaneously reducing the noise levels as the liquid passes around the motor within a water jacket. The double mechanical seal with interposed chamber containing lubrication fluid ensuring long life and reliability. Suitable for booster sets, water features and irrigation systems. This pump is also suitable for installations where the pump is required to run under flood conditions. Supplied with 5mts. cable length type HO7RNF.

MATERIALS

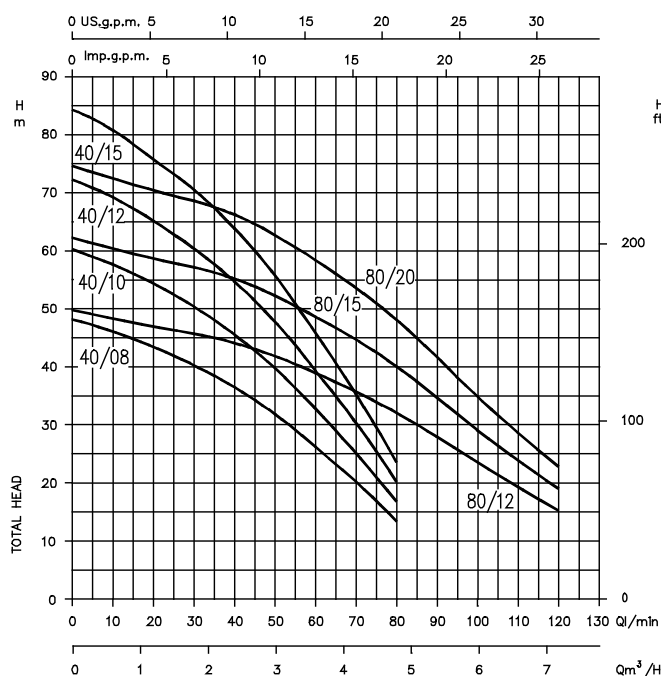
- Pump body, casing cover, external casing and motor casing in AISI 304
- Impeller and diffuser in technopolymer
- Shaft in AISI 416
- Mechanical seal in carbon/ceramic/NBR

SPECIFICATIONS

- Maximum working pressure : 10 bar
- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
40°C for other uses

TECHNICAL DATA

- 2 poles motor cooled by the pumped liquid
- Insulation: Class F
- Protection degree: IP68
- 1~230V \pm 10% 50 Hz, 3~400V \pm 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNA-DNM1"¹/₄



PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		l/min m³/h	Q=Capacity							
Single-phase 230V 50Hz	Three-phase 400V 50Hz		µF	Vc	1~ 230V	3~ 400V		20	30	40	60	80	100	120	
								1,2	1,8	2,4	3,6	4,8	6	7,2	
								H=Total head							
MULTIGO M 40/08	MULTIGO 40/08	0,6	16	450	4,3	1,9		43,3	40,2	36,3	26,1	13,4	-	-	
MULTIGO M 40/10	MULTIGO 40/10	0,75	20	450	5,7	2,2		54,1	50,2	45,4	32,6	16,8	-	-	
MULTIGO M 40/12	MULTIGO 40/12	0,9	20	450	6,8	2,4		64,9	60,2	54,5	39,2	20,2	-	-	
MULTIGO M 40/15	MULTIGO 40/15	1,1	31,5	450	7,3	3,0		75,7	70,3	63,6	45,7	23,5	-	-	
MULTIGO M 80/12	MULTIGO 80/12	0,9	20	450	6,4	2,3		-	45,6	44	38,8	32	23,2	15,2	
MULTIGO M 80/15	MULTIGO 80/15	1,1	31,5	450	7,5	3,1		-	57	55	48,5	40	28	19	
-	MULTIGO 80/20	1,5	-	-	-	3,5		-	68,4	66	58,2	48	34,8	22,8	

VERTICAL MULTI-STAGE CENTRIFUGAL PUMP

CVM

Vertical multistage centrifugal pumps manufactured with the great experience of EBARA in design and production of pumps. Reliable and quiet in operation.



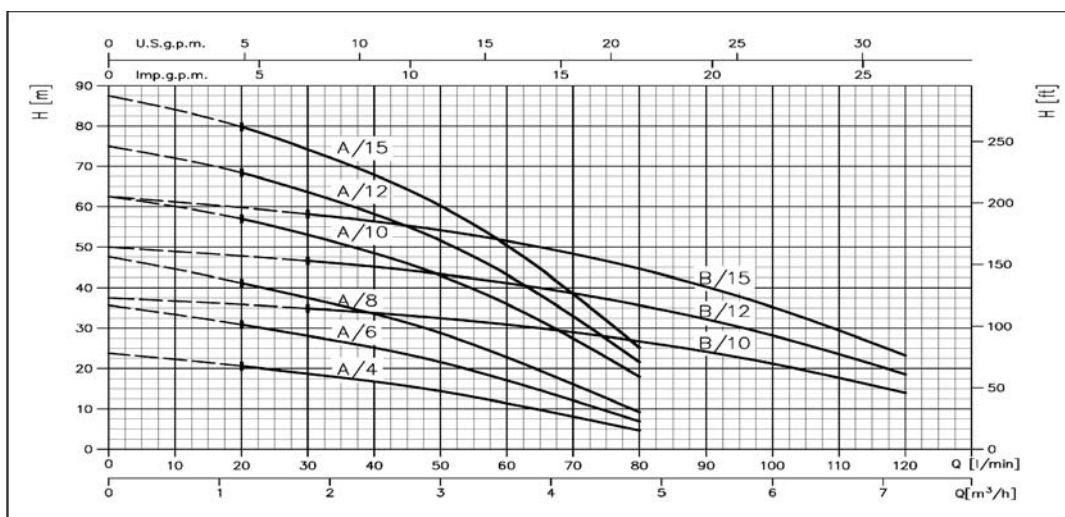
APPLICATION

- Civil/Domestic Uses / Industrial:
 - Water supply systems
 - Pressure boosting
 - Water treatment plants (filtrations)
 - Water supply systems
 - Washing plants
 - Transfer of non-aggressive liquids
- Agriculture:
 - Irrigation

SPECIFICATIONS

PUMP		
Liquid Handled	Type of liquid	Clean water
	Max temperature	40
Construction	Impeller	Closed centrifugal type
	Shaft seal Type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe connection	Suction	G 1 1/2 UNI ISO 228
	Discharge	G 1 1/2 UNI ISO 228
Material	Casing	Cast iron
	Impeller	PPG mod. glass fibre reinforced
	External pump casing	AISI 304
	Shaft seal	Ceramic/Carbon/NBR
	Shaft	AISI 416
	Bracket	Cast iron
Applicable standard of test		ISO 9906 Annex A

SELECTION CHART

CVM A - CVM B


PERFORMANCE TABLE

Pump Type		Power		Q=Capacity								
Single Phase	Three Phase	kW	HP	l/min 0	20	30	40	50	60	80	100	120
				m³/h 0	1,2	1,8	2,4	3	3,6	4,8	6	7,2
H=Total manometric head in meters												
CVM AM/4	CVM A/4	0,3	0,4	23,8	20,6	18,7	16,8	14,4	11,4	4,6	-	-
CVM AM/6	CVM A/6	0,44	0,6	35,7	30,9	28,1	25,2	21,6	17,1	6,9	-	-
CVM AM/8	CVM A/8	0,6	0,8	47,6	41,2	37,5	33,6	28,8	22,8	9,2	-	-
CVM AM/10	CVM A/10	0,75	1	62,5	57,0	53,0	48,5	43,0	36,0	18,0	-	-
CVM AM/12	CVM A/12	0,9	1,2	75,0	68,4	63,6	58,2	51,6	43,2	21,6	-	-
CVM AM/15	CVM A/15	1,1	1,5	87,5	79,8	74,2	67,9	60,2	50,4	25,2	-	-
CVM BM/10	CVM B/10	0,75	1	37,5	-	34,9	33,8	32,5	30,9	26,8	21,2	14,0
CVM BM/12	CVM B/12	0,9	1,2	50,0	-	46,6	45,1	43,3	41,2	35,7	28,2	18,6
CVM BM/15	CVM B/15	1,1	1,5	62,5	-	58,2	56,4	54,2	51,5	44,6	35,3	23,3

VERTICAL MULTI-STAGE STAINLESS STEEL PUMPS

EVM


APPLICATIONS

- Civil, Industrial, farming, fire-fighting, boosting systems
- Water treatment plants (reverse osmosis, filtrations)
- Irrigation system
- Washing system
- Movement of hot and cold water for heating, cooling and air-conditioning system.
- Boiler feeding
- Movement of moderately aggressive chemical liquids without solids.

MATERIALS

- Impeller, diffusers, casing cover, outer casing, shaft sleeve, coupling covers, fixing in contact with liquid: **AISI 304 stainless steel**
- Bottom casing: **AISI 304 stainless steel (EVM) - cast iron (EVMG), AISI 316L (EVML)**
- Motor bracket and base: **cast iron (not in contact with the pumped liquid)**
- Bearings (in contact with liquid): **tungsten carbide**
- Mechanical seal: **Silicon carbide/carbon/Viton**
- Shaft: **AISI 316 stainless steel**
- Tie rods and fixings not contact with liquid: **zinc coated stainless steel**

STANDARD SPECIFICATION - EVM(G)

Model type		3	5	10	18	32	45	64
Application		Water supply, Light Industrial (boiler feed, washing, coolant etc.)						
Temperature range		-15 to +120° C						
Flow / head		80 m³/hr (max); 300m (max)						
Max. working pressure		1.6/2.5MPa (16Bar/25Bar)				1.6/2.5/3.0Mpa (16/25/30Bar)		
Sealing		16Bar:Mechanical-seal - according to DIN				Cartridge type Mechanical-seal - according to DIN		
		25Bar:Cartridge Mechanical-seal - according to DIN						
Connecting flange		OVAL OR DIN TYPE			DIN TYPE			
Material	Impeller	AISI 304						
	Stage casing	AISI 304						
	Bottom casing	Cast iron						
	Head cover	Cast iron						
	Outer sleeve	AISI 304						
	Shaft	AISI 316						
	Casing ring	EPDM-AISI316						
	Rubber/O-ring	EPDM						
	Mechanical seal	Silicon Carbide / Carbon / FPM						
Motor	No. of Poles	2P (3000rpm:50Hz -- Synchronous speed)						
	Flange Mount	IM B14 (up to 4KW); IM B5 (above 5.5KW)						
	Voltage/Hz	380V/415V:50Hz (or 400V:50Hz)						
OPTIONAL SPECIFICATIONS								
Material of Construction		All wetted parts in SS304 available upon request.						
Connecting flange		Vitaluic coupling only for AISI316 pump						
		DIN Round Flange for 16Bar range						
Motor	No. of Poles	IEC 4P model						



STANDARD SPECIFICATION - EVM(L)

Model type		3	5	10	18	32	45	64
Application		Water supply, R.O., D.I. Water, ultra-filter systems, process water, etc.						
Temperature range		-15 to +120° C						
Flow / head		80 m³/hr (max); 300m (max)						
Max. working pressure		1.6/2.5MPa (16Bar/25Bar)				1.6/2.5/3.0Mpa (16/25/30Bar)		
Connecting flange		OVAL OR DIN TYPE			DIN TYPE			
Material	Impeller	AISI 316L						
	Stage casing	AISI 316L						
	Bottom casing	AISI 316L stamped				AISI 316 casting		
	Head cover piece	AISI 316L						
	Outer sleeve	AISI 316L						
	Shaft	AISI 316						
	Casing ring	PTFE(Teflon)-AISI316						
	Rubber/O-ring	Viton						
	Mechanical seal	Silicon Carbide/Carbon/FPM (OPTION: SiC vs SiC)						
Motor	No. of Poles	2P (3000rpm:50Hz -- Synchronous speed)						
	Flange Mount	IM B14 (up to 4 KW); IM B5 (above 5.5 KW)						
	Voltage/Hz	380V/415V:50Hz (or 400V:50Hz)						
OPTIONAL SPECIFICATIONS								
Connecting flange		Vitaalic coupling only for AISI316 pump						
		DIN Round Flange for 16Bar range						
Motor	No. of Poles	IEC 4P model						



VERTICAL MULTI-STAGE STAINLESS STEEL PUMPS

EVM

EBARA Corporation was established in 1912 as a pump manufacturer and today **EBARA** is the world's foremost manufacturer of pumps and pump system. **EBARA** is proudly presenting Vertical Multi-stage pump type **EVM**, manufacture with great experience of **EBARA** in design and production of stamped stainless steel pumps. **EBARA** **EVM** pumps offer technically advance designs to meet most market demands, including pumping of aggressive liquid.

Two standard pump options are available to satisfy most of the market requirements:

- **EVM(G)**: Bottom casing in cast iron, other liquid contact parts in SS304 stainless steel for general water supply usage
- **EVM(L)**: All wetted contact parts in SS316 stainless steel for aggressive liquid pumping operation.

Optional materials available upon request: All wetted contact parts in SS304 stainless steel for industrial pumping applications.

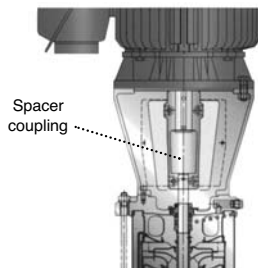
1. *Quality motor used.*

Standard IEC motors used for **EVM** pump; thus ensure reliability in pump operation.

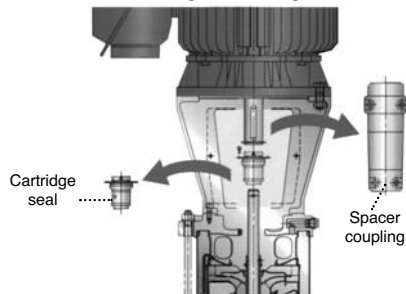
2. *Spacer coupling for user-friendly servicing.*

For 11kW & above models, uniquely designed 'split' type spacer coupling are used to permit easy assembly/disassembly works without dismantling pipework and motor.

Normal Operation



During Servicing



3. *Cartridge mechanical seal.*

Cartridge mechanical seal is used for all pump models, except **EVM** 3-18 (16Bar). Thus permit easy maintenance works at site.



4. *Wide selection options.*

Two (2) pump types are available as standard i.e. **EVMG** (Cast iron bottom casing; other wetted parts in SUS304) and **EVML** (All wetted parts in SUS316L).

- All wetted parts in SUS304 available as option.

EVM(G) Version
FC/SUS304

EVM(L) Version
SUS316

Option: **EVM Version**
SUS304

5. *High efficiency hydraulic design.*

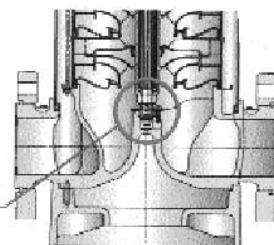
EBARA owned R&D has resulted in the newly developed hydraulic parts for **EVM**, particularly impellers and intermediate casing that provide high efficiency operation.

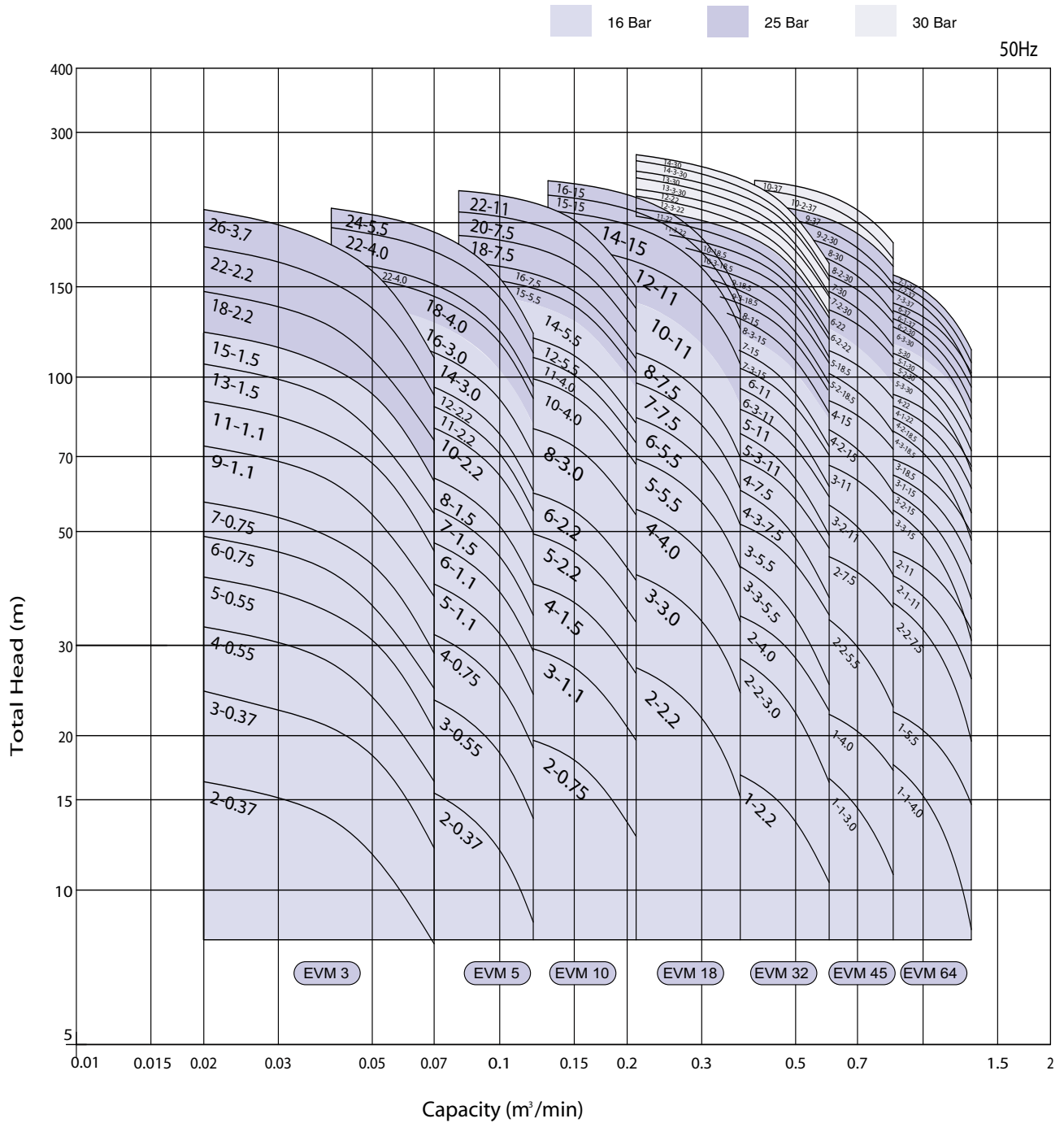
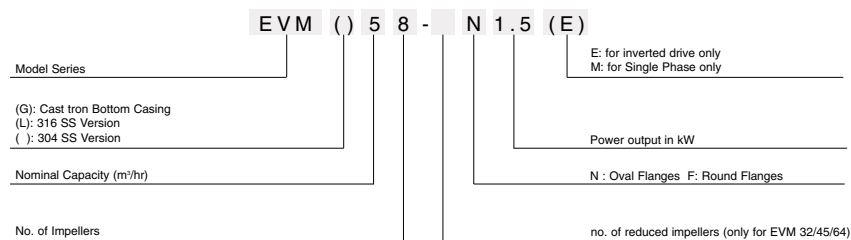


6. *Bottom casing support.*

For **EVM** 45 and 64, unique bottom casing bearing is used to enhance longer operating life of the pumps.

Tungsten carbide
Bottom Bearing.



PERFORMANCE TABLE (EVM 3, 5, 10, 18, 32, 45, 64)
EVM

MODEL CODE


PERFORMANCE TABLE (EVM 2, 4, 8,16, 30, 60)

EVM

Pump type EVM		kW	Capacitor		Absorbed Current (A)				l/min m³/h	Q=Capacity									
1-Phase	3-Phase		µF	Vc	1~	3~ 230V	3~ 400V	3~ 690V		H=Total head									
										20	40	60	75	80	120	150	225	300	400
										1,2	2,4	3,6	4,5	4,8	7,2	9,0	13,5	18	24
EVM2 2N0,37 M	EVM2 2N0,37	0,37	10	400	3,0	1,65	0,95	-	16,8	12,8	7,5	-	-	-	-	-	-	-	-
EVM2 3N0,37 M	EVM2 3N0,37	0,37	10	400	3,0	1,65	0,95	-	25,2	19,2	11,1	-	-	-	-	-	-	-	-
EVM2 4N0,55 M	EVM2 4N0,55	0,55	12	400	3,8	2,34	1,35	-	33,9	26	15,2	-	-	-	-	-	-	-	-
EVM2 5N0,55 M	EVM2 5N0,55	0,55	12	400	3,8	2,34	1,35	-	42	32,5	18,8	-	-	-	-	-	-	-	-
EVM2 6N0,75 M	EVM2 6N0,75	0,75	20	400	5,3	2,8	1,6	-	50,5	38	22,5	-	-	-	-	-	-	-	-
EVM2 7N0,75 M	EVM2 7N0,75	0,75	20	400	5,3	2,8	1,6	-	58,8	44,3	26,1	-	-	-	-	-	-	-	-
EVM2 9N1,1 M	EVM2 9N1,1	1,1	30	400	6,5	4,0	2,3	-	75,7	58,1	33,8	-	-	-	-	-	-	-	-
EVM2 11N1,1 M	EVM2 11N1,1	1,1	30	400	6,5	4,0	2,3	-	91,1	68,7	39,5	-	-	-	-	-	-	-	-
EVM2 13N1,5 M	EVM2 13N1,5	1,5	40	400	9,5	5,7	3,3	-	109	84	48,8	-	-	-	-	-	-	-	-
EVM2 15N1,5 M	EVM2 15N1,5	1,5	40	400	9,5	5,7	3,3	-	126	95,5	55,9	-	-	-	-	-	-	-	-
EVM2 18F2,2 M	EVM2 18F2,2	2,2	60	400	13	7,6	4,4	-	156	120	74	-	-	-	-	-	-	-	-
EVM2 22F2,2 M	EVM2 22F2,2	2,2	60	400	13	7,6	4,4	-	186	141,2	81,7	-	-	-	-	-	-	-	-
-	EVM2 26F3,0	3,0	-	-	-	10,9	6,3	-	220	165,1	105	-	-	-	-	-	-	-	-
EVM4 2N0,37 M	EVM4 2N0,37	0,37	10	400	3,0	1,6	0,95	-	-	17,2	15,8	13,9	13,4	6,9	-	-	-	-	-
EVM4 3N0,55 M	EVM4 3N0,55	0,55	12	400	3,8	2,3	1,35	-	-	25,7	23,4	21	20,2	10,5	-	-	-	-	-
EVM4 4N0,75 M	EVM4 4N0,75	0,75	20	400	5,3	2,8	1,6	-	-	34,9	32	28,4	27,4	15,5	-	-	-	-	-
EVM4 5N1,1 M	EVM4 5N1,1	1,1	30	400	6,5	4,0	2,3	-	-	44,1	40,6	36,3	35	19,8	-	-	-	-	-
EVM4 6N1,1 M	EVM4 6N1,1	1,1	30	400	6,5	4,0	2,3	-	-	53,2	48,2	43,5	42	24	-	-	-	-	-
EVM4 7N1,5 M	EVM4 7N1,5	1,5	40	400	9,5	5,7	3,3	-	-	61,8	56,5	50,9	49	27,7	-	-	-	-	-
EVM4 8N1,5 M	EVM4 8N1,5	1,5	40	400	9,5	5,7	3,3	-	-	71,6	65,8	58,2	57,1	33	-	-	-	-	-
EVM4 10N2,2 M	EVM4 10N2,2	2,2	60	400	13	7,6	4,4	-	-	88,2	81	72,5	70,6	39,6	-	-	-	-	-
EVM4 11N2,2 M	EVM4 11N2,2	2,2	60	400	13	7,6	4,4	-	-	98	90,2	81,8	78,6	45	-	-	-	-	-
EVM4 12N2,2 M	EVM4 12N2,2	2,2	60	400	13	7,6	4,4	-	-	106	97,4	87,2	84	47,5	-	-	-	-	-
-	EVM4 14N3,0	3,0	-	-	-	10,9	6,3	-	-	127	116	105,7	102,2	60,5	-	-	-	-	-
-	EVM4 16N3,0	3,0	-	-	-	10,9	6,3	-	-	142	130	118	116,7	67,6	-	-	-	-	-
-	EVM4 19F4,0	4,0	-	-	-	14,2	8,2	-	-	168	154,2	138,2	134,6	75,2	-	-	-	-	-
-	EVM4 22F4,0	4,0	-	-	-	14,2	8,2	-	-	195	180	163,5	158,1	88,9	-	-	-	-	-
EVM8 2N0,75 M	EVM8 2N0,75	0,75	20	400	5,3	2,8	1,6	-	-	-	-	21,1	20,8	19,2	17,1	10,4	-	-	-
EVM8 3N1,1 M	EVM8 3N1,1	1,1	30	400	6,5	4,0	2,3	-	-	-	-	32	31,8	29,5	26,8	16,7	-	-	-
EVM8 4N1,5 M	EVM8 4N1,5	1,5	40	400	9,5	5,7	3,3	-	-	-	-	42,8	42,2	40	36,1	22,6	-	-	-
EVM8 5N2,2 M	EVM8 5N2,2	2,2	60	400	13	7,6	4,4	-	-	-	-	53,6	53	49,1	44,3	28,3	-	-	-
EVM8 6N2,2 M	EVM8 6N2,2	2,2	60	400	13	7,6	4,4	-	-	-	-	64,4	64,2	59	53,6	33,8	-	-	-
-	EVM8 8N3,0	3,0	-	-	-	7,6	6,3	-	-	-	-	85,7	85	80,2	72,5	45,8	-	-	-
-	EVM8 10N4,0	4,0	-	-	-	10,9	8,2	-	-	-	-	107	106	98,4	87,9	56,5	-	-	-
-	EVM8 11N4,0	4,0	-	-	-	14,2	8,2	-	-	-	-	117	116,2	108	97,8	61,4	-	-	-
-	EVM8 12N5,5	5,5	-	-	-	14,2	11,5	6,6	-	-	-	129	127,1	118,4	107,5	67,8	-	-	-
-	EVM8 14N5,5	5,5	-	-	-	-	11,5	6,6	-	-	-	150	148,3	137,5	124,8	79,1	-	-	-
-	EVM8 15F5,5	5,5	-	-	-	-	11,5	6,6	-	-	-	162	160,7	148,7	134,2	86,6	-	-	-
-	EVM8 16F7,5	7,5	-	-	-	-	15,3	8,8	-	-	-	171	170	157,8	140,9	90,4	-	-	-
-	EVM8 18F7,5	7,5	-	-	-	-	15,3	8,8	-	-	-	193	191,2	176,2	158	102	-	-	-
-	EVM8 20F7,5	7,5	-	-	-	-	15,3	8,8	-	-	-	219	217,2	202,3	183,2	121	-	-	-
EVM16 2F2,2 M	EVM16 2F2,2	2,2	60	400	13	7,6	4,4	-	-	-	-	-	-	-	29	26,2	21,1	10,6	-
-	EVM16 3F3,0	3,0	-	-	-	10,9	6,3	-	-	-	-	-	-	-	43,6	38,1	30,7	15,4	-
-	EVM16 4F4,0	4,0	-	-	-	14,2	8,2	-	-	-	-	-	-	-	58,2	52	42,3	22,3	-
-	EVM16 5F5,5	5,5	-	-	-	-	11,5	6,6	-	-	-	-	-	-	73,8	67,1	54,9	29,5	-
-	EVM16 6F5,5	5,5	-	-	-	-	11,5	6,6	-	-	-	-	-	-	88,3	79,8	65	35,8	-
-	EVM16 7F7,5	7,5	-	-	-	-	15,3	8,8	-	-	-	-	-	-	103	92,5	76,5	41,3	-
-	EVM16 8F7,5	7,5	-	-	-	-	15,3	8,8	-	-	-	-	-	-	119	108	88,1	49,2	-
-	EVM16 10F11	11	-	-	-	-	20,4	11,8	-	-	-	-	-	-	148	132,2	108,9	59	-
-	EVM16 12F11	11	-	-	-	-	20,4	11,8	-	-	-	-	-	-	181	164,5	138	77,6	-
-	EVM16 14F15	15	-	-	-	-	27,6	15,9	-	-	-	-	-	-	207	186,5	152,3	82,6	-
-	EVM16 15F15	15	-	-	-	-	27,6	15,9	-	-	-	-	-	-	226	207	171,8	100	-
-	EVM16 18F15	15	-	-	-	-	27,6	15,9	-	-	-	-	-	-	236	215,2	181	108	-

Pump type EVM	kW	Absorbed Current (A)			Q=Capacity			l/min m³/h	H=Total head		
		230V	400V	690V	210	420	600		400	800	1200
					12,6	25,2	36		24	32	72
EVM30 2F/4	4	12,9	7,4	-	38	32	21,5				
EVM30 3F/5,5	5,5	-	10,5	6,1	56	46	30				
EVM30 4F/7,5	7,5	-	13,9	8,1	77	64	42				
EVM30 6F/11	11	-	20,0	11,6	112	92	62,5				
EVM30 8F/15	15	-	26,5	15,4	155	127	88				
EVM30 10F/18	18,5	-	32,0	18,6	193	162	112				
EVM30 12F/22	22	-	38,5	22,3	232	195	132				
EVM60 2F/5,5	5,5	-	10,5	6,1				30	24	14	
EVM60 3F/7,5	7,5	-	13,9	8,1				43	34,5	19,5	
EVM60 4F/11	11	-	20,0	11,6				59,5	48	28,5	
EVM60 6F/15	15	-	26,5	15,4				83,5	67,5	40	
EVM60 7F/18	18	-	32,0	18,6				103,5	84	52	
EVM60 8F/22	22	-	38,5	22,3				120	97,5	62	



VERTICAL MULT-STAGE PUMPS
EVMK
EVMK

APPLICATIONS

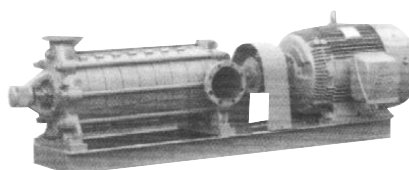
- Hot and cold water pumping for heating, cooling, and air conditioning systems.
- Boiler feeding.
- Pumping of moderately aggressive chemical liquids without solids.

MATERIALS

- Impellers & diffusers Cast iron or bronze
- Casing Cast iron
- Motor bracket and base Cast iron
- Sealing Gland packed or mechanical seal
- Shaft Stainless steel

FEATURES

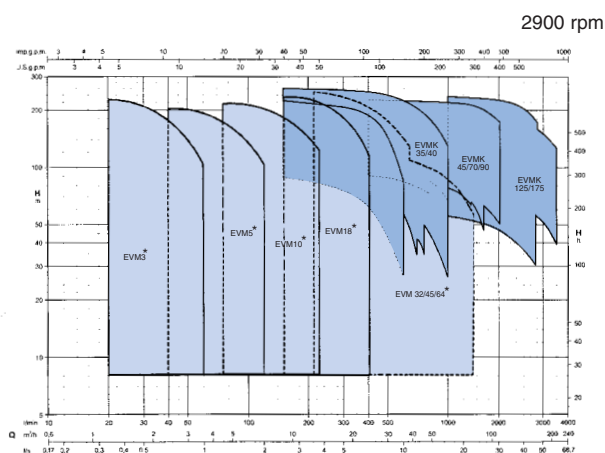
- High pressure booster pump.
- Good capacity booster pump coverage.
- Space saving.

MULTI-STAGE PUMPS
HTM
HTM

APPLICATIONS

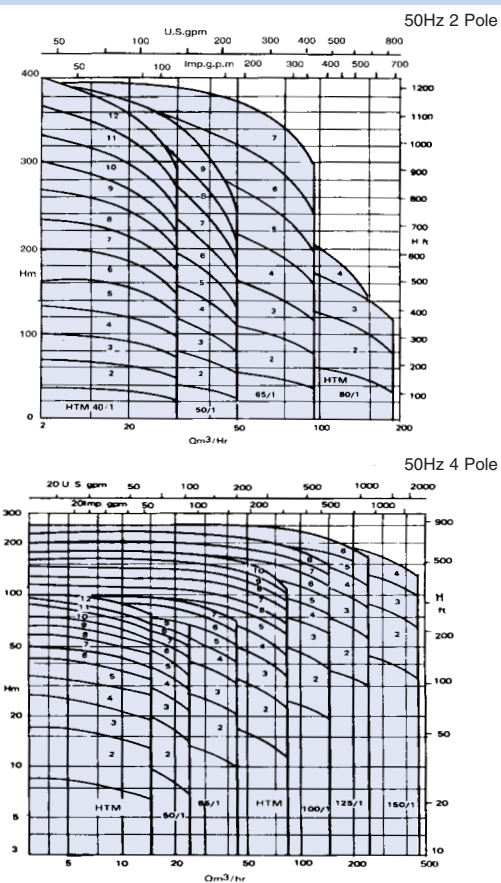
- Boiler feed pumps and condensate pumps.
- General water supply pumps.
- Cooling water and hot water circulation pumps.
- Fire fighting pumps.

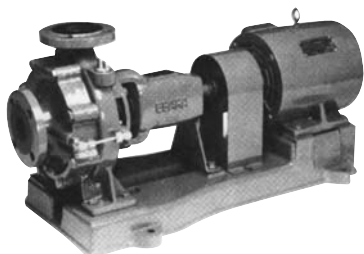
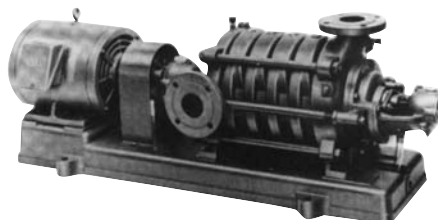
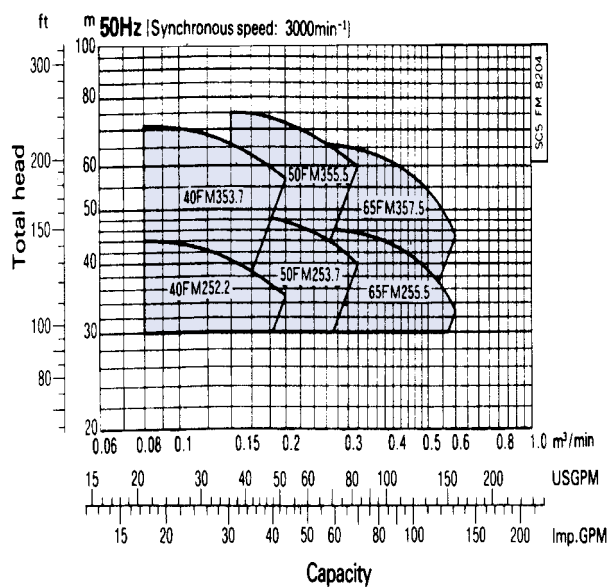
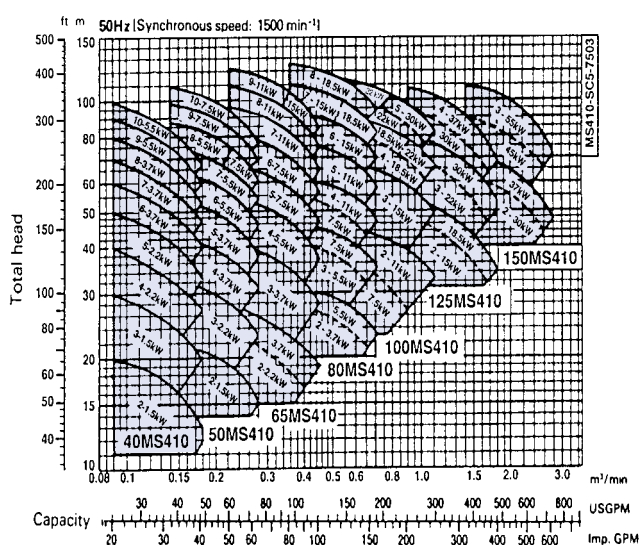
FEATURES

- High efficiency over wide range.
- Complete thrust balancing.

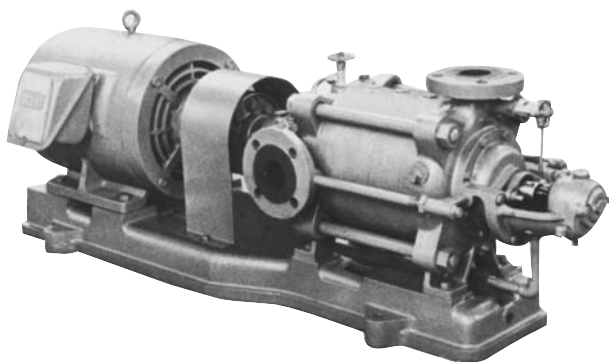
SELECTION CHART


* Please refer to pg 24 & 26 for EVM details.

SELECTION CHART


MULTI-STAGE PUMPS
FM
FM (2 Pole motor drive)

MULTI-STAGE PUMPS
MS 410
MS 410 (4 Pole motor drive)

SELECTION CHART

SELECTION CHART


MULTI-STAGE VOLUTE PUMPS

MS210•220•230
MS210•220•230


APPLICATIONS

- Boiler feed water
- General industrial water supply
- General water supply

FEATURE

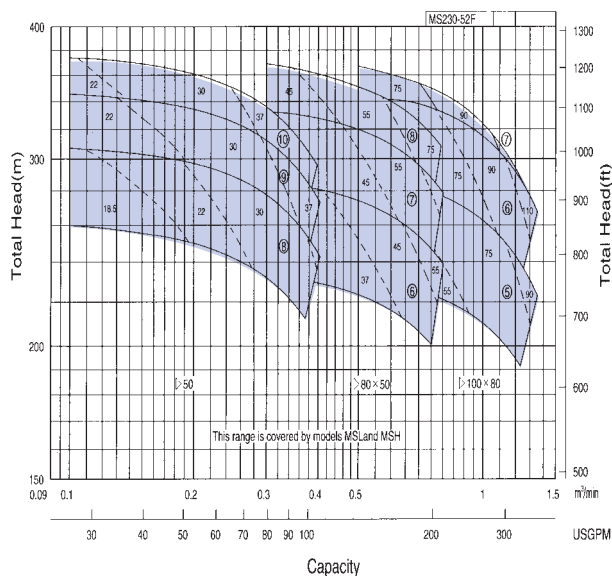
- High efficiency over wide range is possible by double volute design.

SPECIFICATIONS

Model code		MS210	MS220	MS230
Liquid handled		Fresh water		
Temperature		0~104℃		
Max suction pressure		0.4MPa{4kgf/cm ² }		
Construction	Impeller	Closed		
	Shaft sealing	Gland packing		
	Bearing	Sleeve metal		
Materials	Casing	FC200	FC200/FC400	FC200/FC400/SC480
	Impeller	SCS13	SCS13	CAC406/SCS13
	Shaft	SUS630	SUS630	SCM440/SUS630
Flange		JIS10K/JIS10K	JIS10K/JIS20K	JIS10K/JIS30K

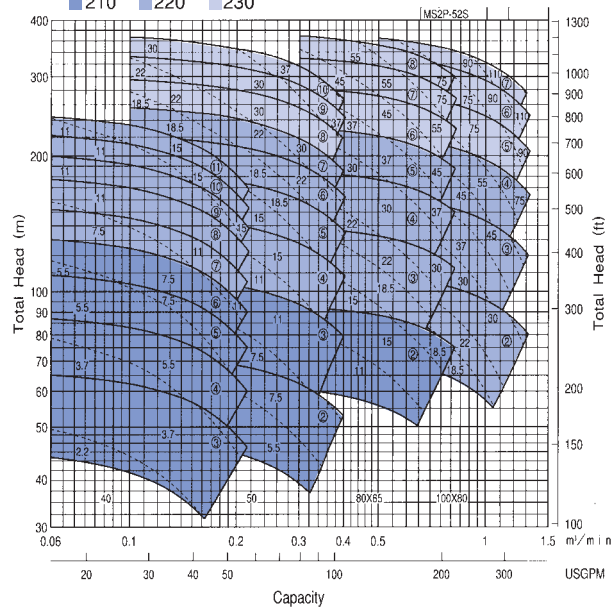
SELECTION CHART

50Hz 2pole Impeller materials CAC406, FC[Synchronous speed:3000min⁻¹]



2pole Impeller materials SCS[Synchronous speed:3000min⁻¹]

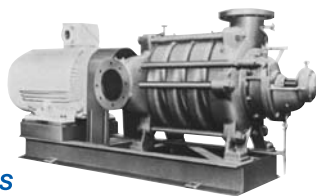
■ 210 ■ 220 ■ 230



Notes: The encircled numbers in the areas enclosed by unbroken lines indicate the number of stages, and the other numbers in the areas enclosed by broken lines indicate the motor capacity in kW.

MULTI-STAGE VOLUTE PUMPS MS420

MS420



APPLICATIONS

- Building water supply
- City water supply
- Industrial water supply
- Fire fighting

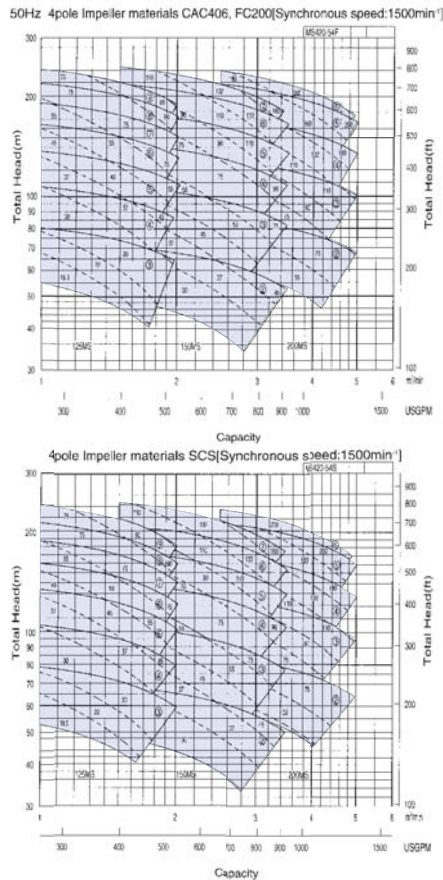
FEATURES

- Low noise operation.
- High efficiency over wide range.
- Thrust balance structure.

SPECIFICATIONS

Liquid handled		Fresh water
Temperature		0~104℃
Max suction pressure		0.4MPa(4kgf/cm ²)
Construction	Impeller	Closed
	Shaft sealing	Gland packing
	Bearing	Ball-and-roller bearings (grease)
Materials	Casing	FC200/FCD400
	Impeller	CAC406/FC200/SCS13
	Shaft	S35C/SUS630
Flange		JIS10K/JIS16K or JIS20K

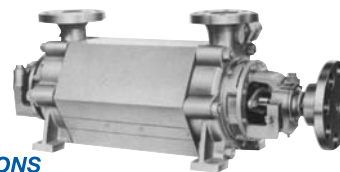
SELECTION CHART



Notes: The encircled numbers in the areas enclosed by unbroken lines indicate the number of stages, and the other numbers in the areas enclosed by broken lines indicate the motor capacity in kW.

MULTI-STAGE TURBINE PUMPS MSS

MSS



APPLICATIONS

- Boiler feed water
- General high pressure service
- City water

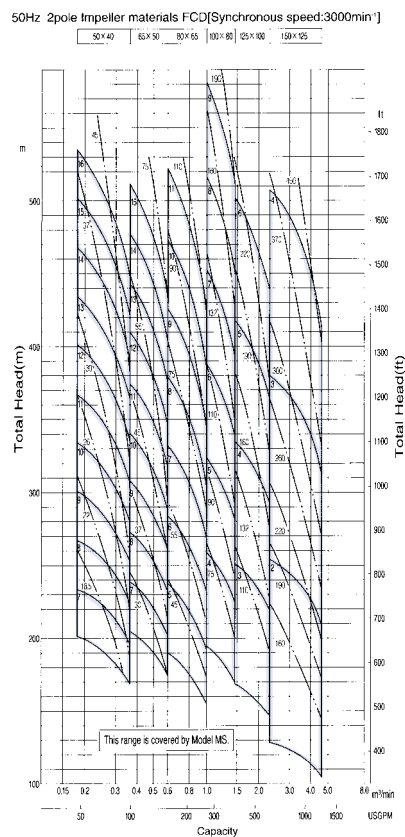
FEATURES

- High efficiency over wide range.
- High reliable components.
- Simple structure for easy maintenance.
- Low NPSH operation.

SPECIFICATIONS

Liquid handled		Fresh water, hot water
Temperature		0~165°C
Max suction pressure		0.8MPa(8kgf/cm ²)
Construction	Impeller	Closed
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	Suction: FCD540-K Intermediate: FCD540-K/SCPH21 Discharge: SCPH21
	Impeller	FCD540-K
	Shaft	SCM435
Flange		JIS10K/JIS20K, 30K, 40K

SELECTION CHART



Notes: Numbers in bold type indicate the number of stages, and number in fine type indicate motor capacity in kW.

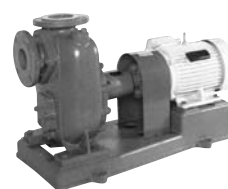


RQD

- Good self-priming performance.
- Internal inspection of pump possible by removing cover.
- May be used for kerosene, light grade oil, grade A oil.

SQ

Semi-open impeller type



Enclosed impeller type

FEATURES

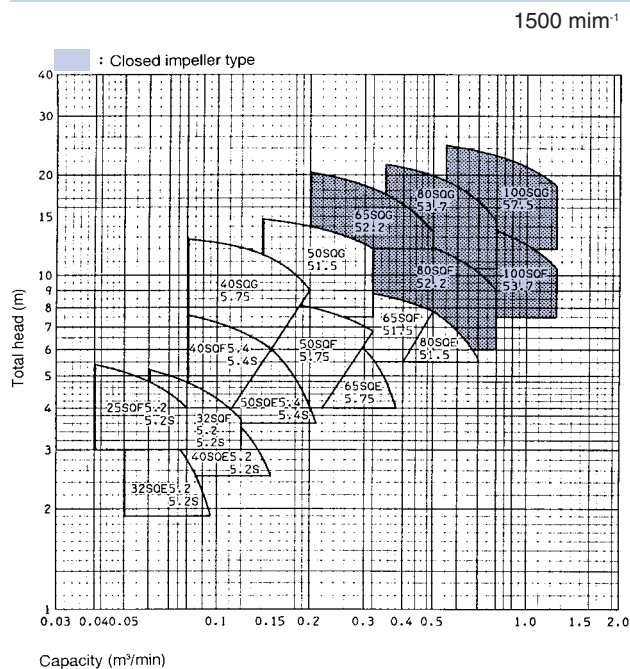
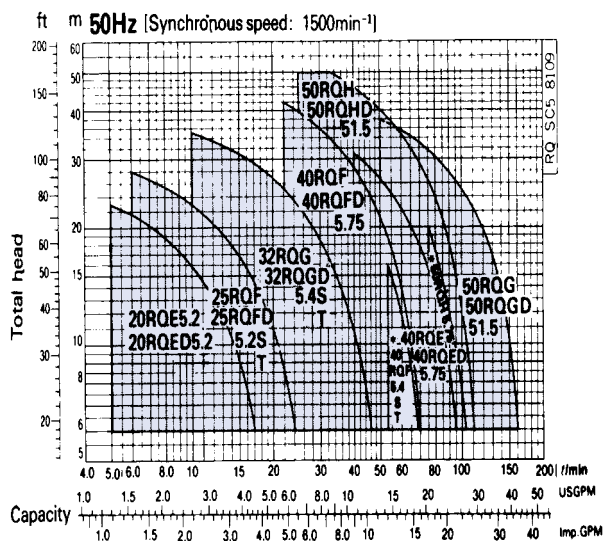
Semi-open impeller type

- No priming is required except for initial use.
- Special design of casing provides very quick priming.
- Water mixed with a little sand or mud can be pumped up due to semi-open impeller design.
- Grease lubrication ensures long life of mechanical seal.

Enclosed impeller type

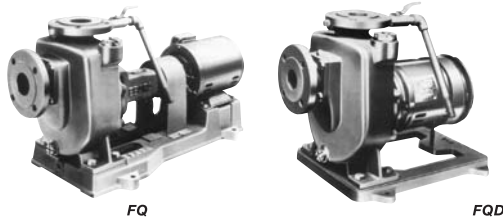
- No priming is required except for initial use.
- Special design of casing provides very quick priming.
- High efficiency is achieved due to enclosed impeller.
- No need of lubrication due to sealed ball bearing.

SELECTION CHART



SELF PRIMING PUMPS

FQ & FQD



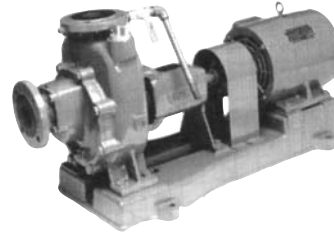
FEATURES

- **Self priming pump** ; Priming required for initial use only.
- **Enclosed impeller ensures high efficiency**
- **Fast pumping action** ; Special designed casing provides very fast action.
- **BPO (back pull out) system** ; Over haul without suction/discharge pipe removal.
- **Non-overload design** ; Ensures stable performance for all applications
- **Sealed ball bearing** ; Eliminates need of lubrication.
- **Compact construction** ; The two-pole high speed motor provides a compact unit and minimizes installation area.
- **403 Stainless steel shaft** ; Portion of shaft contacting liquid is made of 403 stainless steel and is highly resistant to wear.

SELF PRIMING MULTI-STAGE PUMPS

FMQ

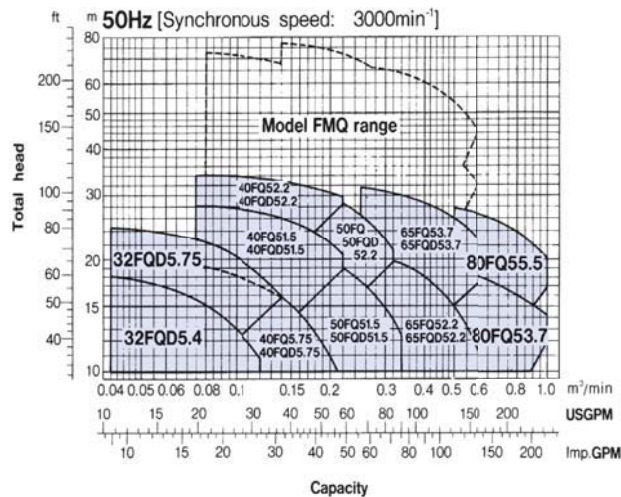
FMQ



FEATURES

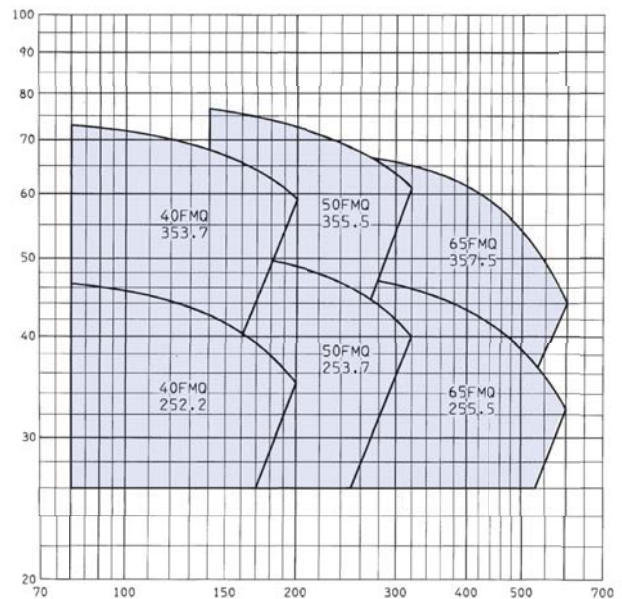
- Energy saving due to high efficiency
- Compact size
- Easy maintenance
- Robust self-priming design
- Higher head possible

SELECTION CHART



SELECTION CHART

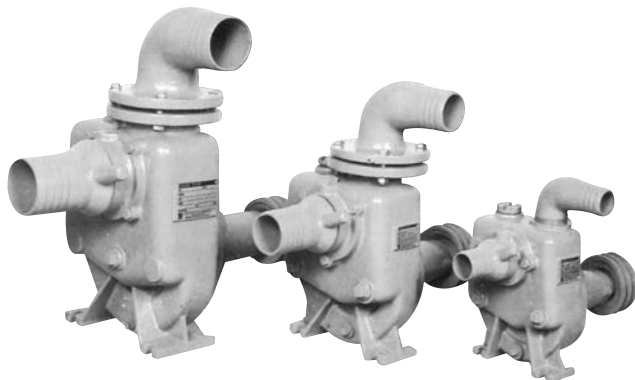
3000 min⁻¹



SELF PRIMING PUMPS

SQPB

SQPB



APPLICATIONS

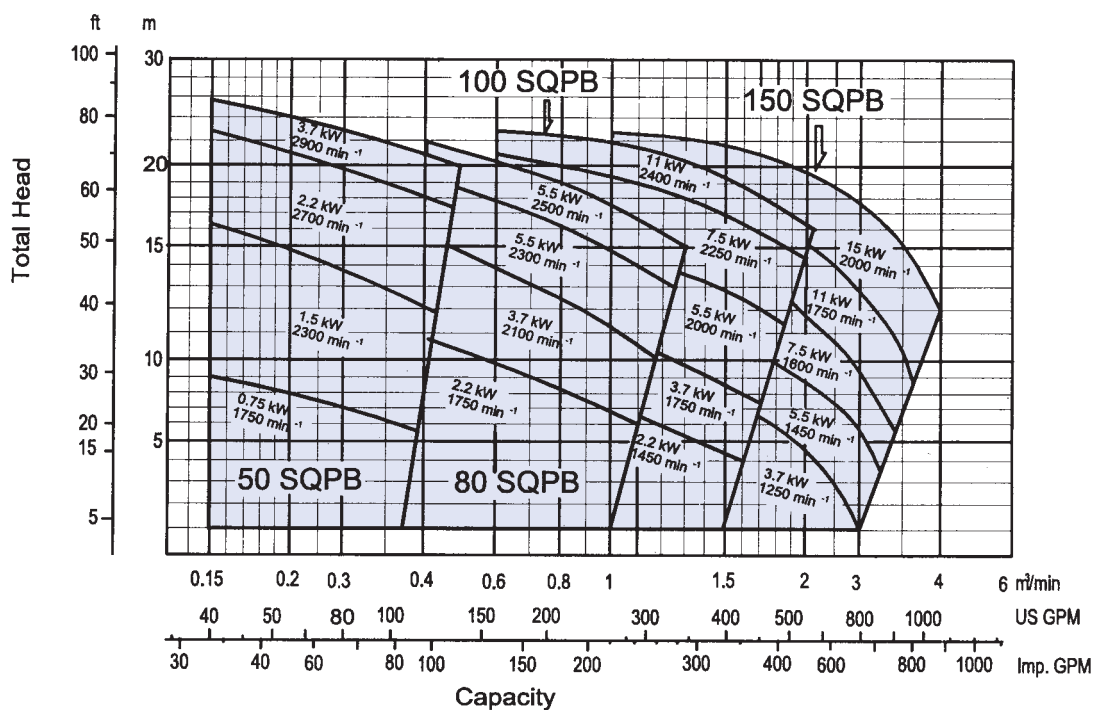
- Irrigation
- Drainage
- General purpose

FEATURES

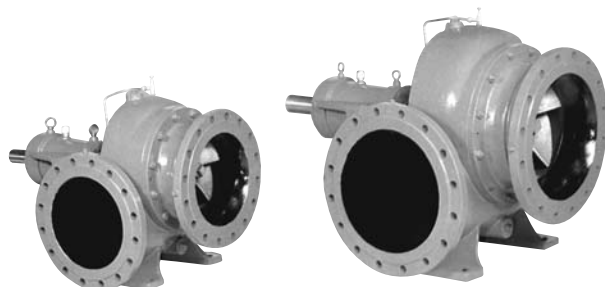
- Special designed casing provides very rapid priming for extended piping.
- Maintenance is facilitated due to packing type.
- Water mixed with a little sand or mud can be pumped up due to semi - open impeller design.
- Easy installation with engine for belt driven due to c.c.w rotation.

SPECIFICATIONS

DESCRIPTION	STANDARD	OPTION
Liquid	Fresh water, river water rain water	sea water
Temperature	0-40°C	
Reg.NPSH	4 m	
Rotation	Counter clockwise when viewed from drive end	
Installation	Outdoors	
Material		
Casing	Cast iron	Bronze
Impeller	Cast iron	Bronze
Shaft	Carbon steel	Stainless steel
Construction		
Impeller	Semi open	
Stuffing box	Packing	
Bearing	Sealed ball bearing	



MIXED FLOW PUMPS

SZ
SZ


FEATURES

- **High efficient and economical**
Extremely high efficiency rate of 80%. Small drive motor required significantly reduces operating costs.
- **Trouble free operation**
Semi-open impeller guarantees clog free operation.
- **Large capacity**
Changes in water level will have little effect on pump capacity. In fact, the higher the water volume, the less horsepower expended. Perfect for irrigation.
- **Simple disassembly and assembly**
Impeller can be easily inspected without removing driver. Simple to disassemble and assemble.

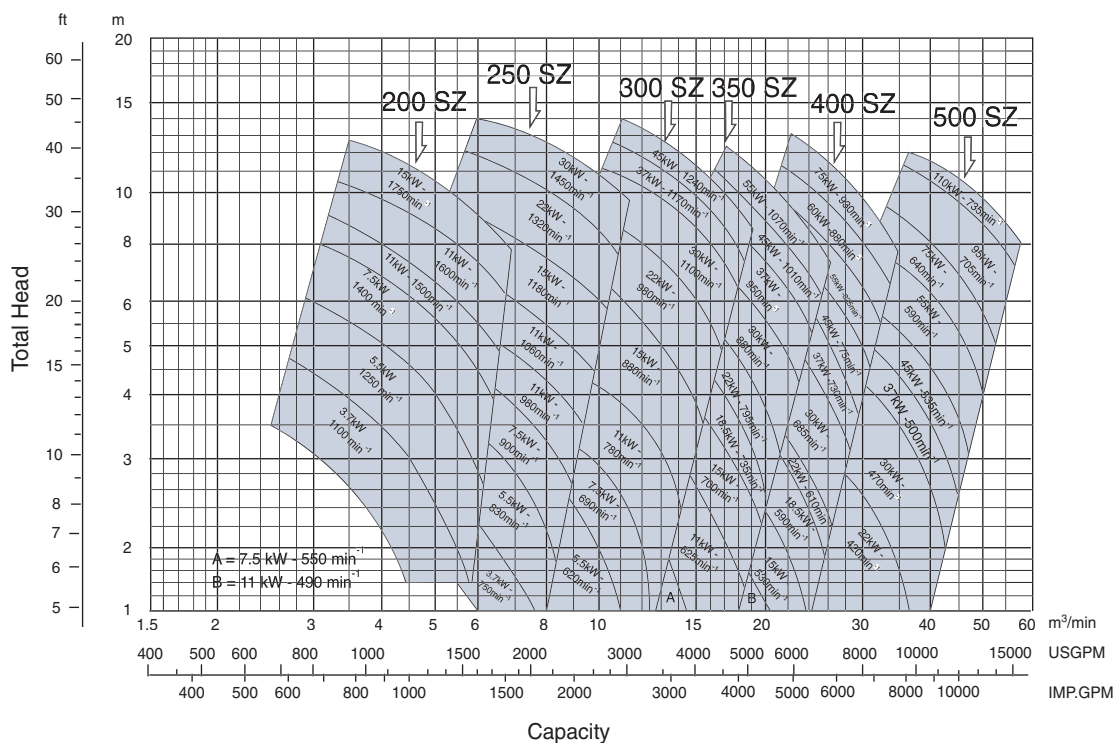
APPLICATIONS

- Irrigation
- Industrial use
- Drainage
- Shrimp Farming
- Flooding
- General purpose

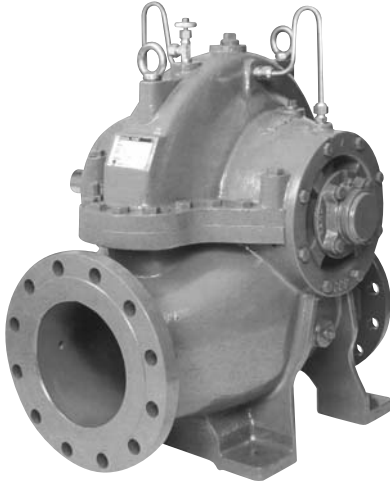
SPECIFICATIONS

Type	Horizontal shaft mixed flow volute pump
Impeller	Mixed flow open type
Rotation	Counter clockwise when viewed from end shaft coupling
Bearing	Ball bearing (seal ball bearing or oil bath type)
Flange	JIS 10Kg/Cm ² (thick type)
Nozzle position	Standard 200 - 250 (side suction - top discharge) Standard 300 - 500 (side suction - side discharge) Optional 300 - 350 (side suction - top discharge)
Liquid	River water, fresh water
Temperature liquid	below 80°C

SELECTION CHART



HORIZONTAL SPLIT CASING PUMPS

CSA/CNA
CSA/CNA


FEATURES

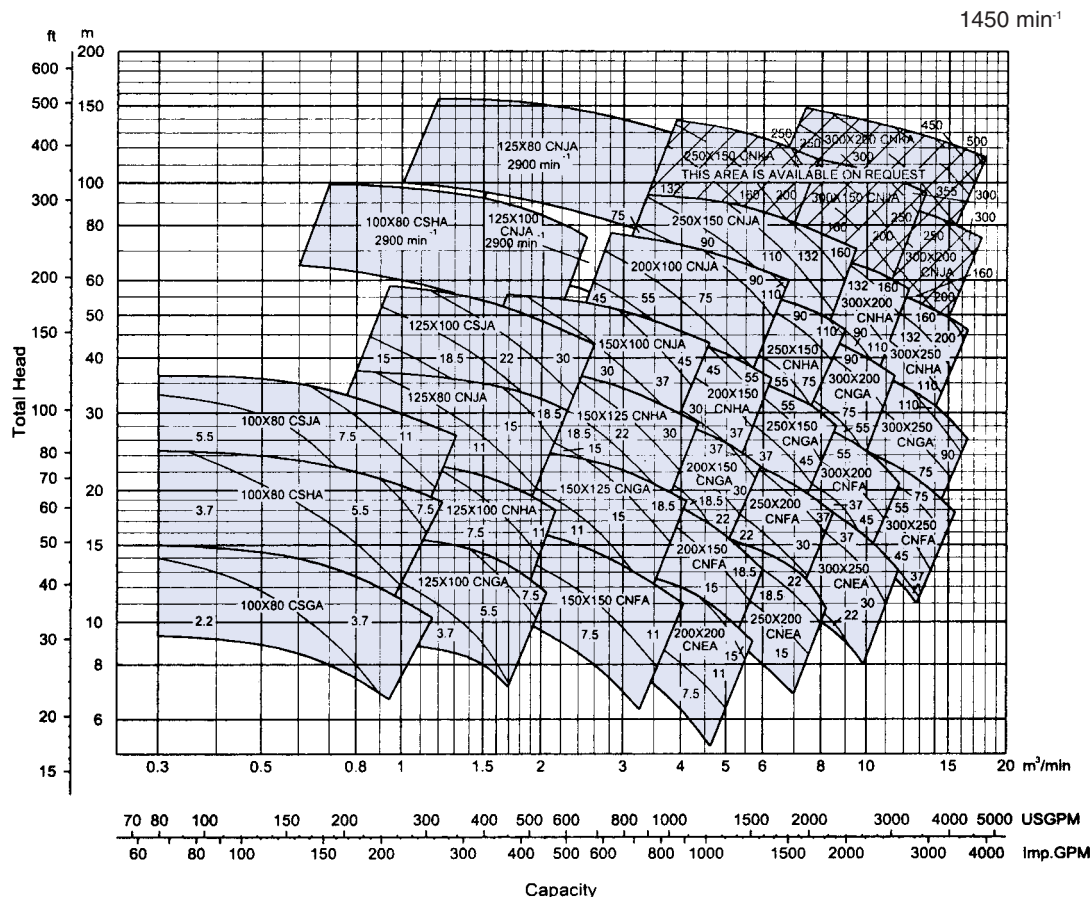
- Very compact design for ease of installation and permits minimum maintenance.
- Axially split casing allows the easy removal of the top casing for inspection and service.
- A wider range of performance with head up to 150 m.
- High speed drives and vertical mount available.
- Anti-corrosion materials used on the rotating parts.
- High quality sealed and cartridge type bearing units provided high durability.
- High allowable working pressure can ensure stable running.
- Mechanical seal for easy maintenance.

APPLICATIONS

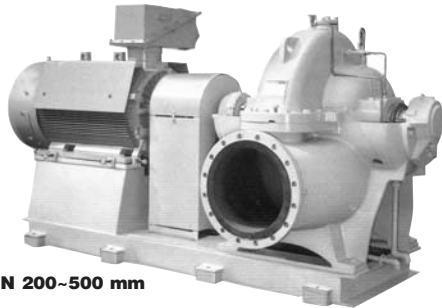
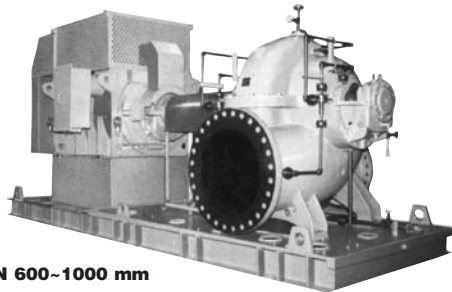
- Water supply
- Hot and cold water circulation
- For cooling tower
- Irrigation
- Industrial use
- Drainage
- Sprinkling
- Air Conditioning
- For swimming pool

SPECIFICATIONS

Description		Standard		Option
Model		CSA-V, CNA-V		
Liquid Handled	Type of liquid	Clean Water, Industrial Water, River Water		
	Temperature	Below 80°C (176°F)		81°C-120°C (177°F-248°F) (only applicable for Mechanical Seal Models)
Max. Positive Suction Pressure		0.981 MPa	0.196 MPa	0.981 MPa
Allowable negative suction pressure		0.03924 MPa		
Construction	Shaft Seal	Mechanical Seal	Gland Packing	Mechanical Seal
	Bearing	Ball Bearing		
	Lubrication	Grease		
Material	Casing	Cast Iron		
	Impeller	Bronze		
	Shaft	SUS 316	SUS 403	SUS 404
	Shaft sleeve		Bronze	Bronze
Flange	Suction	JIS 16 KRF		
	Discharge	JIS 16 KRF		
Accessories				
Standard		Air vent piping, M.Seal or G. Packing, flushing water piping, Lift bolts, Drain piping (only applicable for G. Packing models)		
Option		Common base, Anchor bolts, Shaft coupling, Coupling guard		



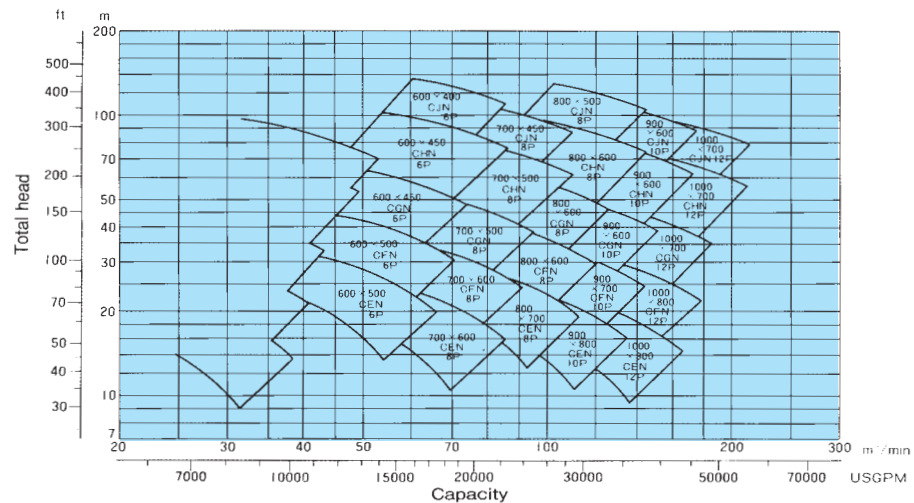
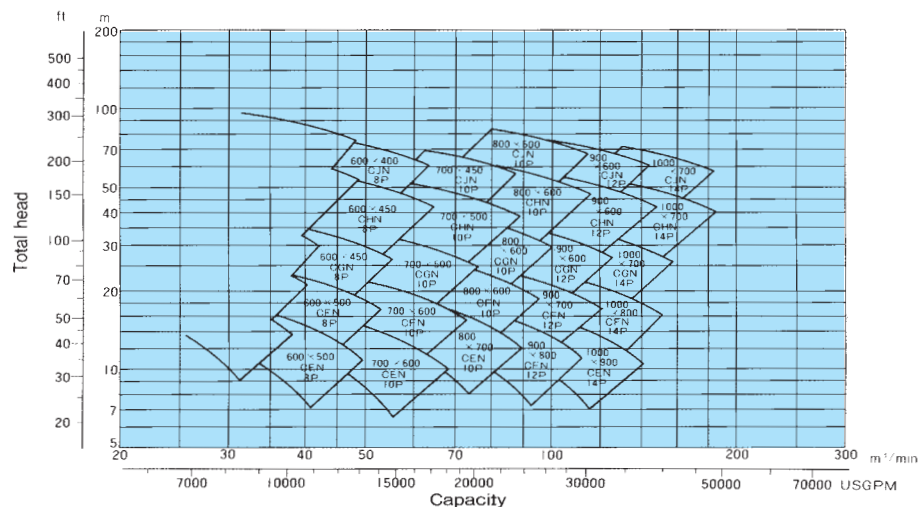
HORIZONTAL DOUBLE SUCTION VOLUTE PUMPS

CN

CN 200~500 mm

CN 600~1000 mm

FEATURES

- Split case design permits easy disassembly, that is, inspection is simplified, it is not necessary to disturb pump alignment and suction & discharge piping when parts replacement is necessary.
- Double suction with advanced design of suction performance ensures high suction lifts even with large capacities. Compared with conventional double suction design, with the possibility of using a high speed motor, such system and related facilities can be installed in a small area.
- High operating efficiency over a wider range of capacities reduce operation cost and smaller motor output are all possible.
- Pump operation with low noise, smaller pressure pulsation ensure comfortable environment.
- Variable combinations of materials permit wide application.

SELECTION CHARTS

CN Bore 600~1000mm
High speed

Low speed


Pump Speed (50Hz)

Motor Pole	6P	8P	10P	12P	14P
Speed (min-1)	990	740	593	493	423

(NOTE) • Pump rating not in the chart are also available.

BEST ZERO

APPLICATIONS

Submersible sump pump suitable for draining garages, cellars and other places subjected to flooding and for garden ponds and small water display. They can be applied for portable and fixed installations. Supplied with 5 mts. cable length type H05 RN-F and available with or without float switch. (10 mts. cable H05 RN-F by request)

MATERIALS

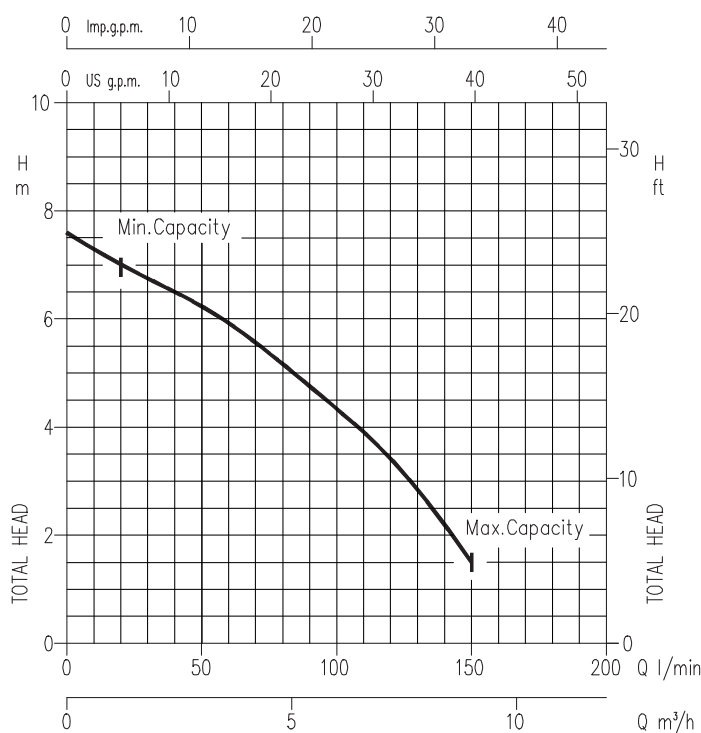
- Pump casing, strainer, cover and motor casing in AISI 304
- Impeller, diffuser and spacer in technopolymer
- Shaft in AISI 304
- Double lip seal with interposed oil chamber

SPECIFICATIONS

- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
40°C for other uses
- Maximum immersion : 5 mts
- Maximum passage of solids : 10 mm

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP68
- 1~230V $\pm 10\%$ 50Hz
- DNM 1¹/₄


PERFORMANCE TABLE

Pump type Single-phase 230V 50Hz	kW	Capacitor		Abs. Curr (A) Single-phase	l/min m³/h	Q=Capacity						Pump type Single-phase 230V 50Hz	Weight Kg
		µF	V _c			20	50	75	100	125	150		
						1,2	3	4,5	6	7,5	9		
						H=Total head							
BEST ZERO	0,25	8	450	1,9		7	6,3	5,4	4,3	3,1	1,5	BEST ZERO	4,5
BEST ZERO SG	0,25	8	450	1,9		7	6,3	5,4	4,3	3,1	1,5	BEST ZERO SG	5,3

Note: Best Zero SG is pump without automatic float switch.

SUBMERSIBLE SUMP PUMPS in AISI 304
BEST ONE
BEST ONE

APPLICATIONS

Submersible drainage sump pump made of stainless steel AISI 304, shaft sealing is with double lip seals that run on a ceramic-coated shaft. Suitable for draining wells, plant room sumps, and lift shafts, emptying, pools, sumps, small-scale irrigation and small water displays and pub cellars. Options include with or without float switch - VOX versions and 110 - 230 - 400V versions.

MATERIALS

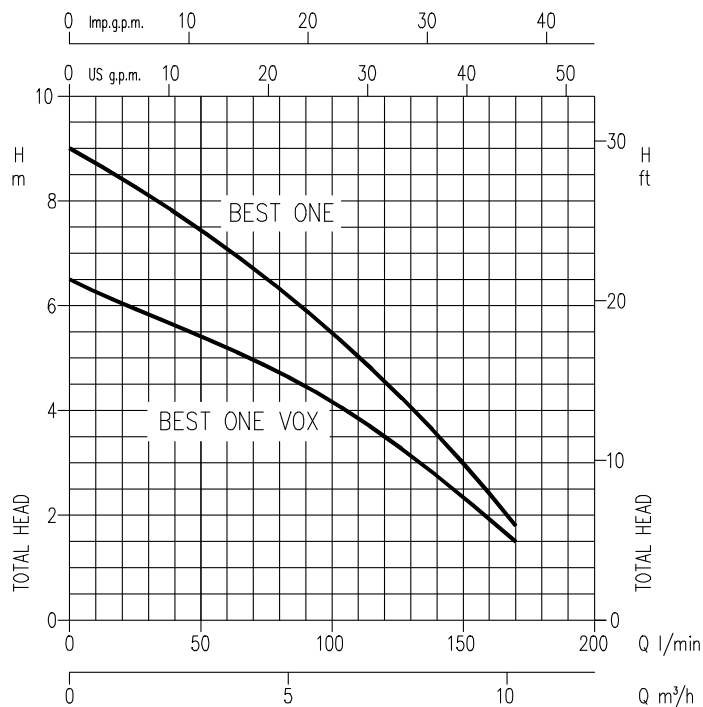
- Pump casing, impeller, strainer, cover, casing cover and motor casing in AISI 304
- Shaft in AISI 304
- Double lip seal with interposed oil chamber

SPECIFICATIONS

- Maximum liquid temperature :
35°C according EN 60335-2-41 for domestic uses
40°C for other uses
- Maximum immersion : 5 mts.
- Maximum passage of solids : 10 mm,
20 mm for VOX version

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP68
- 1~230V \pm 10% 50Hz
- DNM 1 $\frac{1}{4}$


PERFORMANCE TABLE

Pump type	kW	Capacitor		Abs. Current (A)	l/min m³/h	Q=Capacity					
Single-phase 230V 50Hz		µF	V _c	Single-phase		20	40	80	120	160	170
						1,2	2,4	4,8	7,2	9,6	10,2
						H=Total head					
BEST ONE	0,25	8	450	2,2		8,3	7,8	6,3	4,5	2,4	1,8
BEST ONE VOX	0,25	8	450	2,0	6	5,6	4,8	3,5	2	1,5	

BEST 2-3-4-5

SPECIFICATIONS

- Maximum liquid temperature :
35°C according EN 60335 -2-41 for domestic uses
50°C for other uses
- Maximum immersion : 10 mts
- Maximum passage of solids : 10 mm

APPLICATIONS

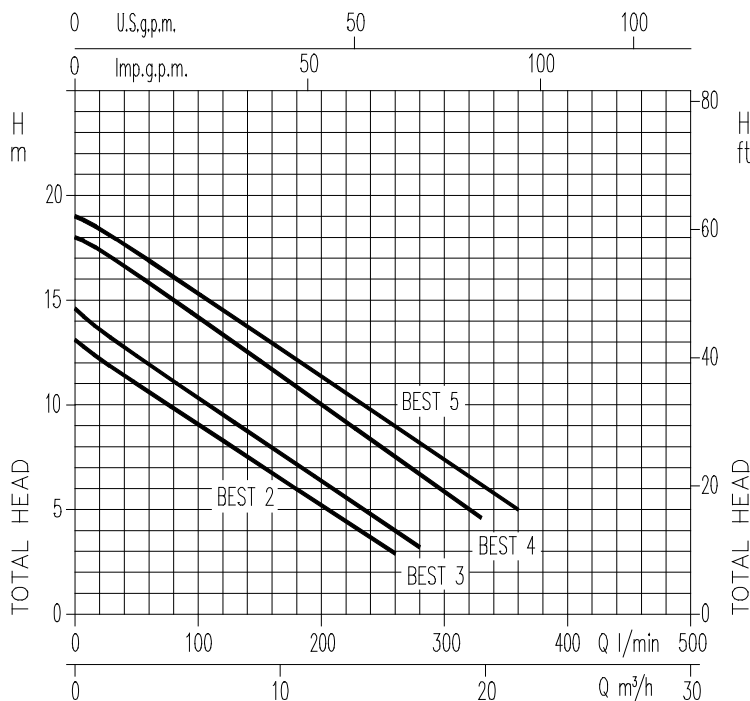
Submersible sump pump made of stainless steel AISI 304, double mechanical seals ensure long life and reliability. Suitable for draining wells, plant room sump, lift shaft emptying, pool, sumps, irrigation, and water display. Options include with or without float switch. Solids handling up to 10 mm.

MATERIALS

- Pump casing, impeller, strainer, cover, casing cover and motor casing in AISI 304
- Shaft in AISI 303
- Double mechanical seal with interposed oil chamber upper in carbon/ceramic/NBR - lower in SiC/SiC/NBR

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP68
- 1~230V ± 10% 50Hz - 3~400V ± 10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 1"½


PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		l/min m³/h	Q=Capacity							
Single-phase 230V 50Hz	three-phase 400V 50Hz		F	V _c	1~	3~		20	80	120	170	260	280	330	360
								1,2	4,8	7,2	10,2	15,6	16,8	19,8	21,6
								H=Total head							
BEST 2 M	BEST 2	0,55	16	450	4,4	2,0		12,2	9,8	8,3	6,3	2,9	-	-	-
BEST 3 M	BEST 3	0,75	20	450	5,6	2,4		13,6	11,1	9,5	7,6	4	3,2	-	-
BEST 4 M	BEST 4	1,1	31,5	450	7,3	3,0		17,4	15	13,4	11,3	7,5	6,7	4,6	-
-	BEST 5	1,5	-	-	-	3,3		18,4	16,1	14,5	12,5	9	8	6	5

SUBMERSIBLE PUMPS for dirty water in AISI 304

RIGHT
RIGHT

SPECIFICATIONS

- Maximum liquid temperature : 50°C
- Maximum immersion : 10 mts
- Maximum passage of solids : 35 mm

APPLICATIONS

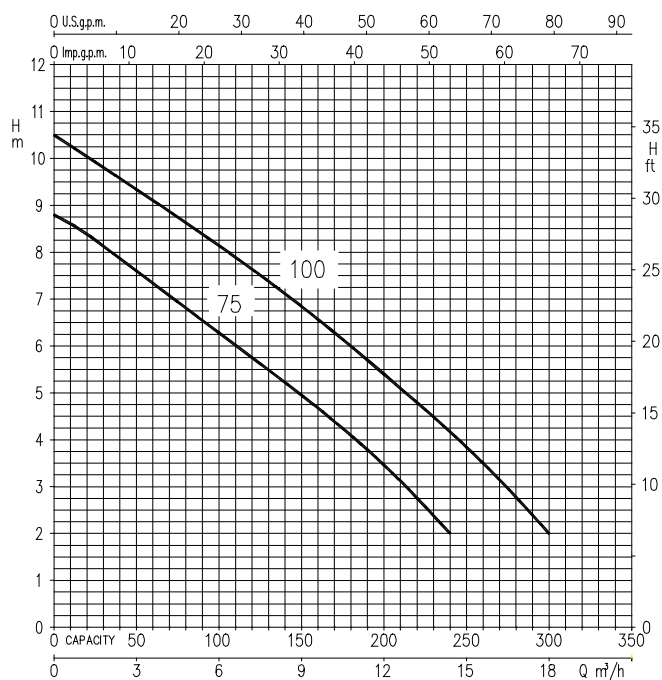
Submersible dirty water pump made of stainless steel AISI 304, double mechanical seals ensure long life and reliability. Suitable for dirty water systems with some solids. Applications include wastewater treatment plants and final effluent pumping, irrigation, and water displays. Options include with or without float switch. Solids handling up to 35 mm.

MATERIALS

- Pumping casing, impeller, cover, casing cover and motor casing in AISI 304
- Shaft in AISI 303
- Double mechanical seal with interposed oil chamber : upper in carbon / ceramic / NBR, lower in Sic / SiC / NBR

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP68
- 1~230V ±10% 50Hz - 3~400V ±10% 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 1" 1/2


PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		l/min m³/h	Q=Capacity							
Single-phase 230V 50Hz	Three-phase 400V 50Hz		μF	Vc	1~	3~		40	80	100	120	160	200	240	300
								2,4	4,8	6	7,2	9,6	12	14,4	18
								H=Total head							
RIGHT 75 M	RIGHT 75	0,55	20	450	4,8	2,1		7,8	6,8	6,2	5,7	4,7	3,4	2	-
RIGHT 100 M	RIGHT 100	0,75	31,5	450	5,7	2,6		9,5	8,6	8,1	7,6	6,6	5,4	4,2	2

SUBMERSIBLE PUMPS for dirty / sewage water in AISI 304

DW-DW VOX
DW-DW VOX

SPECIFICATIONS

- Maximum liquid temperature : 40°C
- Maximum immersion : 10 mts
- Maximum passage of solids : 50 mm

APPLICATIONS

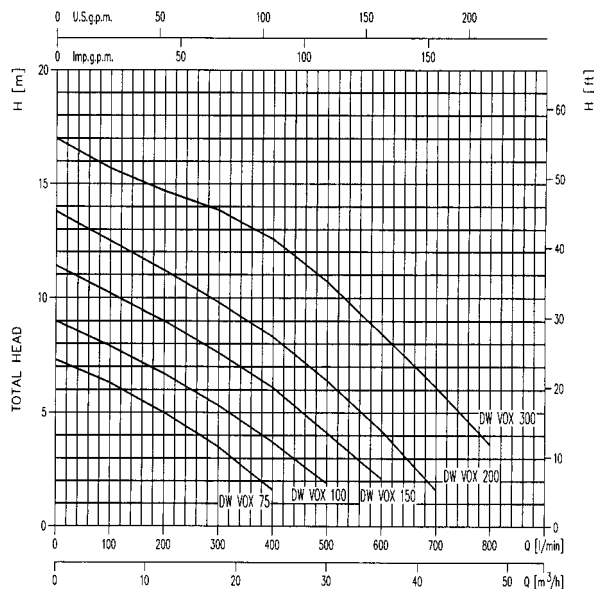
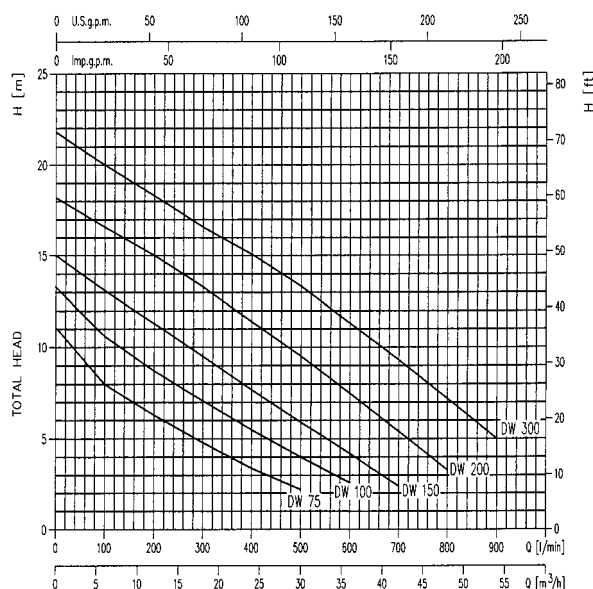
Submersible sewage pump made of stainless steel AISI 304, with double mechanical seals ensure long life and reliability. Suitable for sewage and dirty water systems with solids. Application include remote sewage stations for housing developments, pubs, hotels and restaurants, and water displays. Options include with or without float switch. Solids handling up to 50 mm.

MATERIALS

- Pump casing, impeller, cover, casing cover and motor casing in AISI 304
- Shaft in AISI 303
- Double mechanical seal with interposed oil chamber: upper in carbon / ceramic / NBR, lower in SiC / SiC / NBR

TECHNICAL DATA

- 2 pole motor
- Insulation: Class F
- Protection degree: IP68
- 1~230V \pm 10% 50 Hz - 3~400V \pm 10% 50 Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 50-DNM 2"


PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		l/min m³/h	Q=Capacity									
Single-phase 230V 50Hz	Three-phase 400V 50Hz		µF	Vc	1~	3~ 400V		100	200	300	400	500	600	700	800	900...	
								H=Total head									
DW 75 M	DW 75	0,55	20	450	3,9	1,5		8	6,3	4,8	3,4	2,2	-	-	-	-	
DW 100 M	DW 100	0,75	25	450	5,9	2,1		10,6	8,7	7,1	5,5	4	2,6	-	-	-	
DW 150 M	DW 150	1,1	31,5	450	7,3	2,8		13,1	11,3	9,5	7,7	5,9	4,2	2,4	-	-	
-	DW 200	1,5	-	-	-	3,6		16,6	15	13,3	11,4	9,5	7,5	5,4	3,3	-	
-	DW 300	2,2	-	-	-	-		20	18,3	16,6	15,1	13,3	11,3	9,3	7,2	-	
DW VOX 75 M	DW VOX 75	0,55	20	450	3,9	1,4		6,3	5	3,5	1,6	-	-	-	-	-	
DW VOX 100 M	DW VOX 100	0,75	25	450	5,8	2,1		7,9	6,7	5,3	3,7	1,9	-	-	-	-	
DW VOX 150 M	DW VOX 150	1,1	31,5	450	7,3	2,8		10,2	9	7,6	6,1	4,1	2,1	-	-	-	
-	DW VOX 200	1,5	-	-	-	3,3		12,5	11,2	9,8	8,3	6,4	4,2	1,6	-	-	
-	DW VOX 300	2,2	-	-	-	3,3		15,7	14,7	13,9	12,6	10,7	8,4	6,1	3,6	5,0	

5" SUBMERSIBLE MULTI-STAGE PUMPS in AISI 304

IDROGO

IDROGO



APPLICATIONS

5" submersible centrifugal multi-stage pump made of stainless steel AISI 304 and noryl, suitable for the movement of clean water from wells, tanks for irrigation systems. The double mechanical seal ensures long life and improved reliability. There is no need for a starter box as the capacitors are installed in the pumping unit allowing a neater in installation.

MATERIALS

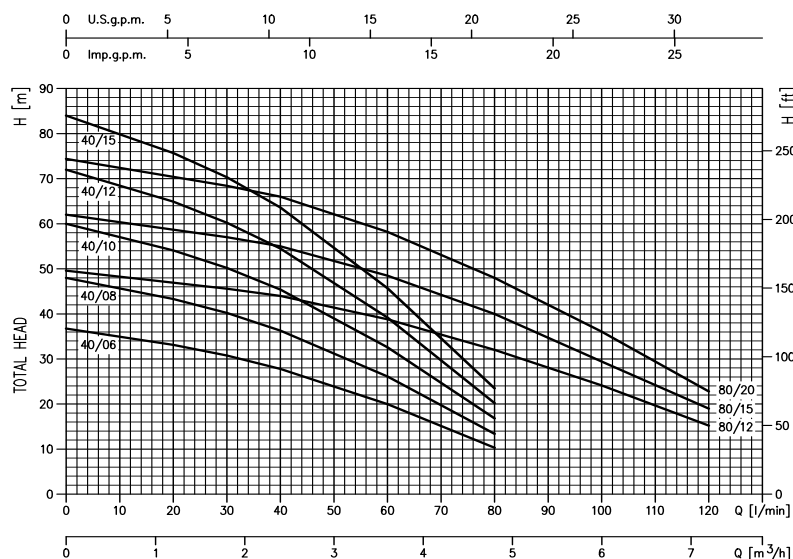
- External casing, motor casing, casing cover and closing ring in AISI 304
- Impeller, diffuser and spacer in technopolymer
- Shaft in AISI 416
- Upper mechanical seal in carbon/ceramic/NBR, lower mechanical seal in SiC/SiC/NBR

SPECIFICATIONS

- Maximum working pressure : 10 bar
- Maximum liquid temperature : 35°C according EN 60335-2-41 for domestic uses 40°C for other uses
- Installation : Horizontal and vertical position
- Maximum immersion : 20 mts

TECHNICAL DATA

- 2 pole motor cooled by the pumped liquid
- Insulation : Class F
- Protection degree : IP68
- 1~230V $\pm 10\%$ 50Hz, 3~400V $\pm 10\%$ 50Hz
- Permanent split capacitor and automatic thermal overload protection for single-phase version
- Thermal protection to be provided by the user for three-phase version
- DNM 1^{1/4}



PERFORMANCE TABLE

Pump type		kW	Capacitor		Absorbed Current (A)		l/min m³/h	Q=Capacity							
Single-phase 230V 50Hz	Three-phase 400V 50Hz		µF	V _c	1~	3~ 400V		20	30	40	60	80	100	120	
								1,2	1,8	2,4	3,6	4,8	6	7,2	
								H=Total head							
IDROGO M 40/06	-	0,45	16	450	3,8	-		33,1	30,8	27,8	20	10,3	-	-	
IDROGO M 40/08	IDROGO 40/08	0,6	20	450	4,3	1,9		43,3	40,2	36,3	26,1	13,4	-	-	
IDROGO M 40/10	IDROGO 40/10	0,75	20	450	5,7	2,2		54,1	50,2	45,4	32,6	16,8	-	-	
IDROGO M 40/12	IDROGO 40/12	0,9	20	450	6,8	2,4		64,9	60,2	54,5	39,2	20,2	-	-	
IDROGO M 40/15	IDROGO 40/15	1,1	31,5	450	7,3	3,0		75,7	70,3	63,6	45,7	23,5	-	-	
IDROGO M 80/12	IDROGO 80/12	0,9	20	450	6,4	2,3		-	45,6	44	38,8	32	23,2	15,2	
IDROGO M 80/15	IDROGO 80/15	1,1	31,5	450	7,5	3,1		-	57	55	48,5	40	28	19	
-	IDROGO 80/20	1,5	-	-	-	3,5		-	68,4	66	58,2	48	34,8	22,8	

4" BORE HOLE PUMPS in AISI 304

4 BHS

4 BHS



APPLICATIONS

4" borehole multi-stage pump entirely made of stainless steel AISI 304. The smooth surface of the impellers and diffusers offer an improved efficiency, and reliability factor. Application includes clean water extraction from bore holes, pressure boosting for domestic, farming and industrial applications. Installation can be horizontal as well as vertical. The 4BHS can be fitted to any NEMA standard motor.

MATERIALS

- Bracket, suction and discharge ports, coupling, impeller, diffuser, diffuser cover, valve, tie-rod and cable guard in AISI 304
- Liner ring in technopolymer/AISI 304
- Shaft in AISI 316

SPECIFICATIONS

- Maximum immersion : 100 mts
- Maximum liquid temperature : 30°C
- Maximum sand content : 50 ppm

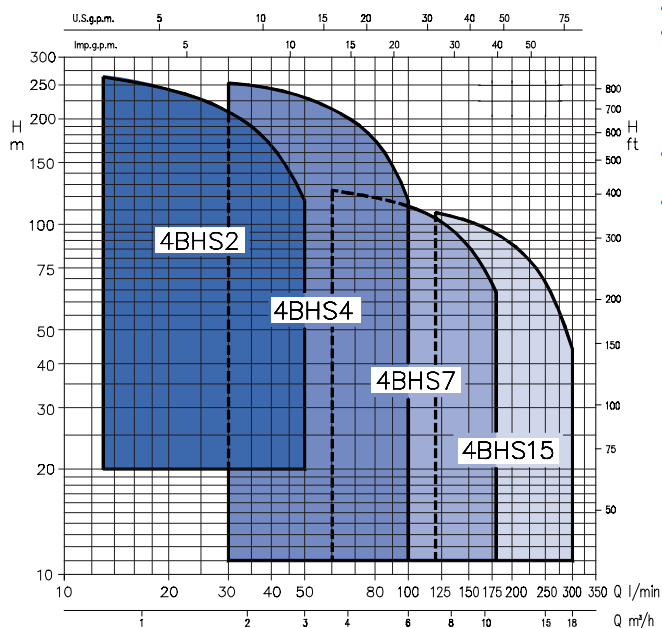
TECHNICAL DATA

Pump can be requested to be coupled with the following motor versions:

- Pump O4BHS with motor OY in coolant liquid bath (max. liquid temperature 40°C)
- Pump W4BHS with motor WY in water bath (max. liquid temperature 30°C).

Both types of motor have the following features:

- 2 pole motor, water filled (WY version) or oil filled (OY version)
- Maximum startings/hour: 30
- Insulation: Class F
- Protection degree: IP58
- 1~220V ± 6% 50Hz, 3~380V ± 6% 50Hz



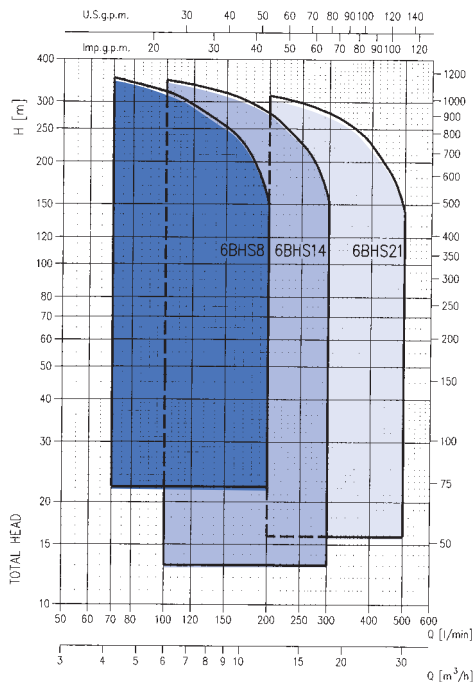
PERFORMANCE TABLE

Pump type 4BHS	kW	l/min m³/h	Q=Capacity										
			13	30	40	50	60	100	120	180	250	300	
			0,8	1,8	2,4	3,0	3,6	6	7,2	10,8	15	18	
H=Total head													
4BHS2 13/5	0,55		65	52	41	29,5	-	-	-	-	-	-	-
4BHS2 18/7	0,75		90	71	58	41	-	-	-	-	-	-	-
4BHS2 27/11	1,1		143	114	92	64	-	-	-	-	-	-	-
4BHS2 36/15	1,5		186	145	116	80	-	-	-	-	-	-	-
4BHS2 44/22	2,2		227	178,7	141	97	-	-	-	-	-	-	-
4BHS2 51/22	2,2		275	222,8	181	125	-	-	-	-	-	-	-
4BHS4 7/5	0,55		-	37	36	34	31,5	18,5	-	-	-	-	-
4BHS4 10/7	0,75		-	53	52,5	48	45	26	-	-	-	-	-
4BHS4 15/11	1,1		-	79	76	72	66,5	39	-	-	-	-	-
4BHS4 20/15	1,5		-	105	102	96	89	50	-	-	-	-	-
4BHS4 24/22	2,2		-	126	122	115	106	61	-	-	-	-	-
4BHS4 29/22	2,2		-	154	150	141,5	132	76	-	-	-	-	-
4BHS4 36/30	3,0		-	189	178	170	156,5	85	-	-	-	-	-
4BHS4 48/40	4,0		-	253	241,1	227	210	109,4	-	-	-	-	-
4BHS7 5/7	0,75		-	-	-	-	28	25	23	13,5	-	-	-
4BHS7 7/11	1,1		-	-	-	-	38,5	35,5	32,5	20	-	-	-
4BHS7 10/15	1,5		-	-	-	-	54	49,5	45	27	-	-	-
4BHS7 12/22	2,2		-	-	-	-	65	59	54	33	-	-	-
4BHS7 14/22	2,2		-	-	-	-	77	70	64	41	-	-	-
4BHS7 18/30	3,0		-	-	-	-	100	90	82,5	51	-	-	-
4BHS7 23/40	4,0		-	-	-	-	125	114	104	64	-	-	-
4BHS15 7/15	1,5		-	-	-	-	-	-	30	27	18,5	-	12
4BHS15 10/22	2,2		-	-	-	-	-	-	43,5	38	28,5	-	17,5
4BHS15 13/30	3,0		-	-	-	-	-	-	55	47,5	36,1	-	25
4BHS15 17/40	4,0		-	-	-	-	-	-	72	63	45	-	29
4BHS15 25/55	5,5		-	-	-	-	-	-	108	95	68,2	-	44

6" SUBMERSIBLE DEEP WELL PUMPS in AISI 304

6 BHS

6 BHS



APPLICATIONS

- Water feeding plants for domestic, industrial and farming applications
- Building pressurisation plants
- Fire fighting systems
- Irrigation
- Washing
- Movement of clean and moderately aggressive water

MATERIALS

- Bottom bracket: **AISI 304 Micro-casting Stainless Steel**
- Coupling, impellers, stages diffuser, check valve, tie-rod, cable guard and fixing: **AISI 304 Stainless Steel**
- Discharge casing: **AISI 304 Micro-casting Stainless Steel**
- Shaft: **AISI 316 Stainless Steel**
- Bearing: **Tungsten Carbide**
- Liner ring: **AISI 304 Stainless Steel + EPDM**
- Stages OR: **NBR**
- Friction ring: **Tungsten Carbide**
- Strainer: **AISI 304 Stainless Steel**
- Check Valve OR: **EPDM**

SPECIFICATIONS

- Maximum liquid temperature : 30°C
- Maximum sand content : 50 ppm

TECHNICAL DATA

PUMP

- Capacity : up to 30 m³/h
- Head : up to 350m
- Max Liquid Temperature : 30°C
- Max immersion : 100 m for pump with motor in coolant liquid bath
350 m for pump with motor in water bath
- Standard version : Single cable / Direct on line starting (DOL)
- On demand : Double cable / Star / delta starting

MOTOR

- THREE PHASE : 400V
Direct on line starting up to 5.5 kW suggested
Soft starting over 5.5 kW suggested
Motors with star / delta starting are available over 5.5 kW on demand
50 Hz 2 pole IP 58 insulation class F
Overload protection to be provided by the user

PERFORMANCE TABLE

Pump Type 6BHS	kW	Q=Capacity									
		70	100	150	200	250	300	375	450	500	
		l/min	4.2	6.0	9.0	12.0	15.0	18	22.1	27.0	30
H=Total head											
6BHS8 5/15	1.5	51.9	47.2	37.3	22.2	-	-	-	-	-	-
6BHS8 7/22	2.2	72.8	66.1	52.2	31	-	-	-	-	-	-
6BHS8 10/30	3.0	104	94.4	74.5	44.3	-	-	-	-	-	-
6BHS8 13/40	4.0	135	123	96.9	57.8	-	-	-	-	-	-
6BHS8 15/55	5.5	156	142	112	66.5	-	-	-	-	-	-
6BHS8 18/55	5.5	187	170	134	79.7	-	-	-	-	-	-
6BHS8 21/75	7.5	218	198	157	93	-	-	-	-	-	-
6BHS8 25/75	7.5	259	236	186	111	-	-	-	-	-	-
6BHS8 29/92	9.2	301	274	216	129	-	-	-	-	-	-
6BHS8 34/110	11	353	321	253	151	-	-	-	-	-	-
6BHS14 3/15	1.5	-	26.7	27.2	23.9	19.4	13.1	-	-	-	-
6BHS14 5/22	2.2	-	49.6	45.4	39.8	32.3	21.8	-	-	-	-
6BHS14 7/30	3.0	-	69.4	63.6	55.7	45.2	30.5	-	-	-	-
6BHS14 9/40	4.0	-	89.2	81.7	71.6	58.1	39.2	-	-	-	-
6BHS14 13/55	5.5	-	129	118	103	83.9	56.6	-	-	-	-
6BHS14 15/75	7.5	-	149	136	119	96.8	65.3	-	-	-	-
6BHS14 18/75	7.5	-	178	163	143	116	78.3	-	-	-	-
6BHS14 22/92	9.2	-	218	200	175	142	95.7	-	-	-	-
6BHS14 25/110	11	-	258	236	207	168	113	-	-	-	-
6BHS14 31/150	15	-	307	282	247	200	135	-	-	-	-
6BHS14 35/150	15	-	347	318	278	226	152	-	-	-	-
6BHS21 4/30	3.0	-	-	-	34.7	33.1	30.9	26.8	20.9	15.9	-
6BHS21 6/40	4.0	-	-	-	52.1	49.6	46.4	40.2	31.4	23.8	-
6BHS21 9/55	5.5	-	-	-	69.4	66.2	61.9	53.5	41.9	31.7	-
6BHS21 12/75	7.5	-	-	-	104	99.2	92.8	80.3	62.8	47.6	-
6BHS21 15/92	9.2	-	-	-	130	124	116	100	78.6	59.4	-
6BHS21 17/110	11	-	-	-	148	141	132	114	89	67.4	-
6BHS21 22/150	15	-	-	-	191	182	170	147	115	87.2	-
6BHS21 25/150	15	-	-	-	217	207	193	167	131	99.1	-
6BHS21 29/185	18.5	-	-	-	252	240	224	194	152	115	-
6BHS21 34/220	22	-	-	-	295	281	263	228	178	135	-
6BHS21 36/220	22	-	-	-	313	298	278	241	189	143	-

- Cable supplied : 4m
- Max starts per hour recommended
20 (motor 6" in water bath)
15 (motor 6" in coolant liquid bath)
20 (motor 4" in water bath)
30 (motor 6" in coolant liquid bath)

SUBMERSIBLE PUMPS FOR DEEP WELLS

BHS
BHS

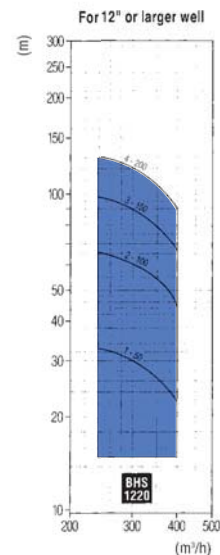
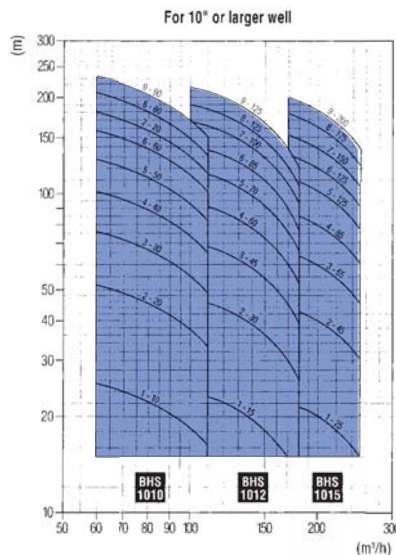
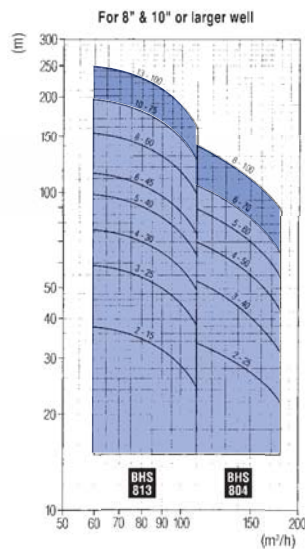
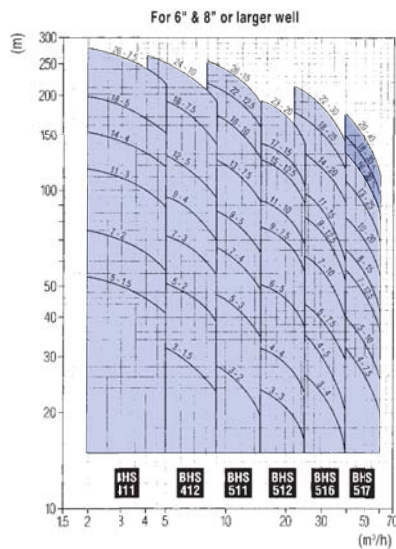

APPLICATIONS

- Home, building and city water supply
- Factories
- Irrigation
- Springs
- Stock breeding
- Lowering of the water table
- Booster pumping

FEATURES

- Wide performance coverage.
- Greater savings and high operating yield.
- Safe and continuous operation with little maintenance.
- Simple construction and easy maintenance.
- Designed for high resistance to abrasion by sand.

SELECTION CHART

2900 mim⁻¹


Remarks

The performance curves and dimensions displayed represent the maximum, number of possible stages for a given motor output. For intermediate or higher curves, please contact the manufacturer or your local dealer.

- For 6" or larger well
- For 8" or larger well
- For 10" or larger well
- For 12" or larger well

4" STAINLESS STEEL SUBMERSIBLE MOTOR

OPM / T
OPM / T


FEATURES

1 NEMA COUPLING

For universal fit, all mounting dimension are in accordance with NEMA standard.

2 ELECTRIC CABLE

Removable four wire flat cable with watertight connector with integral earthing system.

3 SEALING SYSTEM

The sealing system includes a labyrinth seal with a sand slinger for an effective sand prevention. A rotary mechanical seal with graphite/ceramic mating faces assure a very long life.

4 FILLING LIQUID

A special food grade dielectric fluid gives a better lubricant effect increasing life of moving parts and life of insulation material with its superior coolant capabilities. The liquid high thermal capacity gives the motor superior overload capabilities.

5 CORROSION PREVENTION FEATURES

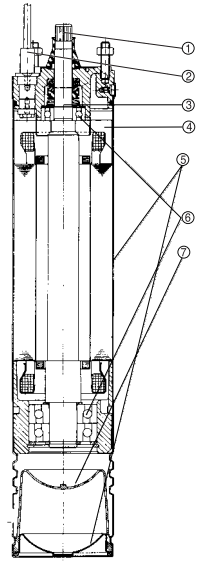
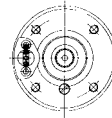
For a better corrosion resistance motor frame and motor base end cover, are made out of AISI 304 SS. Shaft end is made out of AISI 303 SS. Standard upper side bracket is made of cast iron nickel plated. Stainless steel AISI 304, Bronze, Brass nickel plated, upper side bracket, are available.

6 BEARING SYSTEM

Both radial and axial thrust bearing are ball bearing type. The filled liquid is a perfect environment for ball bearing ensuring higher upthrust load capabilities and long-life maintenance free operation.

7 PRESSURE EQUALISING SYSTEM

Pressure equalising is made by a suitable rubber below specially designed to ensure proper heated liquid expansion and to create a positive seal pressure inside the motor.



Technical data												H	Size	Cable	B	Weight
Type	kW	Hp	In	Ia	RPM	COS ϕ	Ca/Cn	EFF.%	μ F	Vc	Thrust Load	mm	mm ²	A mm	mm	kg
Single Phase 220V 50Hz	OPM 050	0,37	0,5	3,4	10,2	2860	0,94	0,75	53	20	450	325				7
	OPM 075	0,55	0,75	4,5	13,6	2855	0,95	0,63	58	25	450	325				7,6
	OPM 100	0,75	1	5,8	18,5	2855	0,92	0,62	63	35	450	350				8,7
	OPM 150	1,1	1,5	7,8	26	2840	0,95	0,62	67	40	450	385				10,3
	OPM 200	1,5	2	10,6	34	2850	0,95	0,62	65	60	450	420				12
	OPM 300	2,2	3	14,9	48	2850	0,96	0,64	68	80	450	470				14,2
	OPM 300	2,2	3	14,9	48	2850	0,96	0,64	68	80	450	520				15,5
	OPT 050	0,37	0,5	1,2	5	2830	0,73	2,8	58			325				6,5
	OPT 075	0,55	0,75	1,75	7	2830	0,72	3,1	62			325				7
	OPT 100	0,75	1	2,4	10	2830	0,7	3,3	67			325				7,6
Three Phases 380V 50Hz	OPT 150	1,1	1,5	3,4	14	2820	0,65	3,2	67			350				8,7
	OPT 200	1,5	2	4,4	17	2830	0,68	3,4	75			385				10,4
	OPT 300	2,2	3	6	24	2820	0,7	3,1	78			420				12
	OPT 300	2,2	3	6	24	2820	0,7	3,1	78			470				14,2
	OPT 400	3	4	7,9	34	2820	0,75	3,5	77			550				18,5
	OPT 400	3	4	7,9	34	2820	0,75	3,5	77			550				19
	OPT 550	4	5,5	10,0	47	2850	0,77	3,5	79			580				20
	OPT 750	5,5	7,5	14,4	58	2830	0,79	3,5	76			650				22,4
	OPT 1000	7,5	10	19,5	72	2820	0,83	3,2	80			810				27

6" STAINLESS STEEL SUBMERSIBLE MOTOR

OY6

OY6 MOTOR

- Submersible 6" motors cooled with dielectric non toxic coolant.
- Suitable for 10000 N axial thrust.
- Three phase motors from 4 kW to 30 kW.
- Classe F insulation and IP 58 protection.
- Motor shaft extension and coupling according to Nema standard.
- Base and frame made out of stainless steel.
- Upper body made of high resistance cast iron nickel plated.
- Availability of the same in bronze and AISI 304 stainless steel.
- Shaft made in stainless steel and balanced.
- Optimised design of pressure equalising rubber diaphragm and sand prevention with sand slinger.
- Irremovable electric cable with watertight connector.
- λ/Δ starting available as option.
- Easily disassembly and rewindability.



Technical data for OY6 series 6" motors										
Type	Thrust Load N	Weight Kg	H mm	kW	Hp	In Amp	RPM	COD ϕ	EFF%	Ca/Cn
OY6 550	5000/10000	38	540	4	5,5	8,7	2860	0,79	78	3,0
OY6 750	5000/10000	40	570	5,5	7,5	13,1	2870	0,80	79	3,0
OY6 1000	10000	42	600	7,5	10	17,5	2840	0,85	78	2,5
OY6 1250	10000	45	600	9,2	12,5	21	2870	0,82	80	2,4
OY6 1500	10000	48	700	11	15	24,1	2860	0,83	83	2,4
OY6 1750	10000	50	700	12,8	17,5	27,8	2850	0,83	83	2,4
OY6 2000	10000	54	760	15	20	31,5	2850	0,88	82	2,5
OY6 2500	10000	65	830	18,5	25	41,5	2840	0,85	82	2,1
OY6 3000	10000	70	890	22	30	48	2870	0,86	83	2,0
OY6 4000	20000	90	1030	30	40	62	2860	0,86	86	2,0

SUBMERSIBLE SEWAGE PUMPS (With Cutter) **DF**

DF



FEATURES

- Cutter mechanism prevents clogging by foreign matter.
- Built-in motor protection.
- Minimal change in flow with variations in lift.
- 4 pole motor with more than sufficient torque.
- Both automatic and automatic alternating types available.

SUBMERSIBLE SEWAGE PUMP (With Cutter) **DL Cutter**

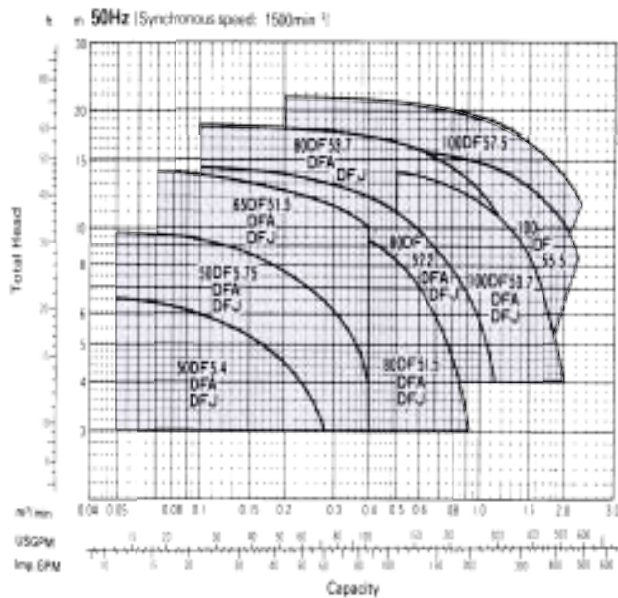
DL Cutter



FEATURES

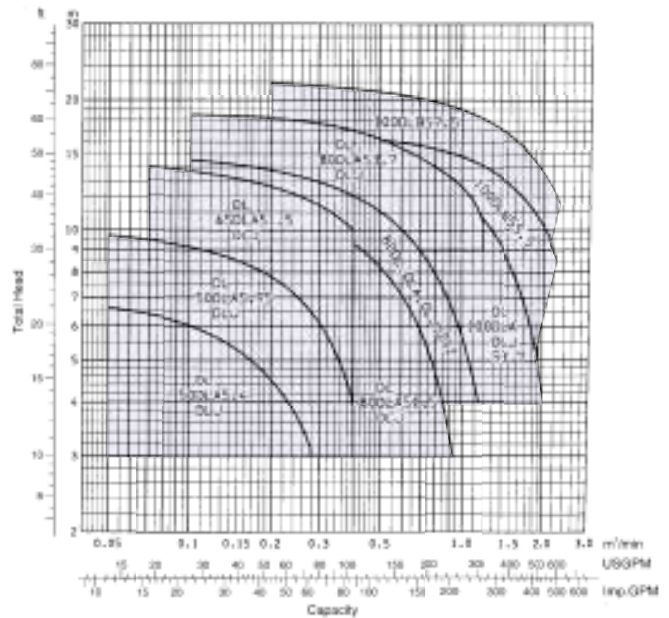
- Available with cutter type semi-open single blade impeller (50-80c) and semi-open mixed flow double blade impeller, this pump is clog-free.
- Built-in thermal protector automatically operates to prevent motor failure.
- Optional quick discharge connector facilitates installation and maintenance.

SELECTION CHART



SELECTION CHART

1500 min⁻¹



EXPLOSION-PROOF SUBMERSIBLE PUMPS EExdII T3 protection **RW**

RW



VORTEX IMPELLER: MODEL RW VORTEX IMPELLER: MODEL RC

APPLICATIONS

- Sewage with suspended solids including long fibres
- For mixing in stock-tanks, for industrial waste and domestic water, for animal slurry with solid suspension with max diameter from 42 to 98 mm according to pump size.

SPECIFICATIONS

- Vortex impeller (for RW type); Double channel impeller (for RC type)
- Max temperature of pumped liquid: 40°C
- Max immersion depth: 20m
- For continuous operation, within the allowed use limits, the pump must be submerged for 2/3 of its height.

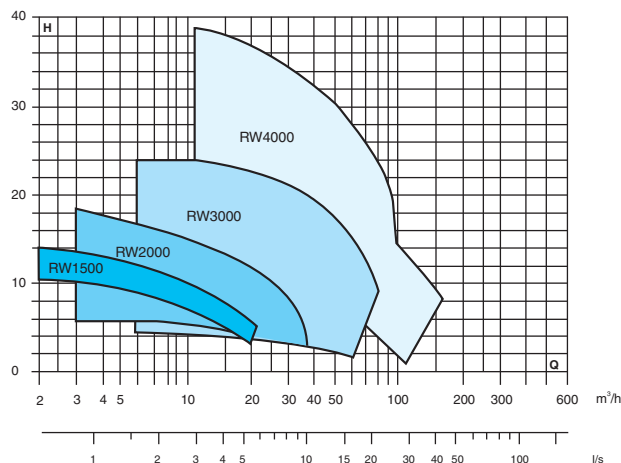
MATERIALS

- Made in high quality engineering cast iron
- Double mechanical seal-silicon carbide with Viton gasket

TECHNICAL DATA

- Explosion proof version with EEx d IIB T3 protection
- Dry chamber motor, 4 Poles
- Insulation Class F, IP 68 protection
- Single Phase 230V ± 10% 50Hz
- Three Phase 400V ± 10% 50Hz
- Starting method: D.O.L. up to 11kW (optional star-delta type)
- Sheathed power cable in Neoprene H07RN-F, 5 or 10m long depending on pump model.

SELECTION CHART



STAINLESS STEEL SUBMERSIBLE PUMPS in AISI 316 **RWI**

RWI



APPLICATIONS

- Unscreened sewage, effluent acid or alkaline water, animal slurry with fibres and suspended solids from 42 to 50mm
- PH of pumped liquid: 3 to 14

SPECIFICATIONS

- Impeller: Vortex impeller
- Max temperature of pumped liquid: 40°C
- Max immersion depth: 20m
- For continuous operation, within the allowed use limits, the pump must be submerged for 2/3 of its height.

MATERIALS

- Stainless steel AISI 316/UNI X5CrNiMo 17-12/ DIN 1.4401
- Double mechanical seal-silicon carbide with Viton gasket

TECHNICAL DATA

- Dry chamber motor, 4 Poles
- Insulation Class F, IP 68 protection
- Single Phase 230V ± 10% 50Hz
- Three Phase 400V ± 10% 50Hz
- Starting method: D.O.L. (optional star-delta type)
- Sheathed power cable in Neoprene H07RN-F, 10m long

SELECTION CHART

MODEL	kW	CV	Total Head in m	CAPACITY																			
				m3h	0	3	5	7.5	9	10.5	12	13.5	15	16.5	18	19.5	21	22.5	24	27	30	33	36
RWI 2010.2MS	0.75	1	7.5	7.2	6.7	6.4	6.1	5.8	5.5	5.2	4.7	4.3	4	3.8	3.2	2.8	2.5	2					
RWI 2010.2T	0.75	1	7.5	7.2	6.7	6.4	6.1	5.8	5.5	5.2	4.7	4.3	4	3.8	3.2	2.8	2.5	2					
RWI 2015.2MS	1.1	1.5	11	10.5	9.8	9.3	8.8	8.3	7.8	7.4	6.9	6.3	5.8	5.3	4.8	4.3	3.9	3	2				
RWI 2015.2T	1.1	1.5	11	10.5	9.8	9.3	8.8	8.3	7.8	7.4	6.9	6.3	5.8	5.3	4.9	4.3	3.9	3	2				
RWI 2025.2T	1.8	2.5	15	14.3	13.7	13.3	12.8	12.3	11.9	11.4	10.9	10.4	9.9	10.3	8.8	8.3	7.8	6.7	5.5	4.5	3.3	2.3	
RWI 2030.2T	2.2	3	18.5	17.7	16.6	16.1	15.6	15	14.5	14	13.4	13	12.2	11.7	11	10.4	9.8	8.4	7	5.6	4.1	2.7	
RWI 2015.4T	1.1	1.5	6.3	6	5.8	5.8	5.4	5.3	5.1	4.9	4.7	4.5	4.3	4	3.8	3.5	3.3						

MODEL	kW	CV	Total Head in m	CAPACITY															
				0	6	12	18	24	30	36	39	42	45	48	54	60	66	72	78
RWI 3030.2T	2.2	3.0	12	10.7	9.5	8.3	7	6	5	4.5	4	3.6	3.2	2.5	1.8	1			
RWI 3040.2T	3.0	4.0	15.4	14.5	13.2	12	10.8	9.3	8	7.3	6.8	6	5.4	4.2	3				
RWI 3050.2T	3.7	5.0	18.7	18.2	17.5	15.5	15.3	14	12.6	11.8	11	10.2	9.4	7.9	6.2	5	4		
RWI 3060.2T	4.4	6.0	22.3	21.2	20.4	19.1	17.9	16.6	15.2	14.6	14	13.4	12.8	11.3	10	8.8	7.5	6.3	5
RWI 3075.2T	5.5	7.5	25	24.1	23.4	22.6	21.9	21	20.2	19.8	19.4	19	18.5	17.5	16.5	15.3	14	12.5	10.8
RWI 3020.4T	1.5	2.0	5	4.9	4.8	3.6	4.3	4	3.7	3.5	3.4	3.2	2.9	2.5	2	1.5			
RWI 3030.4T	2.2	3.0	5	5.8	5.6	5.4	5.1	4.8	4.4	4.2	4.1	4	3.8	3.5	3.1	2.8	2.4	2.1	
RWI 3040.4T	3.0	4.0	8	7.8	7.4	7.1	6.8	6.5	6.2	6	5.9	5.8	5.6	5.3	4.9	4.5	4.1	3.7	3.3
RWI 3050.4T	3.7	5.0	9.5	9.2	8.9	8.5	8.1	7.8	7.4	7.2	6.9	6.7	6.5	6	5.6	5	4.6	4.1	3.5

SUBMERSIBLE STAINLESS STEEL PUMPS PONTOS 717
PONTOS 717

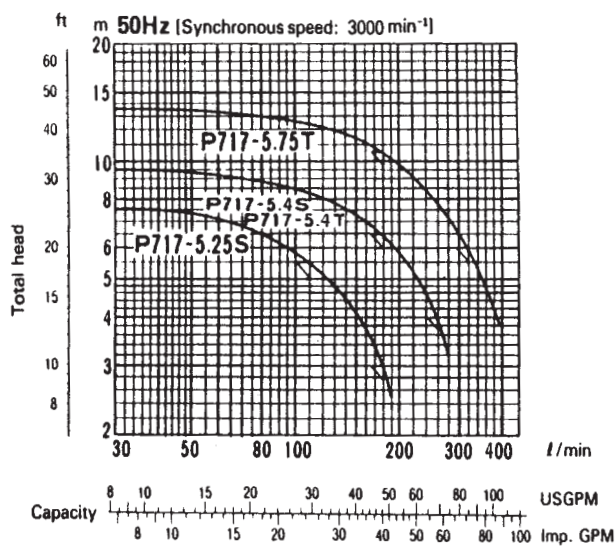
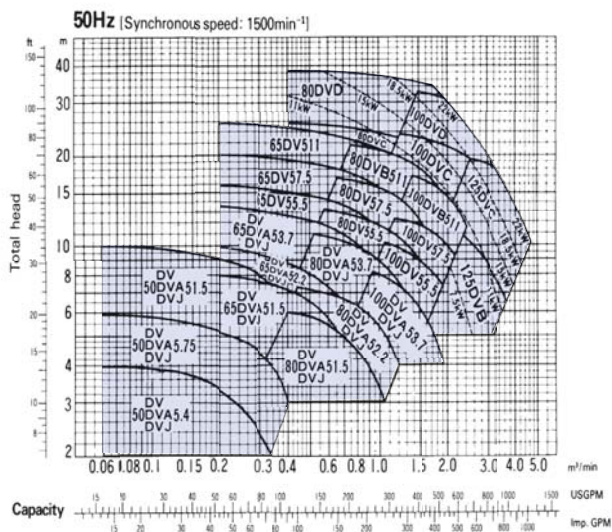
FEATURES

- All stainless steel components prevent rusting and corrosion.
- All pressed components and lightweight.
- Unique triple volute design ensures excellent performance.
- Built-in motor protector.
- Indicate when ordering if pump is to be used for food or cultivation applications (in which case a special oil is enclsed)

SUBMERSIBLE SEWAGE PUMPS Vortex impeller DV
DV

FEATURES

- High efficiency produced by exclusive Ebara design.
- No blockages with vortex impeller.
- Built-in motor protector prevents motor burnouts.
- Mechanical seals made of a super-hard alloy prevent water leakage into the motor.

SELECTION CHART

SELECTION CHART


SUBMERSIBLE SEWAGE PUMPS

DML
DML

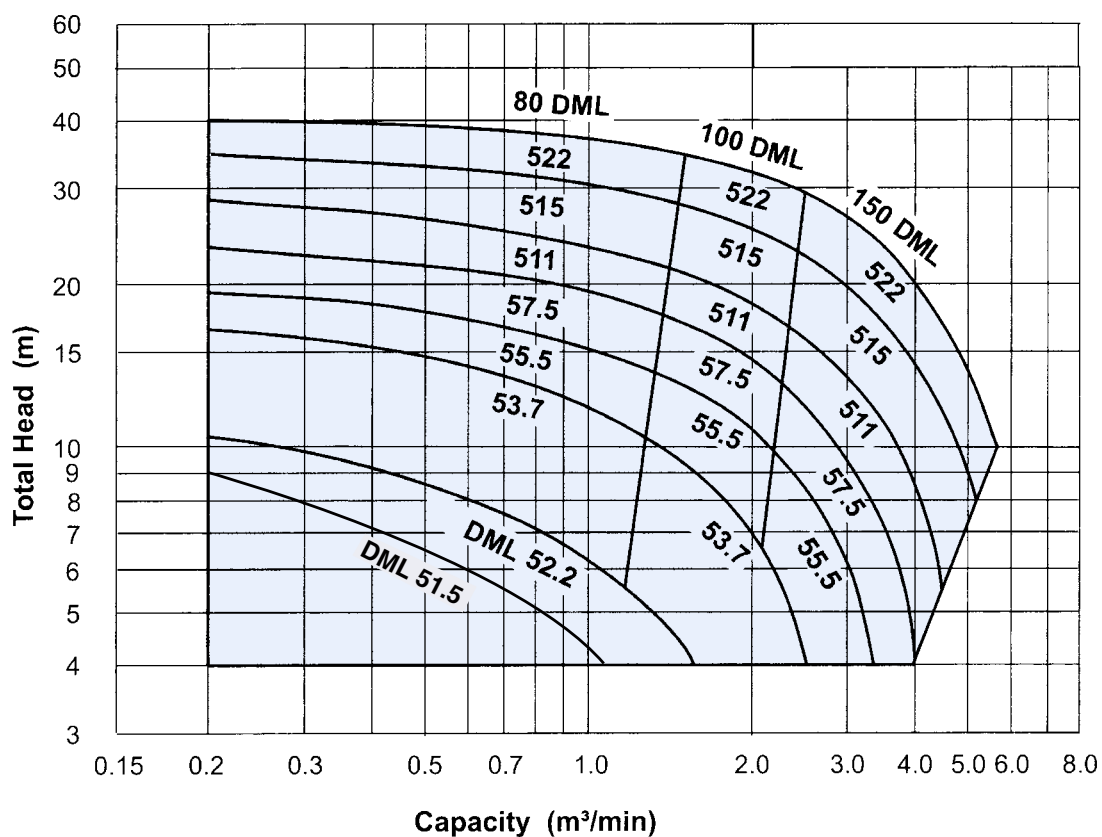

APPLICATIONS

- Sewage
- Waste water

SPECIFICATIONS

Pump		
Liquid Handled	Type of liquid	Sewage, Wastewater
	Temperature	0°C-40°C
	Min solids size	76mm
Maximum Submergence		8m
Maximum Submergence		Refer to water level (L.W.L.) in Dimensions. It is possible to operate at low water level for 30min.
Synchronous Speed		1500min ⁻¹
Construction	Mechanical	Double mechanical seal
	Impeller	Single Channel, non-clog
	Bearing	Prelubricated bearing
Material	Casing	Cast iron
	Impeller	Cast iron
	Shaft	403 Stainless Steel
	Mechanical Seal	Silicon carbide
	Seal	Ceramic / Carbon
	Packing	NBR
Motor		
Type	4 pole, air-filled watertight	
Insulation	Class F	
Protection	Built in overload protector (2.2kW); Built-in temperature detector protection (3.7 - 22kW)	
Accessories		
Standard	Submersible cable: 10m	
Optional	Quick discharge connector, Float switch (DML/DL only), Dry pit type (DML only)	

SELECTION CHART

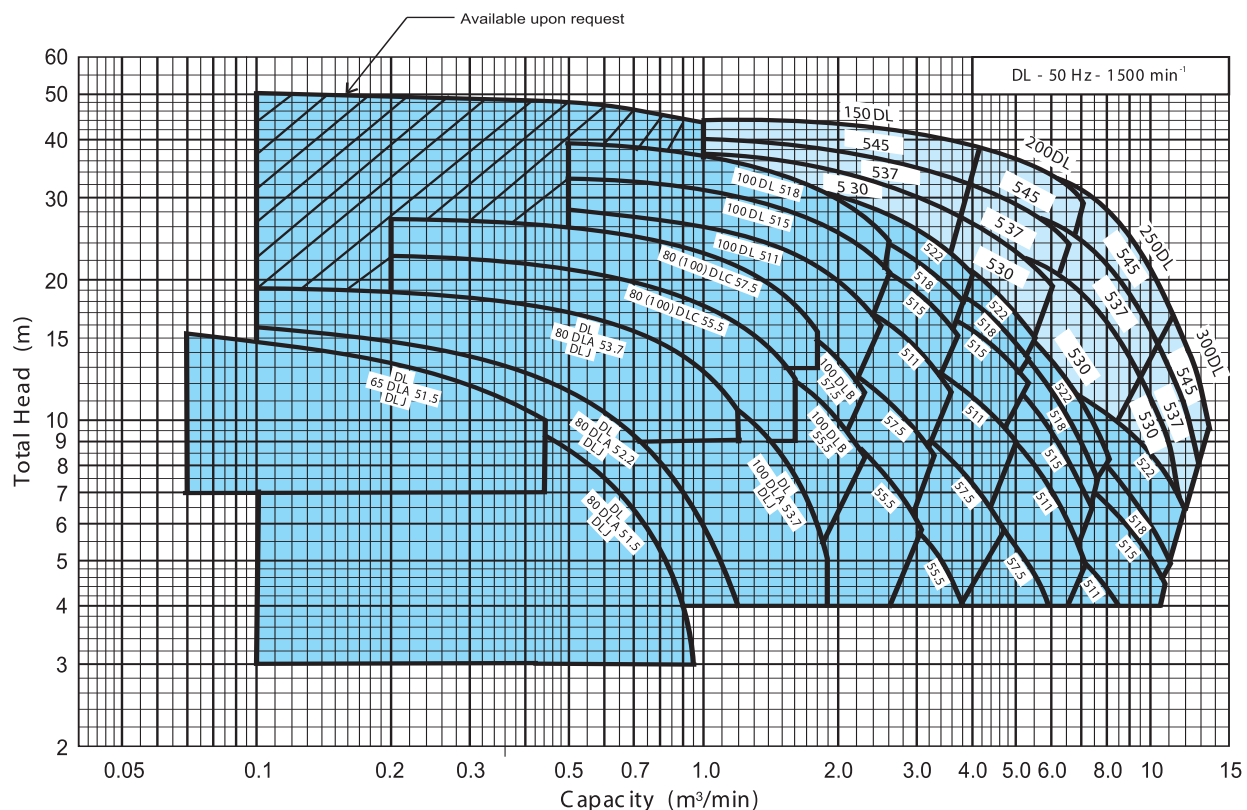
1450 min⁻¹


DL

DL 30/37/45 kW

		Standard	Optional
Scope	Discharge	65 – 300 mm	
	Motor Power	1.5 – 45 kW (3 phase)	
	Performance	Capacity : 0.07 – 12 m ³ /min Head : 3 – 52 m.	
Liquid	Type	Sewage	
	Maximum temperature	40° C (Manual and A Type) 32° C (J' Type)	
	Submergence	8 m (Max)	
Construction	Impeller	Non-clog type	
	Mechanical Seal	Oil lubricated, double mechanical seal (single spring 3.7 kW) (tandem spring 5.5 to 45 kW)	
Materials	Casing	Cast Iron	
	Impeller	Cast Iron	S/S Upon request
	Suction Cover	Cast Iron	
	Shaft	403 Stainless Steel	
	Motor Frame	Cast Iron	
	Fasteners	304 Stainless Steel	
	Mechanical Seal	Upper Faces : Carbon / Ceramic Lower Faces : Silicon Carbide / Silicon Carbide Lubricating Oil: Turbine Oil VG32 (SAE10W/20W)	
Motor	Type	Air filled dry submersible, IP68, Class F insulation	
	Nominal Speed	4 pole 1450 rpm	
	Applicable Voltages	380/400/415 volts 3 phase 50 Hz	
	Starting	DOL (up to 7.5 kW) Star-Delta (11 to 45 kW)	
	Protection	In built overload protection (up to 7.5 kW) Miniature thermal protector (11 to 45 kW)	Leakage detector upon request
	Bearings	Pre lubricated sealed ball bearings	
Cable	Length	10m	
Accessories	Flange	Discharge elbow	
	Others		Quick Discharge Connector (QDC)

SELECTION CHART



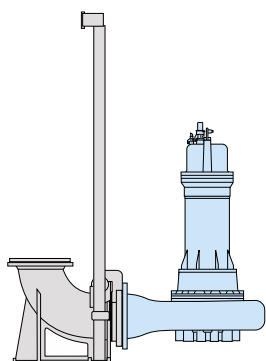
SUBMERSIBLE SEWAGE PUMPS

DLK
DLK

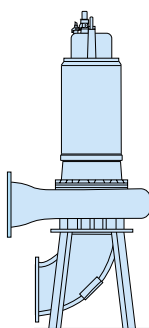

EBARA submersible pumps are designed for pumping sewage, sludge, effluents and surface water, even though containing a large proportion of solid or fibrous matter. These pumps are particularly suitable for both light and heavy-duty usage in domestic, industrial, water supply and agricultural pumping applications. Applications range from waste removal for residential and industrial buildings, large municipal and industrial pumping stations to sewage treatment plants.

FEATURES

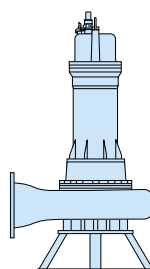
- Non-Clog impellers
- Spherical clearance 100mm - 150mm
- Standard and explosion proof motors available
- Wet and dry installation
- Horizontal installation available



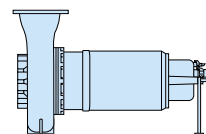
A. Permanent wet well installation
with quick discharge connection



B. Permanent dry well installation
Vertical Type



C. Wet well installation with ring
base stand



D. Dry well installation
Horizontal Type

Choice of motor

Speed:

Depending on hydraulic the motors are designed for the following operations:

1450 rpm/4-pole

960 rpm/6-pole

700 rpm/8-pole

(are available on request)

Voltages:

All power specifications relate to an operating voltage of 400 V/3Ph, 50 Hz. Other voltages are available on request.

Type of starting:

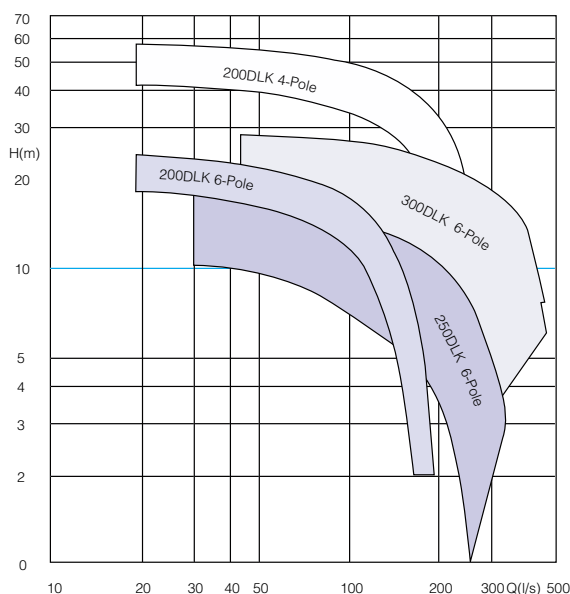
The motors are supplied as standard with star-delta starting. Motors pre-connected for DOL starting are available on request.

Explosion protection:

In addition to the standard version all motors can be supplied explosion proof according to E Ex d(e) II B standard.

Dry pit variant:

Besides the standard model for submerged operating all motors are also available for dry pit installation. Motor cooling is provided by a cooling jacket, using either the pumped liquid or external coolant circulation.



SUBMERSIBLE SEWAGE PUMPS

DSC
DSC


APPLICATIONS

- Water supply for sewage plants and sewage transfer plants
- River water intake
- General industrial waste water drain

FEATURES

- The closed impeller is designed to permit solid passage of 75mm in diameter and high efficiency.
- Quick discharge column for easy maintenance.
- A built-in leakage detector and thermal detector prevent motor damage.

SPECIFICATIONS

Liquid handled	Waste water, sewage, rain water, river water, general waste water
Temperature	0~40°C
Max. depth for pump immersion	10m
Construction	Impeller: Closed(two or three blade) Shaft sealing: W-mechanical seal(cartridge type)
Materials	Casing: FC250 Impeller: FC250 Shaft: SUS420J
Flange	JIS10K, Special
Motor	Type: Dry submersible motor
	Pole: 4Pole or 6Pole
	Phase-Voltage: 3-Phase 50Hz 200V (45kW and below) 50Hz 400V (55kW and above)
	Bearing: Ball bearings
	Shaft sealing: Side in contact with liquid: TW/TW Motor side: Ceramic/carbon
	Protective equipment: Leakage detector, thermal detector

SUBMERSIBLE SEWAGE PUMPS

DSCF
DSCF


APPLICATIONS

- Water supply for sewage plants and sewage transfer plants
- River water intake
- General industrial waste water drain

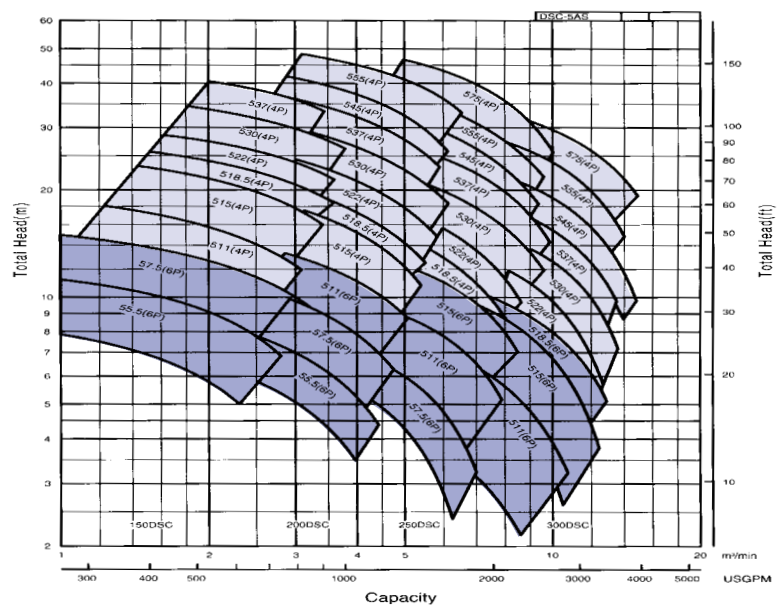
FEATURE

- In addition to special DSC features, the water hammer is prevented by a built-in flywheel equipment.

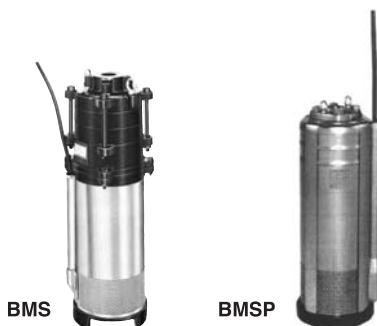
SPECIFICATIONS

Liquid handled	Waste water, sewage, rain water, river water
Temperature	0~40°C
Max. depth for pump immersion	10m
Construction	Shaft: Closed(two or three blade) Bearing: W-mechanical seal(cartridge type) Flywheel: Housed in top section of motor
Materials	Casing: FC250 Impeller: FC250 Shaft: SUS420J
Flange	JIS10K, Special
Motor	Type: Dry submersible motor with flywheel
	Pole: 4Pole or 6Pole
	Phase-Voltage: 3-Phase 50Hz 200V (45kW and below) 50Hz 400V (55kW and above)
	Bearing: Ball bearings
	Shaft Sealing: Side in contact with liquid: TW/TW Motor side: Ceramic/carbon
	Protective equipment: Leakage detector, thermal detector

50Hz ■ 4Pole[Synchronous speed:1500min⁻¹]
■ 6Pole[Synchronous speed:1000min⁻¹]



SUBMERSIBLE PUMPS FOR WATER PIT **BMSP**



APPLICATIONS

- City water intake and supply
- Industrial water, irrigation water

FEATURES

- **Energy conservation (High efficiency)**
Producing an adequate volume of water at low cost.
- **Use for portable water supply**
Water contamination is prevented by use of a water-tight type motor with stainless steel frame and epoxy resin coated steel castings.
- **Space conservation**
No floor space required for installation as the pump is submersible type.
- **Low noise**
Operating is effectively silence as the pump and motor are submerged.
- **Automatic operation**
As the pump can be operated without priming, automatic operation is possible.
- **Possible to operate at low-water levels**
Pump suction inlet of lower portion provides for constant replenishment of fresh water in pit.

SUBMERSIBLE MOTOR PUMPS **BMS**

BMS



APPLICATIONS

- City water intake and supply
- Industrial water, irrigation water

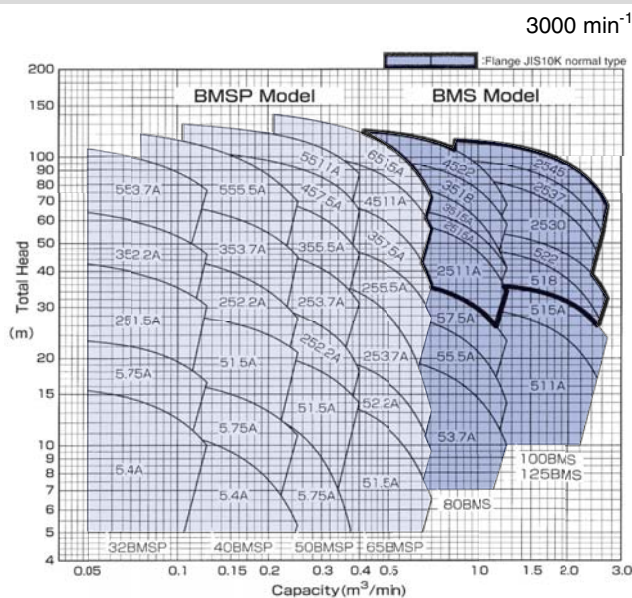
FEATURES

- Since water is not soiled by adoption of water filled submersible, it is the best for public water.
- As the pump can be operated without priming, automatic operation is easy.
- No floor space required for installation as the pump is submersible type.

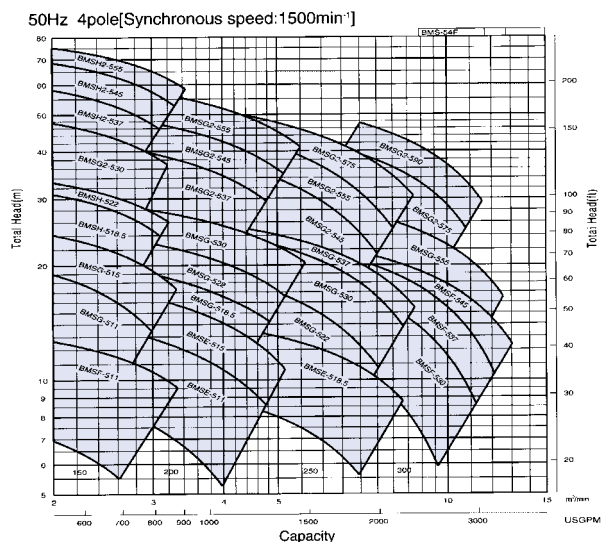
SPECIFICATIONS

Liquid handled		Fresh water, river water
Temperature		0~32°C
Maximum submergence		10m
Construction	Impeller	Closed
	Shaft sealing	Oil seal, mechanical seal
Materials	Casing	FC200
	Impeller	CAC402
	Shaft	SUS402J ₁
Flange		JIS10K
Motor	Type	Water filled submersible motor
	Pole	4Pole
	Phase-Voltage	3-Phase 50Hz:200V(45kW and above) 50Hz:400V (55kW and above)
	Bearing	(Thrust) tilting pad bearing (Radial) bushing

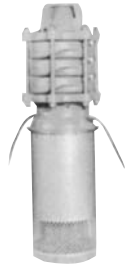
SELECTION CHART



SELECTION CHART



SUBMERSIBLE MOTOR PUMPS

BMSS
BMSS


APPLICATIONS

- City water intake and supply
- Industrial water, irrigation water

FEATURES

- Since water is not soiled by adoption of water filled submersible it is the best for public water.
- As the pump can be operated without priming, automatic operation is easy.
- No floor space required for installation as the pump is submersible type.
- High pressure zone is acceptable.

SPECIFICATIONS

Liquid handled	Fresh water, river water
Temperature	0~32°C
Maximum submergence	10m
Construction	Impeller Closed
	Shaft sealing 2Pole:W-oil seal 4Pole:Oil seal, mechanical seal
Materials	Casing FC200/FC250
	Impeller CAC40S
	Shaft SUS420J
Flange	JIS10K, JIS20K
Motor	Type Water filled submersible motor
	Pole 2Pole or 4Pole
	Phase-Voltage 3-Phase 50Hz:200V (45kW and below) 50Hz:400V (55kW and above)
	Bearing (Thrust)Rolling pad bearing (Radial)Bushings

SUBMERSIBLE SCREW PUMPS

DSMZ
DSMZ


APPLICATIONS

- Water supply for sewage plants and sewage transfer plants
- River water intake
- General industrial waste water drain

FEATURES

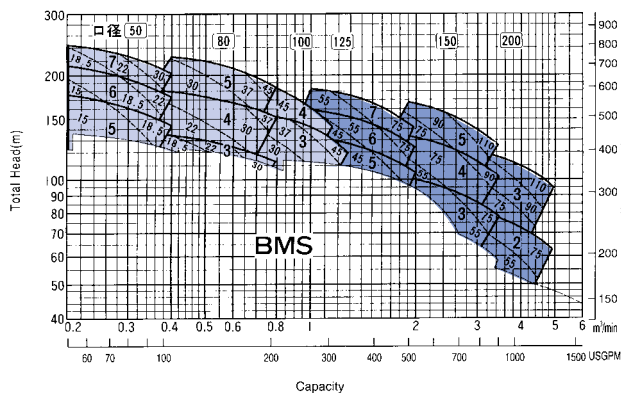
- Quick discharge column for easy maintenance.
- A built-in leakage detector and thermal detector prevent motor damage.

SPECIFICATIONS

Liquid handled	Waste water, sewage, sludge, rain water
Temperature	0~40°C
Maximum submergence	10m
Construction	Impeller Screw type
	Shaft sealing W-mechanical seal(cartridge type)
Materials	Casing FC250
	Impeller FC250/SCS13/HCrFC
	Shaft SUS403
Flange	Special JIS10K
Motor	Type Dry submersible motor
	Pole 4Pole or 6Pole
	Phase-Voltage 3-Phase 50Hz:200V (45kW and below) 50Hz:400V (55kW and above)
	Bearing Ball bearings
	Shaft Sealing Side in contact with liquid:TW/TW Motor side: Ceramic/carbon
	Protective equipment Leakage detector, thermal detector

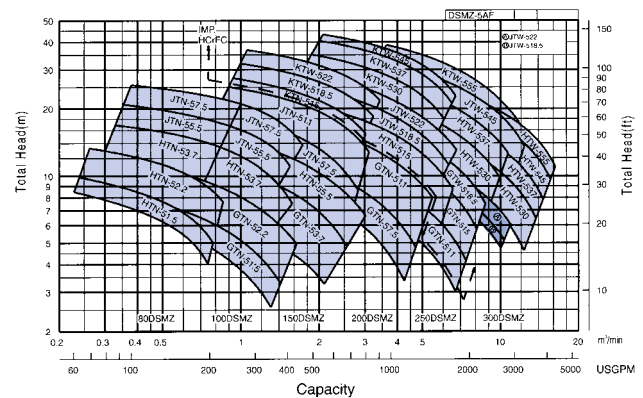
SELECTION CHART

- 50Hz ■ 2pole[Synchronous speed:3000min⁻¹]
■ 4pole[Synchronous speed:1500min⁻¹]



SELECTION CHART

- 50Hz ■ 4Pole[Synchronous speed:1500min⁻¹]
■ 6Pole[Synchronous speed:1000min⁻¹]



NSP & NLP



NSP



NLP

FEATURES

- Seal-less magnetic drive unit, no leakage operation.
- Corrosion resistance materials used thus ensure long operating life.

STAINLESS STEEL MULTI-STAGE PUMPS **VTP**

VTP

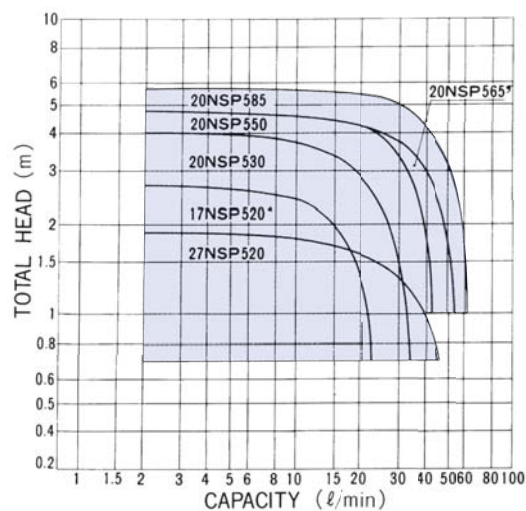


FEATURES

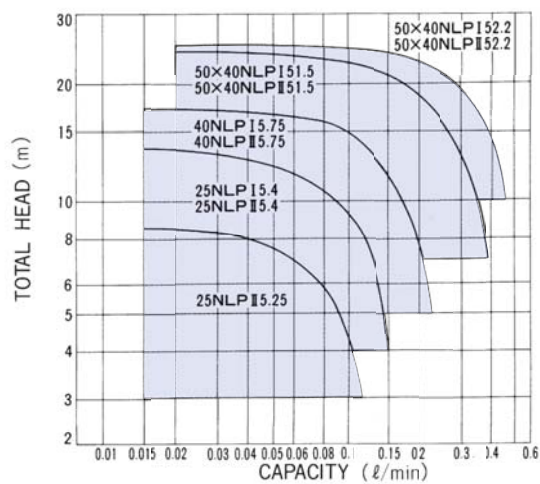
- Vertical design, save space and easy installation.
- Stainless steel wetted parts enhance operating life.
- Ideal for coolant pumping application.

SELECTION CHART

FOR NSP Model

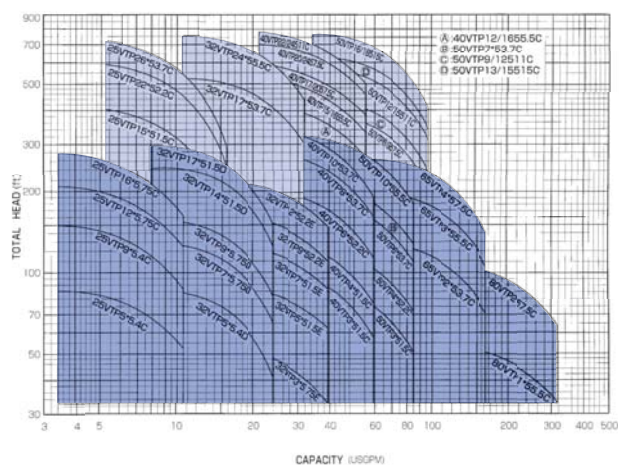


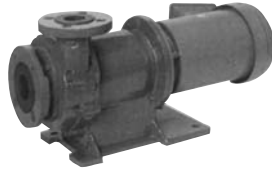
FOR NLP Model



SELECTION CHART

2 Pole



MAGNET-DRIVE PUMPS (DOUBLE CASING) NBF
NBF

APPLICATIONS

- Highly-corrosive liquids transport and circulate

FEATURES

- There is no liquid leak.
- Principal material in contact with liquid is carbon fiber and ETFE for transporting highly acid or alkaline liquids.
- External casing made from cast iron (FC 200), for resistance to heavy piping load and fire.

SPECIFICATIONS

Liquid handled	Corrosive liquid
Temperature	0~90°C
Viscosity	100mPas(10cP) and below (However, no more than permissible motor power)
Density	1900kg/m ³ and below (However, no more than permissible motor power)
Max suction pressure	0.1MPa(1kgf/cm ²)
Construction	Impeller: Closed Bearing: Sleeve bearings, disc bearings
Materials	Casing: ETFE+ carbon fiber (20%) Impeller: ETFE+ carbon fiber (20%) Shaft: High-purity aluminum ceramic Special (JIS 10K FF required)
Flange	Type: Totally enclosed fan-cooled motor Increased safety motor Explosion proof motor
Motor	Phase: 3-Phase Voltage: 50Hz 200-400V W-Voltage 60Hz 200/220V, 400/440V W-Voltage

MAGNET-DRIVE PUMPS
NWP
NWP

APPLICATIONS

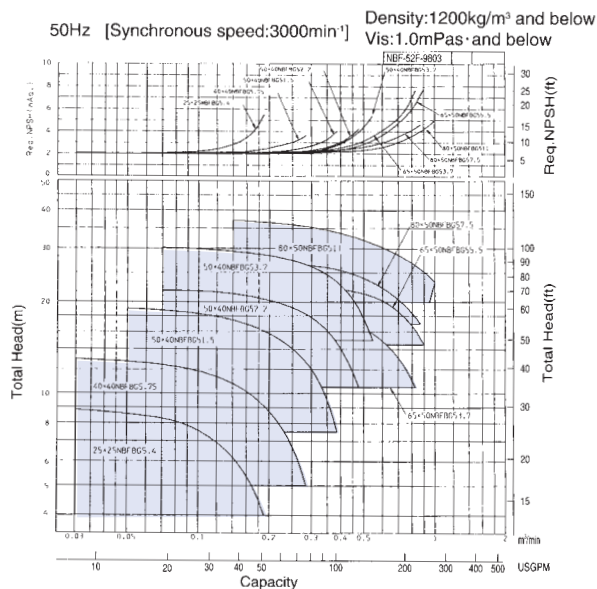
- Clean water, beverages and other liquids which dislike rust.

FEATURES

- No shaft seal, there is no liquid leak.
- Simple structure for easy maintenance.
- Compact and lightweight at adoption of a stainless steel press.

SPECIFICATIONS

Liquid handled	The other liquids which dislike rust
Temperature	0~100°C
Density	1000kg/m ³ and above
Max suction pressure	0.3MPa(3kgf/cm ²)
Construction	Impeller: Closed Bearing: Sleeve metal
Materials	Casing: SUS316L Impeller: SUS316L Shaft: SUS304L
Flange	JIS10K or equivalent
Motor	Type: Totally enclosed fan-cooled motor Pole: 2Pole Phase-Voltage: 3-Phase200/220V

SELECTION CHART


STAINLESS STEEL MAGNET-DRIVE PUMPS

NW
NW


APPLICATIONS

- Highly alkaline liquids, such as caustic soda
- Toxic organic solvents transport and circulate

FEATURES

- No shaft seal, there is no liquid leak.
- 'Back Pull-Out' construction, permits disassembly and inspection without removing the suction and discharge pipes.

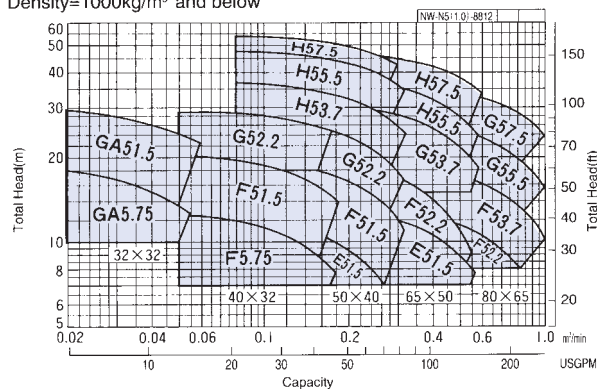
SPECIFICATIONS

Liquid handled		Liquid solvents,Poisonous Liquid, Expensive Liquid
Temperature		0 ~ 100℃
Density		1400kg/m ³ and below
Max suction pressure		0.4MPa(4kgf/cm ²)
Construction	Impeller	Closed
	Bearing	Sleeve metal
Materials	Casing	SCS13
	Impeller	SCS13
	Shaft	SUS304L
	Bearing	Carbon/SiC, SiC/SiC
Flange		JIS10K
Motor	Type	Totally enclosed fan-cooled motor Increased safety motor(eG3) but 0.75kW, Outdoor use Explosion proof motor(d.G.) but 0.75kW, Outdoor use
	Pole	2Pole
	Phase-Voltage	3-Phase200/220V, (400/440V)

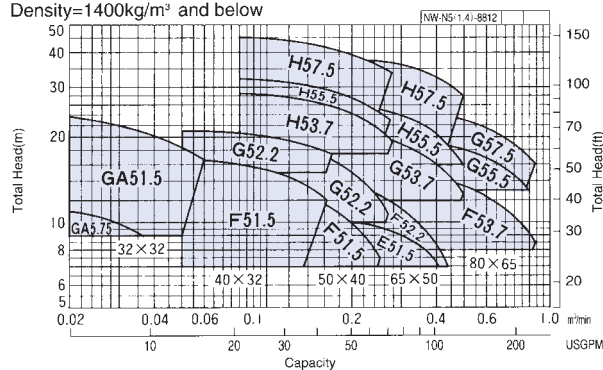
SELECTION CHART

50Hz 2pole[Synchronous speed:3000min⁻¹]

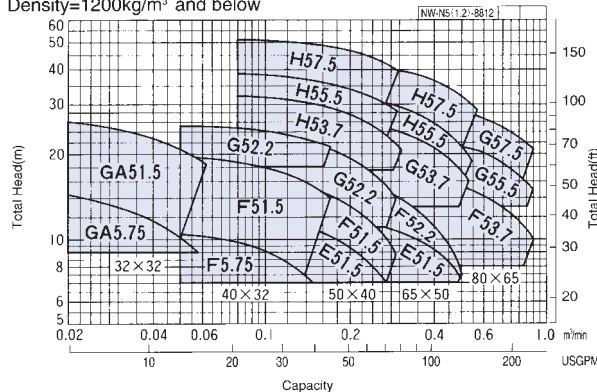
Density=1000kg/m³ and below



Density=1400kg/m³ and below

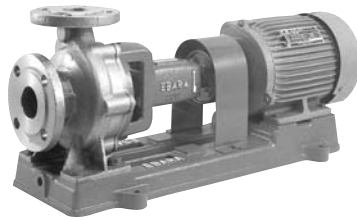


Density=1200kg/m³ and below



Notes: This selection chart applies to the following conditions: viscosity=1.0mPa · s(1.0cP)

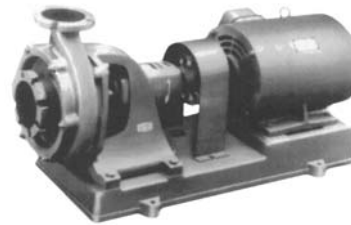
STAINLESS STEEL VOLUTE PUMPS

FSS
FSS


FEATURES

- **Various models**
Either 2-pole or 4-pole models can be selected in wide range
- **Easy maintenance**
The pump is B.P.O. (Back-Pull-Out) type that can be disassembled or inspected without removing the piping or heat insulation.
- **Strong structure**
The discharge port is located at the center of the casing which is supported by the legs. Therefore, large piping load can be applied to pump.
- **Limit load characteristics**
Limit load characteristics effectively prevent overloading even with large discharge rates.

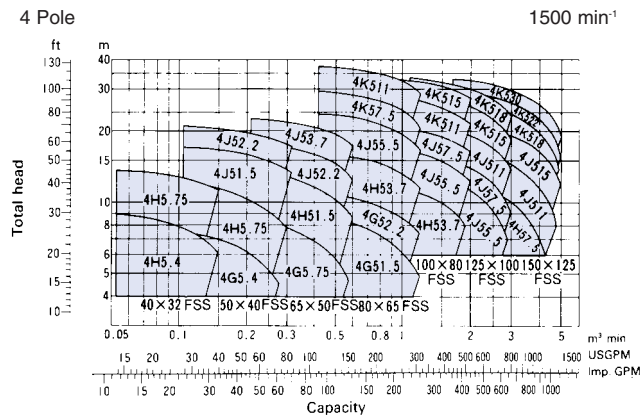
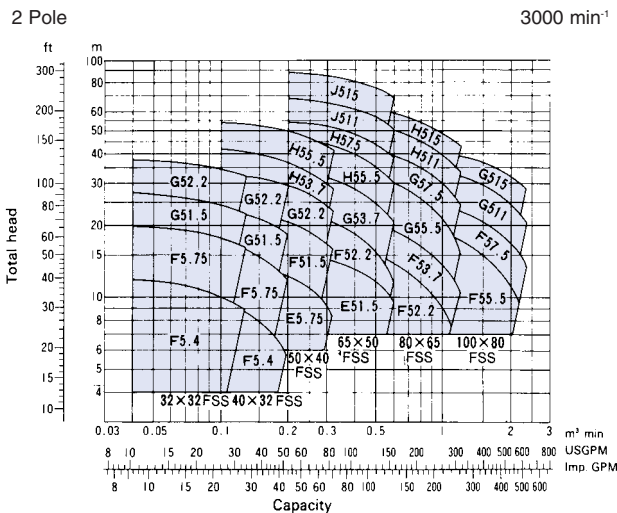
SLURRY PUMPS

SAL
SAL


FEATURES

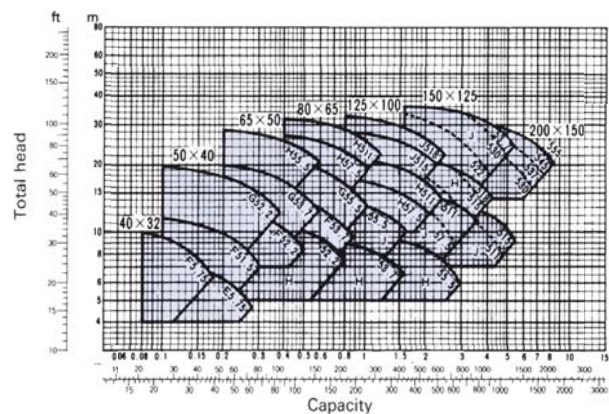
- **No power overload**
Specially designed impeller with a limit load feature is used so that there is never a power overload no matter what the head.
- **Low energy consumption and yet highly efficient**
Unique hydraulic design makes this pump more efficient than any other type. The initial rate of efficiency is sustained for reduced electrical power consumption.
- **Highly durable**
A special, wear-resistant iron casting is used for both body and impeller.
- **Ample motor output allowance**
The motor has ample power output allowance. It will operate without change of output with mixed solution of 1.1 specific gravity.
- **Minimal gland packing leakage**
Rear impeller vane ensures minimal leakage from durable gland packing.
- **Corrosion and wear-resistant materials**
Both chrome iron casting and two-phase stainless steel are available. Interchangeability makes a wide range of applications possible.

SELECTION CHART

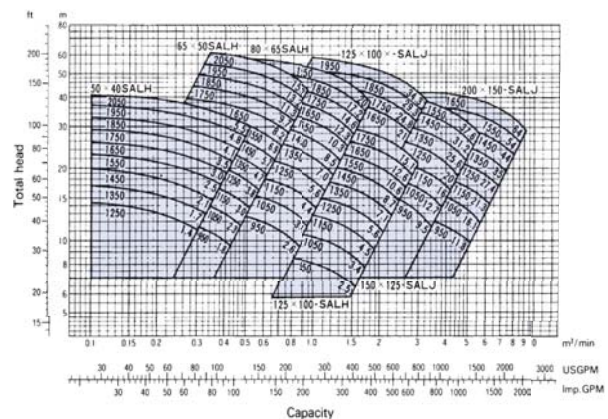


SELECTION CHART

FOR SAL-M (Motor direct drive)

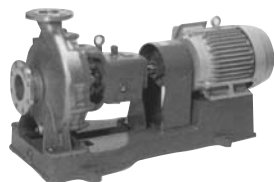


FOR SAL-R (V belt drive)



PROCESS PUMPS (CHEMICAL • LIGHT SLURRY) **TFS**

TFS



APPLICATIONS

- Chemical industry, petrochemical industry
- Other industries

FEATURES

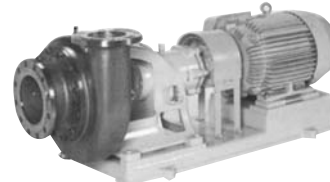
- The semi-open impeller is the best for liquids containing slurry.
- 'Back Pull-Out' construction, permits disassembly and inspection without removing the suction and discharge pipes.

SPECIFICATIONS

Liquid handled	Process liquid
Temperature	-15~150°C (Cast iron) -29~150°C (Stainless steel)
Density	700kg/m ³ and above
Construction	Impeller
	Semi-open type
	Shaft sealing
	Gland packing, mechanical seal
Materials	Bearing
	Ball bearings (oil bath)
	Casing
Materials	FC250/SCS14/SCS11
	Impeller
	FC200/SCS14/SCS11
Flange	Shaft
	S35C/SUS316
JIS10K	

PROCESS PUMPS (CHEMICAL • LIGHT SLURRY) **TLS**

TLS



APPLICATIONS

- Chemical industry, petrochemical industry
- Other industries

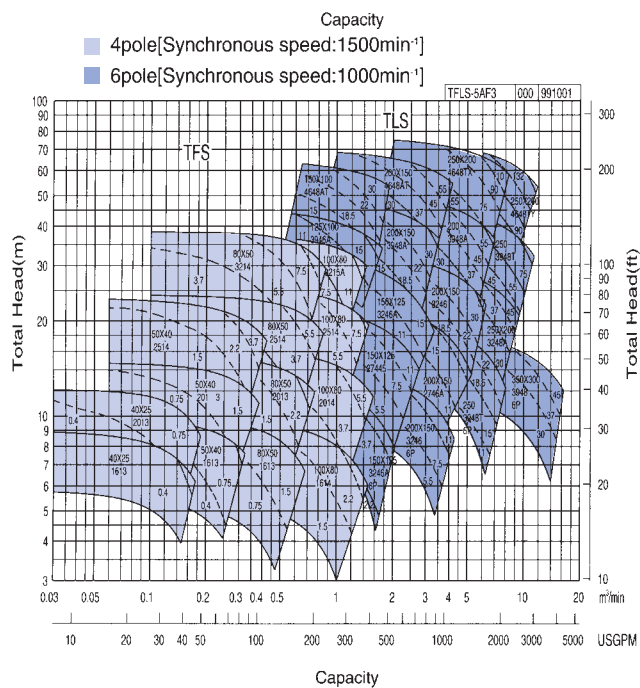
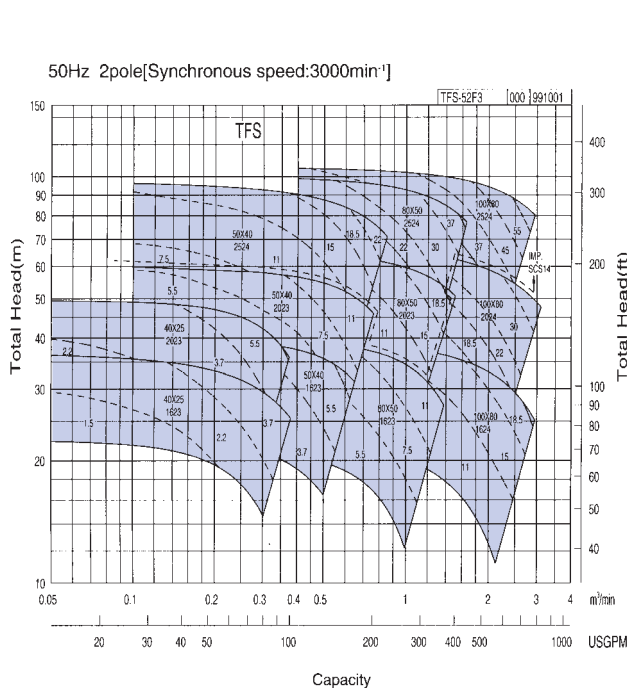
FEATURES

- The open impeller is the best for liquids containing slurry.
- Wear of casing and suction cover is prevented with a side plate.
- Shaft withstands long use by non-contact labyrinth seal.

SPECIFICATIONS

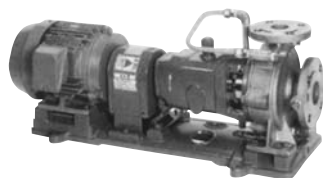
Liquid handled	Process liquid
Temperature	-15~150°C (Cast iron) -29~150°C (Stainless steel)
Density	700kg/m ³ and above
Construction	Impeller
	Open type
	Shaft sealing
	Gland packing, mechanical seal
Materials	Bearing
	Ball bearings (oil bath)
	Casing
Materials	FC200/SCS13/SCS14/SCS11
	Impeller
	SCS13/SCS14/SCS11
Flange	Shaft
	SUS304/SUS316
JIS10K	

SELECTION CHART



Notes: 1. The numbers in the areas enclosed by broken lines indicate motor capacity in kW for a density of 1000 kg/m³.
2. Viscosity correction is required for liquids having a viscosity of 4.3 mPa.s (4.3cP) or more.

PROCESS PUMPS

JFW
JFW


APPLICATIONS

- Chemical industry, petrochemical industry
- Other industries

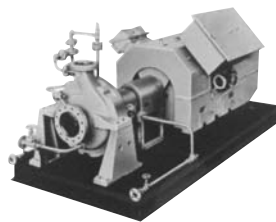
FEATURES

- For setting ends on shaft sleeve, wearing of a mechanical seal is easy.
- Shaft withstands long use by non-contact labyrinth seal.
- For safety, sealed coupling guard is equipped standardly.
- 'Back Pull-Out' construction, permits disassembly and inspection without removing the suction and discharge pipes.

SPECIFICATIONS

Liquid handled		Water, oil, process liquid
Temperature		0~90℃
Max suction pressure		700kg/m ² and above
Construction	Impeller	Closed
	Shaft sealing	Mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	SCS14
	Impeller	SCS14
	Shaft	SUS316
Flange		JIS10K

SINGLE SUCTION PROCESS PUMPS UCW

UCW


APPLICATIONS

- Petroleum refineries
- Petrochemical industry
- Other chemical industries

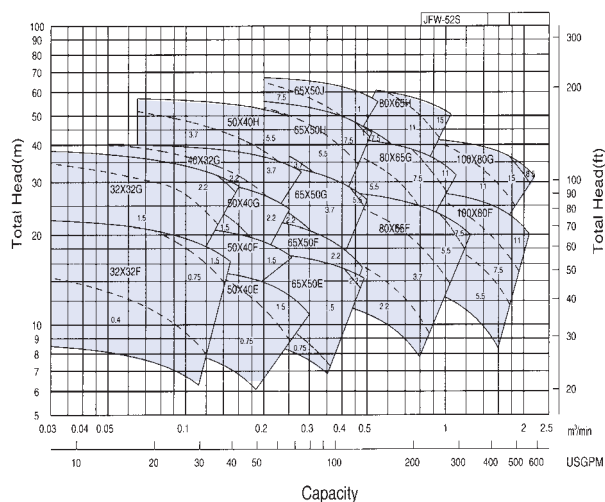
FEATURES

- Centerline supported heavy duty design.
- Full compliance with API 610 specifications.
- Low NPSH operation.

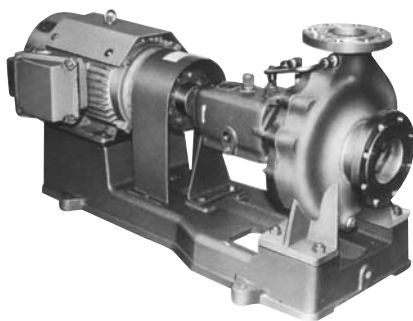
SPECIFICATIONS

Liquid handled		Other process liquids
Temperature		— 100～450℃
Max suction pressure		4.1MPa(45kgf/cm ²)
Construction	Impeller	Closed
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	SCPH2/SCPL1/SCS1/SCS13/SCS14
	Impeller	FC200/SCS1/SCS13/SCS14
	Shaft	SCM440/SUS420J1/SUS304/SUS316
Flange	ANSI300lb	

SELECTION CHART

50Hz 2pole[Synchronous speed:3000min⁻¹]


SINGLE SUCTION PROCESS PUMPS

IFW
IFW


APPLICATIONS

- Chemical industry, petrochemical industry
- Other chemical industries

FEATURES

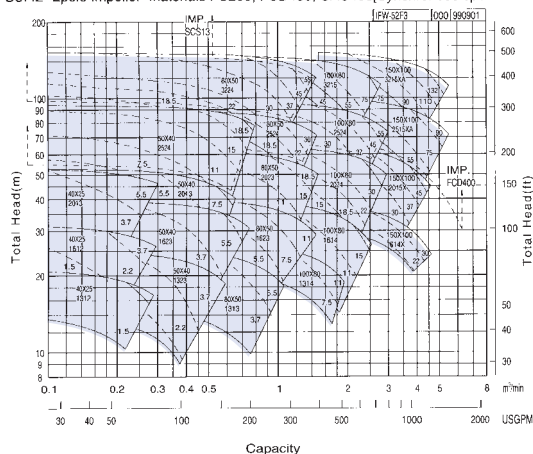
- Low NPSH operation.
- 'Back Pull-Out' construction permits disassembly and inspection without removing the suction and discharge pipes.
- Flexibility of design handles wide range of liquids.
- Full compliance ISO 2858 specifications.

SPECIFICATIONS

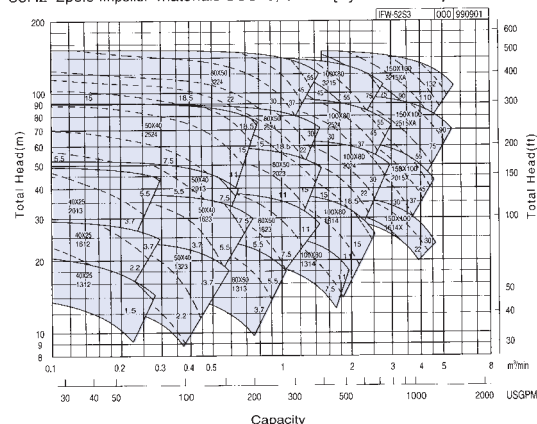
Liquid handled	Process liquid, Sea water
Temperature	-50~200°C (Stainless steel) -5~200°C (Cast steel) -15~150°C (Cast Iron)
Density	600kg/m ³ and above
Construction	Impeller Closed Shaft sealing Gland packing, mechanical seal Bearing Ball bearings (oil bath)
Materials	Casing FC250/SC480/SCS13/SCS14 Impeller FC200/FCD400/CAC406/SCS13/SCS14 Shaft S35C/SCM440/SUS420J1/SUS304 SUS316/SUS630
Flange	JIS10K/ANSI125lb (Cast Iron) JIS10K/ANSI150lb (Cast steel, Stainless steel)

SELECTION CHART

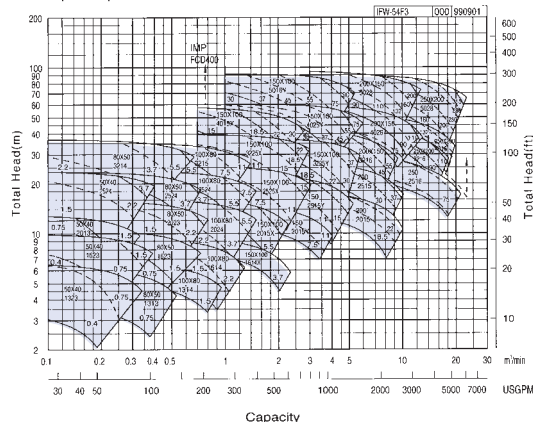
50Hz 2pole Impeller materials FC200, FCD400, CAC406[Synchronous speed:3000min⁻¹]



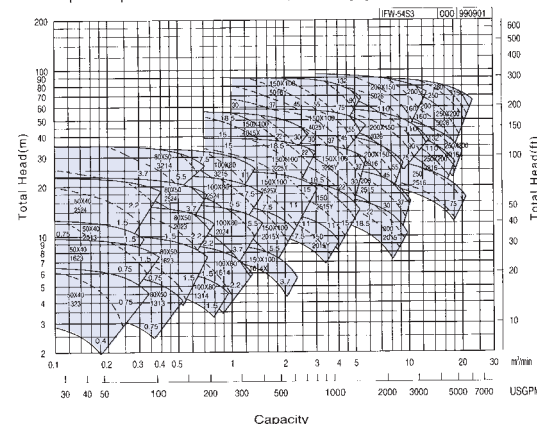
50Hz 2pole Impeller materials SCS13, SCS14[Synchronous speed:3000min⁻¹]



4pole Impeller materials FC200, FCD400, CAC406[Synchronous speed:1500min⁻¹]



4pole Impeller materials SCS13, SCS14[Synchronous speed:1500min⁻¹]



- Notes:
1. The numbers in the areas enclosed by broken lines indicate motor capacity in kW for a density of 1000 kg/m³.
 2. Viscosity correction is required for liquids having a viscosity of 4.3 mPa.s (4.3cP) or more.
 3. Motor output given in the above performance curve is applied to the pumps equipped with grand packing.

SEAL-LESS PUMPS

SXB

SXB



APPLICATIONS

- Chemical plant
- Other industries

FEATURES

- A non-shaft seal and non-lubricant system simplifies maintenance.
- Electric bearing wear sensor detects so that bearings can be seen at a glance during the changing time even after parts have been changed, the bearing sensor can be used.
- So safety and cleanliness can be maintained.
- Integrated pump and motor structure for compactness and light weight, and no need for alignment.
- Sealed motor structure for quiet operation.
- Foot support casing withstands piping loads.

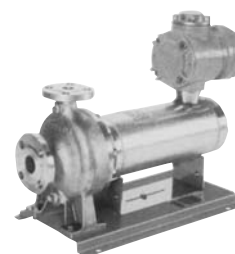
SPECIFICATIONS

Liquid handled	Water, process liquid
Temperature	30~100°C (d.G.) -30~80°C (d.G.)
Viscosity	100mPa·s(100cP) and below
Density	700kg/m ³ and above
Max. working pressure	1MPa(10.2kgf/cm ²)
Construction	Impeller Closed Bearing Sleeve bearings/thrust disk
Materials	Casing SCS13, SCS14 Impeller SCS13, SCS14 Shaft SUS304, SUS316
Flange	JIS10K, ANSI150lb, JPI150lb
Motor	Type Explosion proof motor (d.G., d.G.) Pole 2Pole Phase-Voltage 3-Phase200/220, 400/440V

SEAL-LESS PUMPS (HIGH TEMPERATURE AND PRESSURE)

SXH

SXH



APPLICATIONS

- Chemical plant
- Other industries

FEATURES

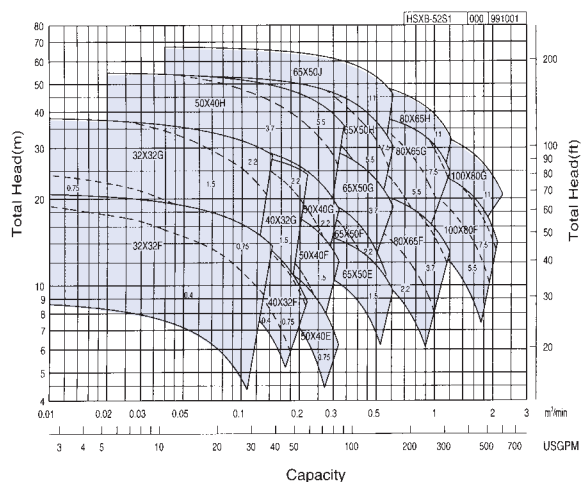
- Cooling not required up to 130°(d.G.)
- A non-shaft seal and non-lubricant system simplifies maintenance.
- Electric bearing wear sensor detects so that bearings can be seen at a glance during the changing time even after parts have been changed, the bearing sensor can be used.
- Handled liquid does not leak to outside, so safety and cleanliness can be maintained.
- Integrated pump and motor structure for compactness and light weight, and no need for alignment.
- Sealed motor structure for quiet operation.
- Foot support casing withstands piping loads.

SPECIFICATIONS

Liquid handled	Liquefied gas, process liquid
Temperature	-50~155°C (d.G.) -50~105°C (d.G.)
Viscosity	100mPa·s(100cP) and below
Density	600kg/m ³ and above
Max working pressure	2.45MPa(25kgf/cm ²)
Construction	Impeller Closed Bearing Sleeve bearings/thrust disk
Materials	Casing SCS14, SCS13 Impeller SCS14, SCS13 Shaft SUS316, SUS304
Flange	JIS20K, ANSI300lb
Motor	Type Explosion proof motor (d.G., d.G.) Pole 2Pole Phase-Voltage 3-Phase200/220, 400/440V

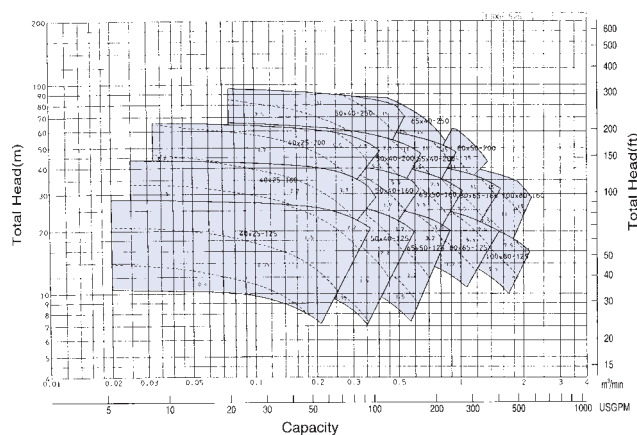
SELECTION CHART

50Hz 2pole[Synchronous speed:3000min⁻¹]



SELECTION CHART

50Hz 2pole[Synchronous speed:3000min⁻¹]



SLURRY PUMPS

URSD-L·H

URSD-L·H



APPLICATIONS

- Industrial processing waste water
- Sand and topsoil transport
- Scale pit and slag transport

FEATURES

- Double casing for easy parts replacement.
- Over head motor and V-belt drive for minimum installation space.

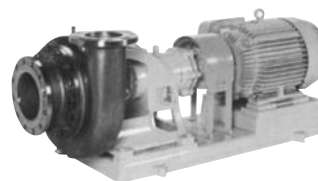
SPECIFICATIONS

Liquid handled	Highly concentrated slurry	
Temperature	-10~100°C	
Density	1300kg/m ³ and below	
Max suction pressure	L Model: 0.2MPa(2kgf/cm ²) H Model: 0.3MPa(3kgf/cm ²)	
Construction	Impeller	Semi-open type
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	Exterior: FC250 Interior: HC/FC/NR/EPT/SCS11
	Impeller	HC/FC/NR/EPT/SCS11
	Shaft	S35C/SUS316
Flange	Special Flange	

PULP PUMPS

ULP

ULP



APPLICATION

- Pulp liquid transfer

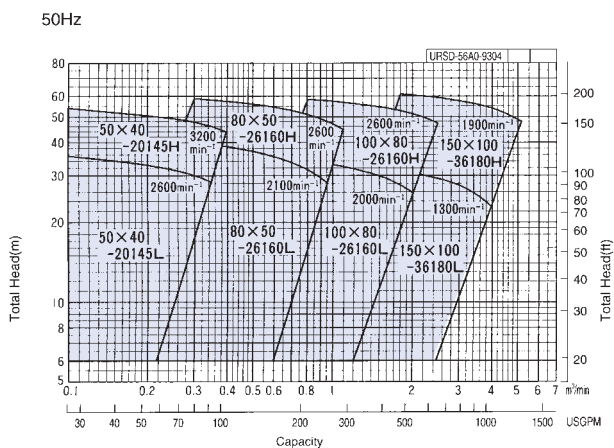
FEATURES

- Simplified adjustment of impeller clearance and triple division of casing has dramatically reduced maintenance time.
- Wear of casing and suction cover is prevented with a side plate.
- Shaft withstands long use by non-contact labyrinth seal.

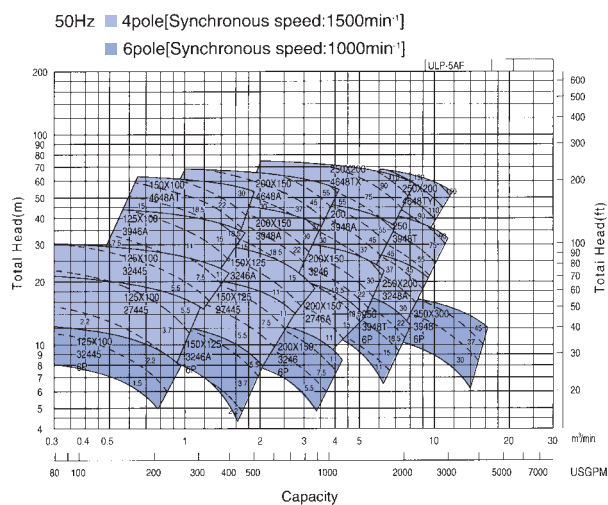
SPECIFICATIONS

SPECIFICATIONS		
Liquid handled	0.3~6%, Pulp liquid	
Temperature	0~95℃	
Density	1000kg/m ³	
Max suction pressure	0.3MPa(3kgf/cm ²)	
Construction	Impeller	Full open type
	Shaft sealing	Gland packing, mechanical seal / Stationary type
	Bearing	Ball bearings (oil bath)
Materials	Casing	FC200/SCS13
	Impeller	SCS13
	Shaft	SUS304
Flange	JIS10K	

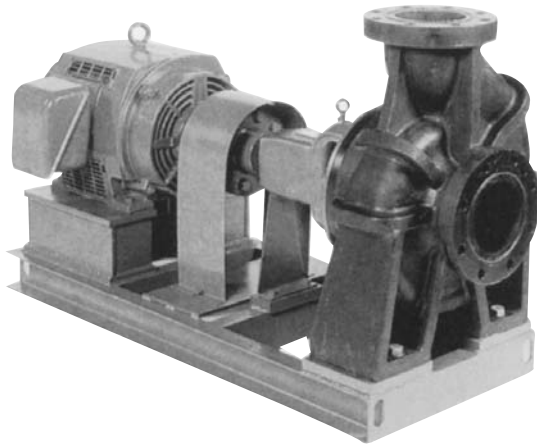
SELECTION CHART



SELECTION CHART



PENTAM VOLUTE PUMPS (Sea Water & Chemical Use)

FPS
FPS


APPLICATIONS

- Seawater intake, supply and circulate
- Corrosive chemical liquids transport and circulate
- Hot spring water transport and circulate

FEATURES

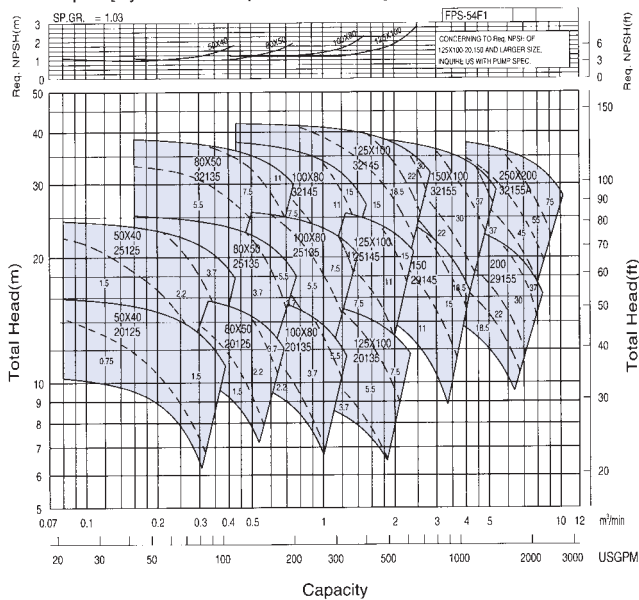
- High efficiency, low NPSH.
- High durability, resistance to abrasion.
- EASILY DISPOSABLE
Absence of fiberglass reinforcement in the plastic-material means the pump can be disposed of by incineration.-An environment-protecting feature.
- EXCELLENT RESISTANCE TO CORROSION
Highly resistant to acids, sewerage and other liquids that corrode stainless steel

SPECIFICATIONS

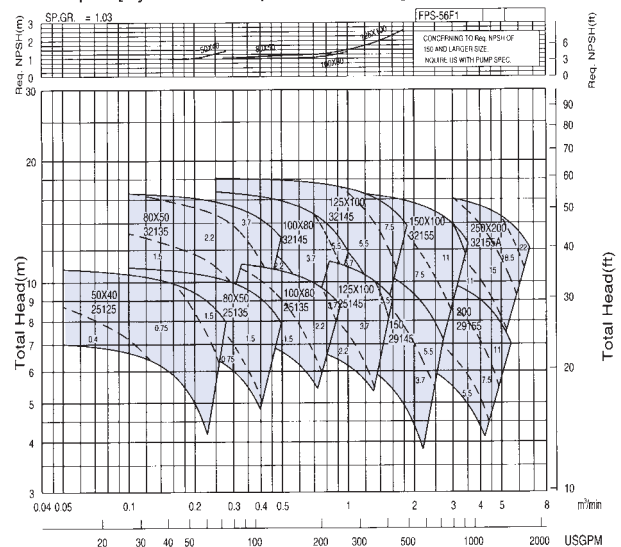
Liquid handled	Seawater, Corrosive chemical water, Hot spring water	
Temperature	-5~80℃	
Max suction pressure	0.2MPa(2kgf/cm ²)	
Construction	Impeller	Semi-open type
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath/sealed grease)
Materials	Casing	PENTAM
	Impeller	PENTAM
	Shaft	SUS316
Flange	JIS10K or equivalent	

SELECTION CHARTS

50Hz 4pole[Synchronous speed:1500min⁻¹]



50Hz 6pole[Synchronous speed:1000min⁻¹]

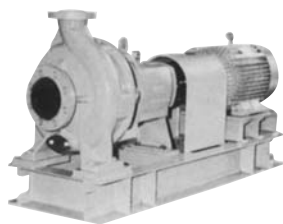


Notes: 1. NPSH varies with pump model. Consult applicable performance curves determine NPSH.
2. The numbers in the areas enclosed by broken lines indicate motor capacity in kw for a density of 1030kg/m³

TEFLON® LINING PUMPS

IFL

IFL



APPLICATIONS

- Strong acidic or alkaline liquids transport.
- Chloride chemical liquids transport.

FEATURE

- Excellent resistance to corrosion by Teflon® Lining.

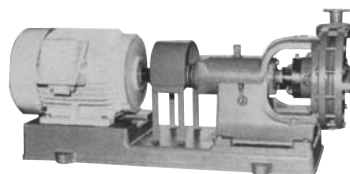
SPECIFICATIONS

Liquid handled	Acidic, alkaline, pharmaceutical, and corrosive liquids	
Temperature	0~150°C	
Density	400mm ³ /s(cSt) and below	
Max suction pressure	0.45MPa(4.5kgf/cm ²)	
Construction	Impeller	Semi-open type
	Shaft sealing	Mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	FCD400/Teflon® (PFA)
	Impeller	FCD400/Teflon® (PFA)
	Shaft	SUS304
Flange	JIS10K or equivalent	

TITANIUM PUMPS

ULTP

ULTP



APPLICATIONS

- Strong acidic or alkaline liquids transport.
- Chloride chemical liquids transport.

FEATURE

- Material in contact with liquid is titanium, for excellent resistance to corrosion.

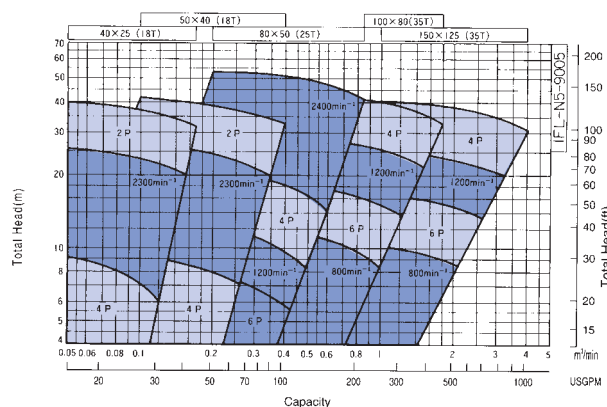
SPECIFICATIONS

Liquid handled	Acidic, alkaline, brine, and galvanizing waste water spring water	
Temperature	0~150°C	
Max working pressure	0.98MPa(10kgf/cm ²)	
Construction	Impeller	Open or Semi-open type
	Shaft sealing	Mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	Titanium
	Impeller	Titanium
	Shaft	Titanium/SCM440
Flange	Loose flange (JIS10K or equivalent)	

SELECTION CHART

50Hz ■ Directly coupled motor, 2/4/6-pole

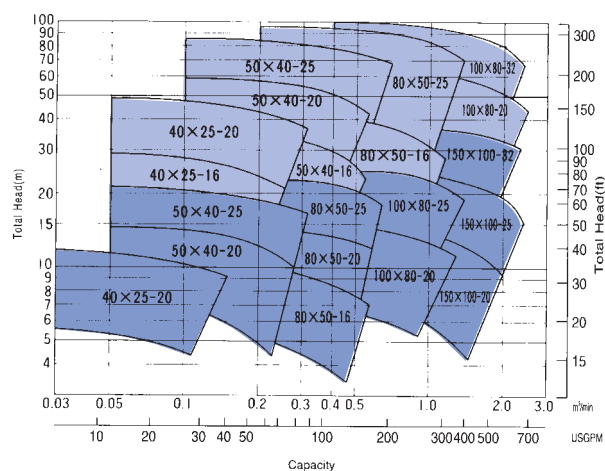
min⁻¹ Belt drive



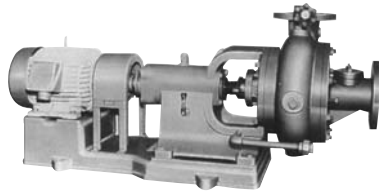
SELECTION CHART

50Hz ■ 2pole[Synchronous speed:3000min⁻¹]

■ 4pole[Synchronous speed:1500min⁻¹]



NON-CLOG VOLUTE PUMPS

ULK
ULK


APPLICATIONS

- For draining waste water and filth from raw and sewage plant.
- Sludge transports
- Solid transports

FEATURE

- Discharges solids and long-fiber without clog.

SPECIFICATIONS

Liquid handled	Waste water, waste solids, sludge, pulp	
Temperature	0~80℃	
Max suction pressure	0.3MPa(3kgf/cm ²)	
Construction	Impeller	Non-clog type
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	FC200/H-CrFC
	Impeller	FC200/SCS13/H-CrFC
	Shaft	S35C/SUS420J/SUS304
Flange	Special JIS10K	

SCREW VOLUTE PUMPS

IFMZ
IFMZ


APPLICATIONS

- For transporting filth and sludge from sewage plants.
- Long-fiber pulp transporting
- General industrial waste water drain

FEATURES

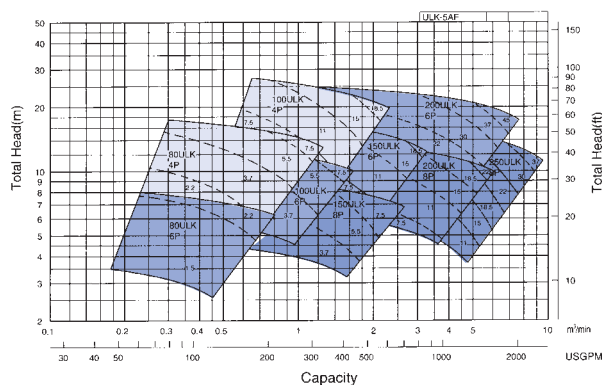
- No-clog type and high efficiency.
- There is little fluctuation in flow control is easy.
- Compact design.

SPECIFICATIONS

Liquid handled	Waste water, waste solids, sludge, pulp	
Temperature	0~80℃	
Max working pressure	0.09~0.2MP(0.9~2kg/cm ²)	
Construction	Impeller	Screw type
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearings (oil bath)
Materials	Casing	FC250/HCrFC
	Impeller	FC250/SCS13/HCrFC
	Shaft	S35C/SUS304
Flange	Special /JIS10K	

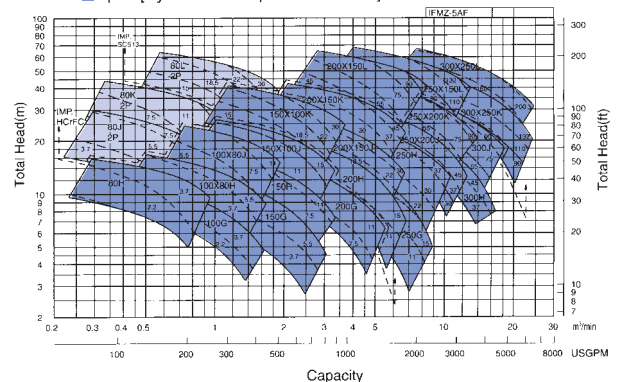
SELECTION CHART

- 50Hz
- 4pole[Synchronous speed:1500min⁻¹]
 - 6pole[Synchronous speed:1000min⁻¹]
 - 8pole[Synchronous speed:750min⁻¹]



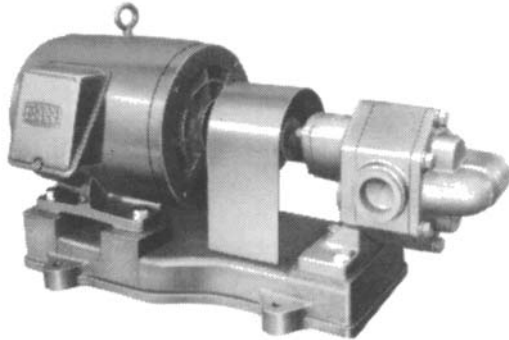
SELECTION CHART

- 50Hz
- 2pole[Synchronous speed:3000min⁻¹]
 - 4pole[Synchronous speed:1500min⁻¹]



Notes: 1. The V-belt drive motor type are given in a separate option chart, please contact with our office.
 2. The numbers in the areas enclosed by broken lines indicate motor capacity in kW for a density of 1000kg/m³.

GEAR PUMPS

GP
GP


FEATURES

- **Compact style and light weight**
Adopting high speed and direct drive type, relieving traditional image of gear pumps
- **Large capacity with small power output**
- **Long life and high reliability**
Durability increased by adopting needle bearings and maintenance made easy by using bearings, requiring no oil supply
- **Quick delivery and low price**
- **Adjustable relief valve**

APPLICATIONS

- Supply oil for machinery
- Fuel transfer
- Low pressure transmission
- Oil burner injection

SPECIFICATIONS

Model	GPE	GPF	GPH
Liquid	Quality: B.C. heavy oil, turbine oil, etc. Temperature: 0 ~ 70 °C Viscosity: 7 ~ 500 centistoke	Heavy oil, turbine oil, etc. 0 ~ 80 °C 5 ~ 500 centistoke	Heavy oil, turbine oil, etc. 0 ~ 120 °C 5 ~ 260 centistoke
Suction & Discharge size	12 to 25mm (1/2 to 1 inch)	12 to 40mm (1/2 to 1 1/2 inches)	15 to 50mm (1/2 to 2 inches)
Discharge pressure	3kgf/cm ² (43PSI) (290kPa)	3 to 10kgf/cm ² (43 to 142PSI) (290 to 980kPa)	10 to 20kgf/cm ² (142 to 284PSI) (980 to 1960kPa)
Allowable suction pressure	-0.3 to +10kgf/cm ² (-43 to +142PSI) (-29 to +98kPa)	-0.3 to +10kgf/cm ² (-43 to +142PSI) (-29 to +98kPa)	-0.3 to +10kgf/cm ² (-43 to +142PSI) (-29 to +98kPa)
Temperature limit	70°C (158°F)	80°C (176°F)	120°C (248°F)
Viscosity range for motor with standard output & speed	7 to 500cSt (7 to 500mm ² /s)	5 to 500cSt (5 to 500mm ² /s)	5 to 260cSt (5 to 260mm ² /s)
Construction	Shaft seal: Bearing	Gland packing Needle bearing	Mechanical seal Needle bearing
Connection	Screw-in	Screw-in	Screw-in (15 ~ 25 GPH) JIS 20K flange (32 ~ 50 GPH)
Material (JIS)	Casing: FC200 Gear: S45C Shaft: S45C	FC200 S45C S45C	FC200 S45C SCM400 S35C

PERFORMANCE TABLE

Model GPE (Discharge pressure 3kgf/cm² (290kPa))

Size	Pipe connecting	Motor kW	50 Hz			60 Hz			Bearing size	Gland		Weight [Mass] kg	
			Max. Discharge pressure kgf/cm ² (kPa)	Capacity L/min	Speed min ⁻¹	Max. Discharge pressure kgf/cm ² (kPa)	Capacity L/min	Speed min ⁻¹		Kind	Shaft size	Bare pump	Pump w/motor & base
12	PT-3/8	0.2	3 (290)	7	1500	3 (290)	6	1800	8φ	Packing	8φ	2	18.4
15	PT-3/8	0.4	3 (290)	10	1500	3 (290)	12	1800	12φ	"	11φ	2.1	19.2
20	PT-3/4	0.4	3 (290)	20	1500	3 (290)	24	1800	12φ	"	11φ	2.4	21.4
25	PT-1	0.75	3 (290)	40	1500	3 (290)	48	1800	15φ	"	14φ	4	35.1

Model GPF (Discharge pressure 3~10kgf/cm² (290~980kPa))

12	PT-3/8	0.2	4:390	8.5	1500	4:390	10	1800	12φ With (inside ring)	Mechanical seal	12φ	3.1	20.1
		0.4	10:980	8.5	1500	10:980	10	1800	23.1				
15	PT-1/2	0.4	4:390	17	1500	4:390	21	1800	12φ With (inside ring)	"	12φ	3.4	22.4
		0.75	10:980	17	1500	10:980	21	1800	33.4				
20	PT-3/4	0.75	4:390	31	1500	4:390	37	1800	20φ With (inside ring)	"	20φ	6.0	37.3
		1.5	10:980	31	1500	10:980	37	1800	43.3				
25	PT-1	1.5	6:590	54	1500	6:590	65	1800	20φ With (inside ring)	"	20φ	6.3	44.3
		2.2	10:980	54	1500	10:980	65	1800	61.5				
32	PT-1 1/4	2.2	4:390	75	1500	4:390	90	1800	22φ With (inside ring)	"	22φ	11	68
		3.7	10:980	75	1500	10:980	90	1800	77.2				
40	PT-1 1/2	2.2	6:590	105	1500				22φ With (inside ring)	"	22φ	12	69
		3.7	10:980	105	1500	4:390	125	1800	79				
		5.5				10:980	125	1800					79
													116

Model GPH (Discharge pressure 10~20kgf/cm² (980~1960kPa))

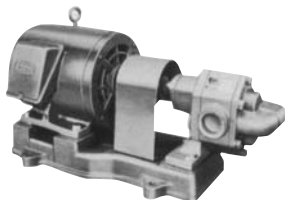
15	PS- $\frac{1}{2}$	0.75	15:1470	14	1500	12:1180	18	1800	15 ϕ With (inside ring)	Mechanical seal	14 ϕ	7	31
		1.5	20:1960	13	1500	20:1960	16	1800	16 ϕ			38	
20	PS- $\frac{3}{4}$	1.5	12:1180	36	1500	12:1180	43	1800	20 ϕ With (inside ring)	"	14 ϕ	8	39
		2.2	20:1960	34	1500	20:1960	41	1800	21 ϕ			54	
25	PS-1	3.7	15:1470	70	1500	15:1470	85	1800	25 ϕ With (inside ring)	"	22 ϕ	12	60
		5.5	20:1960	69	1500	20:1960	84	1800	26 ϕ			86	
32	32 ϕ JIS 20kgf/cm ² Flange	5.5	15:1470	110	1500	12:1180	136	1800	25 ϕ With (inside ring)	"	22 ϕ	20	97
		7.5	20:1960	110	1500	20:1960	134	1800	26 ϕ			112	
40	40 ϕ JIS 20kgf/cm ² Flange	5.5				12:1180	142	1200	35 ϕ With (inside ring)	"	30 ϕ	29	123
		7.5	15:1470	174	1500	20:1960	139	1200	36 ϕ			121	
50	50 ϕ JIS 20kgf/cm ² Flange	11	20:1960	172	1500					"	35 ϕ		154
		15	15:1470	184	1000	15:1470	224	1200	40 ϕ With (inside ring)			191	
			20:1960	184	1000	20:1960	220	1200				37	241

* For larger gear pump, please refer to pg 69

GEAR PUMPS

GPF

GPF



APPLICATIONS

- Oil supply of various machines
- Various fuel transport
- Oil pressure operation
- Oil burner injection

FEATURES

- Needle bearings adopted for increased durability.
- Oil supply is not needed for inner metal construction and maintenance is easy.

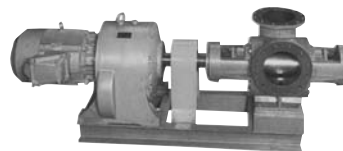
SPECIFICATIONS

Liquid handled	Heavy oil, lubricating oil	
Temperature	0~80°C	
Viscosity	5~500mm ² /S (cSt)	
Max suction pressure	-0.05~-0.1MPa (-0.5~-1kgf/cm ²)	
Construction	Shaft sealing	Mechanical seal
	Bearing	Radial: Needle bearings Thrust: Ball bearings
Materials	Casing	FC200
	Gear	S45C
	Shaft	S35C
Connection joining	JIS10K	

ROCK HILL PUMPS

ERL•ERT

ERL•ERT



APPLICATIONS

- Highly viscous fluids transport
- Solids transport
- Materials and the product food transport

FEATURES

- A transfer of highly viscous fluids up to 1 million mPa·s(cP) is possible.
- A transfer of liquids containing solids, blocks and fiber is possible, without destroying

SPECIFICATIONS

Liquid handled	Highly viscous liquids and liquids containing solids	
Temperature	0~250°C	
Viscosity	100mPa·s (cP) and below	
Construction	Scraper	Plate
	Shaft sealing	Gland packing, mechanical seal
	Bearing	Ball bearing packed
Materials	Casing	FC250/SCS13
	Scraper	S45C/SUS304/plastic
	Shaft	S45C/SUS304
Connection joining	JIS10K	

SELECTION CHART

Viscosity mm ² /s (cSt)	MODEL	50Hz			
		Capacity (m ³ /min)	Pressure MPa (kgf/cm ²)	speed (min ⁻¹)	Motor output (kW)
7~80	50GPFM	0.16	0.64(6.5)	965	3.7
		0.15	0.98(10)	965	5.5
	65GPFM	0.275	0.29(3)	965	3.7
		0.24	0.69(7)	965	5.5
		0.215	0.98(10)	965	7.5
	80GPFM	0.41	0.39(4)	965	5.5
		0.37	0.69(7)	965	7.5
	100GPFM	0.33	0.98(10)	975	11
		0.65	0.54(5.5)	975	11
	50GPFM	0.6	0.88(9)	975	15
		0.58	0.98(10)	975	18.5
	50GPFM	0.175	0.49(5)	965	3.7
		0.165	0.98(10)	965	5.5
81~250	65GPFM	0.29	0.25(2.5)	965	3.7
		0.275	0.59(6)	965	5.5
		0.255	0.98(10)	965	7.5
	80GPFM	0.44	0.29(3)	965	5.5
		0.42	0.59(6)	965	7.5
		0.39	0.98(10)	975	11
	100GPFM	0.71	0.20(2)	965	7.5
		0.7	0.39(4)	975	11
	100GPFM	0.68	0.69(7)	975	15
		0.66	0.98(10)	975	18.5
	50GPFM	0.18	0.34(3.5)	965	3.7
		0.18	0.83(8.5)	965	5.5
251~500	50GPFM	0.18	0.98(10)	965	7.5
		0.29	0.39(4)	965	5.5
	65GPFM	0.28	0.74(7.5)	965	7.5
		0.28	0.98(10)	975	11
	80GPFM	0.44	0.49(5)	965	7.5
		0.425	0.88(9)	975	11
	100GPFM	0.425	0.98(10)	975	15
		0.7	0.29(3)	975	11
	100GPFM	0.7	0.59(6)	975	15
		0.68	0.83(8.5)	975	18.5
		0.68	0.98(10)	975	22

SELECTION CHART

ERL Model (Industrial) Selection chart

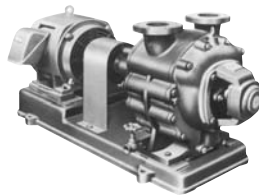
Model Name	Model Code	Capacity(ℓ/min) / Synchronous speed(min ⁻¹)		
		2,000mPa·s(cP)	5,000mPa·s(cP)	10,000mPa·s(cP)
50ERL	50LWO	126/250	100/200	75/150
80ERL	130LWO	273/210	210/165	160/125
100ERL	200LWO	360/182	290/145	220/110
120ERL	300LWO	509/182	406/145	308/110
150ERL	500LWO	800/162	650/130	500/100

ERT Model (For foodstuff) Selection chart

Model Name	Model Code	Capacity(ℓ/min) / Synchronous speed(min ⁻¹)		
		2,000mPa·s(cP)	5,000mPa·s(cP)	10,000mPa·s(cP)
80ERT	50THI	75/150	60/120	45/90
100ERT	120THI	180/150	144/120	108/90
125ERT	200THI	286/130	220/100	165/75
125ERT	300THI	420/120	350/100	280/80
150ERT	500THI	588/120	490/100	392/80
200ERT	1000THI	800/80	700/70	600/60

WATER RING VACUUM PUMPS NVEL•NVEH

NVEL•NVEH



APPLICATION

- Vacuum equipment

FEATURES

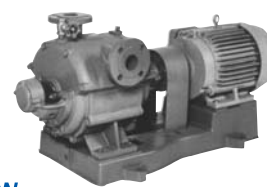
- Low noise operation
- High-vacuum performance with high efficiency by one-turn-one-action.

SPECIFICATIONS

Liquid handled	Air and various gas	
Temperature	-15~50°C	
Max operating vacuum	NVEL: 87kPa (-650mmHg)	NVEH: 93kPa (-700mmHg)
Ultimate vacuum	NVEL: 96kPa (-720mmHg)	NVEH: 98kPa (-740mmHg)
Construction	Type	Water ring
	Shaft sealing	Gland packing
	Bearing	Ball bearing or auto matic alignment roller bearing
Materials	Casing	FC200
	Rota	FCD450/CAC406/SCS13/SCS14
	Shaft	S45C/SUS304/SUS316
Flange	JIS10K	

WATER RING VACUUM PUMPS NVK

NVK



APPLICATION

- Vacuum equipment

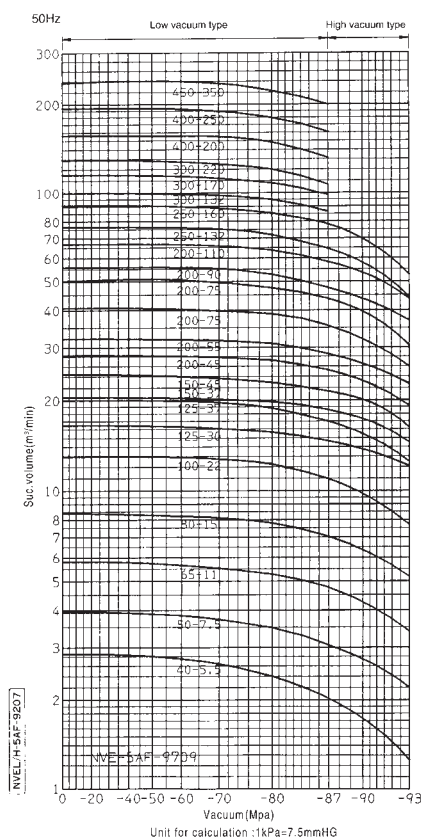
FEATURES

- Low noise operation
- High-vacuum performance with high efficiency by one-turn-one-action.

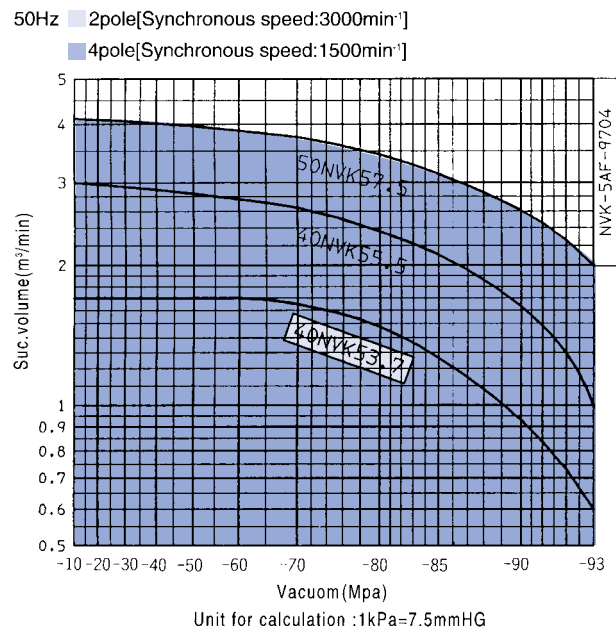
SPECIFICATIONS

Liquid handled	Air	
Temperature	-15~50°C	
Max operating vacuum	-93kPa (-700mmHg)	
Ultimate vacuum	-97kPa (-730mmHg)	
Construction	Type	Water ring type
	Shaft sealing	Mechanical seal, gland packing
	Bearing	Ball bearings
Materials	Casing	FC200
	Rota	CAC406
	Shaft	SUS403
Flange	Special flange/JIS10K	

SELECTION CHART

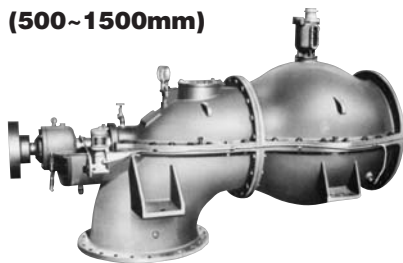


SELECTION CHART



HORIZONTAL MIXED-FLOW PUMP HZ

HZ (500~1500mm)



APPLICATIONS

- River water drainage; Water transfer for sewerage works
- Irrigation and drainage for agricultural
- Water intake/transfer for general industrial

FEATURES

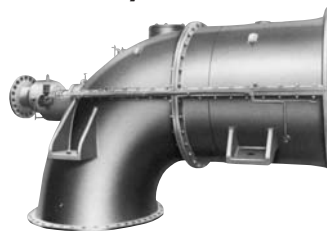
- Split case design permits easy maintenance.
- High efficiency over a wide range.
- Guaranteed high performance, quality and prompt delivery.

SPECIFICATIONS

- Bore 500 ~ 1500mm (20 ~ 60 in)
- Capacity 21 ~ 340m³/min (5500 ~ 90000 USGPM)
- Total head 2 ~ 10m (6.6 ~ 33ft)
- Liquid Fresh water, river water, sea water, etc.
- Temperature 0 ~ 45° C (32 ~ 110° F)

HORIZONTAL AXIAL-FLOW PUMP HS

HS (500~1500mm)



APPLICATIONS

- River water drainage
- Irrigation and drainage for agricultural use
- Water intake/transfer for general industrial use

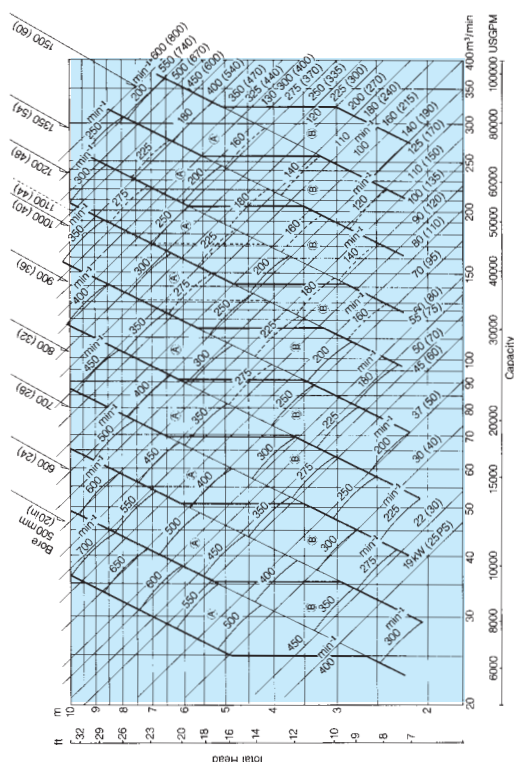
FEATURES

- Higher operating efficiency over a wide range of capacities reduce operation cost.
- Simple construction permits easy maintenance.
- Guaranteed high performance, quality and prompt delivery.

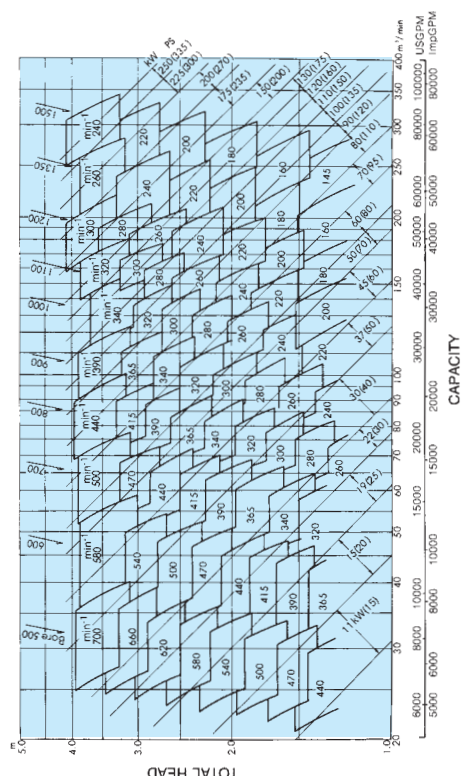
SPECIFICATIONS

Bore	500 ~1500mm (20 ~60 in)
Capacity	Approx. 21 ~ 340m ³ / min (5500 ~ 90000 USGPM)
Total head	Approx. 1.2 ~ 4m (4 ~ 13ft)
Liquid	Fresh water, river water, sea water , etc. Temperature 0 ~ 45°C(32 ~110°F)
Construction	Ball bearing & submerged bearing Radial bearing Thrust bearing Shaft seal Gland packing
Accessories	Grease lubricating unit, pump base, shaft coupling, vacuum breaker, anchor bolts

SELECTION CHART



SELECTION CHART



VERTICAL MIXED FLOW PUMPS VY•VZ

VY•VZ



APPLICATIONS

- River water intake
- Intake and supply for seawater
- City water and industrial water supply and circulate

FEATURES

- Smaller installation space than of horizontal pumps.
- Submerged impeller dispenses with the need for priming and allows pumping up of water from deep sources.

SPECIFICATIONS

Liquid handled	River water, city water industries, seawater	
Temperature	0~90°C	
Construction	Impeller	VY Type: closed VZ Type: semi-open
	Shaft sealing	Gland packing
	Bearing	Upper section: Ball bearings (oil bath) Intermediate and lower sections: Bearing metal (graphite, ceramic, teflon rubber)
Materials	Casing	FC200/SCS14
	Impeller	CAC406/SCS14/SCS6
	Shaft	SUS420Jr/SUS316
Flange	JIS10K/JIS16K	

VERTICAL VOLUTE PUMPS

VWS

VWS



APPLICATIONS

- Cutting oil circulate
- Industrial waste water drain

FEATURE

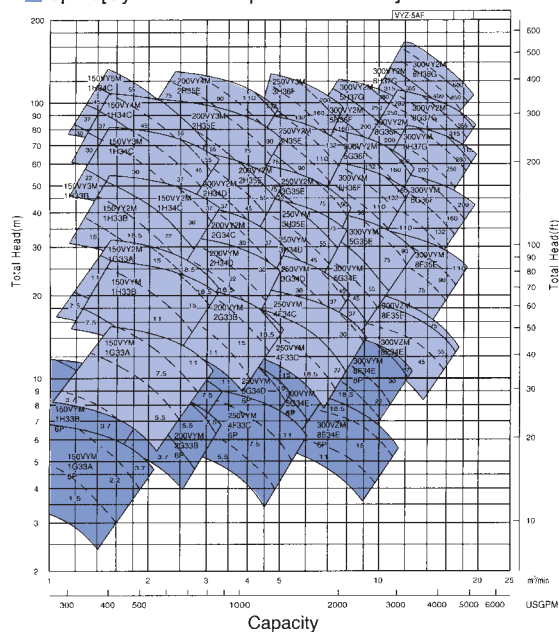
- Semi-open impeller is used, so can also handle liquids containing slurry.

SPECIFICATIONS

Liquid handled	Cutting oil circulate, waste water, process liquid, seawater	
Temperature	0~90°C	
Viscosity	40cSt and below	
Density	1.0	
Max working pressure	4.8kgf/cm ² G (Frame number "36" is 5.3kgf/cm ² G)	
Construction	Impeller	Semi-open type
	Shaft sealing	Mechanical seal (FC200 type) Gland packing,
	Bearing	Upper section: Ball bearings (grease sealed) Intermediate and lower sections: Bearing metal
Materials	Casing	FC200/SCS14
	Impeller	FC200/SCS14
	Shaft	S35C/SUS420Jr/SUS316
Flange	JIS10K	

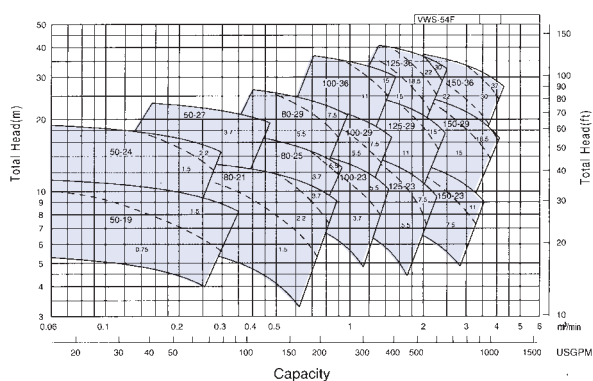
SELECTION CHART

50Hz ■ 4pole[Synchronous speed:1500min⁻¹]
■ 6pole[Synchronous speed:1000min⁻¹]



SELECTION CHART

50Hz 4pole[Synchronous speed:1500min⁻¹]



Notes: The numbers in the areas enclosed by broken lines indicate motor capacity in kW for a density of 1000kg/m³.

VERTICAL PUMPS

VWMS
VWMS


APPLICATIONS

- Industrial water transport
- City water transport

FEATURES

- High efficiency and over wide range is possible by double volute design.
- Axial thrust received by balance piston.
- Intermediate sleeve bearings are self-lubricated by pumping liquid.

SPECIFICATIONS

Liquid handled		City water, industrial water
Temperature		0~80℃
Density		1000kg/m ³
Construction	Impeller	Closed
	Shaft sealing	Gland packing
	Bearing	Upper section:Ball bearings(grease sealed) Intermediate and lower sections: Bearing metal (graphite)
Materials	Casing	FC200
	Impeller	CAC406/FC200/SCS13
	Shaft	SUS420J1
Flange		JIS10K

SUBMERSIBLE PROPELLER PUMPS

DSZ
DSZ


APPLICATIONS

- Lifting and drainage for civil and agricultural projects.
- Irrigation water supply.
- Drainage for general purposes.
- Raw water intake.
- Flood control.
- Sea water applications (as option)

FEATURES

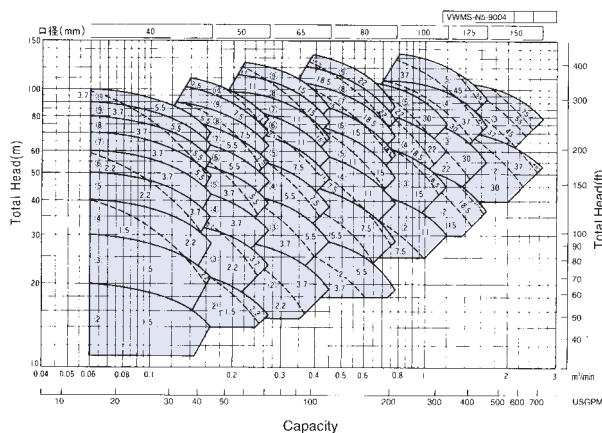
- Compact with easy, boltless installation, this pump can be removed without workmen entering the pit.
- Small column bore sizes can be selected. Gears used with large capacity pumps provide an easy to handle pump-driver unit.
- High efficiency. Designed to inhibit cavitations.
- Can be adapted to any local voltage and voltage fluctuation.
- Built-in thermal detectors and leakage detectors prevent motor damage.

SPECIFICATIONS

Design		Standard	Option
		Bore (column dia.) 500~1800 mm (20~64 in.) Capacity 13~350 m ³ /min. (3400~92000 USGPM) Head 1.5~20 m (4.9~65.6 ft.) Driver output 7.5~450 kW (10~603 HP)	
Materials	Water Temperature	0~40°C (32~104°F)	
	Casing	Cast iron	Ductile Ni-Resist
	Impeller	Bronze	Stainless steel
	Casing wearing ring	—	Bronze or Stainless steel
	Shaft	Stainless steel	Stainless steel
	Motor frame	Cast iron	Ductile Ni-Resist
Construction	Shaft seal	Double mechanical seal	
	Impeller type	Axial or Mixed flow	
	Bearing	Anti-friction bearing	
	Motor type	Air filled watertight	
	Insulation class	F	
	Cable	Rubber insulated flexible cable	
	Starting method	Line start or star delta start	Auto transformer
	Motor protection	Built-in thermal detector, and leakage detector	3E Relay
	Cable connection	Electric terminal casing and tapered gland packing	Wire to wire and mold type cable

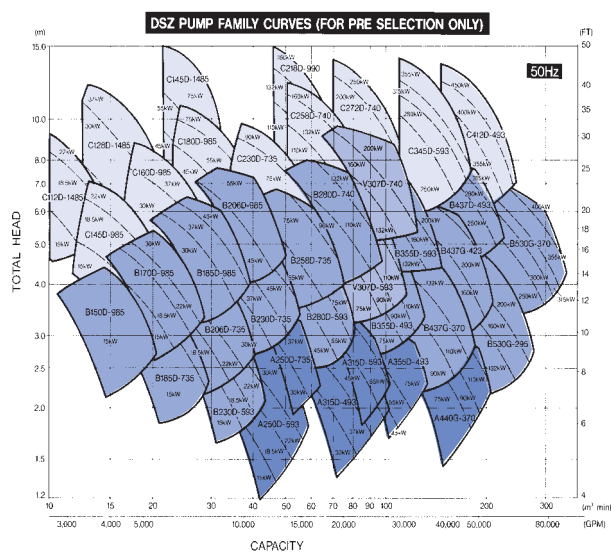
SELECTION CHART

50Hz 4pole Impeller materials CAC406, FC200[Synchronous speed:1500min⁻¹]



- Notes: 1. The selection chart is different for impeller material SCS13; please ask our sales office for information.
2. The encircled numbers in the areas enclosed by unbroken lines indicate the number of stages, the numbers in the areas enclosed by broken lines indicate motor capacity in kW.

SELECTION CHART



VERTICAL MIXED-FLOW PUMP
VLZ
VLZ (200~1000mm)

APPLICATIONS

- ¥ Transfer for sewerage works
- ¥ River water drainage
- ¥ Transfer for general industrial use
- ¥ Water intake

APPLICATIONS RANGE

- ¥ Capacity: 2.5~150m³/min (660~40000USGPM)
- ¥ Total head: 4~20m (13~65ft)
- ¥ Liquid: Sewage, River water, Fresh water
- ¥ Liquid temperature: Below 80oC (176oF)

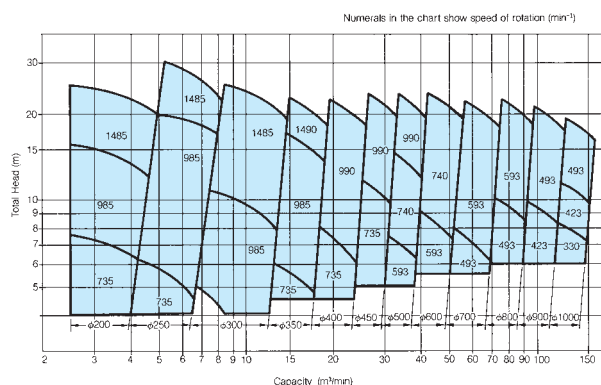
FEATURES

- ¥ Special pump performance.
- ¥ Free from clogging in sewage treatment.
- ¥ Applicable to any construction such as one floor or two floor system.
- ¥ Large hand hole facilitates inside inspection.
- ¥ Simplified and durable construction enable smooth operation and easy maintenance.
- ¥ Compact and light weight construction saves installation space.
- ¥ Each part is interchangeable and makes supply of parts easy.

SPECIFICATIONS

	STANDARD	OPTIONAL
Shaft seal	Gland packing	Mechanical seal
Direction of rotation	CW (viewed from driver)	CCW
Flange	JIS 10K	Any standard
Suction elbow	90° bend	Any type
Drive method	Motor direct drive	Diesel engine drive through gear
Accessories	Foundation bolts, shaft coupling, self sealing water piping, drain piping	Gauge, pressure switch, bearing thermometer, tools, companion flange, etc.

(Note) Other specifications are available, upon request.

SELECTION CHART

VERTICAL MIXED-FLOW PUMP
VLV
VLV (350~700mm)

APPLICATIONS

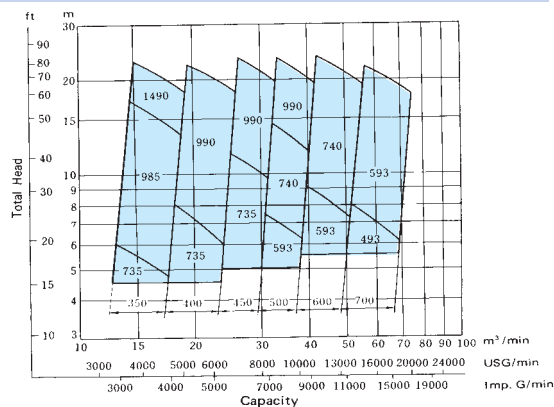
Pump is specially designed for handing combined sewage including sand non-corrosive large solids of city and factory, storm water and drainage in general.

FEATURES

- ¥ **HIGH EFFICIENCY** - Specially designed closed impeller and volute casing create greatest efficiency.
- ¥ **NON-CLOGGING** - Impeller has minimum number of vanes to eliminate clogging.
- ¥ **SHAFT PROTECTED** - Replaceable sleeve protects main shaft from corrosion by chemical reaction of sewage water.
- ¥ **EASY MAINTENANCE** - Rotating parts can be inspected easily without disturbing piping connections and large hand-hole facilitates regular inner inspection.
- ¥ **HIGH DURABILITY** - Simplified design and durable construction insure long-life operation and easy maintenance.
- ¥ **WIDE SELECTION** - Any model standardized up to the size of 28 inches will meet any of your requirements.
- ¥ **HIGH QUALITY AND SHORT DELIVERY** - The standard design allows for shortest delivery period while being manufactured under the highest of quality control programs with refined skill and the newest facilities having the capability to supply the largest pumps in the world.

SPECIFICATIONS

- ¥ Rotative direction : Clockwise as viewed from driver
- ¥ Impeller : Single suction close type
- ¥ Bearing : Ball & roller bearings
- ¥ Bearing lubrication : Grease lubrication
- ¥ Shaft seal : Gland packing (External water injection system)
- ¥ Flange : ANSI class 125(We can meet demands for other standard than the above.)
- ¥ Suction elbow : 90° bend type is our standard, however, we can also manufacture special bend type.

SELECTION CHART


All specifications are subject to change without notice In this catalog, the particulars in { } are in accordance with the international System of Units (SI) and given for reference only

VERTICAL AXIAL-FLOW PUMP

VS

VS (250~1000mm)



APPLICATIONS

- River water drainage
- Irrigation and drainage for agricultural use
- Water intake/transfer for general industrial use

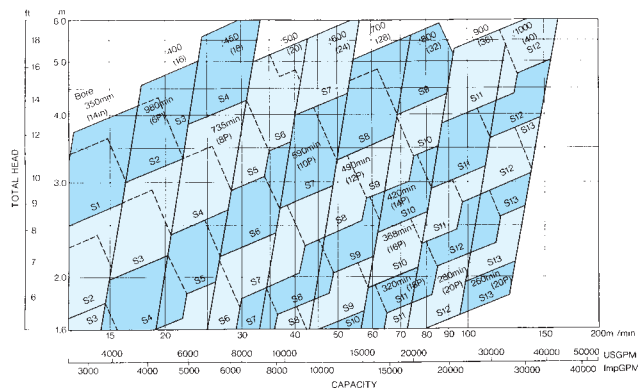
FEATURES

- Higher operating efficiency over a wide range of capacities reduce operation cost.
- Simple construction permits easy maintenance.
- Smaller installation space than that of horizontal pumps.
- Guaranteed high performance, quality and prompt delivery.

SPECIFICATIONS

Bore	350 ~ 1000mm (14 ~ 40in)
Capacity	Approx. 12 ~ 150m ³ /min (3200 ~ 40000USGPM)
Total head	Approx. 1.6 ~ 6m (5.3 ~ 20ft)
Liquid	Fresh water, river water, sewage, sea water, etc. Temperature 0 ~ 45°C (32 ~ 110°F)
Construction	Submerged bearing Radial bearing Thrust bearing Shaft seal
Accessories	Pump base, shaft coupling, drain piping, anchor bolts

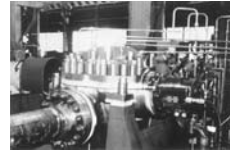
SELECTION CHART



PIPELINE PUMPS

C,SPD & SPW

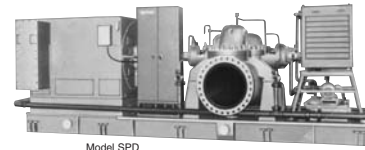
C,SPD & SPW



Model C



Model SPW



Model SPD

APPLICATIONS

- Water & Crude oil transfer, pipeline
- Booster

APPLICATIONS RANGE

Capacity up to 140m³/min (37000USGPM)
Total head up to 1350m (4400ft)
Liquid temperature -20~200°C (-4~560°F)

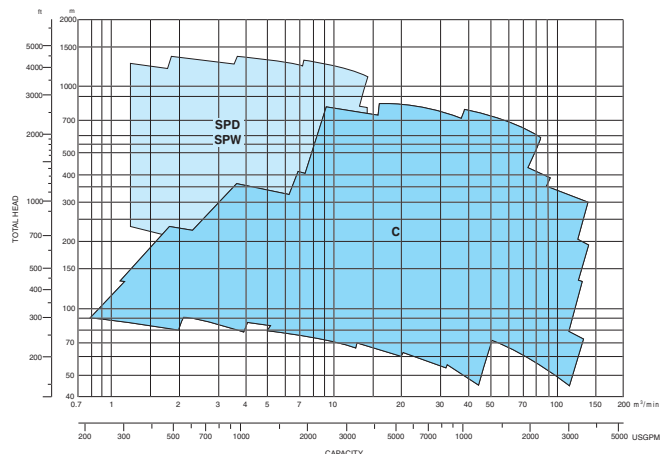
FEATURES

- High Efficiency
Guaranteed high performance, quality and prompt delivery.
- Easy Maintenance
Axially split case design simplify inspection and disassembly.
- High Reliability
Simple and durable construction enable smooth operation.
- Wide Selection
Various material combinations and mechanical options to meet all customer requirement.

SPECIFICATIONS

- Model C
Horizontal shaft, axially split, double suction, single stage volute pump.
- Model SPD
Horizontal shaft, axially split, double suction, multi stage volute pump.
- Model SPW
Horizontal shaft, axially split, twin suction, multi stage volute pump.

SELECTION CHART



VERTICAL MIXED-FLOW PUMP
VYB
VYB

SERVICE

- Brine Recirculation Pump
- Blow Down Pump
- Distillate pump for Seawater Desalination Plant,
- Condensate Pump for Power Plant,
- Hot Well Pump for Geothermal Power Plant,
- Booster Pump for Oil Pipeline

CAPACITY to 400m³/min

TOTAL HEAD to 350m

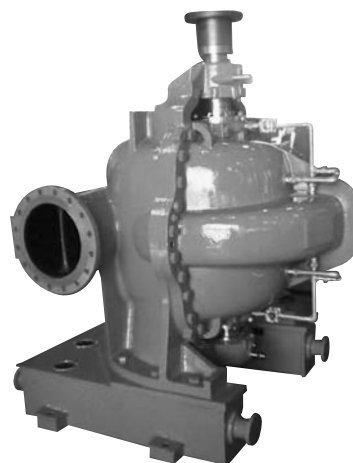
Fluids at or near their boiling point, or fluids coming through long suction pipeline, do not provide sufficient suction head to apply horizontal centrifugal pump. To lower a horizontal centrifugal pump requires expensive excavation and pit construction, and is exposed to flooding risk.

Our model VYB, which we have delivered more than 300 units, however, can have its impeller at any desired depth to avoid pump operation with cavitation, and allows pump driver to remain above ground. Furthermore, suction and discharge nozzle can be oriented in any direction, this flexibility offers the system engineer greater freedom in planning or modernizing a pumping system.

CONSTRUCTION

Discharge Bowl	Single Stage/Multi-Stage
Flange	JIS 10K R.F./Any Standard
Suct. Nozzle Elevation	Underground/Surface
Shaft Seal	Gland Packing/Mechanical Seal
Thrust Bearing	Oil bath Anti-Friction Bearing/Oil Bath Tilting Pad/Mounted in Motor

- Pull-out type, which allows to remove of rotor without disturbing discharge nozzle flange, is also available.

VERTICAL DOUBLE SUCTION VOLUTE PUMP
VDM

APPLICATIONS

- **Water works** Water intake/water supply/booster
- **Industrial use** Water intake/water supply/booster/water circulation/drainage/sea water desalination/chemical/refinery/fire fighting
- **Irrigation** Water supply/drainage
- **Building** Water supply/drainage/air conditioning
- **Pipe line** Water & crude oil transfer/booster

APPLICATION RANGE

Capacity : Approx.35 ~ 250m³/min (9200 ~ 66000 USGPM)

Total head : Approx.7 ~ 190m (23 ~ 620 ft)

Liquid : Fresh water/industries/river water/sea water/brine/paper stock/hydrocarbon etc.

SPECIFICATIONS

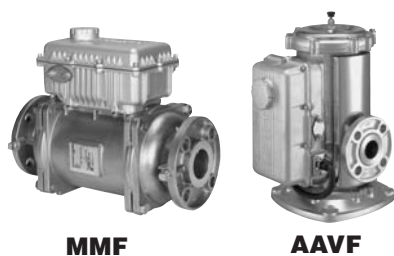
	STANDARD	OPTIONAL
Liquid temperature	Below 80°C (176°F)	81-120°C(177 ~ 248°F)
Shaft seal	Gland packing	Mech. seal
Direction of rotation	CW(viewed from driver)	CCW
Flange	JIS 10K/JIS 20K	Any standard
Suc./Disch. direction	Side-side	Other direction such as bottom suction
Drive method	Motor direct drive	Diesel engine drive, Turbine drive through gear, etc.
Accessories	Common base, foundation bolts, shaft coupling, air vent piping, self sealing water piping, drain piping	Pump base, pressure gauge, compound gauge, vacuum gauge, priming detector, solenoid valve for priming line, pressure switch, bearing thermometer, bearing dial thermometer with an alarm contact, tools, companion flange, etc.

(NOTE) Other specifications can be available, if required.

MATERIALS (Typical material combinations)

	Fresh water/River water/Industries	Sea water	Hydrocarbon
Casing	Cast Iron	Low Alloy Cast Iron/Ni-resist D2/316S.S.	Cast Steel
Impeller	Cast Iron/Bronze/304S.S.	316S.S.	410S.S.
Shaft	Carbon Steel/4140 Steel	316S.S.	Carbon Steel/4140 Steel
Packing sleeve	304S.S.	316S.S.	420S.S.
Casing ring	Cast Iron/Bronze/304S.S.	316S.S.	403S.S.

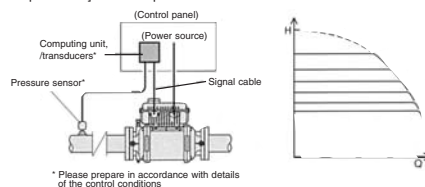
(NOTE) • Other materials such as Nickel aluminium bronze, Duplex stainless steel, Monel, Alloy 20, etc.can also be applied.
• Selection of material requires careful study of the properties of the liquid handled and of the operating conditions, etc.
For specific details, please consult our factory.

BARRELLED MOTOR PUMPS - HzFree
MMF & AAVF


- ✓ Energy saving
- ✓ Space saving
- ✓ Non-leakage

1 Inverted Installed - Energy Saving Space Efficient

[example of use] Constant pressure control


2 Barreled Motor - Space Saving Noise Reduction

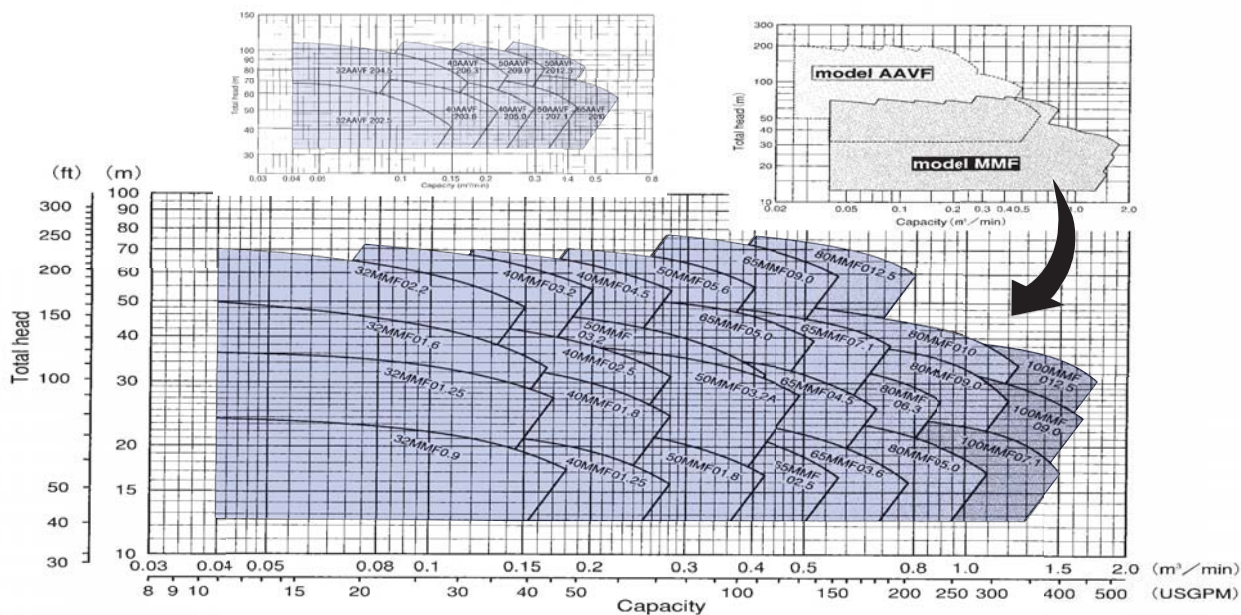
The term "barreled motor" refers to the placement of the motor inside the barrel, which will bring various features of the Hzfree pump.

3 Canned Motor - Non leakage Low Maintenance

No shaft seal (without grand packing, mechanical seal) means no worries about leakage of liquid.

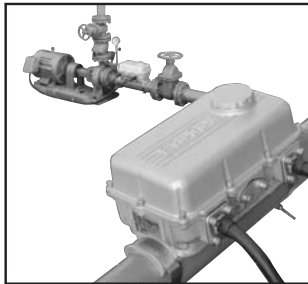
4 Stainless Steel - Cleanliness

SCS (Stainless steel casting) is used for the casing and barreled motor parts.

5 High-endurance SiC bearing - Low Maintenance
SELECTION CHART


EBARA HzFree Pump Controller

EECFA



EBARA HzFree Controller type EECFA

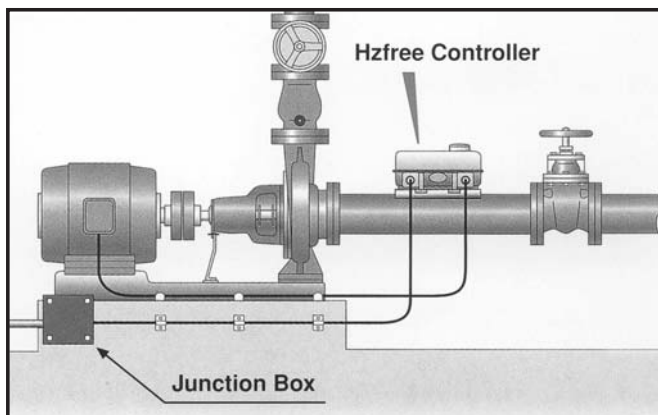
- VFD Control capacity of existing pumps as desired, with minimal modification.
- Specially developed for pumps to realize energy saving (up to 35%).

Standard specifications (Specifications by model)

Controller model	EECFA	52.2	53.7	55.5	57.5	511	515	518	522
Applicable motor *1	Output (kW)	2.2	3.7	5.5	7.5	11	15	18.5	22
	Rated current (A)	5.8	8.3	12.3	16.3	22.5	30	36	42.5
Rated power capacity (kVA)		4	5.7	8.5	11.3	15.6	20.8	24.9	29.4
Output frequency (Hz)		47.5(max.)/45/42.5/40/38/36/34/32(min)							

*1: "Applicable motor" refers to an EBARA 3-phase induction motor for non-submersible standard pump.

Variable Speed Control of existing pumps as desired, with only minimal modification!



Installable to piping

Since starting and stopping of the pump can be executed by the existing control panel's electromagnetic contactor, the Hzfree Controller can be installed to the piping or other connected equipment. This minimizes remodeling of the control panel and keeps the noise generated down to a minimum.

Simple installation

The only wiring needed is to hook up the controller to the power line. The controller is fastened to the pipe just by applying 2 fixing bands. Thus installation is very simple.

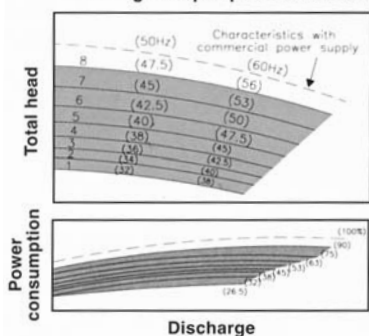
No complicated settings

There are no complicated operation settings to be made. All you have to do is turn the Hzfree Controller's speed regulation dial to the required setting. The dial offers 8 different speed setting, in 5% gradations. The permits speeds as low as 63% of the speed produced by the commercial power supply, yielding savings of up to 26.5% in power consumption with a commercial power supply.

Water cooling permits outdoor installation

The Controller is hermetically sealed by a high-durability metal case, permitting installation in outdoor locations and under severe conditions. And since the pumping liquid is employed for the water-cooling, there is no need for maintenance of cooling fans or similar.

Dial settings and pump characteristics



Controller input vs output table

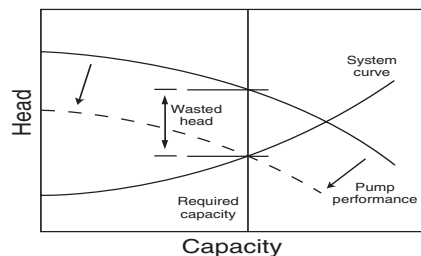
	Commercial Supply	Speed regulating dial No.							
		8	7	6	5	4	3	2	1
Output frequency (Hz)	50	47.5	45	42.5	40	38	36	34	32
Power consumption (%)	100	90	75	63	53	45	38	32	26.5

* With 5% inverter loss. Motor efficiency drop not included.

Eliminate waste, optimize pump operation!

Get the energy-saving effect for pumps like these!

- Circulation pumps for air conditioning etc.
- Pumps whose flow is throttled by valves
- Pumps operating for prolonged periods



Saving in electricity cost enabled by Controller (for 35% energy-saving)

Units : US\$1000

Motor kW	Operating hours / year		
	2400H	4600H	8500H
2.2	0.55	1.1	2.0
3.7	0.93	1.8	3.3
5.5	1.4	2.7	4.9
7.5	1.9	3.6	6.7
11	2.8	5.3	9.8
15	3.8	7.2	13.4
18.5	4.7	8.9	16.5
22	5.5	10.6	19.6

Operating conditions : Electricity unit cost: US\$0.30 / kWh
Load factor: 90% & including motor efficiency
2400H = 10 hours x 240 days (2 holidays & 1 alternation per week)
4600H = 16 hours x 288 days (2 holidays & 2 alternation per week)
8500H = 24 hours x 355 days (continuous operation & 3 alternations)

VARIABLE SPEED MOTOR -PUMPS EVM-E
EVM-E

PUMP

The EVM-E pump is vertical multi-stage centrifugal pump fitted with variable speed drive motor. All wetted parts in contact with liquid are stainless steel; thus ensure trouble-free operation, at all time.

MOTOR

Single-phase or Three-phase, variable speed drive conforming to IEC and Low Voltage Directive (CE).

Power supply: 1 Phase supply 240V;

3 phase supply 400V; $\pm 10\%$; 50/60 Hz $\pm 5\%$.

SPECIFICATION

- IP65 protection, Class F
- Aluminium terminal box and brass cable gland
- Sheet steel fan cover
- RFI filter connection via flexible blade connectors
- Resin-encapsulated electronics to ensure total mechanical withstand to vibration and insensitiveness to humidity

EVM-E BOOSTER SET
EVM-E Booster set

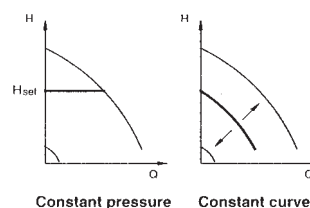
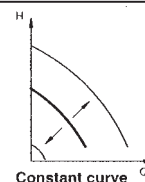
Applications

By using Variable Speed motor, EBARA EVM-E Booster set offers the options for variable speed control and wide possibility of optimal pumping operation. In addition to the built-in PI-controller, options also available for connection to external signals and set-point setting on the unit itself. Through frequency control, the motor enables stepless change of motor speed; thus the pump is set to operate at any point within the performance curves.

For constant pressure system, EVM-E Booster set with pressure sensor fitted offers a reliable pumping solution, which is easy to install and operate. The pressure setting can be directly set on the pump.

ELECTRICAL DATA

Electricity supply	Single Phase supply 240V $\pm 10\%$; 50/60 Hz Three Phase supply 400 $\pm 10\%$; 50/60 Hz
Speed regulation	Regulation of a reference with the integrated PI loop PI sensor characteristic: 0 -10V or 4-20mA signal
Set-point signals	* Potentiometer * 0 -10 V set-point signal * 4 -20mA current signal
Protection	Under-voltage Over-voltage Overloading: over-heating, drive and motor Short-circuit; motor windings
Radiated conducted emission	- conforming to EN 50081-2 as standard - conforming to EN 50081-1 with EMC filter option Immunity: according to EN 50082-2
Enclosure	IP 65
Insulation Class	F (IEC85)

EVM-E with Sensor

EVM-E


Installing the sensor provides possibility of control via pressure, differential pressure, flow, temperature or differential temperature.

HYDRO BOOSTER - Flow Switch Control System

UD
UD

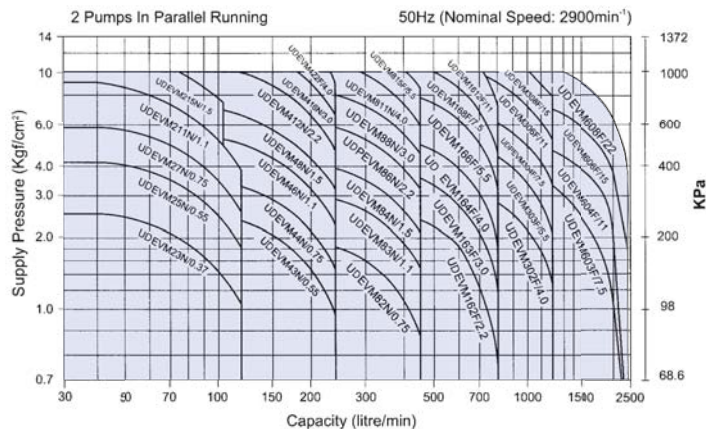
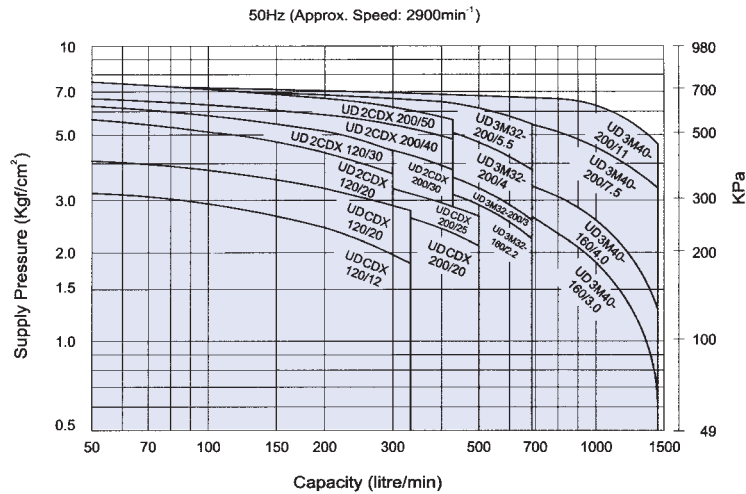

APPLICATIONS

- Domestic : High- rise buildings, Condominiums, Apartments etc.
- Commercial : Office buildings, Hotels, Shopping centres etc.
- Industrial : High- rise factories, Manufacturing & Processing industries applications etc.
- Social Service : Schools, Hospitals etc.

FEATURES

- All components are **intergrated** on a rugged steel base. It is **ready for use** by only connecting with supply piping and to the power source.
- Layout is **compact** and **much lighter** than conventional units. It occupies **lesser space** and requires **easier installation** than conventional units.
- The flow control system which **prevents frequent start and stop** of pumps, requires small pressure tank and ensures **constant fresh water supply**.
- Pumps are in parallel operation for high demand and alternating in low demand, suitable for **energy saving**.

SELECTION CHART



HYDRO BOOSTER - Variable Speed Pump System

UN
UN


SPECIFICATIONS

Liquid handled	Type	Water
Installation		In-door or Out-door (option)
Power source	Phase	Three
	Frequency	50 Hz
	Voltage	415 V +/-10%
Pumps model		EVM (other pump model possible)
No. of pumps		From 2 to 5 sets
Control mode		Variable frequency drive
Operation mode		Parallel or rotation running

APPLICATIONS

- Domestic : High-rise buildings, Condominiums, Apartments etc.
- Commercial : Office buildings, Hotel, Shopping centres etc
- Industrial : High-rise factories, Manufacturing & Processing industries applications etc.
- Social service : Schools, Hospitals etc.
- Others : Golf-course irrigation etc.

FEATURES & BENEFITS

Energy Saving System

Minimum energy consumed during operation due to the use of variable speed drive system.

Constant Pressure

Constant pressure is possible due to variable speed drive that possess the ability for frictional loss compensation, thus stable pressure system ensured.

High Reliable Operation System

The use of EBARA UN Controller assure system compatibility, thus ensure system reliability and durability.

Easy Operation & Easy Maintenance

Operation data are displayed clearly on the control panel and can be adjusted at ease. Hence user-friendly operation assured.

Detailed Informative Output

System able to provide useful operating information at one glance. No complicated setting required enhance trouble-free system operation.

EBARA Hydro-Booster Variable Speed Pump System - Controller

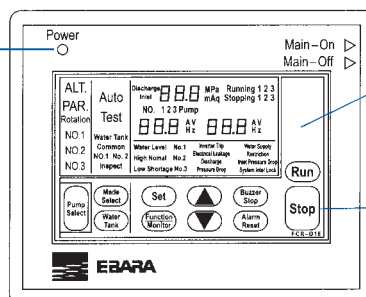
The heart of the system is the EBARA controller unit, which is user-friendly and permit 'One-touch' operation. It controls the sequence of pump operation with signals input from the pressure transmitter and/or flow switch in Auto & Alternate mode. This user-friendly controller unit operates compatible with other electrical components to ensure smooth function of booster system.



EBARA controller unit generally provides the below 'one-touch' functioning features:

- | | |
|------------------------------------------------------|-----------------------------------|
| 1 x Power on indicating light | 1 x Buzzer stop switch |
| 1 x Power selector switch (ALT/PAR/Rotation/Plto P5) | 1 x Alarm reset switch |
| 1 x Mode selector switch (Auto/ Test) | 1 x Run switch |
| 1 x Power main on off switch | 1 x Stop switch |
| 1 x Set switch | 1 x LCD System parameter displays |
| 1 x Function / Monitor switch | |

Power indicating light



System parameters display:

Operation mode
Pump no. in operation
Output frequency & discharge
Water tank & Fault type

Operation pushbuttons:

Run or stop
Pump, mode & water tank select
Parameters set & function monitor
Buzzer stop & alarm reset

STANDARD PROTECTION FEATURES

UN

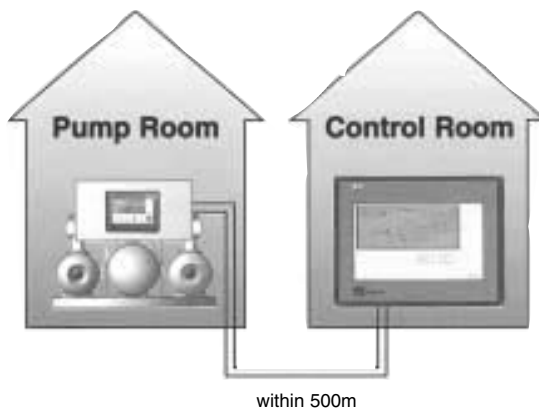
Automatic back up system ensure smooth and continuous pumping operation during the below malfunction:

- electrical leakage,
- discharge pressure drop, and
- inverter tripped

Freezes pump Operation when Low Water level at suction tank. Fault Display for below:

- suction tank water level
- system interlock
- electrical leakage
- inverter trip
- low discharge pressure

REMOTE MONITORING FEATURES (OPTIONAL)



The same operation conditions of the pumping system can be observe and monitor at remote station with only 2 wire connection. No additional electrical supply is required. Buzzer is provided, and distance within 500 m is permissible.

Display Items:

- 1) Normal display
 - Digital : Discharge pressure, pump Operation Hz (each pump).
Operation current (each pump), Voltage.
 - Others : Electrical source (LED Display).
Operation mode (Auto, Test, No. of Pump)
System interlock.
- 2) Fault Display
 - Discharge pressure drop (each pump),
 - Inverter fault (each pump),
 - Water level (over-flow, insufficient, shortage conditions).

INSTALLATION OPTIONS



Standard type



Weather-proof type



Special purpose type

HYDRO BOOSTER Variable Speed Booster System

BPC
BPC


APPLICATIONS

Provide effective booster pumping solution for the following usage:

- Domestic
- High-rise buildings
- Hospital
- Commercial buildings
- Industrial
- Irrigation

FEATURES

• Energy Saving System

Minimum energy consumed during operation due to the use of variable speed drive system.

• Constant Pressure

Constant pressure is made possible due to variable speed drive that possess the ability for frictional loss compensation.

• Ebara Controller enhance system operation

The use of EBARA BPC Controller ensure system compatibility, thus ensure system reliability and durability.

• BPC controller suitable for 6 pump controlling functions.

• Proven VFD technology and controller.

HYDRO PNEUMATIC BOOSTER SYSTEM

HP


APPLICATIONS

EBARA Hydro-pneumatic booster system uses EBARA stainless steel pumps with one or more pressure tanks mounted on a common skid consisting of valves and manifolds. Custom made electrical control panel is designed and built to highest standard, interconnected with pump motor and control devices to ensure automatic booster operation. Just connect to your water source and outlet, the EBARA booster system will automatically regulated to suit your demand conditions satisfactorily, at all time.

PUMPS

Vertical multi-stage stainless steel pump, all wetted parts in contact with liquid are stainless steel for robust operation.

TANK

Local JKPP approved tanks with imported supreme quality diaphragm to ensure long operating life.

CONTROL PANEL

Corrosion-resistance epoxy coated control panel incorporated with quality electrical / electronic components built to Ebara quality standard. Weather-proof type as option.

ACCESSORIES

Approved pressure switches, valves and fittings are selected and used to enhance operating efficiency and assure durability.