hydroo®

LS

Vertical Turbine Pumps 50Hz

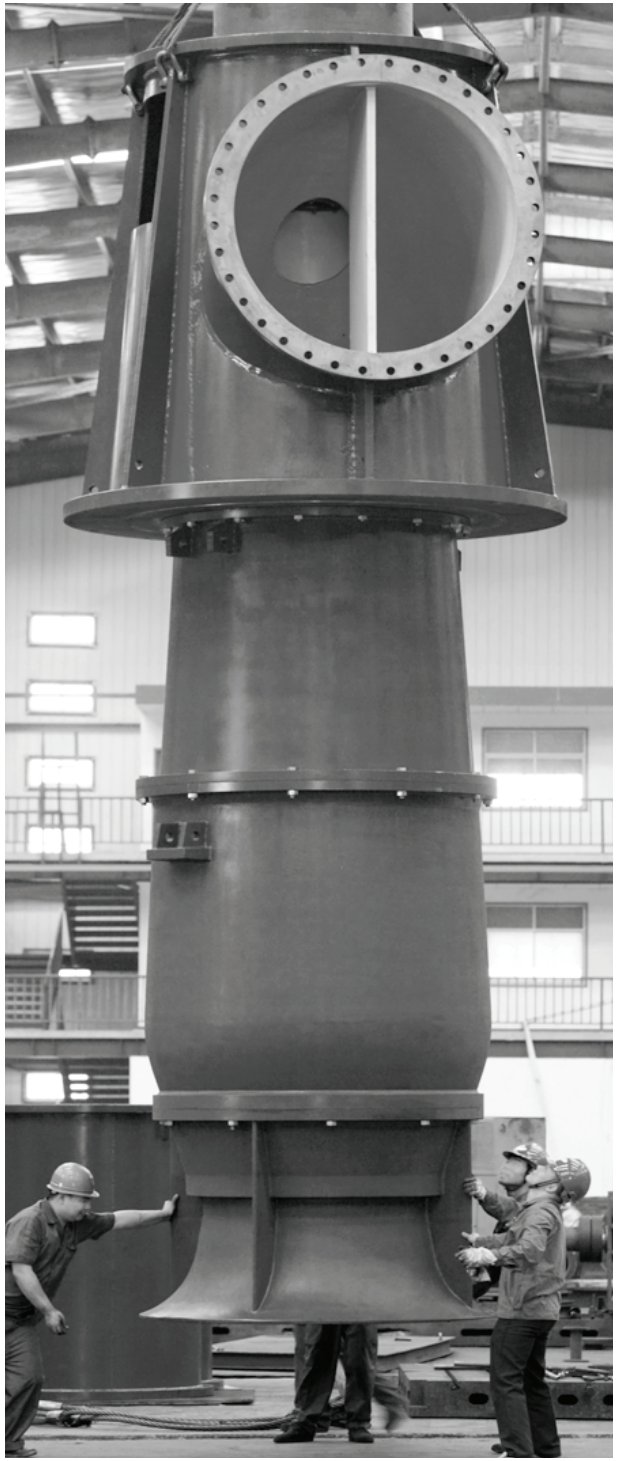
PRESENTATION

Hydroo Pump Industries SL is an enterprise specialised in the research, development and large-scale production of Stainless Steel centrifugal pumps. We have a vertical integration of the production processes, standing out stamping, welding and motor wiring in 6 value centers and production units. All of them with a high performance management on pump engineering and production quality.

HYDROO has set up a wide range of pumping solutions for many applications as building services, industry, irrigation and industrial process. Customers enjoy of the highest performance in booster sets and pressurization, fire-fighting sets, pumping of underground water, HVAC, drainage and sewage, utilities, desalination and OEM integrations. Versions in 50 Hz and 60 Hz are available, as well as any modification on materials, on request.

Global water challenges require excellence in pumping technologies and close cooperation between pump designers, manufacturers and pump engineers. In order to better meet the customers' needs and requirements our company is facing an expansion of its operations worldwide, providing timely and effective services in more than 30 countries. With tight relationships in many regions, we're proud to introduce a new regional value center for Europe. We are based near Barcelona at the Girona industrial area. Hydroo is a trademark to forge excellent and successful business relationships with our value customers by means of an operative assembling unit and an application engineering unit. HYDROO trademark wants to symbolize the firm commitment for a high level service to our value partners.

At Hydroo we bet on a high level service to our value pump partners.



LS

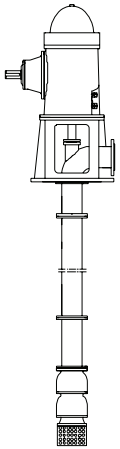
Vertical Turbine Pumps

Models

The 4 different model vertical turbine pumps have one thing in common the hydraulic design of the pump bowl assembly. Using a new techniques in turbine pump design. It covers a wide range of hydraulic conditions to meet virtually every pumping service with optimum efficiency.

Hydroo flexibility of design allows the use of a wide range of material and design features to meet the custom requirements of user. No matter what the requirements, whether low first cost, ease of maintenance, optimum efficiency.

- LSC Centrifugal or mixed-flow pump for high pressure
- LSM Mixed-flow pump for high flow and middle pressure
- LSA Axial-flow pump for high flow low pressure
- LSG Pump for fire and marine gear box engine driven



Model LSC

Vertical Industrial Turbine Pumps.
LSC series is a single or multistage pump with centrifugal or mixed-flow enclosed type impeller, designed for high pressure services.

Model LSA

Low Head Vertical Turbine Pumps.
LSA series is a single stage pump with axial-flow impeller, designed for high capacity, low head services.

Model LSM

High Capacity Vertical Turbine Pumps.
LSM series is a single stage pump with mixed-flow semi-open or enclosed type impeller, designed for high capacity, medium to high head services.

Model LSG

Right Angle Gear Box Driven Vertical Turbine Pumps.
LSG series is vertical turbine pump designed 13r engine driven through a right angle gear box, for the place where electric power is not available services.

Standard Design Features of LS

The bowl assembly is the heart of the LS. The impeller and diffuser type casing are designed to deliver the head and capacity that your system requires in the most efficient way possible. The fact that the ls can be multi—staged allows maximum flexibility both in the initial pump selection and in the event that future system modifications require a change in the pump rating. Submerged impellers allow pump to be started without priming.

A variety material options allows the selection of a pump best suited for even the most severe services. The many bowl assembly options available assure that the LS satisfies the user' s need for safe, efficient, reliable and maintenance—free operation.

1.Strainers

316SS Basket strainers to provide protection from large solids.

2.Suction bell

Allows smooth entry of liquid into impeller eye, minimizes vortex formation. Scotchkote custom fusion bonded epoxy coating inside.

3.Suction bell bearing

Provided for shaft stability.

4.Sand collar

Prevents solids from entering suction bearing.

5.Impeller

Hydraulic balancing to reduce axial down thrust and achieve long thrust bearing life.
Dynamic balancing of impellers are available.

6.Pump shaft

Heavy duty, 416SS standard, other alloys for strength and corrosion resistance. Hollow pump shaft with flushing hole special for bearing flushing on corrosive/ abrasive services.

7.Diffuser bowl

Available in variety of cast material. Scotchkote custom fusion bonded epoxy coating inside to improved the efficiency and longer life. Registered fits assure positive alignment, ease of maintenance.

8.Sleeve type bearing

Provided at each stage to assure stable operation away from critical speed.

9.Wear rings

Dual wear rings for enclosed impellers and bowls, permits re—establishing initial running clearances and efficiency at lower cost. Hard facing of wear surface available for longer life. Wear ring can be flushed when solids are present in the pumping liquid.

10.Keyed impeller

Keyed impeller for all the pumps, suitable for pumping liquid in high temperatures. Keyed impellers provide ease if maintenance and positive locking under fluctuating load and temperature conditions.

11.Flanged column

Heavy duty seamless column pipe sections are provided with flanged ends incorporating registered fits for ease of alignment during assembly.

12.Lineshaft and coupling

a.Open lineshaft
Flanges column/product lubricated lineshaft is recommended for ease of maintenance or whenever a special bearing material is required. Precision keyed lineshaft coupling available in all sizes for ease of maintenance. Various bearing material available. Renewable shaft sleeve or hard facing of shaft available for longer life.
b.Enclosed lineshaft
The lineshaft is protected by water flushing tube, flushing water for bearing and wear ring on corrosive/abrasive services.

13.Bearing retainer and lineshaft bearing

Ductile cast iron bearing retainer for size smaller that 24" .Various bearing material available.

14.Discharge head and motor riser

Discharge head and motor riser designed for all modes of drivers including hollow shaft or solid shaft motors, right angle gears, vertical steam turbines, etc. Fabricated elbow discharge head engineered to minimize losses. Large access holes provide easy access to coupling and stuffing box. Above ground and below ground discharge head for requirement.

15.Thrust bearing

Oil lubricated thrust bearing assembly set with water cooling system make the pumps running safely in longer life

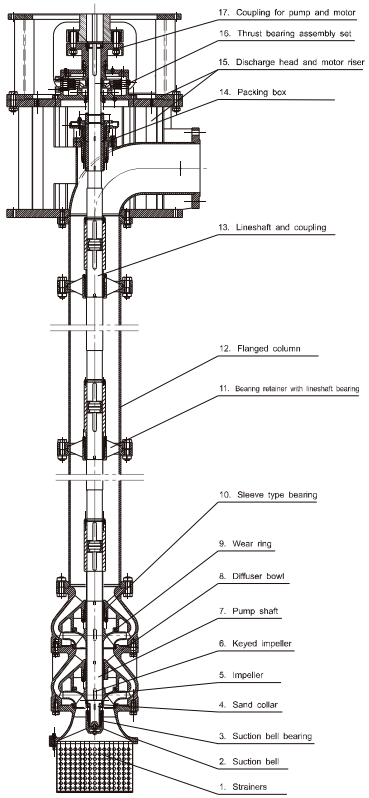
16.Packing box

Whenever packing lubrication leakage can be tolerated and the discharge pressure does not exceed 300psi, a packed box may be used. Optional headshaft sleeve available to protect shaft.

17.Coupling for pump and motor

Flexible coupling for pump and motor when pump with thrust bearing. impeller adjustment by the nut on the top shaft.

Section drawing



Specification range

- Capacities to 5500m3/h (24,000GPM)
- Heads to 300m (980ft)
- Temperatures to 80t (176°F)

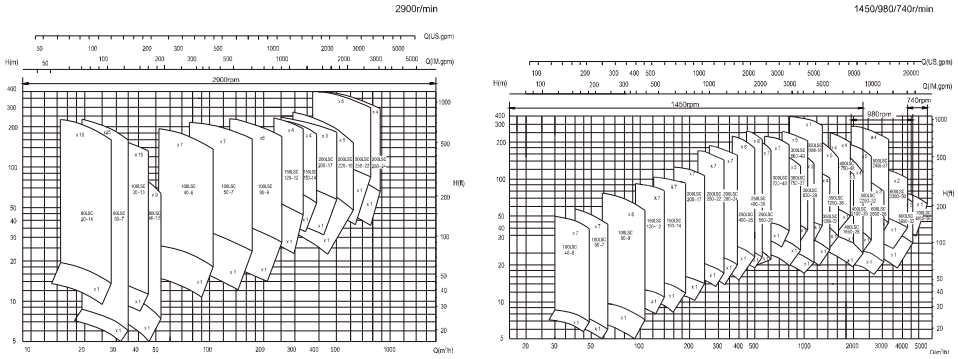
Design Advantages

1. Fabricated discharge head for 10" or larger sizes. Suitable for temperaturer liquid pumping.
2. Seamless flanged ends column pipe and flanges bowl construction incorporating registered fits for ease of assembly during assembly.
3. Alloy construction with external tube flush of critical wear areas available for abrasive services.
4. Build—in alignment and simple piping for less costly installation and ease of maintenance reduced downtime.
5. 416SS shafting. Keyed lineshaft coupling available in all size for ease of maintenance.
   The lineshaft can be protected by water flushing the enclosing tube bearing on corrosive/abrasive services.
6. Various bearing material available.
7. Renewable shaft sleeve or hard facing of shaft available for long life.
8. Dual wear rings for impellers and bowls.
   Hard facing wear surfaces available for longer life. Wear rings can be flushed when solids are present in pumpage.

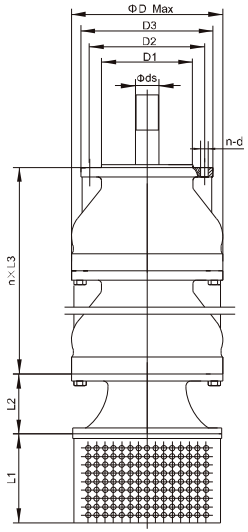
Services

Cooling Water
Seawater and Raw Water Intake
Industrial Process Pumps
Utility Circulating Water
Condenser Circulating Water Pumps
Ash Sluice
Fire—fighting

LSC Selection Charts

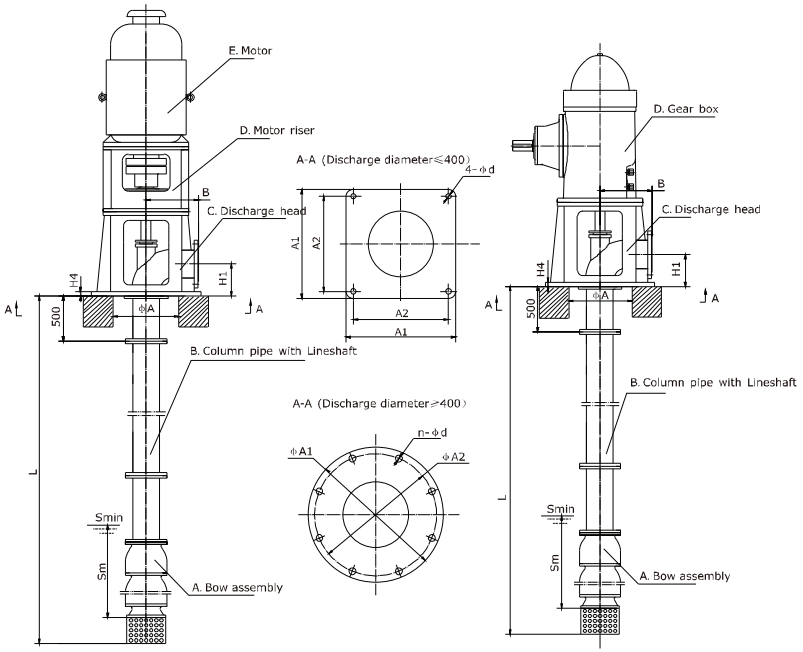


LSC Pump Bowl Assembly Dimensions



Model	D Max	L1	L2	L3	Max n	D1	D2	D3	Øds	n - Ød
80LSC20-14	195	150	95	110	10	125h6	165	195	28	8-M12
80LSC30 7	133	200	80	90	25	132h6	160	200	22	8-ø14
100LSC30-13	180	150	95	135	10	125h6	156	180	28	8-M12
100LSC40-6	245	225	90	180	10	130h6	210	220	30/35	8-M16
100LSC50 7	245	240	90	180	10	130h6	174	200	40	8-ø13.5
100LSC90-9	245	240	90	225	6	130h6	174	200	40	8-ø13.5
150LSC120 12	323	295	140	230	4	160h6	210	240	40	8-M16
150LSC150-14	323	292	140	230	4	160h6	210	240	40	8-M16
200LSC200-17	358	320	140	250	3	230h6	280	320	30/40	8-ø23
200LSC250 22	420	320	165	300	5	230h6	280	320	50	8-ø22
200LSC280-24	420	320	165	300	4	230h6	280	320	50	8-ø22
250LSC400 28	477	340	185	330	8	280h6	330	370	60	12-ø22
250LSC480-30	477	340	185	330	8	280h6	330	370	60	12-ø22
250LSC550-26	430	320	170	365	7	280h6	330	370	60	12-ø22
300LSC720 40	570	600	220	390	7	340h6	385	425	60/70/80	12-M20
300LSC820-29	480	320	170	475	7	340h6	385	425	60/70/90	12-ø22
300LSC860 43	570	600	220	390	7	340h6	385	425	60/70/80	12-M20
300LSC900-25	435	600	170	513	5	340h6	385	425	50	12-ø23
350LSC1000-51	630	370	250	430	7	395h6	440	480	70/90	16-M20
350LSC1200 32	550	320	250	600	4	395h6	440	480	60	16-M20
350LSC1250-36	550	320	250	550	5	395h6	440	480	70/80/90	16-ø23
400LSC1650 28	670	400	280	720	3	440h6	500	550	70/80	16-M24
400LSC1750-48	620	400	280	615	4	440h6	500	550	80/90	16-M24
400LSC2100-35	550	320	250	600	4	440h6	500	550	70	16-M20
500LSC2200 32	755	550	250	750	5	550h6	600	650	90	16-ø26
500LSC2400-57	965	480	390	675	4	550h6	600	650	90/100/120	16-ø30
600LSC2800 26	718	550	450	550	3	660h6	725	780	80/100/110	20-ø30
600LSC3300-50	880	320	280	760	2	650h6	700	745	90/100/110	16-ø27
600VTC3600-32	810	550	330	870	2	650h6	700	745	90/100	16-M24
700VTC4800 56	1330	440	405	890	1	750h6	840	900	120/140	24-ø30

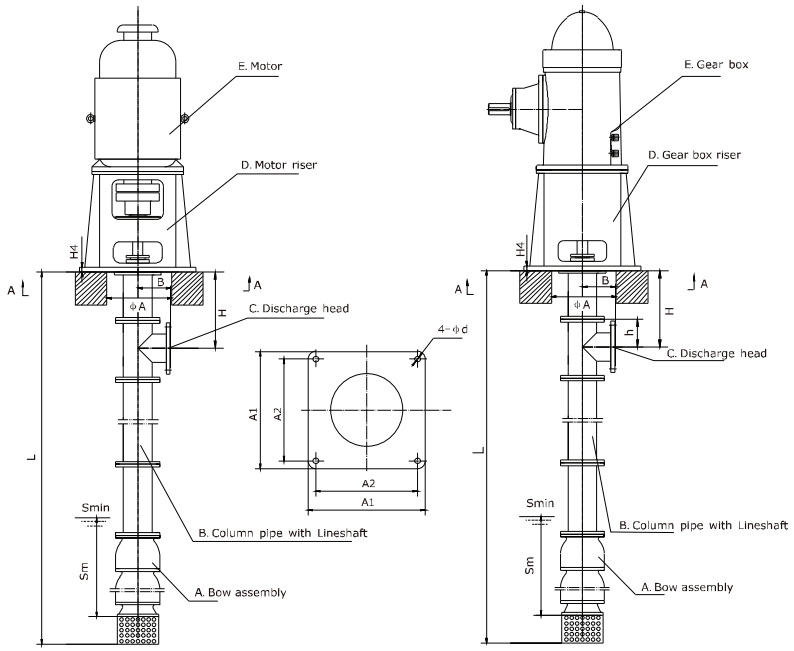
LCS, LSG Pump Dimensions (Above Ground Discharge)



Model	Al	A2	n -Ød	H1	H4	B	Sm	Ø A
80LSC	470	420	4-25	145	20	300	300	300
100LSC	470	420	4-25	145	20	300	400	300
150LSC	550	500	4-25	165	25	350	450	380
200LSC	700	640	4-30	215	25	400	480	480
250LSC	780	720	4-30	265	30	450	700	550
300LSC	880	820	4-30	320	35	500	900	650
350LSC	930	870	4-30	370	35	550	1400	700
400LSC	1030	960	4-30	420	40	600	1800	700
500LSC	ø 1500	ø 1400	8-40	520	40	700	1800	1000
600LSC	ø 1600	ø 1500	12-40	620	45	850	2000	1100
700LSC	ø 1900	ø 1800	12-40	700	50	50	2200	1400

1. Discharge Flanges drilled to ISO.DIN.BS or ANSI.
2. 400 outlet diameter and below can directly use the table size, over 400 outlet diameter will be subject to overall dimension of Hydroo.
3. The final installation size will be subject the final overall dimension.

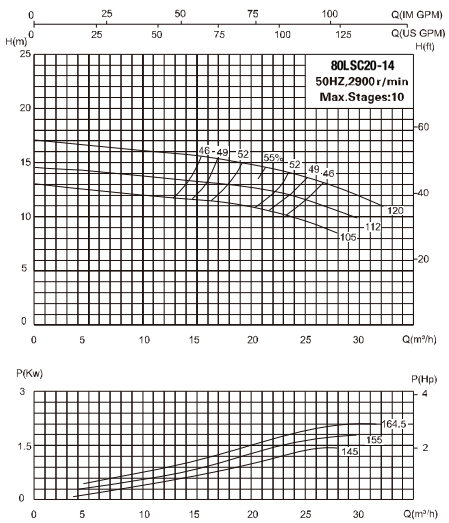
LCS, LSG Pump Dimensions (Below Ground Discharge)

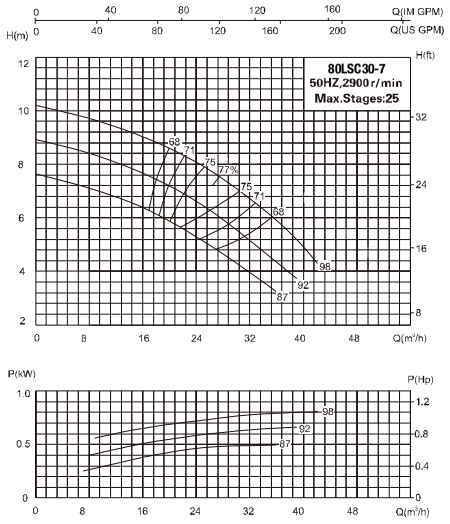


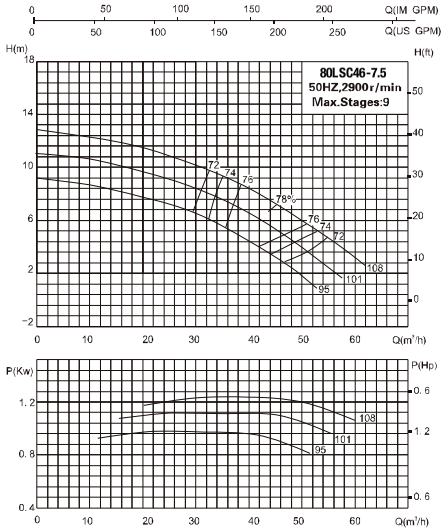
Model	Al	A2	Ød	h	B	5 m	ØA
80LSC	470	420	25	200	120	300	350
100LSC	470	420	25	200	140	400	350
150LSC	550	500	25	200	180	450	420
200LSC	700	640	30	200	220	480	520
250LSC	780	720	30	240	280	700	600
300LSC	880	820	30	260	330	900	700
350LSC	930	870	30	300	380	1400	770
400LSC	1030	960	30	320	430	1800	850

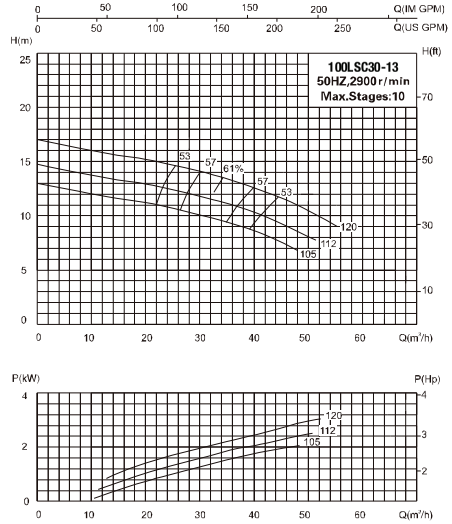
1. Discharge Flanges drilled to ISO.DIN.BS or ANSI.
2. The final installation size will be subject to the final overall dimension.
3. The LSC series below ground discharge in principle is not recommended
4. Over 500 outlet diameter will be subject to overall dimension.

LCS, LSG Pump Curves (Single stage)

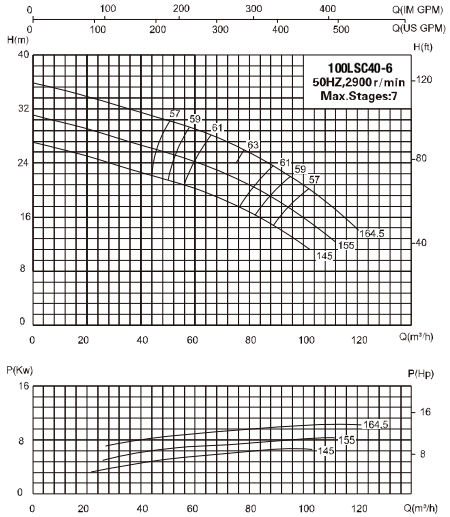


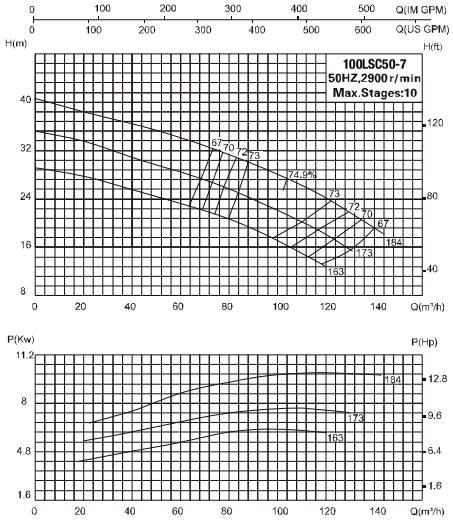


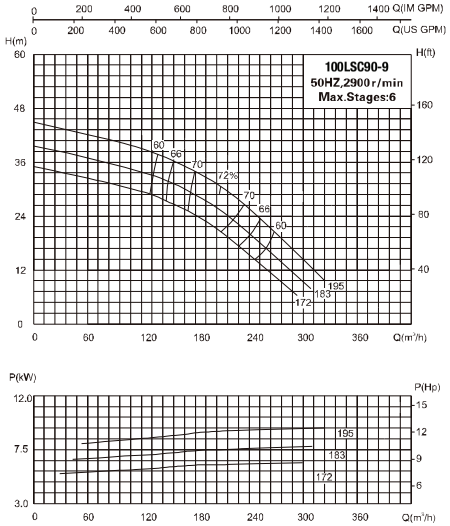


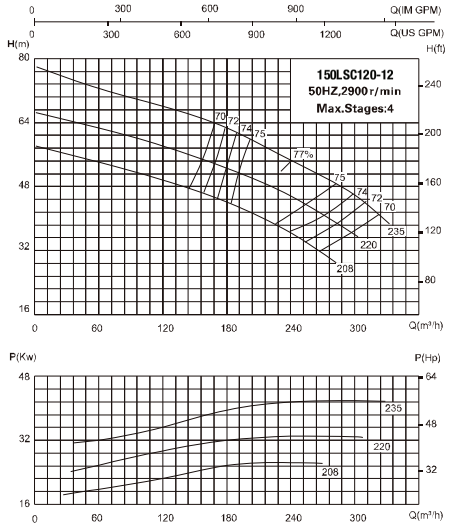


LCS, LSG Pump Curves (Single stage)

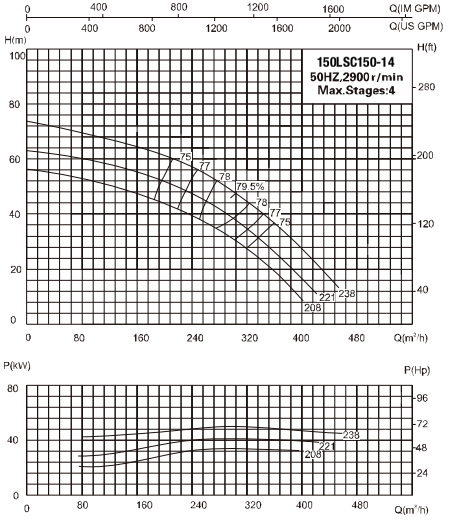


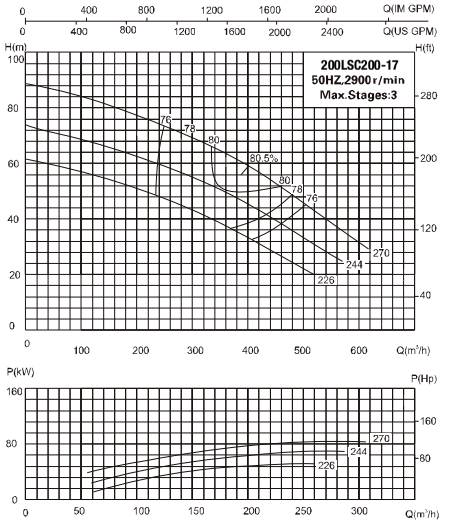


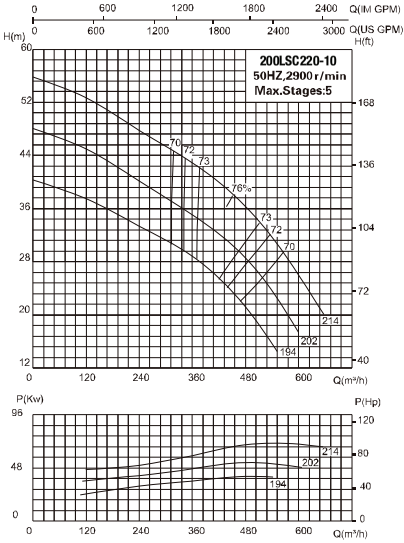


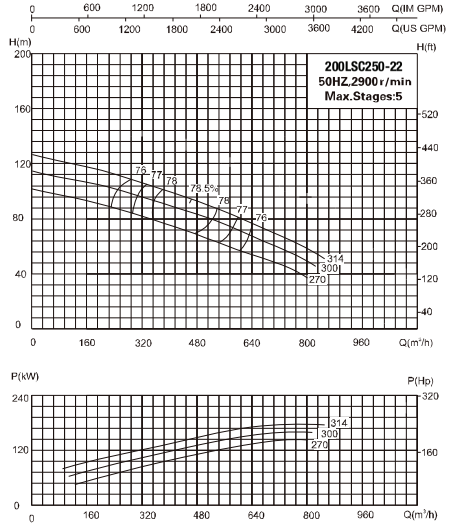


LCS, LSG Pump Curves (Single stage)

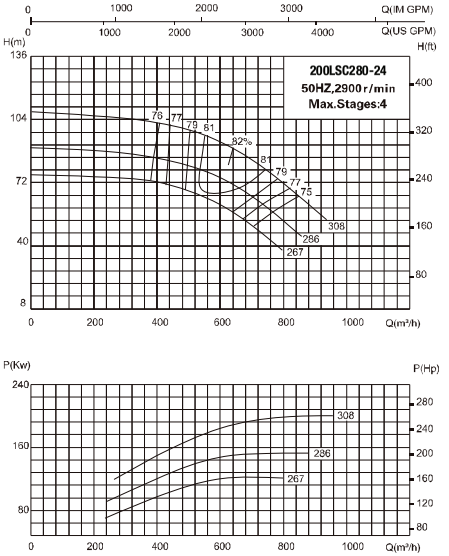


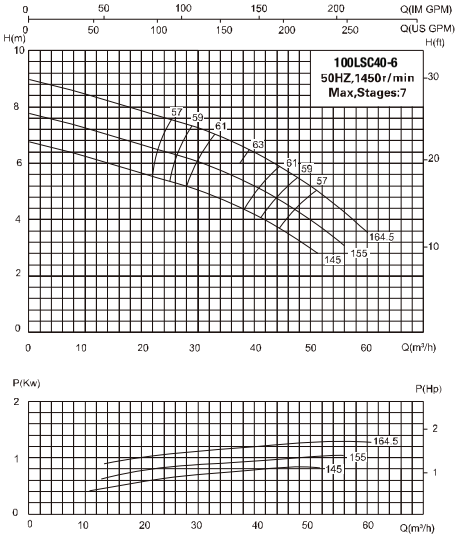


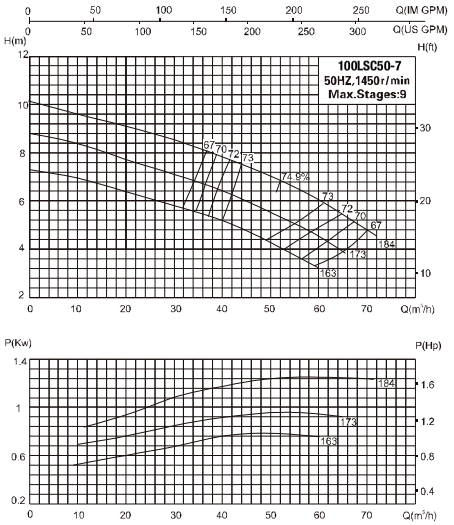


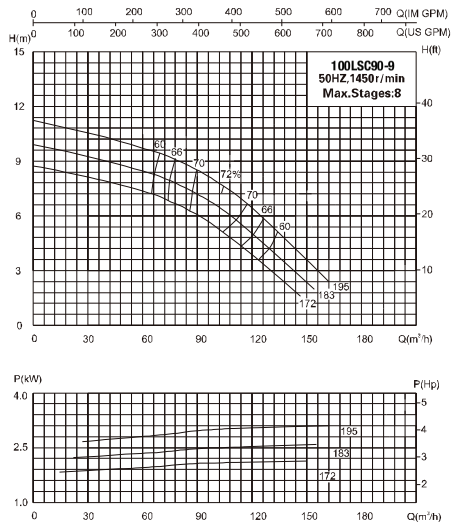


LCS, LSG Pump Curves (Single stage)

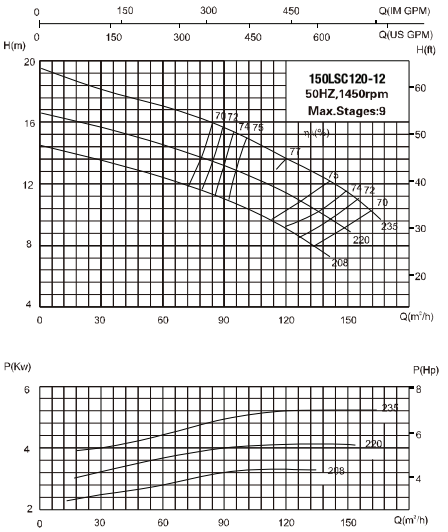


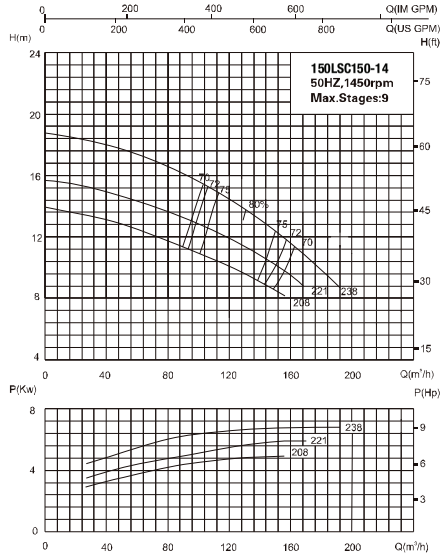


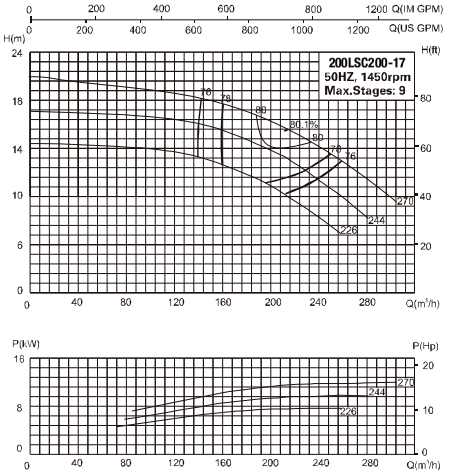


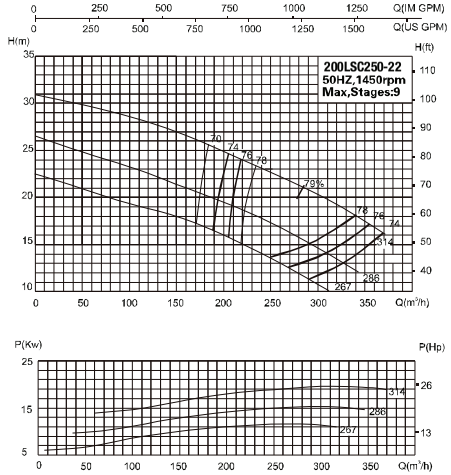


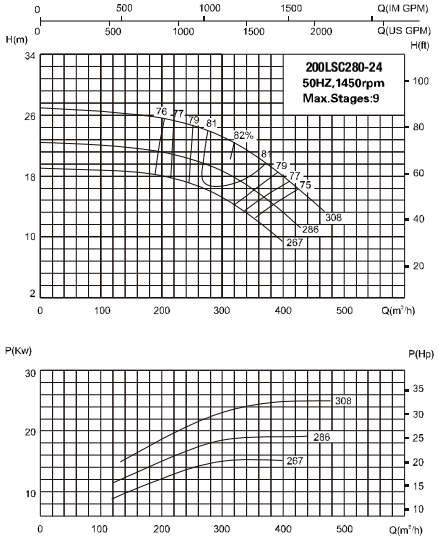
LCS, LSG Pump Curves (Single stage)

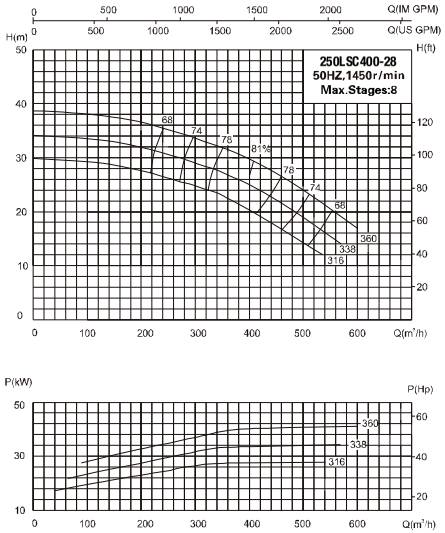


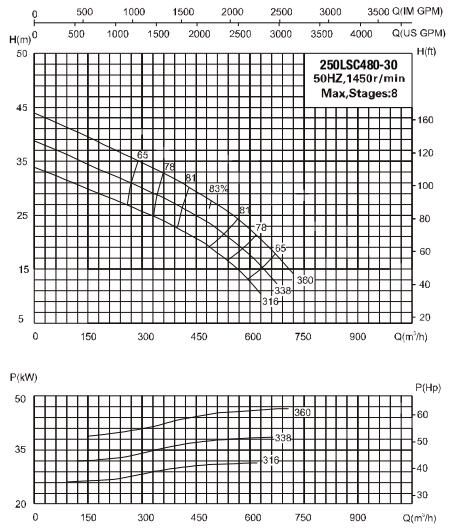


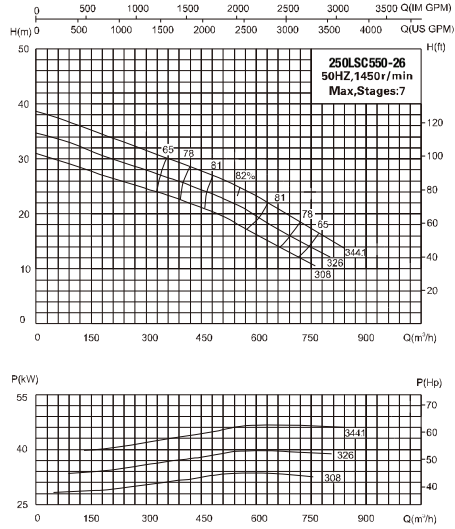


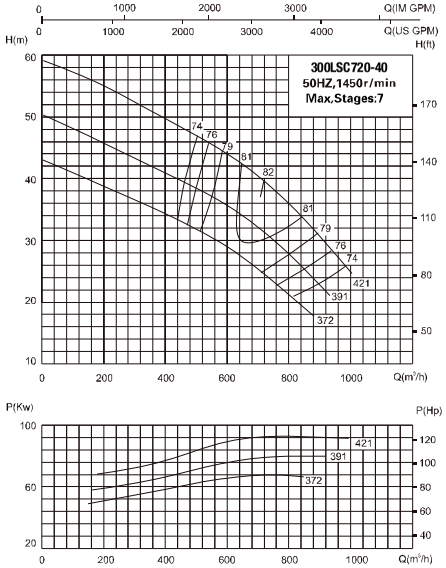


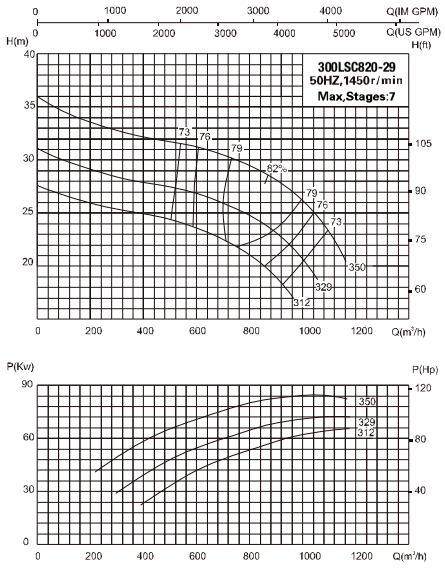


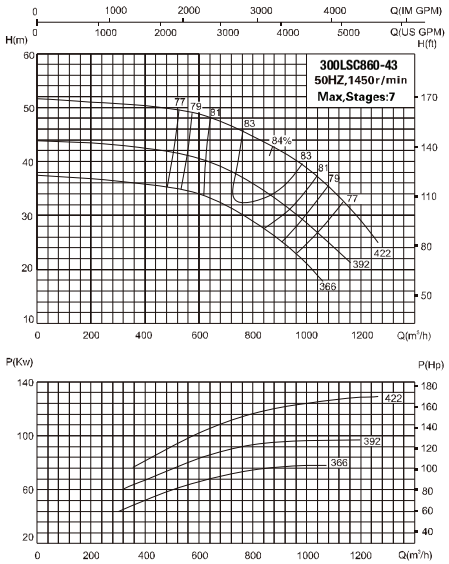


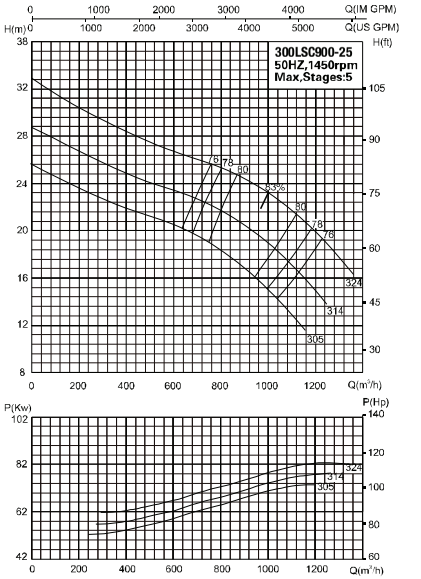




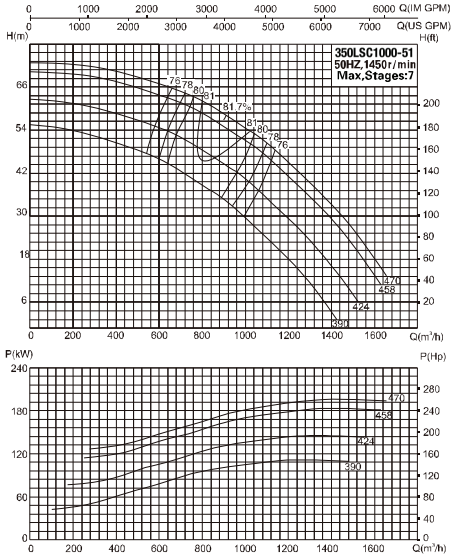


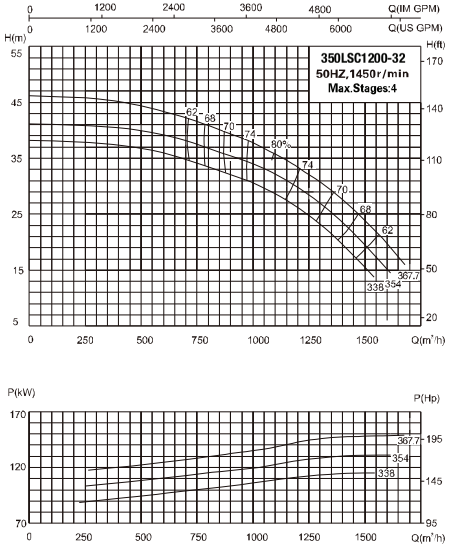


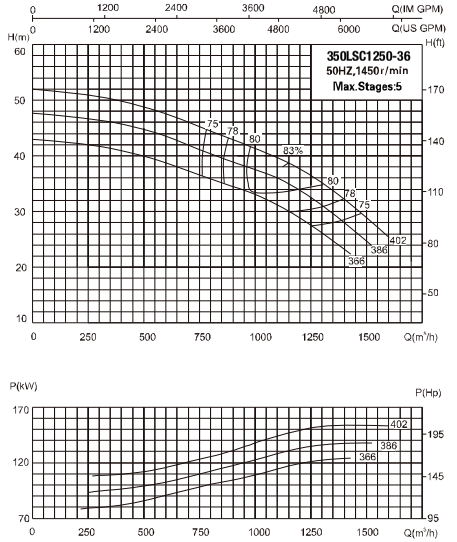


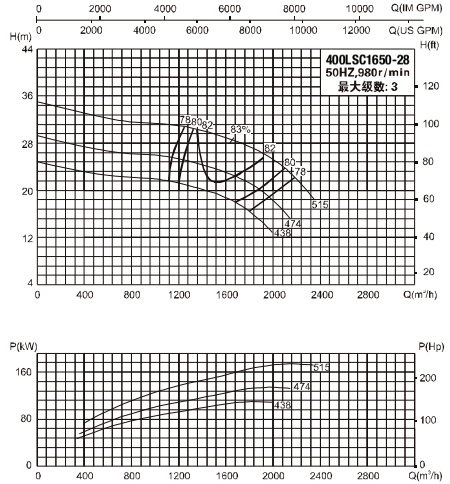


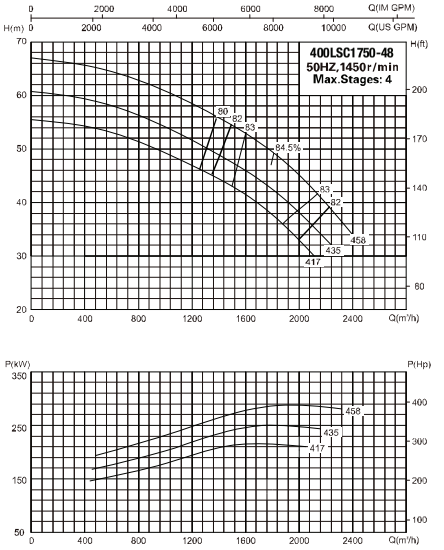
LCS, LSG Pump Curves (Single stage)

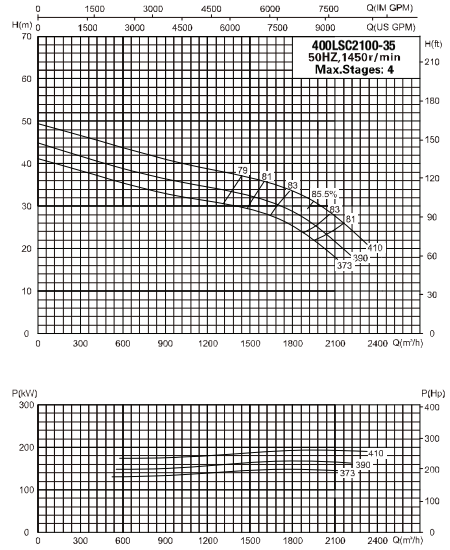

350LSC1000-51
50HZ,1450r/min
Max.Stages:7
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)

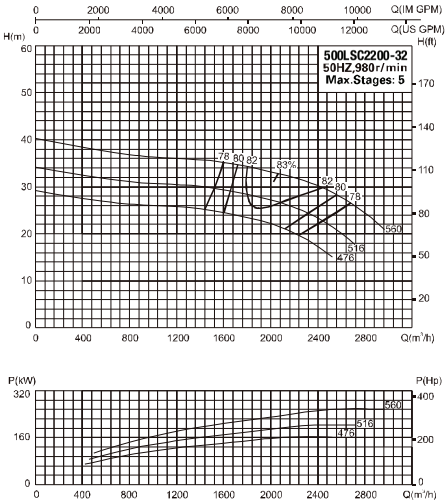

350LSC1200-32
50HZ,1450r/min
Max.Stages:4
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)

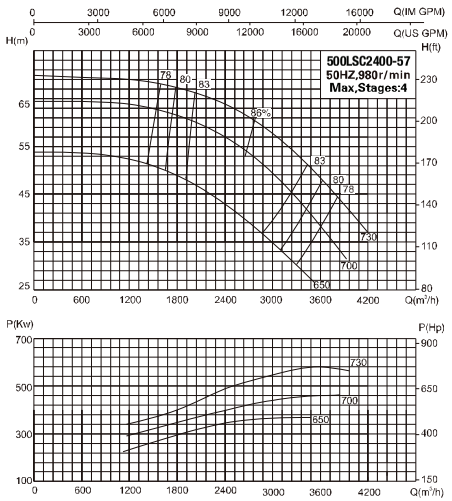

350LSC1250-36
50HZ,1450r/min
Max.Stages:5
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)


400LSC1650-28
50HZ,980r/min
最大级数: 3
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)

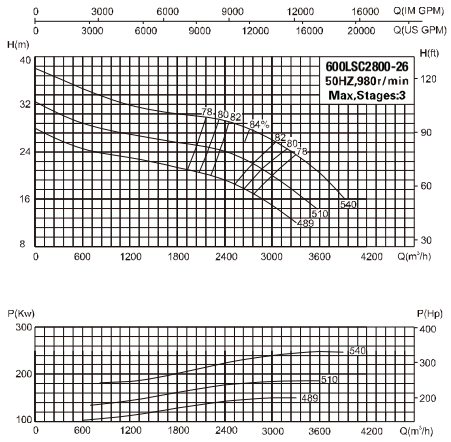

400LSC1750-48
50HZ,1450r/min
Max.Stages: 4
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)

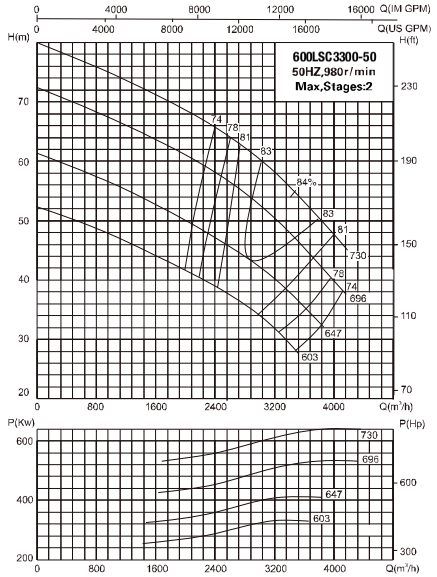

400LSC2100-35
50HZ,1450r/min
Max.Stages: 4
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kV)
P(Hp)

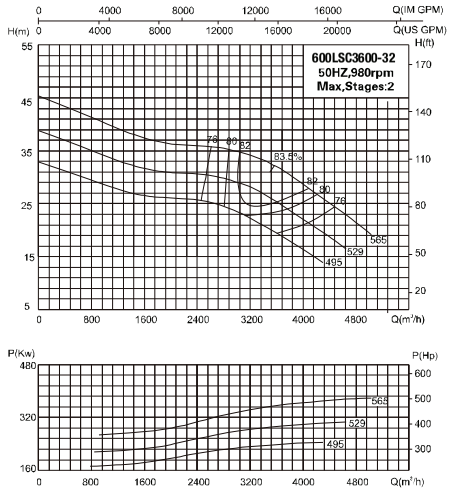

500LSC2200-32
50HZ,980r/min
Max.Stages: 5
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(kW)
P(Hp)

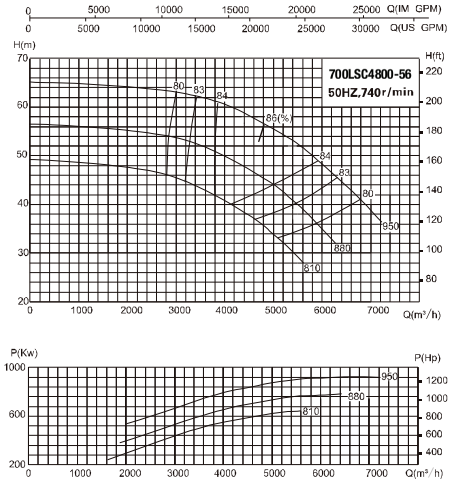

500LSC2400-57
50HZ,980r/min
Max.Stages:4
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
P(Kw)
P(Hp)

LCS, LSG Pump Curves (Single stage)



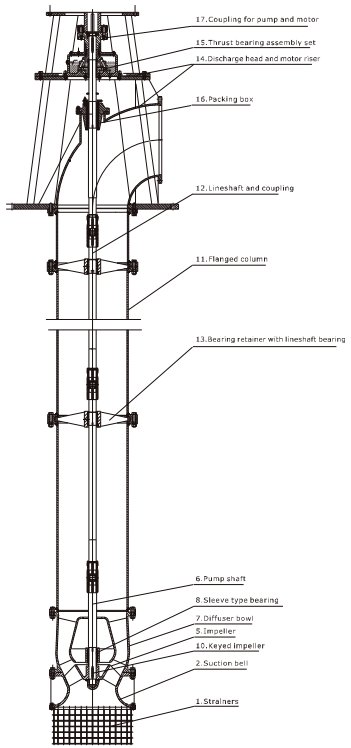






LSM, LSG Vertical Turbine Pumps

Section drawing



Specification range

- Capacities to 40000m3/h (1 80,000GPM)
- Heads to 60m (200ft)

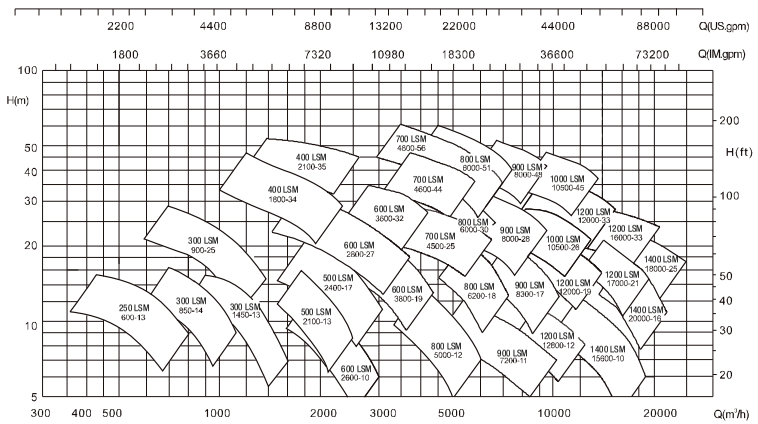
Design Advantages

1. Fabricated discharge head for all sizes.
2. Seamless flanged ends column pipe and flanges bowl construction incorporating registered fits for ease of assembly during assembly.
3. Alloy construction with external tube flush of critical wear areas available for abrasive services.
4. Available with semi-open or enclosed impeller, with or without wear rings, optimum diffuser and impeller match for maximum efficiency.
5. 416SS shafting. Keyed lineshaft coupling available in all size for ease of maintenance. The lineshaft can be protected by water flushing the enclosing tube bearing on corrosive/ abrasive services.
6. Various bearing material available.
7. Wide range of corrosion and erosion resistant materials.
8. Hollow shaft for bowl bearing flushing.
9. Flexible design to accommodate fixed or existing dimensions above and below ground discharge.

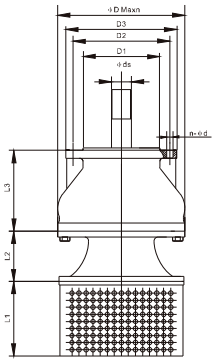
Services

Cooling Water
Seawater and Raw water intake
Industrial Process Pumps Utility
Circulating Water Condenser
Circulating Water Pumps
Irrigation and Drainage Storm and Flood water River Water Intake
Municipal Water Supply

LSM Selection Charts



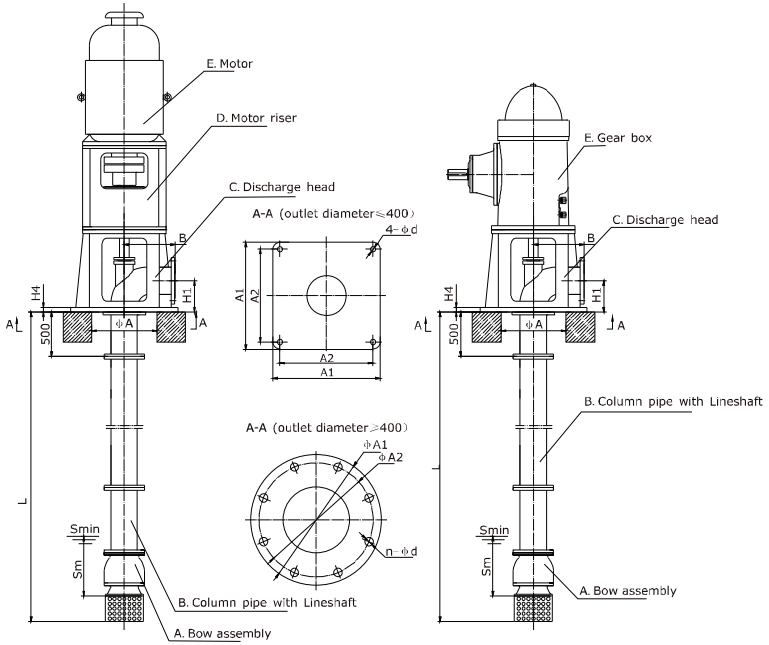
LSM Pump Bowl Assembly Dimensions



Model	Dmax	Ll	L2	L3	lids	D1	D2	D3	n-Ød
250LSM600-13	393	320	110	385	40	305f7	350	393	12-ø23
300LSM850-14	427	320	120	415	40	330f7	385	427	12-ø23
300LSM900-25	435	320	180	513	50	320f7	360	400	12-ø23
350LSM1450-13	480	320	240	410	40	395f7	440	480	16-ø23
400LSM1800-34	550	320	230	600	70	440f7	500	550	16-ø25
400LSM2100-35	550	320	230	600	70	440f7	500	550	16-ø25
500LSM2100-13 *	670	320	350	450	50	520f7	620	670	20-ø25
500LSM2400-17	750	320	400	475	60	550f7	600	650	20-ø25
600LSM2600-10 *	745	320	295	530	60	630f7	695	745	20-ø30
600LSM3600-32	740	320	480	620	80	630f7	725	780	20-ø30
600LSM2800-27	710	320	300	735	70	630f7	725	780	20-ø30
600LSM3800-19 *	760	320	330	640	70	630f7	725	780	20-ø30
700LSM4500-25	875	320	570	730	90	730f7	840	895	24-ø30
700LSM4600-44	1075	320	350	925	110	730f7	840	895	24-ø30
700LSM4800-56	1295	320	405	890	120	730f7	840	895	24-ø30
800LSM5000-12	980	320	410	735	80	830f7	950	1010	24-ø34
800LSM6000-51	1165	320	380	1000	120	830f7	950	1010	24-ø34
800LSM6000-30	965	320	625	810	100	830f7	950	1010	24-ø34
800LSM6200-18	990	320	430	835	90	830f7	950	1010	24-ø34
900LSM7200-11	1160	320	490	890	90	930f7	1050	1110	28-ø34
900LSM8000-28	1135	320	960	740	120	930f7	1050	1110	28-ø34
900LSM8300-17	1165	320	515	990	100	930f7	1050	1110	28-ø34
900LSM8000-48	1385	320	450	1190	140	930f7	1050	1110	28-ø34
1000LSM10500-26	1325	320	865	1110	130	1030f7	1160	1220	28-ø34
1000LSM10500-45	1610	320	525	1390	160	1030f7	1160	1220	28-ø34
1000LSM12000-19	1500	320	985	1265	130	1230f7	1380	1450	32-ø41
1.000LSM12000-33	1830	320	600	1590	160	1230f7	1380	1450	32-ø41
1200LSM12800-12	1560	320	700	1330	120	1230f7	1380	1450	32-ø41
1200LSM16000-33	1500	320	985	1265	160	1230f7	1380	1450	32-ø41
1200LSM17000-21	1560	320	700	1330	140	1230f7	1380	1450	32-ø41
1400LSM20000-16	1800	320	805	1545	160	1430f7	1590	1675	36-ø48
1400LSM18000-25	1720	320	1130	1450	170	1430f7	1590	1675	36-ø48
1400LSM15600-10	1700	320	750	1340	120	1430f7	1590	1675	36-ø48

* marks the pump using semi-open impeller

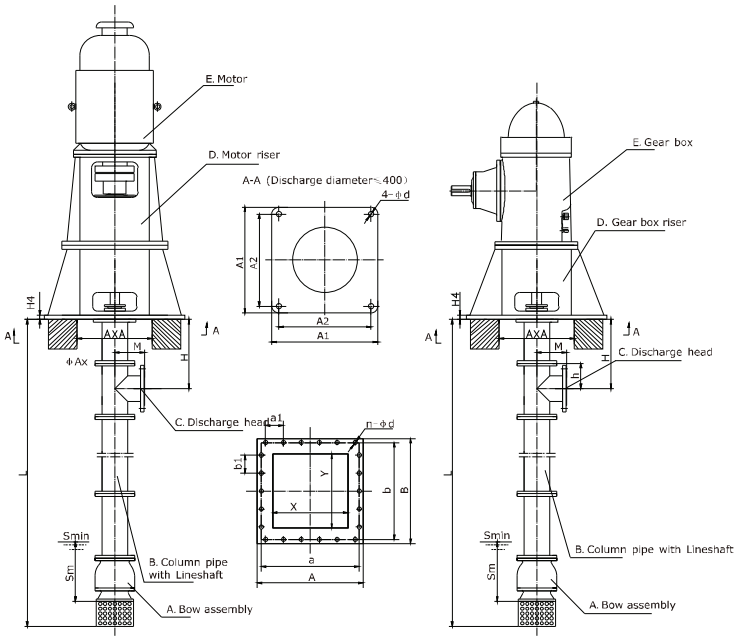
LSM, LSG Pump Dimensions (Above Ground Discharge)



Model	ØA1	ØA2	Al	A2	n-Ø d	H1	H4	B	Sm	ØA
250LSM	/	/	780	720	4-ø30	265	30	450	700	500
300LSM	/	/	880	820	4-ø30	320	35	500	900	600
300LSM	/	/	930	870	4-ø30	370	35	550	1400	650
400LSM	/	/	1030	960	4-ø30	420	40	600	1800	800
500LSM	1400	1300	/	/	8-ø40	520	40	700	1800	900
600LSM	1500	1400	/	/	8-ø40	620	45	850	2000	1000
700LSM	1600	1500	/	/	12-ø40	700	50	950	2200	1100
800LSM	1700	1600	/	/	16-ø40	800	50	1000	2400	1200
900LSM	1800	1700	/	/	16-ø40	900	60	1050	2400	1300
1000LSM	1900	1800	/	/	16-ø45	1000	60	1100	2600	1400
1200LSM	2000	1900	/	/	16-ø50	1200	65	1150	2800	1500
1400LSM	2300	2200	/	/	16-ø50	1400	70	1450	3000	1700

1. Discharge Flanges drilled to ISO.DIN.BS or ANSI.
2. The final installation size will be subject to the final overall dimension.
3. 500 outlet diameter and below can directly use the table size, over 600 will be cancelled the strainer.
4. We recommend below ground discharge when the outlet diameter is more than 1200.

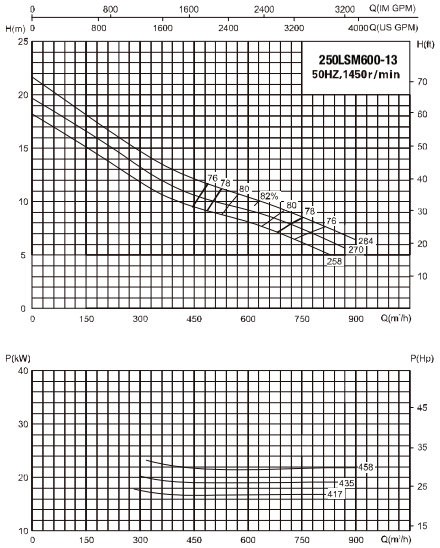
LSM, LSG Pump Dimensions (Below Ground Discharge)

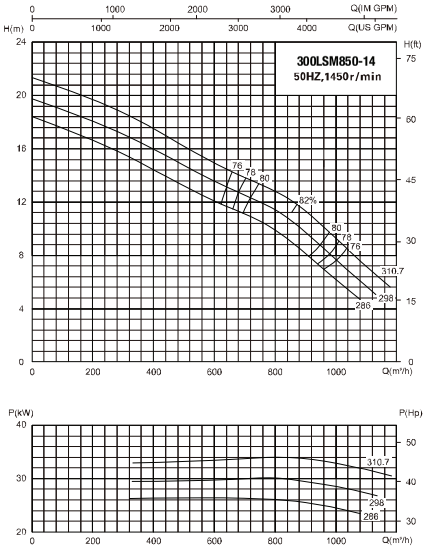


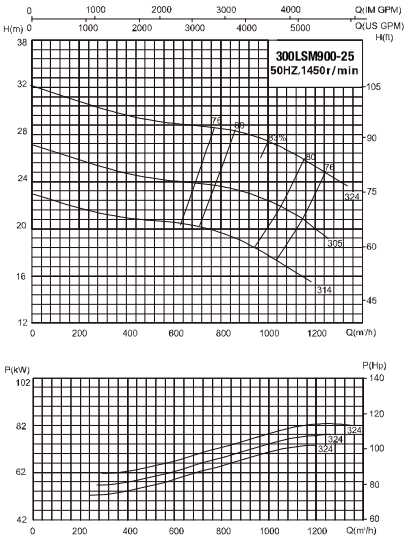
Model	A	a	B	b	a1	b1	n-Ød	H	M	Sm	X.Y
500LSM	1400	1300	1200	1100	400	400	12-ø40	900	550	1800	1000X900
600LSM	1500	1400	1400	1300	450	400	12-ø40	1000	600	2000	1100X1000
700LSM	1700	1600	1600	1500	450	400	14-ø40	1200	650	2200	1200X1100
800LSM	1800	1700	1600	1500	450	400	14-ø40	1300	720	2400	1300X1100
900LSM	2000	1900	1800	1700	450	450	14-ø45	1500	800	2400	1500X1300
1000LSM	2100	2000	1900	1800	450	450	14-ø45	1600	850	2600	1600X1400
1200LSM	2100	2000	2100	2000	500	500	16-ø45	1800	900	2800	1700X1600
1400LSM	2600	2500	2400	2300	500	500	18-ø45	2100	1020	3000	2000X1800
1600LSM	2900	2800	2700	2600	500	500	20-ø50	2300	1120	3200	2300X2100
1800LSM	3100	3000	2900	2800	500	500	22-ø50	2500	1250	3500	2500X2300
2000LSM	3550	3400	3350	3200	500	500	24-ø65	1400	1400	4000	2800X2600

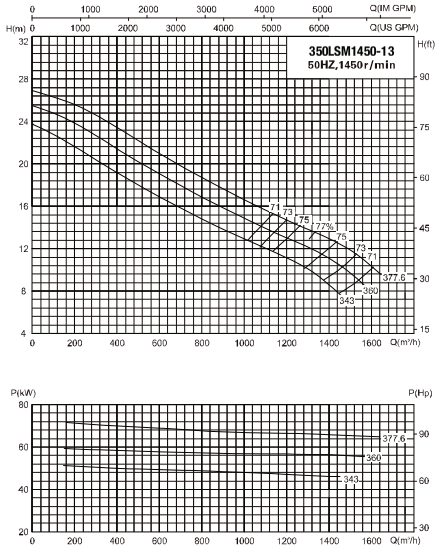
1. Discharge Flanges drilled to ISO.DIN.BS or ANSI.
2. The final installation size will be subject to the final overall dimension.
3. We don't recommend use the below ground discharge when the outlet diameter is equal or below 600.
4. When the outlet diameter is equal or below 400, the dimension is the same with LSC.
5. When the outlet diameter is over 1200, we recommend use the below ground discharge and, you cauld choose the core-pulling availability structure.
6. All below ground discharge structure has a minimt.,m length limit, the shortest length shal not be lower than the pump in use.

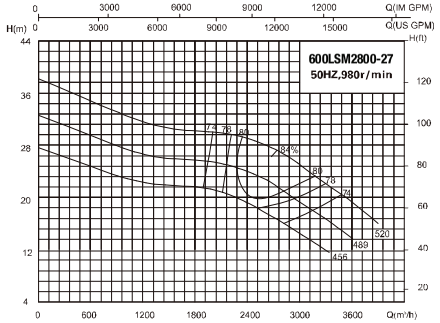
LSM, LSG Pump Curves

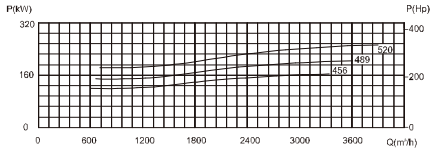


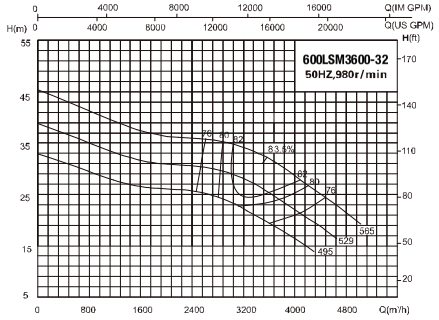


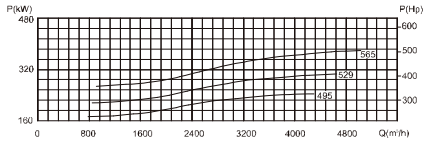


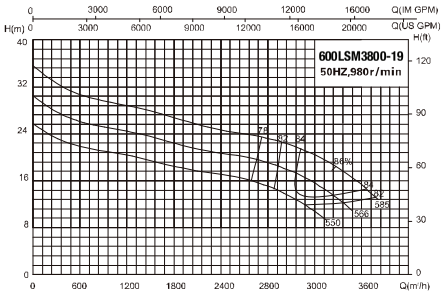


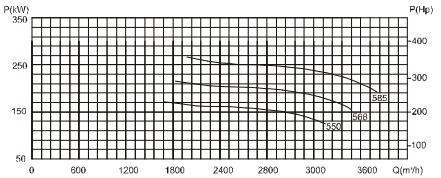

600LSM2800-27
50HZ,980r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
74
76
80
84%
86
78
74
520
489
456

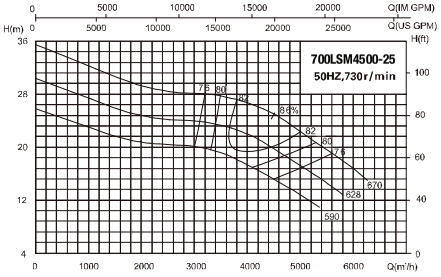

P(kW)
P(Hp)
Q(m³/h)
520
489
456

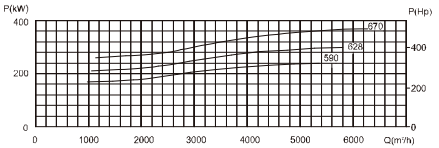

600LSM3600-32
50HZ,980r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
76
80
82
83.5%
82
80
78
595
529
495

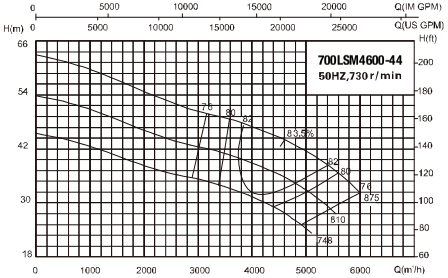

P(kW)
P(Hp)
Q(m³/h)
565
529
495

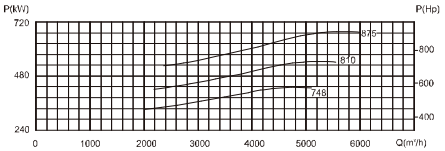

600LSM3800-19
50HZ,980r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
78
80
82
86%
84
82
80
595
565
550

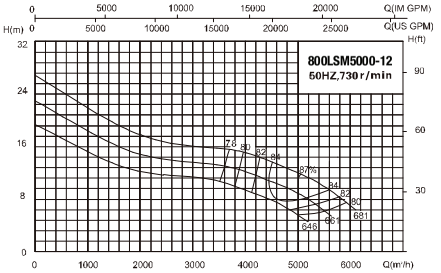

P(kW)
P(Hp)
Q(m³/h)
595
565
550


700LSM4500-25
50HZ,730r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
78
80
82
86%
82
80
78
670
628
590


P(kW)
P(Hp)
Q(m³/h)
670
628
590


700LSM4600-44
50HZ,730r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
78
80
82
83.5%
82
80
76
875
810
748


P(kW)
P(Hp)
Q(m³/h)
875
810
748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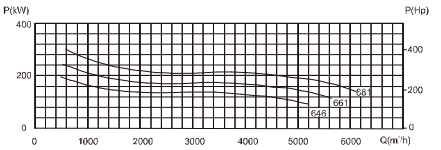
50HZ,730r/min
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
78
80
82
84
87%
84
82
80
76
848
681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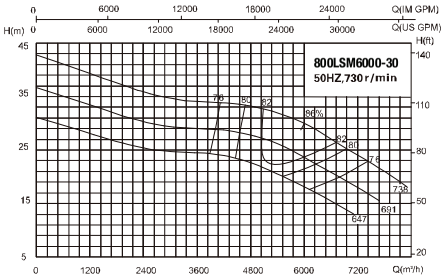
P(Hp)
Q(m³/h)
681
661
646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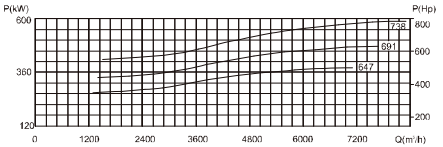
H(m)
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)
78
80
82
86%
82
80
78
738
691
647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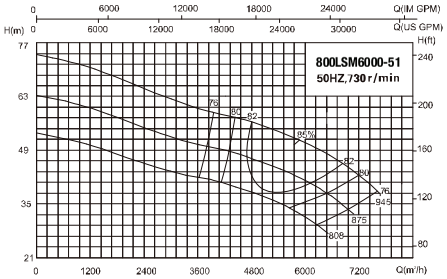
P(Hp)
Q(m³/h)
738
691
647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H(m)
H(ft)
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Q(US GPM)
Q(m³/h)
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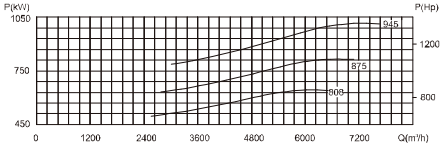
80
82
85%
82
80
76
945
875
806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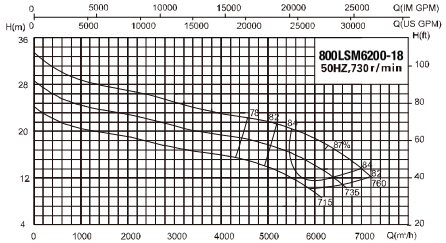
P(Hp)
Q(m³/h)
945
875
806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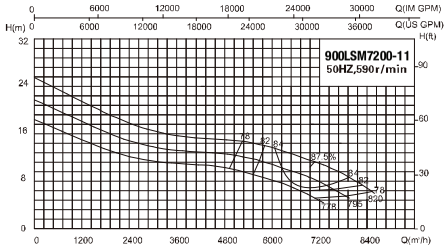
H(m)
H(ft)
Q(m³/h)


900LSM7200-11
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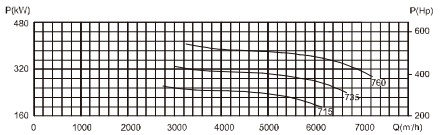
H(m)
H(ft)
Q(m³/h)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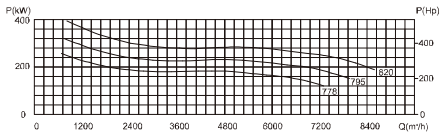
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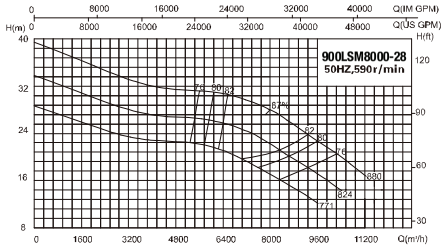
P(Hp)
Q(m³/h)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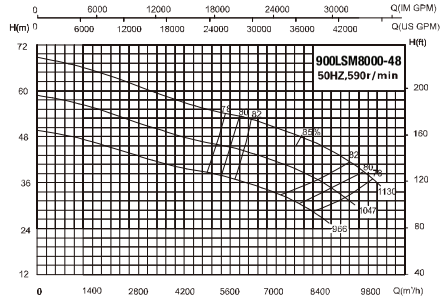
Q(US GPM)
H(m)
H(ft)
Q(m³/h)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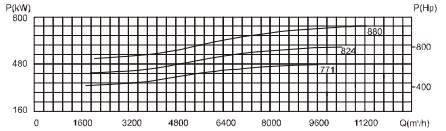
H(m)
H(ft)
Q(m³/h)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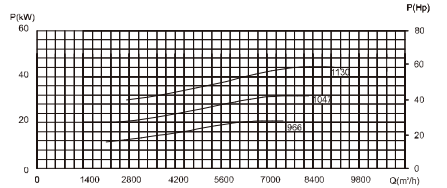
P(Hp)
Q(m³/h)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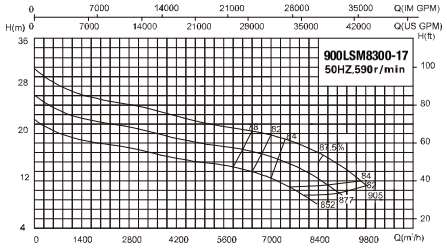
P(Hp)
Q(m³/h)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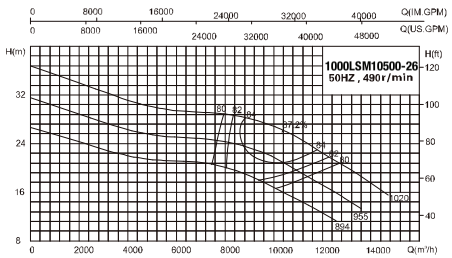
Q(US GPM)
H(m)
H(ft)
Q(m³/h)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50HZ , 490r/min
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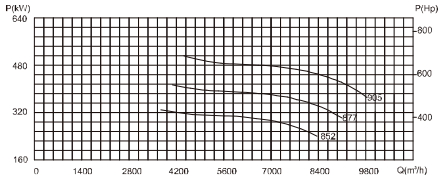
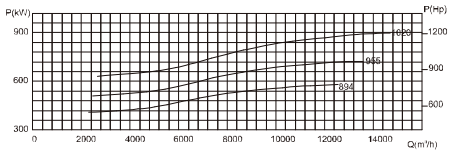
Q(US.GPM)
H(m)
H(ft)
Q(m³/h)


P(kW)
P(Hp)
Q(m³/h)


P(kW)
P(Hp)
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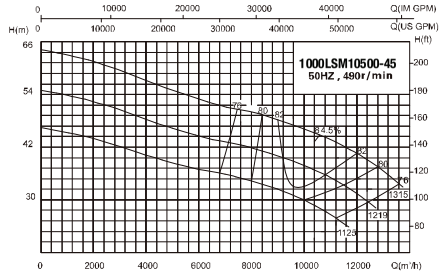
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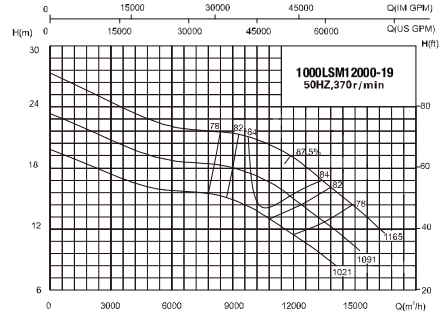
Q(US GPM)
H(m)
H(ft)
Q(m³/h)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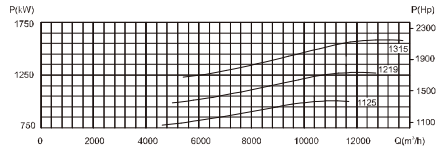
H(m)
H(ft)
Q(m³/h)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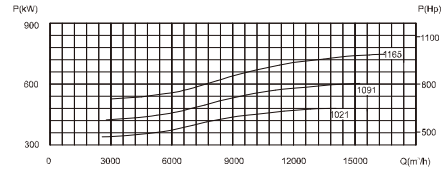
P(Hp)
Q(m³/h)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P(Hp)
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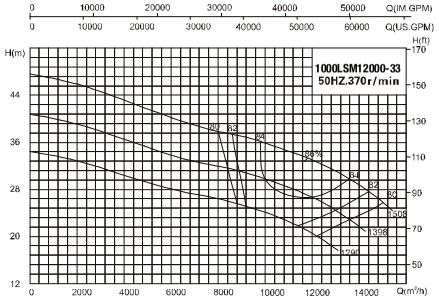
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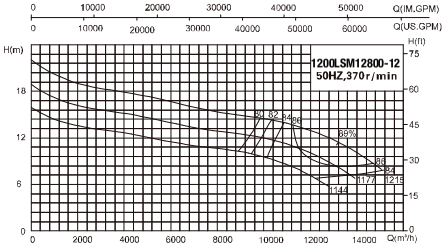
H(m)
H(ft)
Q(IM.GPM)
Q(US.GPM)
Q(m³/h)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H(ft)
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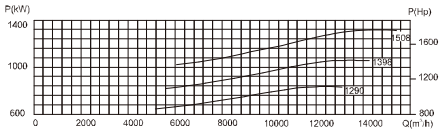
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P(Hp)
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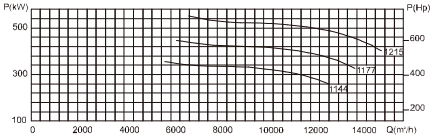
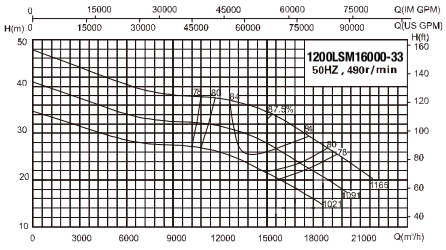

P(kW)
P(Hp)
Q(m³/h)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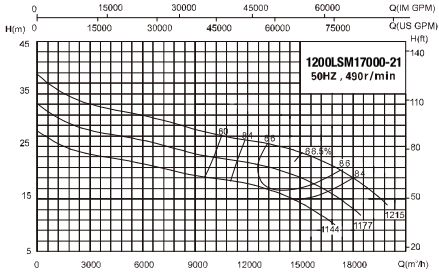
H(ft)
Q(IM GPM)
Q(US GPM)
Q(m³/h)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H(ft)
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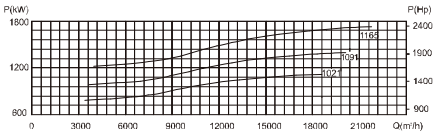
Q(m³/h)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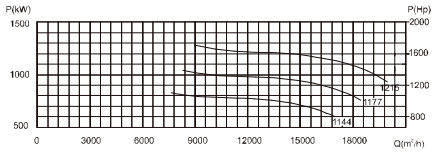
P(Hp)
Q(m³/h)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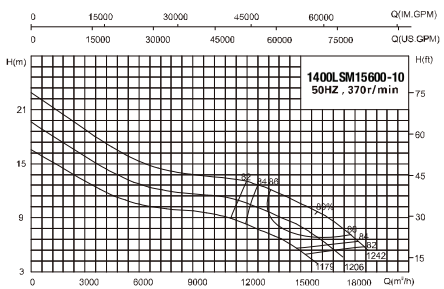
P(Hp)
Q(m³/h)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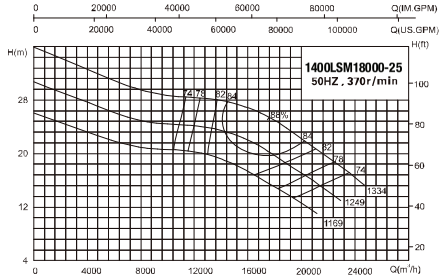
H(ft)
Q(IM.GPM)
Q(US.GPM)
Q(m³/h)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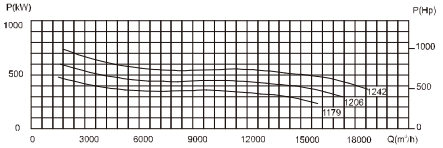
H(ft)
Q(IM.GPM)
Q(US.GPM)
Q(m³/h)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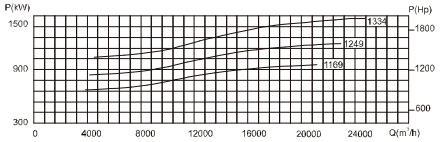
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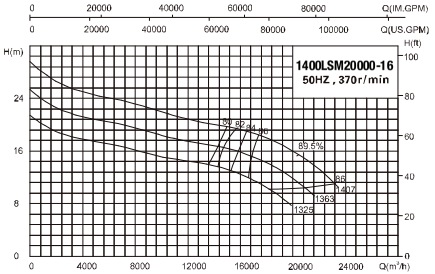
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H(ft)
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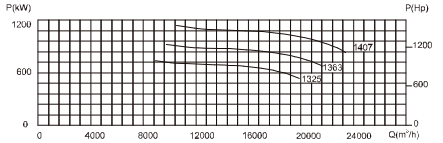
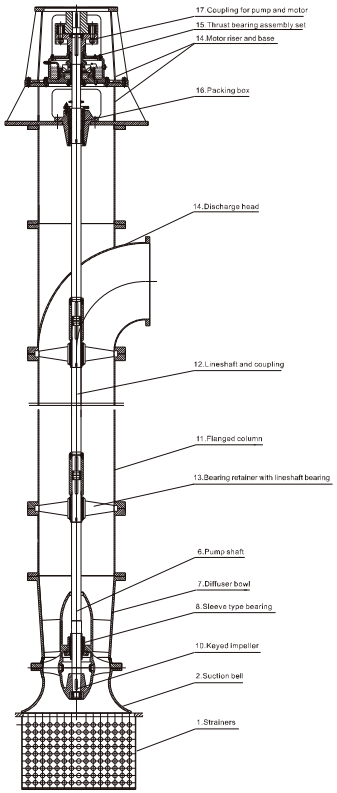
Q(m³/h)


P(kW)
P(Hp)
Q(m³/h)

Section drawing



Specification range

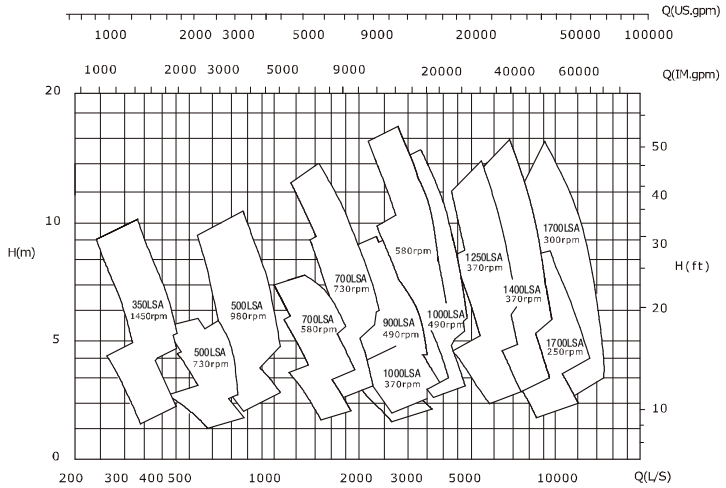
- Capacities to 50000 m3/h (220000G PM)
- Heads to 15 m (50ft)

Design Advantages

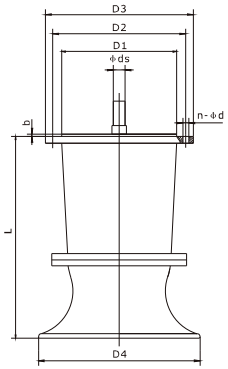
1. Fabricated discharge head for all sizes.
2. Seamless flanged ends column pipe and flanges bowl construction incorporating registered fits for ease of assembly during assembly.
3. Alloy construction with external tube flush of critical wear areas available for abrasive services.
4. High efficiency design. Broad hydraulic coverage provides best selection to meet specific operating conditions.
5. 416SS shafting. Keyed lineshaft coupling available in all size for ease of maintenance.
   The lineshaft can be protected by water flushing the enclosing tube bearing on corrosive/abrasive services.
6. Various bearing material available.
7. Wide range of corrosion and erosion resistant materials.
8. Flexible design to accommodate fixed or existing dimensions

Services

Pollution Control
Medium and Low Head Circulation
Effluent Disposal
Flood Control
Dewatering
River Water Intake
Cooling Water
Irrigation and Drainage
Dry Docks

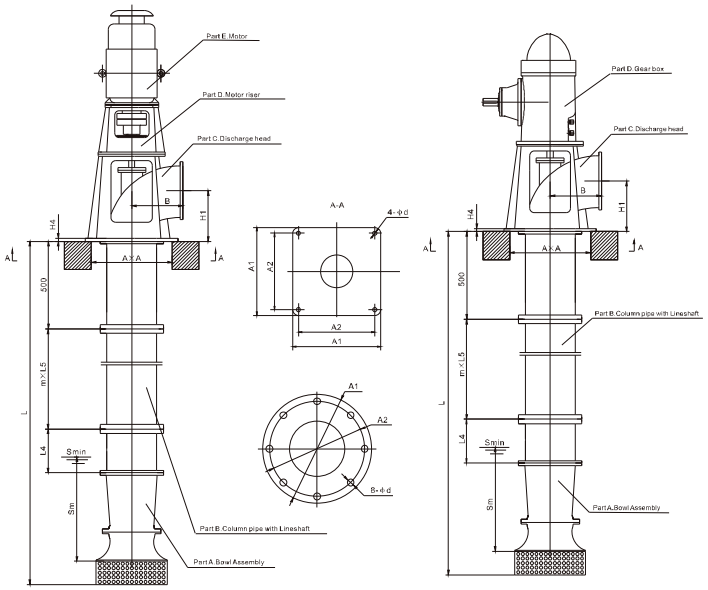


LSA Pump Bowl Assembly Dimensions



Model	Impener Dia	D1	D2	D3	D4	L	Ø ds	b	n- Ød
350LSA	300	370f7	415	450	516	590	40	5	8-ø18
500LSA	450	520f7	600	650	700	900	60	5	12-ø23
700LSA	650	720f7	810	865	1000	1000	90	7	20-ø25
900LSA	850	920f7	1020	1080	1280	1150	110	8	24-ø30
1000LSA	950	1020f7	1120	1180	1400	1200	120	10	28-ø30
1250LSA	1200	12700	1380	1450	1600	1300	140	10	32-ø30
1400LSA	1300	14200	1530	1600	1750	1400	160	10	36-ø30
1700LSA	1600	17200	1830	1900	2150	1600	190	10	40-ø30

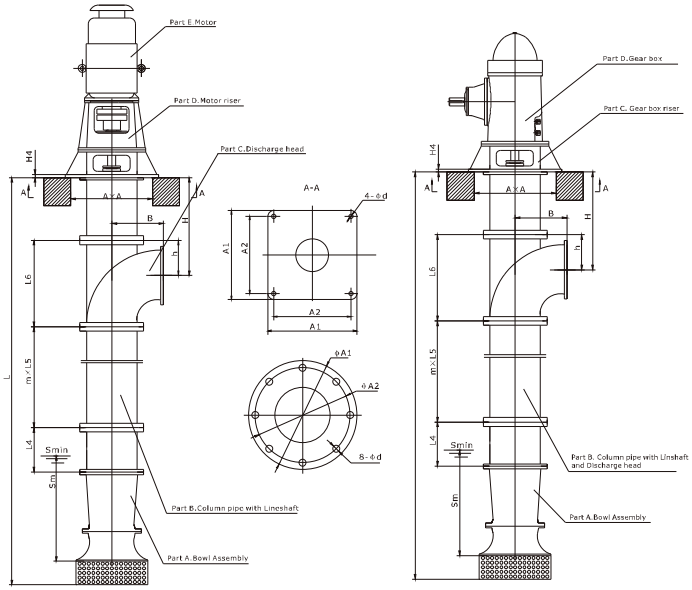
LSA, LSG Pump Dimensions (Above Ground Discharge)



Model	ØA1	ØA2	Al	A2	Ød	H1	H2	H4	L5	B	Sm	AXA
350LSA	/	/	930	870	30	370	720	35	1600	500	600	550x550
500LSA	/	/	1230	1160	33	520	960	40	1600	650	900	850x850
700LSA	1500	1400	/	/	36	700	1250	50	1600	800	1200	1150x1150
900LSA	1800	1700	/	/	36	900	1550	60	1600	1000	1600	1450x1450
1000LSA	1950	1850	/	/	42	1000	1700	60	1600	1100	1800	1700x1700
1250LSA	2250	2150	/	/	42	1250	2000	60	1600	1350	2200	1900x1900
1400LSA	2550	2450	/	/	42	1400	2300	60	1600	1400	2600	1900x1900
1700LSA	3220	3100	/	/	46	1700	2600	60	1600	1700	3000	2500X2500

L according to the custom requirement
Discharge Flanges drilled to ISO.DIN.BS or ANSI

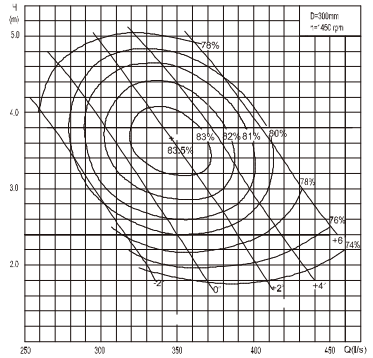
LSA, LSG Pump Dimensions (Below Ground Discharge)



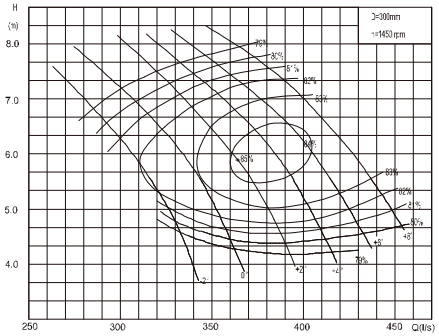
Model	ØA1	ØA2	Al	A2	Ød	L5	L6	h	B	Sm	AxA
350LSA	/	/	930	870	30	1600	630	260	380	600	680x680
500LSA	/	/	1230	1160	33	1600	880	350	540	900	1000x1000
700LSA	1500	1400	/	/	36	1600	2000	700	800	1200	1800X1800
900LSA	1800	1700		/	36	1600	2000	900	1000	1600	2200x2200
1000LSA	1950	1850	/	/	42	1600	2000	1000	1100	1800	2400x2400
1250LSA	2250	2150		/	42	1600	2000	1250	1250	2200	2600x2600
1400LSA	2550	2450	/	/	42	1600	2000	1400	1400	2600	3000x3000
1700LSA	3200	3100		/	46	1600	2000	1700	1700	3000	3500<3500

L & H according to the custom requirement
Discharge Flanges drilled to ISO.DIN.BS or ANSI

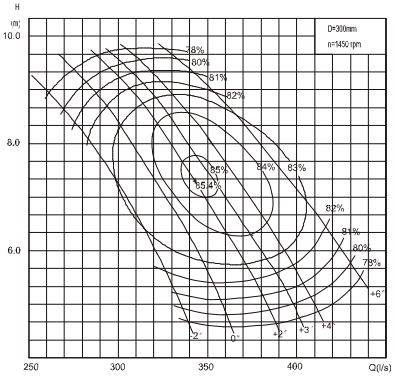
350LSA-3.6



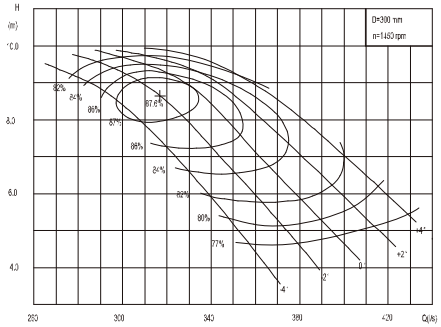
350LSA-5.9



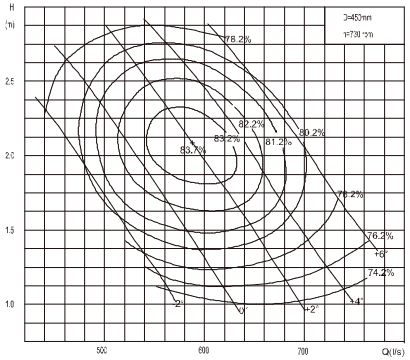
350LSA-7.3



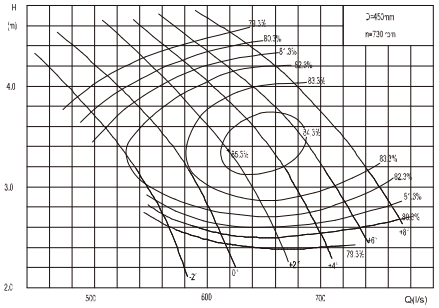
350LSA-8.6



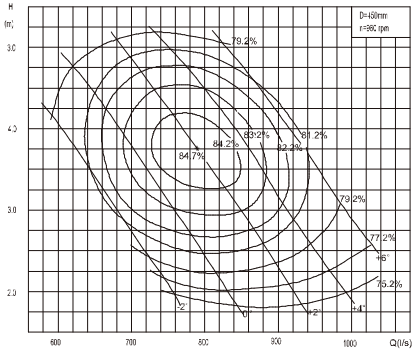
500LSA-2.1



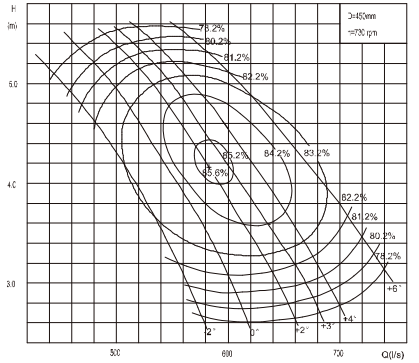
500LSA-3.4



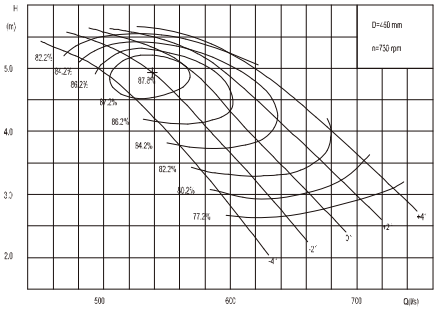
500LSA-3.8



500LSA-4.2



500LSA-5.0



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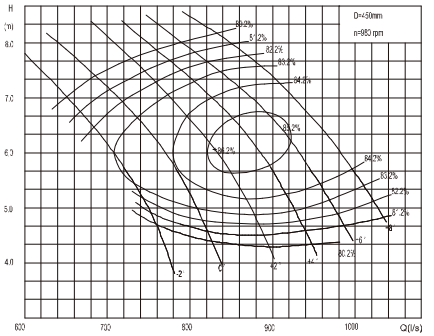
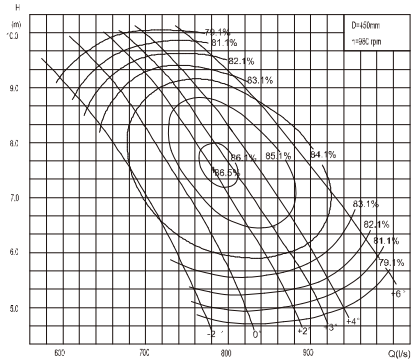
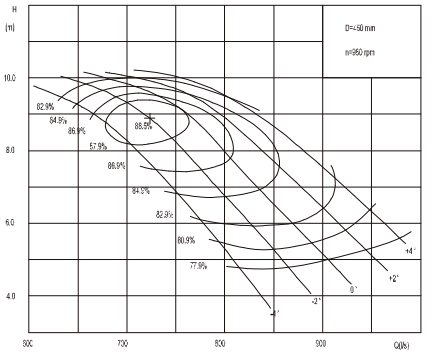


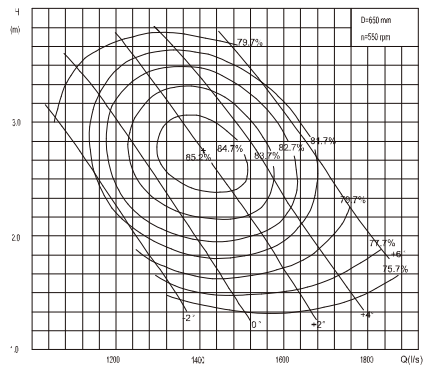
500LSA-7.5



500LSA-8.9



700LSA-2.8



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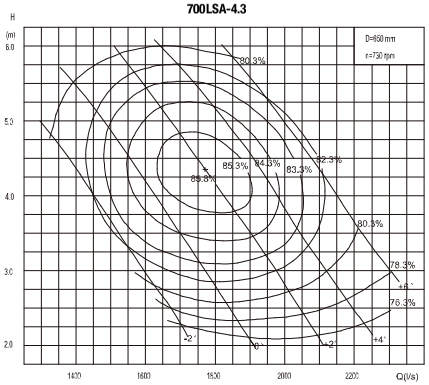

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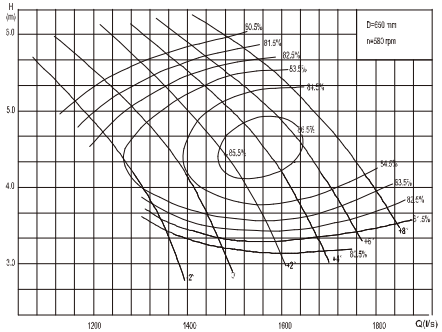
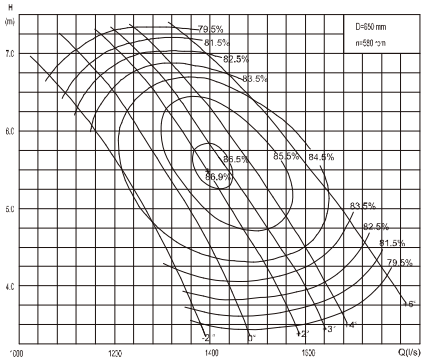
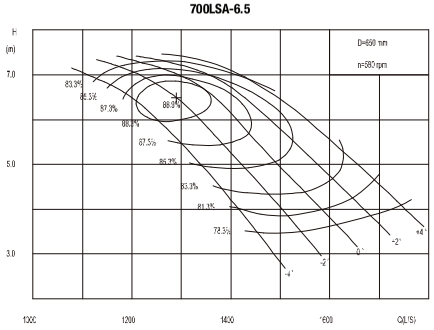


700LSA-5.5



700LSA-6.5



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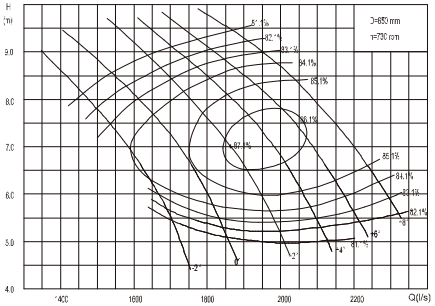
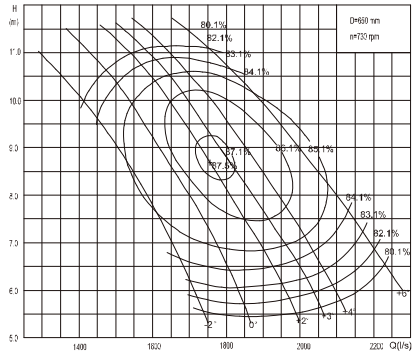
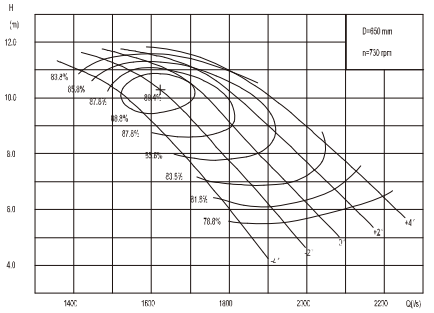


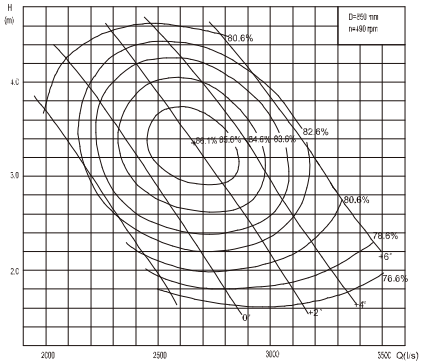
700LSA-8.7



700LSA-10.3



900LSA-3.4



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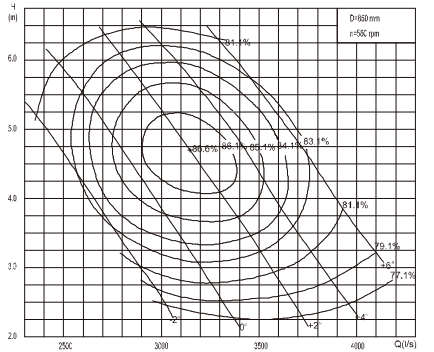
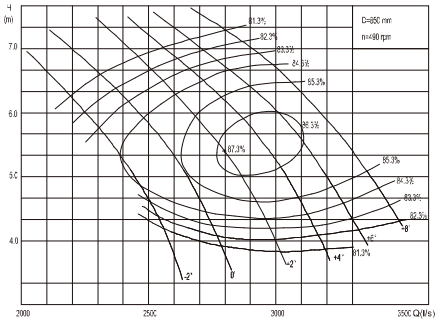


900LSA-5.4



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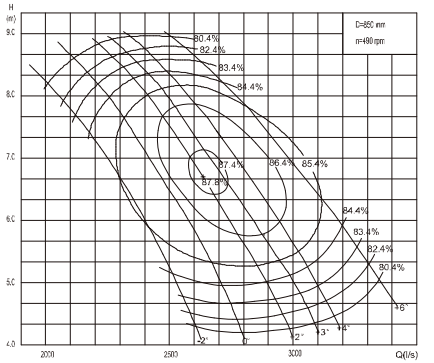

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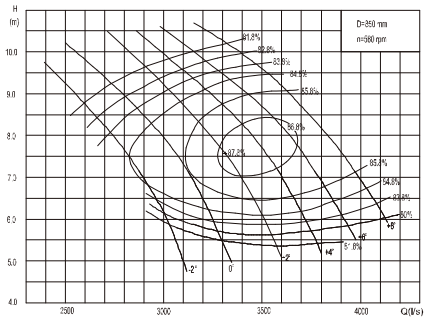

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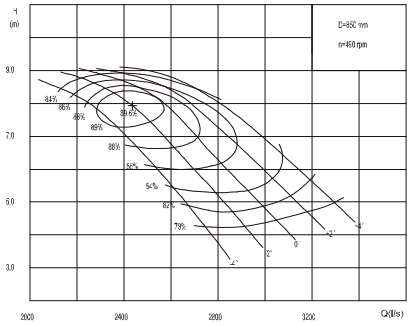

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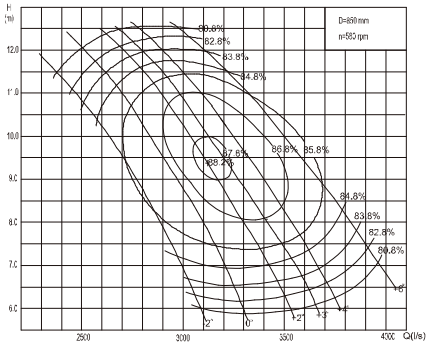
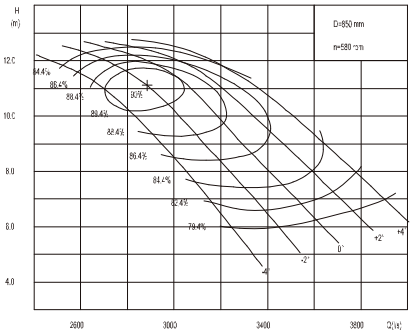


900LSA-11.0



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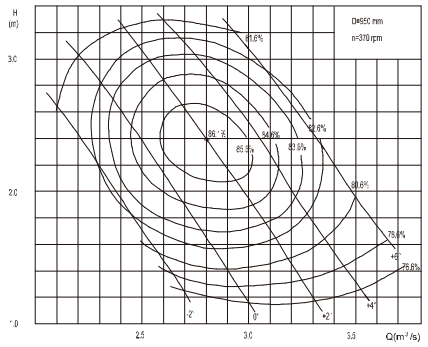

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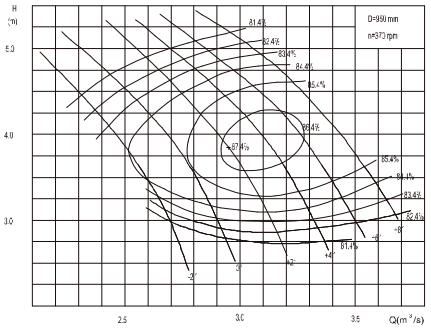

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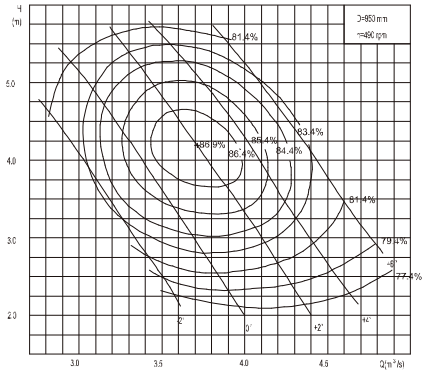
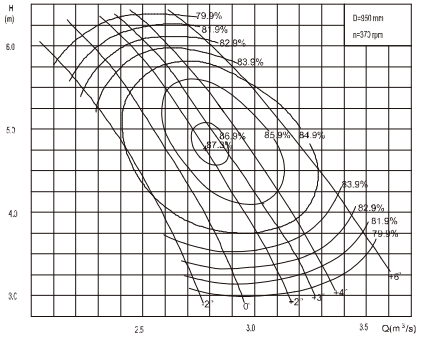


1000LSA-4.8



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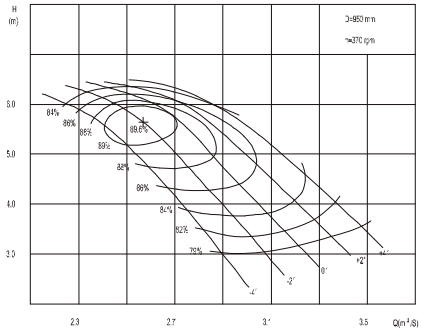

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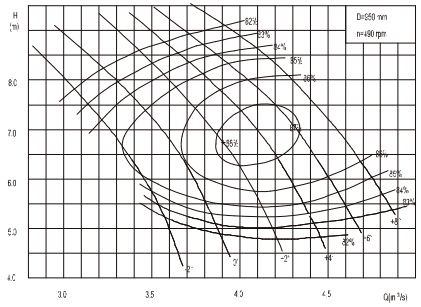

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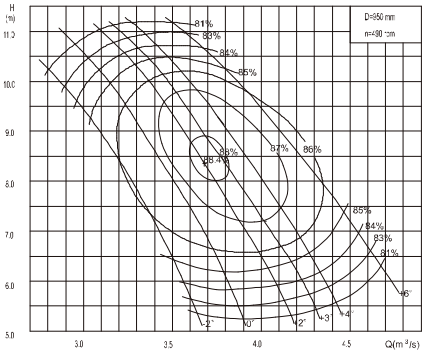

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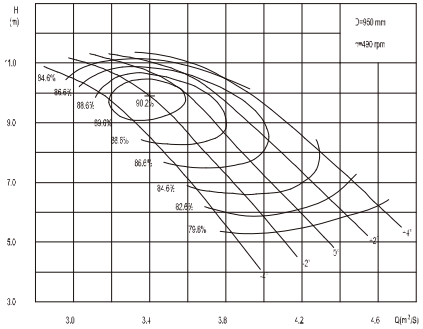
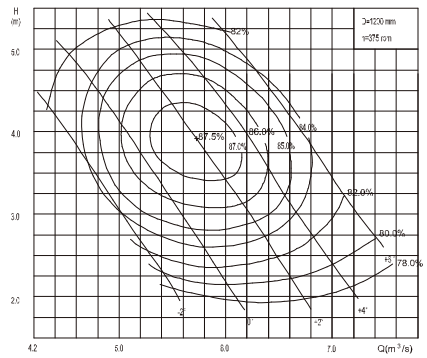


1250LSA-3.9



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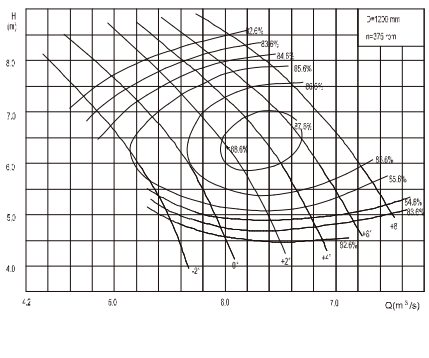
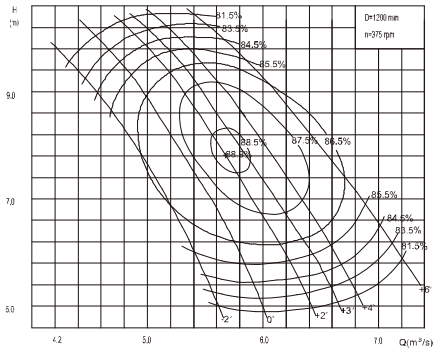


1250LSA-7.8



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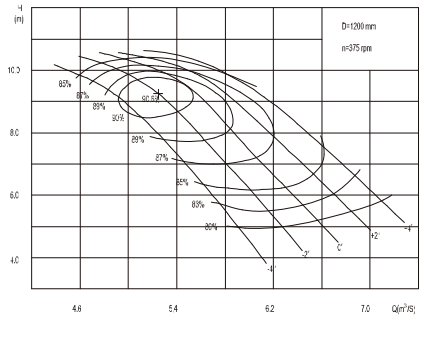

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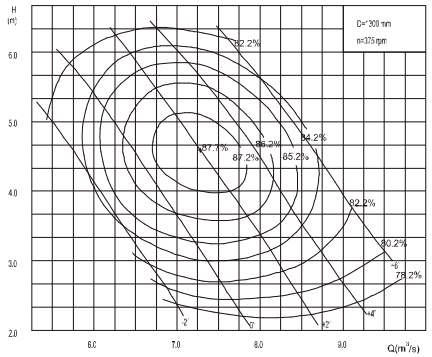

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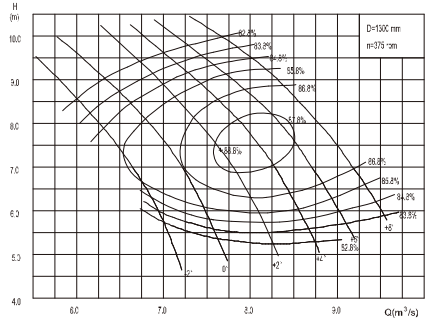

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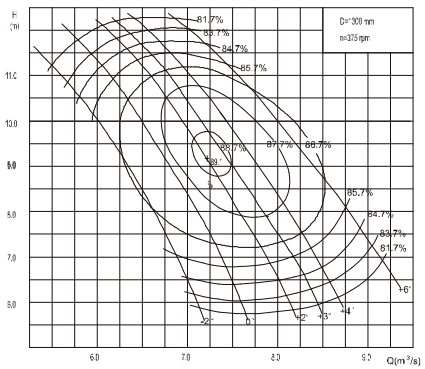
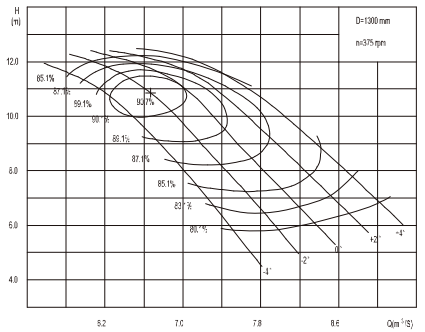
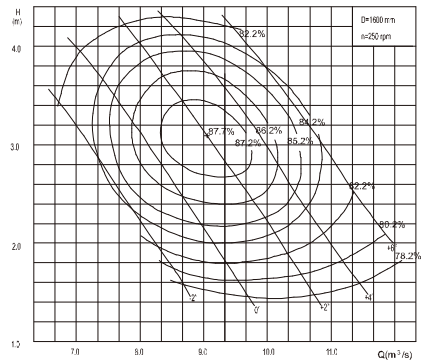


1400LSA-10.8



1700LSA-3.1



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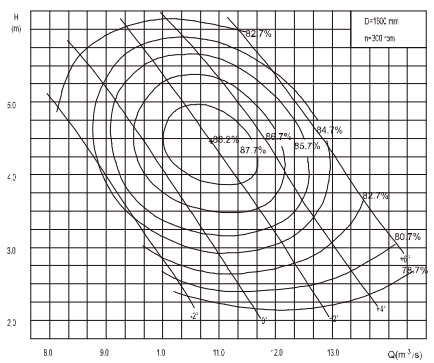
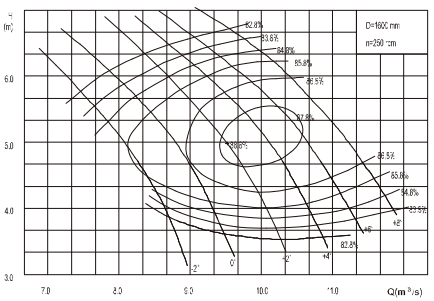
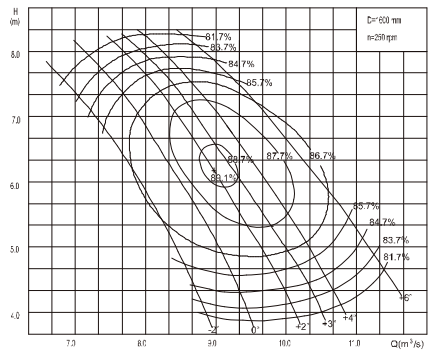


1700LSA-5.0

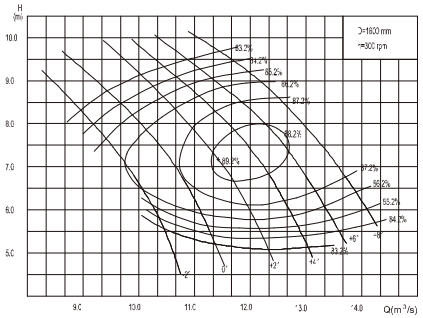


1700LSA-6.2



LSA, LSG Pump Curves

1700LSA-7.2



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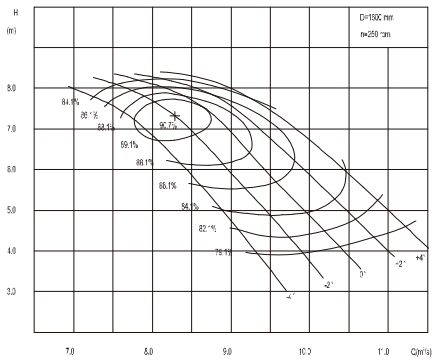
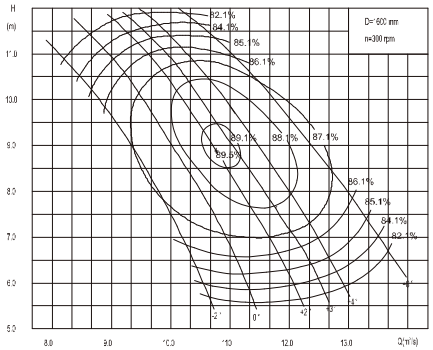


1700LSA-8.9



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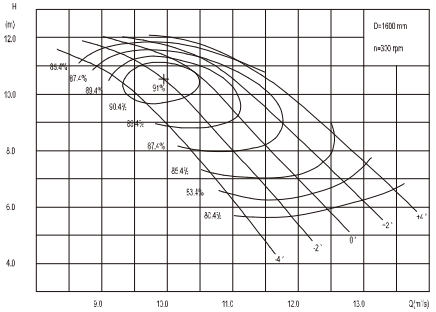
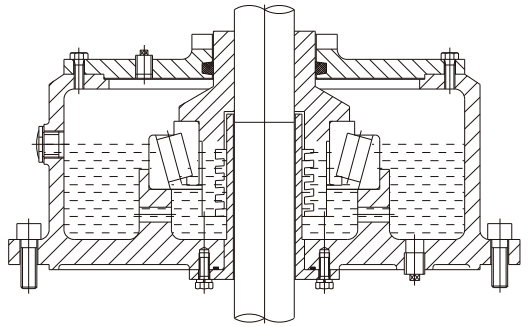


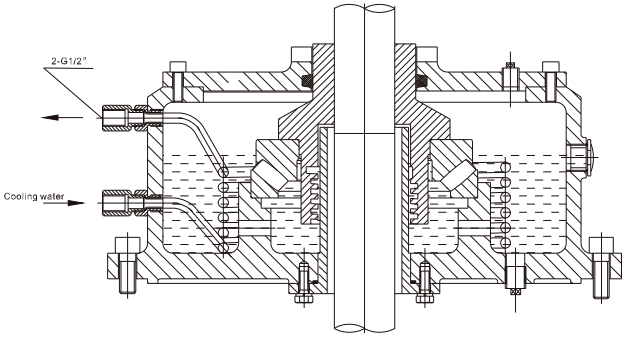
Oil Lubricated Thrust Bearing Assembling Sets

When the LS designed driven by VSS motor, the pump' s thrust will be loaded by the thrust bearing on the top of the pump or loaded by the top thrust bearing of the VSS motor.

Hydroo can supply two kinds of different thrust bearing assembly sets as following, design for the pumps with lower and higher thrust.



Standard thrurst bearing assembly set



Water cooling heavy duty thrust bearing assembly set

Notes

hydroo®

Be pumping partners

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