



Pumps & Systems



# SOM

Chemical Mixed-Flow Pumps



**Source Pumps & Systems Co., LTD.**

[www.sourcegroup.com.cn](http://www.sourcegroup.com.cn)

## ● Introduction

The SOM series pump is single-stage and single suction overhung centrifugal pump that applied in the neutral or caustic liquid with solid which is high flow and low head.

SOM mixed-flow pumps conform to GB/T 13008 standard Performance.

—Flow	Q : up to $\sim 8000 \text{ m}^3/\text{h}$
—Head	H : up to $\sim 25\text{m}$
—Pressure	P : up to $\sim 0.6\text{MPa}$
—Temperature	T : $-20\sim+155^\circ\text{C}$

## ● Applications

- The imposed circulation in chemical industry process
- Sea water culture and desalt .
- Water treatment system .
- The gas project in the city.
- Paper-making industry.

## ● Features

High efficiency low energy loss.

The pump energy consumption. is evenly within the performance limit, it could startup under closed valve condition, so the motor could not overload.

The large wetted section; not plugged easily.

The firmly structure and long running life.

## ● The Horizontal Structure (SOM)

The pump is pull out structure, the casing has not to be dismantled from connecting pipeline during maintaining The shaft is produced precisely. and the bearing with oil, lubricating, the protective shaft is installed in packing housing, the oil level could be controlled by constant level oiler bearing housing.

## ● Vertical Structure (SOMV)

The pump structure is compact, and the covering area is small, it is conveniently for installing the motor is connected with casing by vertical housing it is not necessary to dismantle the pipeline using the grease to lubricate.

The support foot is cast on casing. which could stand the load from pipeline, and transmitting it to the base plate, so the rotor could not bend for pump loading therefore the bearing is guaranteed for long life.

In order to vent for suction pipe conveniently the complete vent device is equipped on pump.

The pump rotation direction: it is CW viewing from the driving end.

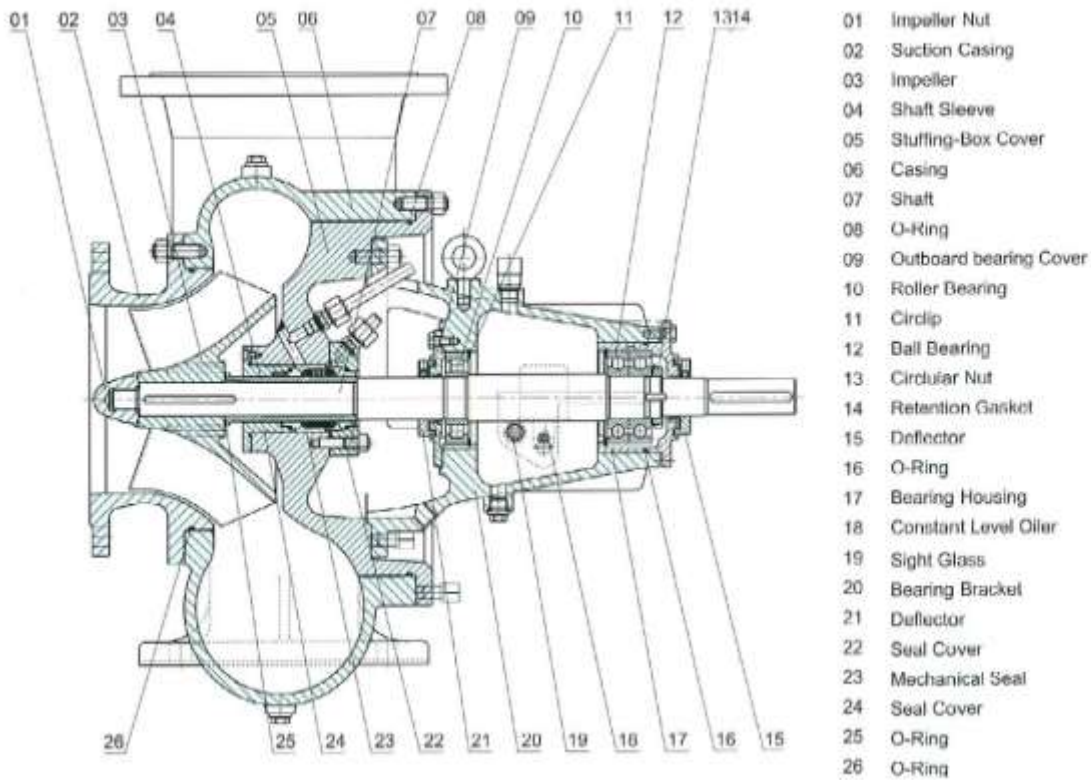
The power: adopting motor or gas engine.

In order to drain conveniently for suction pipeline, the completely drain equipment could be installed on setting.

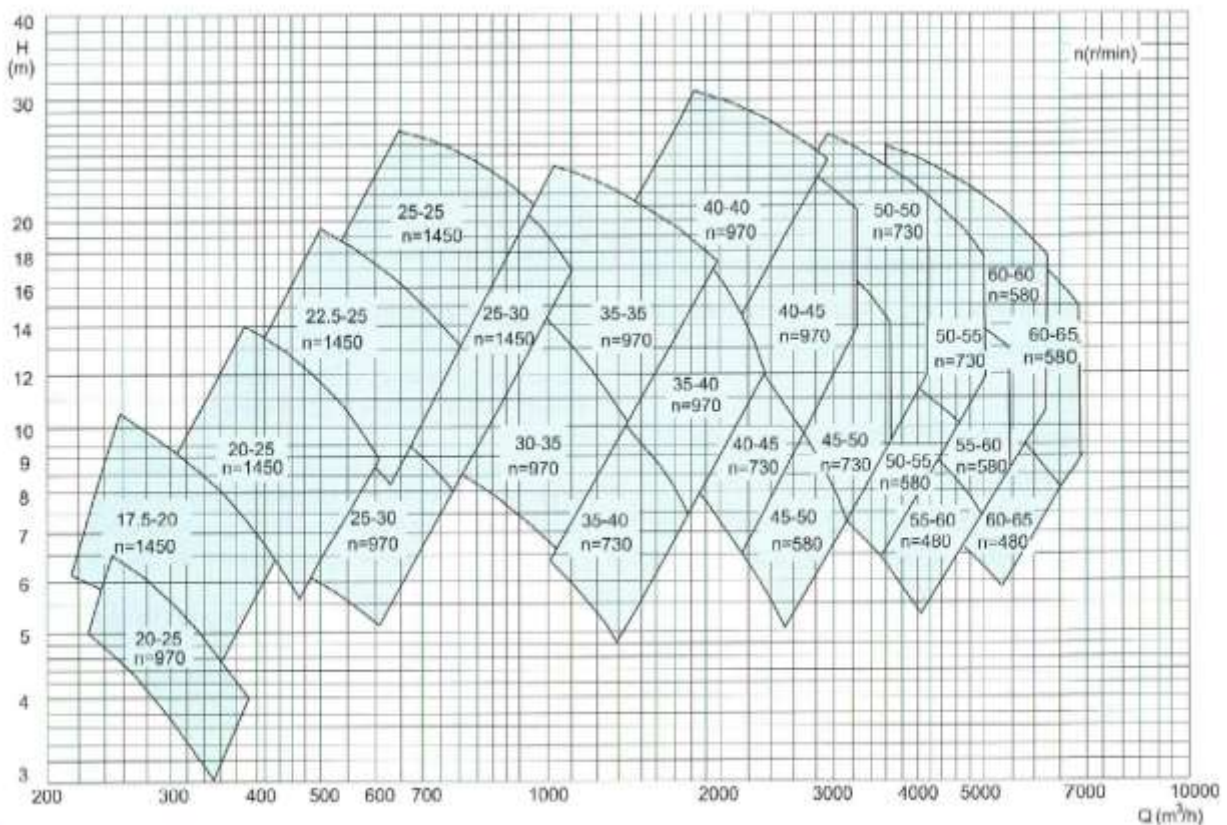
## ● Seal Type

The packing or single and double end mechanical seal.

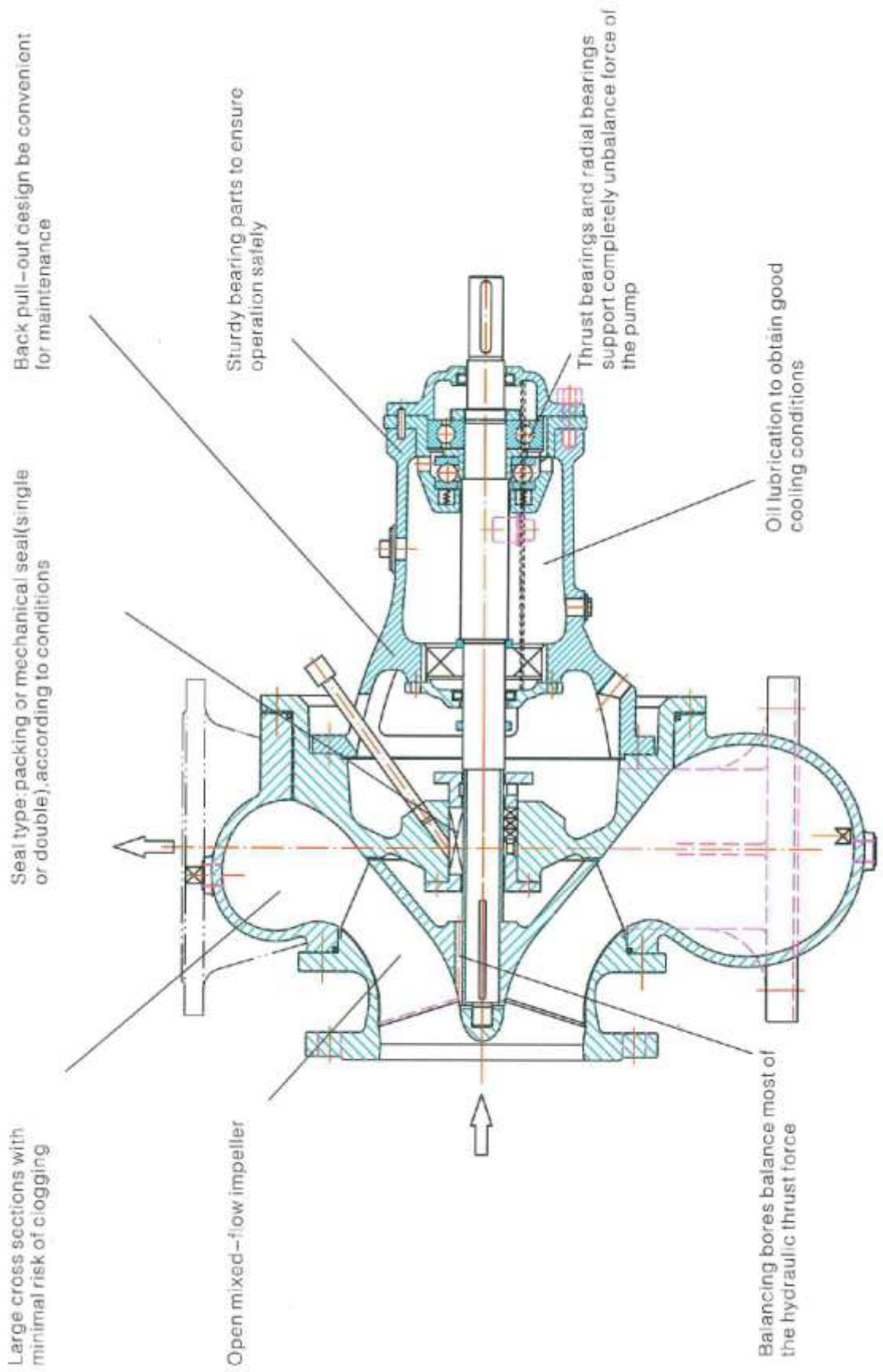
## SOM Section Drawing



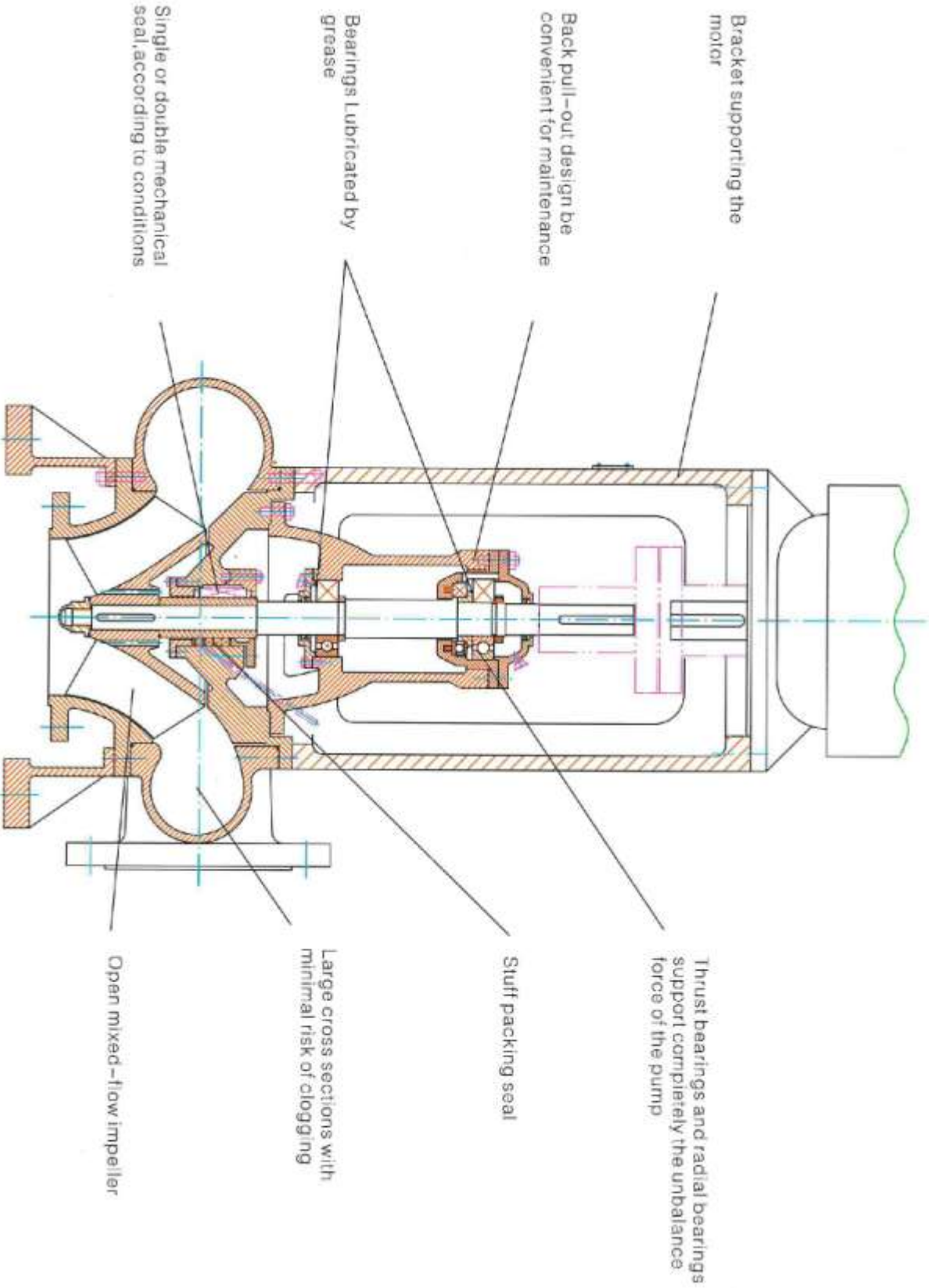
## SOM Range of Performance



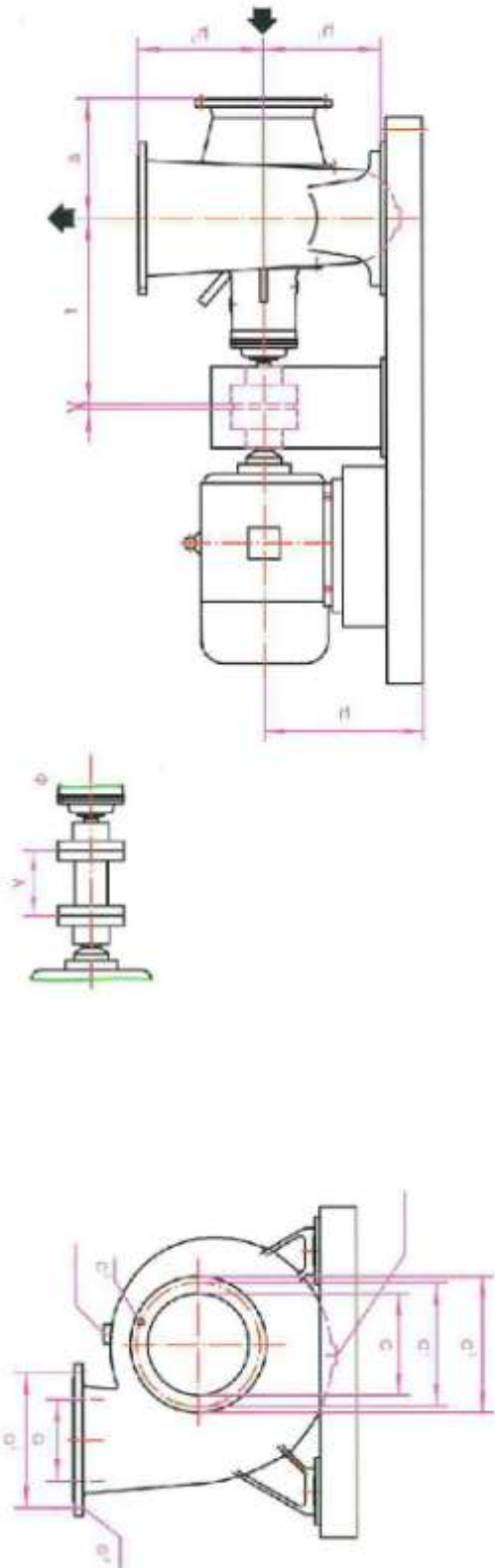
## SOM Sectional Drawing (Horizontally Arrangement)



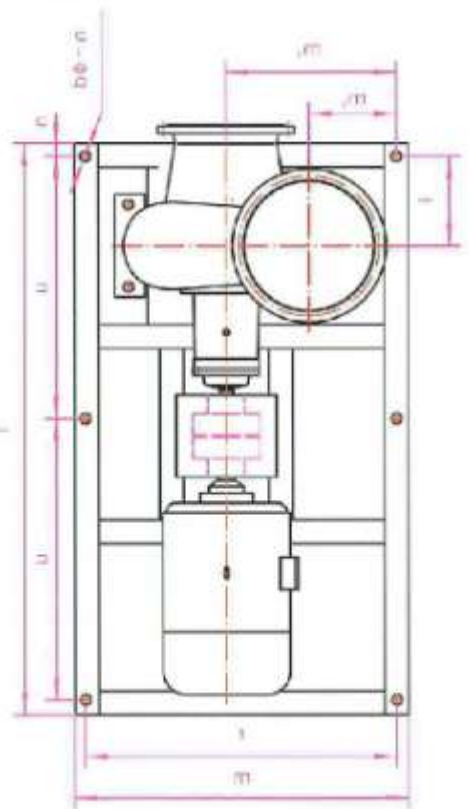
## SOMV Sectional Drawing (vertically Arrangement)



### SOM Outline Drawing (Horizontally Arrange-



Type	Discharge group				Suction group				Pressure
	D <sub>q</sub>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	D <sub>s</sub>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	
60 - 62	620	160	810	50 - Ø58	600	102	122	50 - Ø58	1.0 MPa
60 - 60	600	102	122	50 - Ø58	600	102	122	50 - Ø58	
22 - 60	600	102	122	50 - Ø58	280	622	102	50 - Ø58	0.6 MPa
20 - 22	220	622	102	50 - Ø58	280	600	642	50 - Ø58	
20 - 20	200	600	642	50 - Ø58	200	600	642	50 - Ø58	
42 - 20	200	600	642	50 - Ø58	420	220	282	18 - Ø58	
40 - 42	420	220	282	18 - Ø58	400	482	240	18 - Ø58	
40 - 40	400	482	240	18 - Ø58	400	482	240	18 - Ø58	
32 - 40	400	212	262	18 - Ø58	320	480	202	18 - Ø58	
32 - 32	320	460	202	18 - Ø58	320	480	202	18 - Ø58	
30 - 32	320	460	202	18 - Ø58	300	400	442	15 - Ø58	
32 - 30	300	400	442	15 - Ø58	320	320	382	15 - Ø58	
32 - 32	320	320	382	15 - Ø58	320	320	382	15 - Ø58	
35 2 - 32	320	320	382	15 - Ø58	352	322	310	8 - Ø58	
50 - 32	320	320	382	15 - Ø58	500	282	340	8 - Ø58	
1.2 - 50	500	282	340	8 - Ø58	112	510	312	8 - Ø58	



## SOM Outline & Installing Dimensions

Pump Size	Dimensions of pumps						Dimensions of bases														
	a	f	h1	h2	m1	m2	Motor size		n	l	r	m	h	y	Coupling without spacer				Spacer-type coupling		
															u	l	n-Qd	y	u	l	n-Qd
17.5-200	200	554	250	230	345	137	112M-132S 132M-180L	30	200	640	700	438	5	870	1400	6-Q24	250	670	1400	6-Q24	250
20-250	215	545	280	300	420	180	132M-180L 200L-225S	30	215	790	850	488	5	770	1600	6-Q24	250	770	1600	6-Q24	250
22.5-250	235	630	315	340	425	160	160L-225M 250M-280S	30	235	780	850	503	5	770 870	1600 1800	6-Q24	275	870 970	1800 2000	6-Q24	275
25-25	245	620	315	335	425	157	200L-225M 250M-315S	30	245	790	850	503	5	770 870	1600 1800	6-Q24	300	970 1215	2000 2500	6-Q24	300
25-30	245	620	355	370	502.5	202.5	160L-200L 225S-315S	30	245	940	1000	543	5	870	1800	6-Q24	300	870	1800	6-Q24	300
30-35	295	707	400	420	610	255	200L 225S-315S	30	295	1140	1200	608	5	970	2000	6-Q24	350	970	2000	6-Q24	350
35-35	345	670	400	400	610	235	280S-315L 355S	30 35	345	1140 1130	1200	608	5	970 1215	2000 2500	6-Q24	350	1215	2500	6-Q24	350
35-40	345	670	500	440	615	200	225S-315M 355S	30 35	345	1140 1130	1200	708	5	970 1215	2000 2500	6-Q24	350	1215	2500	6-Q24	350
40-40	390	872	470	450	725.5	297.5	315S-400	35	390	1380	1450	678	50	1215	2500	6-Q24	450	975	3000	8-Q33	450
40-45	400	862	600	500	727.5	252.5	315S-400	35	360	1380	1450	808	50	1215	2500	6-Q24	450	975	3000	8-Q33	450
45-50	440	827	600	550	915	385	315S-400	35	400	1730	1800	808	50	1215	2500	6-Q24	475	975	3000	8-Q33	475
50-50	490	960	600	620				50					50								550
50-55	490	960	710	620				50					50								550
55-60	540	919	800	730				50					50								650
60-60	590	1041	710	730				50					50								700
60-65	590	1041	800	850				50					50								700

## SOM Table of Standard Performance

Type	Speed r/min	Impeller code	SY. (mm)	Q (m <sup>3</sup> /h)	H (m)	(NPSH) (m)	Type and Power(kW)					
							Proportion					
							γ=1.0		γ=1.35		γ=1.84	
							Power	Type	Power	Type	Power	Type
SOM17.5-20	n=1450	A	236	360	8.5	3.2	15	160L-4	18.5	180M-4	30	200L-4
		B	222	340	7.5	3	11	160M-4	15	160L-4	22	180L-4
		C	210	320	6.3	3	11	160M-4	15	160L-4	18.5	180M-4
		D	198.5	300	5	4.5	7.5	132M-4	11	160M-4	15	160L-4
SOM 20-25	n=1450	A	270	530	11.2	4	30	200L-4	30	200L-4	45	225M-4
		B	254	500	10	3.9	22	180L-4	30	200L-4	37	225S-4
		C	240	460	8.5	3.8	18.5	180M-4	22	180L-4	30	200L-4
		D	226.5	430	7	5.5	15	160L-4	18.5	180M-4	30	200L-4
SOM20-25	n=970	A	270	350	5	4	7.5	160M-6	11	160L-6	15	180L-6
		B	254	330	4.5	3.8	7.5	160M-6	11	160L-6	11	160L-6
		C	240	300	3.9	3.6	5.5	132M2-6	7.5	160M-6	11	160L-6
SOM 22.5-25	n=1450	A	304	700	15.8	5	45	225M-4	55	250M-4	75	280S-4
		B	285	650	14	5	37	225S-4	55	250M-4	75	280S-4
		C	270	625	11.5	5	30	200L-4	37	225S-4	55	250M-4
		D	255	575	9.5	7.5	30	200L-4	30	200L-4	45	225M-4
SOM25-25	n=1450	A	338	900	24	6	90	280M-4	110	315S-4	160	315L1-4
		B	317	850	21	5.9	75	280S-4	90	280M-4	132	315M
		C	300	780	18	6	55	250M-4	75	280S-4	110	315S-4
		D	283.5	725	14.5	8.8	45	225M-4	55	250M-4	75	280S-4
SOM 25-30	n=1450	A	338	1100	19.5	6.4	75	280S-4	110	315S-4	160	315L1-4
		B	317	1040	17	6	75	280S-4	90	280M-4	132	315M-4
		C	300	950	14.8	5.8	55	250M-4	75	280S-4	110	315S-4
		D	283.5	880	12	9	45	225M-4	55	250M-4	75	280S-4
SOM25-30	n=970	A	338	750	8.5	4.7	30	225M-6	37	250M-6	45	280S-6
		B	317	700	7.6	4	22	200L2-6	30	225M-6	37	250M-6
		C	300	650	6.5	3.8	18.5	200L1-6	30	225M-6	30	225M-6
		D	283.5	600	5.3	7.2	15	180L-6	18.5	200L1-6	30	225M-6
SOM30-35	n=970	A	405	1300	12.2	4.4	75	315S-6	75	315S-6	110	315L1-6
		B	380	1200	11	4	55	280M-6	75	315S-6	90	315M-6
		C	360	1150	9	4	45	280S-6	55	280M-6	75	315S-6
		D	340	1050	7.2	6	30	225M-6	45	280S-6	55	280M-6
SOM35-35	n=970	A	472	1600	21	5.2	132	315L2-6	160	355S-6	220	355L1-6
		B	444	1500	17	5.3	90	315M-6	132	315L2-6	185	355M1-6
		C	420	1450	13.5	5.5	75	315S-6	110	315L1-6	132	315L2-6
		D	396.5	1350	11	7.8	55	280M-6	75	315S-6	110	315L1-6
SOM35-40	n=970	A	472	2000	17	6	132	315L2-6	160	355S-6	220	355L1-6
		B	444	1900	15	5.5	110	315L1-6	160	355S-6	185	355M1-6
		C	420	1800	12.2	5.2	90	315M-6	110	315L1-6	160	355S-6
		D	396.5	1700	10	8	75	315S-6	90	315M-6	132	315L2-6
SOM35-40	n=730	A	472	1500	9.6	4	55	315S-8	75	315M-8	110	315L2-8
		B	444	1450	8.1	3.9	45	280M-8	75	315M-8	75	315M-8
		C	420	1350	7	3.6	37	280S-8	55	315S-8	75	315M-8
		D	396.5	1250	5.7	5.8	30	250M-8	37	280S-8	55	315S-8
SOM40-40	n=970	A	540	2400	28	7	250	355L2-6				
		B	507	2300	22	7	185	355M1-6	250	355L2-6		
		C	480	2100	18	7	160	355S-6	185	355M1-6	250	355L2-6
		D	453	2000	14.5	9.8	110	315L1-6	160	355S-6	200	355M2-6



## SOM Table of Standard Performance

Type	Speed r/min	Impeller code	SY (mm)	Q (m <sup>3</sup> /h)	H (m)	(NPSH) (m)	Type and Power(kW)					
							Proportion					
							γ=1.0		γ=1.35		γ=1.84	
Power	Type	Power	Type	Power	Type							
SOM40-45	n=970	A	540	3200	20.6	8	250	355L2-6				
		B	507	3000	18.5	7.5	200	355M2-6				
		C	480	2800	16	7.1	180	355S-6	220	355M2-6		
		D	453	2500	13.5	10	132	315L2-6	185	355M1-6	250	355L2-6
SOM 40-45	n=730	A	540	2400	11.6	6	110	315L2-8	132	355S-8	185	355L1-8
		B	507	2200	10.9	5.4	90	315L1-8	132	355S-8	160	355M-8
		C	480	2000	9.5	5	75	315M-8	90	315L1-8	132	355S-8
		D	453	1800	8	8	55	315S-8	75	315M-8	110	315L2-8
SOM45-50	n=730	A	608	3300	15.8	5.2	185	355L1-8				
		B	570	3100	13.8	5	160	355M-8	200	355L2-8		
		C	540	2900	12	5	132	355S-8	185	355L1-8		
		D	510	2600	10.2	7.3	110	315L2-8	132	355S-8	185	355L1-8
SOM 45-50	n=580	A	608	2600	10	3.4	90	355S-10	132	355M2-10	185	355L2-10
		B	570	2500	8.6	3.1	75	315L2-10	110	355M1-10	160	355L1-10
		C	540	2300	7.8	3	75	315L2-10	90	355S-10	132	355M2-10
		D	510	2200	6	5.8	55	315S-10	75	315L2-10	90	355S-10
SOM50-50	n=730	A	675	3700	24	5						
		B	634	3400	20	5						
		C	600	3200	16	5	185	355L1-8				
		D	567	3000	12.8	7	160	355M-8	200	355L2-8		
SOM 50-55	n=730	A	675	4500	20	5.5						
		B	634	4300	17.5	5.1						
		C	600	4000	15	5						
		D	567	3800	12.3	7.6	185	355L1-8				
SOM50-55	n=580	A	675	3600	12.6	3.8	160	355L1-10				
		B	634	3400	11	3.4	132	355M2-10	185	355L2-10		
		C	600	3200	9.4	3.1	110	355M1-10	160	355L1-10		
		D	567	3000	8	5.8	90	355S-10	132	355M2-10	160	355L1-10
SOM 55-60	n=580	A	742	4800	15	5.2						
		B	696	4400	13.5	5						
		C	660	4100	11.5	4.9	185	355L2-10				
		D	623	3900	9.5	7.2	132	355M2-10	185	355L2-10		
SOM55-60	n=480	A	742	3800	10.5	3.5						
		B	696	3700	9.1	3.2						
		C	660	3400	8	2.9						
		D	623	3200	6.5	5.1						
SOM 60-60	n=580	A	810	5200	21.5	5.6						
		B	760	5000	17	5.6						
		C	720	4500	14	5.6						
		D	680	4300	11	7.8	185	355L2-10				
SOM60-65	n=580	A	810	6200	17	6.2						
		B	760	5800	15	6						
		C	720	5400	13	5.8						
		D	680	5100	10.5	8						
SOM 60-65	n=480	A	810	5200	11.5	4.2						
		B	760	5000	10	4						
		C	720	4600	8.5	3.5						
		D	680	4000	7.5	6						



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