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## 产品概述 Production overview

SLDA型泵是根据API610《石油、重化学和天然气工业用离心泵》标准设计的轴向剖分，单级或两级两端支撑卧式离心泵，底脚支撑或中心支撑，泵体为蜗壳结构。

该泵安装维修方便，运行稳定，强度高，使用寿命长，可以满足较为苛刻的工况条件。

两端轴承是滚动轴承或滑动轴承，润滑方式为自润滑或者强制润滑。轴承体上可按要求设置温度和震动监视仪表。

泵的密封系统按照API682《离心泵及回转泵轴封系统》进行设计，可配置各种形式的密封及冲洗、冷却方案，也可根据客户的要求进行设计。

该泵的水力设计采用先进的CFD流场分析技术，效率高，汽蚀性能好，节能方面可以达到国际先进水平。

泵通过联轴器由电动机直接驱动，联轴器为叠片式挠性形式，只需拆除中间节即可对驱动端轴承和密封进行维修或更换。

SLDA type pump is based on the API610 "petroleum, chemical and gas industry with centrifugal pump" standard design of axial split single grade two or two ends of the supporting horizontal centrifugal pump, foot supporting or center support, pump volute structure.

The pump easy installation and maintenance, stable operation, high strength, long service life, to meet the more demanding working conditions.

Both ends of the bearing is a rolling bearing or sliding bearing, lubrication is self-lubricating or forced lubrication. The temperature and vibration monitoring instruments can be set on the bearing body as required.

Pump sealing system in accordance with API682 "centrifugal pump and rotary pump shaft seal system" design, can be configured in various forms of sealing and washing, cooling program, can also be designed according to customer requirements.

The pump hydraulic design using advanced CFD flow field analysis technology, high efficiency, good cavitation performance, energy saving can reach the international advanced level.

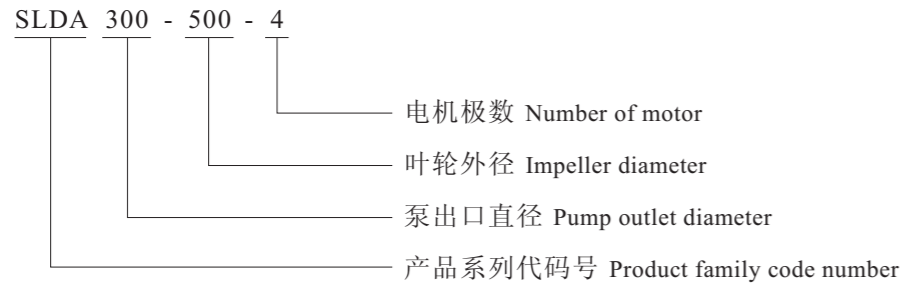
The pump is driven directly by the motor via a coupling. The coupling is a laminated version of the flexible version. The drive end bearing and seal can be repaired or replaced simply by removing the intermediate section.

## 应用范围 Application range

产品主要应用于工业流程、水力灌溉、污水处理、供水与水处理、石油化工、电站、热电厂、管网加压、原油输送、天然气输送、造纸、船用泵、海上工业、海水淡化等场合。可以输送清洁或含有微量杂质的介质、中性或有腐蚀性介质。

The products are mainly used in the industrial process, water irrigation, sewage treatment, water supply and water treatment, petroleum chemical industry, power plant, power plant, pipe network pressure, the transportation of crude oil, natural gas transportation, papermaking, marine pump, marine industry, seawater desalination and other occasions. You can transport clean or contain trace impurities of medium, neutral or corrosive medium.

型号说明 About the model



泵用材料 Pump materials

SLDA标准材料配置 SLDA standard material configuration

零件名称 Part Name	符合API610 11th 标准材料等级 Comply with API610 11th standard material grade						
	S-5	S-6	C-6	A-7	A-8	D-1	D-2
承压壳体 Pressure shell	ZG230-450	ZG230-450	ZG1Cr13Ni	ZG07Cr19Ni9	ZG07Cr19Ni11 Mo2	ZG0Cr26Ni6Mo2 Cu3	A890 5A
叶轮 Impeller	ZG230-450	ZG1Cr13Ni	ZG1Cr13Ni	ZG07Cr19Ni9	ZG07Cr19Ni11 Mo2	ZG0Cr26Ni6Mo2 Cu3	A890 5A
轴 Axis	42CrMo	42CrMo	30Cr13	05Cr17Ni4Cu4 Nb	05Cr17Ni4Cu4 Nb	022Cr22Ni5Mo3N	022Cr25Ni7Mo4W Cu
壳体口环 Shell ring	1Cr13MoS	1Cr13MoS	1Cr13MoS	06Cr19Ni10 表面硬化 Surface hardening	06Cr17Ni12Mo2 表面硬化 Surface hardening	022Cr22Ni5Mo3N 表面硬化 Surface hardening	022Cr25Ni7Mo4WCu 表面硬化 Surface hardening
叶轮口环 Impeller ring	30Cr13	30Cr13	30Cr13	06Cr19Ni10 表面硬化 Surface hardening	06Cr17Ni12Mo2 表面硬化 Surface hardening	022Cr22Ni5Mo3N 表面硬化 Surface hardening	022Cr25Ni7Mo4WCu 表面硬化 Surface hardening

可选设计 Optional design

1) 轴承冷却形式

轴承的冷却可以提供风扇冷却或者水冷却，用户可以根据现场实际情况进行选择。

2) 轴承润滑形式

根据功率和转速不同，可以选择油环润滑或者强制润滑两种方式对轴承进行润滑。

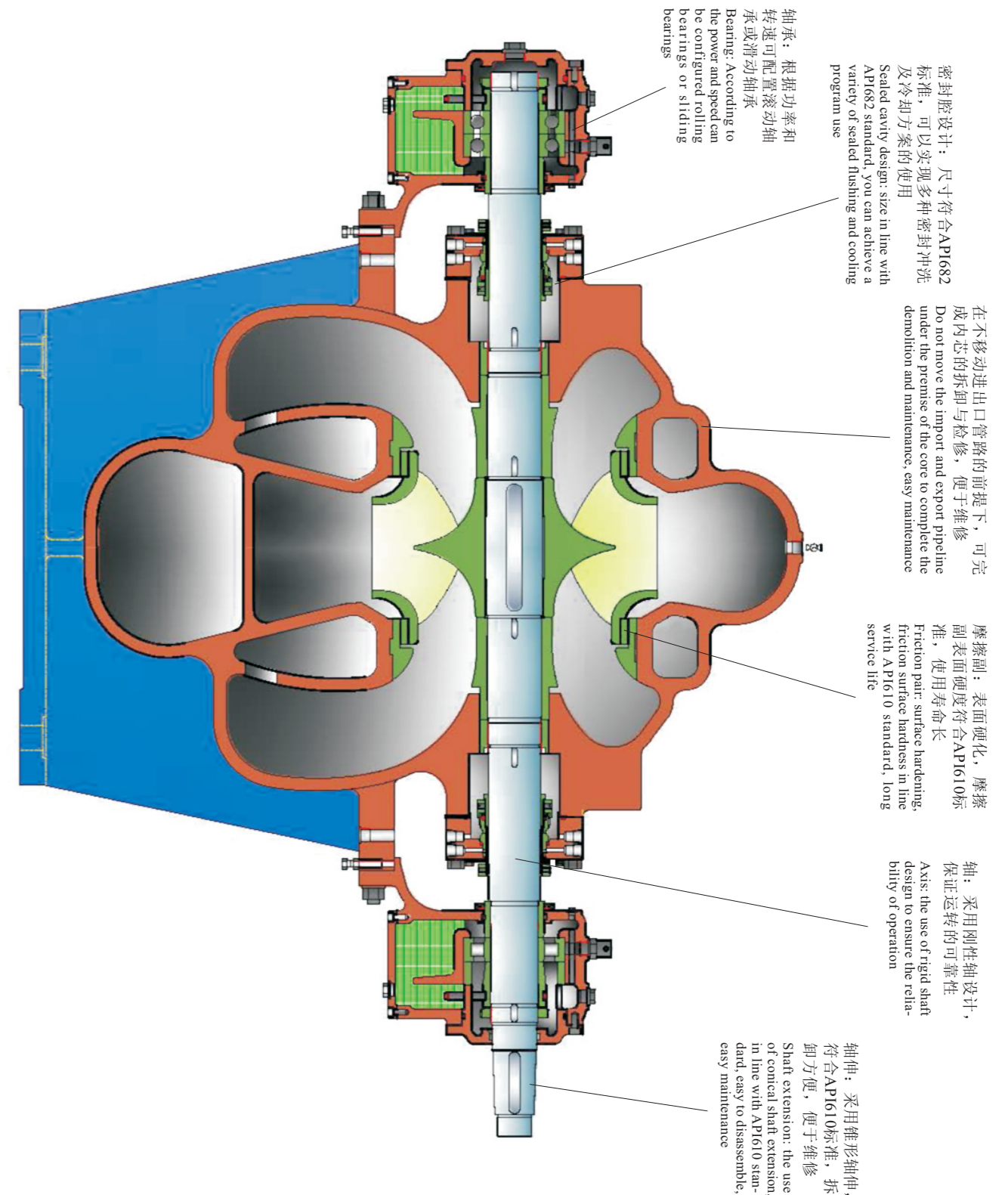
1). Bearing cooling form

The cooling of the bearing can provide fan cooling or water cooling, the user can choose according to the actual situation of the scene.

2). Bearing lubrication form

According to the power and speed are different, you can choose the oil ring lubrication or forced lubrication in two ways to lubricate the bearing.

SLDA泵结构图 SLDA pump structure drawing



## 设计方法 Design method

在产品的设计过程中，水力及零部件均采用国内领先的研发设计手段，保证产品性能及质量。

- 1) 水力设计采用CFD仿真技术，进行流场分析，优化产品水力性能。
- 2) 采用有限元分析软件对零件强度进行分析，保证产品运行的安全可靠。

In the product design process, the hydraulic and spare parts are using the leading domestic R & D design means to ensure product performance and quality.

- 1). Hydraulic design using CFD simulation technology, flow analysis, optimization of product hydraulic performance.
- 2). Using finite element analysis software to analyze the strength of parts to ensure the safety and reliability of product operation.

## 质量保证 Quality assurance

### 1) 零部件生产

叶轮可采用精密铸造工艺，严格控制水力部件的过流尺寸，从而保证产品的水力性能，保证产品效率；

### 2) 产品材质

泵用材料入厂时均严格按标准验收，进行化学成分和力学性能检测，轴需进行超声波无损探伤，确保零部件材质的合格和安全性；

### 3) 转子部件

转子部件均按精度等级2.5级做动平衡实验，确保产品运行的稳定可靠性；

### 4) 泵性能试验

在泵装配完毕后，需要进行性能试验，并得出试验数据，严格按照API610和GB/T 3216-2005《回转动力泵水力性能验收试验》一级要求进行验收。

### 1). Parts production

Impeller can be used precision casting process, and strictly control the hydraulic components of the over-flow size, so as to ensure the hydraulic performance of products to ensure product efficiency;

### 2). Product material

Pump materials into the factory are strictly in accordance with the standard acceptance, the chemical composition and mechanical properties of the test, the shaft to be ultrasonic non-destructive testing to ensure that the parts of the material qualified and safe and reliable;

### 3). Rotor parts

Rotor parts are according to the accuracy level 2.5 to do the dynamic balance experiment to ensure the stability of product operation reliability;

### 4). Pump performance test

After the pump assembly is completed, the need for performance testing, and test data, in strict accordance with API610 and GB / T 3216-2005 "rotary power pump hydraulic performance acceptance test" level requirements for acceptance.

## 配套系统 Supporting system

### 1) 监测系统

根据用户要求，可对泵配置进出口压力检测仪表、轴承测温仪表、震动检测仪表、转速检测仪表等辅助仪表和装置。

### 1). Monitoring system

According to user requirements, the pump can be equipped with import and export pressure detection instruments, bearing temperature measuring instruments, vibration detection instruments, speed detection instruments and other auxiliary instruments and devices.

### 2) 传动设备

根据要求传动装置可选择联轴器直联、液力耦合器、变速齿轮箱等。

### 3) 原动机

原动机可以选配电动机、柴油机、汽轮机、液力透平等。

### 2). Transmission equipment

According to the requirements of the transmission device can choose coupling directly, hydraulic coupling, variable speed gear box and so on.

### 3) the original motive

The prime mover can be equipped with motor, diesel, steam turbine, hydraulic turbine and so on.

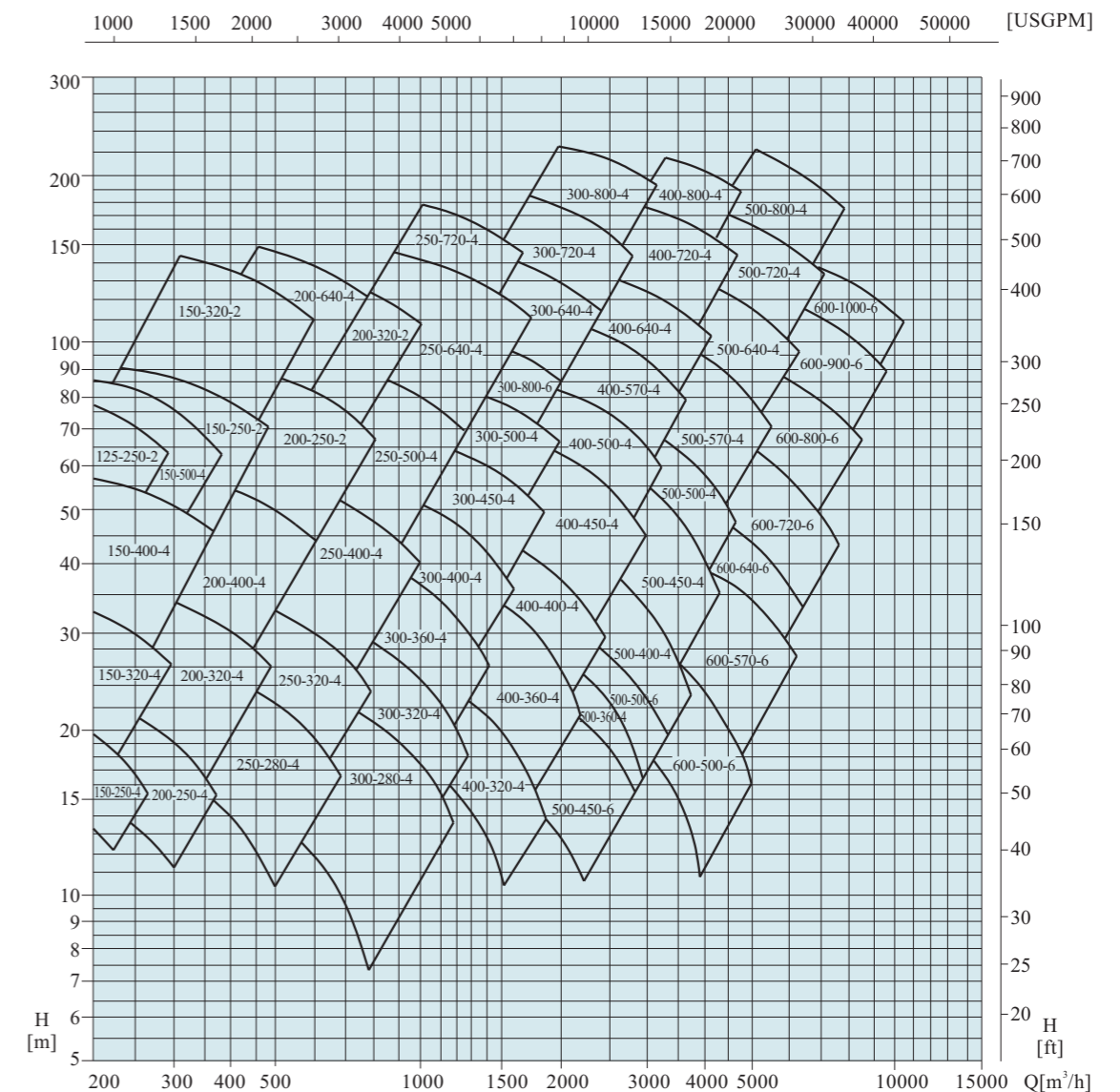
## 型谱图 Atlas of style

流量范围 Flow range: (Q) 20~10000 m<sup>3</sup>/h

设计压力 Design pressure: (P)6.4MPa(max)

扬程范围 Head range: (H) 可达200m

温度 Temperature: (t)-20~160℃



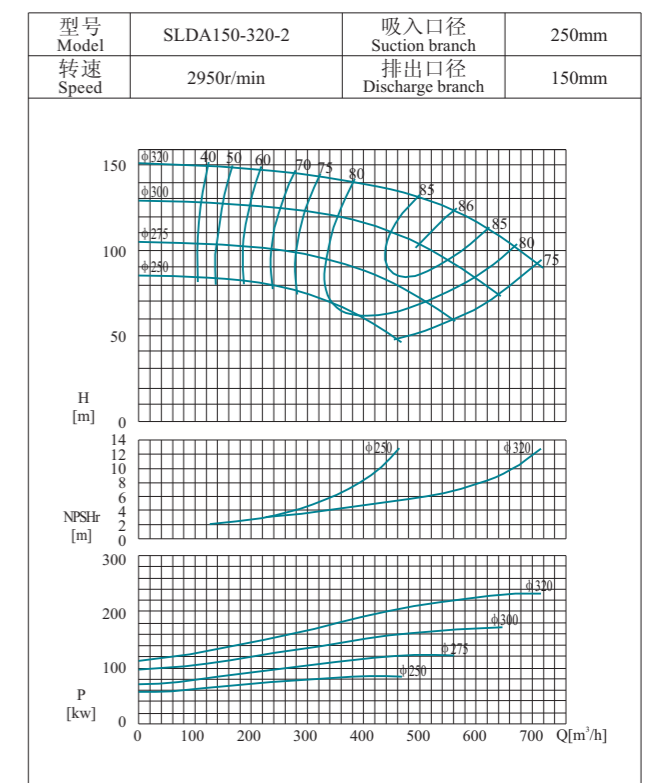
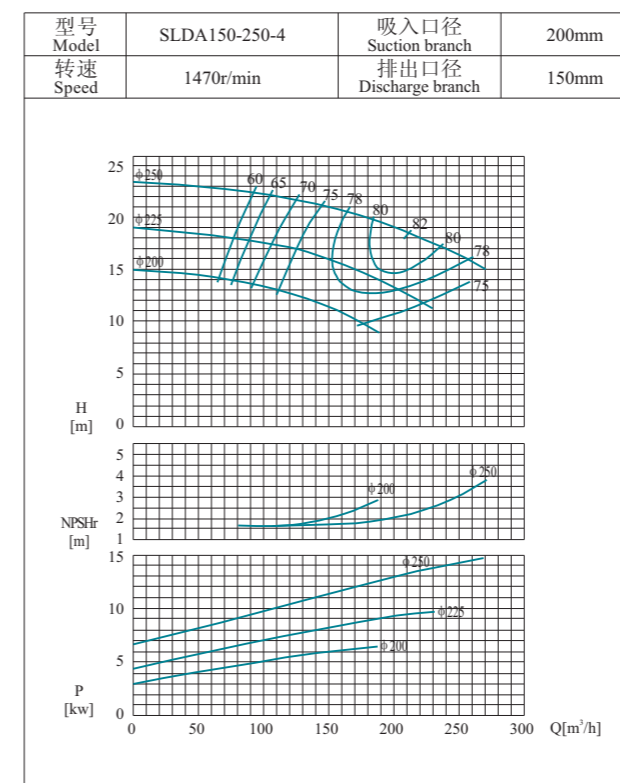
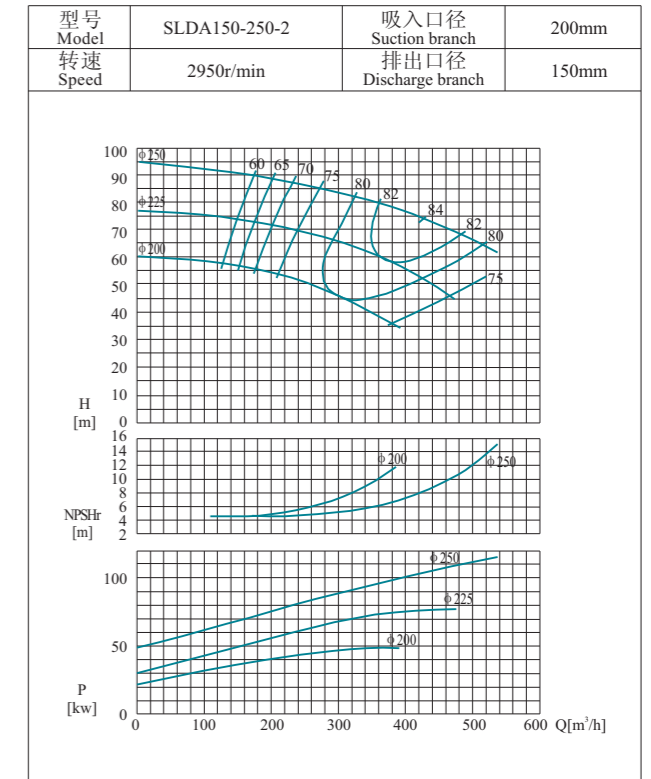
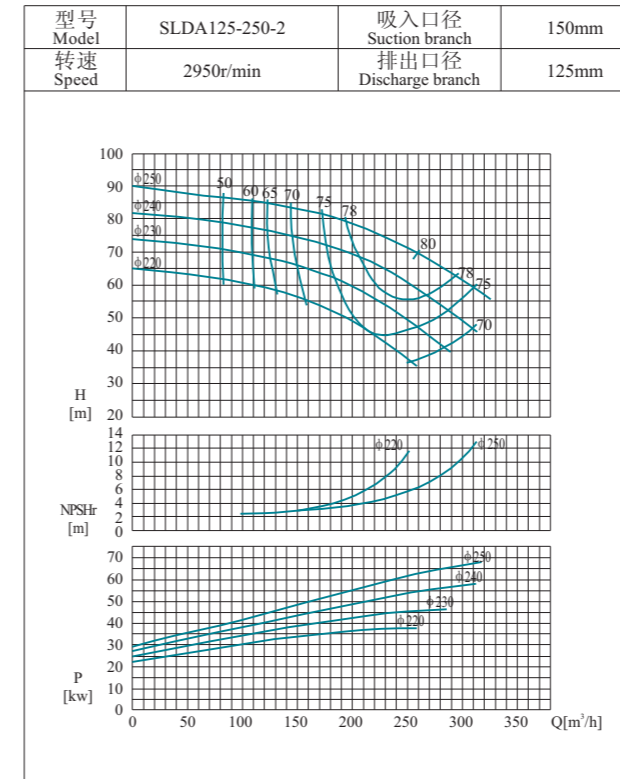


性能参数表 Performance data

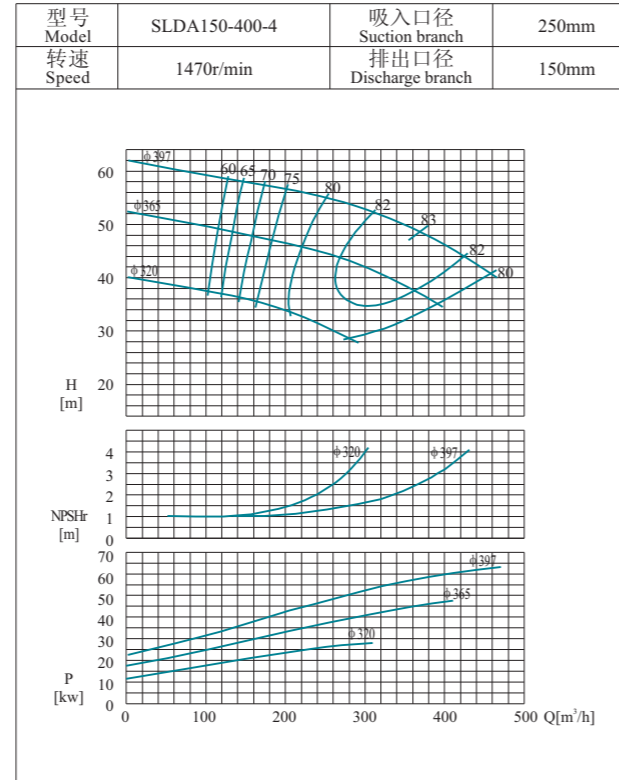
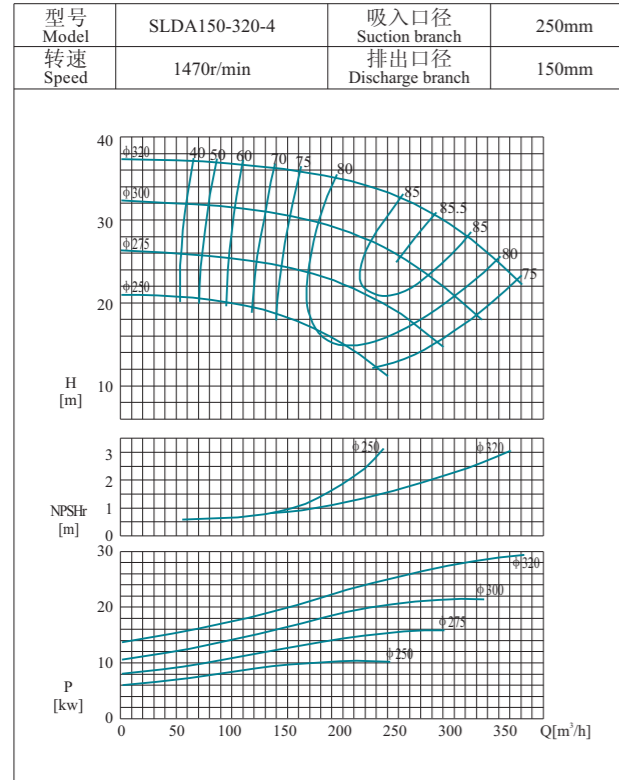
型号 Model	流量 Flow (m³/h)	扬程 Head (m)	转速 Speed (r/min)	效率 Eff. (%)	汽蚀 Cavitation (m)
SLDA 125-250-2	260	70	2950	80	6
SLDA 150-250-2	424	74	2950	84	8
SLDA 150-250-4	213	18.5	1470	82	2.3
SLDA 150-320-2	560	124	2950	86	7
SLDA 150-320-4	280	31	1470	85.5	2
SLDA 150-400-4	370	48	1470	83	2.7
SLDA 150-500-4	330	72	1470	78.5	2.3
SLDA 200-250-2	670	69	2950	86	8
SLDA 200-250-4	330	17.5	1470	85	2.1
SLDA 200-320-2	850	120	2950	86.5	10.2
SLDA 200-320-4	420	30	1470	85	2.5
SLDA 200-400-4	525	51	1470	84	2.7
SLDA 200-450-4	750	65	1470	86	4
SLDA 200-500-4	680	76	1470	83	3.5
SLDA 200-640-4	850	135	1490	80.5	3.5
SLDA 250-320-4	720	26	1470	86	3.4
SLDA 250-400-4	850	52	1470	89	4
SLDA 250-500-4	1090	78	1480	86	4.5
SLDA 250-640-4	1400	130	1470	87	5
SLDA 250-720-4	1540	175	1490	82.5	6
SLDA 300-280-4	950	20	1470	88	4.5
SLDA 300-320-4	1060	22	1470	87	5.5
SLDA 300-360-4	1260	33	1470	89	6
SLDA 300-400-4	1350	47	1470	87	5.5
SLDA 300-450-4	1650	56	1470	90.5	5.5
SLDA 300-500-4	1700	74	1480	89.5	6
SLDA 300-640-4	2230	128	1480	89	8
SLDA 300-800-4	2570	200	1490	87	7
SLDA 300-800-6	1680	87	980	87	3

型号 Model	流量 Flow (m³/h)	扬程 Head (m)	转速 Speed (r/min)	效率 Eff. (%)	汽蚀 Cavitation (m)
SLDA 400-360-4	1940	30	1470	87.5	6.5
SLDA 400-400-4	2100	36	1470	90	7.8
SLDA 400-450-4	2440	57	1480	90	7
SLDA 400-500-4	2880	64	1470	88	8
SLDA 400-640-4	3590	115	1470	88.5	10
SLDA 400-570-4	3200	99	1475	90	7
SLDA 400-570-6	2130	43.5	980	89	3
SLDA 400-720-4	3720	165	1490	88.5	11
SLDA 400-800-4	4280	196	1490	88	10.5
SLDA 400-850-6	2090	110	980	86.5	3
SLDA 500-360-4	3000	26	1480	86	10.5
SLDA 500-400-4	3060	34	1470	88	10
SLDA 500-450-4	3780	43	1470	86	11.5
SLDA 500-450-6	2500	19	980	86	5
SLDA 500-500-4	4500	58	1470	90	12
SLDA 500-500-6	3000	27	980	89.5	5.4
SLDA 500-570-4	4900	90	1480	90.5	11.5
SLDA 500-570-6	3250	40	980	90.5	5.2
SLDA 500-640-4	5400	108	1470	89	11
SLDA 500-720-4	6000	150	1490	91	12.5
SLDA 500-800-4	6800	195	1490	90	13
SLDA 500-800-6	4500	90	985	90	5.5
SLDA 600-500-6	4200	23	980	88	7
SLDA 600-1000-6	9000	145	980	90	9
SLDA 600-640-6	5300	45	980	90	7
SLDA 600-720-6	6400	57	980	90	8
SLDA 600-800-6	6750	80	980	89.5	8
SLDA 600-900-6	8200	103	980	90.5	9

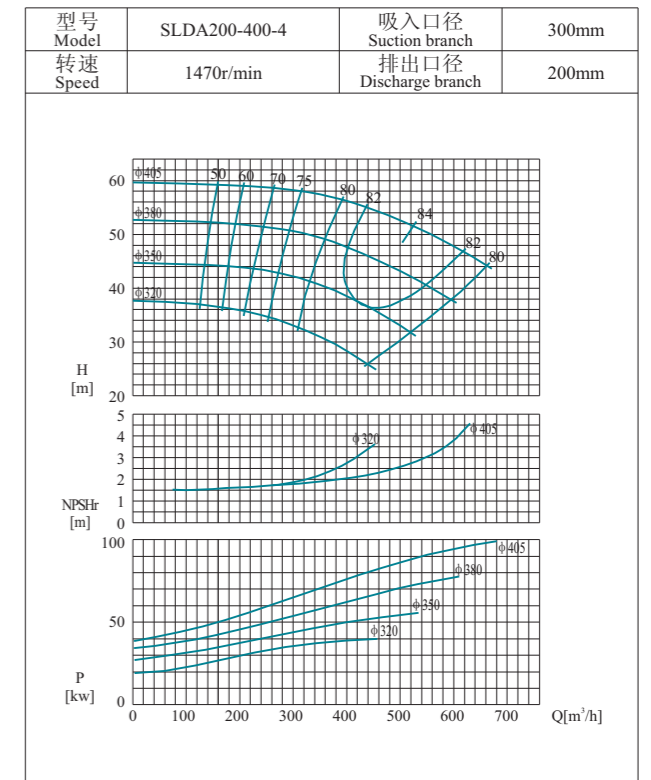
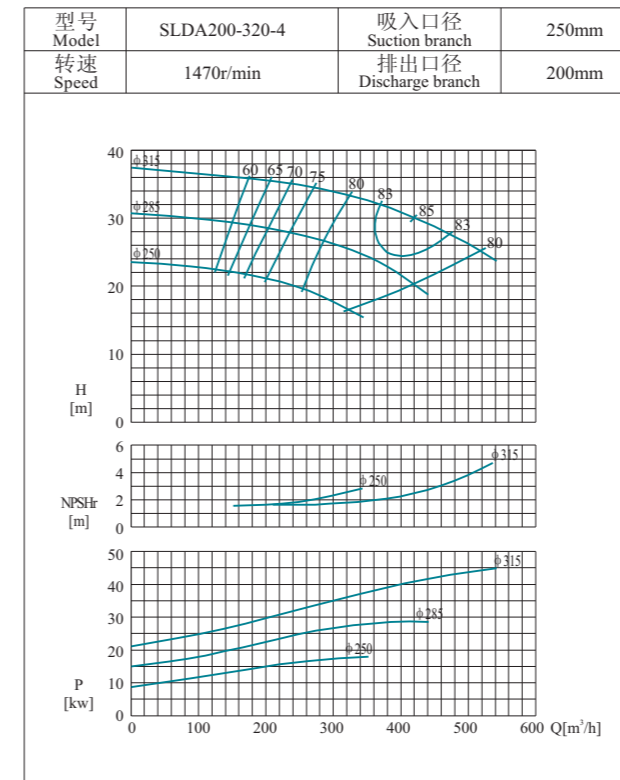
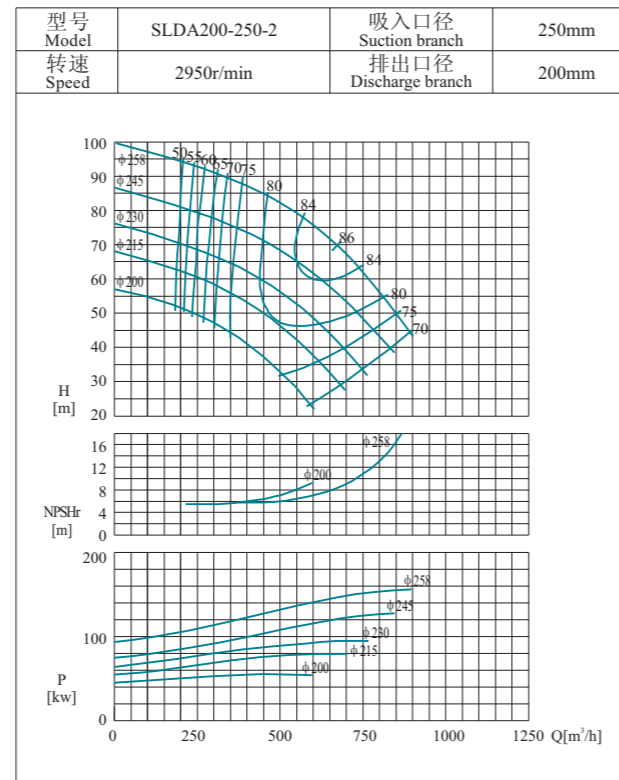
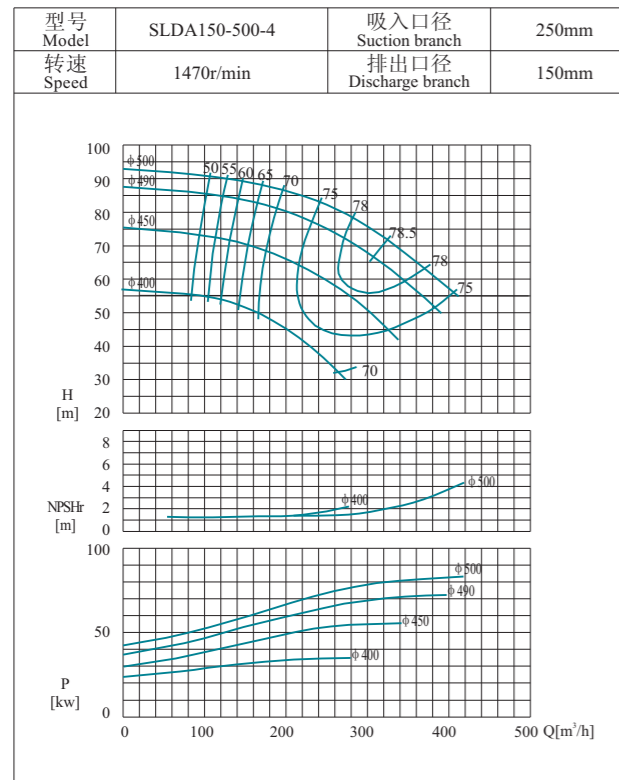
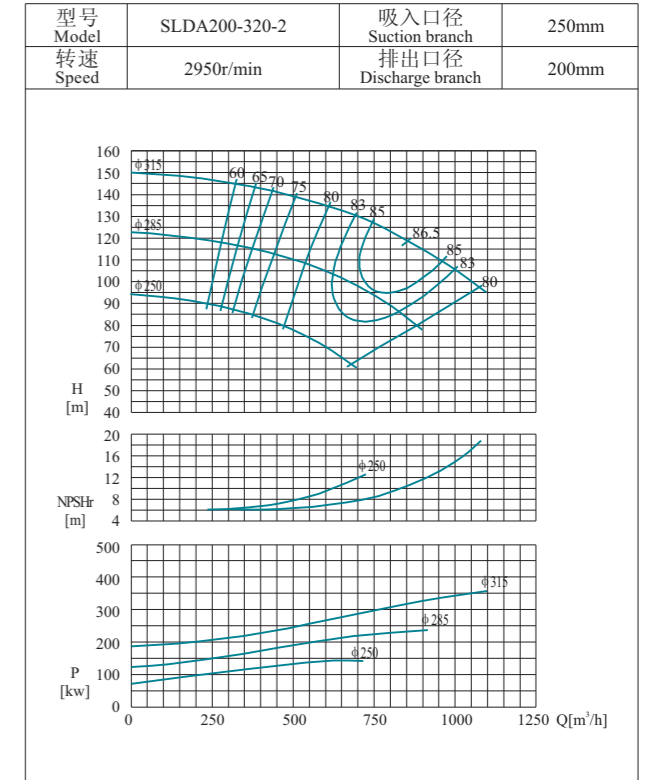
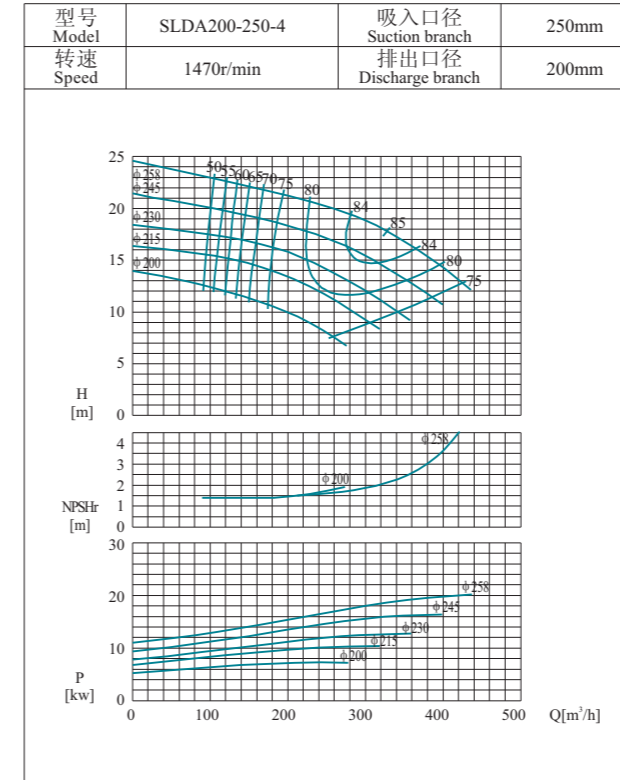
性能曲线图 Performance curve



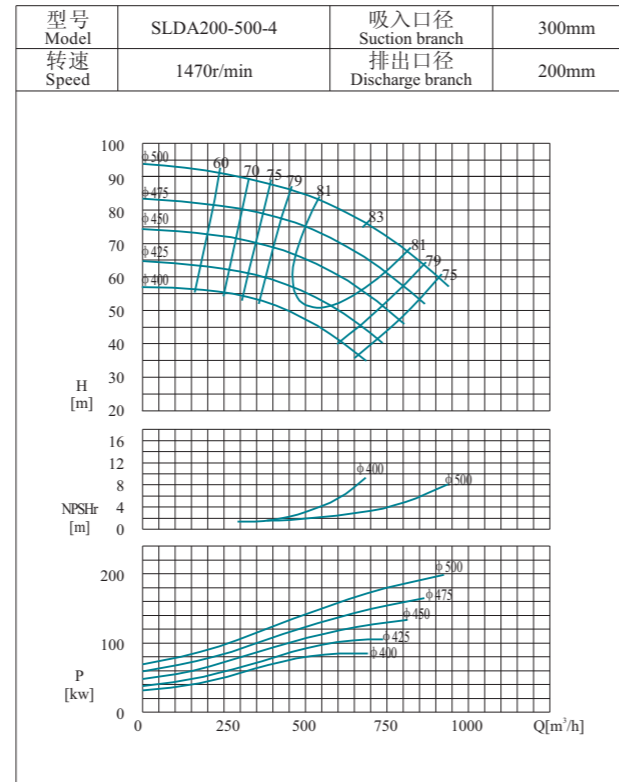
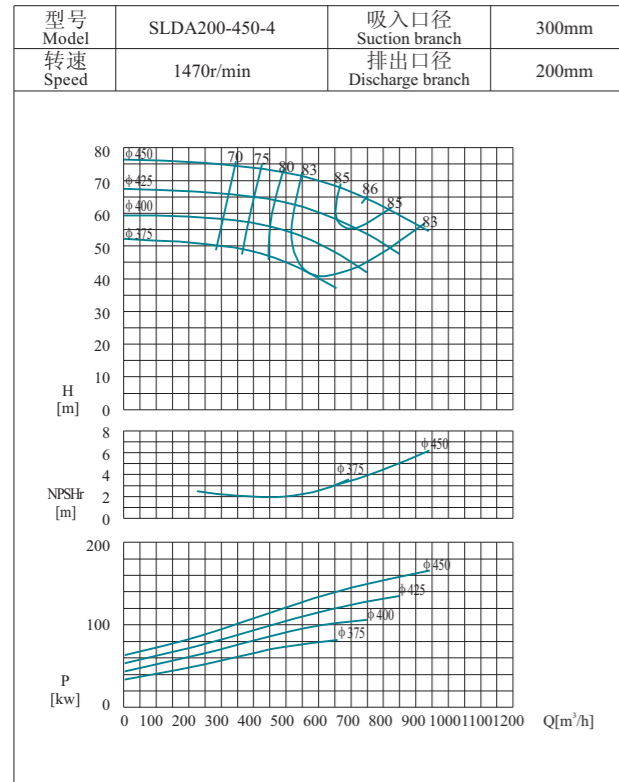
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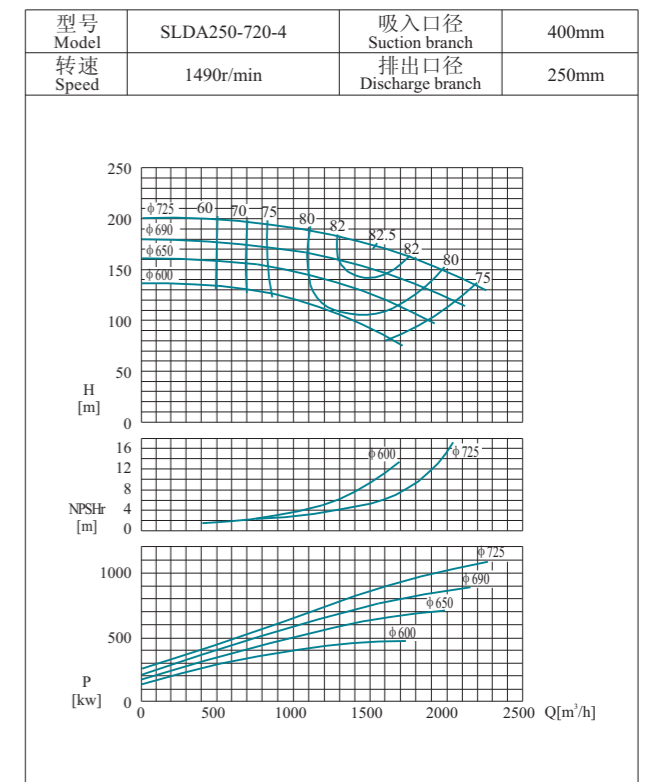
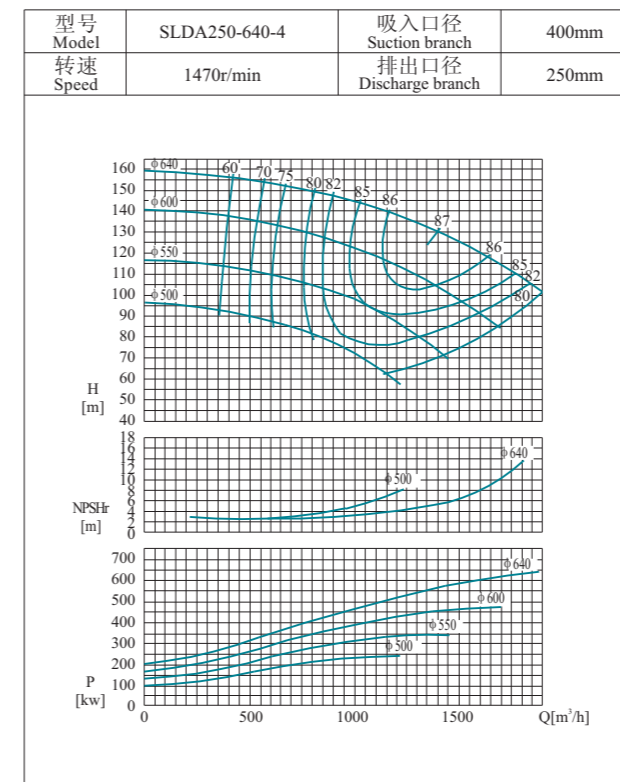
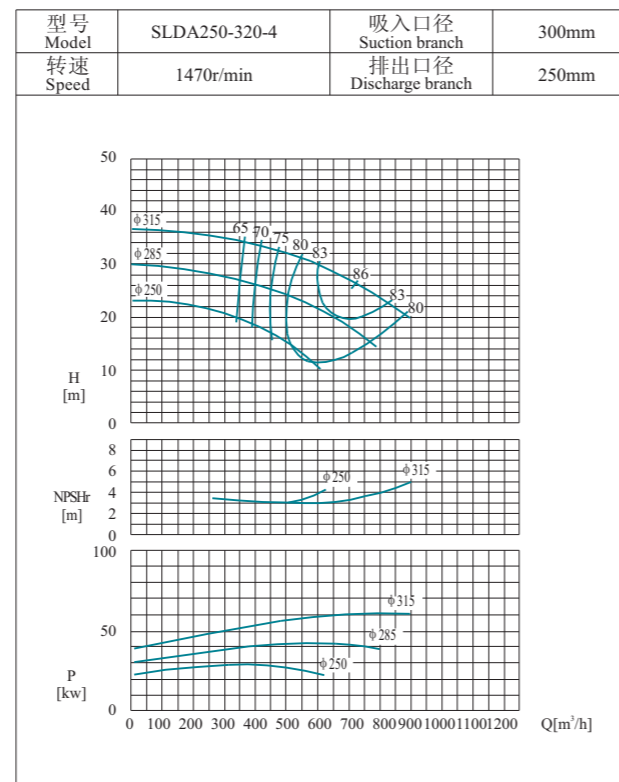
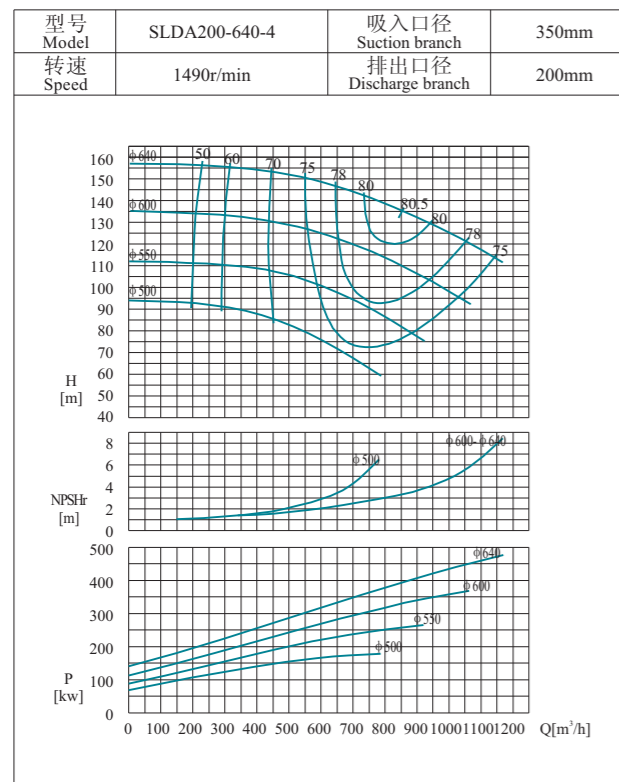
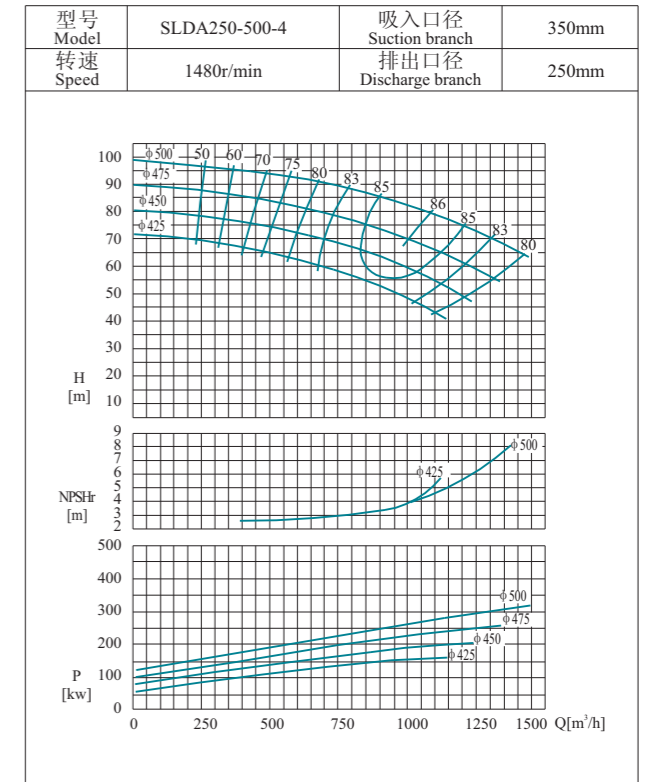
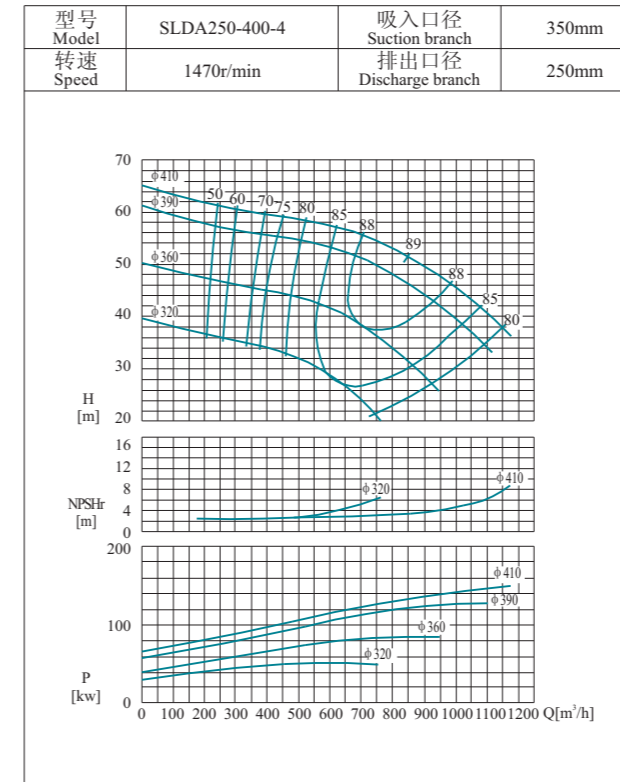
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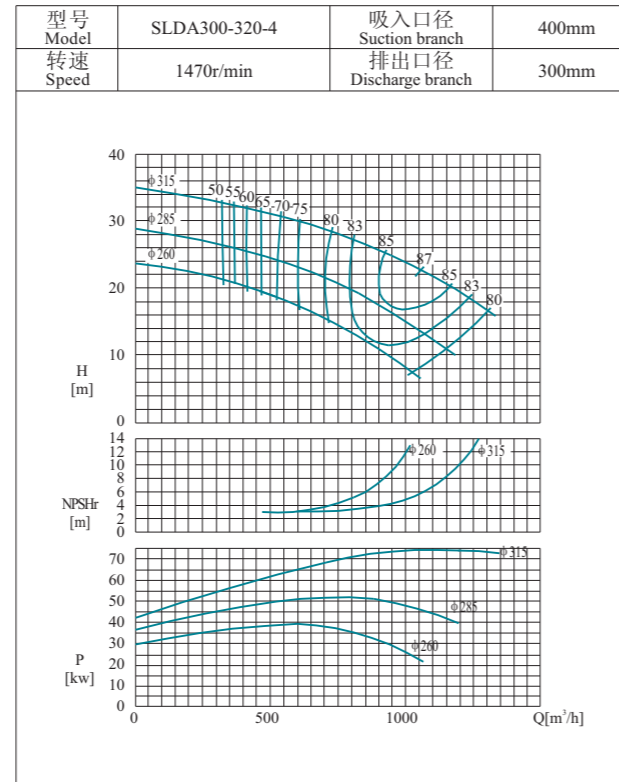
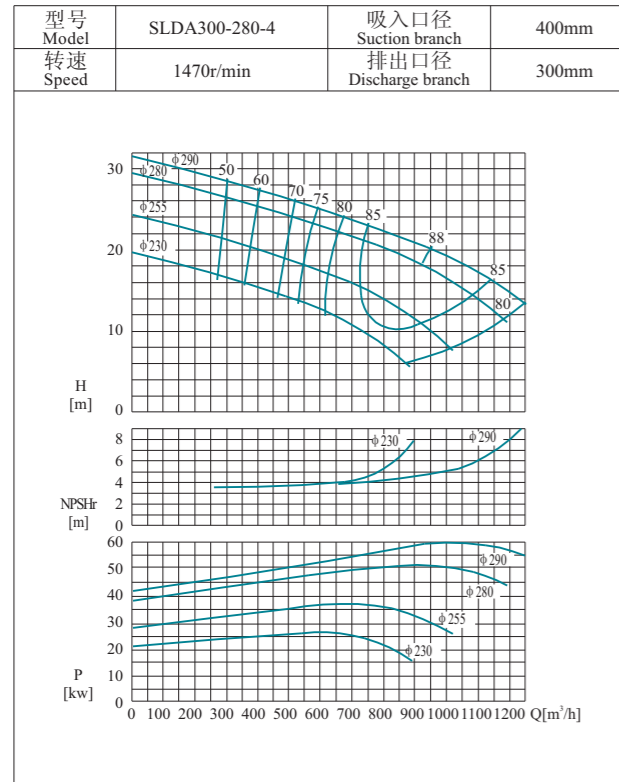
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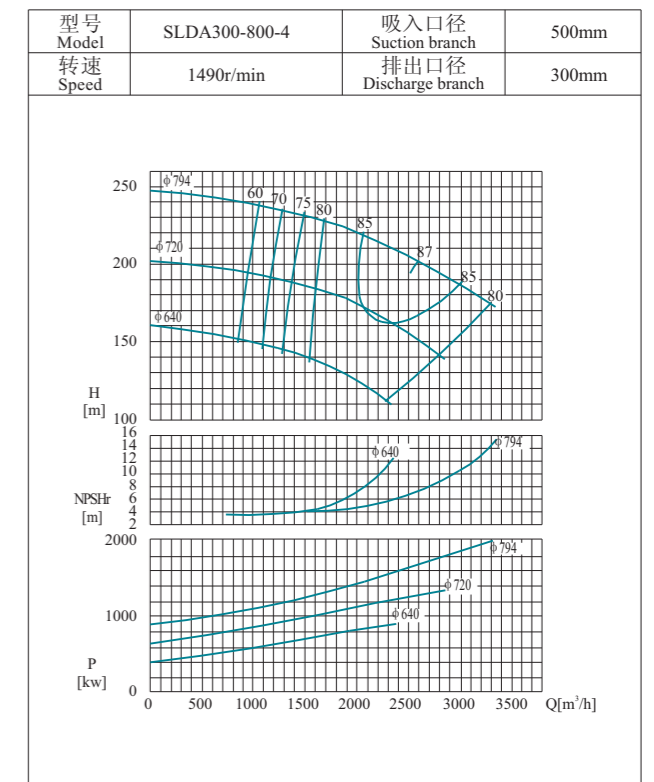
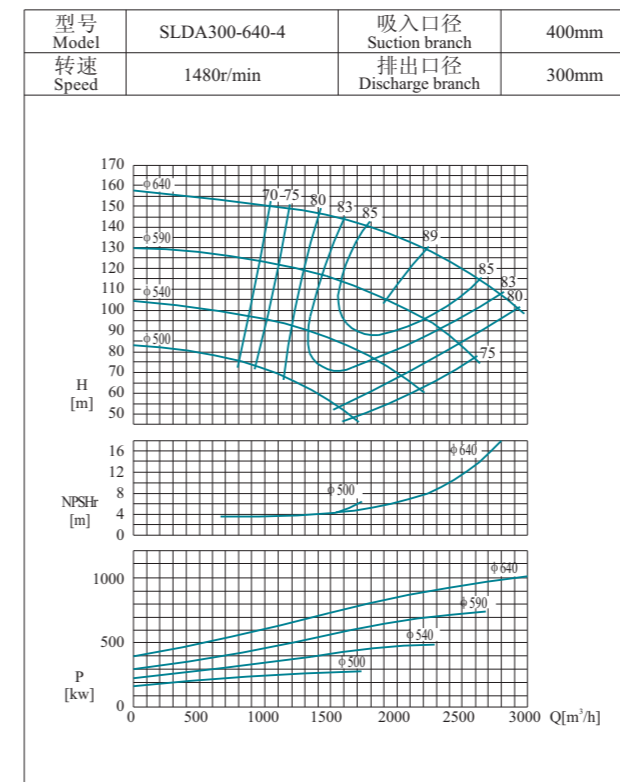
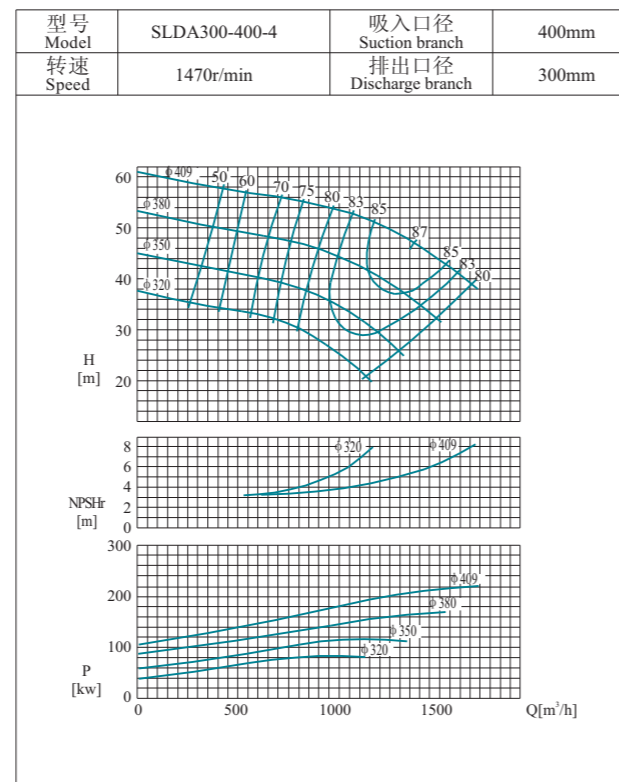
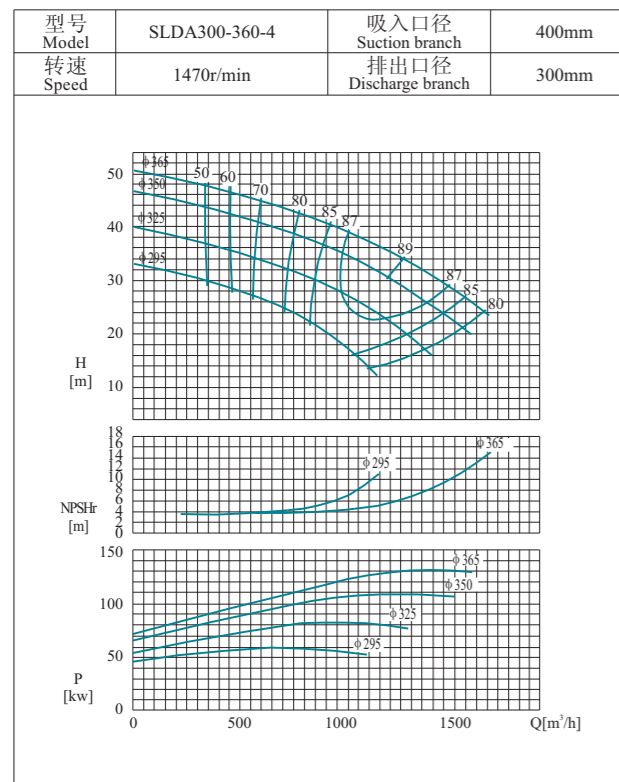
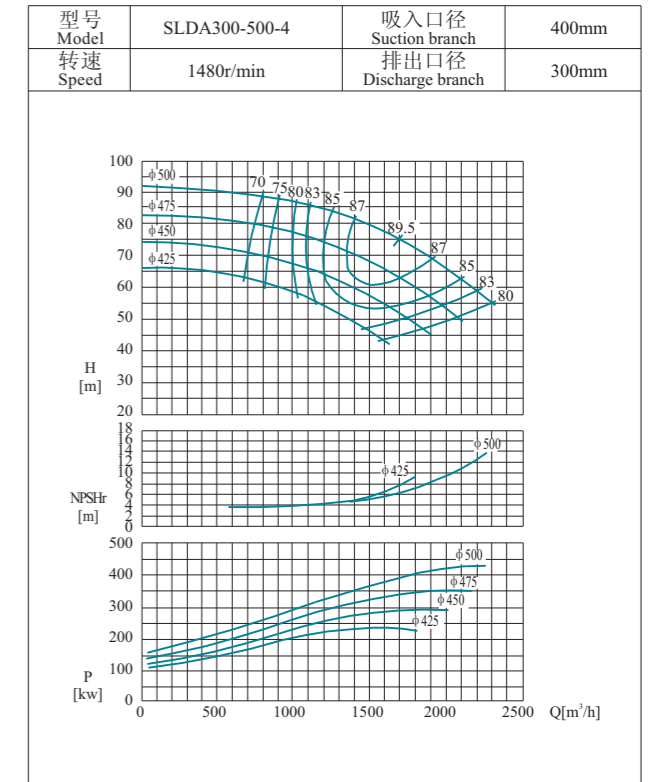
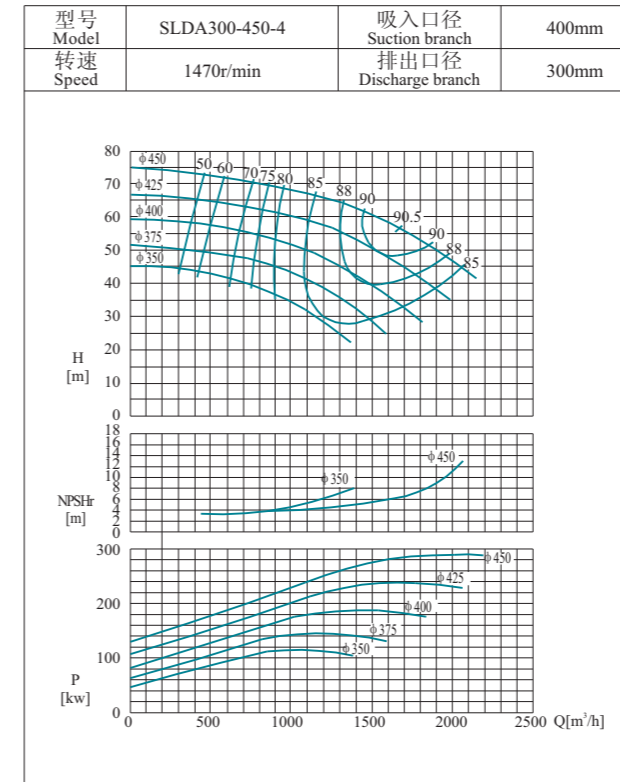
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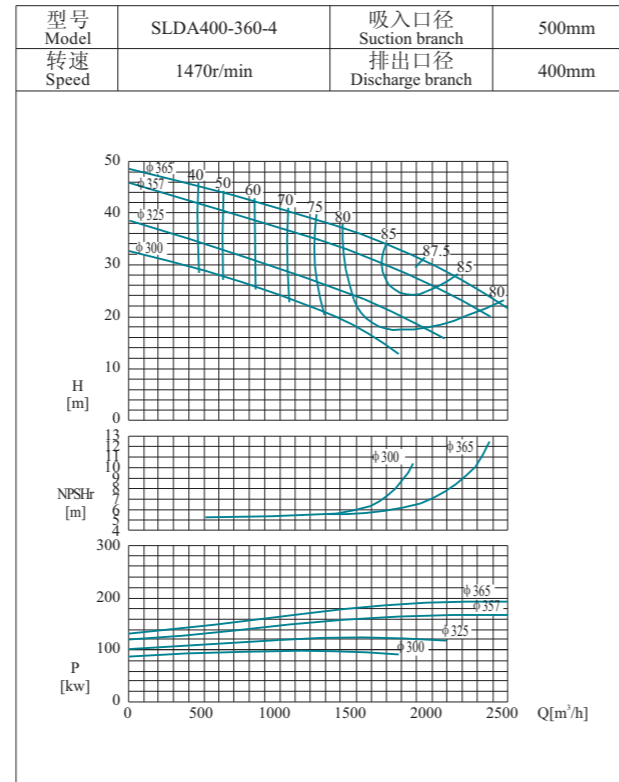
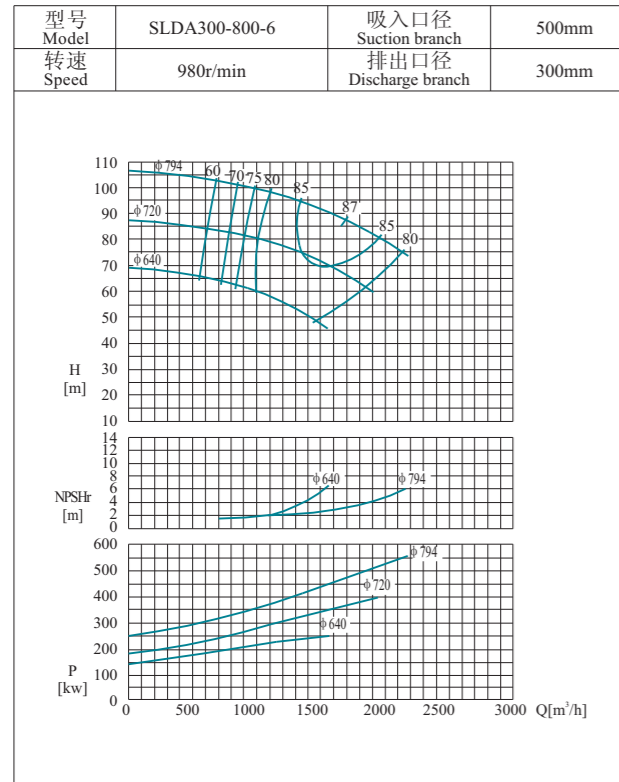


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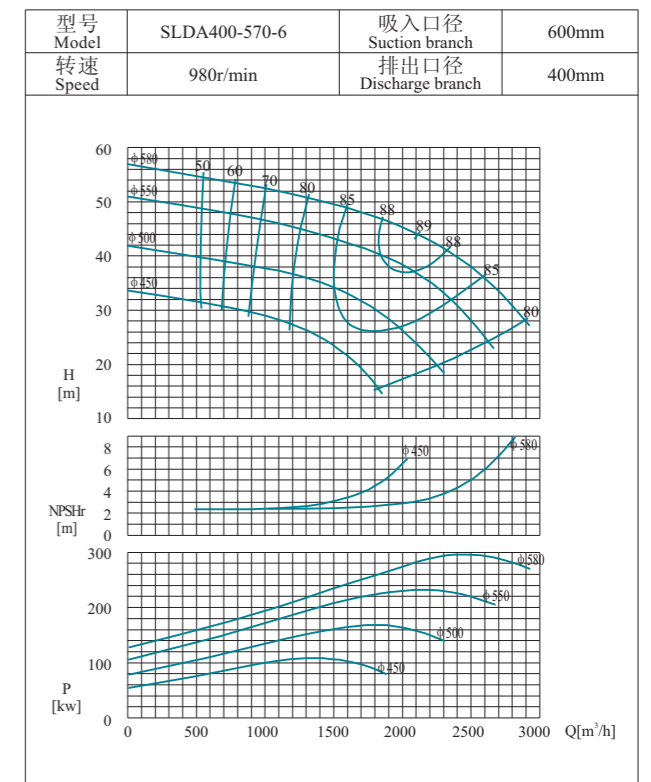
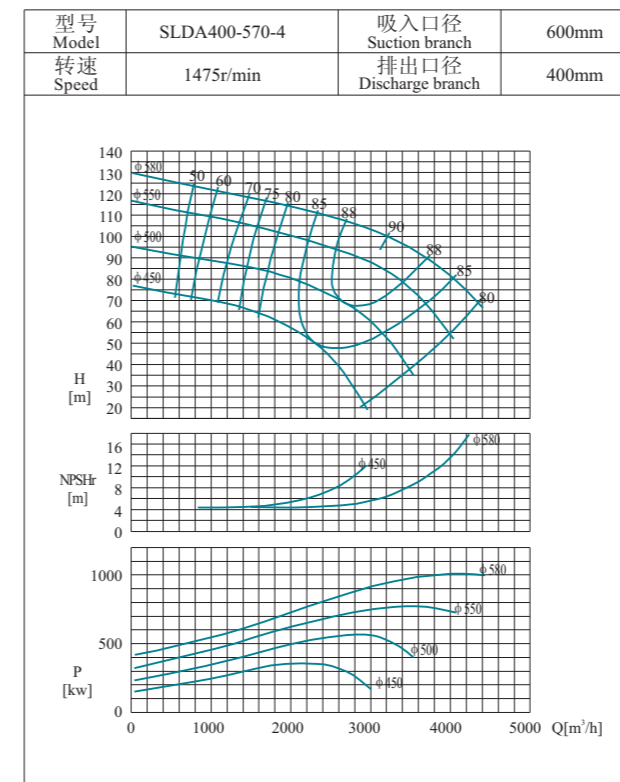
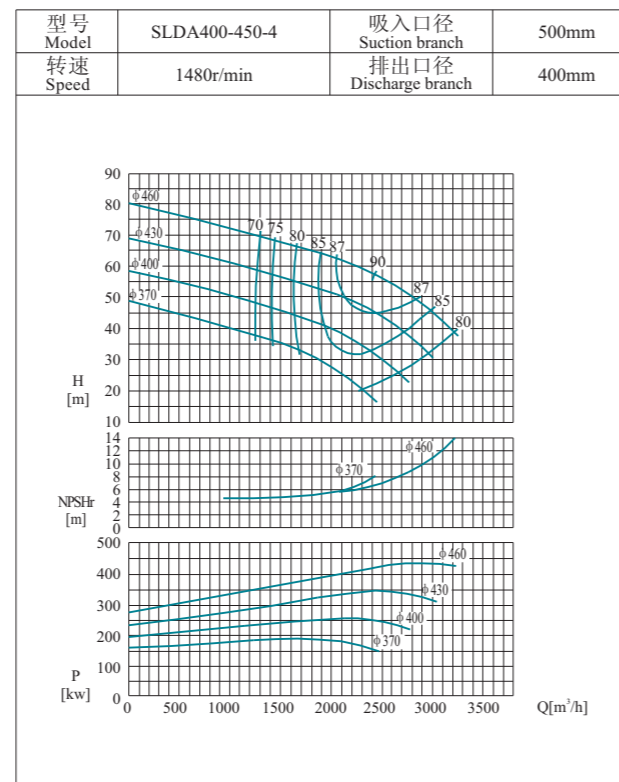
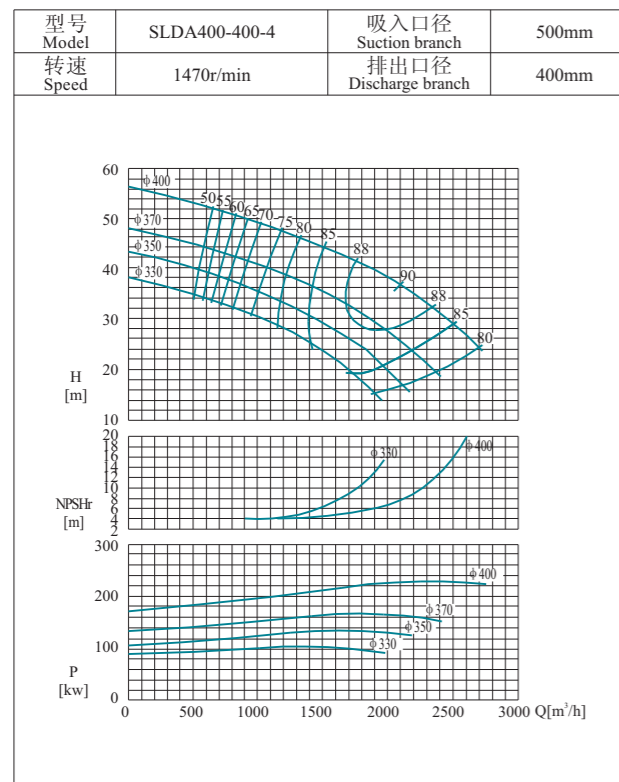
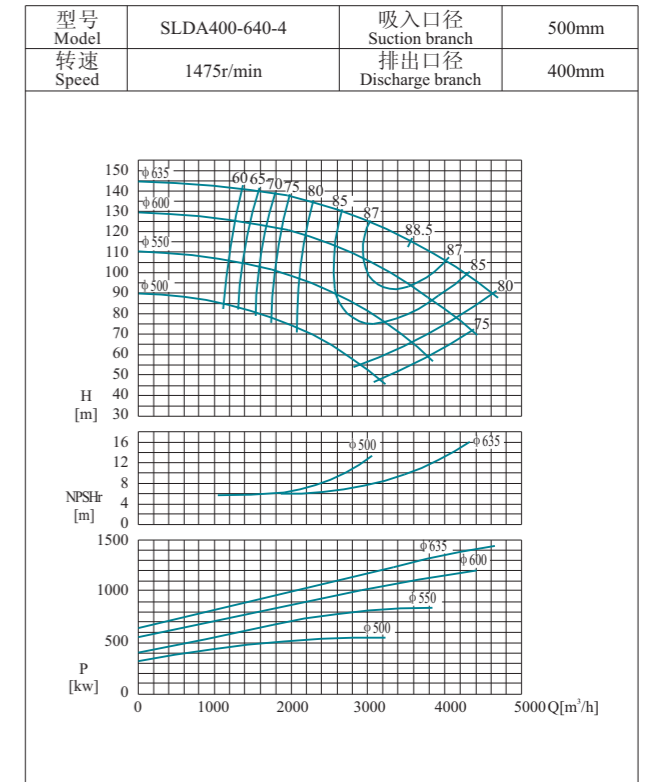
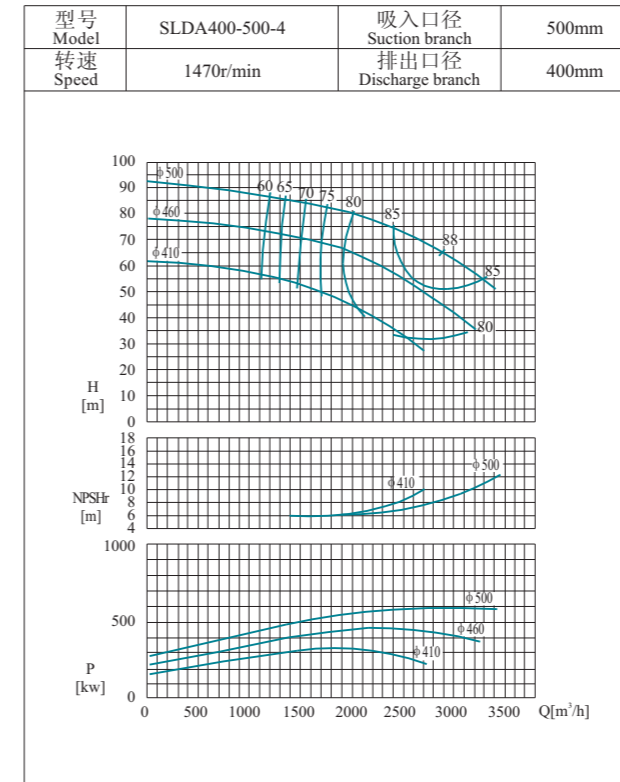




性能曲线图 Performance curve

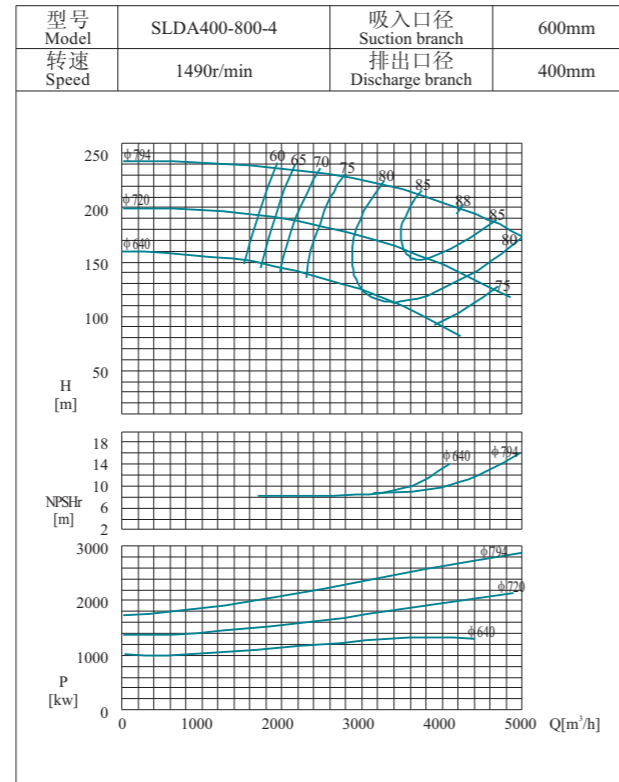
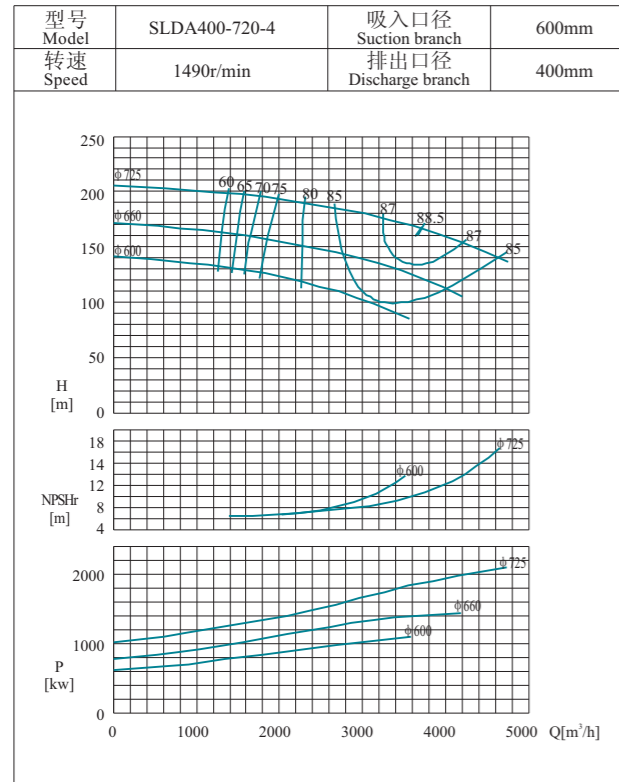


性能曲线图 Performance curve

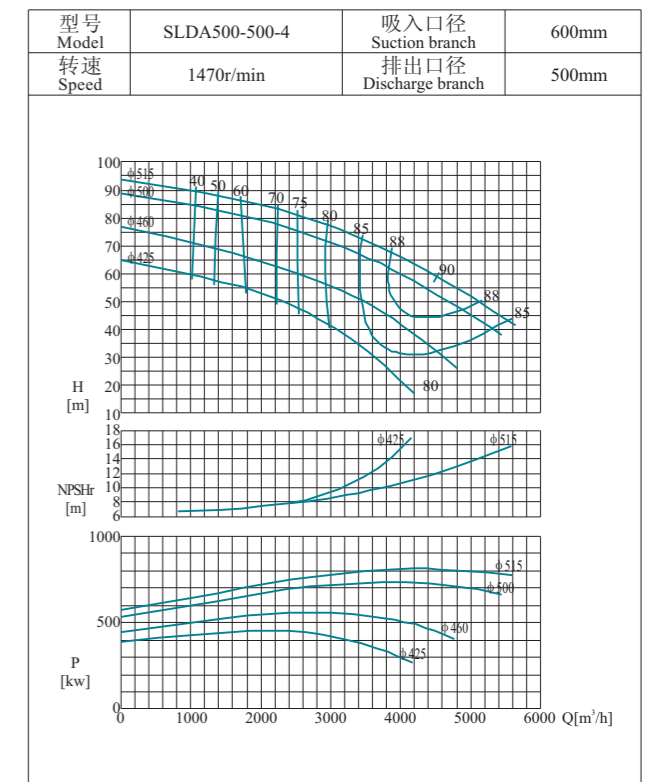
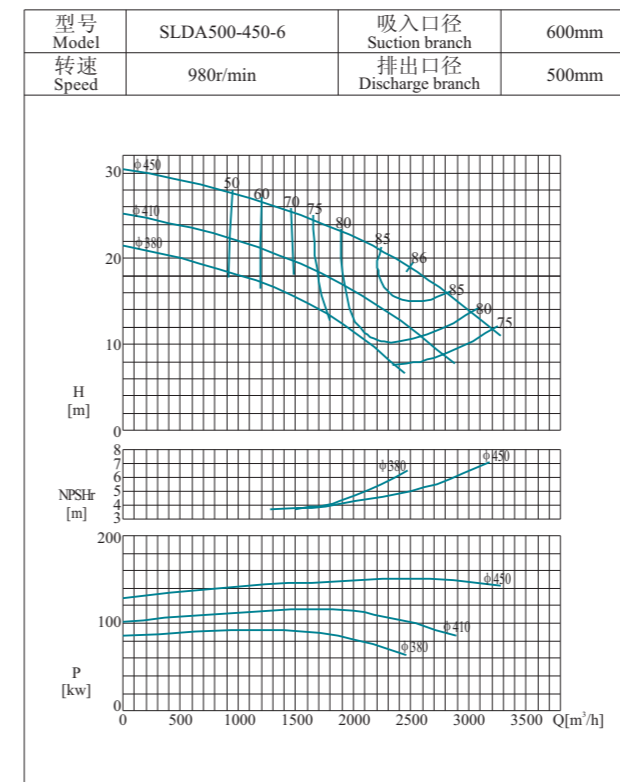
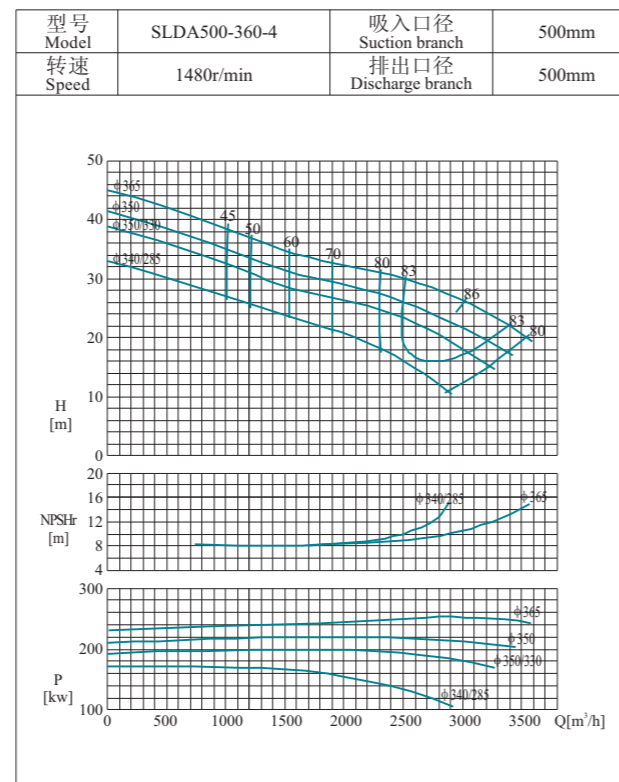
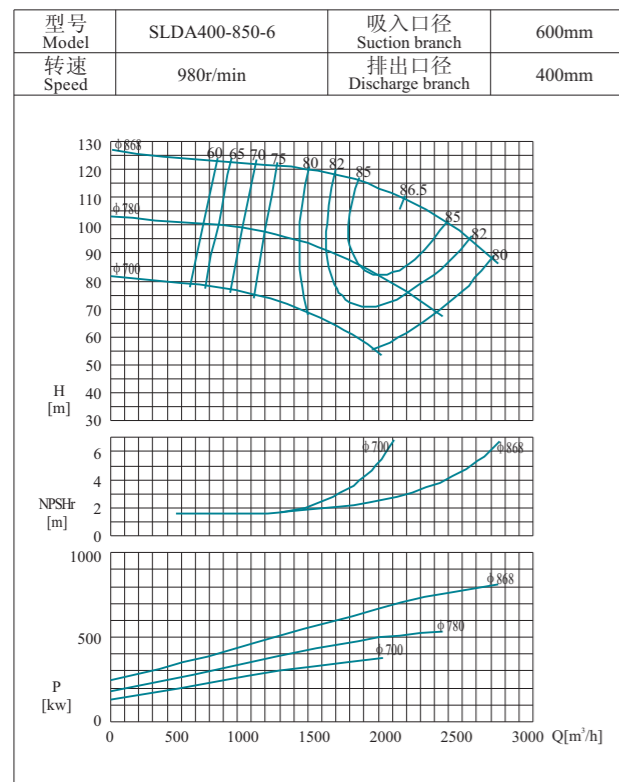
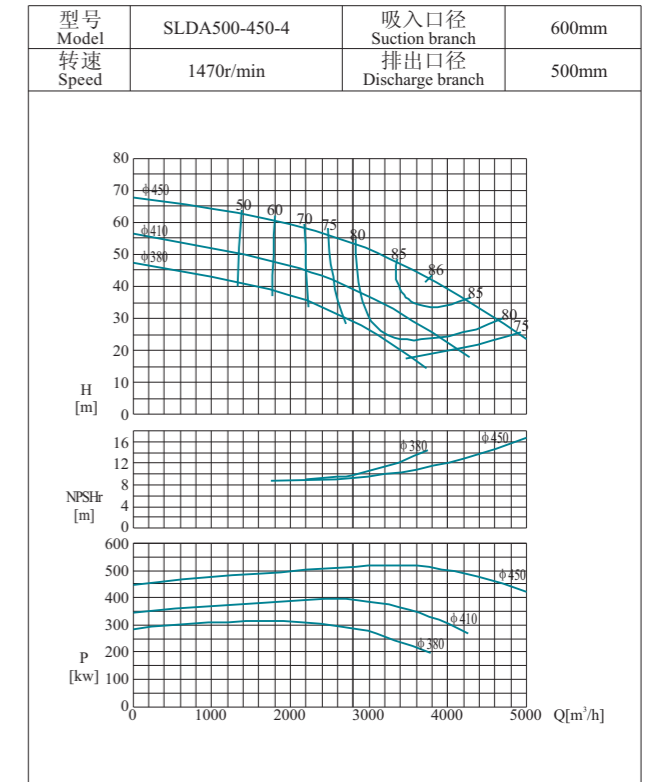
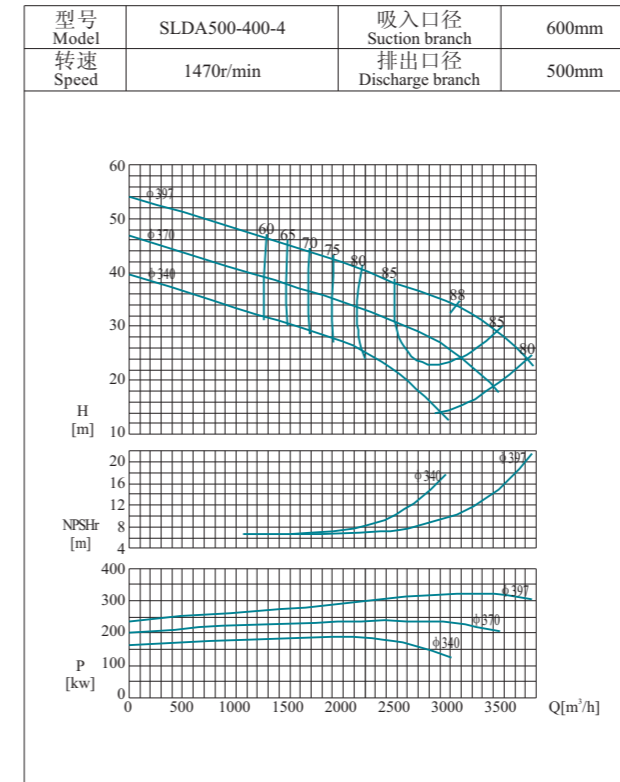




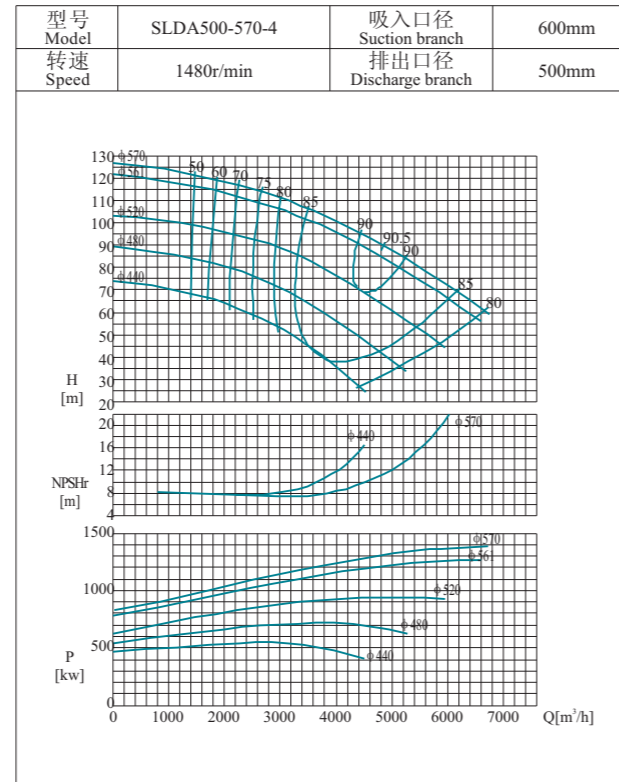
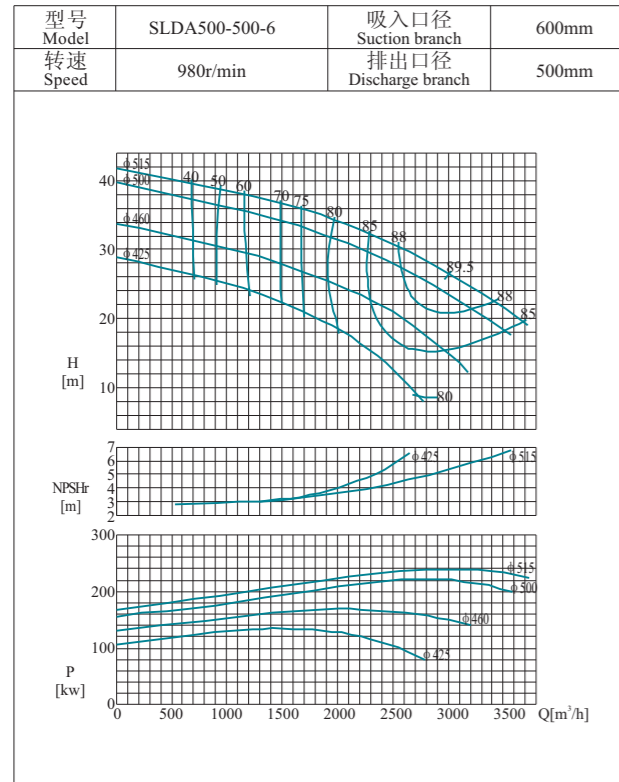
性能曲线图 Performance curve



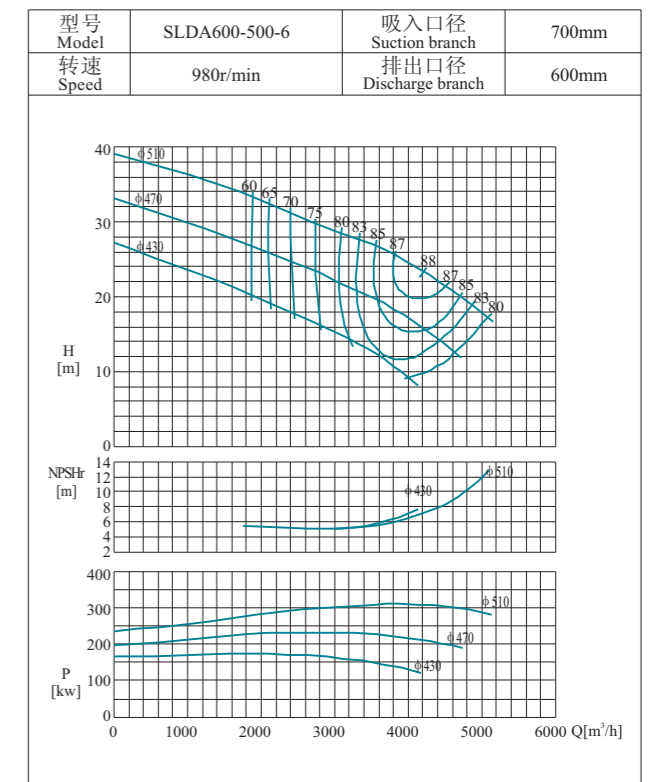
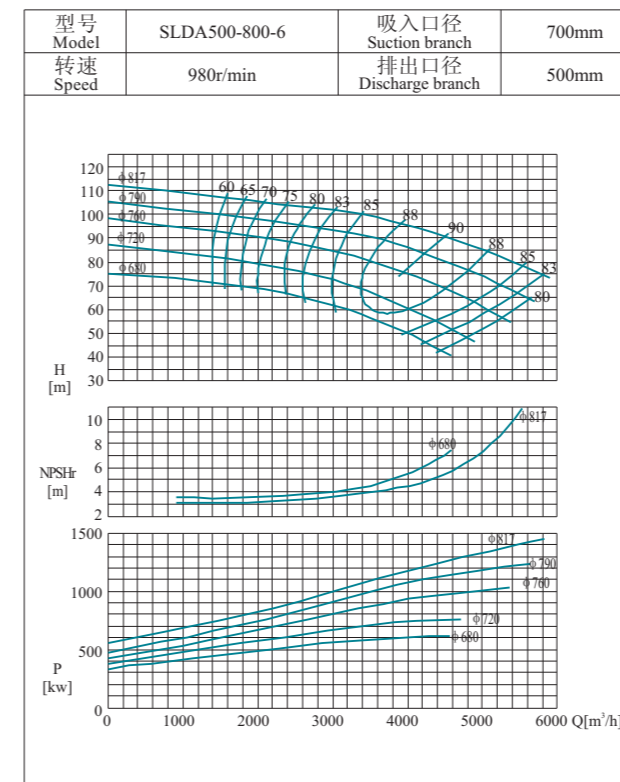
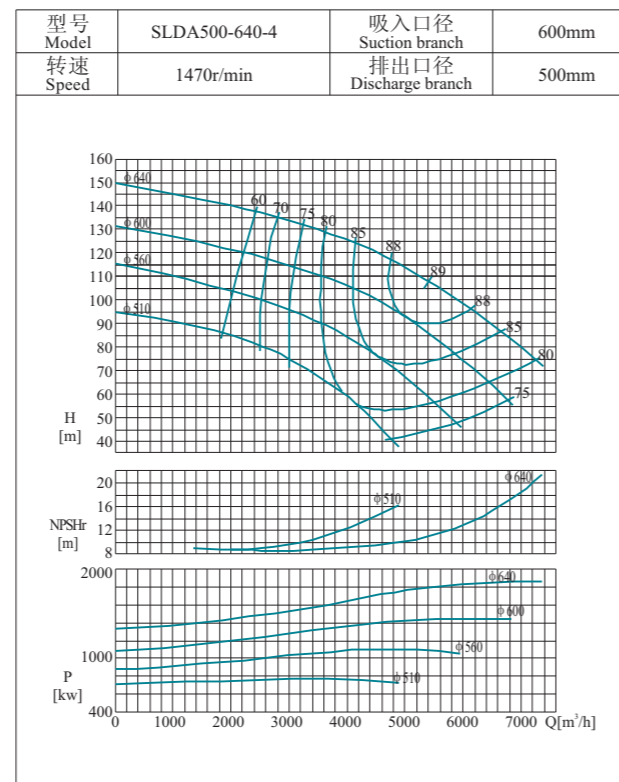
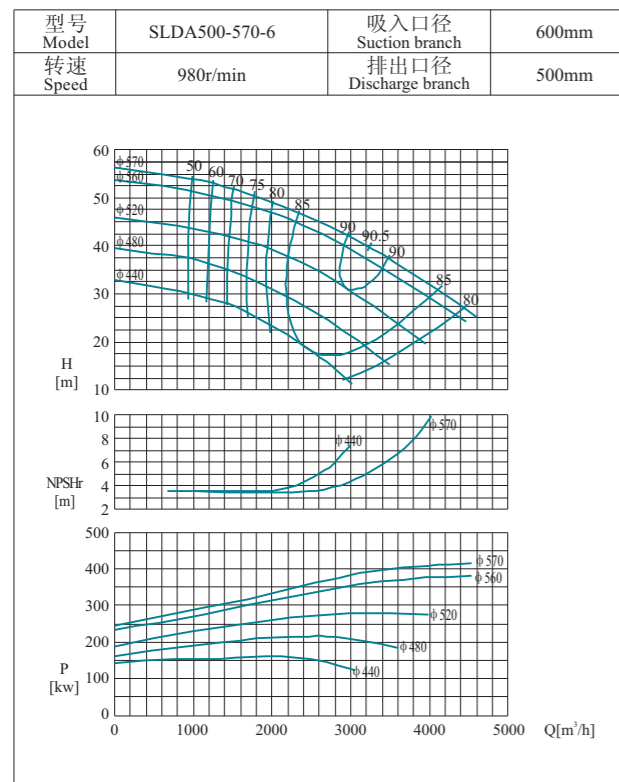
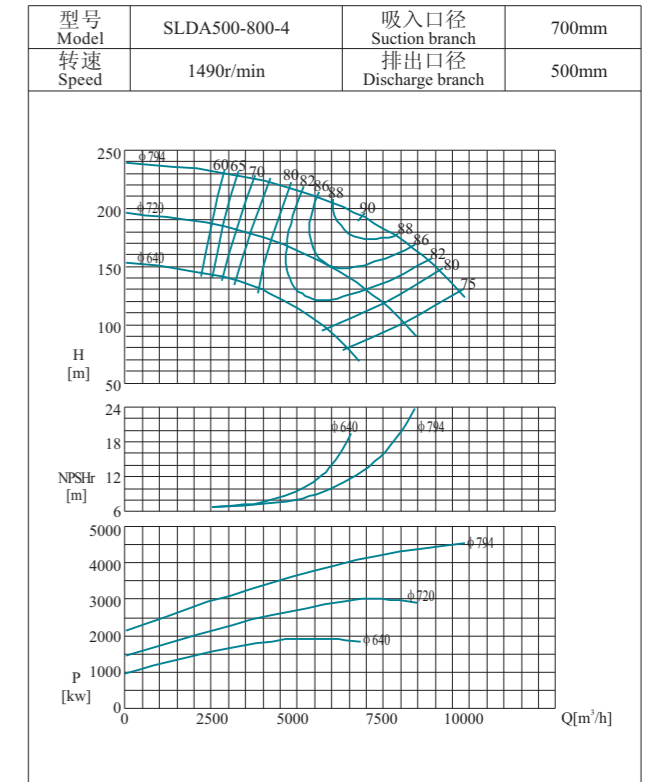
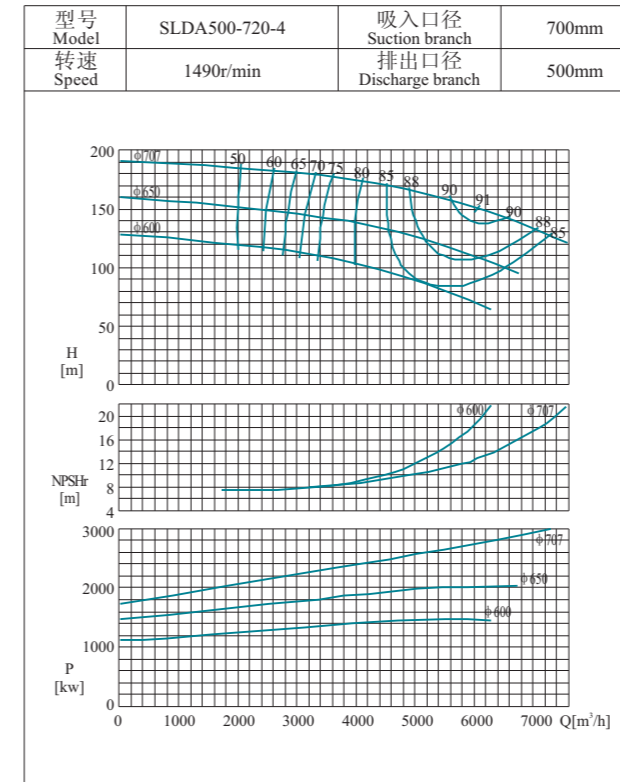
性能曲线图 Performance curve



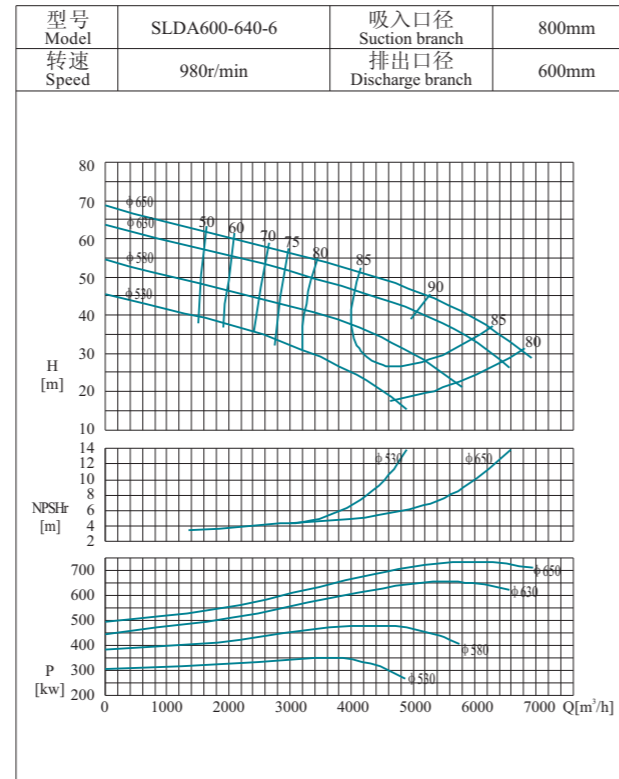
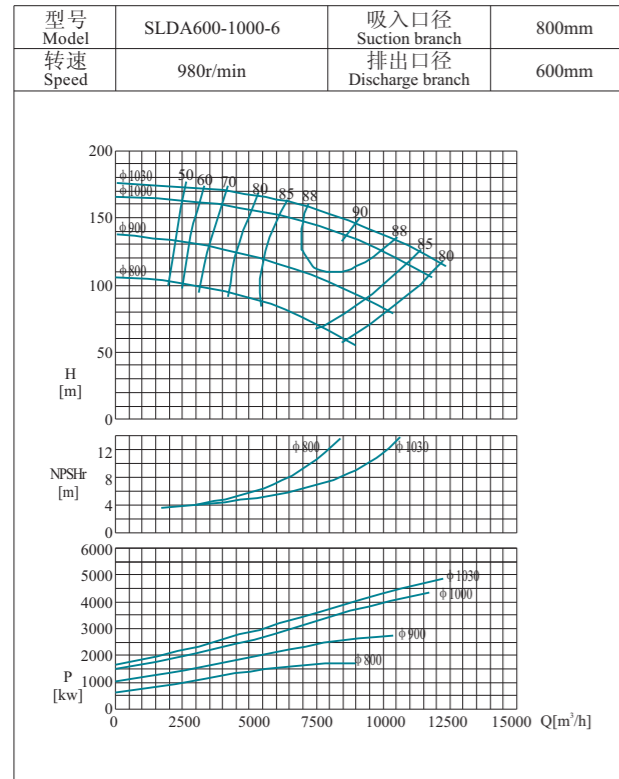
性能曲线图 Performance curve



性能曲线图 Performance curve



性能曲线图 Performance curve



性能曲线图 Performance curve

