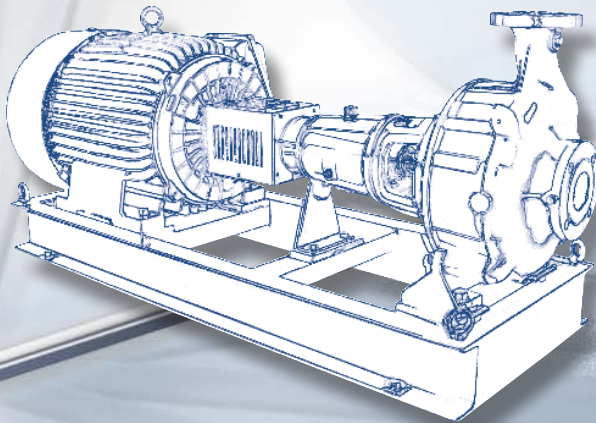




GARBARINO®

MCA/MCA-VSC

Recessed impeller torque flow pumps





MCA/MCA-VSC

NO CLOGGING RECESSED IMPELLER TORQUE FLOW PUMPS

DESCRIPTION

Thanks to the shape of the impeller and to its recessed position in the casing, MCA pumps are suitable for pumping viscous and pasty liquids containing suspended solids.

MAIN FEATURES

IMPELLER: the impeller is of the open type with radial blades. The impeller is provided with back vanes to balance the axial thrust and the pressure in the stuffing box area.

CASING: volute type with ample section end suction and top discharge nozzles.

The flanges are NP 10 according to UNI - ANSI 150# - EN - DIN - JIS - standards.

SHAFT SEALING: basic pump version is mechanically sealed but soft packing with optional external flushing with clean fluid can be fitted. In case of dangerous liquids, pumps can be provided with double mechanical seals completed with barrier system. Soft packing and mechanical seal are only allowable on horizontal long coupled units only.

MATERIALS

Materials of construction are Ni-Al Bronze, SS, duplex, super duplex, monel, Cast iron and Carbon steel are also available. Any other material combinations can be supplied.

APPLICATIONS

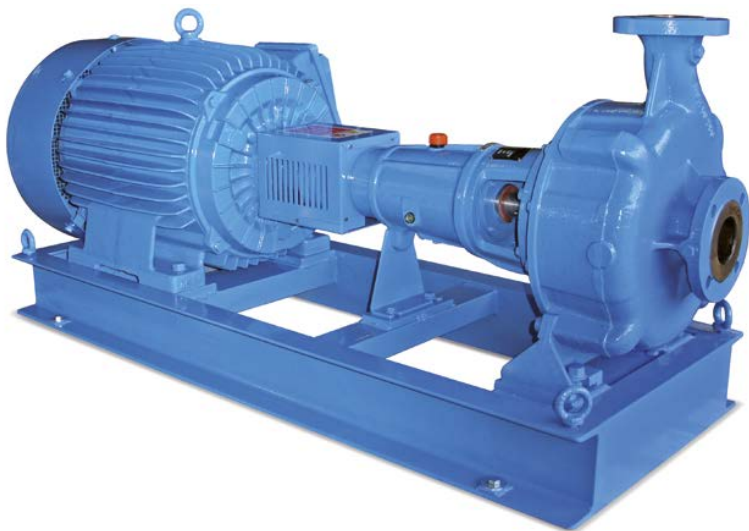
Sewage treatment plants, gritty coolant, paper industry, food and sugar industry and generally to convey all liquids with suspended solids.

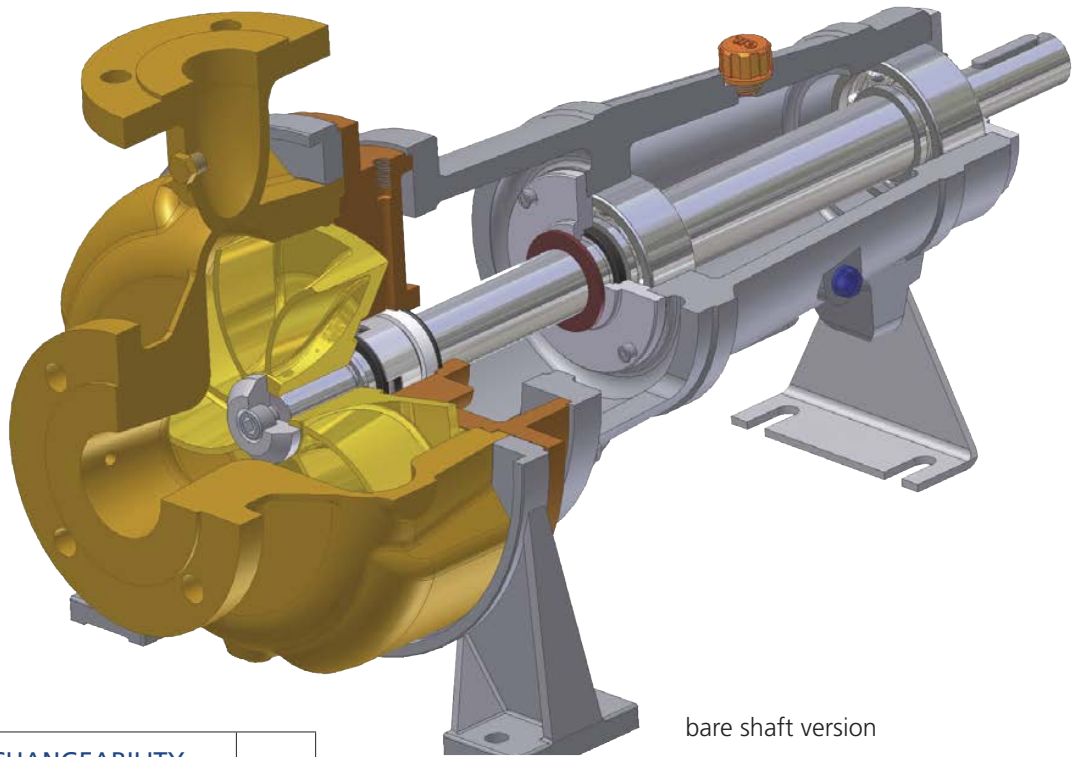
PERFORMANCES

Capacity up to 2200 GPM

Total dynamic head up to 328 ft.

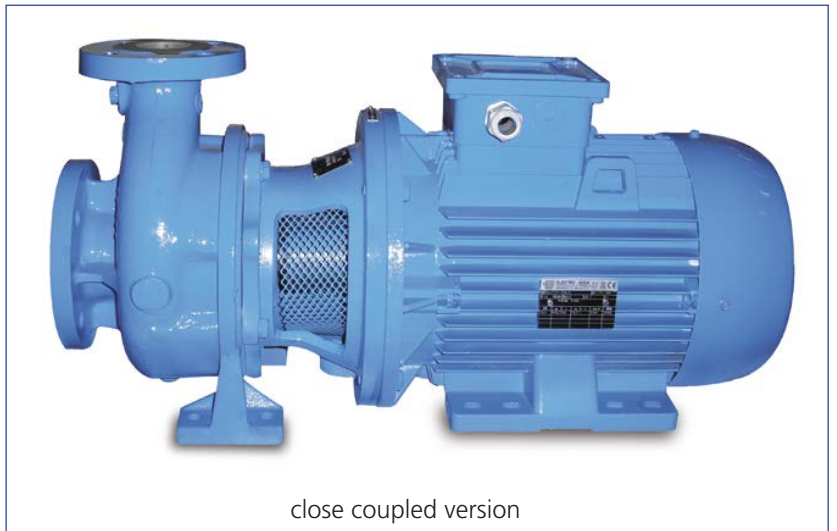
Speed from 750 to 3500 rpm

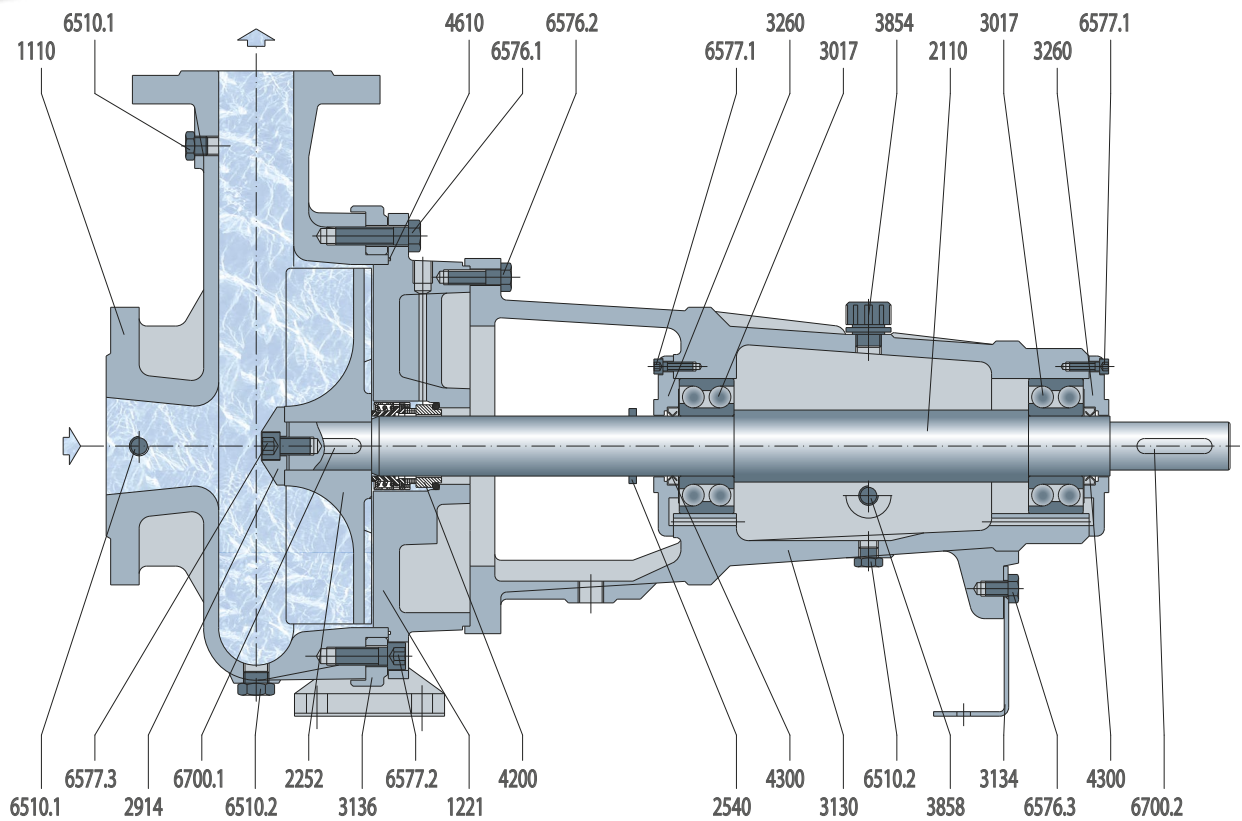




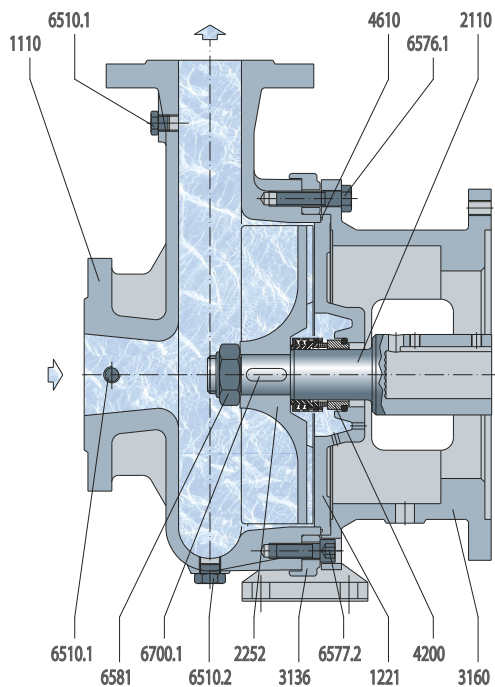
INTERCHANGEABILITY	
MODELS	19
CASINGS	19
IMPELLERS	19
SHAFTS	3
BEARING BRACKETS	3
MECHANICAL SEALS	3

MATERIALS	MAX. WORKING PRESSURE
CAST IRON	150 PSI
STAINLESS STEEL, BRONZE, SPECIAL ALLOYS	240 PSI
<i>NOTE: SPECIAL EXECUTIONS EXCEEDING THE ABOVE LIMITS AVAILABLE ON REQUEST</i>	





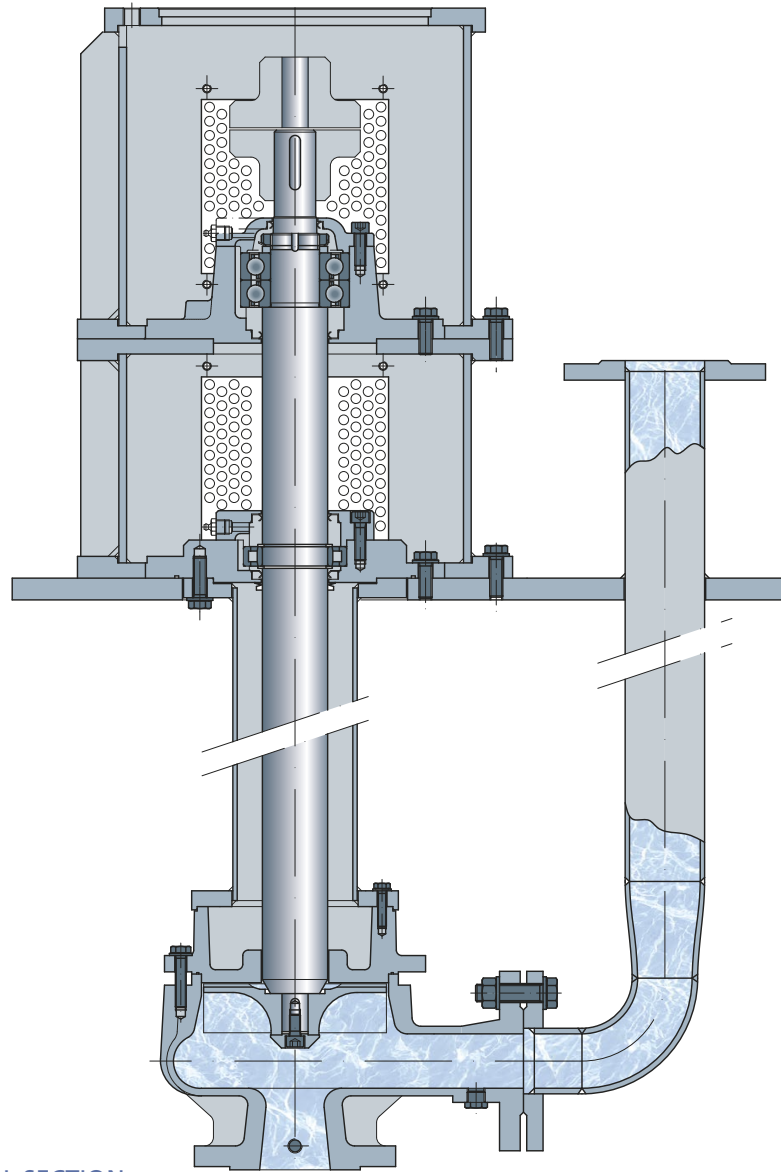
LONGITUDINAL SECTION



CLOSE COUPLED VERSION

Pos	Description
1110	Pump casing
1221	Casing cover
2110	Pump shaft
2252	Radial impeller open
2540	Deflector
2914	Impeller hub cap
3017	Ball bearing
3130	Shaft sleeve
3130	Bearing bracket
3134	Support foot
3136	Adjustable foot
3160	Motor stool
3260	Bearing cover
3854	Oil filler plug
3858	Oil level

Pos	Description
4200	Mechanical seal
4300	Radial shaft seal
4610	O-Ring
6510.1	Plug
6510.2	Plug
6576.1	Screw
6576.2	Screw
6576.3	Screw
6577.1	Screw
6577.2	Screw
6577.3	Screw
6581	Impeller nut
6700.1	Key
6700.2	Key



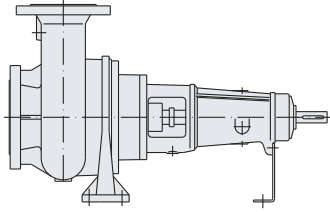
CANTILEVER LONGITUDINAL SECTION

INTERCHANGEABILITY	
MODELS (CANTILEVER)	19
CASINGS	19
IMPELLERS	19
SHAFTS	3
BEARING BRACKETS	3

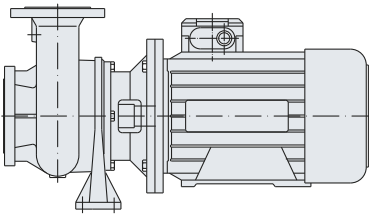
MATERIALS (CANTILEVER)	MAX. WORKING PRESSURE
CAST IRON	145 PSI
STAINLESS STEEL, BRONZE, SPECIAL ALLOY	232 PSI
<i>NOTE: SPECIAL EXECUTIONS EXCEEDING THE ABOVE LIMITS AVAILABLE ON REQUEST</i>	



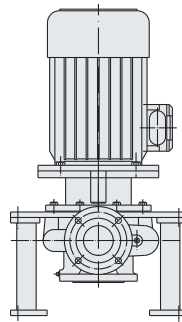
MAIN VERSIONS



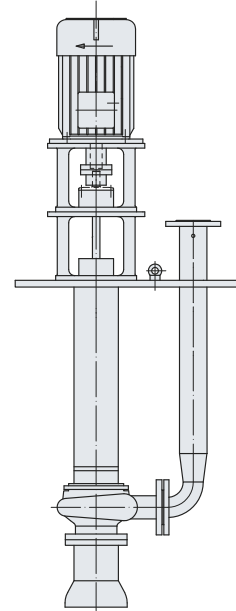
MCA
bare shaft version



MCA-M
close coupled version



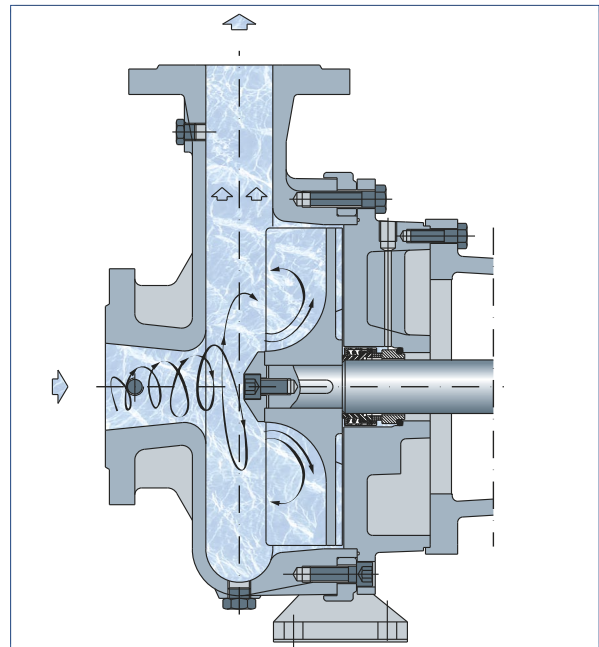
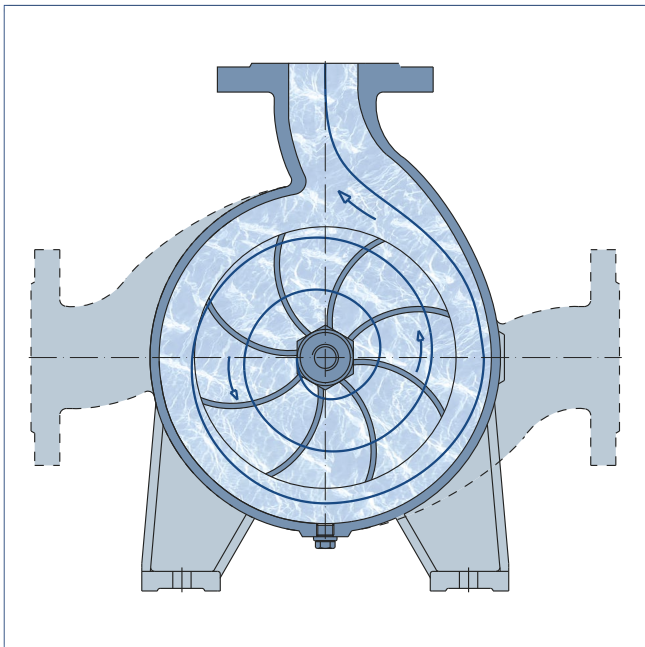
MCA-VM
vertical close coupled version

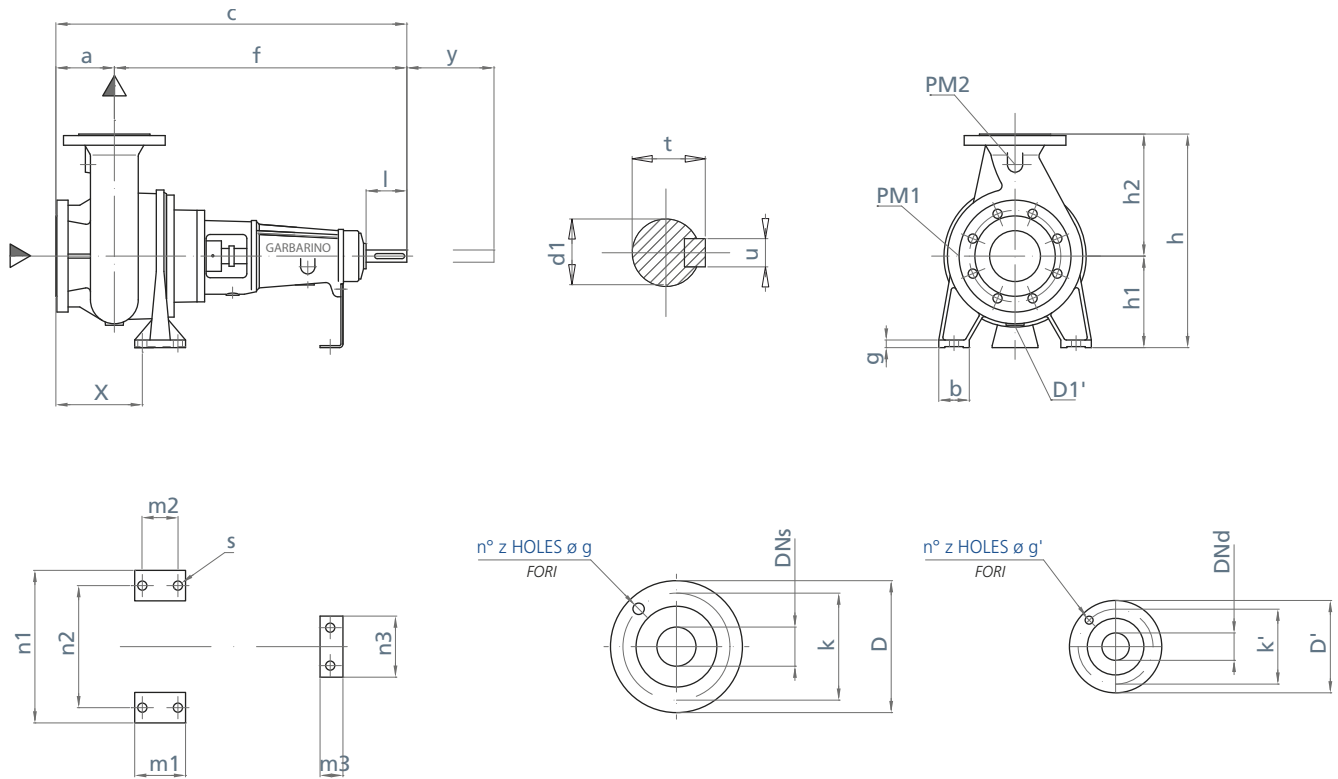


MCA-VSC

WORKING PRINCIPLE

The special impeller shape and its position in the rear part of the casing operates in such a way that the solid particles in suspension flow through the casing without touching the impeller directly.



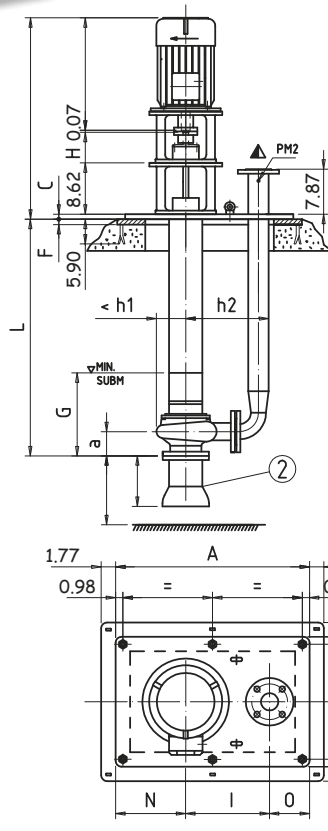


PUMP DIMENSIONS																				PUMP TYPE		FLANGES DIMENSIONS (ANSI 150)								DRAINAGE	VACUUM GAUGE	PRESSURE GAUGE	PUMP WEIGHT
a	b	c	f	g	h1	h2	h	m1	m2	m3	n1	n2	n3	l	d1	t	u	s	x	y	DNs	DNd	D	D'	K	K'	z/g	z/g'	D1	PM1	PM2	lb	
3.07	2.36	21.77	18.70	0.59	6.29	7.08	13.38	3.93	2.75	1.96	11.81	9.44	5.90	1.96	0.94	1.06	0.31	0.62	3.22	5.51	32-200	2"	1 1/4"	6.50	5.50	4.75	3.50	4/M14	4/M14	1/4"	1/4"	1/4"	112
3.54	1.96	21.85	18.30	0.59	5.90	7.48	13.38	3.93	2.75	1.96	9.44	7.48	5.90	1.96	0.94	1.06	0.31	0.55	4.13	5.51	50-125	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	1/4"	1/4"	1/4"	103
3.93	1.96	24.80	20.86	0.59	5.90	7.48	13.38	3.93	2.75	1.96	9.44	7.48	5.90	1.96	0.94	1.06	0.31	0.55	5.31	5.51	50-140	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	1/4"	1/4"	1/4"	143
3.93	1.96	24.80	20.86	0.59	5.90	8.26	14.17	3.93	2.75	1.96	9.44	7.48	5.90	1.96	0.94	1.06	0.31	0.55	5.31	5.51	50-160	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	1/4"	1/4"	1/4"	154
3.93	2.36	29.52	25.59	0.59	7.08	8.85	15.94	3.93	2.75	1.96	11.81	9.44	5.90	3.14	1.25	1.37	0.39	0.55	5.51	5.51	50-200	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	1/4"	1/4"	1/4"	231
3.93	2.36	29.52	25.59	0.59	7.08	9.84	16.92	3.93	2.75	1.96	11.81	9.44	5.90	3.14	1.25	1.37	0.39	0.55	5.51	5.51	50-250	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	3/8"	1/4"	1/4"	264
4.13	3.54	30.11	25.98	0.70	8.66	12.20	20.86	4.72	3.54	1.96	14.56	11.41	5.90	3.14	1.25	1.37	0.39	0.70	6.14	5.51	50-280	2 1/2"	2"	7.30	6.50	5.50	4.75	4/0.75	4/M14	3/8"	1/4"	1/4"	297
4.52	2.36	25.98	21.45	0.59	7.08	9.44	16.53	3.93	2.75	1.96	11.81	9.44	5.90	1.96	0.94	1.06	0.31	0.55	6.49	5.51	80-160	4"	3"	9.02	7.90	7.50	6	8/0.75	8/0.75	1/4"	1/4"	1/4"	176
4.92	2.36	31.49	26.57	0.59	7.08	9.84	16.92	3.93	2.75	1.96	11.81	9.44	5.90	3.14	1.25	1.37	0.39	0.55	7.48	5.51	80-200	4"	3"	9.02	7.90	7.50	6	8/0.75	8/0.75	1/4"	1/4"	1/4"	253
4.92	2.75	31.49	26.57	0.78	8.85	11.81	20.66	4.72	3.14	1.96	13.38	10.62	5.90	3.14	1.25	1.37	0.39	0.70	7.28	5.51	80-250	4"	3"	9.02	7.90	7.50	6	8/0.75	8/0.75	3/8"	1/4"	1/4"	286
4.92	3.54	31.49	26.57	0.70	8.66	13.18	23.03	4.72	3.54	1.96	14.56	11.41	5.90	3.14	1.25	1.37	0.39	0.70	7.51	5.51	80-280	4"	3"	9.02	7.90	7.50	6	8/0.75	8/0.75	3/8"	1/4"	1/4"	330
4.92	3.14	37.59	32.67	0.78	11.02	13.97	25.00	6.29	4.72	1.96	17.12	13.97	5.90	4.33	1.88	2.02	0.55	0.70	6.88	5.51	80-335	4"	3"	9.02	7.90	7.50	6	8/0.75	8/0.75	3/8"	1/4"	3/8"	539
5.51	2.75	32.48	26.96	0.78	8.85	11.02	19.88	4.72	3.14	1.96	13.38	10.62	5.90	3.14	1.25	1.37	0.39	0.70	8.26	5.51	100-200	5"	4"	10	9.02	8.50	7.50	8/0.75	8/0.75	3/8"	1/4"	1/4"	286
5.51	2.75	32.48	26.96	0.78	8.85	11.81	20.66	4.72	3.14	1.96	13.38	10.62	5.90	3.14	1.25	1.37	0.39	0.70	8.26	5.51	100-250	5"	4"	10	9.02	8.50	7.50	8/0.75	8/0.75	3/8"	1/4"	1/4"	363
5.51	3.14	38.58	33.07	0.78	9.84	13.97	23.81	6.29	4.72	1.96	15.74	12.40	5.90	4.33	1.88	2.02	0.55	0.70	7.87	5.51	100-280	5"	4"	10	9.02	8.50	7.50	8/0.75	8/0.75	3/8"	1/4"	1/4"	462
5.51	3.14	38.58	33.07	0.78	11.02	16.33	27.36	6.29	4.72	1.96	17.12	13.97	5.90	4.33	1.88	2.02	0.55	0.70	7.87	5.51	100-335	5"	4"	10	9.02	8.50	7.50	8/0.75	8/0.75	3/8"	1/4"	1/4"	572
6.49	3.14	34.44	27.95	0.78	11.02	14.56	25.59	6.29	4.72	1.96	15.74	12.40	5.90	3.14	1.25	1.37	0.39	0.70	9.44	3.93	150-250	8"	6"	13.50	11.22	11.75	9.50	8/0.88	8/0.88	3/8"	1/4"	1/4"	396
6.49	3.14	40.55	34.05	0.78	11.02	15.55	26.57	6.29	4.72	1.96	17.12	13.97	5.90	4.33	1.88	2.02	0.55	0.70	9.84	5.51	150-280	8"	6"	13.50	11.22	11.75	9.50	8/0.88	8/0.88	3/8"	1/4"	1/4"	528
6.49	4.72	40.55	34.05	0.94	12.59	17.12	29.72	5.11	3.14	1.96	20.47	15.74	5.90	4.33	1.88	2.02	0.55	0.70	10.23	5.51	150-335	8"	6"	13.50	11.22	11.75	9.50	8/0.88	8/0.88	3/8"	1/4"	1/4"	693

GR.24
 GR.32
 GR.48



SEALING RING



L = MAX LENGTH			
SIZE	960 1150 RPM	1450 1750 RPM	2900 RPM
VSC 24	1100	1100	1100
VSC 32	1100	1100	750
VSC 42	1100	1100	-

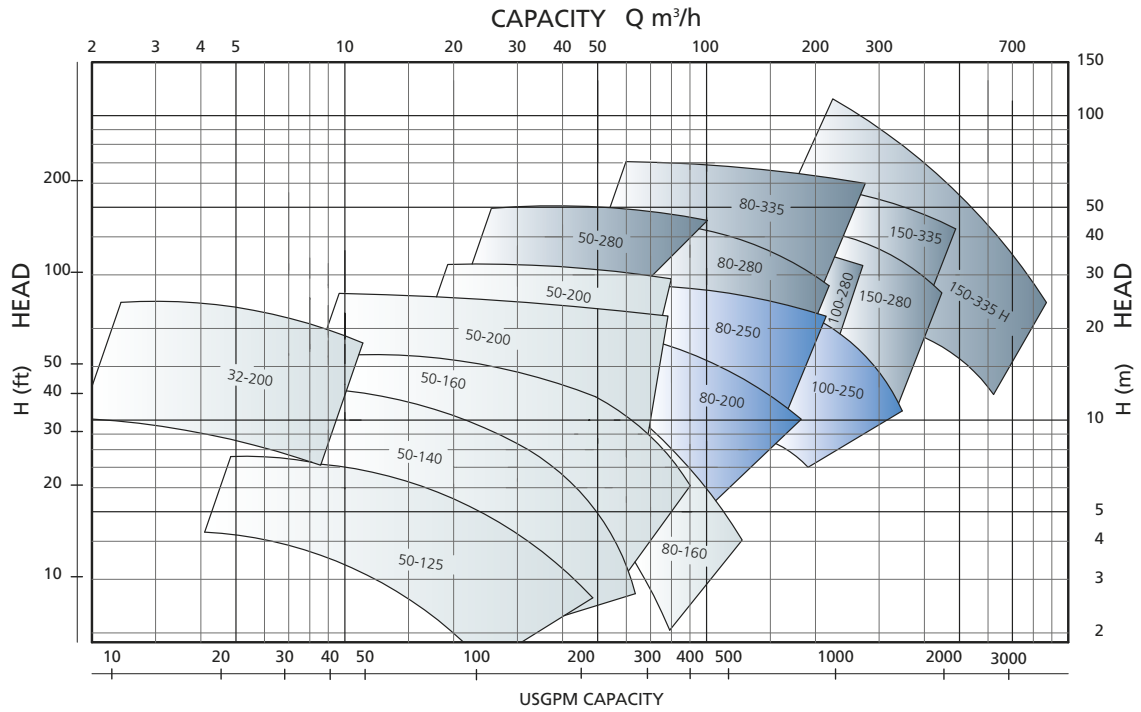
CONNECTIONS LIST				
POS	SERVICE	SIZE	RATING	NOTE
PM2	PRESSURE GAUGE CONNECTION	G 1/4"		PLUGGED

ACCESSORIES LIST			
POS	DESCRIPTION	MATERIALS/NOTES	Q.TY
1	COUNTER PLATE		1
2	SUCTION PIPE DIM. 3.93 + 29.52		1

PUMP TYPE	SIZE	OVERALL DIMENSIONS																			
		DNs	DNd	h1	h2	a	A	B	C	D	E	F	G	H	I	M	N	O	P	R	T
32-200	24	2"	1 1/2"	6.29	13.54	3.07	29.52	21.65	0.78	33.07	25.19	0.78	11.81	7.55	12.59	6	11.81	5.11	23.62	6	15.74
50-125	24	2 1/2"	2 1/2"	5.90	14.05	3.54	29.52	21.65	0.78	33.07	25.19	0.78	11.81	7.55	12.59	6	11.81	5.11	23.62	6	15.74
50-140	24	2 1/2"	2 1/2"	5.90	14.05	3.93	29.52	21.65	0.78	33.07	25.19	0.78	11.81	7.55	12.59	6	11.81	5.11	23.62	6	15.74
50-160	24	2 1/2"	2 1/2"	5.90	14.84	3.93	31.49	21.65	0.78	35.03	25.19	0.78	11.81	7.55	13.38	6	11.81	6.29	25.59	6	15.74
50-200	32	2 1/2"	2 1/2"	7.08	15.82	3.93	31.49	21.65	0.78	35.03	25.19	0.78	11.81	7.55	14.37	6	11.81	5.31	25.59	6	15.74
50-250	32	2 1/2"	2 1/2"	7.08	15.62	3.93	31.49	23.62	0.78	35.03	27.16	0.78	11.81	7.55	14.17	6	11.81	5.51	25.59	6	17.71
50-280	32	2 1/2"	2 1/2"	8.66	18.77	4.13	37.40	23.62	0.78	40.94	27.16	0.78	11.81	7.55	17.32	6	13.77	6.29	31.49	6	17.71
80-160	24	4"	4"	7.08	17.24	4.52	33.46	23.62	0.78	37.00	27.16	0.78	11.81	7.55	14.96	6	11.81	6.69	27.55	6	17.71
80-200	32	4"	4"	7.08	17.24	4.92	33.46	23.62	0.78	37.00	27.16	0.78	11.81	7.55	14.96	6	11.81	6.69	27.55	6	17.71
80-250	32	4"	4"	8.85	19.56	4.92	37.40	23.62	0.78	40.94	27.16	0.78	11.81	7.55	17.32	6	13.77	6.29	31.49	6	17.71
80-280	32	4"	4"	9.84	21.37	4.92	41.33	25.59	0.98	44.88	29.13	0.98	11.81	7.55	19.09	6	15.74	6.49	35.43	6	19.68
80-335	42	4"	4"	11.02	21.37	4.92	41.33	25.59	0.98	44.88	29.13	0.98	19.68	10.23	19.09	6	15.74	6.49	35.43	6	19.68
100-200	32	5"	5"	8.85	20.47	5.51	37.40	23.62	0.78	40.94	27.16	0.78	15.74	7.55	17.71	6	11.81	7.87	31.49	6	17.71
100-250	32	5"	5"	8.85	21.88	5.51	41.33	23.62	0.78	44.88	27.16	0.78	15.74	7.55	19.09	6	13.77	8.46	35.43	6	17.71
100-280	42	5"	5"	9.84	23.42	5.51	43.30	27.55	0.98	46.85	31.10	0.98	19.68	10.23	20.66	8	15.74	6.88	37.40	8	21.65
100-335	42	5"	5"	11.02	32.51	5.51	57.08	29.52	0.98	60.62	33.07	0.98	19.68	10.23	29.72	8	17.71	9.64	51.18	8	23.62
150-250	32	8"	8"	11.02	28.93	6.49	49.21	27.55	0.98	52.75	31.10	0.98	19.68	7.55	24.60	8	15.74	8.85	43.30	8	21.65
150-280	42	8"	8"	11.02	29.92	6.49	51.18	29.52	0.98	54.72	33.07	0.98	19.68	10.23	25.59	8	15.74	9.84	45.27	8	23.62
150-335	42	8"	8"	12.59	31.88	6.49	55.11	29.52	0.98	58.66	33.07	0.98	19.68	10.23	27.55	8	17.71	9.84	49.21	8	23.62

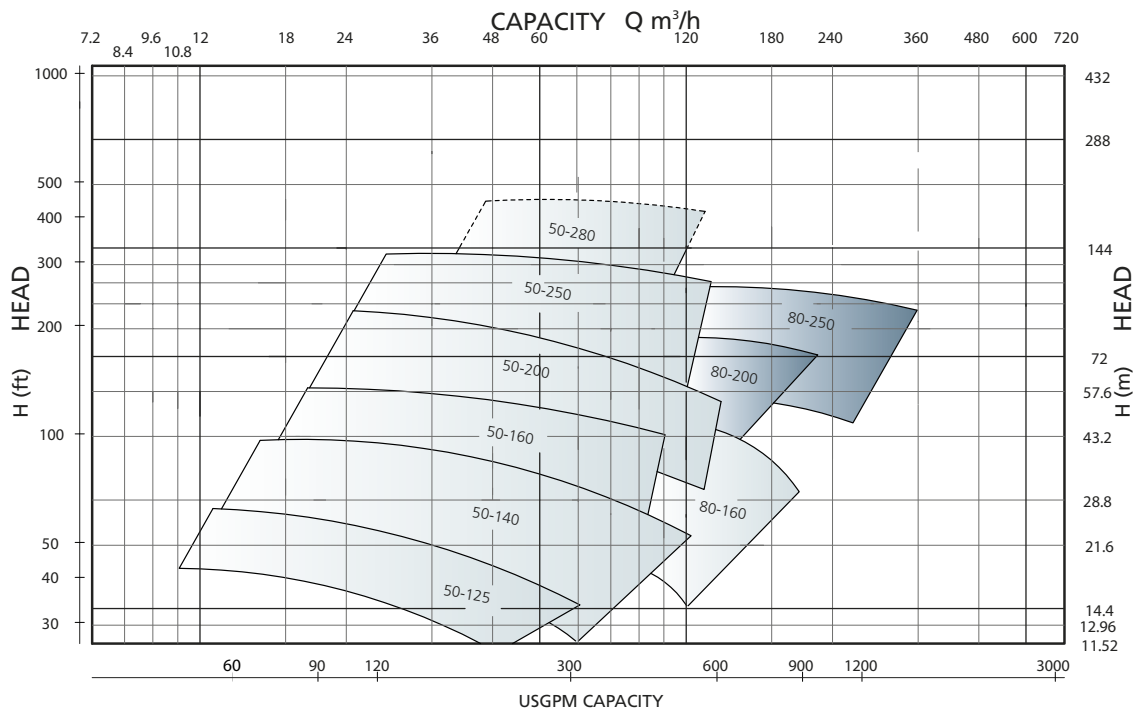
1750 RPM

PERFORMANCES



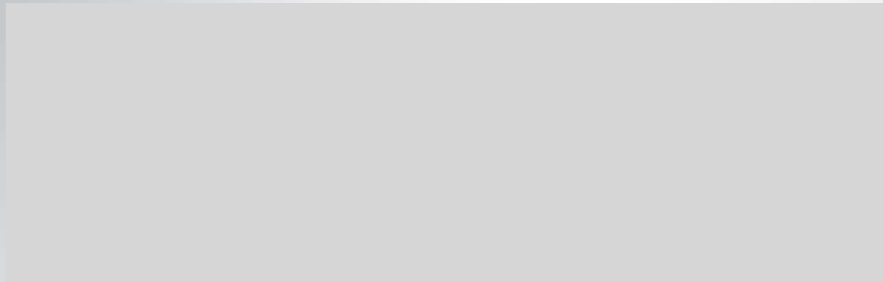
3500 RPM

PERFORMANCES



NOTES

A series of horizontal dashed lines for writing notes.



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