Pumps & Systems

SOC

Standard Chemical Process Pumps



Source Pumps & Systems Co., LTD.

www.sourcegroup.com.cn

Add: No.18 Xidian, Qian mu cheng yi, Ying cheng zi Street,Ganjingzi District, Dalian, China 116036
TEL: +86-411-66853898
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General

Type SOC standard chemical process pumps are horizontal, single-stage, single-suction, radial-split centrifugal pumps with their dimensions and performance in conformity with ISO 2856. The size 150-400 and up are proprietary. the indexes of efficiency and cavitation performance both exceed that of IH pump type. Making exchange with the single pump of these two type is allowed.
The designing of pump SOC is according to ASME B73.1, ISO5199.

Application

The chemical and petrochemical industries
Refineries
The pulp and paper industries
The sugar industries

Performance

Size DN: 32～300mm

Capacity Q： ～2000 m³/h

Heads H: ～160m

Operating Pressure P: ～2.SMpa

Operating Temperature T: ～ 2 6 0 ℃

Pumping mediums and materials

The pumps can handle of clean liquids or liquids containing solids.
The materials of the pump can be selected C,S,12%CHR steel and other stainless steers. depended on the service conditions.

Symbol

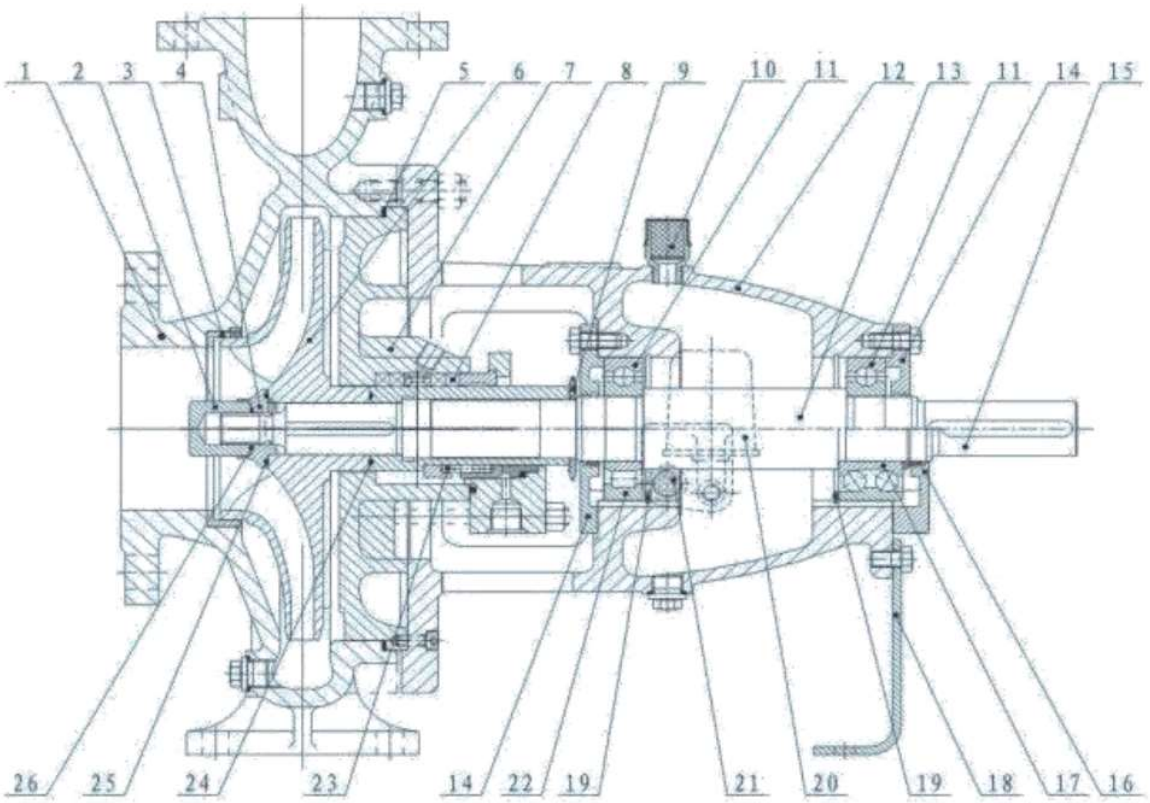
SOC—50—250
- 250 — Impeller diameter mm
- 50 — Discharge Branch mm
- SOC — Series

Product Features

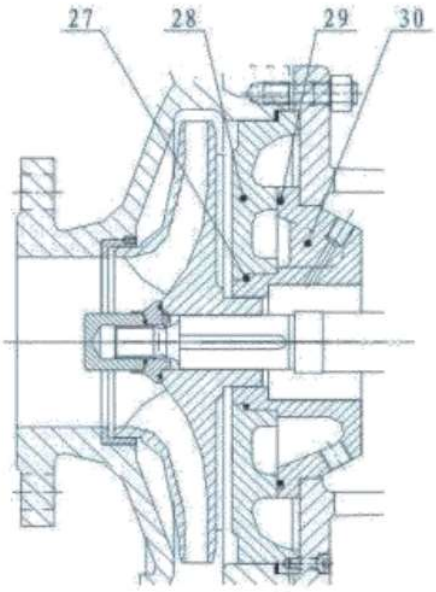
• Hydraulic design the axial force is balanced by back vanes or balancing bores at the impeller. for some sizes. the casing is designed double volute to compensate the radial forces.
• Shaft seal design the shaft is sealed either by soft packing or by single or double mechanical seal with various flush plans. The secondary impeller seal will be designed when necessary.
• Flange grade the suction branch and discharge branch are the same pressure grade. PN2.SMpa is standard. They can also be designed PN1.6Mpa or 150lbs.
• Structure design the pull out back structure and a spacer-type coupling is used, the volute casing and the driver need not to be removed from the pipework when maintenance.

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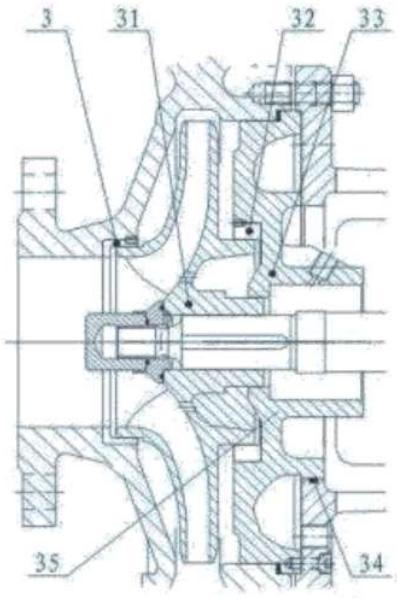
SOC Sectional Drawings



Impeller with back vanes,stuffing box uncooled



Impeller with back vanes,stuffing box cooled



Impeller with balancing bores,stuffing box cooled/uncooled

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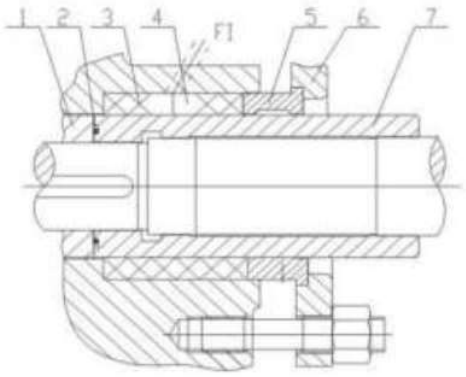
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Pump parts list

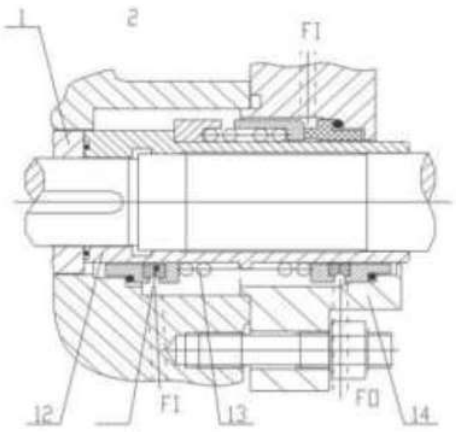
	1	casing
☆	2	impeller nut
☆	3	wearing ring
☆	4	collar disc
☆	5	gasket
☆	6	impeller
	7	casing cover
☆	8	packing seal
	9	deflector
	10	oil filling plug
	11	bearing
	12	bearing bracket
	13	shaft
	14	bearing cover
	15	shaft
	16	circlip
	17	bearing
	18	foot
	19	circlip
	20	constant level oiler
	21	oil level indicator
	22	bearing
	23	mechanical seal
☆	24	O-ring
☆	25	O-ring
☆	26	O-ring
☆	27	O-ring
	28	casing cover
☆	29	O-ring
	30	stuffing box
☆	31	impeller
☆	32	wearing ring
	33	casing cover
☆	34	O-ring
	35	casing cover

☆Being spare parts

Shaft Seal Drawings



Packed stuffing box



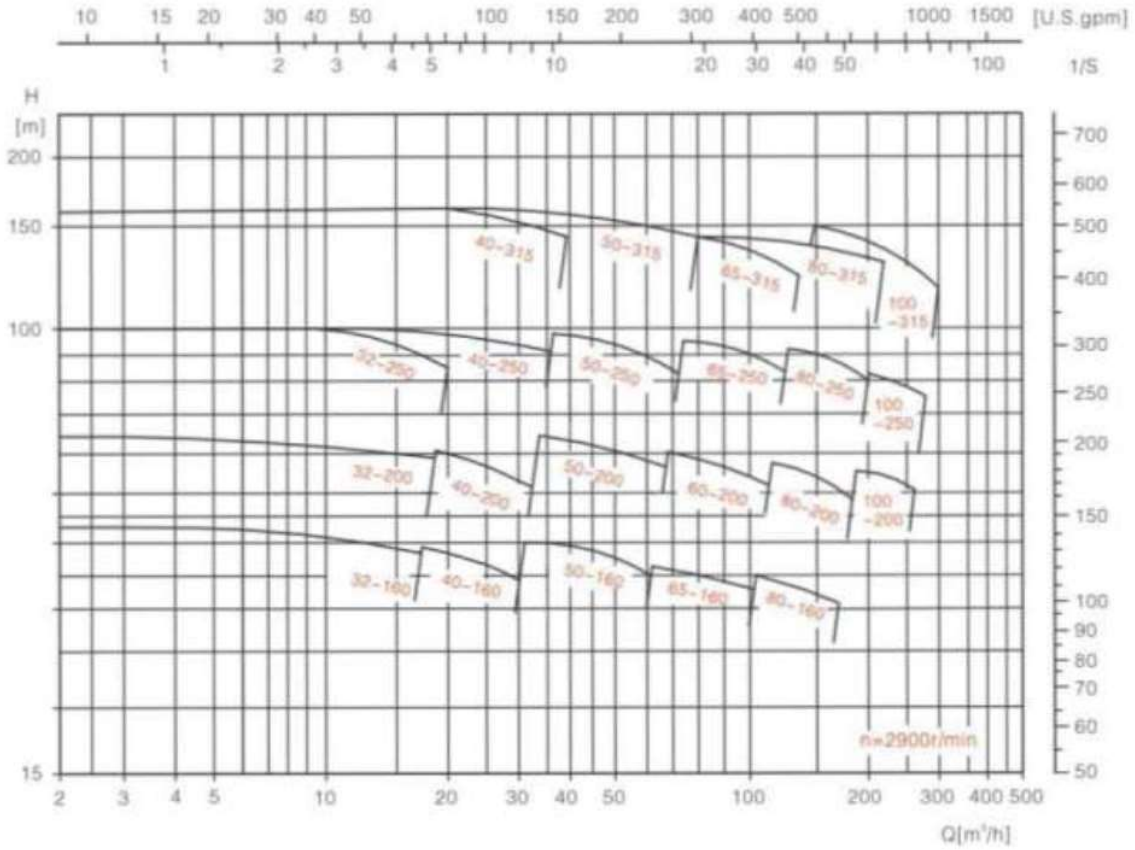
Single/Double mechanical seals

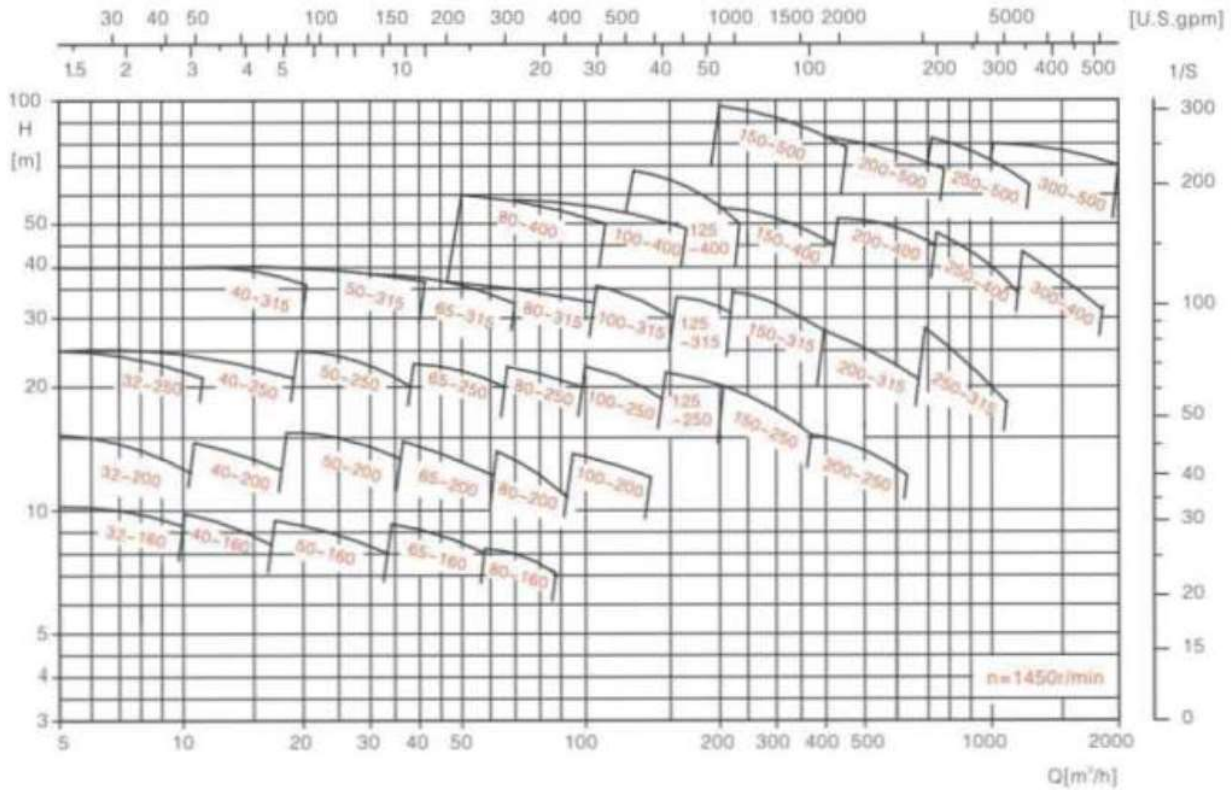
Shaft seal parts list

1 impeller	2 O-ring
3 packing	4 lantern ring
5 gland insert	6 gland
7 shaft sleeve	8 shaft sleeve
9 single mechanical seal	
10 seal rings	11 gland
12 shaft sleeve	
13 double mechanical seal	
14 shaft sleeve	

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SOC Performance Charts (5 0Hz)

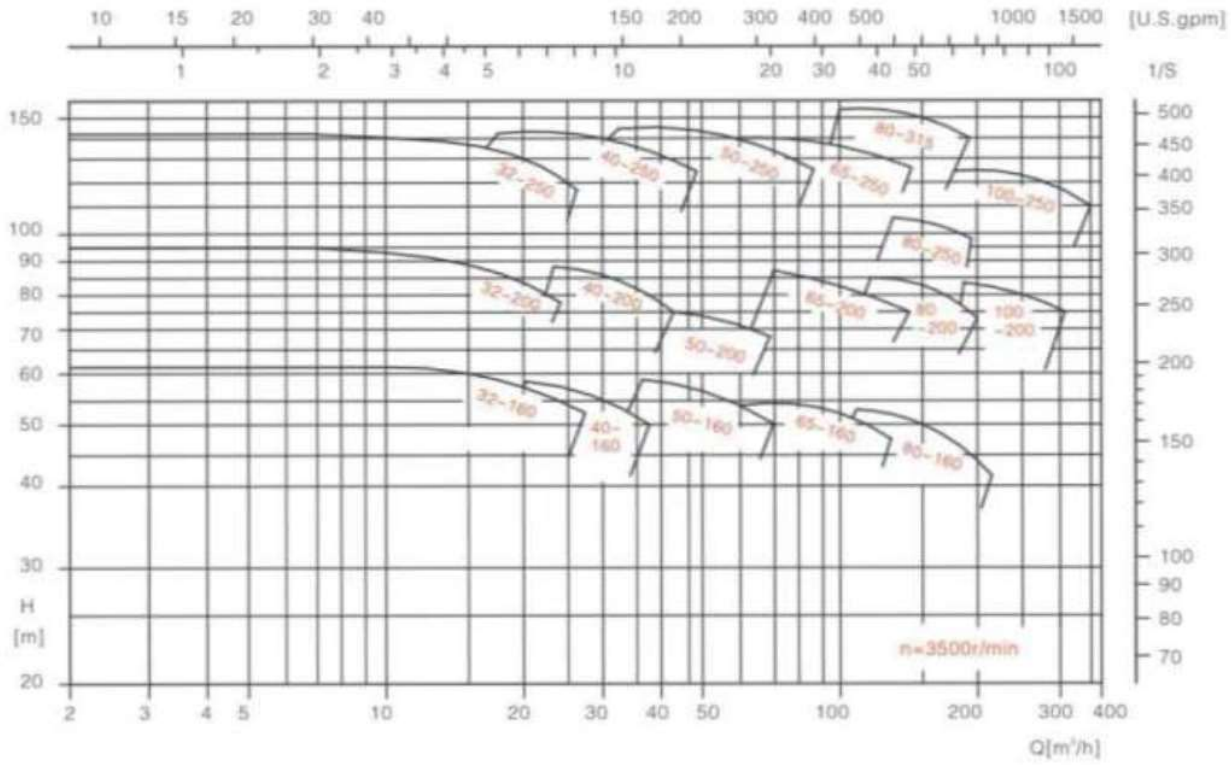


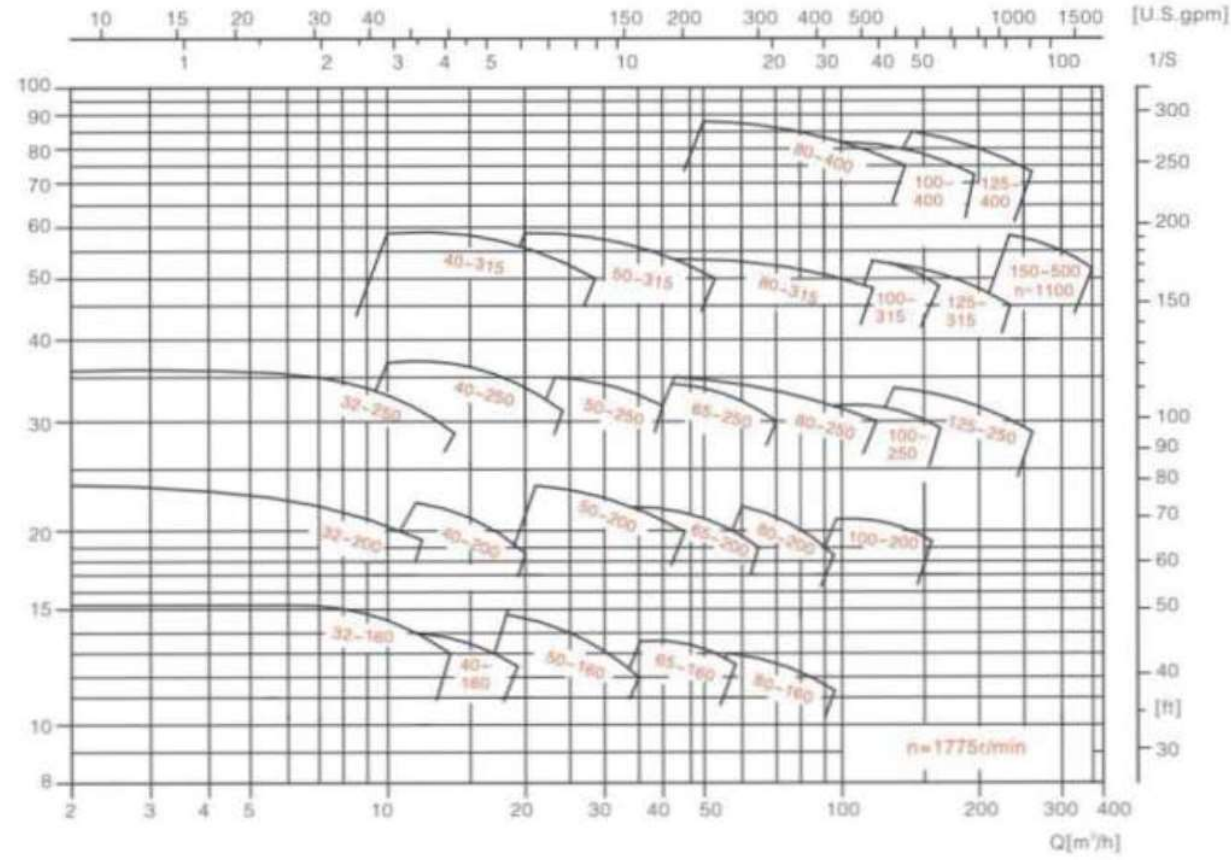


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SOC Performance Charts (60Hz)





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SOC Table of Standard Performance

Type	Impeller SY.	Speed n=2900r/min									Speed n=1450r/min						
		Flow Q m³/h	Head H m	Proportion γ=1.0 Ppwer and Type(KW) kW		Proportion γ=1.35 kW		Proportion γ=1.85 kW		Q m³/h	H m	Proportion γ=1.0 kW		Proportion γ=1.35 kW		Proportion γ=1.85 kW	
32-160	A	20	36	4	Y112M-2	5.5	Y132S-2	7.5	$Y132S_2$-2	11	9	1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	B									10	8						
	C	17	28	3	Y100L-2	4	Y112M-2	5.5	$Y132S_1$-2	9	7					1.1	Y90S-4
	D	15	20	2.2	Y90L-2	3	Y100L-2	4	Y112M-2	6	5						
	E	13	14							6	3						
32-200	A	20	50	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	$Y160M_2$-2	10	13	1.5	Y90L-4	1.5	Y90L-4	2.2	$Y100L_1$-4
	B	18	48					11	$Y160M_1$-2	9	12					1.5	Y90L-4
	C	16	40	5.5	$Y132S_1$-2	7.5	$Y132S_2$-2			8	10						
	D	15	30	4	Y112M-2	5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	8	8						
32-250	A	20	85	15	$Y160M_2$-2	18.5	Y160L-2	30	$Y200L_1$-2	11	20	2.2	$Y100L_1$-4	3	$Y100L_2$-4	4	Y112M-4
	B	20	75							10	19						
	C	18	65	11	$Y160M_1$-2	15	$Y160M_2$-2	18.5	Y160L-2	9	15			2.2	$Y100L_1$-4	3	$Y110L_2$-4
	D	15	50	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	$Y160M_2$-2	8	11					2.2	$Y100L_1$-4
40-160	A	30	34	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	$Y160M_2$-2	15	8	1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	B	28	30	5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	7						
	C	16	26			5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	14	6					1.1	Y90S-4
	D	14	18	3	Y100L-2			5.5	$Y132S_1$-2	12	4						
40-200	A	34	50	11	$Y160M_1$-2	15	$Y160M_2$-2			16	13	1.5	Y90L-4	1.5	Y90L-4	2.2	$Y100L_1$-4
	B	30	48	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	$Y160M_2$-2	15	12	1.1	Y90S-4				
	C	26	38	5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	11	$Y160M_1$-2	14	9			1.1	Y90S-4	1.5	Y90L-4
	D	22	30							12	7					1.1	Y90S-4
40-250	A	36	85	22	Y180M-2	30	$Y200L_1$-2	45	Y225M-2	20	21	4	Y112M-4	5.5	Y132S-4	5.5	Y132S-4
	B	34	80	18.5	Y160L-2	22	Y180M-2	37	$Y200L_2$-2	18	20	3	$Y100L_2$-4	4	Y112M-4		
	C	30	65	15	$Y160M_2$-2	18.5	Y160L-2	30	$Y200L_1$-2	16	15	2.2	$Y100L_1$-4	3	$Y100L_2$-4	4	Y112M-4
	D	26	50	11	$Y160M_1$-2	15	$Y160M_2$-2	18.5	Y160L-2	13	12			2.2	$Y100L_1$-4	2.2	$Y100L_1$-4
40-315	A	46	140	45	Y225M-2	55	Y250M-2			22	36	11	Y160M-4	11	Y160M-4	11	Y160M-4
	B	44	130	37	$Y200L_2$-2	45	Y225M-2			22	32	5.5	Y132S-4				
	C	40	100	30	$Y200L_1$-2	37	$Y200L_2$-2	37	$Y200L_2$-2	20	24	4	Y112M-4	5.5	Y132S-4		
	D	34	80			30	$Y200L_1$-2	37	$Y200L_2$-2	18	18			4	Y112M-4	5.5	Y132S-4
50-160	A	55	34	11	$Y160M_1$-2	11	$Y160M_1$-2	15	$Y160L_2$-2	30	8	1.5	Y90L-4	2.2	$Y100L_1$-4	3	$Y100L_2$-4
	B	50	30	7.5	$Y132S_2$-2					26	7	1.1	Y90S-4	1.5	Y90L-4	22	$Y100L_1$-4
	C	46	26	5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	11	$Y160M_1$-2	24	6			1.1	Y90S-4	1.5	Y90L-4
	D	40	18			5.5	$Y132S_1$-2	7.5	$Y132S_2$-2	20	4					1.1	Y90S-4
50-200	A	65	56	18.5	Y160L-2						14	3	$Y100L_2$-4	4	Y112M-4	5.5	Y132S-4
	B	65	50	15	$Y160M_2$-2	18.5	Y160L-2			34	12	2.2	$Y100L_1$-4	3	$Y100L_2$-4	4	Y112M-4
	C	50	40	11	$Y160M_1$-2	15	$Y160M_2$-2	18.5	Y160L-2	30	10	1.5	Y90L-4	2.2	$Y100L_1$-4	3	$Y100L_2$-4
	D	40	32	7.5	$Y132S_2$-2	11	$Y160M_1$-2	15	$Y160M_2$-2	24	7			1.5	Y90L-4	2.2	$Y100L_1$-4
50-250	A	65	85	30	$Y232L_1$-2	37	$Y200L_3$-2	45	Y225M-2	34	21	5.5	Y132S-4	5.5	Y132S-4	11	Y160M-4
	B	60	80					45	Y225M-2	30	20	4	Y112M-4				
	C	55	65	22	Y180M-2	30	$Y200L_1$-2	37	$Y200L_2$-2	26	16	3	$Y100L_2$-4	4	Y11M-4	5.5	Y132S-4
	D	45	60	15	$Y160M_2$-2	15	$Y160M_2$-2	22	Y180M-2	24	12	2.2	$Y100L_1$-4	3	$Y100L_2$-4	4	Y112M-4
50-315	A	80	140							42	36	11	Y160M-4	11	Y160M-4	15	Y160L-4
	B	75	135	55	Y250M-2					42	32						
	C	70	110	45	Y225M-2					40	28					11	Y160M-4
	D	65	85	37	$Y200L_2$-2	45	Y225M-2			36	20						

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		Flow Q m³/h	Head H m	Proportion γ=1.0 Ppwer and Type(KW)		Proportion γ=1.35 Ppwer and Type(KW)		Proportion γ=1.85 Ppwer and Type(KW)		Flow Q m³/h	Head H m	Proportion γ=1.0 Ppwer and Type(KW)		Proportion γ=1.35 Ppwer and Type(KW)		Proportion γ=1.85 Ppwer and Type(KW)	
				kW		kW		kW				kW		kW		kW	
65-160	A	100	32	15	Y160M -2	18.5	Y160L-2			50	8	2.2	Y100L -4	3	Y100L -4	4	Y112M-4
	B	90	32					22	Y180M-2	48	7						
	C	90	24	11	Y160M -2	15	Y160M -2	18.5	Y160L-2	46	6			2.2	Y100L -4	3	Y100L -4
	D	80	14	5.5	Y132S -2	7.5	Y132S -2	11	Y160M -2	38	4						
65-200	A	100	54	22	Y180M -2	30	Y200L -2	37	Y200L -2	50	13	4	Y112M-4	4	Y112M-4	5.5	Y132S-4
	B	90	50							46	12	3	Y100L -4				
	C	90	40	18.5	Y160L-2	22	Y160L-2	30	Y200L -2	42	10			3	Y100L -4	4	Y112M-4
	D	70	30	11	Y160M -2	15	Y160M -2	18.5	Y160L-2	36	7	2.2	Y100L -4	2.2	Y100L -4	3	Y100L -4
65-250	A	115	85	45	Y225M-2	55	Y250M-2			54	21	11	Y160M-4	11	Y160M-4	11	Y160M-4
	B	115	75							50	20	5.5	Y132S-4				
	C	100	65	37	Y200L -2	45	Y225M-2	55	Y250M-2	46	16	4	Y112M-4	5.5	Y132S-4		
	D	80	50	30	Y200L -2	30	Y200L -2	37	Y200L -2	40	10			4	Y112M-4	5.5	Y132S-4
65-315	A	135	135	90	Y280M-2	110	Y315S-2	160	T315M -2	64	32	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	B	130	125							61	30						
	C	115	115	75	Y280S-2	90	Y280M-2	132	Y315M -2	56	28			11	Y160M-4	15	Y160L-4
	D	110	110	55	Y250M-2	75	Y280S-2	110	Y315S-2	54	24						
	E	90	85	45	Y225M-2	55	Y250M-2	75	Y280S-2	50	20	5.5	Y132S-4			11	Y160M-4
	F	75	70	30	Y200L -2	45	Y225M-2	55	Y250M-2	52	16			5.5	Y132S-4		
80-160	A	170	30	22	Y180M-2	30	Y200L -2	37	Y200L -2	75	8	3	Y100L -4	4	Y112M-4	5.5	Y132S-4
	B	160	28	18.5	Y160L-2	22	Y180M-2	30	Y200L -2	70	7			3	Y100L -4	4	Y112M-4
	C	150	22	15	Y160M -2	18.5	Y160L-2			70	5	2.2	Y100L -4				
	D	130	16	11	Y160M -2	15	Y160M -2	18.5	Y160L-2	65	4			2.2	Y100L -4	2.2	Y100L -4
80-200	A	150	50	37	Y200L -2	45	Y225M-2	55	Y250M-2	80	12	5.5	Y132S-4	11	Y160M-4	11	Y160M-4
	B	140	46	30	Y200L -2	37	Y200L -2			75	11	4	Y112M-4	5.5	Y132S-4		
	C	130	38	22	Y180M-2	30	Y200L -2			65	9	3	Y100L -4	4	Y112M-4	5.5	Y132S-4
	D	110	26	15	Y160M -2	18.5	Y160L-2	30	Y200L -2	60	6			3	Y100L -4	4	Y112M-4
80-250	A	190	80							90	20	11	Y160M-4	11	Y160M-4	15	Y160L-4
	B	180	75	55	Y250M-2					90	19						
	C	170	70	45	Y225M-2					85	17						
	D	150	55	37	Y200L -2	55	Y250M-2	75	Y280S-2	75	14	5.5	Y132S-4			11	Y160M-4
	E	130	47	30	Y200L -2	37	Y200L -2	55	Y250M-2	70	11			5.5	Y132S-4		
80-315	A	200	130	110	Y315S-2	160	Y315M -2			100	32	15	Y160L-4	18.5	Y180M-4	30	Y200L-4
	B	180	125			132	Y315M -2			95	30						
	C	160	100	75	Y280S-2	90	Y280M-2	132	Y315M -2	85	24			15	Y160L-4	18.5	Y180M-4
	D	150	75	55	Y280S-2	75	Y280S-2	90	Y280M-2	70	18					15	Y160L-4
80-400	A									105	52	30	Y200L-4	37	Y225S-4		
	B									100	50						
	C									90	44			30	Y200L-4		
	D									80	38	18.5	Y180M-4				
	E									75	30			18.5	Y180M-4	30	Y200L-4
100-200	A	220	45	45	Y250M-2	55	Y250M-2			115	11	5.5	Y132S-4	11	Y160M-4	11	Y160M-4
	B	200	40	30	Y225M-2	45	Y225M-2	55	Y250M-2	100	10						
	C	180	30	22	Y180M-2	30	Y200L -2	45	Y225M-2	90	8			5.5	Y132S-4	5.5	Y132S-4
	D	150	25					37	Y200L -2	80	6						

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SOC Table of Standard Performance

Type	Impeller SY.	Speed n=2900r/min								Speed n=1450r/min							
		Flow Q	Head H	Proportion γ=1.0		Proportion γ=1.35		Proportion γ=1.85		Flow Q	Head H	Proportion γ=1.0		Proportion γ=1.35		Proportion γ=1.85	
				Ppwer and Type(KW)								Ppwer and Type(KW)					
		m³/h	m	kW		kW		kW		m³/h	m	kW		kW		kW	
100-250	A	280	75	90	Y280M-2	110	Y315S-2	160	$Y315M_r$-2	130	20	15	Y160L-4	30	Y200L-4	30	Y200L-4
	B	250	70	75	Y280S-2			132	$Y315M_r$-2	130	18	11	Y160M-4	15	Y160L-4		
	C	230	55	55	Y250M-2	75	Y280S-2	110	Y315S-2	120	14			11		15	Y160L-4
	D	200	40	37	$Y200L_r$-2	55	Y250M-2	75	Y280S-2	100	10					11	Y160M-4
100-315	A	270	135	160	$Y315M_r$-2					132	32	30	Y200L-4	30	Y200L-4		
	B	250	130	132	Y315M-2					120	30	18.5	Y180M-4			30	Y200L-4
	C	230	100	110	Y315S-2	132	$Y315M_r$-2			100	26	15	Y160L-4	15	Y160L-4		
	D	200	85	75	Y280S-2	110	Y315S-2	132	$Y315M_r$-2	90	21					18.5	Y180M-4
100-400	A									150	50	45	Y225M-4	45	Y225M-4		
	B									140	48	30	Y200L-4				
	C									120	40			30	Y200L-4	45	Y225M-4
	D									100	30	18.5	Y180M-4			30	Y200L-4
125-250	A									200	20	18.5	Y180M-4	22	Y180L-4		
	B									200	18	15	Y160L-4	18.5	Y180M-4		
	C									190	14	11	Y160M-4	15	Y160M-4		
	D									160	10			11	Y160M-4	15	Y160L-4
125-315	A									200	30	30	Y200L-4	37	Y225S-4	45	Y225M-4
	B									180	30			30	Y200L-4	37	Y225S-4
	C									170	24	18.5	Y180M-4			30	Y200L-4
	D									100	18	15	Y160L-4	18.5	Y180M-4		
125-400	A									220	50	55	Y250M-4	75	Y280S-4		
	B									200	48	45	Y225M-4	75	Y280S-4		
	C									180	46	37	Y225S-4	55	Y250M-4		
	D									170	42	30	Y200L-4	45	Y225M-4		
	E									150	36			30	Y200L-4		
	F									150	30						
150-250	A									320	17	22	Y180L-4	30	Y200L-4	37	Y225S-4
	B									300	15	110	Y180M-4				
	C									280	13						
	D									260	12	15	Y160L-4	18.5	Y180M-4	30	Y200L-4
	E									240	11	11	Y160M-4	15	Y160L-4	22	Y180L-4
150-315	A									380	30	45	Y225M-4	75	Y280S-4		
	B									340	26	37	Y225S-4	45	Y225M-4		
	C									320	20	30	Y200L-4	37	Y225S-4	55	Y250M-4
	D									300	17	22	Y180L-4	30	Y220L-4	37	Y225S-4
150-400	A									400	48	75	Y280S-4	110	Y315S-4		
	B									340	40	55	Y250M-4	75	Y280S-4		
	C									300	34	45	Y225M-4			90	Y280S-4
	D									260	28	37	Y225S-4	45	Y225M-4	75	Y280M-4
150-500	A									420	80	132	$Y315M_r$-4				
	B									400	70	110	Y315S-4	160	$Y315M_r$-4		
	C									360	65			130	Y315M-4		
	D									340	50	75	Y280S-4	110	Y315S-4	132	$Y315M_r$-4
	E									300	45	55	Y225M-4	75	Y280S-4	110	Y315S-4

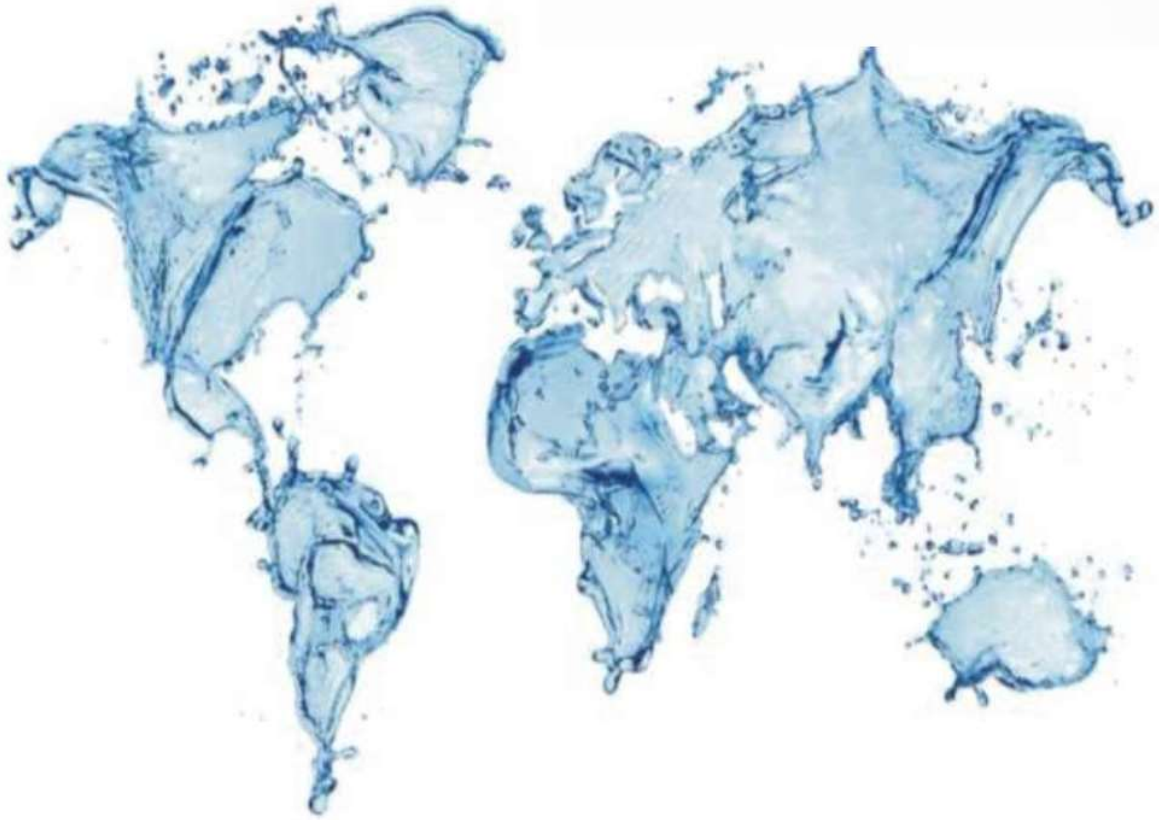
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SOC Table of Standard Performance

Type	Impeller SY.	Speed n=2900r/min								Speed n=1450r/min							
		Flow Q	Head H	Proportion γ=1.0		Proportion γ=1.35		Proportion γ=1.85		Flow Q	Head H	Proportion γ=1.0		Proportion γ=1.35		Proportion γ=1.85	
				Ppwer and Type(KW)								Ppwer and Type(KW)					
		m³/h	m	kW		kW		kW		m³/h	m	kW		kW		kW	
200-250	A									600	12	30	Y200L-4	37	Y225S-4		
	B									540	11	22	Y180L-4	30	Y200L-4		
	C									500	10					37	Y225S-4
200-315	A									650	24	55	Y250M-4	75	Y280S-4		
	B									600	20						
	C									550	16	37	Y225S-4	45	Y225M-4		
	D									500	13	30	Y200L-4	37	Y225S-4	55	Y250M-4
200-400	A									650	52	132	Y315M$_1$-4				
	B									550	45	90	Y280M-4	132	Y315M$_1$-4		
	C									500	40	75	Y280S-4	110	Y315S-4	160	Y315M$_2$-4
	D									450	30	55	Y250M-4	75	Y280S-4	110	Y315S-4
200-500	A									700	75						
	B									650	65	160	Y315M$_2$-4				
	C									550	55	110	Y250M-4	160	Y315M$_2$-4		
	D									450	40	75	Y280S-4	110	Y315S-4	132	Y315M$_1$-4
250-315	A									950	22	75	Y280S-4	110	Y315S-4		
	B									900	20			90	Y280M-4		
	C									800	16	55	Y250M-4	75	Y280S-4		
	D																
250-400	A									1000	44	160	Y315M$_2$-4				
	B									900	38	132	Y315M$_1$-4				
	C									850	30	110	Y315S-4	160	Y315M$_2$-4		
	D									800	24	90	Y280M-4	110	Y315S-4	160	Y315M$_2$-4
250-500	A									1200	80						
	B									1100	70						
	C									1000	55						
	D									850	45	160	Y315M$_2$-4				
300-400	A									1500	40						
	B									1400	30	160	Y315M$_2$-4				
	C									1300	25	132	Y315M$_1$-4				
	D									1300	20	110	Y315S-4	160	Y315M$_2$-4		
300-500	A									1700	70						
	B									1500	60						
	C									1300	50						
	D									1100	40						

Pumps & Systems



SOURCE PUMPS & SYSTEMS CO.,LTD

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