



KTS 空 调 双 吸 泵

AIR-CONDITION PUMP

产品执行标准：Q/GZGYP31

用途

KTS型泵是我公司专为高层建筑空调制冷循环系统用泵而设计研制的单级双吸泵，主要用于中央空调制冷，高层建筑水循环系统、以及在工矿企业、城市、电站取水工程、给排水工程等。

Application

KTS-Type pump, which is a single-stage & double-suction pump specially designed, developed and manufactured by our company for the cooling circulation system of air conditioning of high-rise buildings, is applied principally for the cooling of central air conditioning, water circulation system of high-rise buildings and water-taking, water supply and drainage projects of industrial and mining enterprises, cities and power plants.

输送介质

主要供输送稀释的、清洁的、不腐蚀的清水及物理化学性质类似水不含固体颗粒或纤维的液体。

Pumped Medium

It is mainly for suction and delivery of diluted, clean and non-corrosive clear water as well as the liquid that has similar physiochemical properties to water and contains no solid particles or fibers.

性能范围 Performance

转速(speed)	1480r/min
流量(capacity)	280 - 1440m ³ /h
扬程(head)	16 - 58m
功率(power)	30 - 250kW

工作条件 Operation conditions

最高工作温度(Max. working temp.): 0 - 80
使用压力(Max. working pressure): 1.6MPa

出厂前均作2.4MPa耐压试验，确保使用安全。
2.4MPa pressure test has been made in factory before delivery to ensure the safety.

泵说明

该型泵具有流量大、耐高压、高效节能、结构紧凑、安装维修方便、低转速、低噪音、寿命长而且通用性高。互换性好等特点。

采用前后开门式结构形式。由于泵的转子是支撑在左右两个轴承体上，卸下两轴承体即可分体，检修时无需拆卸泵体和进出管路，只需脱开联轴器及泵盖，即可取出叶轮等部件进行检修。

采用双吸的叶轮，不存在轴向力的问题。叶轮材质采用耐磨合金铸铁或铸铜精密铸造，用户可根据使用情况选用(订货时说明)。

采用高强度不锈钢轴以及配套进口优质轴承、高质量机械密封。耐高温润滑剂。确保使用安全。工作寿命长。

为适应不同安装场合，本型泵提供两种进出水口的型式。一种是进、出水口都是垂直向上，呈U型；一种是水平进水，垂直出水，呈L型，用户可根据实际情况选择。

如果无特别说明，泵的转向从电机方向看为顺时针方向。

Introduction of the pump

The pump is characterized by the large flow rate, high-temperature resistance, high efficiency and energy saving, compact structure, convenient and easy installation and maintenance, low rotating speed, low noise, long service life, high versatility and good interchangeability.

Front and back opening-type structure is adopted. Since pump rotor is rested upon the two bearing bodies located at the left and right sides, disassembly thereof can be achieved by simply removing the bearing bodies. During the maintenance, impeller and other parts can be taken out for maintenance by disconnecting shaft couplers and pump bonnet; therefore, there is no need to dismantle pump body and incoming/outgoing pipelines.

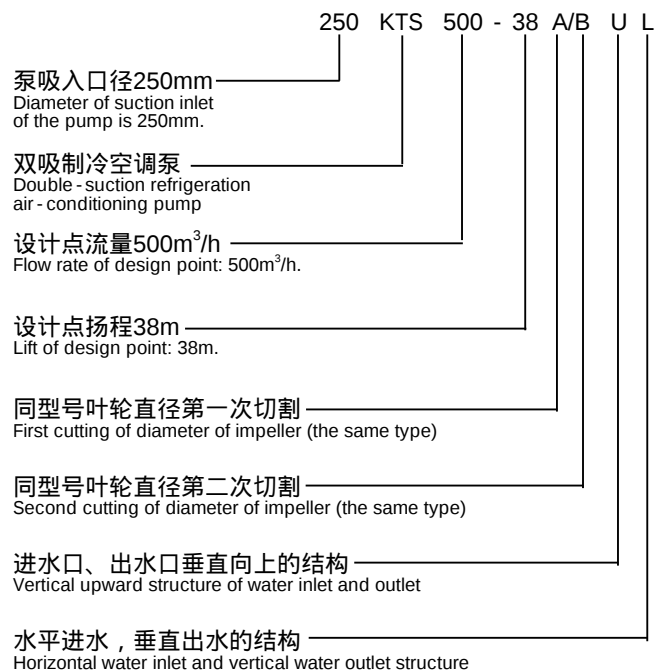
Owing to the adoption of double-suction impeller, there is no axial force problem. Impeller is made of wear-resistance alloy cast iron or cast steel. Customers can select either of the above-mentioned materials as per application conditions (by specifying the material required on purchase order).

High-strength stainless steel shaft, imported high-quality bearing and high-quality mechanical seals are applied, and high-temperature-resistance lubricants are used to ensure the application safety and long service life.

In order to accommodate different installation conditions, two kinds of inlet and outlet ports are provided for this type of pump. The first kind has vertical and upward inlet and outlet, taking the shape of "U"; the second kind has horizontal inlet port and vertical outlet port, in the shape of "L". Customers can choose from both kinds of arrangement of inlet and outlet according to actual application situation.

If no special description is made, rotation of pump is of clockwise direction when viewing from the direction of electric motor.

型号意义说明 Model Meaning



配置

配用电机的噪声等级低于普通Y型电机，接近进口电机水平，轴承体处设注油孔，可随时向轴承加油，维护保养方便。

提供尺寸齐全的铸铁底板或槽钢底板，方便现场安装。对于减振要求高的场合，我公司可提供减振装置或设计配套供应。

Configuration

Intermediate shaft coupling is provided between electric motor and pump, therefore bearing and sealing parts can be replaced easily by dismantling the intermediate shaft coupler.

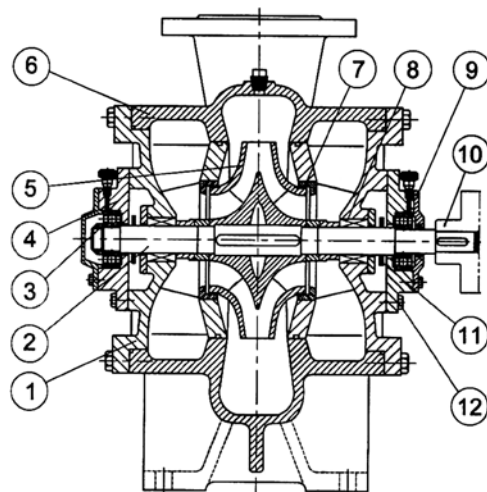
Electric motor for the pump has a noise level lower than the ordinary "Y" type motor and the noise level is close to that of imported motor. Lubrication holes are provided on bearing body to facilitate oil filling to bearing whenever it is required, thus convenient in maintenance.

Cast-iron or channel-steel base plates of all dimensions are provided to facilitate site installation. For installations with higher vibration damping requirement, damping devices or matching design are available with us.

材料名称 Material description

序号	组件 Assembly parts	材料Material
1	泵盖 Pump bonnet	铸铁 Cast iron
2	泵轴 Pump shaft	2Cr13/45#
3	进口轴承 Imported bearing	NSK/SKF/NTN
4	轴承座 Bearing seat	铸铁 Cast iron
5	双吸叶轮 Double-suction impeller	铸铁或铸钢 Cast iron or cast steel
6	泵体 Pump body	铸铁 Cast iron
7	密封环 Sealing ring	HT250或铜 HT250or steel
8	机械密封 Mechanical seal	
9	轴承压盖 Bearing gland	铸铁 Cast iron
10	联轴器 Shaft coupler	铸铁 Cast iron
11	挡水环 Water retaining ring	橡胶 Rubber
12	压盖螺母 Gland nut	2Cr13

*按合同要求 * According to the contract requirements



性能表

型号 Model	流量 Q		扬程 H	转速 n	功率 P(kW)		效率 Eff.	必需汽蚀 余量 NPSH(r)	泵口径 吸入-吐出	整机重量	
	m³/h	l/s			轴功率	配用 功率				净重 Kg	电机重量
200KTS280-42	216 280 342	60 77.8 95	48 42 35	1480	34.9 37.7 40.2	45	81 85 81	5	200-150	315	
200KTS280-42A	198 270 310	55 75 86.1	43 36 31	1480	30.5 33.1 34.4	37	76 80 76	5	200-150	288	
200KTS280-42B	188 266 300	52.2 73.9 83.3	36 30 26	1480	34.57 27.5 28.32	30	75 79 75	5	200-150	279	
200KTS280-42C	175 250 300	48.6 69.4 83.3	30 25 21	1480	19.32 22.69 23.83	30	74 75 72	5	200-150	270	
200KTS350-42	300 350 400	83.3 97.2 111.1	45 42 38	1480	44.83 48.23 49.87	55	82 83 83	5	200-150	365	
200KTS350-42A	300 350 400	83.3 97.2 111.1	38 35 31.5	1480	38.32 40.68 41.84	45	81 82 82	5	200-150	330	
200KTS350-42B	300 350 400	83.3 97.2 111.1	32 29 26	1480	32.27 33.7 34.54	37	81 82 82	5	200-150	315	
250KTS485-24	360 485 572	100 134.7 158.9	27 24 19	1480	33.1 36.9 36.3	45	80 86 82	4.2	200-200	530	
250KTS485-24A	342 414 482	95 115 133.9	22.2 20.3 17.4	1480	25.8 27.6 28.6	37	80 83 80	4.2	200-200	515	
250KTS500-38	360 500 612	100 138.9 170	42.5 38 32.5	1480	54.8 62.3 68.6	75	76 83 79	4.2	200-200	640	
250KTS500-38A	324 468 576	90 130 160	35.5 31.5 25	1480	42.3 49.5 50.9	55	74 81 77	4.2	200-200	635	
250KTS500-50	360 500 612	100 138.9 170	53 50 46	1480	69.3 87.3 100.8	110	75 78 76	4.2	200-200	647	

性能表

型号 Model	流量 Q		扬程 H	转速 n	功率 P(kW)		效率 Eff.	必需汽蚀 余量 NPSH(r)	泵口径 吸入-吐出	整机重量	
	m³/h	l/s	m	r/min	轴功率	配用 功率	%	(m)	(mm)	净重 Kg	电机重量
250KTS500-50A	324 468 576	90 130 160	47 44 40	1480	56.04 72.8 83.6	90	74 77 75	4.2	200-200	642	
250KTS630-24	445 630 758	123.6 175 210.6	27.5 24 19	1480	40.9 49 50.3	55	80 84 78	4	200-200	826	
250KTS630-24A	420 600 725	116.7 166.7 201.4	22 20 17	1480	31.85 39.85 43.6	45	79 82 77	4	200-200	800	
250KTS630-38	445 630 758	123.6 175 210.6	42 38 32	1480	66.97 75.55 83.62	90	76 83 79	4	200-200	786	
250KTS630-38A	420 600 725	116.7 166.7 201.4	36 32 26	1480	55.64 64.12 66.7	75	74 80 78	4	200-200	772	
250KTS630-50	445 630 758	123.6 175 210.6	53 50 46	1480	80.28 100.9 126.6	132	80 85 75	4	200-200	725	
250KTS630-50A	420 600 725	116.7 166.7 201.4	45 42 38	1480	72.49 83.69 102.8	110	71 82 73	4	200-200	702	
300KTS800-25	612 800 915	170 222.2 254.2	27 25 20	1480	56.25 64.1 66.45	75	80 85 75	5.2	200-250	678	
300KTS800-25A	560 750 850	155.6 208.3 236.1	23 20 17	1480	44.97 49.21 51.77	55	78 83 76	5.2	300-250	355	
300KTS800-38	612 800 915	170 222.2 254.2	42.5 38 32.5	1480	76.45 97.4 98.76	110	81 85 82	5.2	300-250	1021	
300KTS800-38A	540 765 850	150.0 212.5 236.1	36 32 28	1480	66.17 79.36 83.1	90	80 84 78	5.2	300-250	998	
300KTS800-38B	530 750 840	147.2 208.3 233.3	32 28 24	1480	58.47 68.9 70.4	75	79 83 78	5.2	300-250	923	
300KTS800-50	612 800 900	170 222.2 250	53 50 46	1480	108 134.5 144.5	160	80 81 78	5.2	300-250	1350	
300KTS800-50A	546 765 850	151.7 212.5 236.1	47 44 40	1480	97 116.8 121.7	132	72 80 78	5.2	300-250	1320	
300KTS900-25	700 900 1100	194.4 250 305.6	27 25 20	1480	64.4 72 77	90	80 85 78	5.2	300-250	1298	
300KTS900-25A	700 900 1100	194.4 250 305.6	22 20 17	1480	57.45 59.06 67	75	73 83 76	4.5	300-250	1023	
300KTS900-38	700 900 1100	194.4 250 305.6	42 38 33	1480	97.6 112 118	132	82 83 84	4.5	300-250	1188	
300KTS900-38A	700 900 1100	194.4 250 305.6	37 32 26	1480	89.28 94.5 97.4	110	79 83 80	5.2	300-250	1145	
300KTS900-38B	700 900 1100	194.4 250 305.6	33 28 23	1480	80.65 83.69 87.21	90	78 82 79	5.2	300-250	1100	
300KTS900-50	700 900 1100	194.4 250 305.6	53 50 46	1480	122.5 145.9 162.1	185	82.5 84 85	4.3	300-250	1423	
300KTS900-50A	700 900 1100	194.4 250 305.6	47 44 40	1480	112 131.5 144.4	160	80 82 83	4.5	300-250	1403	
350KTS1260-26	972 1260 1440	270 350 400	32 26 22	1480	99.7 101.5 105	110	85 88 82	4.5	350-300	1250	
350KTS1260-26A	864 1114 1296	240 309.4 360	26 21.5 16.5	1480	76.5 78.8 80	90	80 83 78	4.5	350-300	1235	
350KTS1260-44	972 1260 1476	270 350 410	50 44 37	1480	164 177.4 189	220	81 87 79	4.5	350-300	1825	
350KTS1260-44A	864 1200 1332	240 333.3 370	41 36 30	1480	121 131 136	160	80 84 80	4.5	350-300	1525	
350KTS1260-44B	900 1200 1300	250 333.3 361.1	35 30 28	1480	109.9 118.5 125.5	132	78 82 79	4.5	350-300	1507	
350KTS1260-70	600 900 1100	166.7 250 305.6	75 70 63	1480	163.4 204.2 236	250	75 85 80	5.8	350-250	2037	

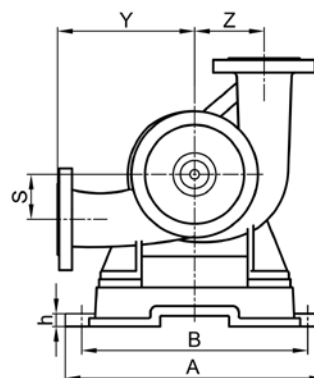
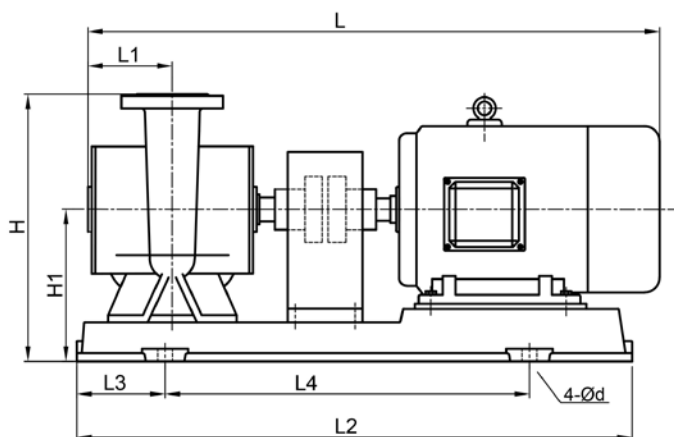
L型结构外形安装尺寸表

Table of installation dimensions for “L” shaped structure (provided with cast iron base plate)

注：S表示低噪声电机，P表示IP23型电机

Note: “S” indicates low-noise motor, “P” indicates type IP23 motor.

泵型号	电机座号	L	L ₁	L ₂	L ₃	L ₄	H	H ₁	h	A	B	S	Z	Y	d
200KTS280-42	Y225M-4S	1502	283	1400	215	950	926	586	20	710	640	170	288	450	25
200KTS280-42A	Y225M-4S	1470	283	1400	215	950	926	586	20	710	640	170	288	450	25
200KTS280-42B	Y200L-4S	1470	283	1200	125	950	926	586	20	710	640	170	288	450	25
200KTS350-42	Y250M-4S	1590	283	1400	215	950	931	591	20	710	640	170	288	450	25
200KTS350-42A	Y225M-4S	1511	283	1400	215	950	926	586	20	710	640	170	288	450	25
200KTS350-42B	Y225M-4S	1496	283	1400	215	950	926	586	20	710	640	170	288	450	25
250KTS485-24	Y225-4	1620	337	1350	200	950	976	576	20	730	640	230	230	450	25
250KTS485-24A	Y225S-4S	1600	337	1350	200	950	996	596	20	730	640	230	230	450	25
250KTS500-38	Y280S-4S	1780	337	1494	212	1070	1026	586	20	750	675	200	260	450	30
250KTS500-38A	Y250M-4S	1710	337	1380	155	1070	1036	596	20	710	620	200	260	450	30
250KTS500-50	Y315-4	2050	335	1580	215	1235	1065	615	20	870	780	200	280	460	30
250KTS500-50A	Y280M-4S	1824	335	1500	212	1070	1041	591	20	740	675	200	280	460	30
250KTS630-24	Y250-4	1703	337	1350	200	950	976	576	20	730	640	230	230	450	25
250KTS630-24A	Y225M-4	1618	337	1350	200	950	976	576	20	730	640	230	230	450	25
250KTS630-38	Y280S-4S	1823	337	1494	212	1070	1026	586	20	750	675	200	260	450	30
250KTS630-38A	Y280S-4S	1823	337	1494	212	1070	1026	586	20	750	675	200	260	450	30
250KTS630-50	Y315M-4	2115	338	1610	215	1235	1040	590	20	870	780	200	280	460	30
250KTS630-50A	Y315S-4P	2040	338	1610	215	1235	1040	590	20	870	780	200	280	460	30
300KTS800-25	Y280S-4S	1825	358	1600	225	1150	1080	670	20	800	710	260	280	470	30
300KTS800-25A	Y250M-4S	1755	358	1600	260	1070	1080	670	20	800	710	260	280	470	30
300KTS800-38	Y315S-4P	2290	358	1350	260	1235	1060	650	20	860	780	260	280	470	30
300KTS800-38A	Y280M-4S	1870	358	1750	260	1150	1060	650	20	800	710	260	280	470	30
300KTS800-38B	Y280S-4S	1820	358	1600	225	1150	1060	650	20	800	710	260	280	470	30
300KTS800-50	Y315L-4P	2255	380	1765	265	1235	1180	650	20	940	870	240	310	540	30
300KTS800-50A	Y315M-4P	2205	380	1765	265	1235	1180	650	20	940	870	240	310	540	30
300KTS900-25	Y280M-4S	2030	400	1815	317	1235	1020	630	50	780	710	250	310	470	30
300KTS900-25A	Y280S-4S	1960	400	1815	317	1235	1020	630	50	780	710	250	310	470	30
300KTS900-38	Y315S-4	2155	358	1750	260	1235	1060	650	20	860	780	260	280	470	30
300KTS900-38A	Y315S-4	2095	358	1750	260	1150	1060	650	20	800	780	260	280	470	30
300KTS900-38B	Y280M-4S	1875	358	1670	260	1150	1060	650	20	800	710	260	280	470	30
300KTS900-50	Y315M1A-4P	2205	380	1765	265	1235	1180	650	20	940	870	240	310	540	30
300KTS900-50A	Y315S-4P	2205	380	1765	260	1235	1180	650	20	940	870	240	310	540	30
350KTS1260-26	Y280S-4P	2386	420	2015	347	1250	1300	740	50	880	810	300	310	580	30
350KTS1260-26A	Y280M-4S	2216	420	1945	347	1105	1300	740	50	880	810	300	310	580	30
350KTS1260-44	Y315M1B-4P	2290	420	1800	275	1250	1160	590	20	940	870	300	310	580	30
350KTS1260-44A	Y315S-4P	2220	420	1955	347	1250	1320	740	50	940	870	300	310	580	30
350KTS1260-44B	Y280M-4P	2395	420	1955	347	1250	1320	740	50	940	870	300	310	580	30
350KTS1260-70	Y355M-4	2650	480	2015	347	1295	1366	760	50	940	870	300	310	600	30



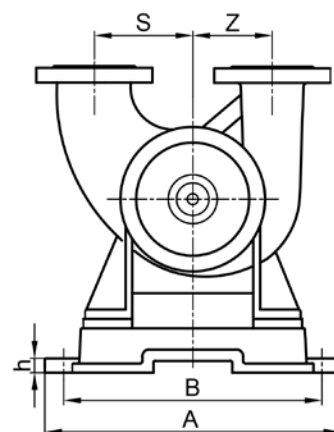
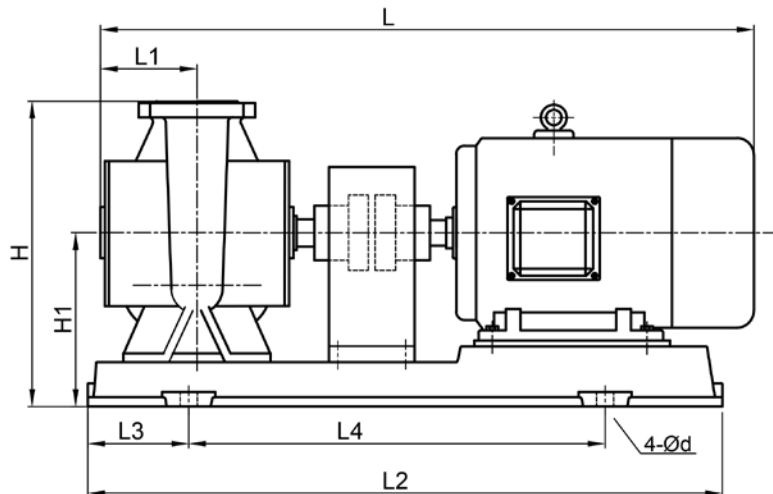
U型结构外形安装尺寸表

Table of installation dimensions for "u" shaped structure (provided with cast iron base plate)

注：S表示低噪声电机，P表示IP23型电机。

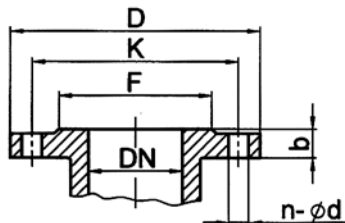
Note: "S" indicates low-noise motor, "P" indicates type IP23 motor.

泵型号	电机座号	L	L ₁	L ₂	L ₃	L ₄	H	H ₁	h	A	B	S	Z	d
200KTS280-42	Y225M-4S	1710	320	1400	215	950	926	586	20	710	640	320	260	25
200KTS280-42A	Y225M-4S	1675	320	1400	215	950	926	586	20	710	640	320	260	25
200KTS280-42B	Y200L-4S	1615	270	1200	125	950	931	591	20	710	640	320	260	25
200KTS350-42	Y250M-4S	1820	320	1400	215	950	931	591	20	710	640	320	260	25
200KTS350-42A	Y225M-4S	1710	320	1400	215	950	926	586	20	710	640	320	260	25
200KTS350-42B	Y225S-4S	1675	320	1400	215	950	926	586	20	710	640	320	260	25
250KTS485-24	Y225M-4S	1745	350	1350	200	950	996	596	20	730	640	320	260	25
250KTS485-24A	Y225S-4S	1720	350	1350	200	950	996	596	20	730	640	320	260	25
250KTS500-38	Y280S-4S	1900	350	1494	212	1070	1026	586	20	750	675	320	280	30
250KTS500-38A	Y250M-4S	1830	350	1380	155	1070	1036	596	20	710	620	320	280	30
250KTS500-50	Y315-4	2120	350	1610	215	1235	1065	615	20	870	780	320	310	30
250KTS500-50A	Y280-4S	1950	350	1500	212	1070	1041	591	20	740	675	320	310	30
250KTS630-24	Y250M-4S	1830	350	1350	200	950	1016	596	20	730	640	320	260	25
250KTS630-24A	Y255M-4S	1745	350	1350	200	950	1016	596	20	730	640	320	260	25
250KTS630-38	Y280M-4S	1950	350	1494	212	1070	1026	586	20	750	675	320	280	30
250KTS630-38A	Y280S-4S	1900	350	1494	212	1070	1026	586	20	750	675	320	280	30
250KTS630-50	Y280M-4P	2170	350	1610	215	1235	1065	615	20	870	780	320	310	30
250KTS630-50A	Y280S-4P	2120	350	1610	215	1235	1065	615	20	870	780	320	310	30
300KTS800-25	Y280S-4S	1955	380	1600	225	1150	1110	670	20	800	710	320	280	30
300KTS800-25A	Y250M-4S	1885	380	1600	260	1070	1110	670	20	800	710	320	280	30
300KTS800-38	Y280S-4P	2175	380	1750	260	1235	1105	675	20	860	780	320	280	30
300KTS800-38A	Y280M-4S	2010	380	1670	260	1150	1110	670	20	800	710	320	280	30
300KTS800-38B	Y280S-4S	1935	380	1600	225	1150	1110	670	20	800	710	320	280	30
300KTS800-50	Y315S-4P	2340	400	1765	265	1235	1165	665	20	940	870	320	310	30
300KTS800-50A	Y280M-4P	2290	400	1765	265	1235	1165	665	20	940	870	320	310	30
300KTS900-25	Y280M-4S	2030	400	1815	317	1235	1020	630	50	780	710	320	310	30
300KTS900-25A	Y280S-4S	1960	400	1815	317	1235	1020	630	50	780	710	320	310	30
300KTS900-38	Y280M-4P	2290	400	1750	260	1235	1105	665	20	860	780	320	280	30
300KTS900-38A	Y280S-4P	2240	400	1750	260	1235	1105	665	20	860	780	320	280	30
300KTS900-38B	Y280M-4S	2020	400	1670	260	1150	1110	670	20	800	710	320	280	30
300KTS900-50	Y315M1A-4P	2450	400	1765	265	1235	1165	665	20	940	870	320	310	30
300KTS900-50A	Y315S-4P	2340	400	1765	265	1235	1165	665	20	940	870	320	310	30
350KTS1260-26	Y315S-4P	2386	420	1750	300	1102	1160	600	20	820	730	320	310	30
350KTS1260-26A	Y280M-4S	2216	420	1945	347	1105	1300	740	50	880	810	320	310	30
350KTS1260-44	Y315M1B-4P	2546	420	2215	347	1295	1320	740	50	940	870	320	310	30
350KTS1260-44A	Y315S-4P	2507	420	1800	275	1250	1472	610	20	940	870	320	310	30
350KTS1260-44B	Y315M-4P	2395	420	1800	275	1250	1412	610	20	940	870	320	310	30
350KTS1260-70	Y355M-4	2650	480	2015	347	1295	1360	760	50	940	870	320	310	30



法兰连接尺寸 Flange size

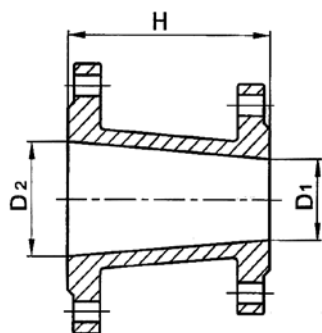
型号	进水口法兰尺寸						出水口法兰尺寸					
	DN ₁	D ₁	K ₁	F ₁	b ₁	n-d ₁	DN ₂	D ₂	K ₂	F ₂	b ₂	n-d ₂
200KTS	200	340	295	268	38	12-23	150	285	240	215	32	8-23
250KTS	250	405	355	320	38	12-27	200	340	295	268	38	12-23
300KTS	300	460	410	368	38	12-27	250	405	355	320	38	12-27
350KTS	350	520	470	436	42	16-27	300	460	410	368	38	12-17



为了减少管路阻力损失，一般应控制在管路中的水流速度大约2~2.5m/s，所以水泵进出水口应装扩散锥管，本厂提供的扩散锥管尺寸如下表：

For the purpose of reducing pipeline resistance, water velocity in pipeline should be controlled generally at the rate of 2~2.5m/s or so. In order to control the speed, diffusion taper pipes shall be installed at inlet and outlet of pump. Dimensions of diffusion taper pipes provided by us are shown in the table below:

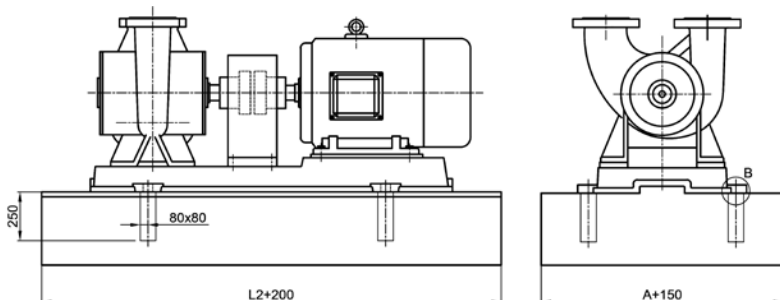
D1	D2	H	工作压力(MPa)
150	250	300	1.6
200	250	300	1.6
200	300	300	1.6
250	300	300	1.6
250	350	300	1.6
300	350	300	1.6
300	400	300	1.6
350	400	300	1.6
300	450	350	1.6
350	450	350	1.6



水泵安装

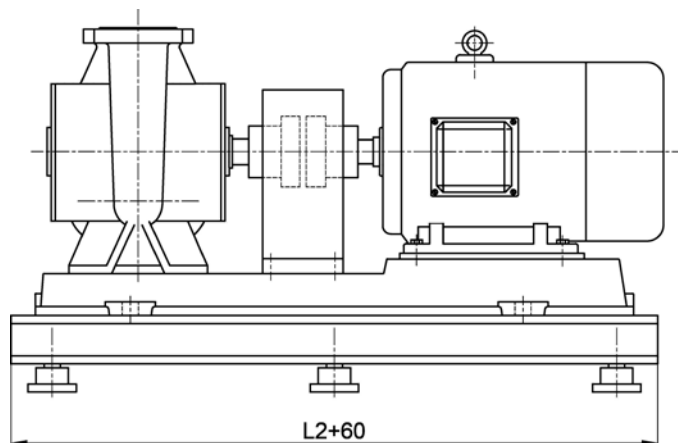
1、本型泵全部配有底板，整体泵组出厂，安装十分方便，泵房设置在底层时，可用地脚螺栓直接安装在混凝土基础上，其安装方法如下图所示。

This type of pumps are provided all with base plates and are delivered from factory in assembled form, thus convenient in installation. If pump room is on the ground floor, the pump can be installed directly on concrete footing with holding-down bolts. Installation method is shown in the following diagram.



2、如果安装在楼层面上，或者有减振要求较高的场合，可采用弹簧减振器和橡胶隔垫同时组合使用，减振效果较佳。基础减振装置，我厂可设计配套供应。其安装方法见下图。

If the pump is installed on floor plate or places where vibration damping requirement is high, combined use of damping spring and rubber pad can be adopted to achieve better damping results. Design and supply of foundation vibration damping facilities are available with us. For installation method, please refer to the following diagram.



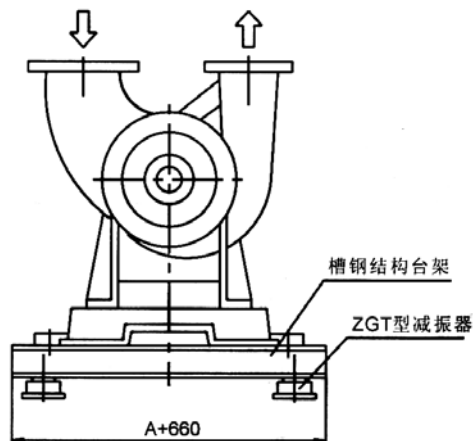
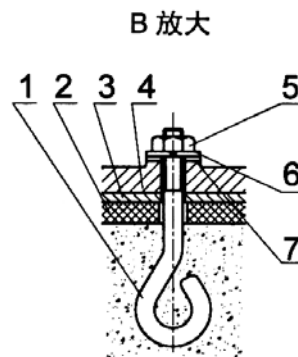
3、端必须安装橡胶软接头，管路系统的重量不得加在水泵上，其进水管应用JTD型弹性吊架固定。

Flexible rubber joints must be installed at ends and weight of pipeline must not be applied upon the pump. Intake/outlet pipes of the pump shall be fixed with JTD type elastic hanger frame.

订货时请说明泵的旋转方向，不同的旋转方向，进水口和出水口方向不一样，因此必须说明，如果无特别说明，我厂产品按从电机方向看泵为顺时针方向旋转。（请参照产品旋转方向指示标志牌）

Please specify clearly rotation direction requirement of the pump, since directions of suction and delivery ports are different with different rotation directions. It is therefore necessary to emphasize that rotation of pump is in clockwise direction when viewing from motor direction if no special description is made. (Please refer to label plate showing rotation direction of the product)

- 1、地脚螺栓 (Holding down bolt)
- 2、SD型橡胶隔振垫 (SD type rubber vibration isolating pad)
- 3、钢板 (Steel plate)
- 4、泵座 (Pump seat)
- 5、螺母 (Screw nut)
- 6、弹簧垫圈 (Spring washer)
- 7、平垫圈 (Flat washer)



水泵保养维护

1. 本泵均采用机械密封，严禁断水情况下运转，调试电机时也只作瞬间点车，以确定电机转向。泵运转时应有少量水(12mg/h)泄漏。如果泄漏较大，应检查原因，更换密封，机械密封寿命约10000小时。

2. 本型泵只需拆卸中间联轴器，即可更换轴承及密封，不必移动电机及管路。

3. 本泵全部采用进口优质轴承，出厂时加入适量耐高温润滑脂，如经长期运转，发现轴承缺油、噪音大、(包括电机)可向轴承体上设置的油杯加油。电机轴承压盖处亦设有加油孔，也应同时加油。

Pump maintenance and repair

1. Mechanical seal is adopted for the pump, thus pump running without water is strictly prohibited. Confirmation of rotation direction shall be done by instantaneous inching during debugging of motor. There is small quantity of water leakage during pump operation (12mg/h). If excessive leakage is observed, inspection shall be carried out to find the cause, and sealing parts shall be replaced if necessary. Service life of mechanical seal is about 10000 hours.

2. Replacement of bearing and sealing parts for this type of pump can be achieved by dismantling intermediate shaft coupler only, and there is no need to remove motor and pipeline.

3. All bearings of the pump are high-quality imported bearings and are lubricated with appropriate amount of high-temperature resistance lubricating grease before delivery from factory. If the bearings (including those in motor) are found in short of grease and having excessive noise after long period of operation, oil can be filled from lubrication holes provided on bearing body. Lubrication holes are also provided on bearing cap of the motor for oil filling.

轴承及机械密封配件

Bearing and mechanical seal

型号 Pump model	轴承规格 Bearing model	密封规格 Mech.seal model
200KTS280-42	6309	KTM-50
200KTS350-42	6309	KTM-50
250KTS485-24	6309	KTM-50
250KTS630-24	6309	KTM-50
250KTS500-38	6309	KTM-50
250KTS630-38	6310	KTM-55
250KTS500-50	6310	KTM-55
250KTS630-50	6310	KTM-55
300KTS800-25	6309	KTM-50
300KTS900-25	6309	KTM-50
300KTS800-38	6310	KTM-50
300KTS900-38	6310	KTM-55
300KTS800-50	6310	KTM-55
300KTS900-50	6310	KTM-55
350KTS1200-26	6310	KTM-55
350KTS1200-44	6312	KTM-55

故障原因和解决办法

运行和维修时应注意电机和水泵的故障的征象，下表列出了常见的部分故障和解决方法。遇到下列情况应立即处理，以免造成停工和更大的损失。当问题仍不能解决时，请及时与本公司联系。

Trouble shooting and solutions

Attention shall be paid to signs of motor and pump faults during operation and maintenance. Some common faults and solutions thereof are given in the following table. When the following phenomenon occurs, they shall be dealt with immediately to avoid shutdown or even greater losses. If problems cannot be solved by yourselves, please contact us timely.

问题	序号	故障原因	解决方法
水泵不出水	1	水泵没有注水	将水泵和入水管路注满水
	2	注水不足或水管仪表漏气	检查进水管路的连接装置；用放气螺塞排出残余气体；检查密封装置。
	3	吸程太高(吸入口仪表读数负)	如果进水阀门没有堵塞，出水阀门打开了，检查是否有管路摩擦损失。水泵运转时用真空表测量，如果是静态吸程太高的原因，必须提高被抽吸液面高度或降低水泵的安装高度。
	4	系统静态扬程过高	与公司联系是否可采用较大一点的叶轮。或者减少管路的损失；或者采用增加转速的办法，但必须注意可能会发生严重的电机过载。
	5	转速太低	检查电机是否正确接线、电压是否正常。频率可能过低，电机可能缺相。
	6	转向错误	改变电机接线
	7	水泵没有旋转	检查电源及联轴器、键等传动部件。
	8	叶轮松脱	检查键和叶轮螺母等紧固件。
	9	叶轮完全堵塞	拆卸水泵清洗叶轮。
	10	系统扬程或要求的出口扬程过高	检查管路摩擦损失；检查阀门是否全开，加大管道。
水泵出水不足	11	进水管路漏气	堵塞漏气处
	12	转速太低	见第5项
	13	系统扬程或要求的出口扬程过高	见第10项
	14	吸程太高	见第3项
	15	叶轮部分堵塞	见第9项
	16	气蚀；可供气蚀余量不足	a.降低水泵安装高度，增加液面高度。 b.冷却进水管路，降低吸入液体的温度。 c.安装进水压力容器。
	17	叶轮或密封环有缺损	更换叶轮，密封环间隙大于平时3倍时应进行更换。
	18	底阀太小或部分堵塞	底阀的截面积应最小与进水管直径相等(最好为1.5倍)。如果使用过滤器，截面积应为进水管道的3-5倍。
	19	进水管淹没不足	增加进水管淹没高度。
	20	转向错误	见第6项
	21	系统扬程过高	见第4项
	22	机械密封失效	更换机械密封。
	23	转速太低	见第5项
压力不足	24	进水管路漏气	见第11项
	25	叶轮或密封环有缺损	见第18项
	26	进水管路形成紊流	见第19项
	27	流道堵塞	检查进出管路阀门是否全开；拆卸水泵，清除堵塞物。
	28	液体中含有空气或其他气体	建议在进水管路靠近水泵的地方安装气水分离器。定期放掉积存的气体。见第16项。

问题	序号	故障原因	解决方法
水泵短暂运行后停止	30	气蚀；可供气蚀余量不足	见第16项
	31	系统扬程过高	见第4和10项
水泵耗功率过大，电机发热，超功	32	扬程低于额定值，造成流量过大。	降低转速或由工厂建议切割叶轮。
	33	气蚀	见第16项
	34	机械部件引起的故障	见第17、20、22项
	35	进水管淹没不足	见第19项
	36	液体粘度重度超过允许值	增大电机额定功率，请与公司联系。
	37	泵体由于进出水口的应力作用而变形	检查水泵的同心度，检查叶轮与泵体之间的摩擦，更换损坏的部件或重新连接管路。
	38	在运输、运行和检查过程中造成泵轴变形弯曲。	检查转动部件的偏移量，不得超过精度要求。
	39	泵轴与电机轴不同心。	重新校准同心度
	40	电气连接错误	电流频率和电压过低对电机运行有负面影响。也有可能是电机通风不良，造成电机发热。
轴承过热	41	没有油，泵轴与电机轴不同心。	注油；重新校准同心度。
水泵振动	42	泵轴与电机轴不同心	见第39项

Problems	No	Cause	Solution
No water coming from the pump	1	No water injected in the pump	Inject the pump and intake pipes fully with water
	2	The water injected is insufficient or there is air leakage on the pipe instrument	Check the connection devices of the intake pipe; discharge the residual gas with the deflation plug screw; check the sealing device.
	3	The suction lift is too high (the reading of the suction inlet instrument is negative)	If the intake valve is not blocked and the discharge valve is open, check whether there is any loss due to pipe friction. Check with a vacuum meter while the pump is in operation; If the static suction lift is too high, the height of the liquid level must be raised of the installation height of the pump must be lowered.
	4	The static lift of the system is too high.	Contact with the company to see whether a bigger impeller is available, reduce the loss from the pipeline, or increase the rotating speed. However, attentions must be paid to the possible overload of the motor.
	5	The rotating speed is too low.	Check whether the motor is connected correctly or the voltage is normal. The problem may be caused by too low frequency or the missing phase of the motor.
	6	Wrong rotation	Change the wiring of the motor
	7	The pump does not rotate.	Check the drive disk assemblies, such as the power supply, coupler, and keys.
	8	The impeller gets loose.	Check the key and fasteners such as the impeller nut.
	9	The impeller is blocked completely.	Dismantle the pump to clean the impeller.
	10	The lift of the system or the required outlet lift is too high.	Check the friction loss of the pipeline; check whether the valve is fully opened, and enlarge the pipeline.
Insufficient water coming from the pump	11	There is air leakage on the intake pipe.	Block the air leakage.
	12	The rotating speed is too low.	See Item 5.
	13	The lift of the system or the required outlet lift is too high.	See Item 10.
	14	The suction lift is too high.	See Item 3
	15	The impeller is blocked partially	See Item 9

Insufficient water coming from the pump	16	There is cavitation or insufficient cavitation available.	a. Lower the installation height of the pump, and raise the liquid level. b. cool the intake pipe, and reduce the temperature of the inlet liquid. c. install a inlet pressure vessel.
	17	There is defect on the impeller or the wearing ring.	Change the impeller. The wearing ring should be changed if its gap is 3 times bigger than its normal position.
	18	The bottom valve is too small or partially blocked.	As a minimum, the sectional area of the bottom valve should at least be equal to the diameter of the intake pipe (it is better to be 1.5 times). In case that a filter is adopted, the sectional area should be 3-5 times of the diameter of the intake pipe.
	19	The submerged depth of the intake pipe is insufficient.	Increase the submerged depth of the intake pipe.
	20	Wrong rotation	See Item 6.
	21	The lift of the system is too high.	See Item 4
	22	The mechanical seal is valid.	Change the mechanical seal.
	23	The rotating speed is too low.	See item 5.
Insufficient pressure coming from the pump	24	There is air leakage on the intake pipe.	See Item 11.
	25	There is defect on the impeller or the wearing ring.	See Item 18.
	26	Turbulence formed in the intake pipe	See Item 19.
	27	The runner is blocked.	Check whether the valves of both the inlet and outlet pipes are fully opened; dismantle the water pump and clear the blockage away.
	28	The liquid contains air or other gases.	It is recommended to install a gas-water separator at the position on the intake pipe near the pump. Discharge the accumulated gas regularly. See Item 16.
The pump stops after a short period of running.	30	There is cavitation or insufficient cavitation available.	See Item 16.
	31	The lift of the system is too high.	See Items 4 and 10.
The pump consumes too much power and the motor is hot with overpower	32	The lift is lower than the rated value, resulting in the excessive flow.	Lower the rotating speed, or cut the impeller according to the suggestion from the factory.
	33	Cavitation	See Item 16
	34	Fault caused by mechanical components	See Items 17, 20, and 22
	35	The submerged depth of the intake pipe is insufficient	See Item 19.
	36	The liquid viscosity exceeds the allowable value	Please contact the company to increase the rated capacity of the motor.
	37	The pump body is deformed due to the stress at the water inlet/outlet	Check the concentricity of the pump, check the friction between the impeller and the pump body, change the damaged components, or connect the pipeline again.
	38	Pump spindle is deformed or bent during the transportation, operation, or inspection	Check the offset of the rotation parts, which cannot exceed the accuracy requirement.
	39	The spindle of the pump is not concentric with that of the motor.	Recalibrate the concentricity.
	40	Wrong electrical connection	The current frequency and too-low voltage will affect the motor running, or it may be caused by poor motor ventilation, resulting in high temperature of the motor.
Bearing running hot	41	No oil is available, or the spindle of the pump is not concentric with that of the motor.	Inject oil; recalibrate the concentricity.
The pump vibrates.	42	The spindle of the pump is not concentric with that of the motor.	See Item 39.

