NISO ,NIS ,NISF 卧式（直联）管道泵

Horizontal (Direct-Connected) Pipeline Pump

辰禹（重庆）流体设备有限公司

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目录 Catalogue

★ 型号含义 Model meaning

NIS	100-65-200	G/30	S	W	S

- NIS.....端吸离心泵（加长轴结构）End-discharge centrifugal pump (long shaft structure)
- 100.....吸入口直径(mm) Inlet diameter (mm)
- 65.....排出口直径(mm) Outlet diameter(mm)
- 200.....叶轮名义直径(mm) Impeller nominal diameter(mm)
- G/30.....新一代/电机功率(kw) A new generation/Power of motor(kw)
- S.....三相 Three-phase(≤3kwis 220/380V,>3kw is 380V) or D.....单相 Single phase220V or B.....泵体 Pump body
- W.....50Hz or L.....60Hz
- S.....304 叶轮 Impeller or C..... 青铜叶轮 Bronze impeller or H.....HT200 叶轮 Impeller

NIS	F	300-250-315(Q)	75	S	W	F

- NIS.....端吸离心泵（加长轴结构）End-discharge centrifugal pump (long shaft structure)
- F.....过流部件为不锈钢 The overcurrent component is made of stainless steel.
- 300.....吸入口直径(mm) Inlet diameter (mm)
- 250.....排出口直径(mm) Outlet diameter(mm)
- 315(Q).....叶轮名义直径(mm) Impeller nominal diameter(mm) (Q)小流量 Low flow rate
- 75.....电机功率(kw) Power of motor(kw)
- S.....三相 Three-phase(≤3kwis 220/380V,>3kw is 380V) or D.....单相 Single phase220V or B.....泵体 Pump body
- W.....50Hz or L.....60Hz
- F.....304 过流件 Flow-through or L.....316 过流件 Flow-through or J.....2205 过流件 Flow-through

NISO 100-65-200/30 S W S

- NISO.....端吸离心泵(联轴器结构) End-discharge centrifugal pump (long shaft structure)
- 100.....吸入口直径(mm) Inlet diameter (mm)
- 65.....排出口直径(mm) Outlet diameter(mm)
- 200/30..... 叶轮名义直径(mm)/电机功率(kw) Impeller nominal diameter(mm)/Power of motor(kw)
- S.....三相 Three-phase(≤3kwis 220/380V,>3kw is 380V) or D.....单相 Single phase220V or B.....泵体 Pump body
- W.....50Hz or L.....60Hz
- S.....304 叶轮 Impeller or C..... 青铜叶轮 Bronze impeller or H.....HT200 叶轮 Impeller F.....304 过流件 Flow-through or L.....316 过流件 Flow-through or J.....2205 过流件 Flow-through

★ 应用场景 Application scenarios

☁产品适宜在清洁、稀薄、非侵蚀、非易燃易爆且不含固体颗粒或纤维的液体中使用

The product is suitable for use in clean, dilute, non-erosive, non-flammable and non-explosive liquids that do not contain solid particles or fibers.

☁供水系统 Water supply

☁供热、空调系统 Heating and Air Conditioning Systems

☁增压供水、恒压供水 Boosted water supply, constant pressure water supply

☁消防喷淋系统 Fire sprinkler system

☁灌溉、畜牧使用 Irrigation and livestock use

☁工业冷却、加热循环系统 Industrial cooling and heating circulation system

☁工业输送、排放系统 Industrial transportation and emission systems

★ 性能参数 Performance parameter

- 最大流量 Maximum Flow：1600m³/h
- 最高扬程 Maximum Head：160m
- 最大工作压力 Maximum Working Pressure：16bar
- 最大进口压力 Maximum Inlet Pressure：6bar
- 最大功率 Maximum Power：200kW
- 介质温度 Medium Temperature：-15℃~110C
- 进口口径 Import Caliber：DN50~DN3
- 出口口径 Export Caliber：DN32~DN300

★ 泵结构 Pump structure

- 泵为非自吸、单级单吸卧式、轴向进水、径向出水，泵体底部与底座固定。

The pump is non self-priming, single stage and single suction horizontal, axial inlet and radial outlet, and the pump body is fixed to the base.

- 采用标准型耐磨机械密封。

The standard type wear-resistant mechanical seal is adopted.

- 全封闭、风冷 IEC 标准电机。

Fully enclosed, air-cooled IEC standard motor.

- NISO 采用轴承架，可进行轴承定位，避免轴承的轴向窜动，同时提高了转子部件的刚性。

NISO uses a bearing frame to position the bearings, preventing axial movement and enhancing the rigidity of the rotor components.

- NISO 整体式泵轴,采用油脂润滑的导向深沟球轴承。

The NISO integral pump shaft features grease-lubricated deep groove ball bearings.

- NISO 泵与电机之间采用半弹性联轴器相连。

The NISO pump and motor are connected by a semi-elastic coupling.

- NISO 泵外形及安装尺寸符合 ISO2858 标准。

The pump's shape and installation dimensions comply with ISO2858 standard.

☁NIS,NISF 泵采用直联型联接加长轴结构。

The NIS and NISF pumps feature a direct-connected extended-shaft design.

☁铸铁泵体进出口法兰符合 GB/T17241.6(ISO7005-2)标准,压力等级 PN16;不锈钢泵进出口法兰符合 GB/T9113(ISO7005-1)标准，压力等级 PN16。

The cast iron pump body inlet and outlet flanges comply with GB/T17241.6 (ISO7005-2) standard, with a pressure rating of PN16; the stainless steel pump inlet and outlet flanges comply with GB/T9113 (ISO7005-1) standard, with a pressure rating of PN16.

★ 运行条件 Operational condition

☁泵的相对湿度 Relative humidity of pump

泵专门设计安装在非腐蚀性和非爆炸性环境。相对湿度不得超过 95%。

The pump is specifically designed for installation in non-corrosive and non-explosive environments. The relative humidity must not exceed 95%.

☁环境湿度和海拔高度 Environmental humidity and altitude

环境湿度与安装的海拔高度是影响电机寿命的重要因素，因为他们影响到轴承和绝缘系统的寿命。安装海拔高度是安装位置高出海平面的高度。如果环境温度超过建议的最高环境温度，或安装高度超过建议的最大海拔高度则由于密度较低，空气冷却效果较差，不得使用电机满负荷运行。在这种情况下，要选择更高输出功率的电机。

Environmental humidity and installation altitude are critical factors affecting motor lifespan, as they directly influence the longevity of bearings and insulation systems. Installation altitude refers to the elevation above sea level where the equipment is mounted. When ambient temperatures exceed the recommended maximum operating range or installation heights surpass the advised maximum altitude, motors

should not operate at full capacity due to reduced air density and diminished cooling efficiency. In such scenarios, selecting motors with higher output power becomes essential.

★ 特点 Characteristic

☁采用后拉式结构、维修时无须拆除泵体及管路。

The pull-out structure is adopted, and the pump body and pipeline need not be removed during maintenance.

☁NISO 泵型仅采用 4 种泵轴及悬架体部件，提高了零件的互换性。

NISO pump type only uses 4 kinds of pump shaft and suspension body parts, which improves the interchangeability of parts.

☁NISO,NIS,NISF 叶轮进行了优化设计，进口口径加大,无涡流,有效地降低水泵汽蚀余量,使得水泵运行平稳低噪声，性能曲线较平，流量范围较宽，性能与国外同行相似。

The impeller of NISO, NIS, and NISF has been optimized with an enlarged inlet diameter and vortex-free design, effectively reducing the pump's cavitation head. This ensures smooth, low-noise operation with a flat performance curve and wide flow range, achieving comparable performance to international counterparts.

☁NIS 带 G，带 Q 系列产品完全按照 GB/T5662 最新标准设计，性能曲线相对于 NISO,NIS,NISF 型性能曲线较为陡峭,流量范围符合目标要求。采用优秀的水力模型、CFD 优化，效率高，扬程分布合理。结构紧凑，安装方便。

The NIS series (including G and Q models) are designed in strict compliance with the latest GB/T5662 standard. Their performance curves exhibit steeper gradients compared to NISO, NIS, and NISF models, while meeting target flow range specifications. Featuring advanced hydraulic modeling and CFD optimization, these products demonstrate high efficiency with optimized head distribution. The compact design ensures easy installation.

☁NIS, NISF 泵体积小、结构紧凑、安装简单。

The NIS and NISF pumps feature compact designs, small sizes, and easy installation.

★ 最小进口压力 Minimum inlet pressure

如果泵中的压力低于输送液体的汽化压力，可能发生汽蚀，为避免汽蚀，确保泵进口侧有----最小压力，最大吸程 H(m)可按下式计算:

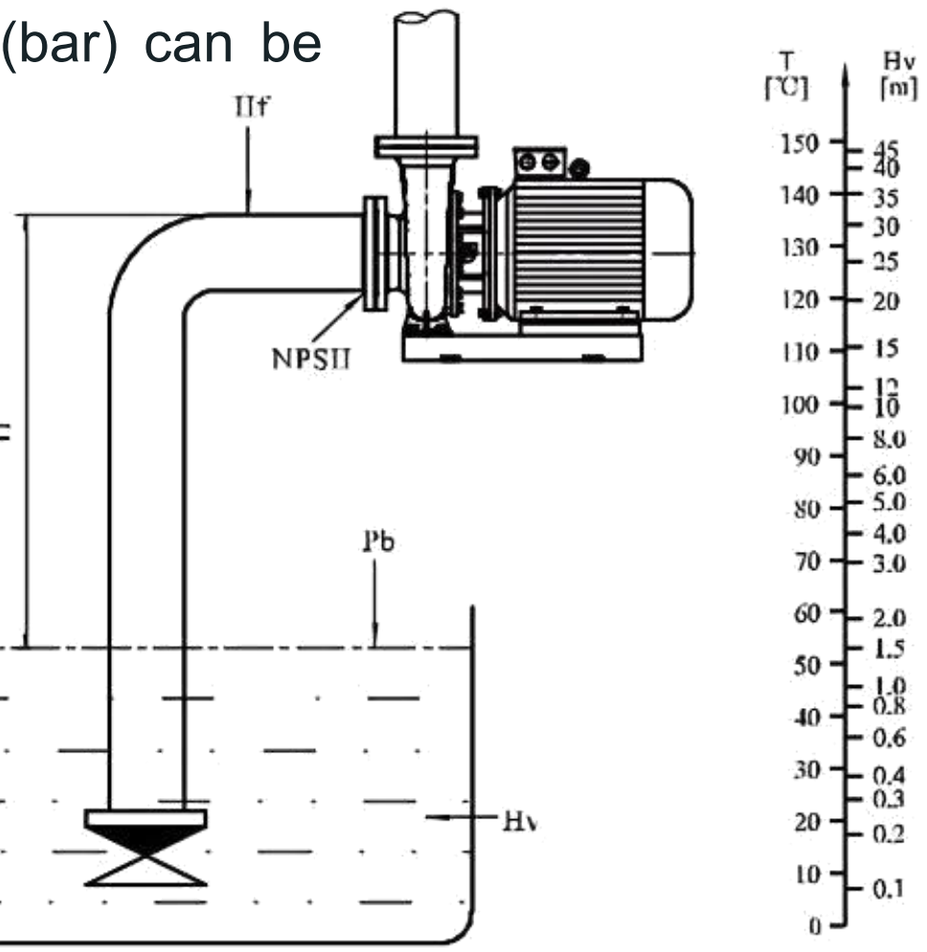
If the pump pressure falls below the vaporization pressure of the liquid being transported, cavitation may occur. To prevent cavitation and ensure a minimum pressure at the pump inlet, the maximum suction head H (m) can be calculated using the following formula:

H=Pbx10.2-NPSH-Hf-Hv-Hs

- H-最大吸程 Maximum suction lift(m)
- Pb-大气压力 atmospheric pressure(bar) 在闭式管路中可以认为是闭式系统的系统压力(bar)。

In closed-loop piping systems, the system pressure (bar) can be considered as the pressure of the closed-loop system.

- NPSH-净正吸入压头 Net positive suction head(m) 可以在性能曲线中 NPSH 曲线上对应于最大流量处读出。It can be read out at the maximum flow rate on the NPSH curve in the performance curve.



- Hf-入口处的管路损失Pipeline loss at the entrance(m) 其是对应于管路可能产生的最大流量时的值。It is the value corresponding to the maximum flow rate that may be generated by the pipeline.
- Hv-液体的汽化压力 Vaporization pressure of liquid(m) 其值的大小取决于液体的温度和液体的汽化压力值。The value of the liquid depends on the temperature and the vapor

pressure of the liquid.

- Hs-安全余量 Safety margin(m)　　最小为 0.5m 压头。The minimum head is 0.5 m.

通过计算，如果“H”为正值，说明泵可以在最大吸程“H”的情况下运行;如果“H”为负值，说明泵必须要在进口有一个最小压力为“H”米的压头的情况下才可以正常运行。

The calculation shows that if H is positive, the pump can operate at the maximum suction head H, and if H is negative, the pump must have a minimum pressure head of H m at the inlet to operate normally.

注:一般情况下不进行以上计算。只有在下列情况下使用泵时才要对“H”进行计算:

Note: The above calculation is generally not performed. H should be calculated only when the pump is used under the following conditions:

1、液体温度较高　The liquid temperature is relatively high

2、液体流速超过了额定值　The liquid flow rate exceeds the rated value

3、吸程较大或进口管路较长　Large suction head or long inlet pipeline

4、系统压力太小　The system pressure is too low

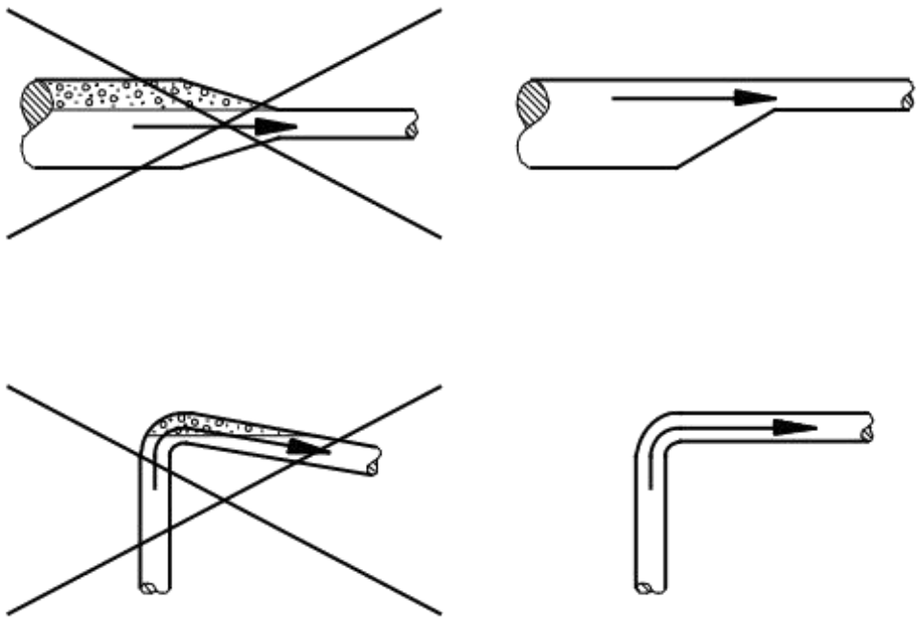
5、进口条件较差　Poor import conditions

★ 管道安装条件 Pipe installation condition

☁ 安装管道时 ,必须确保泵壳不承受管道应力。When installing the pipeline, ensure the pump housing is not subjected to pipeline stress.

☁吸水管和排水管的尺寸必须恰当，同时需要考虑到泵的入口压力。The size of the suction and discharge pipes must be appropriate, and the pump's inlet pressure must be taken into account.

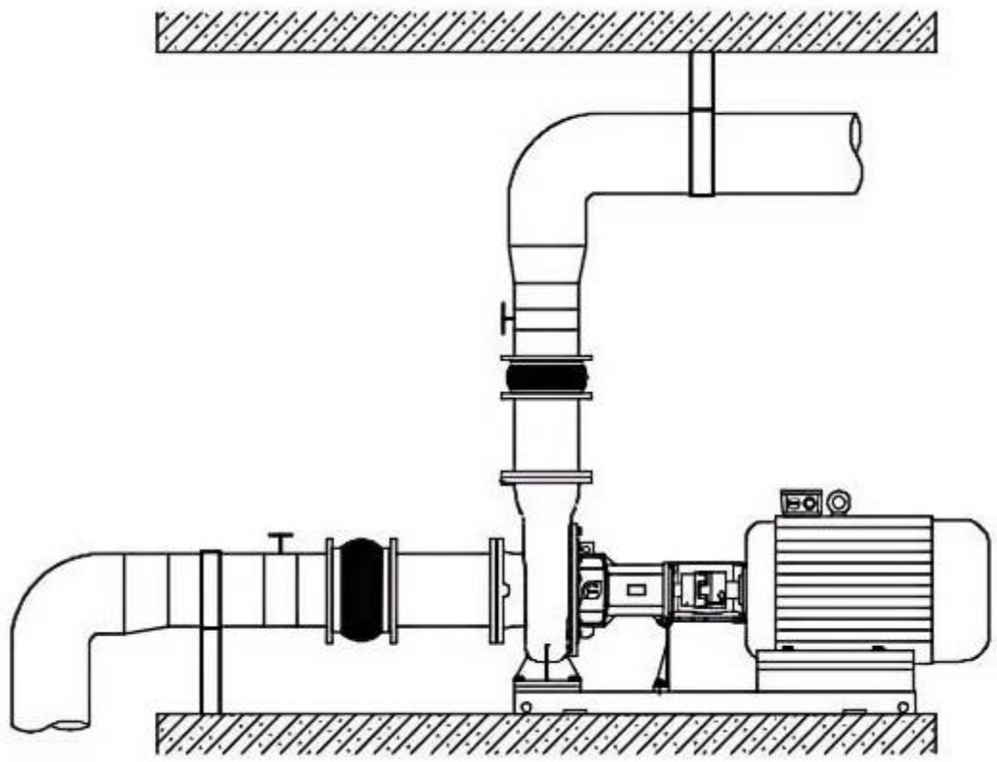
☁ 安装管道 ,避免产生气阻 ,特别是在泵的入口侧。见图 :Install the pipeline to prevent airlocks, especially on the pump inlet side. See Figure：



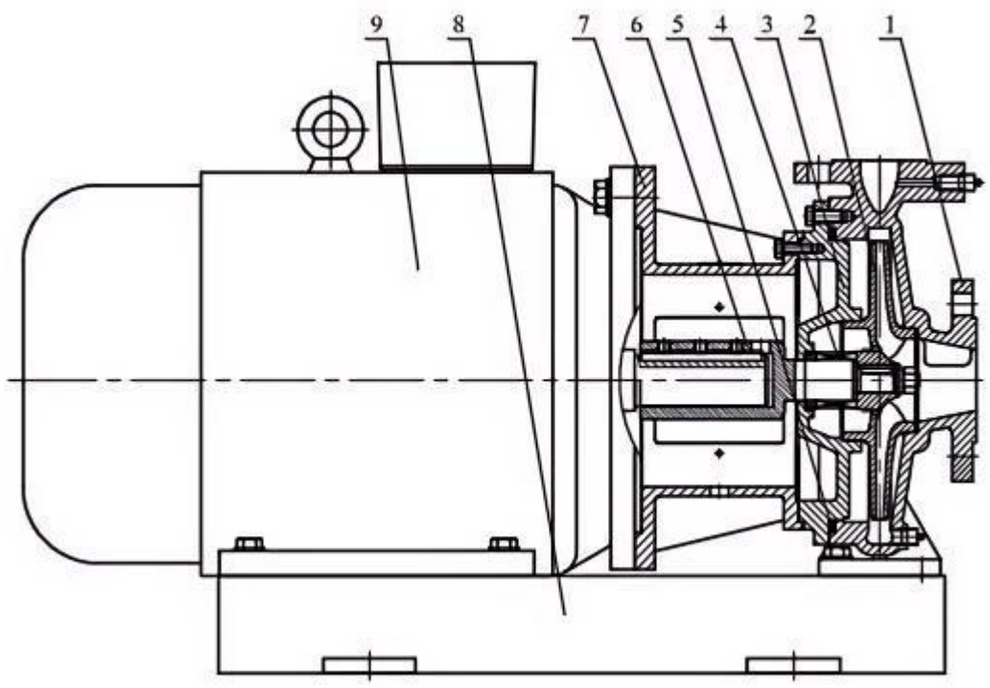
- 在泵的两端分别安装一个隔离阀，以便在需要对泵进行清洁或维修时无须将系统排干。Install a shut-off valve at each end of the pump to prevent system drainage during cleaning or maintenance.

- 确保在尽可能接近泵的地方为管道提供足够的支持(入口侧和出口侧)。对接法兰应该与泵的法兰贴牢而又不会受到牵拉应力，因为牵拉应力的存在会损坏泵。

Ensure adequate support for the pipeline as close as possible to the pump (both inlet and outlet sides). The flanges should be tightly connected to the pump's flanges without being subjected to tensile stress, as such stress could damage the pump.

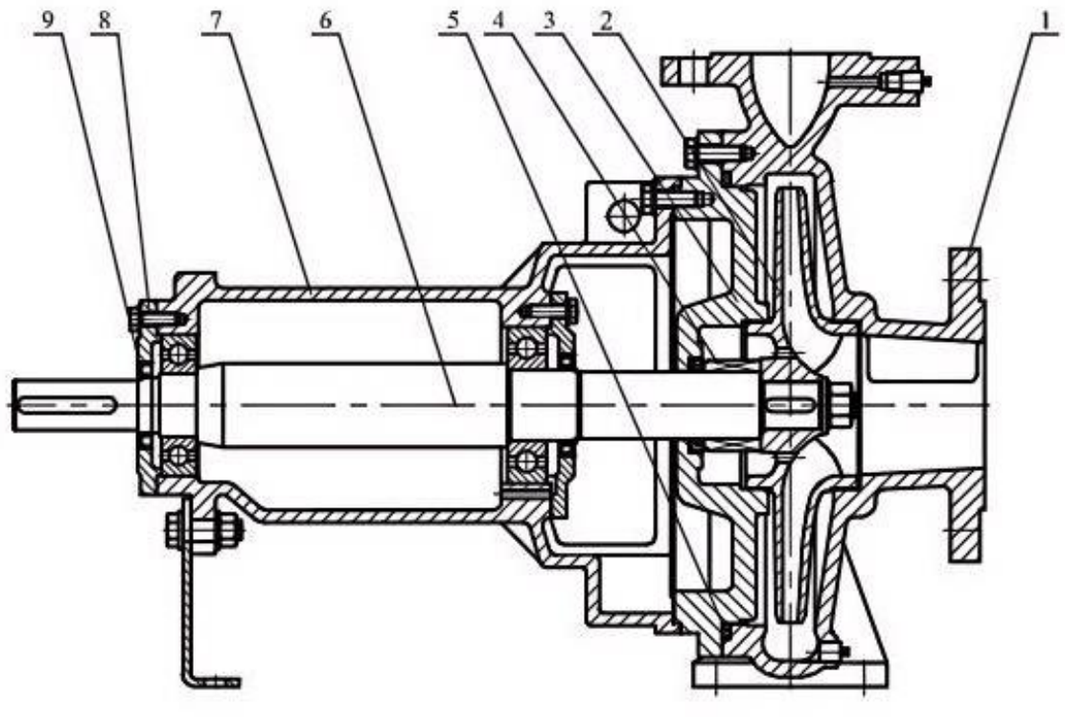


★ NIS、NISF 截面图 Sectional view



Number	零件名称 Part name
1	泵体 pump body
2	叶轮 impeller
3	泵盖 pump bonnet
4	机械密封 contact seal
5	O 形橡胶圈 O-ring rubber
6	泵轴 pump spindle
7	泵头 pump head
8	底座 foundation
9	电机 electric motor

★ NISO 截面图 Sectional view



Number	零件名称 Part name
1	泵体 pump body
2	叶轮 impeller
3	泵盖 pump bonnet
4	机械密封 contact seal
5	O 形橡胶圈 O-ring rubber
6	泵轴 pump spindle
7	悬架体 suspension body
8	轴承压盖 bearing cover
9	油封 oil seal

★ NIS/NISF*G,NIS/NISF*(Q)产品范围 Product range

number	Pump Model	Q (m3/h)	H (m)	(Q)Scope (m3/h)	Motor (kw)	N (r/min)
1	NIS100-65-200G/18.5	100	42	40~120	18.5	2950
2	NIS100-65-200G/22		51		22	
3	NIS100-65-200G/30		67		30	
4	NIS100-65-200G/37		80		37	
5	NIS100-65-250G/45		103		45	
6	NIS100-65-250G/55		116		55	
7	NIS100-65-315G/75		140		75	
8	NIS100-65-315G/90		160		90	
9	NIS100-80-160G/11		26		11	
10	NIS100-80-160G/15		36		15	
11	NIS100-80-160G/18.5		44		18.5	
12	NIS125-100-200(Q)/30	160	43	60~200	30	
13	NIS125-100-200(Q)/37		52		37	
14	NIS125-100-200G/30	200	35	80~240	30	
15	NIS125-100-200G/37		45		37	
16	NIS125-100-200G/45		54		45	
17	NIS125-100-200G/55		68		55	
18	NIS125-100-200G/75		74		75	
19	NIS125-100-250G/75		86		75	
20	NIS125-100-250G/90		102		90	
21	NIS125-100-315G/110		128		110	
22	NIS125-100-315G/132		150		132	
23	NIS125-100-315G/160		160		160	

number	Pump Model	Q (m3/h)	H (m)	(Q)Scope (m3/h)	Motor （kw)	N (r/min)
1	NIS100-65-200G/3	50	13	20~60	3	1450
2	NIS100-65-200G/4		17.5		4	
3	NIS100-65-250G/5.5		24		5.5	
4	NIS100-65-250G/7.5		28		7.5	
5	NIS100-65-315G/11		40		11	1480
6	NIS100-65-315G/15		45		15	
7	NIS100-80-160G/1.5		7		1.5	1450
8	NIS100-80-160G/2.2		10		2.2	
9	NIS125-100-200G/4	100	9.5	40~120	4	
10	NIS125-100-200G/5.5		13		5.5	
11	NIS125-100-200G/7.5		18		7.5	
12	NIS125-100-250G/11		25		11	1480
13	NIS125-100-315G/15		33		15	
14	NIS125-100-315G/18.5		40		18.5	
15	NIS125-100-400G/30		55		30	
16	NIS125-100-400G/37		68		37	
17	NIS125-100-400G/45		72		45	
18	NIS150-125-200(Q)/5.5	160	8.5	60~200	5.5	1450
19	NIS150-125-200(Q)/7.5		12		7.5	
20	NIS150-125-200(Q)/11		16		11	1480
21	NIS(F)150-125-200G/5.5	200	7	80~240	5.5	1450
22	NIS(F)150-125-200G/7.5		10		7.5	
23	NIS(F)150-125-200G/11		14		11	1480
24	NIS150-125-250G/15		18		15	
25	NIS150-125-250G/18.5		23		18.5	
26	NIS150-125-250G/22		27		22	

number	Pump Model	Q (m3/h)	H (m)	(Q)Scope (m3/h)	Motor （kw)	N (r/min)
27	NIS150-125-315(Q)/22	160	32	60~200	22	1480
28	NIS150-125-315(Q)/30		43		30	
29	NIS150-125-315G/30	200	36	80~240	30	
30	NIS150-125-315G/37		42		37	
31	NIS150-125-400(Q)/37	160	50	60~200	37	
32	NIS150-125-400G/45	200	54	80~240	45	
33	NIS150-125-400G/55		64		55	
34	NIS150-125-400G/75		71		75	
35	NIS200-150-250(Q)/11	300	9.5	120~360	11	
36	NIS200-150-250(Q)/15		12.5		15	
37	NIS200-150-250(Q)/18.5		16		18.5	
38	NIS200-150-250(Q)/22		20		22	
39	NIS(F)200-150-250G/15	400	9	160~480	15	
40	NIS(F)200-150-250G/18.5		12		18.5	
41	NIS(F)200-150-250G/22		15.5		22	
42	NIS(F)200-150-250G/30		20		30	
43	NIS200-150-315G/37		24		37	
44	NIS200-150-315G/45		29		45	
45	NIS200-150-315G/55		36		55	
46	NIS200-150-400G/75		47		75	
47	NIS200-150-400G/90		56		90	
48	NIS200-150-400G/110		63		110	

★ NISO,NIS, NISF 产品范围 Product range

序号	Pump model	Q [m³/h]	H [m]	motor [kW]	n [r/min]
1	50-32-160/3	12.5	28	3	2900
2	50-32-160/4		36	4	
3	50-32-160/5.5		44	5.5	
4	50-32-200/7.5		55	7.5	
5	50-32-200/11		74	11	2950
6	65-40-200/7.5	25	48	7.5	2900
7	65-40-200/11		62	11	2950
8	65-40-200/15		72	15	
9	65-40-250/18.5		84	18.5	
10	65-40-250/22		95	22	
11	65-40-250/30		105	30	
12	65-40-315/22		105	22	
13	65-40-315/30		120	30	
14	65-40-315/37		145	37	
15	65-40-315/45		165	45	
16	65-50-160/4		28	4	2900
17	65-50-160/5.5		36	5.5	
18	65-50-160/7.5		42	7.5	
19	80-50-200/11	50	44	11	2950
20	80-50-200/15		57	15	
21	80-50-200/18.5		64	18.5	
22	80-50-200/22		71	22	
23	80-50-250/30		84	30	
24	80-50-250/37		100	37	
25	80-50-315/37		105	37	
26	80-50-315/45		125	45	
27	80-50-315/55		140	55	
28	80-50-315/75		152	75	

序号	Pump model	Q [m³/h]	H [m]	motor [kW]	n [r/min]
29	80-65-160/5.5	50	22	5.5	2900
30	80-65-160/7.5		29	7.5	
31	80-65-160/11		38	11	2950
32	80-65-160/15		44	15	
33	100-65-200/18.5	100	36	18.5	
34	100-65-200/22		43	22	
35	100-65-200/30		56	30	
36	100-65-200/37		67	37	
37	100-65-250/45		80	45	
38	100-65-250/55		88	55	
39	100-65-250/75		108	75	
40	100-65-315/90		128	90	
41	100-65-315/110		148	110	
42	100-80-160/11		23	11	
43	100-80-160/15		30	15	
44	100-80-160/18.5		35	18.5	
45	100-80-160/22		40	22	
46	125-100-200/30	200	34	30	
47	125-100-200/37		41	37	
48	125-100-200/45		48	45	
49	125-100-200/55		55	55	
50	125-100-200/75		66	75	
51	125-100-250/75		75	75	
52	125-100-250/90		86	90	
53	125-100-250/110		100	110	
54	125-100-315/90		93	90	
55	125-100-315/110		108	110	
56	125-100-315/132		124	132	
57	125-100-315/160		144	160	

序号	Pump model	Q [m³/h]	H [m]	motor [kW]	n [r/min]
1	50-32-160/0.55	6.3	8.5	0.55	1450
2	50-32-160/0.75		11	0.75	
3	50-32-200/1.1		14	1.1	
4	50-32-200/1.5		18	1.5	
5	65-40-200/1.1	12.5	12	1.1	
6	65-40-200/1.5		15	1.5	
7	65-40-200/2.2		17.5	2.2	
8	65-40-250/3		25	3	
9	65-40-315/4		34	4	
10	65-40-315/5.5		40	5.5	
11	65-50-160/0.55		7	0.55	
12	65-50-160/0.75		9	0.75	
13	65-50-160/1.1		10.5	1.1	
14	80-50-200/1.5	25	11	1.5	
15	80-50-200/2.2		15	2.2	
16	80-50-200/3		17.5	3	
17	80-50-250/4		21	4	
18	80-50-250/5.5		25	5.5	
19	80-50-315/5.5		30	5.5	
20	80-50-315/7.5		37	7.5	
21	80-65-160/0.75		6	0.75	
22	80-65-160/1.1		8	1.1	
23	80-65-160/1.5		10.5	1.5	
24	100-65-200/3	50	11.5	3	
25	100-65-200/4		14	4	
26	100-65-200/5.5		16	5.5	
27	100-65-250/5.5		20	5.5	
28	100-65-250/7.5		25	7.5	
29	100-65-315/11		32	11	1480

序号	Pump model	Q [m³/h]	H [m]	motor [KW]	n [r/min]
30	100-65-315/15	50	40	15	1480
31	100-80-160/1.5		6.5	1.5	1450
32	100-80-160/2.2		9	2.2	
33	100-80-160/3		10.5	3	
34	125-80-400/15		39	15	1480
35	125-80-400/18.5		45	18.5	
36	125-80-400/22		50	22	
37	125-80-400/30		60	30	
38	125-80-400/37		67	37	
39	125-100-200/4	100	9	4	1450
40	125-100-200/5.5		11.5	5.5	
41	125-100-200/7.5		14	7.5	
42	125-100-200/11		16.5	11	1480
43	125-100-250/15		25	15	
44	125-100-315/11		23	11	
45	125-100-315/18.5		32	18.5	
46	125-100-315/22		36	22	
47	125-100-315/30		40	30	
48	125-100-400/30		50	30	
49	125-100-400/37		58	37	
50	125-100-400/45		65	45	
51	150-125-250/11	200	12.5	11	
52	150-125-250/15		16	15	
53	150-125-250/18.5		20	18.5	
54	150-125-250/22		24	22	
55	150-125-315/30		32	30	
56	150-125-315/37		39	37	
57	150-125-400/45		50	45	
58	150-125-400/55		57	55	

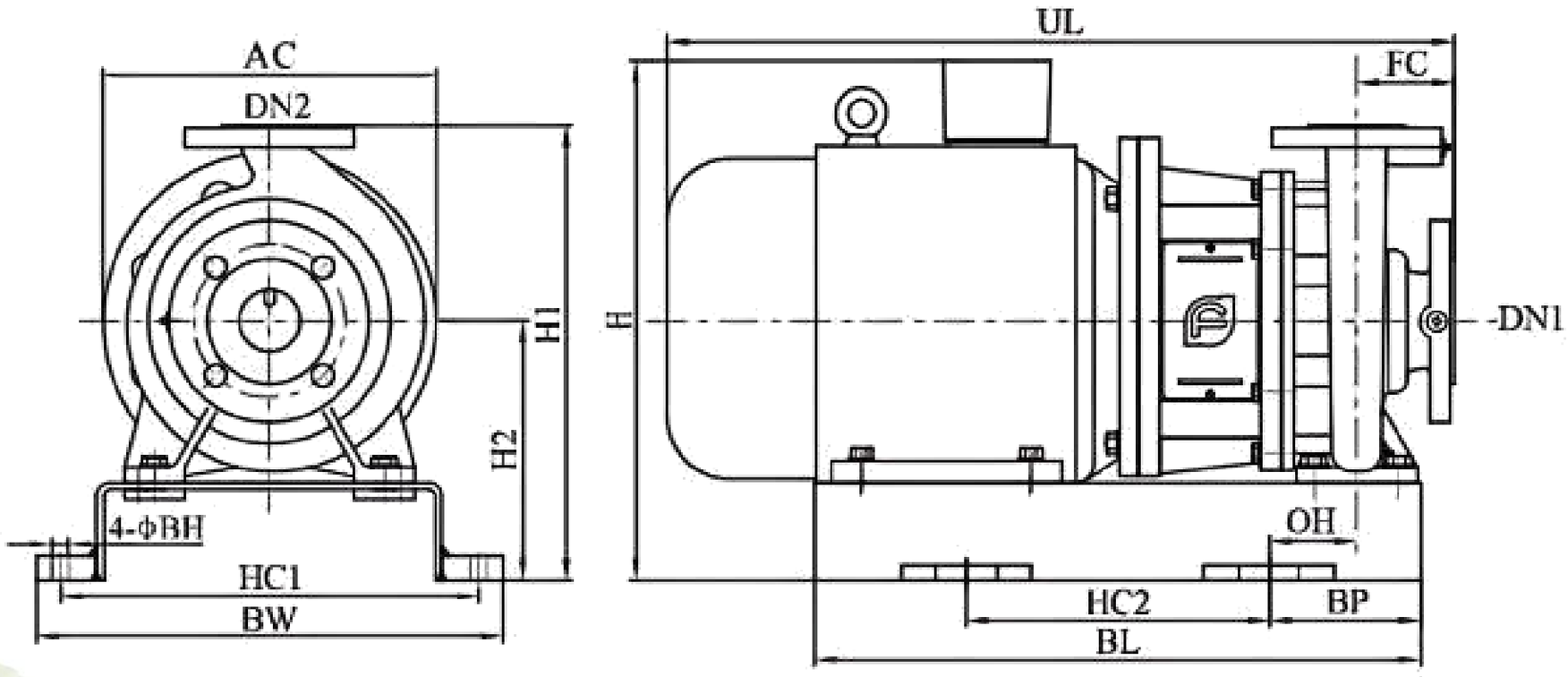
序号	Pump model	Q [m³/h]	H [m]	motor [kW]	n [r/min]
59	150-125-400/75	200	68	75	
60	200-150-315/37		23	37	
61	200-150-315/45		27	45	
62	200-150-315/55		32	55	
63	200-150-315/75	400	38	75	
64	200-150-400/75		43	75	
65	200-150-400/90		50	90	
66	200-150-400/110		62	110	
67	250-200-250/22*		12.5	22	
68	250-200-250/30*	500	16.5	30	
69	250-200-315/37		20	37	
70	250-200-315/45		23	45	
71	250-200-250/37*		17	37	
72	250-200-250/45*		20.5	45	
73	250-200-315/55		24	55	
74	250-200-315/75	630	32	75	
75	250-200-400/90		37	90	
76	250-200-400/110		44	110	1480
77	250-200-400/132		53	132	
78	250-200-400/160		60	160	
79	300-250-250(Q)/37*		11.5	37	
80	300-250-250(Q)/45*		15	45	
81	300-250-250(Q)/55*		18.5	55	
82	300-250-315(Q)/75		26	75	
83	300-250-315(Q)/90		32	90	
84	300-250-315(Q)/110	800	35	110	
85	300-250-400(Q)/110		38	110	
86	300-250-400(Q)/132		45	132	
87	300-250-400(Q)/160		53	160	

序号	Pump model	Q [m³/h]	H [m]	motor [kW]	n [r/min]
88	300-250-400(Q)/200	800	63	200	1480
89	300-250-250/45*	1000	11	45	
90	300-250-250/55*		14	55	
91	300-250-250/75*		20.5	75	
92	300-250-315/75		20	75	
93	300-250-315/90		25	90	
94	300-250-315/110		31	110	
95	300-250-400/132		37	132	
96	300-250-400/160		45	160	
97	300-250-400/200		50	200	
98	350-300-250/75*	1200	17	75	
99	350-300-250/90*		21.5	90	
100	350-300-250/110*		26	110	
101	350-300-250/132*		31	132	
102	350-300-315/132*		32.5	132	
103	350-300-315/160*		38.5	160	
104	350-300-315/185*		44.5	185	
105	350-300-315/200*		46	200	

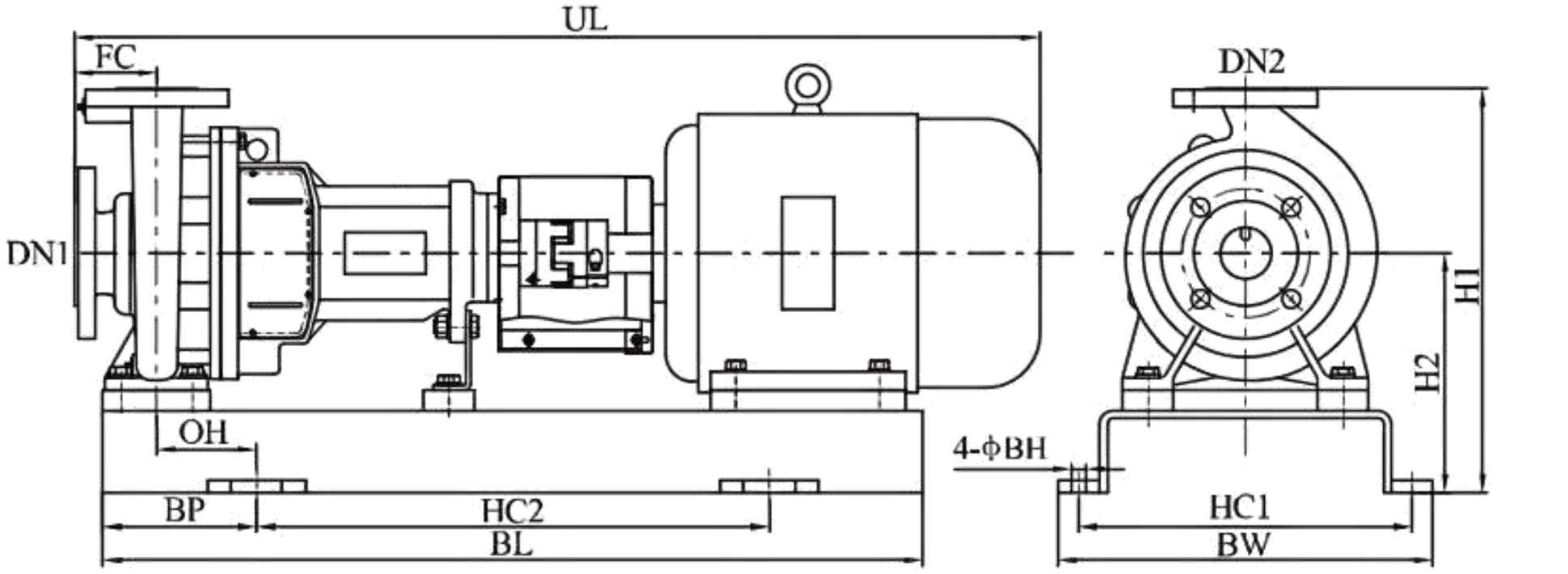
注：带*号的水泵目前只有NIS结构

Note: The water pump with * currently only has NIS structure.

★ NIS/NISF*G,NIS/NISF*(Q)泵外形尺寸图 Pump external dimension drawing



★ NISO 泵外形尺寸图 Pump external dimension drawing



★ NIS、NISF 泵外形尺寸图 Pump external dimension drawing