

Introduction of API Petrochemical Centrifugal Pumps

I.BB1 HTS Series Single Stage Dual Suction Calculating Pump



Technical Parameters

There are 60 types with different impeller diameters and rotation speeds for choices to meet the operation needs at different even special applications.

Suction dia.: 150~1400 mm Discharge dia.: 100~1200 mm

Flow rate: ~ 25000 m³/h Head: ~ 200 m

Fluid temp.: -15°C~+104°C (Note out when the temp is over 80°C)

Product Introduction

We adopted the mature superb hydraulic model and then optimized it deeply, analyze its FE strength with Fluent, Numeca 3D fluid field simulation tech to develop the new efficient circulating pump. Its efficiency is better 2%-3% than similar pump, which prolongs the maintenance period and improved the operation economy.

The structure can be divided single stage, dual suction and volute horizontal mid open BB1 type. It features energy-efficient, low impulse, low noise, low vibration, powerful and durable. We have solid abilities on technology, production, test and well-rounded quality control system.

Application Areas

HTS SERIES can be widely used for petrochemical chemical plant's cooling system and fire control system, thermal power plant flue gas desulfurization system, steam turbine cooling system and drainage system of large ships, heating power and water supply system, water conservancy, etc. It can also be used for chemical process and sea water delivery once the fluid is changed into corrosive ones.

Smart Mating

The relative systems such as fault diagnosis system can be mated based the user's request.

Product Feature

Case--- It adopts high efficiency volute type. This double volute design can reduce the radial force and bearing load of the impeller. The Import and export flanges are marked design, so users can specify.

Oil seal ----There are packing seal and mechanic seal for choice.

Impeller----It adopts new blade runner design with good hydraulic performance and excellent working characteristics. And its precision casting ensures superior design performance; The Impeller keeps balance between static and dynamic in line with ISO1940 standard.

Pump shaft ----Fully sealed thick design, no contact with liquid to maintain a long service life



and the shaft protection sleeves can be replaceable.

Bearing----The pump adopts high quality enclosed bearing, grease lubrication to prevent friction to prolong the bearing's service life .

Application Cases

The series draws on the technical advantages of similar products at home & abroad, and integrates the high standard and advanced concept of military products. The technical indicators have reached the leading domestic and international level. The pumps have been successfully used in the chemical equipment in Gulei Petrochemical, Baling Petrochemical, Yangzi Petrochemical, Tianjin Petrochemical.

Performance Table

型号 Type	流量 Q Capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency η (%)	必须汽 蚀余量 NPSHr (m)	叶轮名义直径 Impeller diameter (m)	净重 Weight (kg)
	(m ³ /h)	(l/s)			轴功率 Shaft	配用功率 Motor				
HYS150-100	160	44.5	100	2950	59.8	75	73	4.5	—	168/112
HYS150-78	160	44.5	78	2950	46	55	74	4.5	245	158/112
HYS150-78A	140	39	60		31.9	45	72		223	158/95
HYS150-50	160	44.5	50	2950	27.6	37	79	4.5	206	147/112
HYS150-50A	140	39	39		19.9	30	75		185	147/95
HYS150-50B	133	36.9	36		18.6	22	70		170	147/80
HYS200-95	280	78	95	2950	94.4	132	77	5	282	240/-
HYS200-95A	268	74.5	87		84.8	110	75		270	240/-
HYS200-95B	245	68	72		64.9	75	74		250	240/-
HYS200-63	280	78	63	2950	59.5	75	81	5	235	187/135
HYS200-63A	245	68	48		41.6	55	77		210	187/124
HYS200-42	280	78	42	2950	37.7	45	85	5	204	219/108
HYS200-42A	245	68	36		30	37	80		193	219/108
HYS200-65	485	134.5	65	1450	108.5	135	79	3.8	450	518/-
HYS200-65A	420	116.5	48		71.2	90	77		400	518/-
HYS200-39	485	134.5	39	1450	62	75	83	3.8	367	400/240
HYS250-39A	420	116.5	29		42.5	55	78		328	400/233
HYS250-24	485	134.5	24	1450	36.9	45	86	3.8	285	370/201
HYS250-24A	420	116.5	20		27.6	37	83		265	307/201
HYS250-14	485	134.5	14	1450	21.7	30	85	3.8	245	305/225
HYS250-14A	420	116.5	10		14.1	18.5	81		214	305/215
HYS300-90	790	219	90	1450	242	315	80	4.8	530	840/-
HYS300-90A	756	210	78		217	280	74		500	840/-
HYS300-90B	720	200	67		180	220	73		470	840/-

型号 Type	流量 Q Capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency η (%)	必须汽 蚀余量 NPSHr (m)	叶轮直径名义 Impeller diameter (m)	净重 Weight (kg)
	(m ³ /h)	(l/s)			轴功率 Shaft	配用功率 Motor				
HYS300 - 58	790	219	58	1450	148.2	180	84	4.8	445	599
HYS300 -58A	735	204	50		122	160	82		419	599
HYS300 -58B	685	190	43		100.3	132	80		394	599
HYS300 - 32	790	219	32	1450	79	90	87	4.8	348	709
HYS300 -32A	700	194.5	26		60	75	84		318	709
HYS300 - 19	790	219	19	1450	46.9	55	87	4.8	290	434/485
HYS300 -19A	700	194.5	15		34.8	45	82		260	434/490
HYS300 - 12	790	219	12	1450	31.1	37	83	4.8	251	413/243
HYS300 -12A	700	194.5	10		24.1	30	79		251 R122 切割	413/237
HYS350 -125	1260	351	125	1450	531	680	81	5.5	655	1580
HYS350 -125A	1181	328	112		462	570	78		633	1580
HYS350 -125B	1098	305	96		373	500	77		615	1580
HYS350 - 75	1260	351	75	1450	304	355	85	5.5	503	1200
HYS350 -75A	1170	325	65		247	280	84		470	1200
HYS350 -75B	1080	300	55		197	220	82		435	1200
HYS350 - 44	1260	351	44	1450	177.6	220	87	5.5	406	1105
HYS350 -44A	1116	314	36		130	160	84		370	1105
HYS350 - 26	1260	350	26	1450	101.4	132	88	5.5	340	672
HYS350 -26A	1130	314	21		77.8	90	83		310	672
HYS350 - 16	1260	350	16	1450	63.8	75	86	5.5	290	632
HYS350 -16A	1130	314	12		45.6	55	81		250 R121 切割	632
HYS500 - 98	2020	561	98	970	678	780	79.5	6	860	3215
HYS500 -98A	1872	520	83		540	650	78.5		800	3205
HYS500 -98B	1746	485	74		452	560	78		745	2198

型号 Type	流量 Q Capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency η (%)	必须汽 蚀余量 NPSHr (m)	叶轮直径名义 Impeller diameter (m)	净重 Weight (kg)
	(m ³ /h)	(l/s)			轴功率 Shaft	配用功率 Motor				
HYS500 - 59	2020	561	59	970	392	450	83	6	675	2667
HYS500 -59A	1872	520	49		333	400	75		630	2660
HYS500 -59B	1746	485	40		258	315	74		585	2654
HYS500 - 35	2020	561	35	970	219	280	88	6	530	2023
HYS500 -35A	1746	485	27		152	220	85		498	2020
HYS500 - 22	2020	561	22	970	144.2	185	84	6	460	2092
HYS500 -22A	1746	485	17		101	132	80		410	2092
HYS500 - 13	2020	561	13	970	86.2	110	83	6	390	2020
HYS600 - 90	3000	833	113	1450	1072.5	1250	86	8.7	615	5029
HYS600 - 75	3170	880	75	970	761	900	85	8.7	782	4043
HYS600 -75A	2880	800	62		608.2	800	80	7.5	716	4031
HYS600 - 47	3170	880	47	970	461	560	88	7.5	620	3396
HYS600 -47A	2920	811	40		370	450	86		-	3390
HYS600 - 32	3170	880	32	970	314	380	88	7.5	540	3060
HYS600 -32A	2880	800	27		246	280	86		500	3048
HYS600 -32B	2628	730	22		187.4	220	84		465	3039
HYS600 - 22	3170	880	22	970	215.7	250	88	7	485	2818
HYS600 -22A	2880	800	18		161.4	185	87		-	2806
HYS700 - 47	4400	1220	47	730	654	800	86	8.2	-	4800
HYS800 - 22	5500	1528	22	730	370.2	450	89	7	-	-
	4400	1222	14	585	190.6	250	88	5	-	-
HYS800 -22A	4830	1342	17	730	254.1	315	88	7	-	-
	3870	1075	11	585	133.3	185	87	5	-	-
HYS800 - 32	5500	1528	32	730	538.5	630	89	7	740	6723
	4400	1222	20.5	585	279.1	315	88	4.5	680	6723

型号 Type	流量 Q Capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率 Power(kW)		效率 Efficiency η (%)	必须汽蚀余量 NPSHr (m)	叶轮直径名义 Impeller diameter (m)	净重 Weight (kg)
	(m ³ /h)	(l/s)			轴功率 Shaft	配用功率 Motor				
HYS800 - 32A	4950	1375	26	730	378.3	450	88	7	740	6723
	3960	1100	16.5	585	204.5	250	87	4.5	680	6723
HYS800 - 47	5500	1528	47	730	782	900	90	6.5	-	-
	4400	1222	30	585	403.9	450	89	4	-	-
HYS800 - 47A	5070	1408	40	730	620.5	710	89	6.5	-	-
	4060	1128	25	585	314.1	355	88	4	-	-
HYS800 - 76	5500	1528	76	730	1293.6	1600	88	6	-	-
	4400	1222	49	585	674.9	800	87	4	-	-
HYS800 - 76A	5080	1411	65	730	1033.6	1250	87	6	-	-
	4070	1130	42	585	541.3	630	86	4	-	-
HYS800 - 76B	4680	1300	55	730	824.7	1000	85	6	-	-
	3750	1042	35	585	425.5	500	84	4	-	-
HYS900 - 23	8280	2300	23	730	603	710	86	8.9	685	6900
HYS1200 - 56	10800	3000	56	600	1871	2240	88	7.5	-	-
HYS1200 - 56A	9720	2700	50	600	1512.6	1800	87.5	7.5	-	-
HYS1200 - 56B	8748	2430	44	600	1218.9	1600	86	7.5	-	-
HYS1200 - 39	9000	2500	39	500	1092.4	1400	87.5	5.5	-	-
HYS1200 - 39A	8100	2250	35	500	892.5	1120	86.5	5.5	-	-
HYS1200 - 39B	7290	2025	31	500	718	900	85.7	5.5	-	-
HYS1200 - 32	10800	3000	32	600	1082	1250	87	7.7	-	-
HYS1200 - 32A	9720	2700	29	600	887.5	1120	86.5	7.7	-	-
HYS1200 - 26	11000	3056	26.3	485	908	1250	86.8	6.3	985	17000
HYS1200 - 22	9612	2670	22	500	662	800	87	5.8	-	-
HYS1200 - 22A	9000	2500	20.2	500	573	710	86.5	5.8	-	-
HYS1400 - 25	16000	4444	25	370	1251	1600	87	8.9	1280	28000
HYS1400 - 20	15660	4350	20	370	970	1250	88	8.6	1144	28000

2.OH2 Process Pump



Structural design: Meet with API610 OH2 type, single stage single suction overhung central support type

Performance range: Flow rate (Q) : 6~ 2200m³/h
Head (H) : 8~250m
Fluid temp.: ≤450°C

Application sites

Ethylene plant, petroleum, chemical, natural gas industrial processes where liquids or other similar liquids are transported. It can also be used as turbines for energy recovery. Its spares are generalized and be replaced or repaired easily with higher reliability. It is suitable for high temperature and high pressure conditions.

Product categories

Heavy fuel oil product pump, deethane tower reflux pump, light tower bottom pump, etc.

3. BB3 Pipeline Oil Pump



Production Introduction

SY/DY/SDY series pipeline oil transfer centrifugal pumps are mainly used for transporting mid and long distance semi-finished oil or refined oil.

Structural design: Meet with API610 BB1 or BB3 with whole anti-explosive design.

Performance range: Flow rate (Q) : ~ 8800m³/h
Head (H) : ~1500m
Pump speed: 2980rpm、1480rpm、980rpm
Operation pressure: ~20MPa
Fluid temp.: -45℃ ~80℃

Product Features

1. Horizontal open, easily open the pump cover to check and repair.
2. Without shaft sleeve, the impeller is fixed on the shaft with a clamp ring.
3. Assembled mechanical seal, easily being assembled or disassembled.
4. With wear rings for impeller and pump shell to improve the service life.
5. Large flow range, high single-stage head, high anti-cavitation performance.
6. High hydraulic efficiency, wide efficiency areas.
7. Simple and reliable structure, convenient maintenance.

Application Sites

Mainly used in oil depot, pipeline and other petroleum, chemical process transportation of crude oil, water, seawater salt and offshore industry.

Application Cases

We have successively provided more than 240 sets of oil transmission pump units for oil pipelines of Sinopec, CNPC, military and the public.