



NIH

Single Stage Single Suction
Chemical Process Pump

- Conform to ISO2858,API610,API682
- Flow: 3-120 m³/h
- Head: 5-150m
- Fluid Temperature: -20~180°C
- Max. working pressure: 2.0MPa



REPRESENTATIVE IN GEORGIA

Address: Tbilisi; Libani street 2

Tel: +995 032 248 35 62

Email: info@cnp.ge

Website: cnp.ge

E220301
Code: 1500112699
subject to amendments



Stock code:300145

Pumping Water Pumping Honor



Company profile

Nanfang Pump Industry Co., Ltd. (CNP), a subsidiary of Nanfang Zhongjin Environment Co., Ltd. was founded in 1991 and listed on Shenzhen Stock Exchange on 9th December 2010, Stock code 300145. In 2019, CNP'S annual output exceeded 900,000 sets and sales exceeded 3 billion RMB, and it continues to maintain high-speed growth. With a national-level enterprise technology center, CNP has its featured product—the innovative CDM (F) series light vertical multi-stage centrifugal pumps, which has ultra-high efficiency $MEI \geq 0.7$. And CNP has developed the same series of high temperature pump products in 2019 to meet the high temperature field pump demand. Its various stainless steel light industrial pump series products maintains stable growth, the complete sets of intelligent water supply and drainage equipment keep leading technology in the market. Its pumps products, including TD in-line circulation pump, NISO/ NIS/ NISF end suction pump, NSC split case pump, VTC vertical turbine pump, VTM series mixed flow pump, ZLB series submersible axial flow pump, NDS Series of multi-stage split case pump, WQ submersible pump, PQ stainless steel submersible fountain pump, BP silent tube pump, swimming pool pump, non-clogging self-priming sewage pump, diesel engine fire pump set, dosing pump, oil pump, NIH chemical process pump, provide pump solutions for the whole system. CNP has set up a perfect marketing network, not only its flagship sales and service in China domestic market, but also won the trust of the overseas market, and CNP has successfully set up good business relationship with distributors and customers from more than 60 countries and regions.

CNP, a green water expert beside you.

Contents

Product introduction	1
Typical Application	1
Model Definition	1
Structure Features	1
Structure Drawing	2
Parts Names	2
Exploded View	2
Parts Material	3
Performance Table	3
Installation Sizes	5
Common API Flushing Plan	9
Main Parts Illustration	11
Pump Datasheet	12

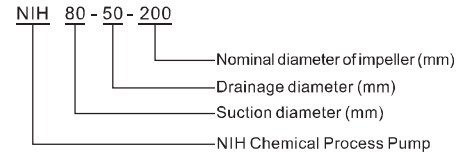
Product Introduction

- NIH series pumps are horizontal single-stage single-suction cantilever centrifugal pumps. The pumps are designed based on old pumps such as IH, IJ, and CZ pumps on the market and also innovate the technology for existing pumps. It features high efficient, wide range of application. The long space between bearings design perfectly solve the problem of broken shaft when the pump operate in medium with large specific gravity and high viscosity.
- High performance hydraulic design: The CFD simulation and improvement is useful for improvement the efficiency of pump, it increases more than 5% than IH pumps.
- Bracket support type suspension body: The design can relieve the pressure caused by some of the pipeline and ensure the pump operate in stable.
- The bearing is lubricated with thin oil and designed with a bearing separator. The shaft surface will not be damaged during operation, with service life of up to 25,000 hours, to avoid the problem of frequent maintenance for traditional oil seals.
- The sealing cavity is specially designed considering the medium is easy to crystallize and contain solid particles, the design ensures the mechanical seal operate in a good condition and improve its service life.
- The design of rear blade for the impeller is good to reduce the axial force, and the pump body with structure of single volute and double volute is good to balance the radial force and reduce the vibration.
- The rear door design is convenient for operation and installation, which doesn't need to disassemble the inlet and outlet pipes during maintenance.
- Product spare parts are interchangeable, it is not necessary for end user to store a lot of spare part.
- Flange standard implementation HG/T20592-2009 PN16 RF (can be designed and manufactured according to user requirements such as SH/ASTM/ANSI and other standards)
- The pump rotates clockwise viewed from the drive end.

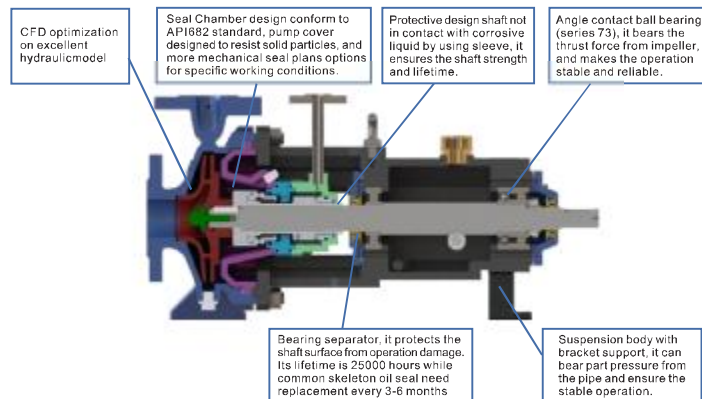
Applications

- Soda industry: Ammonia brine mother liquor produced by soda ash and ammonia hydrazine, normal temperature caustic alkali produced by chlor-alkali, chlorine products, chlorate and hypochlorite.
- Non-ferrous Metallurgy: Transport of electrolytic copper and nickel electrolyte, acid mist for cobalt production, ore slurry for zinc production, ammonium vanadate for vanadium production, acid and thiourea liquid for gold production, etc.
- Petrochemical: Petroleum refining acetaldehyde alkyl benzene production
- Acid industry: Nitric acid, sulfuric acid, hydrochloric acid, phosphoric acid, acetic acid, etc.
- Pharmaceutical industry: Medicines and pesticides production.
- Synthetic fibers and plastics industry: Dacron, PVC production, spinning, printing and dyeing industry.
- Fertilizer industry: Urea, ammonium nitrate production.
- Environmental protection: Sewage treatment and acid mist transferring.
- Papermaking industry: Pulp cooking liquid and bleach liquid transferring.
- Steel industry: Electric plating, pickling, waste acid treatment.

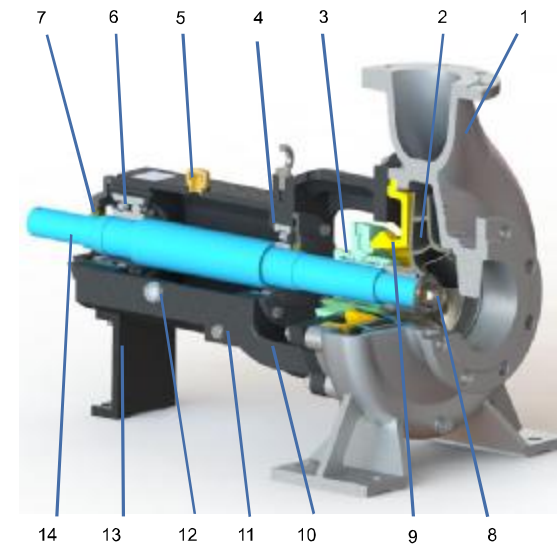
Model definition



Structure Features



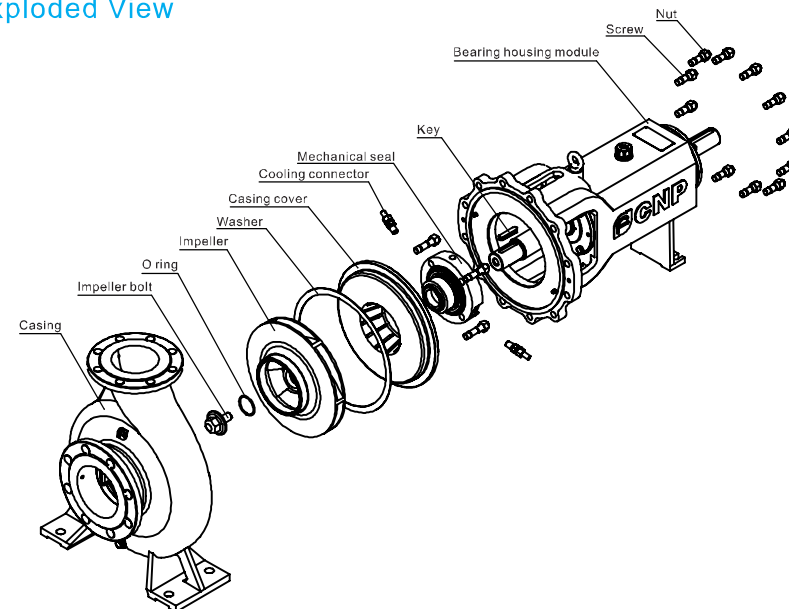
Structure Drawing



Parts Name

No	Name
1	Pump body
2	Impeller
3	Mechanical seal
4	Cylindrical roller bearing
5	Vent cap
6	Angle contact ball bearing
7	Bearing separator
8	Impeller screw
9	Pump cover
10	Suspension body
11	Oil plug
12	Oil level indicator
13	Suspension body bracket
14	Shaft

Exploded View



Parts materials

- Choose corrosion-resistant and wear-resistant materials according to the working medium (stainless steel/duplex stainless steel/Titanium/Nickel/Hastelloy)

NO.	Industry	Medium	Common metal materials
1	Caustic soda/Chlor-alkali	Sodium hydroxide, sodium hypochlorite, sodium chlorite, light brine, cathode fluid, anodic fluid, etc.	304, 316L, TA2/TA9/TA10, Ni200
2	Acid production	Sulfuric acid, phosphoric acid, nitric acid, acetic acid, etc.	304, 316L, 2205, 904, 20#Alloy, Hastelloy
3	Salt production	Sodium chloride, sodium sulfate, sodium nitrate, etc.	304, 316L, 2205, 2507, TA2
4	Pharmacy	Ethanol, glucose, medicine, pesticide, etc.	304, 316L
5	Fine Chemistry	Organic chemicals, organic intermediates, synthetic fibers, synthetic resins, monomers, etc.	304, 316L, 2205, 2507, TA2
6	Fertilizer	Urea, amine fertilizer, potash fertilizer, etc.	304, 316L
7	Papermaking	Pulp, black liquor, white mud, green mud, filtrate, etc.	304, 2205, 0Cr17, CD4MCu
8	Food	Filter aids, additives, etc.	304, 316L
9	Sewage treatment	Sodium hypochlorite, sodium sulfite, sodium dihydrogen phosphate	304, 316L, 2205, 2507, TA2
10	Desalination	Seawater	316L, 2205, 2507, TA2

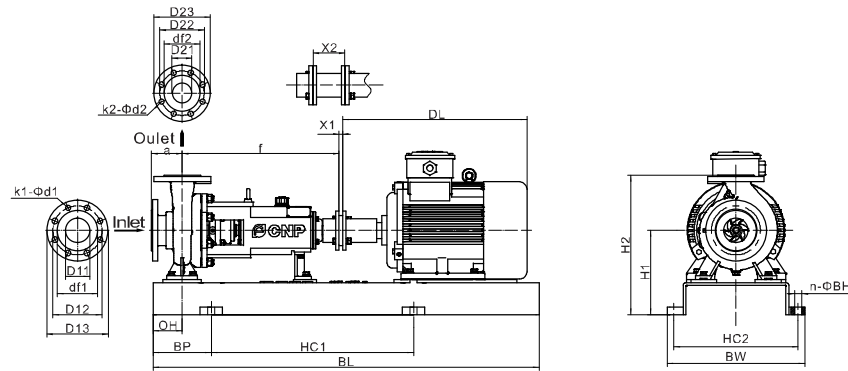
Table of performance parameters

Mode	RPM (r/min)	Flow (m³/h)	Head (m)	Rated Flow (m³/h)	Rated Head (m)	Rated point EFF(%)	Shaft Power (kW)	Matching Motor		
								specific gravity 1.0	specific gravity 1.35	specific gravity 1.84
40-25-125	2900	4.8~7.2	16~22	6	20	39	0.84	Y80M-2/1.1	Y90S-2/1.5	Y90L-2/2.2
40-25-160	2900	4.8~7.2	24~33	6	32	32.1	1.63	Y90L-2/2.2	Y90L-2/2.2	Y100L-2/3
40-25-200	2900	4.8~7.2	40~55	6	50	23.2	3.52	Y112M-2/4	Y132S-2/5.5	Y132S-2/7.5
50-32-125	2900	10~15	16~22	12.5	20	51.8	1.31	Y90S-2/1.5	Y90L-2/2.2	Y100L-2/3
50-32-160	2900	10~15	25.6~33	12.5	32	45.7	2.38	Y100L-2/3	Y112M-2/4	Y132S-2/5.5
50-32-200	1450	5~9	10~15	6.3	12.5	33.2	0.65	Y80M-4/0.75	Y90S-4/1.1	Y90L-4/1.5
	2900	10~15	40~60	12.5	50	39.2	4.34	Y132S-2/5.5	Y132S-2/7.5	Y160M1-2/11
50-32-250	1450	5~9	16~24	6.3	20	24.2	1.42	Y90L-4/1.5	Y100L-4/2.2	Y100L-4/3
	2900	10~15	64~86	12.5	80	30.1	9.04	Y160M1-2/11	Y160M2-2/15	Y160L-2/18.5
65-50-125	2900	20~30	16~24	25	20	61.8	2.2	Y100L-2/3	Y112M-2/4	Y132S-2/5.5
65-50-160	2900	20~30	25.6~33	25	32	57.5	3.79	Y132S-2/5.5	Y132S-2/7.5	Y160M1-2/11
	1450	10~15	10~15	12.5	12.5	46.2	0.92	Y90S-4/1.1	Y90L-4/1.5	Y100L-4/2.2
65-40-200	2900	20~30	40~60	25	50	52	6.54	Y132S-2/7.5	Y160M1-2/11	Y160M2-2/15
	1450	10~15	16~22	12.5	20	39.1	1.74	Y100L-4/2.2	Y100L-4/3	Y112M-4/4
65-40-250	2900	20~30	64~85	25	80	45	12.1	Y160M2-2/15	Y160L-2/18.5	Y200L-2/30
	1450	10~15	25.6~33	12.5	32	30.2	3.61	Y132S-4/5.5	Y132S-4/5.5	Y132M-4/7.5
65-40-315	2900	20~30	100~127	25	125	36.4	23.4	Y200L-2/30	Y200L-2/37	Y225M-2/45
	2900	40~60	16~25	50	20	68.5	3.97	Y132S-2/5.5	Y132S-2/7.5	Y160M1-2/11
80-65-125	2900	40~60	29~35	50	32	67	6.5	Y132S-2/7.5	Y160M1-2/11	Y160M2-2/15
80-50-200	1450	20~30	10~15	25	12.5	58.1	1.46	Y100L-4/2.2	Y100L-4/3	Y112M-4/4
	2900	40~60	46~55	50	50	63	10.8	Y160M2-2/15	Y160L-2/18.5	Y200L-2/30

Table of performance parameters

Mode	RPM (r/min)	Flow (m³/h)	Head (m)	Rated Flow (m³/h)	Rated Head (m)	Rated point EFF(%)	Shaft Power (kW)	Matching Motor		
								specific gravity 1.0	specific gravity 1.35	specific gravity 1.84
80-50-250	1450	20~30	16~22	25	20	52	2.62	Y100L-4/3	Y112M-4/4	Y132S-4/5.5
	2900	40~60	72~87	50	80	57	19.1	Y180M-2/22	Y200L-2/30	Y225M-2/45
80-50-315	1450	20~30	25.6~33	25	32	45.1	4.83	Y132S-4/5.5	Y132M-4/7.5	Y160M-4/11
	2900	40~60	100~127	50	125	50.1	34	Y200L-2/37	Y250M-2/55	Y280S-2/75
100-80-125	2900	68~120	16~24	100	20	73	7.46	Y160M1-2/11	Y160M2-2/15	Y160L-2/18.5
100-80-160	2900	70~120	26~35	100	32	73	11.9	Y160M2-2/15	Y160L-2/18.5	Y200L-2/30
100-65-200	1450	40~60	10~15	50	12.5	67	2.54	Y100L-4/3	Y112M-4/4	Y132S-4/5.5
	2900	80~120	45~53	100	50	71.2	19.1	Y180M-2/22	Y200L-2/30	Y225M-2/45
100-65-250	1450	40~60	16~22	50	20	63	4.32	Y132S-4/5.5	Y132M-4/7.5	Y160M-4/11
	2900	70~130	70~84	100	80	67	32.5	Y200L-2/37	Y250M-2/55	Y280S-2/75
100-65-315	1450	35~65	30~33	50	32	56.6	7.7	Y160M-4/11	Y160L-4/15	Y180M-4/18.5
	2900	80~120	115~127	100	125	61.1	55.7	Y280S-2/75	Y280M-2/90	Y315S-2/110
100-65-400	1450	30~60	41~52	50	50	50.1	13.6	Y160L-4/15	Y180M-4/18.5	Y180L-4/22
125-80-200	1450	60~90	10~15	75	12.5	71.2	3.58	Y132S-4/5.5	Y132M-4/7.5	Y160M-4/11
	2900	100~180	40~60	150	50	74.5	27.4	Y200L-2/30	Y225M-2/45	Y250M-2/55
125-80-250	1450	60~90	16~24	75	20	68.1	6	Y132M-4/7.5	Y160M-4/11	Y160L-4/15
	2900	100~180	60~85	150	80	71.6	45.6	Y250M-2/55	Y280S-2/75	Y280M-2/90
125-80-315	1450	60~90	30~35	75	32	61	10.7	Y160L-4/15	Y180M-4/18.5	Y180L-4/22
	2900	100~180	100~127	150	125	66	77.3	Y280M-2/90	Y315M-2/132	Y315L-2/160
125-100-200	1450	70~130	10~15	100	12.5	73	4.66	Y132S-4/5.5	Y132M-4/7.5	Y160M-4/11
	2900	160~240	40~55	200	50	76.1	35.8	Y225M-2/45	Y250M-2/55	Y280S-2/75
125-100-250	1450	80~120	16~24	100	20	71.1	7.66	Y160M-4/11	Y160L-4/15	Y180M-4/18.5
	2900	160~240	70~84	200	80	74.5	58.5	Y280S-2/75	Y280M-2/90	Y315M-2/132
125-100-315	1450	80~120	29~35	100	32	67.1	13	Y160L-4/15	Y180L-4/22	Y200L-4/30
	2900	160~240	96~127	200	125	70.5	96.5	Y315S-2/110	Y315L-2/160	Y315L-2/200
125-100-400	1450	70~140	42~55	100	50	61.2	22.2	Y200L-4/30	Y225S-4/37	Y250M-4/55
150-125-250	1450	150~300	13~23	200	20	76.4	14.3	Y180M-4/18.5	Y200L-4/30	Y225S-4/37
150-125-315	1450	160~240	28~35	200	32	74.7	23.3	Y200L-4/30	Y225S-4/37	Y250M-4/55
150-125-400	1450	150~300	40~55	200	50	70.7	38.5	Y225M-4/45	Y280S-4/75	Y280M-4/90
200-150-250	1450	250~520	12~23	400	20	79.3	27.5	Y200L-4/30	Y225M-4/45	Y250M-4/55
200-150-315	1450	250~520	28~35	400	32	79.2	44	Y250M-4/55	Y280S-4/75	Y280M-4/90
200-150-400	1450	300~550	40~53	400	50	77.8	70	Y280M-4/90	Y315S-4/110	Y315L-4/160
200-150-500	1450	300~550	62~82	400	80	73.5	118.5	Y315M-4/132	Y315L-4/200	Y355M-4/250
250-200-315	1450	500~760	20~33	640	32	81	68.8	Y280S-4/90	Y315S-4/110	Y315L-4/160
250-200-400	1450	500~760	40~53	640	50	80	108.9	Y315M-4/132	Y315L-4/200	Y315L-4/200
250-200-500	1450	500~780	68~80	660	75	78	172.8	Y315L-4/200	Y355M-4/250	Y355L-4/315
300-250-400	1450	650~1200	40~53	1000	50	82	166	Y315L-4/200	Y355M-4/250	Y355L-4/315
300-250-500	1450	850~1200	50~80	1000	75	81.5	250.5	Y355M-4/280	Y355L-4/315	Y400M-4/400

Installation Dimension Drawing



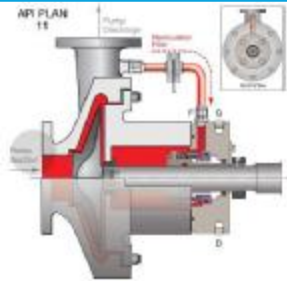
Installation Dimension table

Motor	Pump Model	Base No.	Pump Installation Dimension Inlet(mm)													Intel Flange Size(mm)					Outlet Flange Size(mm)				
			BL	BP	HC1	DL	H1	H2	H-C2	BW	OH	a	f	X1/X2	n-φBH	D11	d1	D12	D13	k1-φd	D21	d2	D23	k2-φd2	
NIH40-25-125	Y801-2 0.75	150 320 A	948	150	540	285	202	342	320	360	80	80	512	8	4-φ19	40	84	110	140	4-φ18	25	65	85	115	4-φ14
	Y802-2 1.1					310																			
	Y90S-2 1.5					310																			
	Y90L-2 2.2					335																			
NIH40-25-160	Y801-2 0.75	150 320 B	948	150	540	285	222	382	320	360	80	80	512	8	4-φ19	40	84	110	140	4-φ18	25	65	85	115	4-φ14
	Y802-2 1.1					310																			
	Y90S-2 1.5					310																			
	Y90L-2 2.2					335																			
NIH40-25-200	Y801-2 0.75	170 350 A	1048	170	600	380	250	382	350	390	80	80	512	8	4-φ19	40	84	110	140	4-φ18	25	65	85	115	4-φ14
	Y802-2 1.1					380																			
	Y90S-2 1.5					380																			
	Y90L-2 2.2					400																			
NIH50-32-125	Y801-4 0.55	150 320 A	948	150	540	285	202	342	320	360	80	80	512	8	4-φ19	50	99	125	165	4-φ18	32	76	100	140	4-φ18
	Y802-4 0.75					310																			
	Y90S-4 1.1					310																			
	Y90L-4 2.2					335																			
NIH50-32-160	Y801-4 0.55	150 320 B	948	150	540	285	222	382	320	360	80	80	512	8	4-φ19	50	99	125	165	4-φ18	32	76	100	140	4-φ18
	Y802-4 0.75					310																			
	Y90S-4 1.1					310																			
	Y90L-4 2.2					335																			
NIH50-32-200	Y802-4 0.75	170 350 A	1048	170	600	380	250	382	350	390	80	80	512	8	4-φ19	50	99	125	165	4-φ18	32	76	100	140	4-φ18
	Y90S-4 1.1					380																			
	Y100L-4 3					380																			
	Y112M-4 4					400																			
NIH50-32-250	Y132S-2 5.5	190 400 A	1260	190	660	600	270	495	440	490	100	635	8	4-φ24	50	99	125	165	4-φ18	32	76	100	140	4-φ18	
	Y160M-2 11					645																			
	Y90L-4 1.5					335																			
	Y100L-4 2.2					380																			
NIH65-50-125	Y801-4 0.55	150 320 A	948	150	540	285	202	342	320	360	80	80	512	8	4-φ19	65	118	145	185	8-φ18	50	99	125	165	4-φ18
	Y802-4 0.75					335																			
	Y90L-2 2.2					380																			
	Y100L-2 3					380																			
NIH65-50-160	Y801-4 0.55	170 350 B	1048	170	600	400	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y802-4 0.75					475																			
	Y90S-4 1.1					400																			
	Y100L-4 3					400																			
NIH65-50-200	Y132S-2 5.5	190 400 A	1260	190	660	600	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y160M-2 11					645																			
	Y90L-4 1.5					335																			
	Y100L-4 2.2					380																			
NIH65-50-250	Y132S-2 5.5	210 440 A	1300	210	740	475	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y160M-2 11					600																			
	Y160M-2 15					645																			
	Y160L-2 18.5					645																			
NIH65-50-125	Y801-4 0.55	150 320 A	948	150	540	285	202	342	320	360	80	80	512	8	4-φ19	65	118	145	185	8-φ18	50	99	125	165	4-φ18
	Y802-4 0.75					335																			
	Y90L-2 2.2					380																			
	Y100L-2 3					380																			
NIH65-50-160	Y801-4 0.55	170 350 B	1048	170	600	400	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y802-4 0.75					475																			
	Y90S-4 1.1					400																			
	Y100L-4 3					400																			
NIH65-50-200	Y132S-2 5.5	190 400 A	1260	190	660	600	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y160M-2 11					645																			
	Y90L-4 1.5					335																			
	Y100L-4 2.2					380																			
NIH65-50-250	Y132S-2 5.5	210 440 A	1300	210	740	475	270	495	440	490	100	635	8	4-φ24	80	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y160M-2 11					600																			
	Y160M-2 15					645																			
	Y160L-2 18.5					645																			

Installation Dimension table

Motor	Pump Model	Base No.	kW	Pump Installation Dimension Inlet(mm)													Intel Flange Size(mm)					Outlet Flange Size(mm)				
				BL	BP	HC1	DL	H1	H2	H-C2	BW	OH	a	f	X1/X2	n-φBH	D11	d1	D12	D13	k1-φd	D21	d2	D23	k2-φd2	
NIH65-50-160	Y802-4 0.75	150 320 B	948	150	540	285	222	382	320	360	80	80	512	8	4-φ19	65	118	145	185	8-φ18	50	99	125	165	4-φ18	
	Y90S-4 1.1					310																				
	Y90L-4 1.5					335																				
	Y100L-2 3					380																				
NIH65-50-200	Y112M-2 4	170 350 A	1048	170	600	400	250	430	350	390	80	80	512	8	4-φ19	65	118	145	185	8-φ18	40	84	110	150	4-φ18	
	Y132S-2 5.5					400																				
	Y132S-2 7.5					400																				
	Y90S-4 1.1					310																				
NIH65-40-200	Y90L-4 1.5	150 320 B	948	150	540	335	222	382	320	360	80	80	512	8	4-φ19	65	118	145	185	8-φ18	40	84	110	150	4-φ18	
	Y100L-4 2.2					380																				
	Y132S-2 5.5					475																				
	Y132S-2 7.5					475																				
NIH65-40-250	Y160M-2 11	190 400 A	1260	190	660	400	270	495	400	450	95	110	110	4-φ24	80	118	145	185	8-φ18	40	84	110	150	4-φ18		
	Y160M-2 15					400																				
	Y160M-2 18.5					400																				
	Y200L-2 30					400																				
NIH65-40-315	Y112M-4 4	225 490 B	1500	225	840	600	270	495	480	550	100	635	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18	
	Y132S-4 5.5					400																				
	Y132M-4 7.5					475																				
	Y160M-2 11					400																				
NIH65-40-315	Y132S-4 5.5	225 490 B	1500	225	840	600	270	495	480	550	100	635	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18	
	Y132M-4 7.5					475																				
	Y160M-2 11					400																				
	Y160M-2 15					400																				
NIH65-40-315	Y160M-2 15	250 550 A	1700	250	940	645	270	495	480	550	100	635	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18	
	Y200L-2 30					645																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y132M-4 7.5	225 490 B	1500	225	840	600	270	495	480	550	100	635	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18	
	Y160M-2 11					400																				
	Y160M-2 15					400																				
	Y200L-2 30					400																				
NIH65-40-315	Y250M-2 55	300 600 B	1800	300	600/600	815	270	495	600	665	120	125	805	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18
	Y250M-2 55					930																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y112M-4 4	225 490 B	1500	225	840	600	270	495	480	550	100	635	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18	
	Y132S-4 5.5					475																				
	Y160M-2 11					400																				
	Y160M-2 15					400																				
NIH65-40-315	Y160M-2 15	300 600 C	1800	300	600/600	815	270	495	600	665	120	125	805	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18
	Y250M-2 55					930																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y250M-2 55	300 600 B	1800	300	600/600	815	270	495	600	665	120	125	805	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18
	Y250M-2 55					930																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y250M-2 55	300 600 B	1800	300	600/600	815	270	495	600	665	120	125	805	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18
	Y250M-2 55					930																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y250M-2 55	300 600 B	1800	300	600/600	815	270	495	600	665	120	125	805	8	4-φ28	100	110	140	160	180	8-φ18	40	84	110	150	4-φ18
	Y250M-2 55					930																				
	Y112M-4 4					400																				
	Y132S-4 5.5					475																				
NIH65-40-315	Y250M-2 55	300 600 B	1800	300	600/600	815	270	495	600	665																

Typical API plans



- Description**
- Recirculation from the pump discharge through a flow control orifice into the seal chamber.
 - Default API Plan for all single seals.
- Reasons**
- Cooling for sealing chamber.
 - Prevents product from vaporizing by maintaining positive pressure above vapour pressure.
 - Becomes a self-venting plan for horizontal pumps.
- Use**
- In general, applications with clean fluids with moderate temperatures.
 - Non-polymerizing fluids.



- Description**
- Recirculation from pump discharge through a flow control orifice and cooler into the seal chamber.
 - Compared with PLAN 11, heat exchanger is added as a cooler.
- Reasons**
- Cooling the seal.
 - Cool the fluid temperature to improve pressure margin over vapour pressure.
- Use**
- For high temperature applications e.g. hot water application (temperature < 177°C).
 - Clean non-polymerizing fluids.



- Description**
- Product recirculation from seal chamber to heat exchanger and back to seal chamber.
 - Standard plan for hot water application.
- Reasons**
- High efficient seal performance under less load of heat exchanger.
 - Increased required margin between fluid vapour pressure and smooth liquid.
- Use**
- In hot and clean services e.g. in boiler feed water and hot hydrocarbon services.
 - Clean non-polymerizing fluids.



- Description**
- Product recirculation from discharge through a cyclone separator, which directs clean fluid to the seal and solids back to pump suction.
 - Particles from cyclone separator are returned to suction.
- Reasons**
- Cooling for sealing chamber.
 - Removes entrained solids from the process fluid.
- Use**
- Used in media with suspended solids.
 - Non-polymerizing fluids.

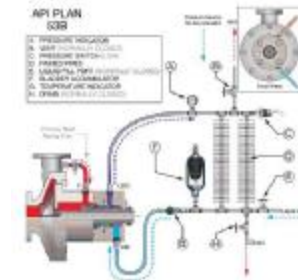
Typical API plans



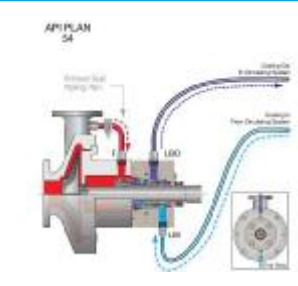
- Description**
- Unpressurised fluid circulation through fluid tank.
 - Circulation is maintained by using pumping ring in running condition.
- Reasons**
- No process contamination.
 - Outboard seal backs up for the main seal.
- Use**
- Work with dual seal in serial.
 - Applications where no leakage to atmosphere can be tolerated e.g. hazardous, toxic, inflammable media.
 - High saturation vapor pressure liquid, lighter hydrocarbon.
 - Heat conduction oil body.



- Description**
- Pressurised barrier fluid circulation through fluid tank.
 - Circulation is maintained by using pumping ring in running condition.
- Reasons**
- Separate the fluid.
 - In no case will liquid leak to atmosphere.
- Use**
- Work with dual seal in serial.
 - Applications where no leakage to atmosphere can be tolerated e.g. hazardous, toxic, inflammable media.
 - High saturation vapor pressure liquid, lighter hydrocarbon.
 - For dirty, abrasive or polymerizing products.
 - Vacuum working conditions.



- Description**
- Pressurised barrier fluid circulation through fluid tank. The pressure is maintained in the seal circuit by a bladder accumulator.
 - Circulation is maintained by using pumping ring in running condition.
- Reasons**
- Separate the fluid.
 - In no case will liquid leak to atmosphere.
 - Pressure is higher than a Plan 53A.
- Use**
- Applications where no leakage to atmosphere can be tolerated e.g. hazardous, toxic, inflammable media.
 - High saturation vapor pressure liquid, lighter hydrocarbon.
 - For dirty, abrasive or polymerizing products.



- Description**
- Pressurised external barrier fluid circulation.
- Reasons**
- Separate the fluid.
 - In no case will liquid leak to atmosphere.
- Use**
- Work with dual seal in serial.
 - For dirty, abrasive or polymerizing products.
 - High saturation vapor pressure liquid, lighter hydrocarbon.

Pictures of the main parts



Pump casing



Impeller



Shaft



Bearing house



Casing cover



Mechanical seal



Baseplate

Pump datasheet

Company name: _____ Project name: _____					
Pump model: _____					
Bit No.: _____ Qty: _____ Working/standby: ___/___ Mode: _____					
Medium condition	Site condition				
Medium name: _____	Ambient temp: _____ °C				
Medium characteristics: <input type="checkbox"/> Flammable <input type="checkbox"/> Combustible <input type="checkbox"/> Poisonous <input type="checkbox"/> Corrosive <input type="checkbox"/> Wearing	AMSL: _____ m				
Solids content: _____ % (V)	Barometric pressure: _____ MPa (A)				
Solid name: _____ Solide size: _____ mm	Classification of explosion-proof area: _____				
Solid kind: <input type="checkbox"/> Soft <input type="checkbox"/> Hard	Installation site (Indoor/Outdoor/Roof): _____				
Operation Temp Normal/Max _____/_____ °C	Colling water pressure: ___/___ MPa (G)				
Viscosity: _____ CP	Colling water Temp: ___/___ °C				
Density: _____ kg/m ³	Structure				
Inlet pressure: _____ MPa (G)	Impeller type: <input type="checkbox"/> Open <input type="checkbox"/> Semi-open <input type="checkbox"/> Closed				
Outlet pressure: _____ MPa (G)	<input type="checkbox"/> Single suction <input type="checkbox"/> Double suction				
Pressure diff: _____ MPa (G)	Support type: <input type="checkbox"/> Footing <input type="checkbox"/> Centerline				
Vapourized pressure: _____ MPa (A)	<input type="checkbox"/> Vertical <input type="checkbox"/> Near centerline				
NPSH: _____ m	Forms: <input type="checkbox"/> Radial <input type="checkbox"/> Axial				
Flow Normal/Duty _____/_____ m ³ /h	Casing type: <input type="checkbox"/> Cantilever <input type="checkbox"/> Both-end support				
Head Normal/Duty _____/_____ m	Driver: <input type="checkbox"/> Constent <input type="checkbox"/> Variable				
Flange	Drive type: <input type="checkbox"/> Direct <input type="checkbox"/> Transmission				
Pipe	DN(mm)	PN(MPa)	Sealing face	Direction	<input type="checkbox"/> Triangle belt
Inlet				<input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Coupling: <input type="checkbox"/> Pin <input type="checkbox"/> Diaphragm
Outlet				<input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Baseplate: <input type="checkbox"/> Common <input type="checkbox"/> Seperated
Flange standard: _____					Lubrication: <input type="checkbox"/> Oil bath <input type="checkbox"/> Oil fog
Material	Pump body: _____ Impeller: _____ Shaft/Sleeve: _____/_____				
Remark:					<input type="checkbox"/> Grease <input type="checkbox"/> Force feed
					Bearing type: Radial/Thrust _____/_____