



CATALOGUE

2014

TTAAZ-Series of Single Stage Double Suction Pumps



PRODUCT BROCHURE

TORONTECH
PUMPS

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Torontech™ is a leading North American based international manufacturer and supplier of pumps, pipes, valves & actuators. The Torontech™ group has established an extensive network in the USA as well as international markets and remains to be a preferred vendor of choice supplying quality pumps for today's leading corporations.

Creating comprehensive solutions for our clients has always been the core value of our company. From sales, to order execution, and post-sales support; every staff member is here to assist you in selecting the solution that best suits your unique requirements and budget.

The Torontech™ group offers a complete range of quality pumps that are,ANSI to ISO approved and engineered to last, ensuring your company continuous production without interruptions.

Since the beginning, we have succeeded in only offering quality manufactured pumps that are currently being used worldwide. We offer the best value for your investment and provide world-class support.

Due to the demand for our quality pumps, Torontech™ has experience explosive growth primarily in the oil & gas, water filtration and chemical refinery industries.

We offer an extensive range of solutions and products for oil & gas projects, refineries, petrochemical plants, and marine applications. Our main class of pumps includes API (American Petroleum Institute) Standard, Mining, Water & Sewage and Firefighting applications. The pumps are offered in various configurations depending on orientation of the pump, required head and type of fuel used for operation.

TTAAZ-Series of Single Stage Double Suction Pumps

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Outline of product

With inlet diameter at 1000 mm or 2000 mm, TTAAZ-SLOW Large Single Stage Double Suction Bisect Volute Centrifugal Pump is specially designed and manufactured for water transportation, electric power plants, pump stations,

large-scaled water supply and sewerage works. The feeding media are water and liquids have similar chemical and physical properties to water at temperature ranging from -10 C to 80 C.

Product characteristic

Some pumps adopting rolling bearing, grease or thin oil lubrication. See structure drawing I.

Some pumps adopting sliding bearing, thin oil lubrication. See structure drawing II (Thin oil station may be provided as required).

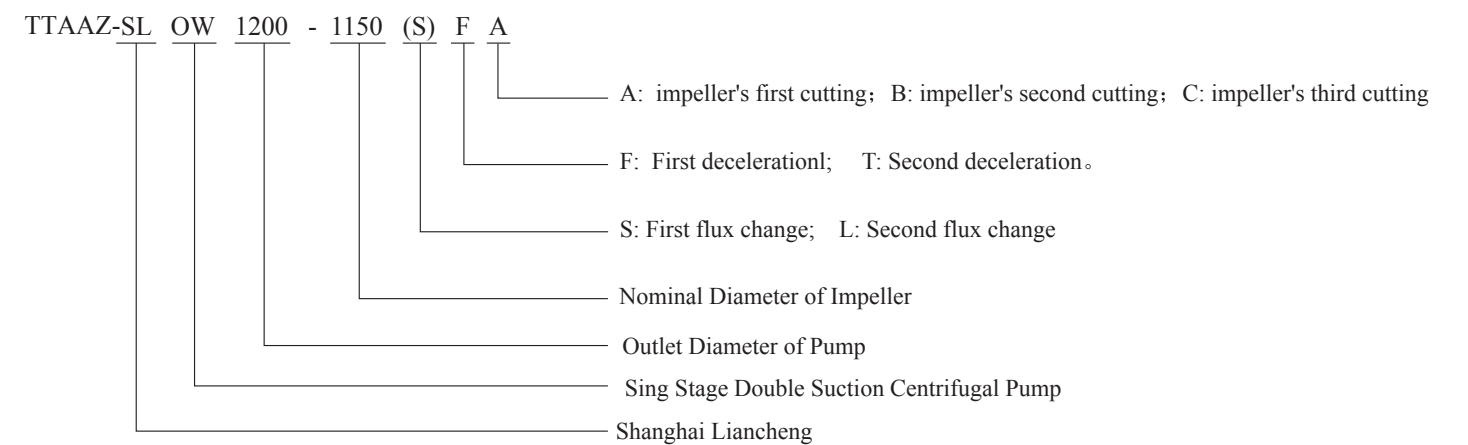
Declining exit edge of Impeller and symmetrically and stag-

geredly arranged bilateral vanes minimize the pulsing of pump during operation.

Adoption of double volute design reduces radial force and offers pump operation more stability.

Full application of stuffing sealing and bisect type stuffing gland makes maintenance work much easier. Mechanical seal can be customized as required.

About the model





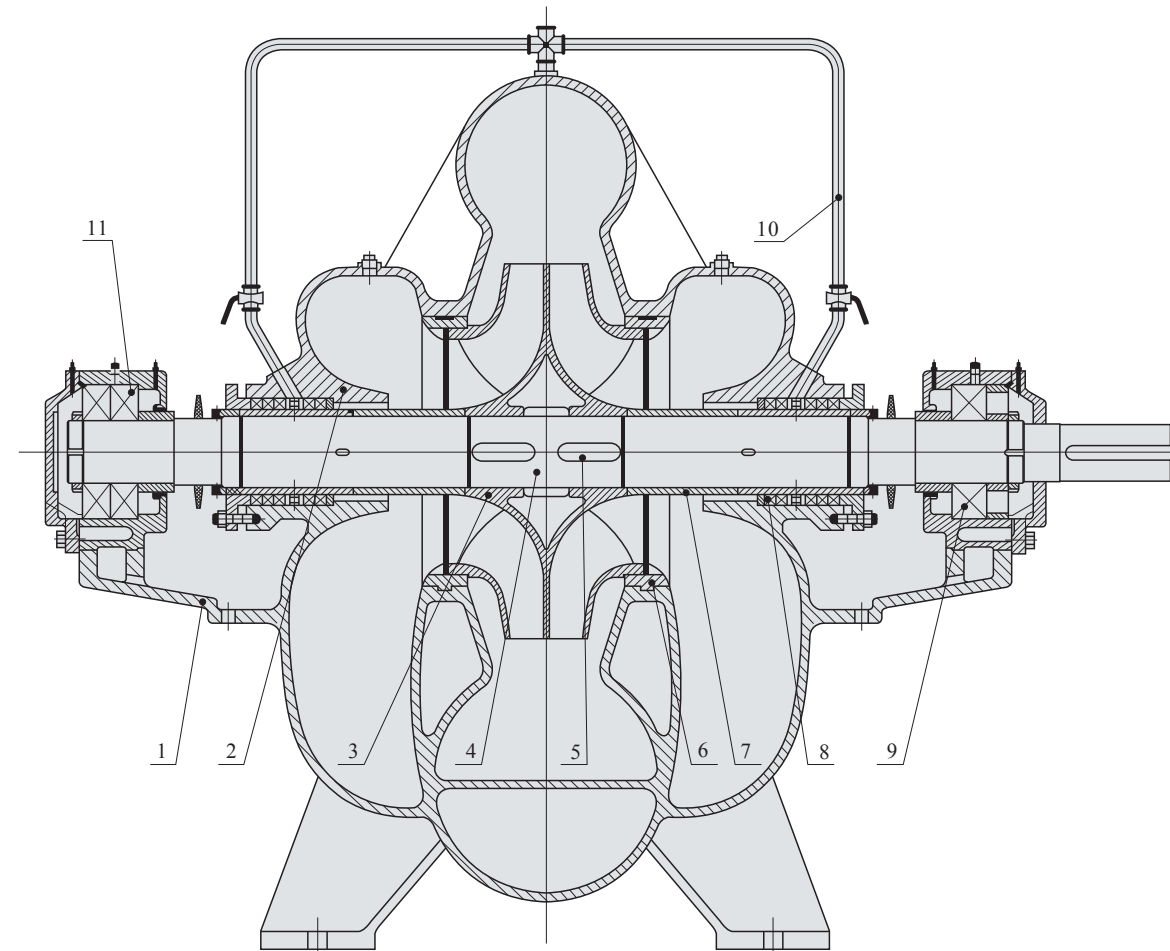
TAAZ-Series of Single Stage Double Suction Pumps

Main parts material

Name	Material	Name	Material
Pump casing	◆ Cast iron HT250	shaft	◆ Carbon steel 45
	Ball iron QT400-18		Stainless steel 2Cr13
	Cast steel ZG230-450		
Pump cover	◆ Cast iron HT250	Shaft sleeve	◆ Cast iron HT200
	Ball iron QT400-18		Stainless steel 2Cr13
	Cast steel ZG230-450		
Impeller	◆ Cast iron HT250	Seal-ring	◆ Cast iron HT200
	Ball iron QT400-18		Ball iron QT400-18
	Stainless steel 1Cr18Ni9Ti		

◆denotes general supply, to be supplied as required.

TAAZ-Slow Pump structural drawing



Pump Structure Drawing I

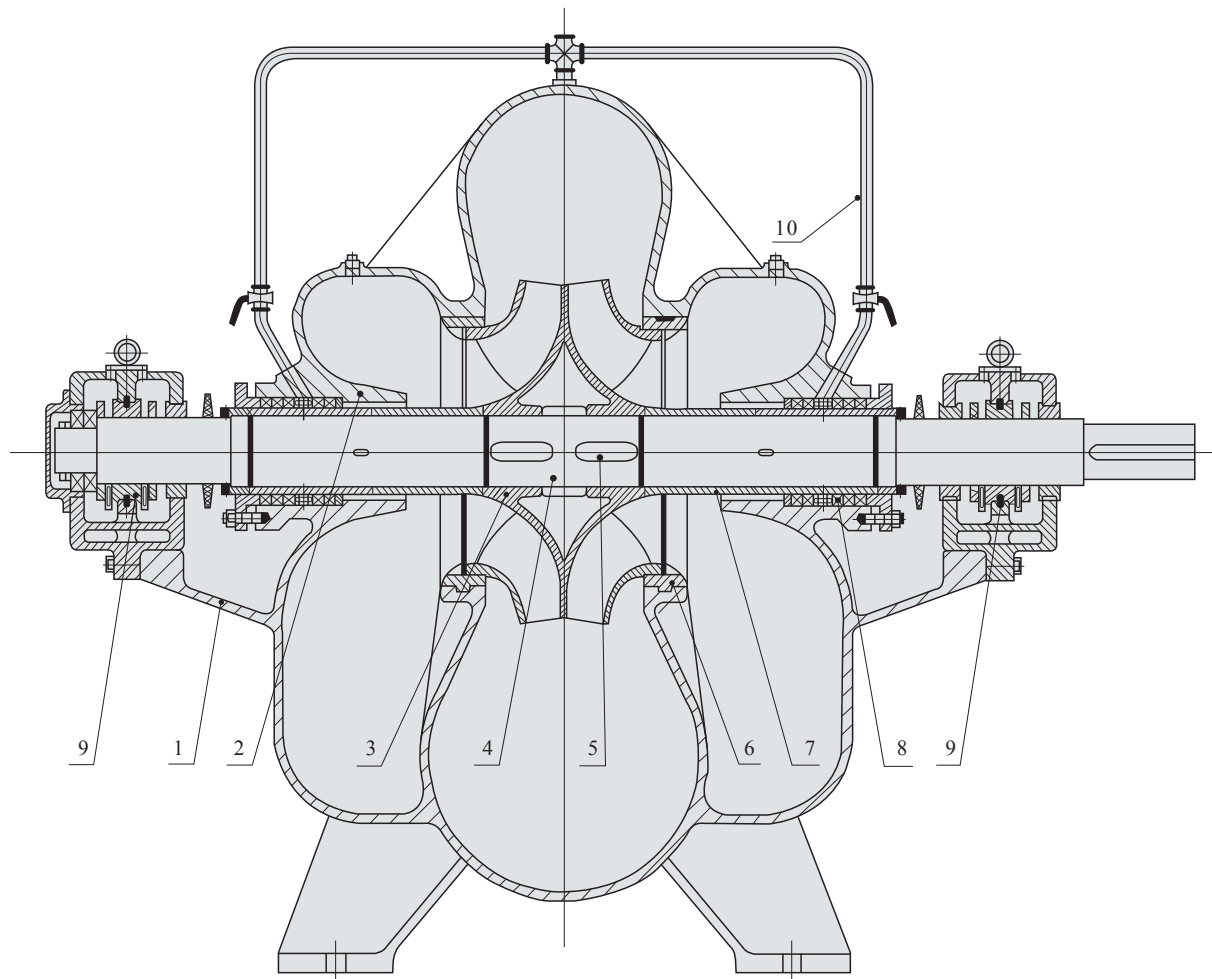
1	Pump casing	3	Impeller	5	Key	7	Muff	9	Bearing	11	Bearing
2	Pump cover	4	Shaft	6	Seal-ring	8	Stuffing	10	Water-sealing pipe part		



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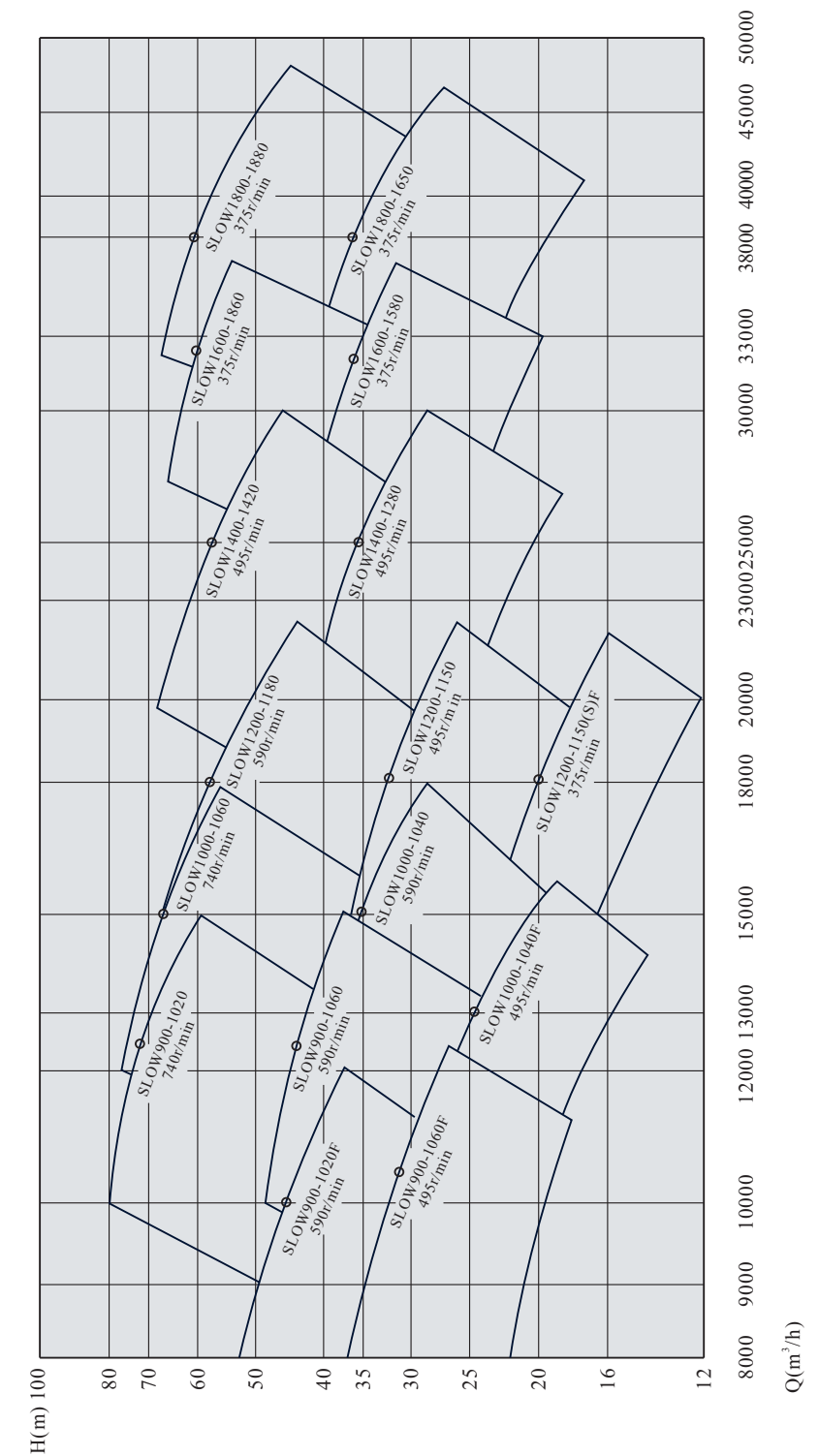
TAAZ-Slow Pump structural drawing

TAAZ-Slow Pump atlas of style



Pump Structure Drawing II

1	Pump casing	3	Impeller	5	Key	7	Muff	9	Part of rolling bearing
2	Pump cover	4	Shaft	6	Seal-ring	8	Stuffing	10	Water-sealing pipe part





TTAAZ-Series of Single Stage Double Suction Pumps

TTAAZ-Slow Pump performance

pump type	Capacity Q		Head H (m)	Speed n (r/min)	Motor power P (KW)	Eff. η (%)	(NPSH)r (m)	Weight W (Kg)
	(m³/h)	(L/s)						
SLOW900-1060	10000 12500 15000	2778 3472 4167	48 45 38	590	2000	89	7	11800
SLOW900-1060A	9250 11500 13800	2569 3194 3833	41 38 32	590	1600	88.5		
SLOW900-1060B	8500 10500 12500	2361 2917 3472	35 32 28	590	1250	88		
SLOW900-1060F	8500 10500 12500	2361 2917 3472	34 31 27	495	1250	89	6.5	11800
SLOW900-1060FA	7800 9800 11500	2167 2722 3194	29 26 22	495	1000	88.5		
SLOW900-1060FB	7000 8800 10500	1944 2444 2917	24 22 19	495	710	88		
SLOW900-1020	10000 12500 15000	2778 3472 4167	78 72 58	740	3150	88	9	11800
SLOW900-1020A	9250 11500 13800	2569 3194 3833	67 61 50	740	2500	87.5		
SLOW900-1020B	8500 10500 12800	2361 2917 3556	56 51 42	740	2000	87		
SLOW900-1020F	8000 10000 12000	2222 2778 3333	51 46 38	590	1600	88	7.5	11800
SLOW900-1020FA	7500 9200 11000	2083 2556 3056	43 39 32	590	1400	87.5		
SLOW900-1020FB	6800 8500 10300	1889 2361 2861	36 33 28	590	1000	87		
SLOW1000-1040	12000 15000 18000	3333 4167 5000	39 35 29	590	2000	89	7.5	13600
SLOW1000-1040A	11200 14000 17000	3111 3889 4722	35 31 26	590	1600	88.5		
SLOW1000-1040B	10500 13000 15800	2917 3611 4389	30 27 22	590	1250	88		
SLOW1000-1040F	10000 13000 15000	2778 3611 4167	28 24 20	495	1120	89	6.5	1360
SLOW1000-1040FA	9400 11800 14200	2611 3278 3944	25 22 18	495	900	88.5		
SLOW1000-1040FB	8800 11000 13500	2444 3056 3750	21 18 14	495	800	88		
SLOW1000-1060	12000 15000 18000	3333 4167 5000	75 68 56	740	3550	88	9	13600
SLOW1000-1060A	11000 13800 16500	3056 3833 4583	64 58 47	740	2800	87.5		
SLOW1000-1060B	10000 12800 15300	2778 3556 4250	54 49 40	740	2240	87		
SLOW1200-1150	15000 18000 22500	4167 5000 6250	36 32 26	495	2000	90	8.6	16500
SLOW1200-1150A	14000 16800 21000	3889 4667 5833	31 28 22	495	1800	89		
SLOW1200-1150B	13000 15500 19000	3611 4306 5278	27 24 19	495	1400	88		

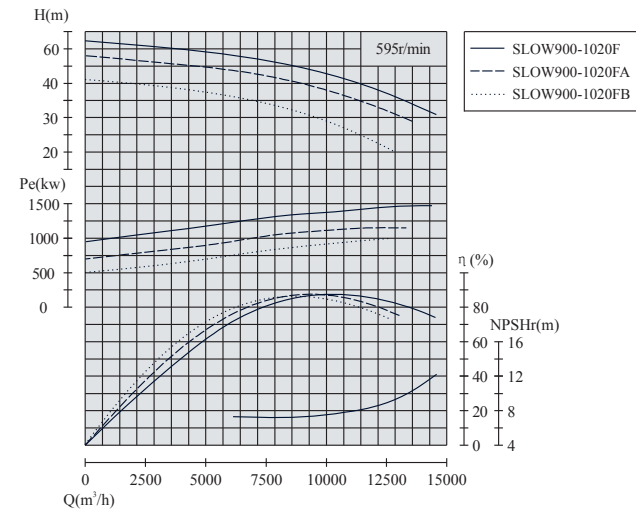
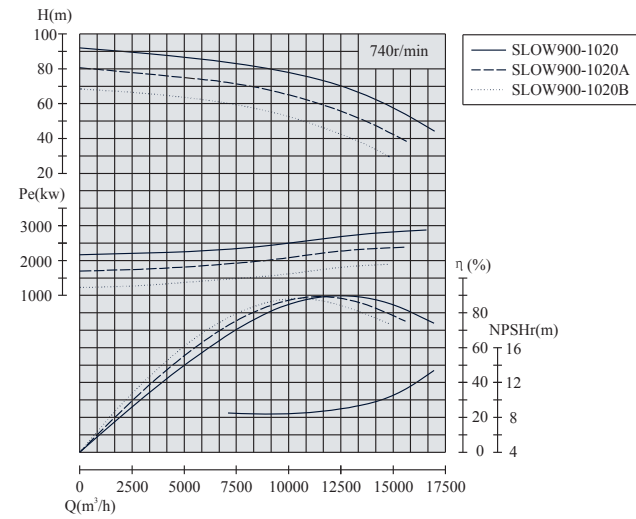
TTAAZ-Slow Pump performance

pump type	Capacity Q		Head H (m)	Speed n (r/min)	Motor power P (KW)	Eff. η (%)	(NPSH)r (m)	Weight W (Kg)
	(m³/h)	(L/s)						
SLOW1200-1180	15000 18000 22500	4167 5000 6250	65 58 43	590	3550	89	9	16500
SLOW1200-1180A	13800 16500 20800	3833 4583 5778	56 50 37	590	2800	88		
SLOW1200-1180B	12800 15300 19000	3556 4250 5278	47 42 31	590	2240	87		
SLOW1200-1150(S)F	15000 18000 22000	4167 5000 6111	23 20 16	375	1250	88	8	16500
SLOW1200-1150(S)FA	13500 16000 20000	3750 4444 5556	19 16 12	375	900	88		
SLOW1400-1280	21500 25000 28500	5972 6944 7917	40 36 30	495	3150	90	8.8	21300
SLOW1400-1280A	20000 23000 26000	5556 6389 7222	34 31 26	495	2500	89		
SLOW1400-1280B	18000 21000 24000	5000 5833 6667	28 25 21	495	1800	88		
SLOW1400-1420	21500 25000 28500	5972 6944 7917	62 58 49	495	5000	89	9.2	21300
SLOW1400-1420A	20000 23000 26000	5556 6389 7222	52 49 41	495	4000	88.5		
SLOW1400-1420B	18000 21000 24000	5000 5833 6667	45 40 35	495	3150	88		
SLOW1600-1580	28000 32000 36000	7778 8889 10000	40 36 32	375	4000	90	8.9	30800
SLOW1600-1580A	25800 29500 33000	7167 8194 9167	33 30 26	375	2800	89		
SLOW1600-1580B	23500 27000 30000	6528 7500 8333	27 25 22	375	2240	88		
SLOW1600-1860	28000 32000 36000	7778 8889 10000	64 60 50	375	6500	90	9.4	30800
SLOW1600-1860A	25500 29000 32800	7083 8056 9111	53 50 42	375	4500	89		
SLOW1600-1860B	23000 26500 29500	6389 7361 8194	43 40 34	375	3550	88		
SLOW1800-1650	32000 38000 44000	8889 10556 12222	41 36 30	375	5000	90	9.1	38500
SLOW1800-1650A	29000 34500 40000	8056 9583 11111	34 30 25	375	3550	89		
SLOW1800-1650B	26000 31000 36000	7222 8611 10000	27 24 20	375	2500	88		
SLOW1800-1880	32000 38000 44000	8889 10556 12222	68 60 50	375	8000	89	9.1	38500
SLOW1800-1880A	29000 34500 40000	8056 9583 11111	56 50 42	375	5600	88.5		
SLOW1800-1880B	26000 31000 36000	7222 8611 10000	45 40 34	375	4000	88		

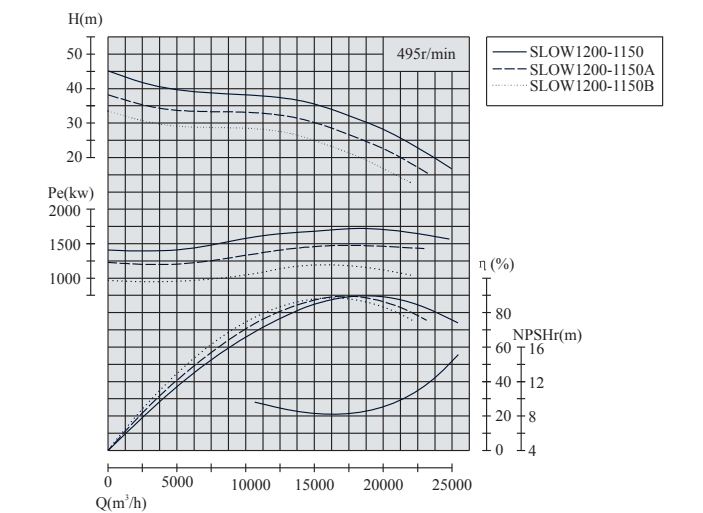
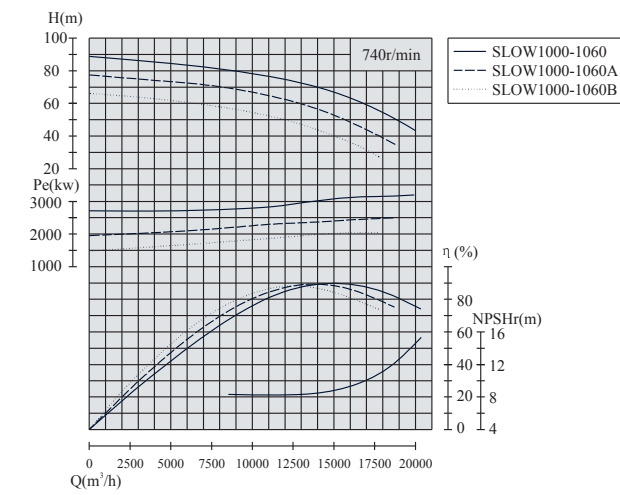
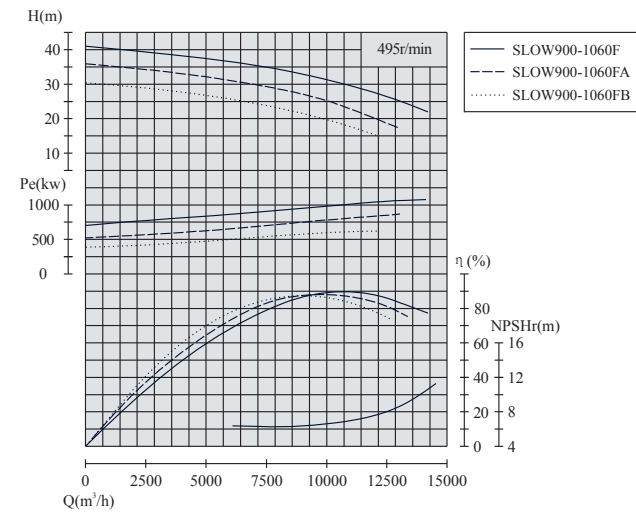
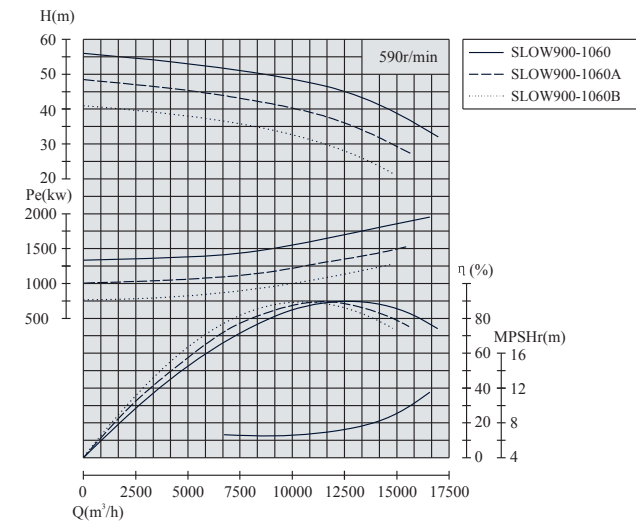
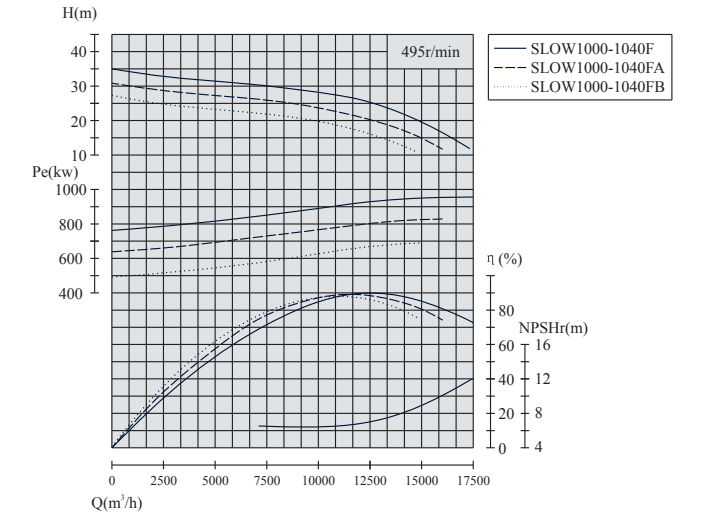
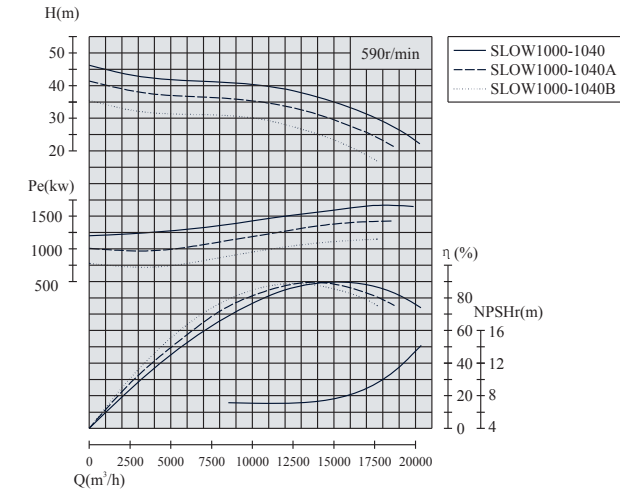


TTAAZ-Series of Single Stage Double Suction Pumps

TTAAZ-Slow Pump performance curve chart



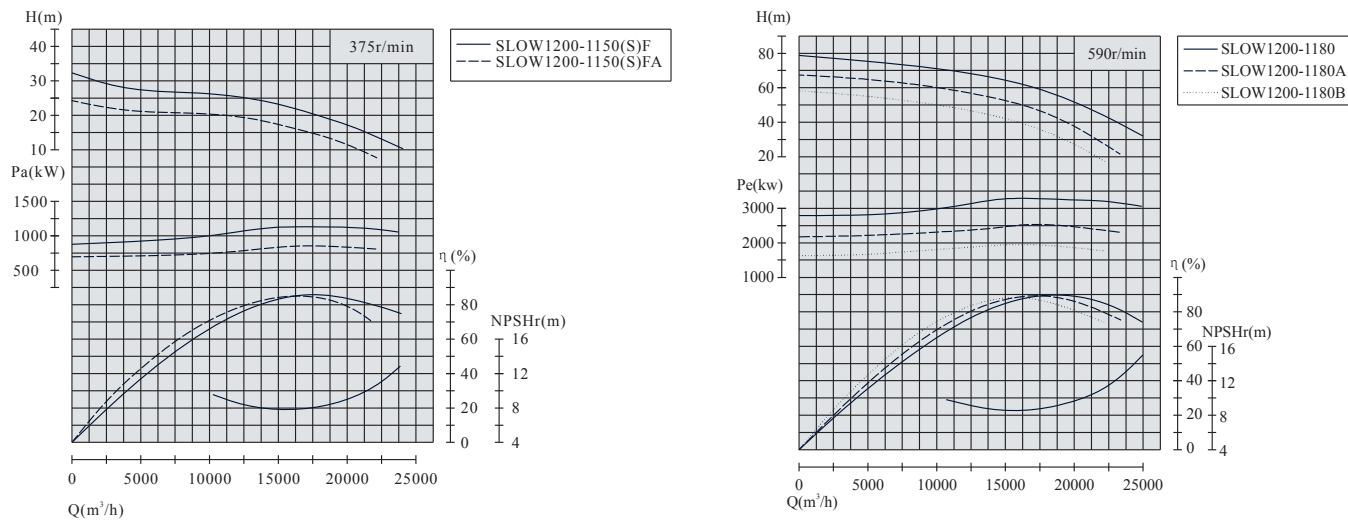
TTAAZ-Slow Pump performance curve chart



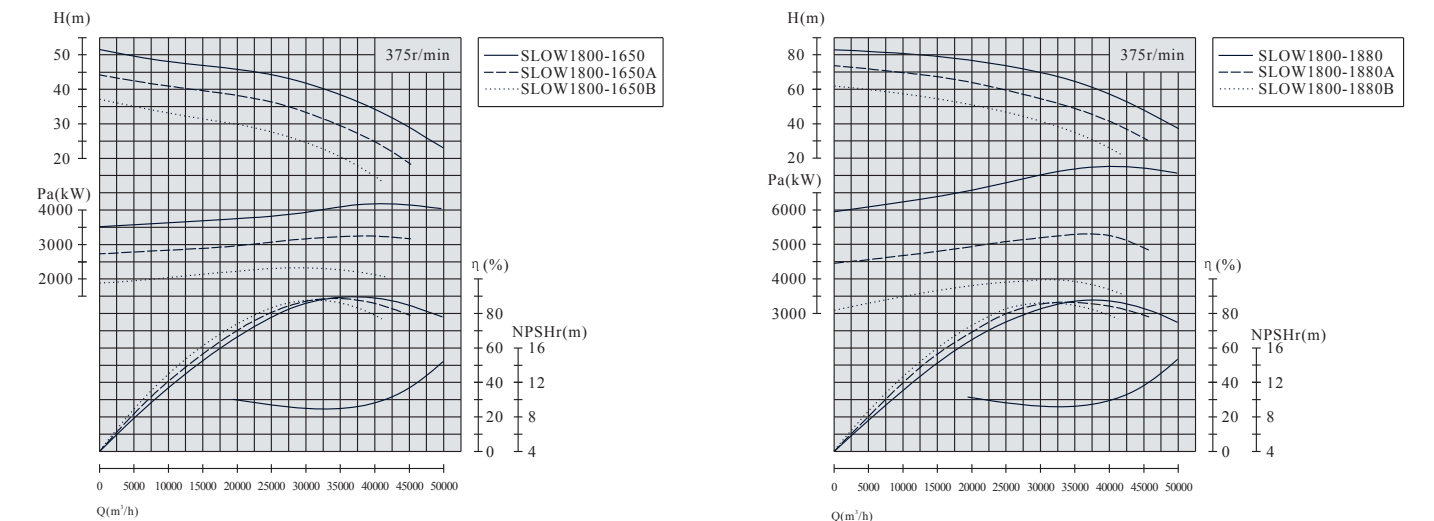
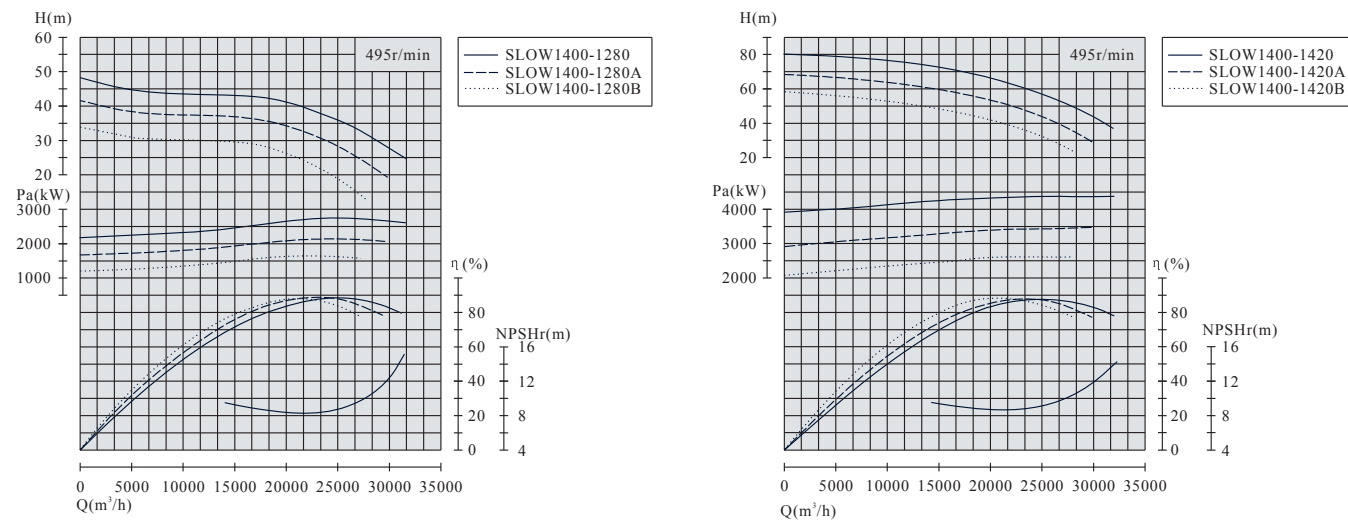
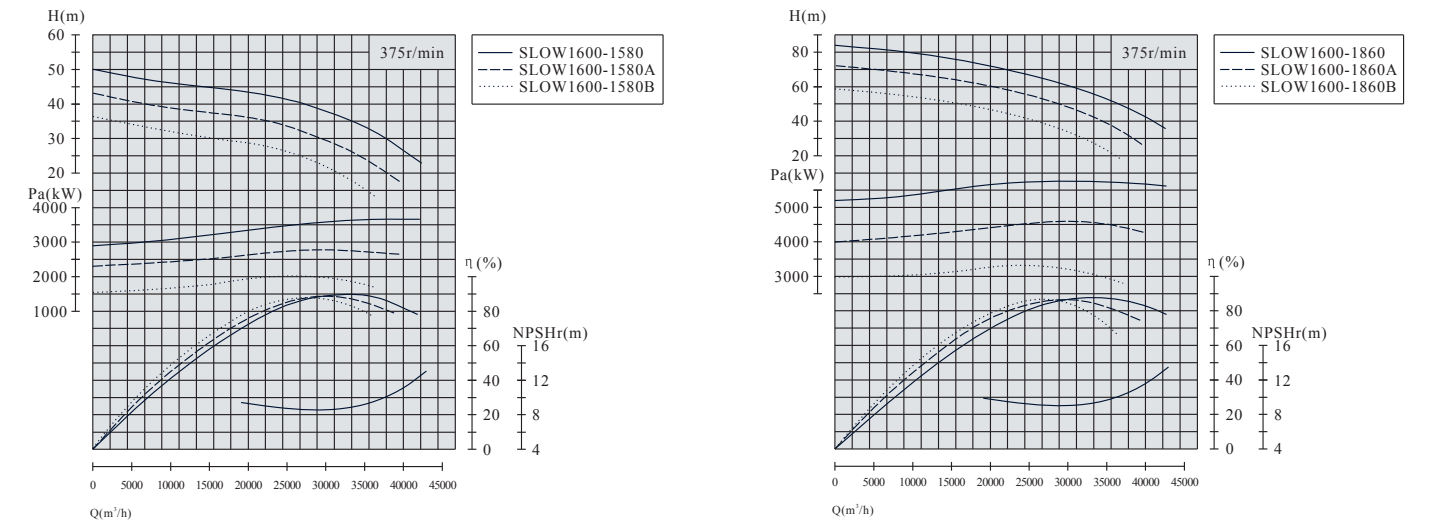


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TTAAZ-Slow Pump performance curve chart



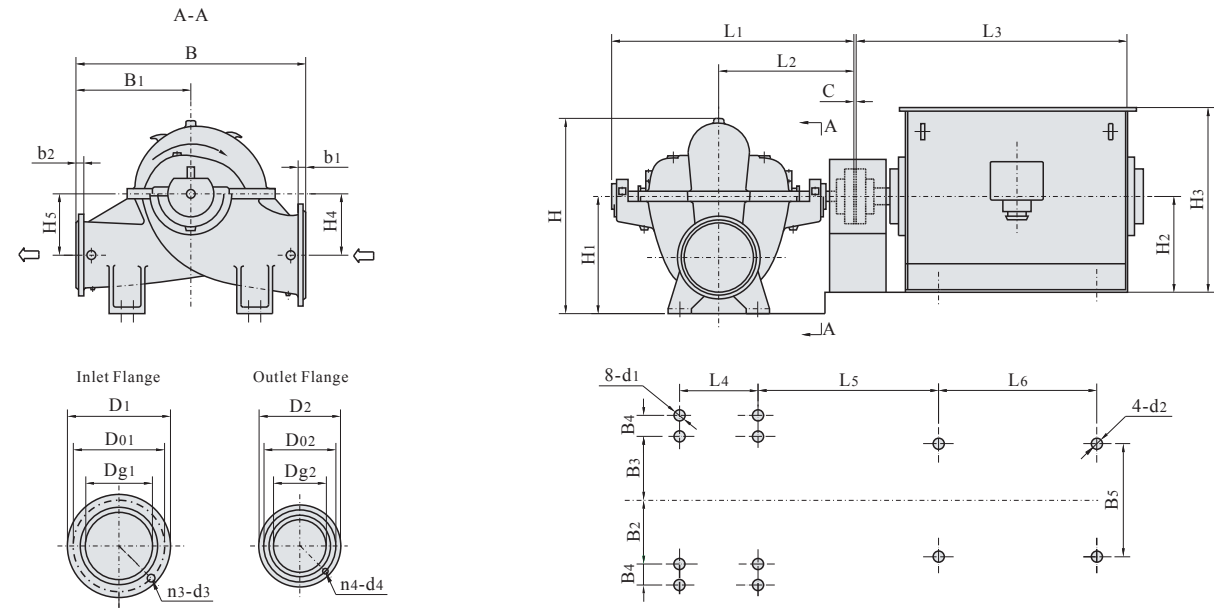
TTAAZ-Slow Pump performance curve chart





TTAAZ-Series of Single Stage Double Suction Pumps

TTAAZ-Slow Mounting dimensions drawing & flange dimensions



pump type	B	B1	B2	B3	B4	B5	H	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6	8-d1	4-d2	
SLOW900-1060 SLOW900-1060F SLOW900-1020 SLOW900-1020F	2800	1200	600	730	200		2800	1700			975	975	3210	1750	1250					8-φ42	
SLOW1000-1040 SLOW1000-1060	3200	1400	700	900	200		3130	1900			150	150	3610	1980						8-φ42	
SLOW1200-1150 SLOW1200-1180 SLOW1200-1150(S)F	3600	1600	800	1000	200		3580	2100			1150	1150	4540	2250						8-φ42	
SLOW1400-1280 SLOW1400-1420	4100	1900	1000	1200	200		3830	2300			1250	1250	4720	2550						8-φ50	
SLOW1600-1580 SLOW1600-1860	4500	2100	1200	1400	250		4250	2500			1350	1350	5220	2800						8-φ55	
SLOW1800-1650 SLOW1800-1880	5000	2400	1400	1600	250		4730	2700			1500	1500	5750	3100						8-φ65	

Flange dimensions

pump type	D1	D01	Dg1	n3-d3	b1	Pressure Grade	D2	D02	Dg2	n4-d4	b2	Pressure Grade
SLOW900-1060 SLOW900-1060F SLOW900-1020 SLOW900-1020F	1230	1160	1000	28-φ37	50	1.0MPa	1115	1050	900	28-φ34	46	1.0MPa
SLOW1000-1040 SLOW1000-1060	1455	1380	1200	32-φ40	56	1.0MPa	1230	1160	1000	28-φ37	50	1.0MPa
SLOW1200-1150 SLOW1200-1180 SLOW1200-1150(S)F	1675	1590	1400	36-φ43	62	1.0MPa	1455	1380	1200	32-φ40	56	1.0MPa
SLOW1400-1280 SLOW1400-1420	1915	1820	1600	40-φ49	68	1.0MPa	1675	1590	1400	36-φ43	62	1.0MPa
SLOW1600-1580 SLOW1600-1860	2115	2020	1800	44-φ49	70	1.0MPa	1915	1820	1600	40-φ49	68	1.0MPa
SLOW1800-1650 SLOW1800-1880	2325	2230	2000	48-φ49	74	1.0MPa	2115	2020	1800	44-φ49	70	1.0MPa

Motor size subjects to order contract

Reference table for pipeline loss

Capacity(L/s)	Brief table for the frictional loss of a straight pipe(for evaluation),the lost meters of a 100m straight pipe takes the newly iron pipe as the standard and multiple for the old one.											
	25	38	50	65	75	100	125	150	175	200	250	300
15												
20												
25												
30												
40												
50												
60												
70												
80												
90												
100												
110												
120												
130												
140												
160												
180												
200												
250												
300												

Limit of the maximum flow for a pipe with a certain diameter

Pipeline diameter (mm)	Maximum flow (L/s)	Maximum flow rate (m/s)	Pipeline diameter (mm)	Maximum flow (L/s)	Maximum flow rate (m/s)
25	1	2.04	125	30.0	2.44
38	2.5	1.69	150	43.0	2.45
50	4.17	2.12	175	60.0	2.49
65	6.67	2.01	200	83.3	2.69
75	10.0	2.26	250	133.0	2.72
100	18.4	2.33	300	192.0	2.71

Note: The pipeline loss would be made greatly increased once the limit is over.

The length of a straight pipe converted into from both valve and elbow(each)

Variety	Convert into the times of the diameter of a straight pipe	Remark
Standard elbow	12	Multiple in case of unopen
Fully opened gate valve	25	
Back valve	100	
Foot valve	100	Partial block-up multiplied

Note: For instance, a 100mm diameter pipe, the foot valve has a 100X100=10000mm=10m diameter when which is converted into 100 times that of the pipe's diameter. Suppose the flow is 8L/s. Looked into this above table, the loss of the straight pipe is 1.3m each 100m, then the one for 100mm is 0.13m, that is, for a 100mm foot valve with a flow 8L/s, its head loss is 0.13m.



TORONTECH™

Pumps and Valves

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