TQ GROUP
天泉集团

水泵行业全产业链整合研发与制造集团
The complete integration of R&Dt with manufacturing within the pump industrial chain

上海天泉泵业集团有限公司
SHANGHAI TIANQUAN PUMP GROUP CO., LTD.

地址：上海市青浦区华新镇嘉松中路3568号
Address：3568 Jiasong Zhong Road, Huaxin Town, Qingpu Area, Shanghai
邮编（P.C.）：201705
网址：http://www.tqpumps.com

关注天泉集团微信公众号
获取更多信息

销售服务热线：400-166-8686

注：本公司保留对产品设计更改权利，个别尺寸如有变动恕不事前通知。
Note: our Co. reserves the right to modify the product design so as to change some of the dimensions without a prior notice.

版本日期：2024年11月

TQ GROUP
天泉集团

TI系列化工流程泵

TI series chemical process pump

企业简介
Introduction

上海天泉泵业集团有限公司成立于上世纪八十年代末，经过三十多年的市场磨炼，现已发展成为国内领先的集研究、生产、销售各类水泵、智慧成套供水设备以及电气控制系统的大型现代化集团企业。

天泉集团旗下已拥有一个产品科研中心以及铸造厂、水泵厂、压力容器厂、电机厂四大工业生产基地。集团注册资金一亿元，总资产人民币14.5亿元，总占地面积四十余万平方米，总部位于上海市青浦区。

天泉集团先后获得多项专业认证及荣誉，包括三大管理体系认证、中国著名品牌、中国水泵行业十大品牌、企业信用AAA级、中国工程建设推荐产品、政府采购优秀供应商、绿色环保首选品牌、无负压产品节水节能认证、中国二次供水行业首选品牌、上海消防协会会员以及多项实用新型专利。

Shanghai Tianquan Pump Group Co, Ltd. was founded in the late 1990s, and after 30-year development, has developed into a state-certified high-tech enterprise in China. We are a leading professional industrial pump solution provider and specialized in the research and production of industrial pumps, submersible motors, and electrical control systems.

With a registered capital of 100 million RMB and total assets of 1.45 billion yuan, the group covers a total area of more than 550,000 square meters and is headquartered in Qingpu District, Shanghai. The company now has four factories, which are located in Shanghai, Anhui, and Jiangsu provinces: Shanghai factory has one research center and focuses on pump assembling and testing; the Anhui factory focuses on casting and motor research and manufacturing; the Jiangsu factory focuses on the water pressure tank

The group currently has more than 2, 000 sets of advanced domestic and imported production and testing equipment, such as a large pump testing center, trilinear-coordinates measuring instrument, impeller dynamic balance meter, laser rapid prototyping meter, malfunction blasting machine, automatic welding machine, large vertical lathe, large grinding machine, and CNC machine tools, etc.

▲ 上海天泉集团总部 Shanghai Tianquan Pump Group Headquarters

▼ 广德正富生产基地 Guangde Zhengfu production base

TQ GROUP
天泉集团

企业简介
Introduction

天泉集团极其注重技术力量的储备和生产设备的更新改造，目前拥有国家Ⅱ级标准水泵测试中心、五轴联动加工中心、大型镗床、大型立式车床、全自动数控多孔钻床、自动氩弧焊机、机械无箱造型机、全自动机械化压机、全自动阴极电泳线、全自动下线流水线以及动静平衡测量仪等国内外先进的生产测量设备，保证了每一台产品的出厂品质。集团建有完善的销售服务网络，在全国设有80余家分支机构，拥有1800多人的专业销售团队，为广大用户提供了优质的售前、售中和售后服务。

技术创新是企业发展的源动力，天泉集团拥有一支由行业技术专家、中高级工程师和专业技术人才组成的30余人的精干技术团队，引入世界先进的CFD流体力学专业内流场分析、SOLIDWORKS、Pro/E等研究设计软件系统，拥有国家各项专利15项。目前公司每年投入销售总额的5%以上，用于技术创新和新产品研发。

天泉凭借合理的价格以及优良的服务，深受用户青睐，畅销全国34个省、市、自治区，并出口中东、东南亚等地区。产品广泛应用于建筑、消防、环保、给排水、暖通、石油、化工、冶金、造纸、电力、医药等领域。截止目前，已经成功的为碧桂园集团、绿地集团、顶新（国际）集团、三星电机、伊利集团、中国石化、东风汽车、上海外高桥保税区、京张高铁、清华大学等提供优良的产品与服务，屡次荣获优秀供应商称号。

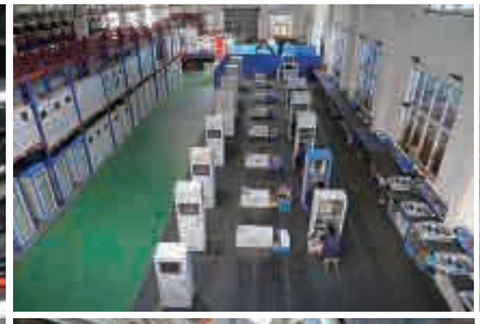
The company has 4 categories industrial pumps,covering more than 3000 models. We only research and develop energy-saving product conform to Chinese energy conservative standard. About 50% of pump models are equipped with lower motor power compare with national counterparts. Our featured products are circulating pumps, submersible sewage pumps, fire-fighting pump and water supply pump and are widely used in construction, environmental protection, HVAC, chemical industry, water supply and drainage,paper making, power plant, medical making and other fields.

Due to our whole industry chain production layout and energy-saving product principle, our products are featured with competitive price, energy-saving and reliable quality. Up to now, Tianquan products are selling well in 34 provinces national wide, and exported to the Middle East, Southeast Asia,and Eastern Europe.

We are strive to be the most influential manufacturer with energy-saving product in the industrial pump area. Hope we can bring you good quality product and be your best pump solution partner.

▼ 自动定子嵌线流水线　Automatic stator line embedding pipeline

▲ 智慧云监控中心　Smart cloud monitoring center



▲ 供水设备生产车间　Water supply equipment production workshop

▼ 电控柜生产车间
Eletric control cabinet production workshop

▲ 铸件仓库
Casting workshop

◀ 排污泵装配流水线
Assembly line of submersible sewage pump

生产实力
Production Capability

研发
Research and development

30人精干专业团队，国内一流专家和高级技术人员组成，获得国家各项专利15项。
先进的CFD流体力学专业内流场分析软件系统，不断升级水力模型。
TQ has a capable professional team of 30 people, domestic first-class experts and senior technical personnel, and has obtained 15 national patents.
Advanced CDF fluid mechanics major internal flow field analysis software system, constantly upgrade the hydraulic model.

铸造
Casting

行业内极少数拥有自主铸造生产能力，采用先进覆膜砂芯工艺，拥有5台百万级的机械无箱造型机，告别传统人工，生产效率高，铸件品质和精度大大优于同类产品。
Very few in our industry have independent casting production capacity, using advanced coated sand core process, has 5 million-level mechanical boxless modeling machine, farewell to the traditional labor, high production efficiency, casting quality and precision is much better than similar products.

电机
Motor

拥有电机全套自主生产线，是行业内知名电机及电机部件供应商。
拥有全自动机械化压机、自动定子嵌线机、高速冲床等先进的加工装备，自动流水线装配，电机质量可靠，性价比高。
With a full set motor independent production line, it is a well-known motor and motor parts supplier in the industry.
With automatic mechanized press, automatic stator wiring machine, high-speed punch and other advanced processing equipment, automatic line assembly, reliable motor quality, cost-effective.

加工
Machining

装备了4台国外进口高精度五轴联动加工中心，以及数十台（套）精密数控加工设备，确保零部件加工的高精度、高效率；
采用模块化、流水线生产模式，大大提升生产效率，保障品质稳定。
Equipped with 4 sets of foreign imported high-precision five-axis linkage machining center, as well as dozens of sets (units) of precision CNC machining equipment, to ensure the high precision and high efficiency of parts processing;
Adopt modular and assembly line production mode to greatly improve production efficiency and ensure quality stability.

涂刷和装配
Shelling-out and assembling

采用电泳工艺处理，表面坚硬、镀层致密牢固、抗腐耐磨。
装配工序规范合理，装配人员均经过长期严格的专业培训。
Using electrophoresis process, the surface is hard, dense and firm, corrosion and wear resistance.
The assembly process is standardized and reasonable, and the assembly personnel have undergone long-term and strict professional training.

检测
Check and test

拥有国家Ⅱ级水泵综合性能测试台、光谱测试仪、动平衡机等检测设备。
专业的品控团队严格执行“三检”要求，每项来料必检，每道工序抽检，每台出厂必检，层层把关产品质量，产品合格率保持在98%以上。
It has the national water pump comprehensive performance test bench, spectrum tester, dynamic balance machine and other testing equipment.
The professional quality control team strictly implements the requirements of “three inspections”, every incoming material must be inspected, every process is inspected, every pump must be inspected, the product quality is checked layer by layer, and the qualified rate of products is maintained above 98%.

▼ 五轴联动加工中心 Five-axis linkage machining center

▼ 机械无箱造型 Mechanical box-free shape

▼ 电泳自动线 Electrophoresis automatic line

▼ 成品电机装配流水线 Assembly line of finished motor

▼ 国家Ⅱ级综合性能测试台 National comprehensive performance test bench

▼ 动平衡测试机 Dynamic blance test machine

目录 Catalogue

02 产品概述 Product overview
04 使用条件 Service conditions
05 型谱图 Hydraulic coverage curve
06 TI 泵规格表 TI Pump Specification table
10 化工流程泵性能曲线 Performance curve of pump
52 TI 主剖面图 Main section drawing
53 材料表 Material sheet
54 总体结构特点和优点 Overall structural features and advantages
55 叶轮 Impeller
58 互换性 Interchangeability
62 轴承悬架部件 Bearing suspension assembly
64 外部微米级叶轮调节装置缩短维护时间并降低维护成本 External micron-level impeller adjustment device is shortened Maintenance time and reduce maintenance costs
65 轴和轴承 Axis and bearing
69 锥形密封腔 Tapered sealing chamber
71 底座 Foundation
74 法兰 Flange
75 外形尺寸图 External Dimensions
76 外形安装尺寸表 Outline installation Dimension table
77 订货须知 Notes on Order-Placing

产品概述 Product overview

产品概述

TI系列化工流程泵为化工流程泵中的佼佼者。

TI 系列化工流程泵遵照ISO2858/ISO5199及GB/T5656标准，并参照了 ASME (ANSI) B73.1 部分内容进行开发设计，具有ISO2858拓展或扩流的出色水力性能和无与伦比的可靠性，同时最大限度地降低了采购和制造、运行与维护的综合成本。它拥有CE标志，符合ATEX等适用指令，且具有众多经过试验验证或实践检验的设计特点，可显著提高可靠性和性能。综合起来，有如下优点：

- 使用前部正向叶片开式叶轮和反向闭式叶轮，控制叶轮前与泵体或后部与泵盖的间隙及性能，在泵的整个生命周期内提供可重复的高效性能
- 每次叶轮调整后可重新建立可预测的最优密封腔压力
- 即可选用成本较低的单端面或双端面普通机械密封，又可以选择集装式单端面或双端面机封及系统
- 通过锥形密封腔形成的理想密封环境，最大限度地提高了机械密封寿命
- 粗的轴和轴承设计降低了轴挠度，延长了机械密封和轴承的使用寿命
- 采用行业内最具创新的外部叶轮调节装置，实现叶轮的快速、精确设置
- 唯一充分利用后拉式设计的一款泵，可在现场方便地进行反向叶片叶轮调节

运行参数

- 最大流量 1440 m3/h (6336 US gpm)
- 最高扬程 192 m (628 ft)
- 最大压力 25 bar (365 psi)
- 适用温度为 -80°C 至 400°C (-110°F 至 752°F)
- 出口尺寸为 25 至 200 mm (1 至 8 in)

Product overview

TI series chemical process pump is the leader in the chemical process pump.

The TI series chemical process pump is developed and designed in accordance with ISO2858 / ISO5199 and GB / T5656 standards and ASME (ANSI) B73.1, with excellent hydraulic performance and unparalleled reliability of ISO2858 expansion or flow expansion, while minimizing the comprehensive cost of procurement, manufacturing, operation and maintenance. It has the CE mark, complies with ATEX and other applicable instructions, and has many experimental verification or practical test design characteristics, which can significantly improve the reliability and performance. In summary, it has the following advantages:

- Use the front forward blade open impeller and reverse closed impeller to control the clearance and performance between the front and the pump body or the pump cover to provide repeatable and efficient performance throughout the whole life cycle of the pump
- The predictable optimal sealing chamber pressure can be re-established after each impeller adjustment
- You can choose the low cost single end face or double end face ordinary mechanical seal, and you can choose the assembly type single end face or double end face machine seal and system
- Mechanical sealing life is maximized by the ideal sealing environment formed by the conical sealing cavity
- The thick shaft and bearing design reduces shaft deflection and extends the service life of mechanical seals and bearings
- The most innovative external impeller adjustment device in the industry is adopted to realize the fast and accurate setting of the impeller
- The only pump that makes full use of the rear pull design can be easily adjusted by the reverse blade impeller on site

Operating parameters

- Flows to 1440 m3/h (6336 US gpm)
- Heads to 192 m (628 ft)
- Pressures to 25 bar (365 psi)
- Temperatures from -80°C to 400°C (-110°F 至 752°F)
- Discharge sizes from 25 to 200 mm (1 至 8 in)

产品概述
Product overview

提供 42 种尺寸规格

- 1K组 包含 13 种尺寸规格
- 2K组 包含 12 种尺寸规格
- 3K组 包含 11种尺寸规格
- 4K组 包含 6 种尺寸规格

Available in 42 sizes

- Group 1K Includes 13 sizes
- Group 2K Includes 12 sizes
- Group 3K Includes 11 sizes
- Group 4K Includes 6 sizes

型号示例

TIXKXXX-XXX-XXXXXX

- 1--2位字母 CS: 集装式单封 CD: 集装式双封 D: 双端面机封 S: 单端面机封
- 1位字母 R: 反向叶轮F: 前叶片开式叶轮
- 3位数字, 叶轮名义外径
- 空白: PN16脚支撑标准型 H: PN25脚支撑 N: PN25中心支撑
- 2~3位数字, 泵出口公称直径
- 2~3位数字, 泵进口公称直径
- K系列轴承箱
- 1、2、3、4号轴承箱号
- ISO
- 天泉泵业

Example of model

TIXKXXX-XXX-XXXXXX

- 1--2 letters CS: Assembly type single-end face mechanical sealing CD: Assembly type double-end face mechanical sealing D: Double-end face mechanical sealing S: Single-end face mechanical sealing
- 1 letter R: Reverse impeller F: Front vane open impeller
- 3 letters Outer diameter of impeller
- blank: PN16 foot support standard type H: PN25 food support N: PN25 center support
- 2~3 letters, Pump outlet nominal diameter
- 2~3 letters, Pump inlet nominal diameter
- K series bearing housing
- 1、2、3、4 Bearing box number
- ISO
- Tianquan pump group

使用条件
Service conditions

应用领域

- 常规蒸汽
- 联合循环
- 聚光太阳能
- 生物质能与城市固体废物
- 地热
- 常规溶液（有机和无机）
- 特殊化学品
- 油气上游勘探与开采
- 油气中游管道输送
- 油气下游加工
- 生物燃料
- 制药
- 玉米湿磨与制乙醇
- 食品饮料
- 造纸
- 采矿
- 废水处理

Application area

- Conventional steam
- Combined cycle
- Concentrated solar energy
- Biomass energy and municipal solid waste
- Subterranean heat
- Conventional solution（Organic and inorganic）
- Special chemicals
- Oil and gas upstream exploration and exploitation
- Oil and gas midstream pipeline transportation
- Oil and gas downstream processing
- Biofuel
- Pharmacy
- Corn wet grinding and ethanol production
- Food and beverage
- Papermaking
- Mining
- Waste water treatment

输送典型介质

- 酸类输送
- 盐水
- 烃类
- 溶剂
- 腐蚀性液体
- 食品和饮料
- 药品
- 聚合物
- 纸浆
- 海水
- 水和废水

Conveying typical media

- Acid transport
- Saline water
- Alkanes
- Dissolvant
- Corrosive liquid
- Food and drinks
- Medicines and chemical reagents
- Polymer
- Paper pulp
- Seawater
- Water and wastewater

广泛的泵送解决方案

在全世界范围内的基础设施市场上， TI系列化工流程泵可提供广泛系列配置，实现 在各 类应用中的卓越灵活性：

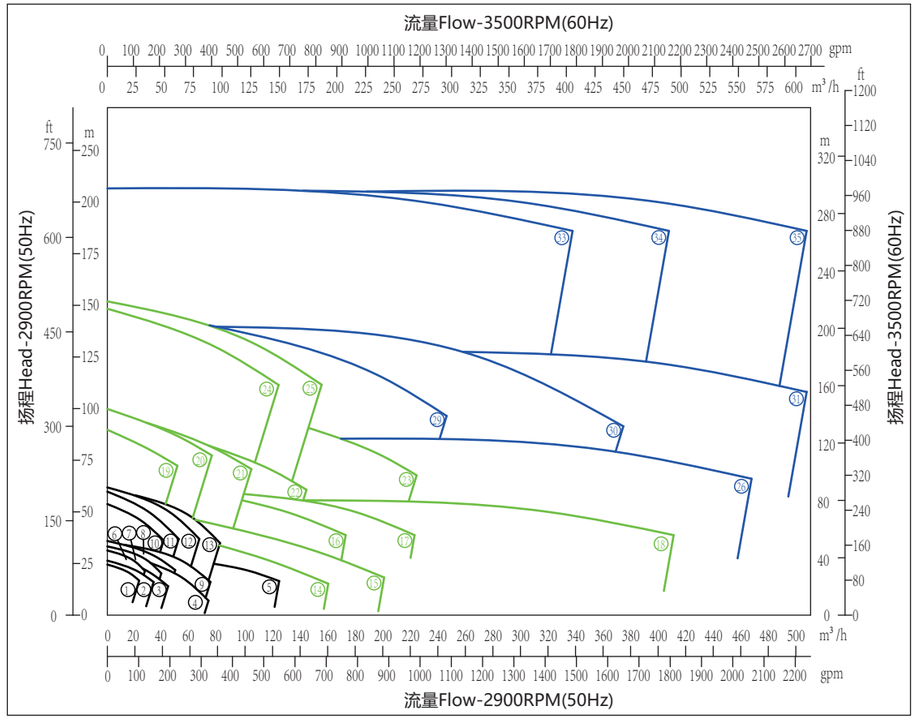
- 单端面机械密封
- 双端面机械密封
- 集装式单端面机械密封
- 集装式双端面机械密封

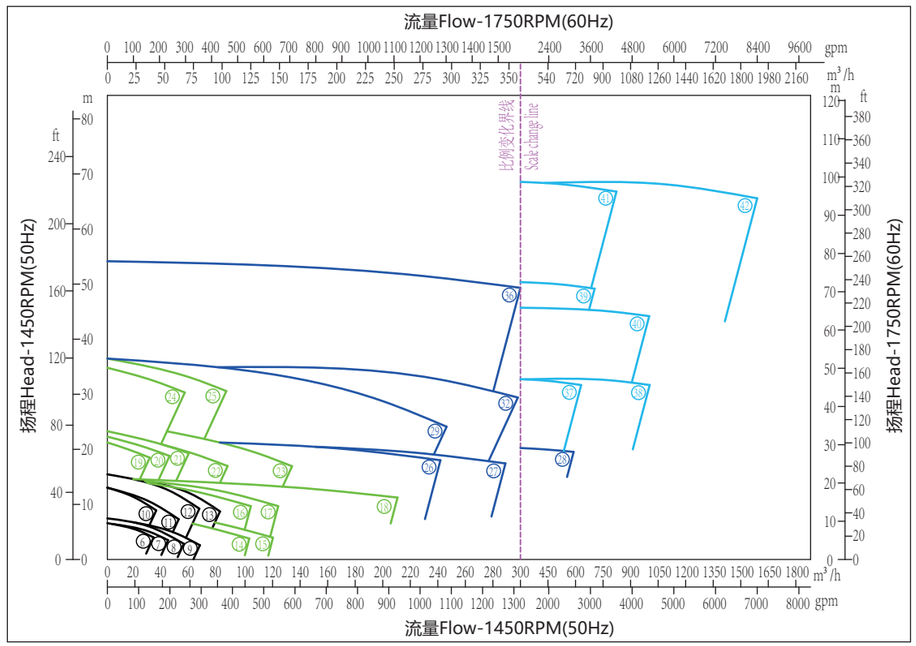
Extensive pumping solutions

In the global infrastructure market place, the TI Series chemical process pumps offer a wide range of configurations for superior flexibility in various applications:

- Single mechanical end face seal
- Double mechanical seal
- Assembly type single-end face mechanical sealing
- Double-end mechanical sealing

型谱图
Hydraulic coverage curve





TI 1K组
TI 1K Group
① 1K40-25-125
② 1K50-32-125
③ 1K65-40-125
④ 1K80-50-125
⑤ 1K100-65-125
⑥ 1K40-25-160
⑦ 1K50-32-160
⑧ 1K65-40-160
⑨ 1K80-50-160
⑩ 1K40-25-200
⑪ 1K50-32-200
⑫ 1K65-40-200
⑬ 1K80-50-200

TI 2K组
TI 2K Group
⑭ 2K100-65-160
⑮ 2K125-80-160
⑯ 2K100-65-200
⑰ 2K125-80-200
⑱ 2K150-100-200
⑲ 2K50-32-250
⑳ 2K65-40-250
㉑ 2K80-50-250
㉒ 2K100-65-250
㉓ 2K125-80-250
㉔ 2K65-40-315
㉕ 2K80-50-315

TI 3K组
TI 3K Group
㉖ 3K150-100-250
㉗ 3K150-125-250
㉘ 3K200-150-250
㉙ 3K100-65-315
㉚ 3K125-80-315
㉛ 3K150-100-315
㉜ 3K150-125-315
㉝ 3K100-65-400
㉞ 3K125-80-400
㉟ 3K150-100-400
㊱ 3K150-125-400

TI 4K组
TI 4K Group
㊲ 4K200-150-315
㊳ 4K250-200-315
㊴ 4K200-150-400
㊵ 4K250-200-400
㊶ 4K200-150-500
㊷ 4K200-150-500

TI 泵规格表
TI Pump Specification table

*仅列50Hz（1450和2900r/min性能，60Hz的1740和3480r/min性能及曲线请见按B73.1设计的产品样本）
**轴功率按密度ρ=1000kg/m³计算
* Only 50Hz (1450 and 2900 r/min performance, 60Hz 1740 and 3480 r/min performance and curves see product samples designed per B73.1)
** Axis power was calculated by density ρ = 1000 kg/m³

泵型 Pump type	叶轮结构 Impeller structure	流量 Q (m³/h)	扬程 H (m)	转速 n (r/min)	效率 η (%)	轴功率 **Pa (kW)	汽蚀余量 NPSHr (m)
40-25-125	F	17	20	2900	48	1.930	1.0
	R	17	20		48	1.930	1.0
40-25-160	F	12	6	1450	29	0.677	0.4
	R	11	5.6		24	0.699	1.3
	F	20.6	28	2900	48	3.275	1.1
	R	21.2	24		46	3.014	1.5
40-25-200	F	13	11	1450	38.5	1.012	0.9
	R	13	10		35	1.012	1.4
	F	24	46	2900	49.5	6.078	2.1
	R	24	42		50	5.494	5.9
50-32-125	F	25	20	2900	59	2.309	1.1
	R	25	20		59	2.309	1.1
50-32-160	F	15	6	1450	36	0.681	0.7
	R	15	6		36	0.681	1.0
	F	30	28	2900	53	4.319	1.5
	R	30	24		53	3.702	2.0
50-32-200	F	15	12	1450	46	1.066	0.8
	R	15	12		46	1.066	1.1
	F	30	48	2900	55	7.135	2.5
	R	30	48		55	7.135	3.0
50-32-250	F	16	19	1450	31.5	2.630	0.9
	R	15	18.5		31	2.439	0.5
	F	31.4	83	2900	39	18.210	1.6
	R	31	80		42.3	15.976	1.6
65-40-125	F	32	20	2900	60	2.907	1.5
	R	32	20		60	2.907	1.7
65-40-160	F	21	6.7	1450	43	0.892	1.0
	R	24	6.4		43	0.973	0.8
	F	38.5	28	2900	57.5	5.109	3.0
	R	35.8	24		58.4	4.009	2.2

TI 泵规格表
TI Pump Specification table

泵型 Pump type	叶轮结构 Impeller structure	流量 Q (m^3/h)	扬程 H (m)	转速 n (r/min)	效率 η (%)	轴功率 ρ=1000 Pa(kW)	汽蚀余量 NPSHr (m)
65-40-200	F	23	12	1450	48	1.567	0.5
	R	24	11		49	1.468	0.7
	F	45.6	51	2900	58.5	10.83	2.4
	R	43.7	46		54.5	10.05	2.6
65-40-250	F	28.5	22.5	1450	48.5	3.603	0.6
	R	28	21		47.5	3.373	0.8
	F	56.5	91	2900	56	25.02	2.6
	R	57.3	80		52	24.02	3.1
65-40-315	F	33	31.5	1450	48	5.901	0.9
	R	33	29		43	6.065	1.1
	F	66	133	2900	53.5	44.710	3.3
	R	66	125		51.5	43.653	3.6
80-50-125	F	50	20	2900	63	4.325	1.6
	R	50	20		63	4.325	1.8
80-50-160	F	30.9	6	1450	50	1.010	0.8
	R	30	6		44.5	1.102	0.9
	F	56.8	26	2900	67	6.006	3.0
	R	52.5	25		67	5.338	2.3
80-50-200	F	31.5	10	1450	47	1.826	0.9
	R	32	11.5		52.5	1.910	0.6
	F	60	45	2900	62	11.87	3.1
	R	61.4	48		62.5	12.85	2.5
80-50-250	F	41	20	1450	53	4.216	0.9
	R	44	19		56	4.068	1.2
	F	78.5	84	2900	59	30.46	4.2
	R	81.4	78		62	27.91	4.2
80-50-315	F	58	30.5	1450	54.4	8.861	1.2
	R	61	30.5		51	9.941	1.2
	F	107	132	2900	58.5	65.79	3.9
	R	101	132		54	67.28	5.9
100-65-125	F	110	20	2900	65	9.223	2.0
	R	110	20		65	9.223	2.2
100-65-160	F	60	6.5	1450	55	1.932	0.9
	R	60	6.5		52	2.044	0.9
	F	120	29	2900	68	13.946	2.4
	R	120	25		68	12.022	3.0

泵型 Pump type	叶轮结构 Impeller structure	流量 Q (m^3/h)	扬程 H (m)	转速 n (r/min)	效率 η (%)	轴功率 ρ=1000 Pa(kW)	汽蚀余量 NPSHr (m)
100-65-200	F	67	11	1450	60	3.347	1.2
	R	71	12		59	3.935	0.9
	F	129	48	2900	70	24.10	3.8
	R	136	50		65	28.51	3.7
100-65-250	F	56	16	1450	56	4.360	0.8
	R	61	17.5		58	5.015	0.7
	F	108	68	2900	63.5	31.52	3.2
	R	124	72		66.5	36.58	2.8
100-65-315	F	109	31	1450	66.5	13.846	1.8
	R	121	31		63.5	16.097	2.2
	F	194	125	2900	70.5	93.73	5.5
	R	202	100		65.5	84.04	6.9
100-65-400	F	115	50	1450	66	23.741	2.0
	R	128	50		63	27.683	2.4
	F	220	200	2900	67	178.955	3.5
	R	240	200		64	204.375	4.2
125-80-160	F	80	6.5	1450	57	2.486	1.0
	R	80	6.5		54	2.624	1.0
	F	160	30	2900	70	18.686	2.5
	R	160	26		70	16.194	3.1
125-80-200	F	90	12	1450	62	4.747	1.3
	R	90	12		61	4.825	1.1
	F	180	50	2900	72	34.063	4
	R	180	48		73	32.252	3.9
125-80-250	F	100	20	1450	62	8.790	0.9
	R	100	20		65	8.385	0.9
	F	200	78	2900	66	64.409	3.7
	R	200	76		66	62.758	3.3
125-80-315	F	135	31	1450	68	16.771	1.9
	R	135	31		65	17.545	2.0
	F	270	125	2900	71	129.533	5.8
	R	270	122		66	136.002	6.7
125-80-400	F	150	50	1450	67	30.504	3.5
	R	150	50		66	30.966	3.1
	F	300	200	2900	68	240.441	7.5
	R	300	200		67	244.0299	8.6

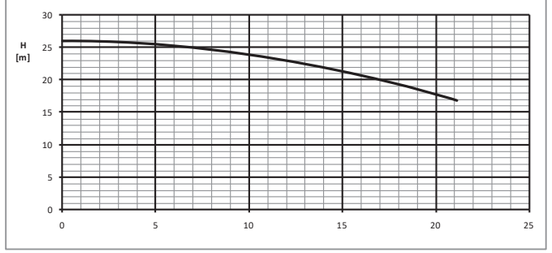
TI 泵规格表
TI Pump Specification table

泵型 Pump type	叶轮结构 Impeller structure	流量 Q (m^3/h)	扬程 H (m)	转速 n (r/min)	效率 η (%)	轴功率 ρ=1000 Pa(kW)	汽蚀余量 NPSHr (m)
150-100-200	F	160	12.5	1450	66	8.258	1.5
	R	160	12.5		65	8.385	1.4
	F	320	50	2900	75	58.133	3.0
	R	320	50		75	58.133	3.5
150-100-250	F	175	20	1450	65	14.673	2.1
	R	175	20		68	14.026	2.2
	F	360	80	2900	74	106.054	6.0
	R	360	80		73	107.507	6.3
150-100-315	F	190	32	1450	76.5	21.658	3.3
	R	190	30		76.5	20.304	2.3
	F	400	125	2900	70	194.643	5.2
	R	400	120		70	186.857	5.6
150-100-400	F	200	50	1450	71	38.380	3.7
	R	200	50		72	37.847	3.2
	F	400	200	1450	72	302.778	6.9
	R	400	200		73	298.630	8.2
150-125-250	F	230	18	1450	78	14.463	1.8
	R	210	18		78	13.206	1.8
150-125-315	F	253	32	1450	76.5	28.839	3.3
	R	230	30		76.5	24.578	2.3
150-125-400	F	278	53	1450	71	56.550	3.7
	R	285	50.5		72	54.472	3.2
200-150-250	F	430	20	1450	78	30.045	2.0
	R	410	20		78	28.647	2.0
200-150-315	F	446	33.4	1450	80	50.741	4.5
	R	437	33.4		80	49.717	3.4
200-150-400	F	498	47	1450	77	82.833	4.7
	R	498	44.6		74	81.790	3
200-150-500	F	550	68	1450	77	132.357	4.7
	R	570	68		74	142.731	3
250-200-315	F	771	30	1450	76.5	82.391	6.1
	R	798	30		80.5	81.039	5
250-200-400	F	826	46	1450	83.5	124.00	5.3
	R	802	43		83.5	112.54	4.6
250-200-500	F	1000	68	1450	76.5	242.222	5.9
	R	1200	68		81	274.519	6.4

化工流程泵性能曲线
Performance curve of pump

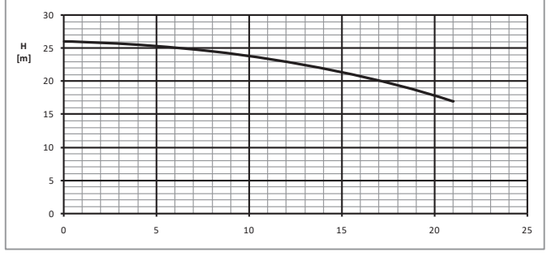
泵型 40-25-125F

转速：2900 rpm | 曲线编号：40-25-125-F2HC | 版次：A



泵型 40-25-125R

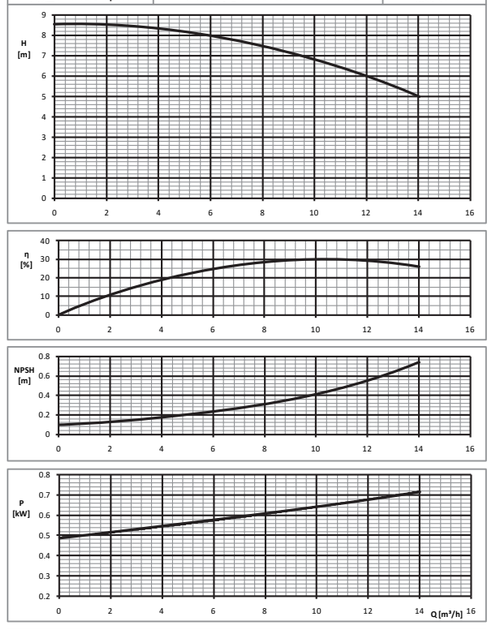
转速：2900 rpm | 曲线编号：40-25-125-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

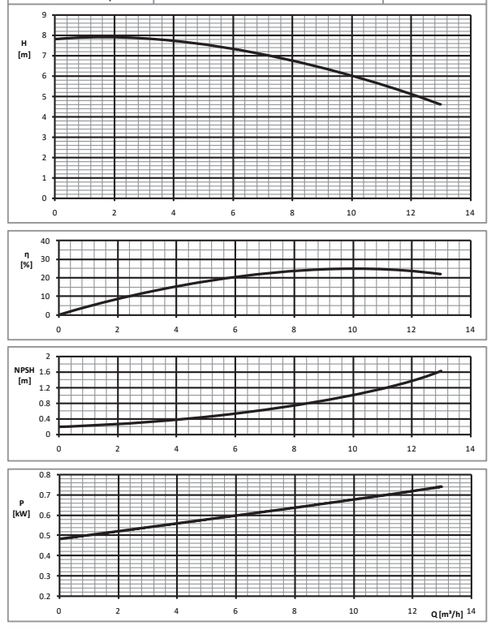
泵型 40-25-160F

转速：1450 rpm | 曲线编号：40-25-160-F4HC | 版次：A



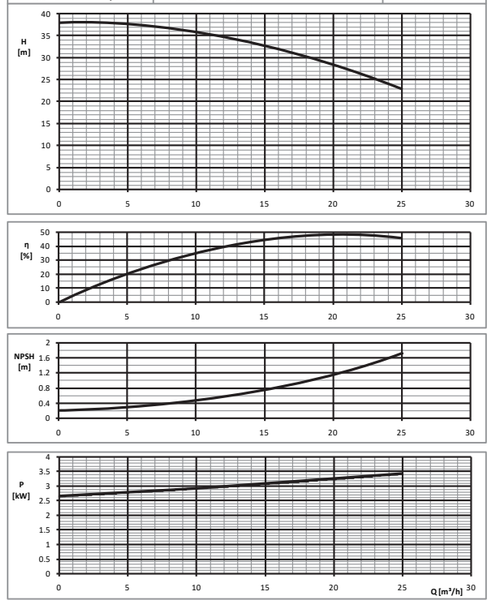
泵型 40-25-160R

转速：1450 rpm | 曲线编号：40-25-160-R4HC | 版次：A



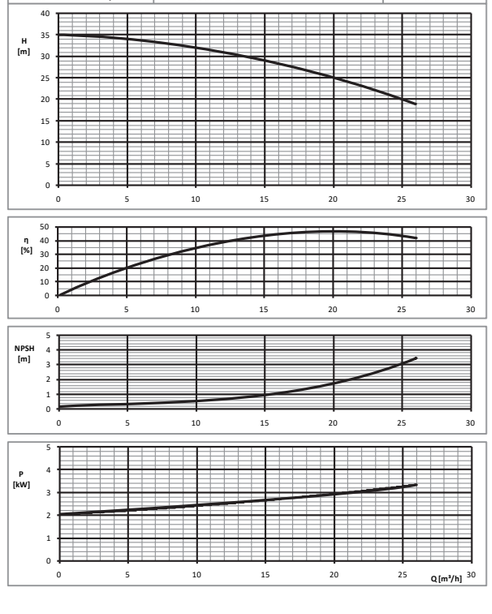
泵型 40-25-160F

转速：2900 rpm | 曲线编号：40-25-160-F2HC | 版次：A



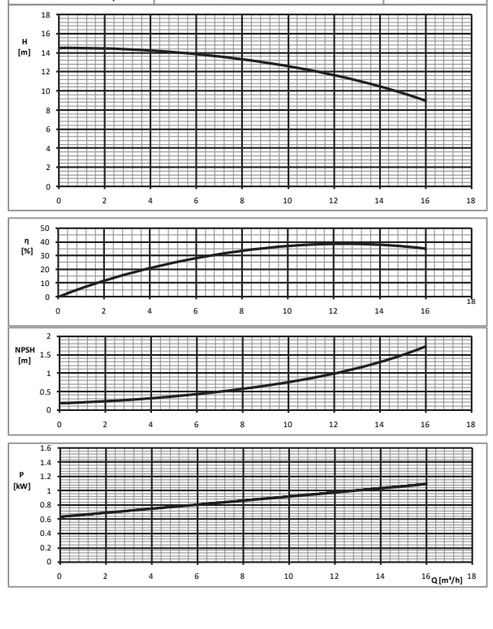
泵型 40-25-160R

转速：2900 rpm | 曲线编号：40-25-160-R2HC | 版次：A



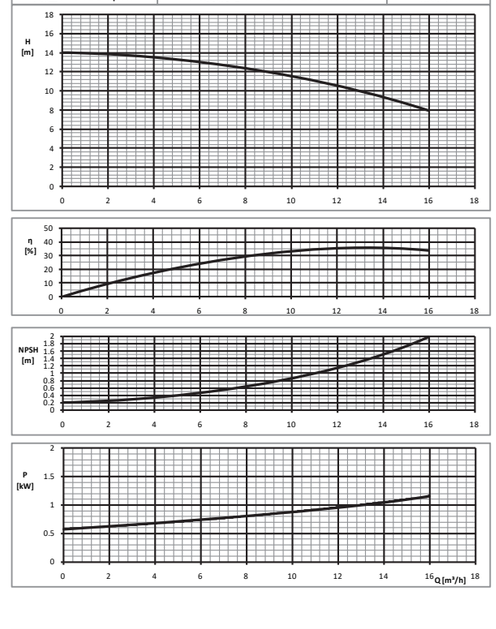
泵型 40-25-200F

转速：1450 rpm | 曲线编号：40-25-200-F4HC | 版次：A



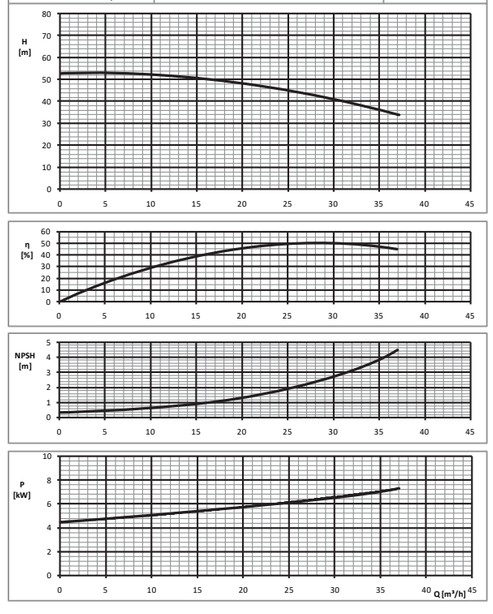
泵型 40-25-200R

转速：1450 rpm | 曲线编号：40-25-200-R4HC | 版次：A



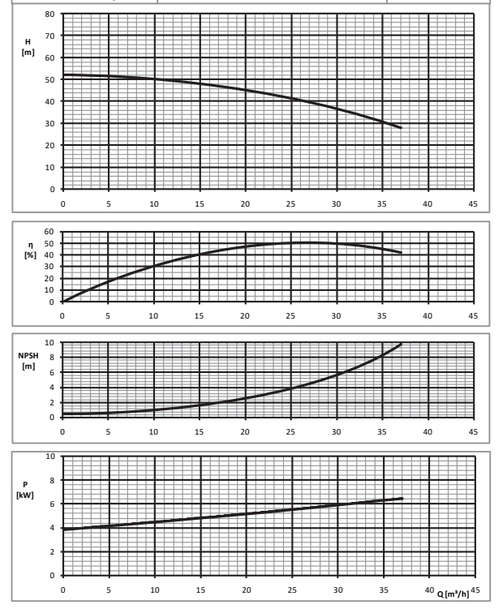
泵型 40-25-200F

转速：2900 rpm | 曲线编号：40-25-200-F2HC | 版次：A



泵型 40-25-200R

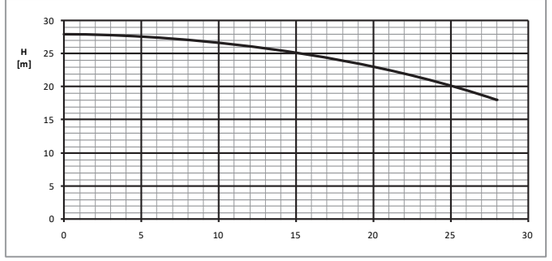
转速：2900 rpm | 曲线编号：40-25-200-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

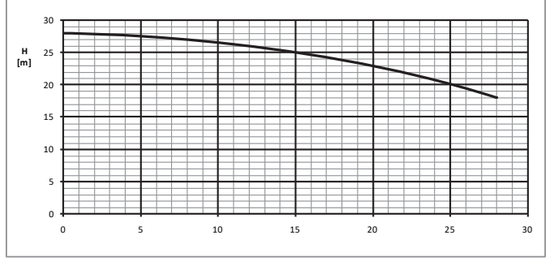
泵型 50-32-125F

转速：2900 rpm | 曲线编号：50-32-125-F2HC | 版次：A



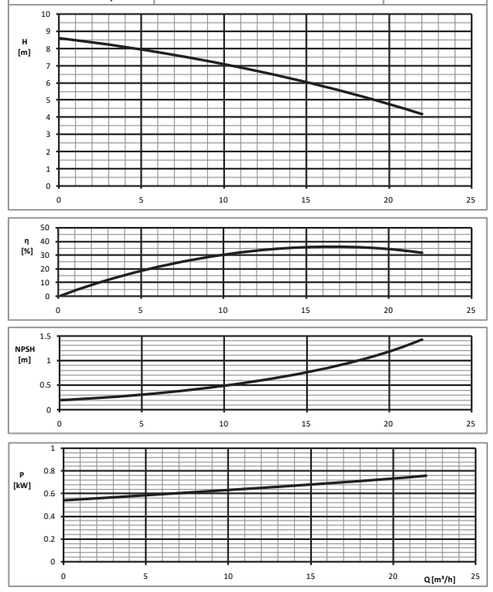
泵型 50-32-125R

转速：2900 rpm | 曲线编号：50-32-125-R2HC | 版次：A



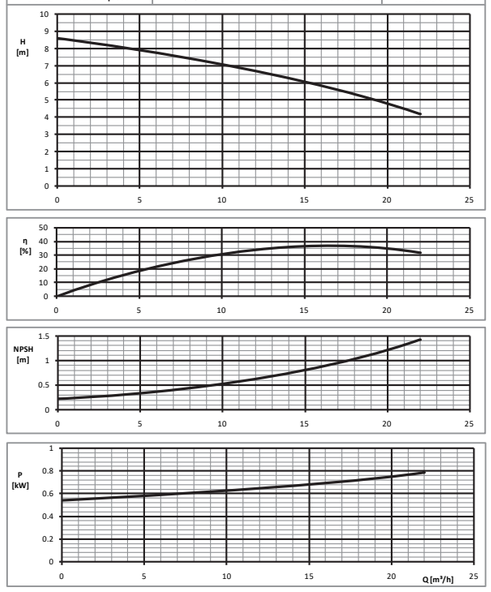
泵型 50-32-160F

转速：1450 rpm | 曲线编号：50-32-160-F4HC | 版次：A



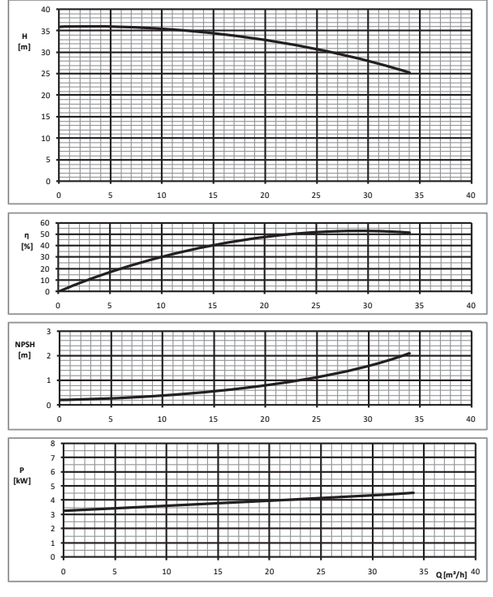
泵型 50-32-160R

转速：1450 rpm | 曲线编号：50-32-160-R4HC | 版次：A



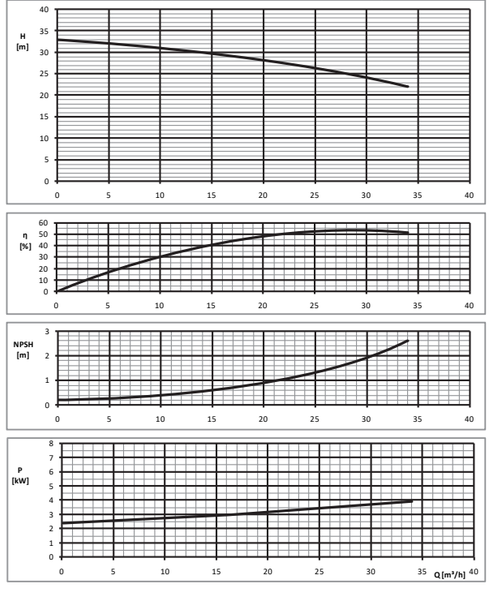
泵型 50-32-160F

转速：2900 rpm | 曲线编号：50-32-160-F2HC | 版次：A



泵型 50-32-160R

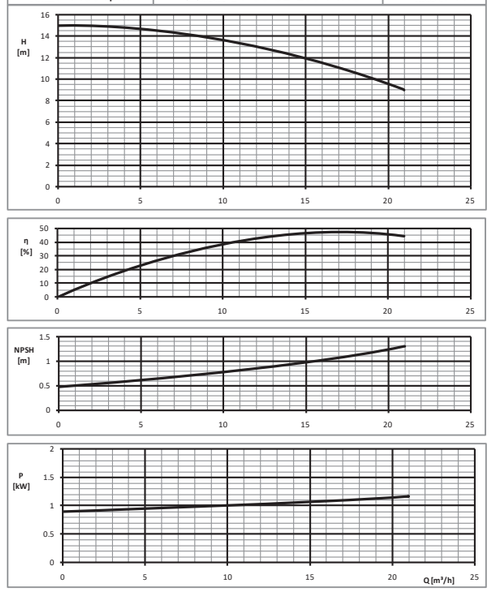
转速：2900 rpm | 曲线编号：50-32-160-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

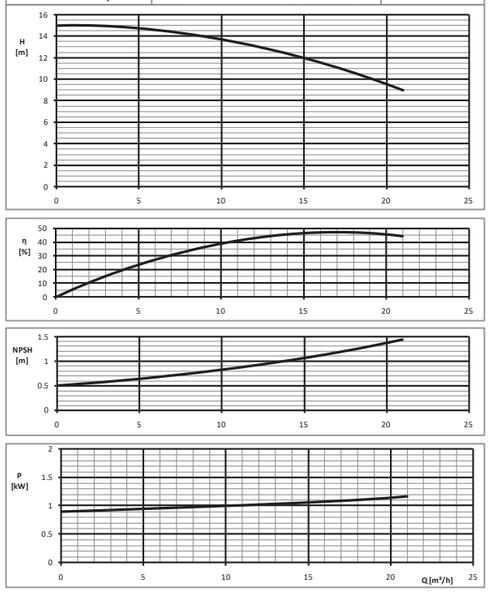
泵型 50-32-200F

转速：1450 rpm | 曲线编号：50-32-200-F4HC | 版次：A



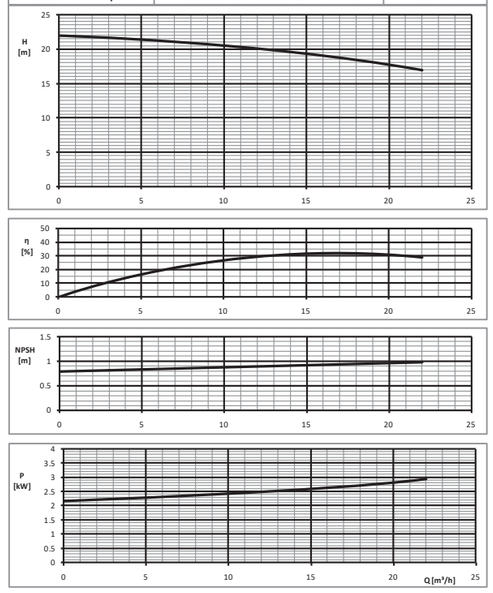
泵型 50-32-200R

转速：1450 rpm | 曲线编号：50-32-200-R4HC | 版次：A



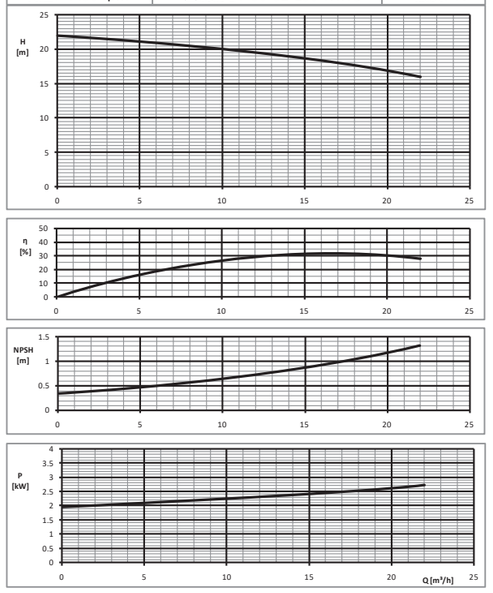
泵型 50-32-250F

转速：1450 rpm | 曲线编号：50-32-250-F4HC | 版次：A



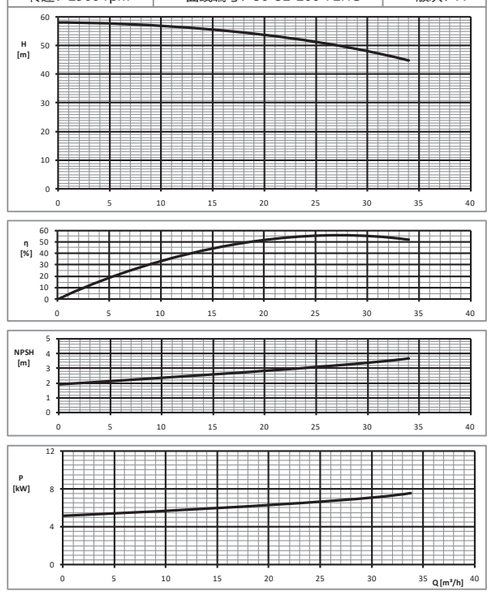
泵型 50-32-250R

转速：1450 rpm | 曲线编号：50-32-250-R4HC | 版次：A



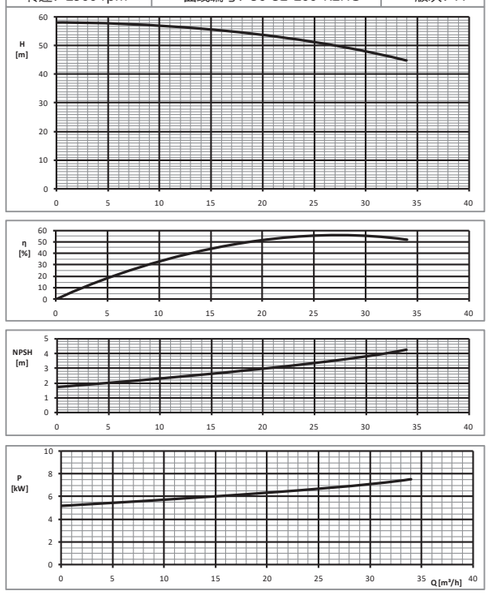
泵型 50-32-200F

转速：2900 rpm | 曲线编号：50-32-200-F2HC | 版次：A



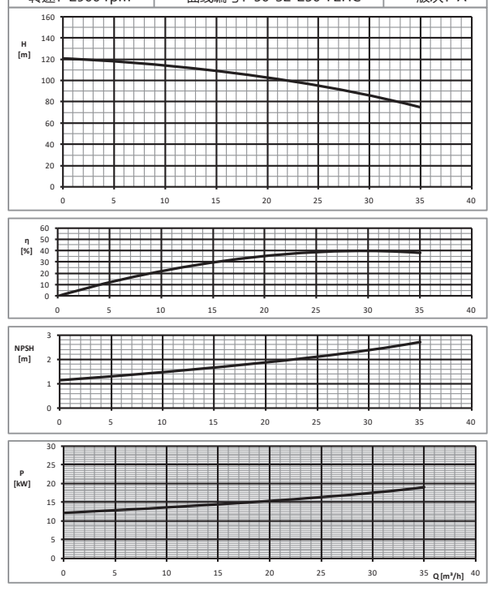
泵型 50-32-200R

转速：2900 rpm | 曲线编号：50-32-200-R2HC | 版次：A



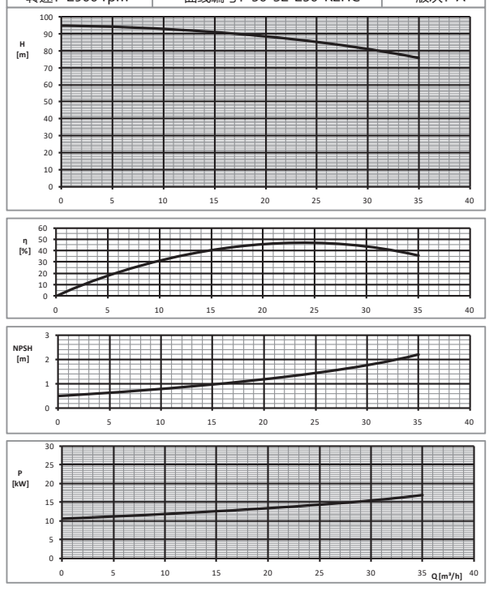
泵型 50-32-250F

转速：2900 rpm | 曲线编号：50-32-250-F2HC | 版次：A



泵型 50-32-250R

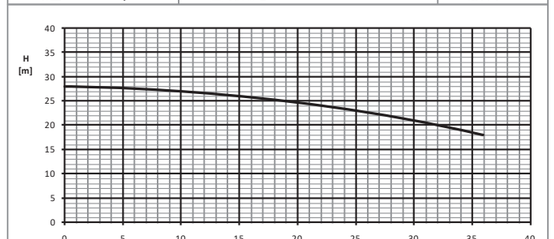
转速：2900 rpm | 曲线编号：50-32-250-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

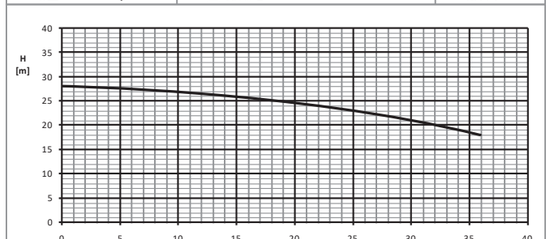
泵型 65-40-125F

转速：2900 rpm | 曲线编号：65-40-125-F2HC | 版次：A



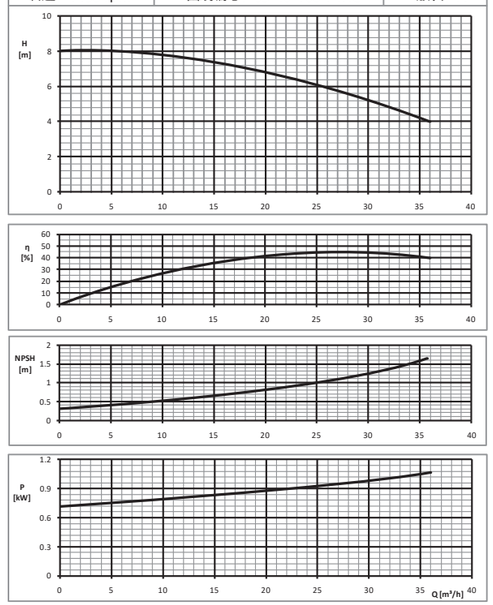
泵型 65-40-125R

转速：2900 rpm | 曲线编号：65-40-125-R2HC | 版次：A



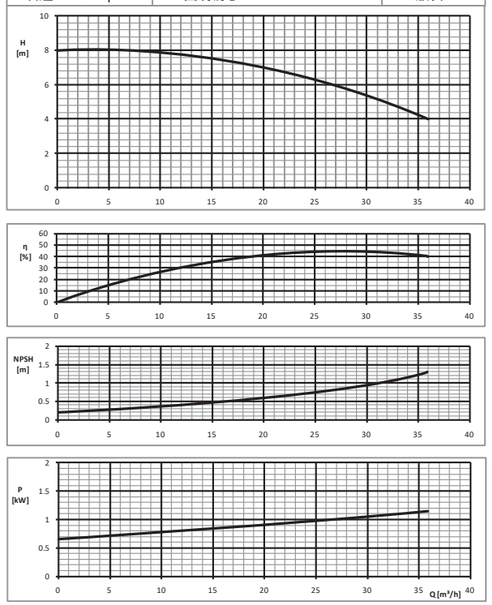
泵型 65-40-160F

转速：1450 rpm | 曲线编号：65-40-160-F4HC | 版次：A



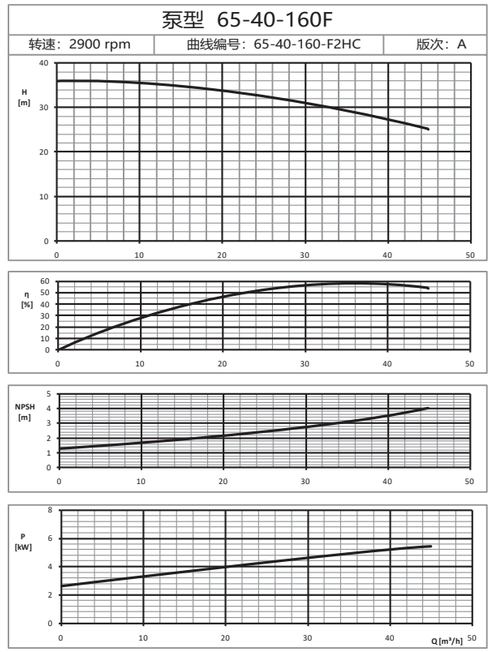
泵型 65-40-160R

转速：1450 rpm | 曲线编号：65-40-160-R4HC | 版次：A



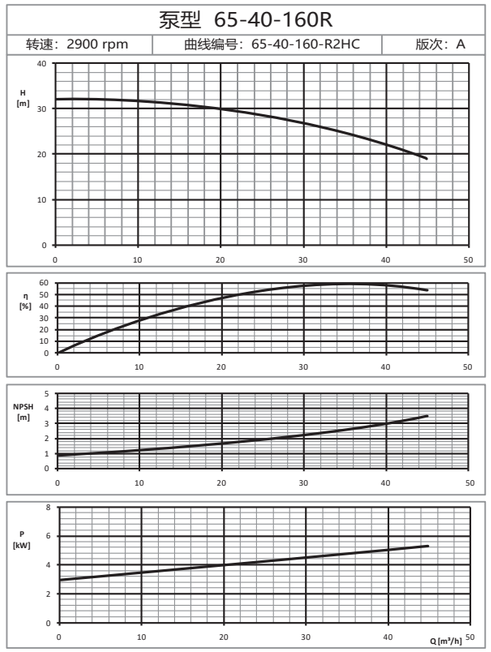
泵型 65-40-160F

转速：2900 rpm | 曲线编号：65-40-160-F2HC | 版次：A



泵型 65-40-160R

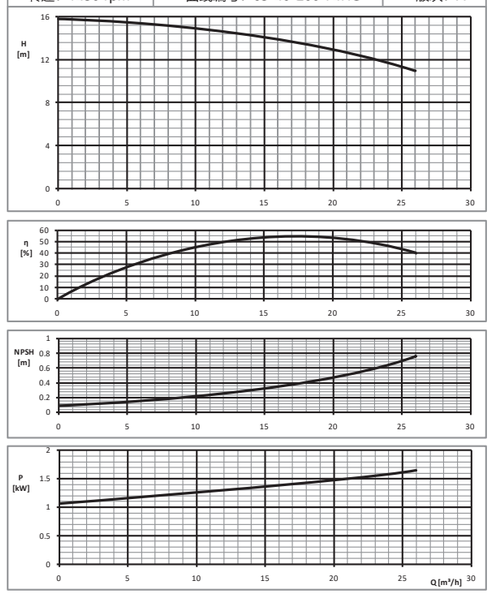
转速：2900 rpm | 曲线编号：65-40-160-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

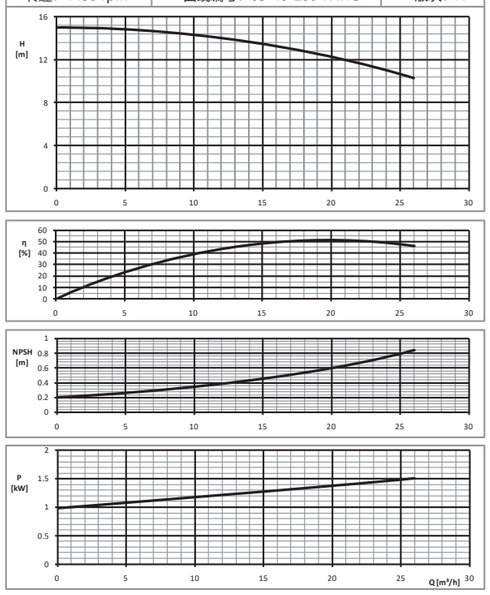
泵型 65-40-200F

转速：1450 rpm | 曲线编号：65-40-200-F4HC | 版次：A



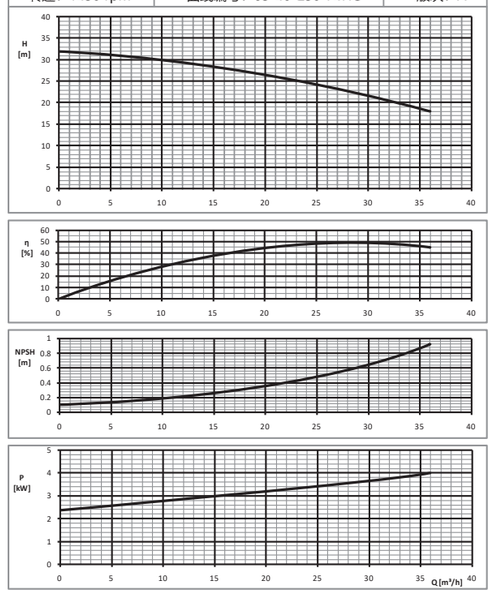
泵型 65-40-200R

转速：1450 rpm | 曲线编号：65-40-200-R4HC | 版次：A



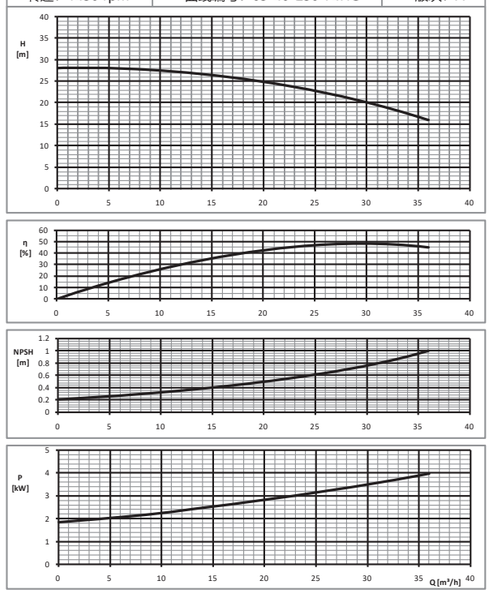
泵型 65-40-250F

转速：1450 rpm | 曲线编号：65-40-250-F4HC | 版次：A



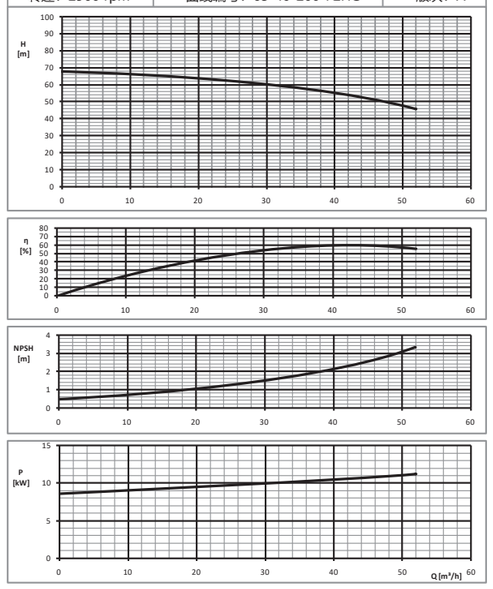
泵型 65-40250R

转速：1450 rpm | 曲线编号：65-40-250-F4HC | 版次：A



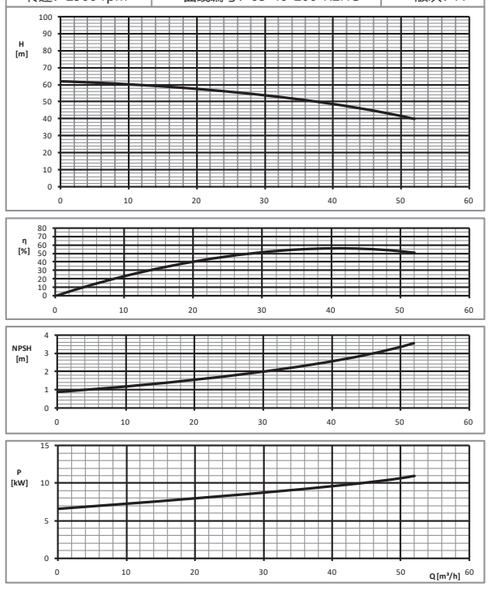
泵型 65-40-200F

转速：2900 rpm | 曲线编号：65-40-200-F2HC | 版次：A



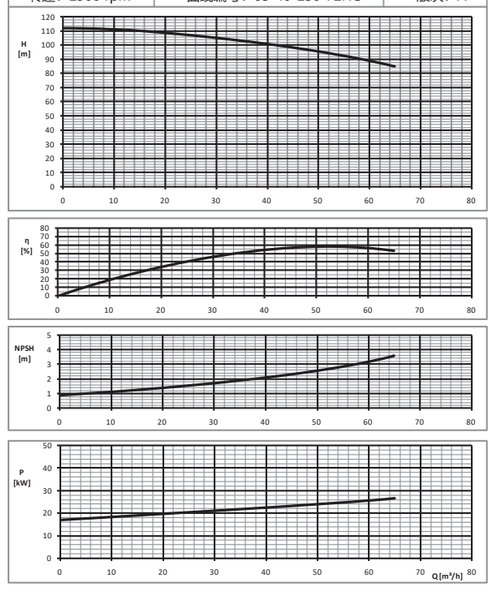
泵型 65-40-200R

转速：2900 rpm | 曲线编号：65-40-200-R2HC | 版次：A



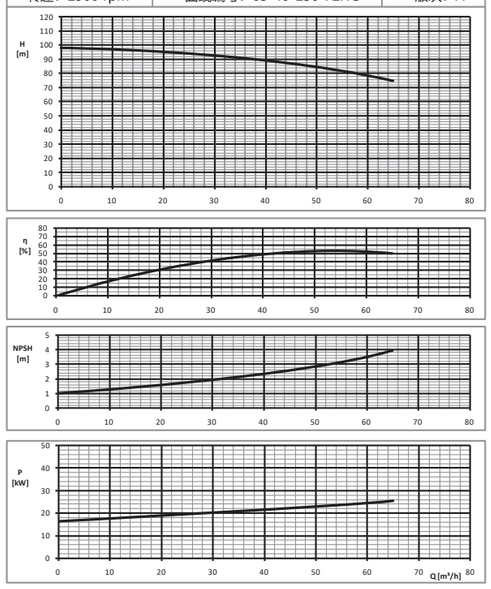
泵型 65-40-250F

转速：2900 rpm | 曲线编号：65-40-250-F2HC | 版次：A



泵型 65-40-250R

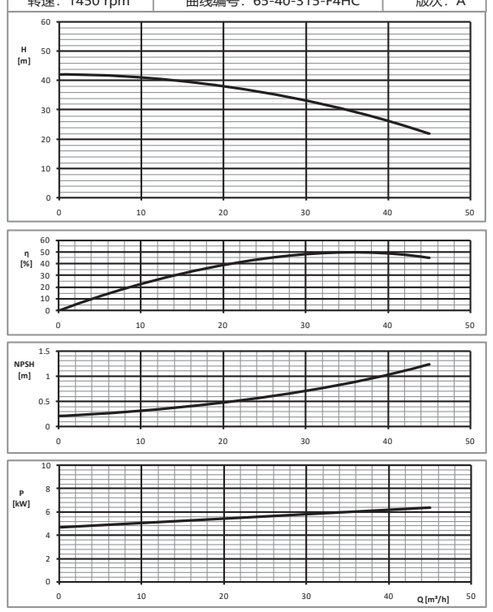
转速：2900 rpm | 曲线编号：65-40-250-F2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

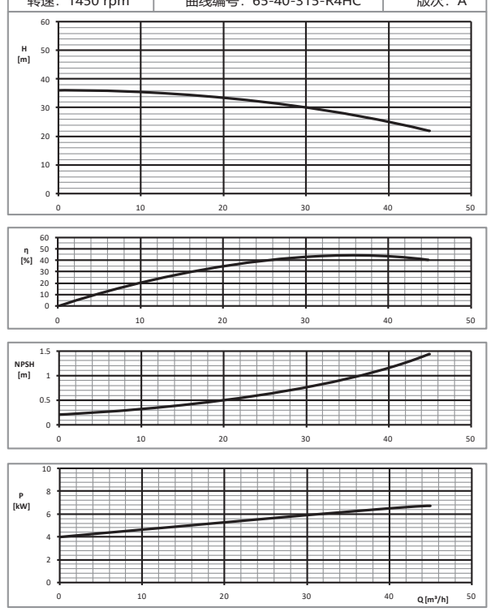
泵型 65-40-315F

转速：1450 rpm | 曲线编号：65-40-315-F4HC | 版次：A



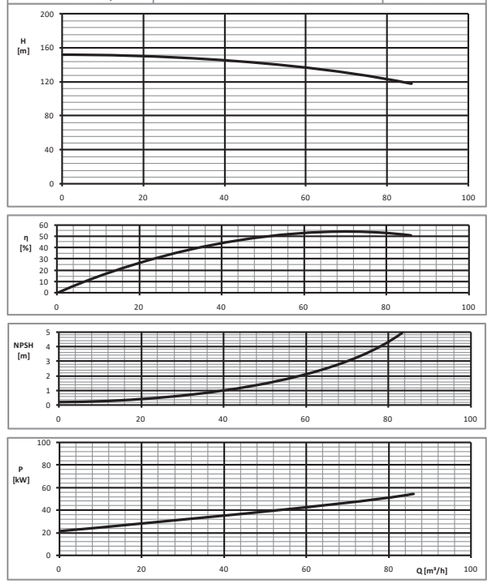
泵型 65-40-315R

转速：1450 rpm | 曲线编号：65-40-315-R4HC | 版次：A



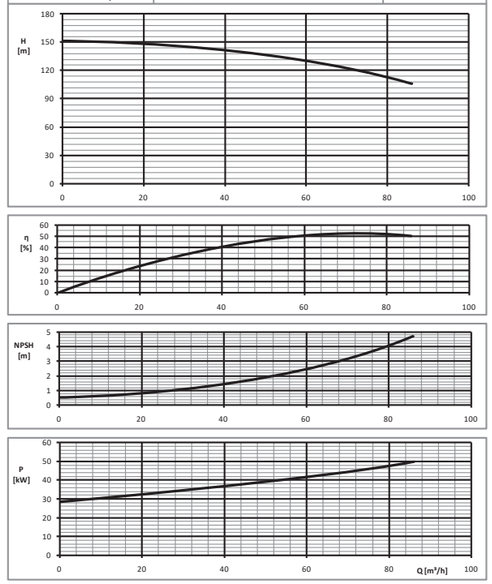
泵型 65-40-315F

转速：2900 rpm | 曲线编号：65-40-315-F2HC | 版次：A



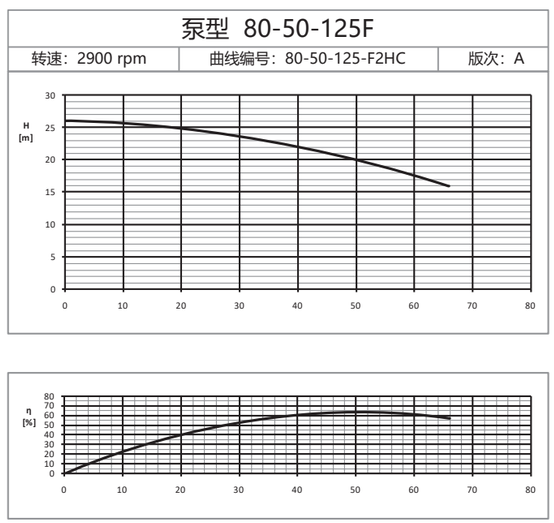
泵型 65-40-315R

转速：2900 rpm | 曲线编号：65-40-315-R2HC | 版次：A



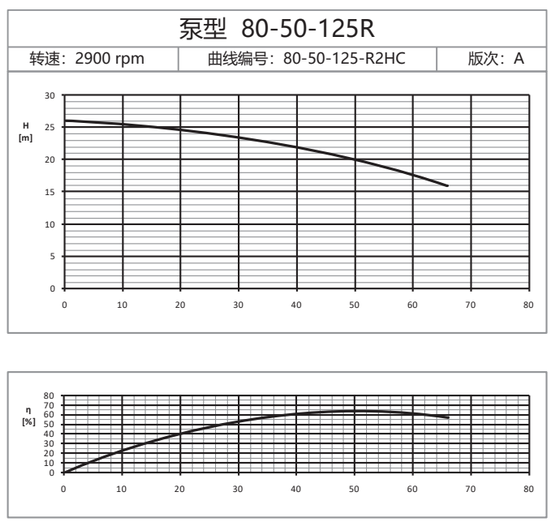
泵型 80-50-125F

转速：2900 rpm | 曲线编号：80-50-125-F2HC | 版次：A



泵型 80-50-125R

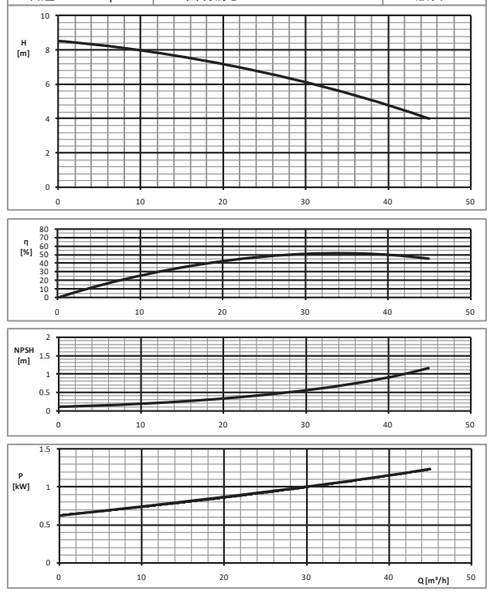
转速：2900 rpm | 曲线编号：80-50-125-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

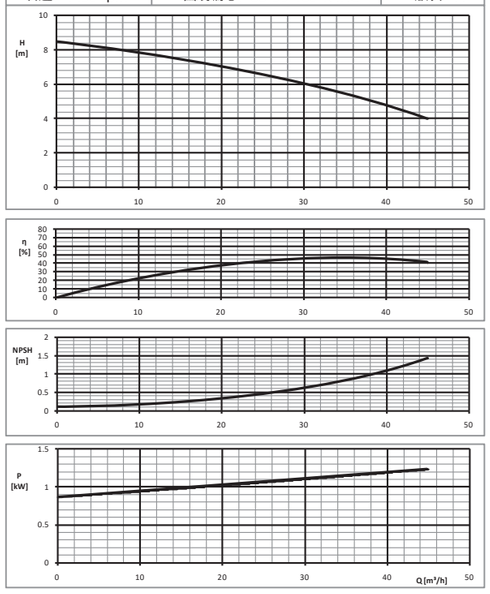
泵型 80-50-160F

转速：1450 rpm | 曲线编号：80-50-160-F4HC | 版次：A



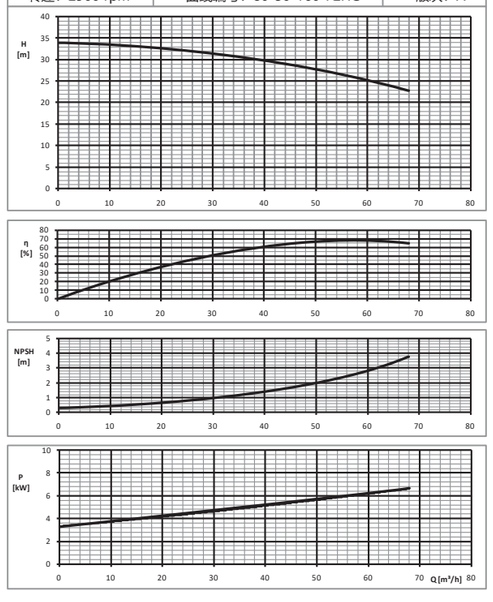
泵型 80-50-160R

转速：1450 rpm | 曲线编号：80-50-160-R4HC | 版次：A



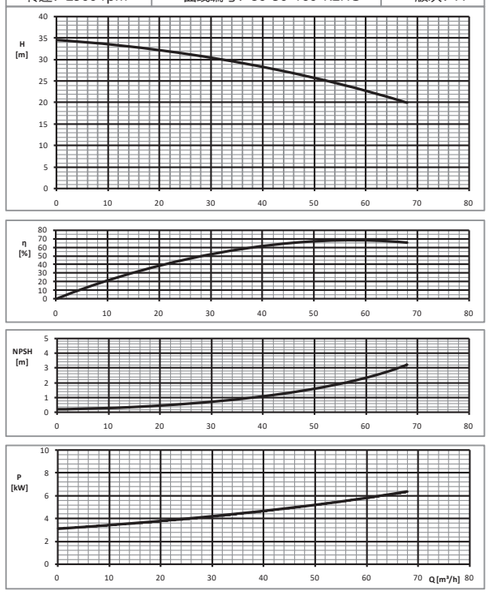
泵型 80-50-160F

转速：2900 rpm | 曲线编号：80-50-160-F2HC | 版次：A



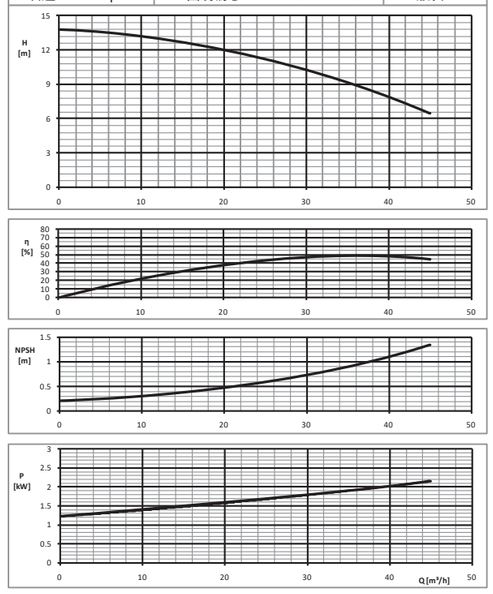
泵型 80-50-160R

转速：2900 rpm | 曲线编号：80-50-160-R2HC | 版次：A



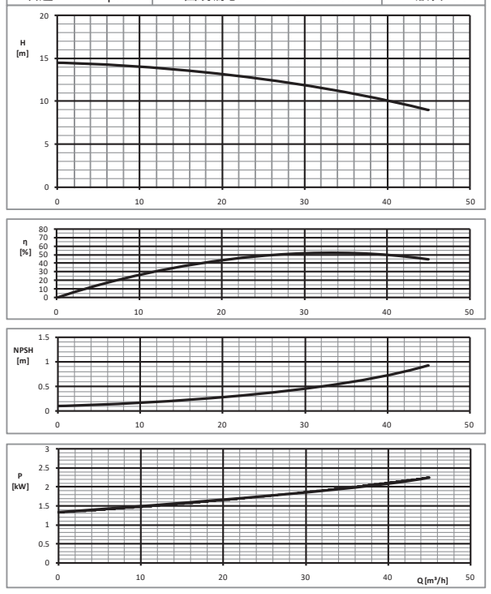
泵型 80-50-200F

转速：1450 rpm | 曲线编号：80-50-200-F4HC | 版次：A



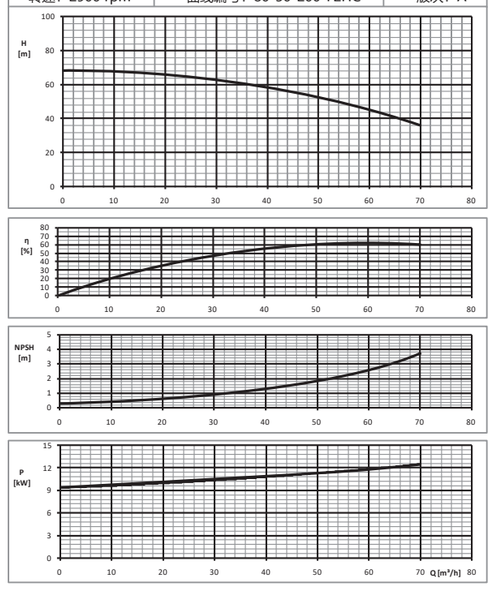
泵型 80-50-200R

转速：1450 rpm | 曲线编号：80-50-200-R4HC | 版次：A



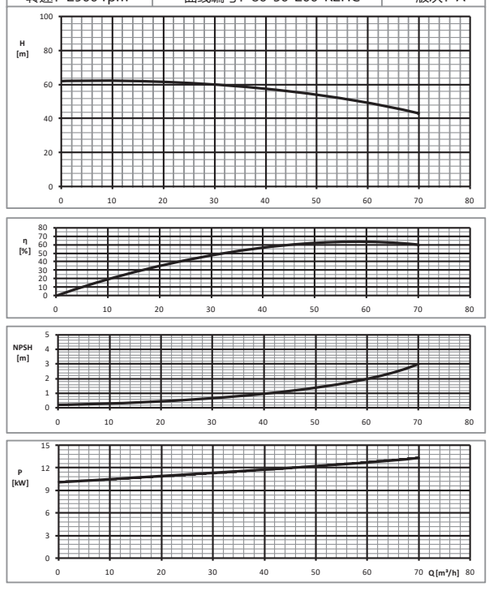
泵型 80-50-200F

转速：2900 rpm | 曲线编号：80-50-200-F2HC | 版次：A



泵型 80-50-200R

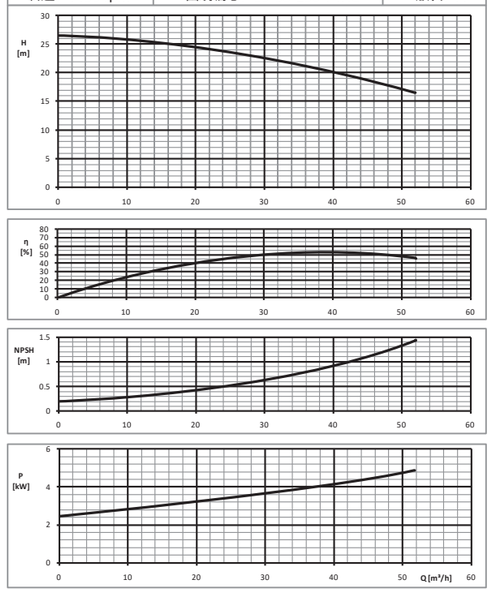
转速：2900 rpm | 曲线编号：80-50-200-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

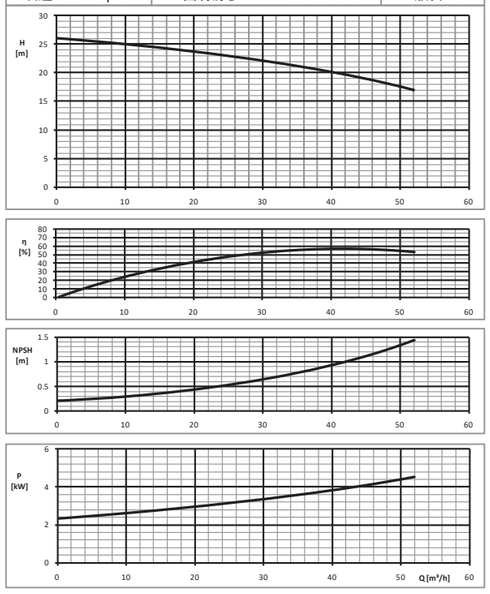
泵型 80-50-250F

转速：1450 rpm | 曲线编号：80-50-250-F4HC | 版次：A



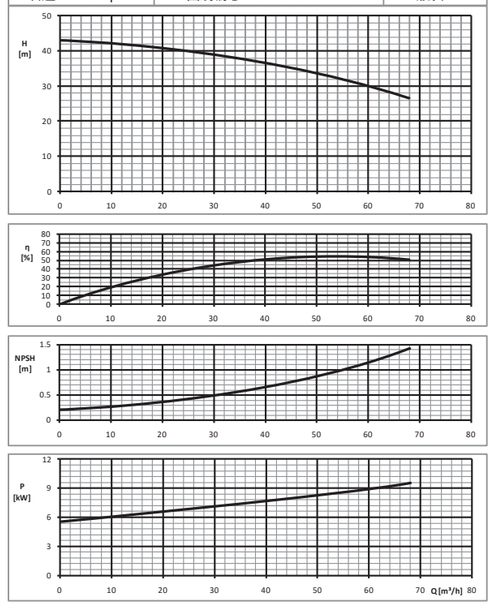
泵型 80-50-250R

转速：1450 rpm | 曲线编号：80-50-250-R4HC | 版次：A



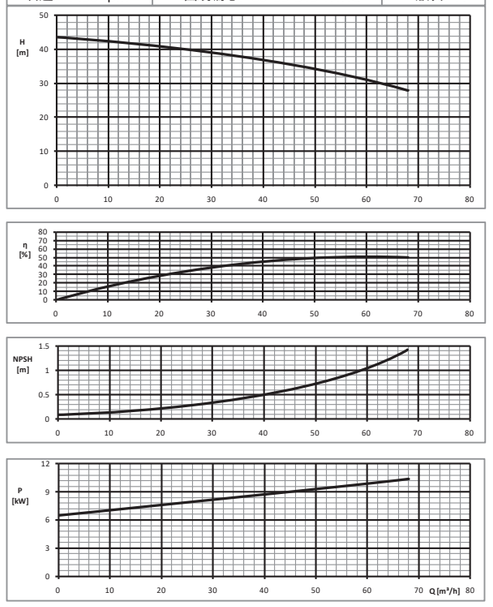
泵型 80-50-315F

转速：1450 rpm | 曲线编号：80-50-315-F4HC | 版次：A



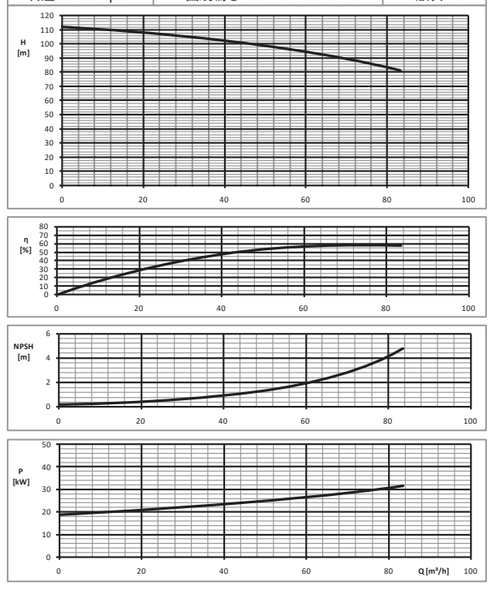
泵型 80-50-315R

转速：1450 rpm | 曲线编号：80-50-315-R4HC | 版次：A



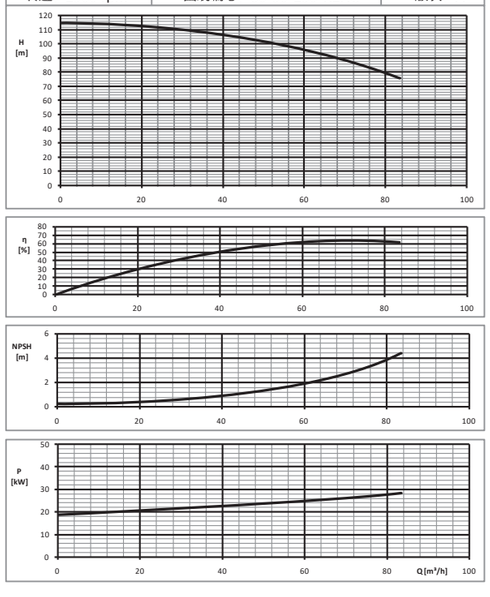
泵型 80-50-250F

转速：2900 rpm | 曲线编号：80-50-250-F2HC | 版次：A



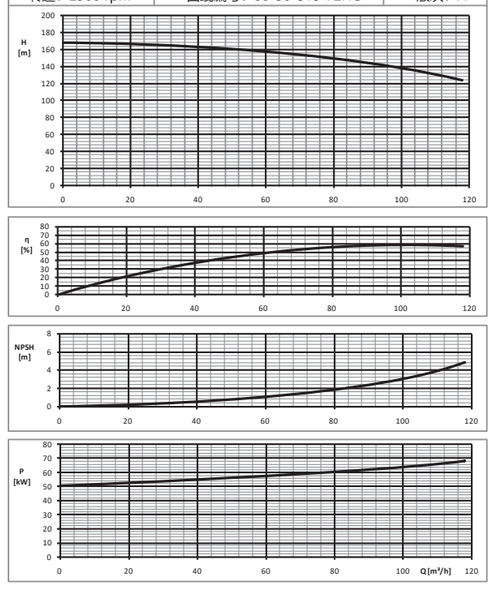
泵型 80-50-250R

转速：2900 rpm | 曲线编号：80-50-250-R2HC | 版次：A



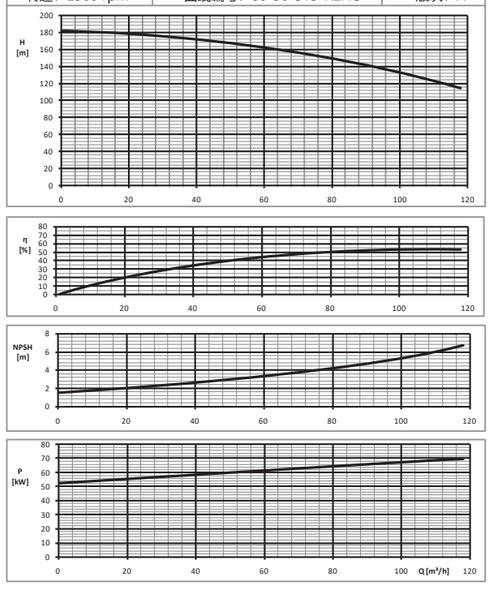
泵型 80-50-315F

转速：2900 rpm | 曲线编号：80-50-315-F2HC | 版次：A



泵型 80-50-315R

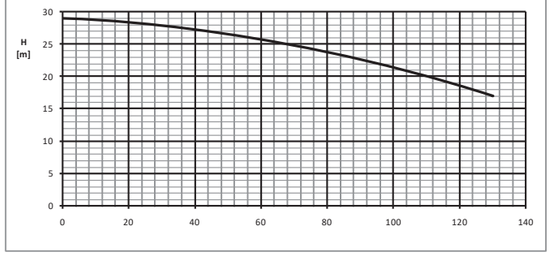
转速：2900 rpm | 曲线编号：80-50-315-R2HC | 版次：A

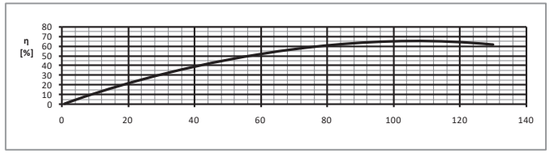


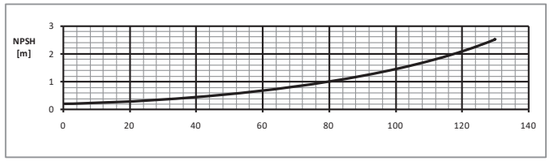
化工流程泵性能曲线
Performance curve of pump

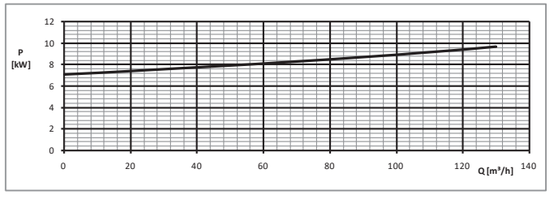
泵型 100-65-125F

转速：2900 rpm | 曲线编号：100-65-125-F2HC | 版次：A



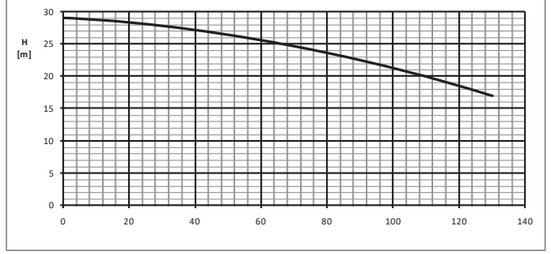


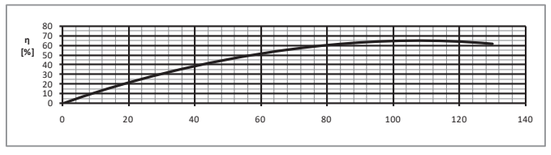


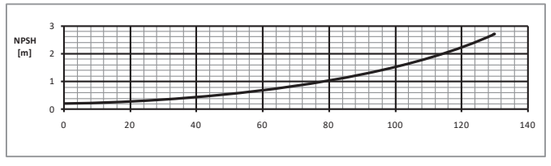


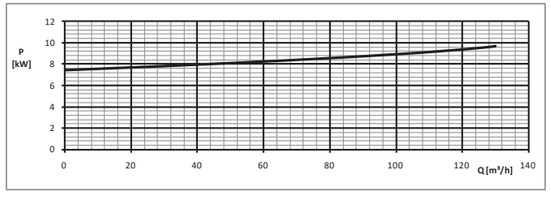
泵型 100-65-125R

转速：2900 rpm | 曲线编号：100-65-125-R2HC | 版次：A



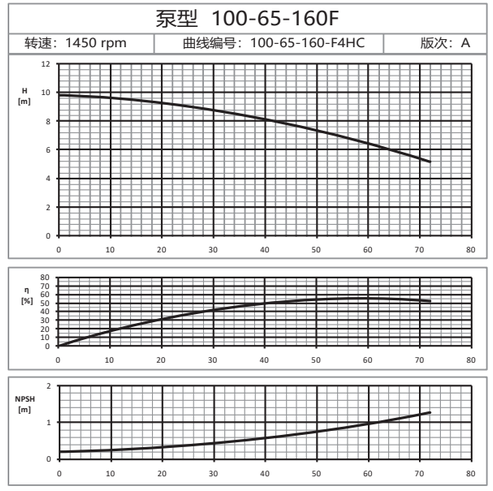


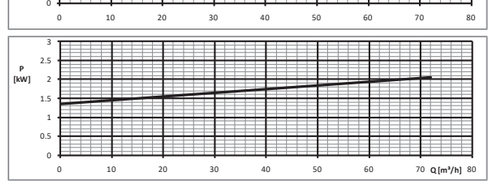




泵型 100-65-160F

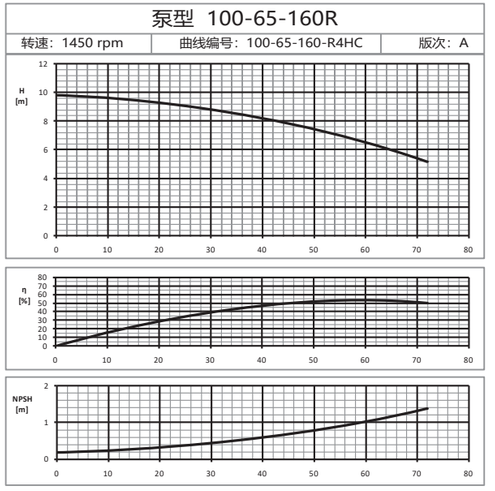
转速：1450 rpm | 曲线编号：100-65-160-F4HC | 版次：A

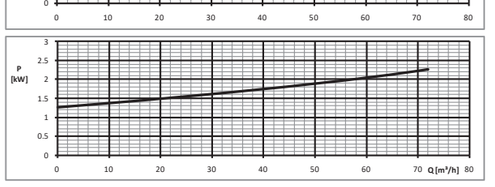




泵型 100-65-160R

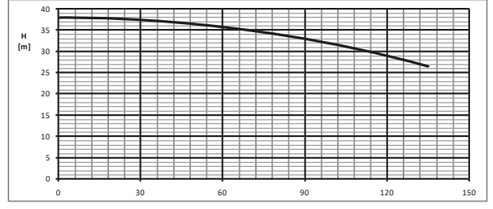
转速：1450 rpm | 曲线编号：100-65-160-R4HC | 版次：A

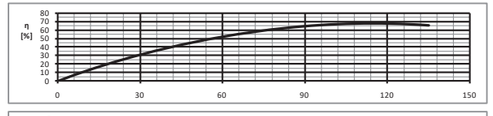


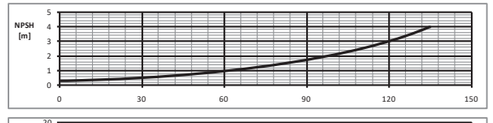


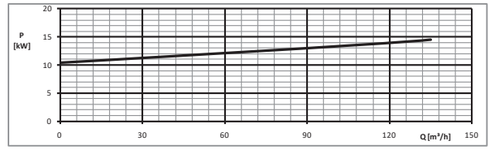
泵型 100-65-160F

转速：2900 rpm | 曲线编号：100-65-160-F2HC | 版次：A



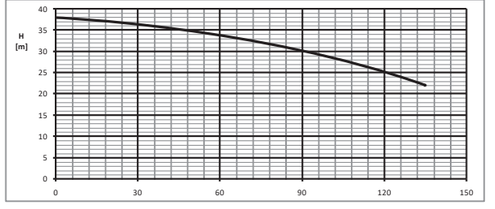


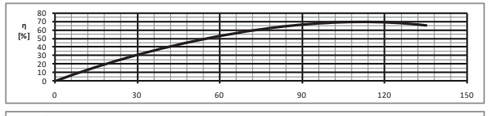


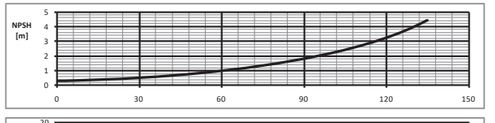


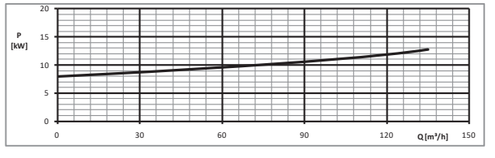
泵型 100-65-160R

转速：2900 rpm | 曲线编号：100-65-160-R2HC | 版次：A





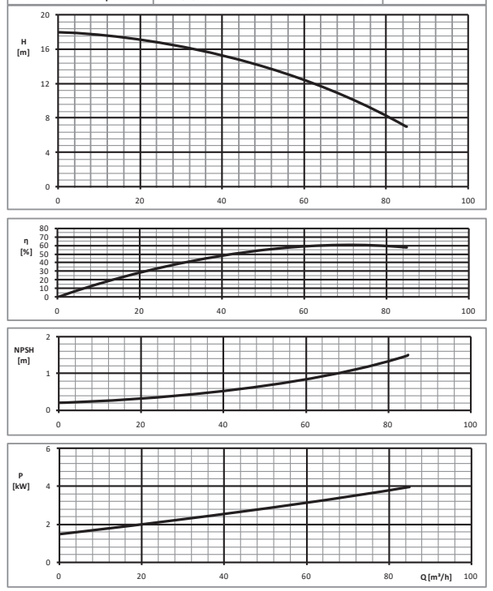




化工流程泵性能曲线
Performance curve of pump

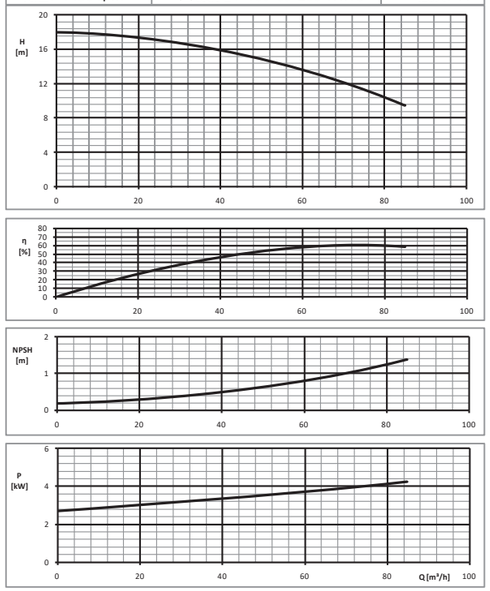
泵型 100-65-200F

转速：1450 rpm | 曲线编号：100-65-200-F4HC | 版次：A



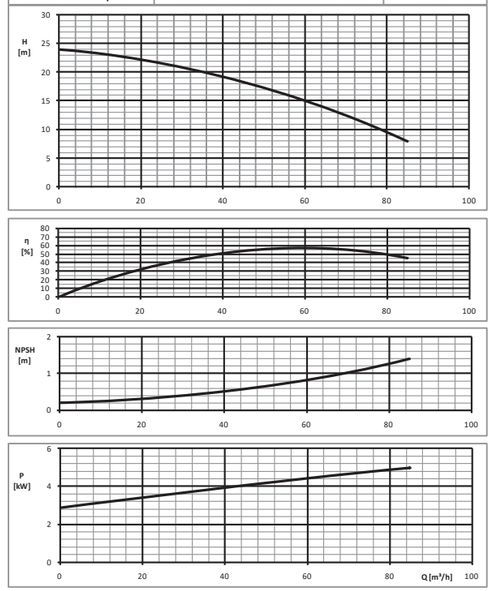
泵型 100-65-200R

转速：1450 rpm | 曲线编号：100-65-200-R4HC | 版次：A



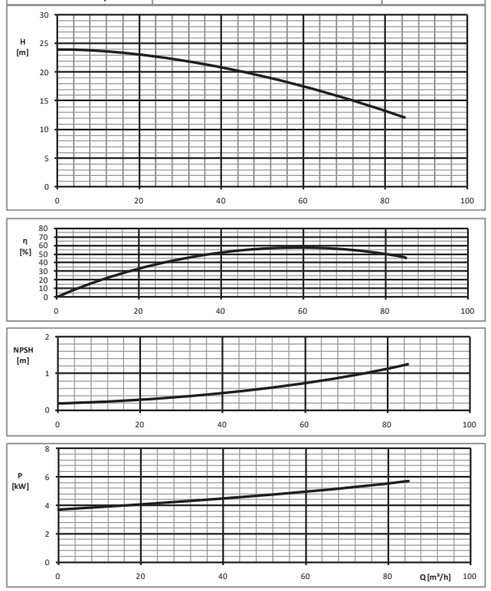
泵型 100-65-250F

转速：1450 rpm | 曲线编号：100-65-250-F4HC | 版次：A



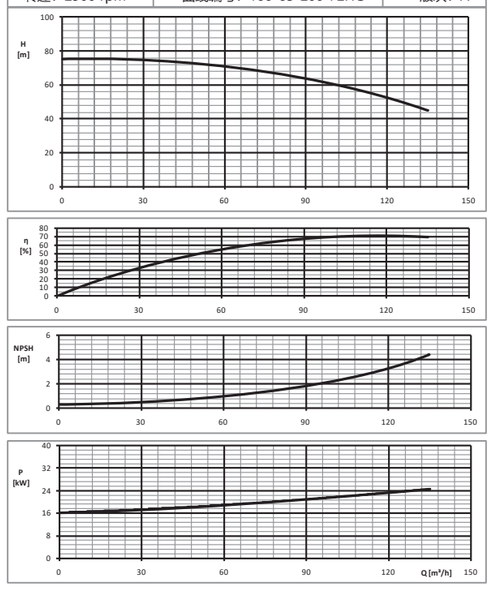
泵型 100-65-250R

转速：1450 rpm | 曲线编号：100-65-250-R4HC | 版次：A



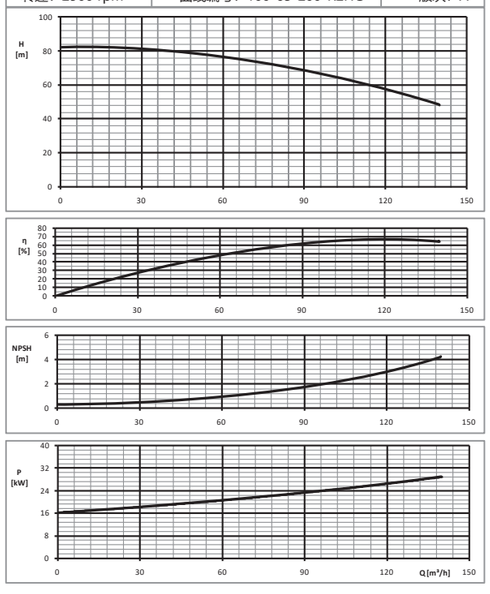
泵型 100-65-200F

转速：2900 rpm | 曲线编号：100-65-200-F2HC | 版次：A



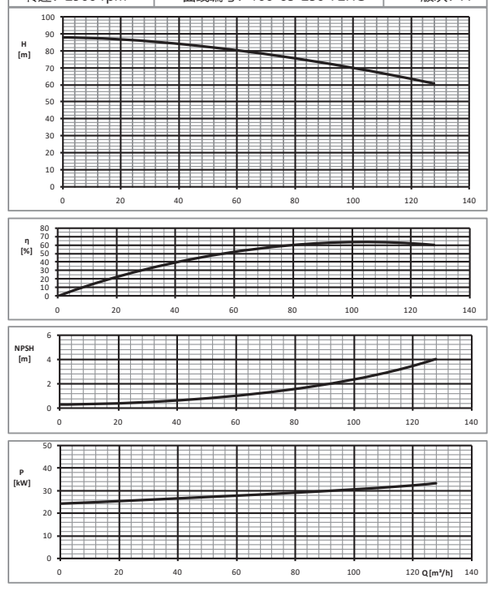
泵型 100-65-200R

转速：2900 rpm | 曲线编号：100-65-200-R2HC | 版次：A



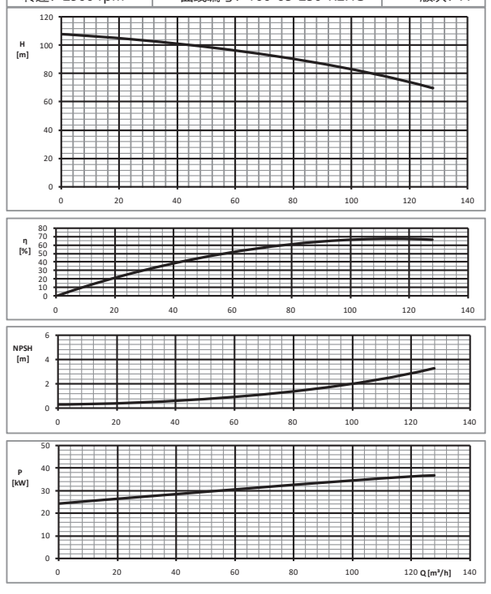
泵型 100-65-250F

转速：2900 rpm | 曲线编号：100-65-250-F2HC | 版次：A



泵型 100-65-250R

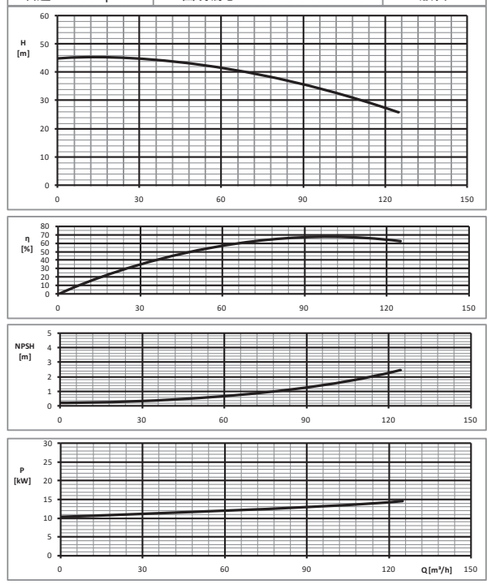
转速：2900 rpm | 曲线编号：100-65-250-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

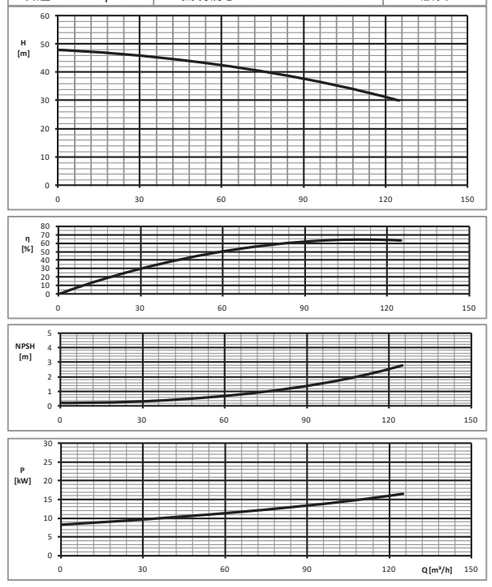
泵型 100-65-315F

转速：1450 rpm | 曲线编号：100-65-315-F4HC | 版次：A



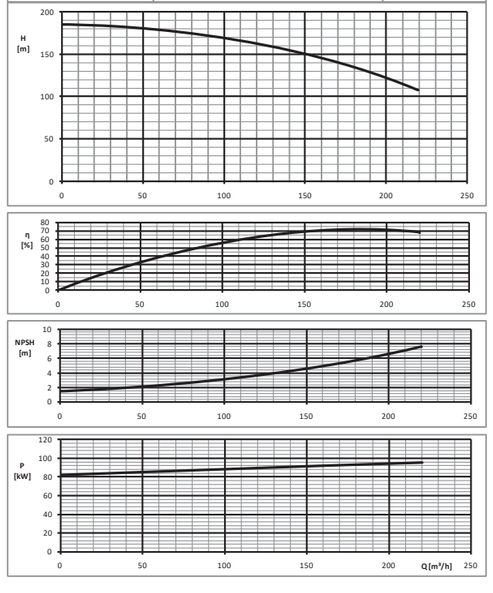
泵型 100-65-315R

转速：1450 rpm | 曲线编号：100-65-315-R4HC | 版次：A



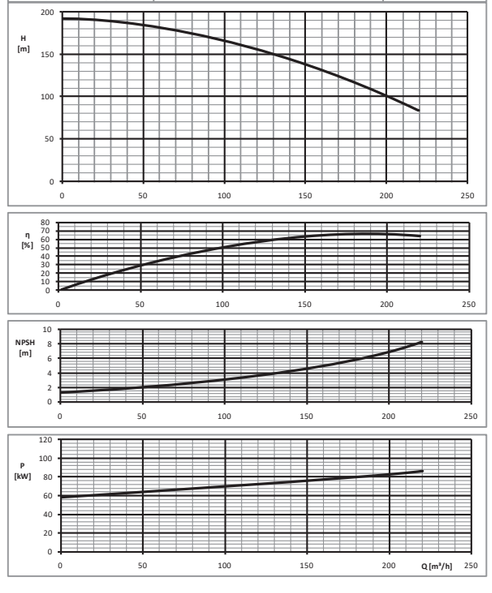
泵型 100-65-315F

转速：2900 rpm | 曲线编号：100-65-315-F2HC | 版次：A



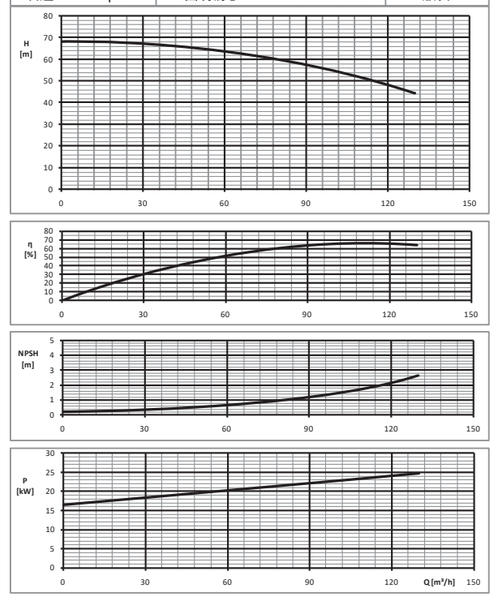
泵型 100-65-315R

转速：2900 rpm | 曲线编号：100-65-315-R2HC | 版次：A



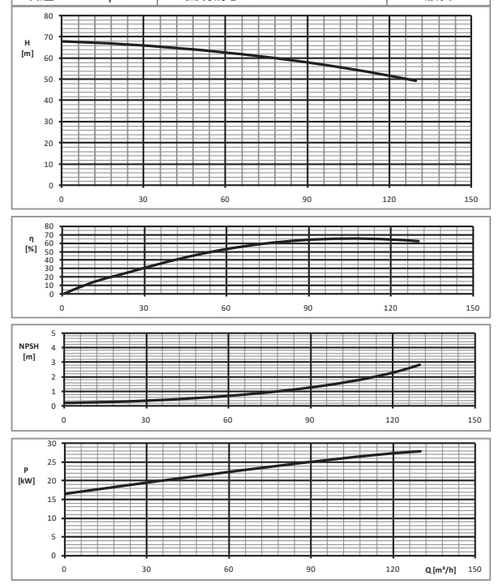
泵型 100-65-400F

转速：1450 rpm | 曲线编号：100-65-400-F4HC | 版次：A



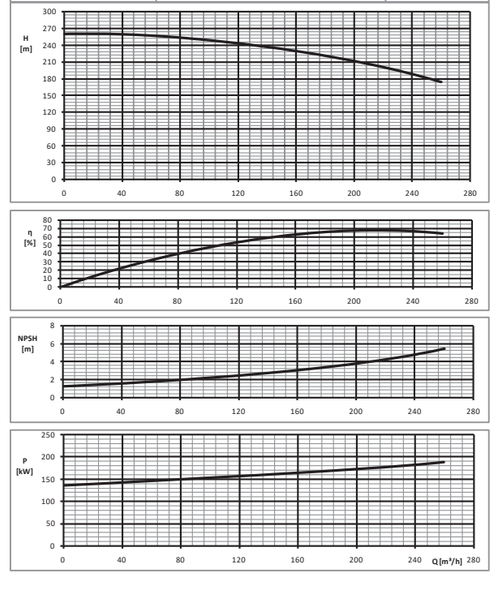
泵型 100-65-400R

转速：1450 rpm | 曲线编号：100-65-400-R4HC | 版次：A



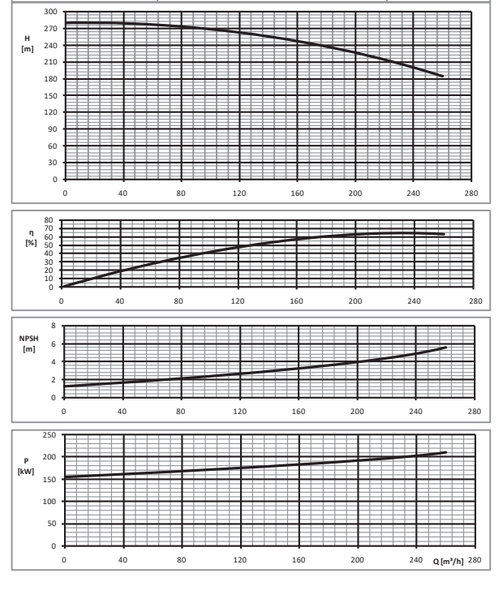
泵型 100-65-400F

转速：2900 rpm | 曲线编号：100-65-400-F2HC | 版次：A



泵型 100-65-400R

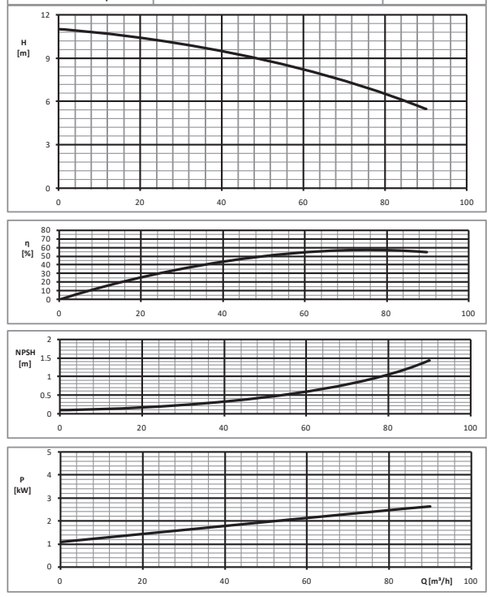
转速：2900 rpm | 曲线编号：100-65-400-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

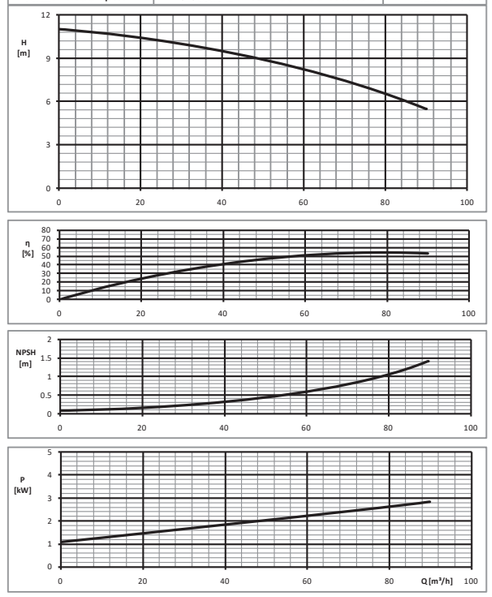
泵型 125-80-160F

转速：1450 rpm | 曲线编号：125-80-160-F4HC | 版次：A



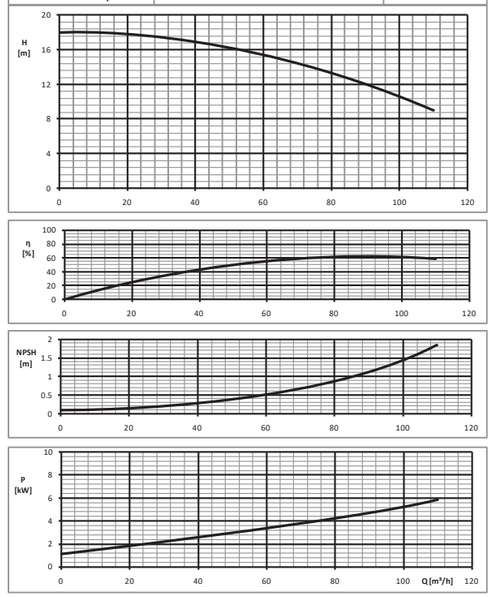
泵型 125-80-160R

转速：1450 rpm | 曲线编号：125-80-160-R4HC | 版次：A



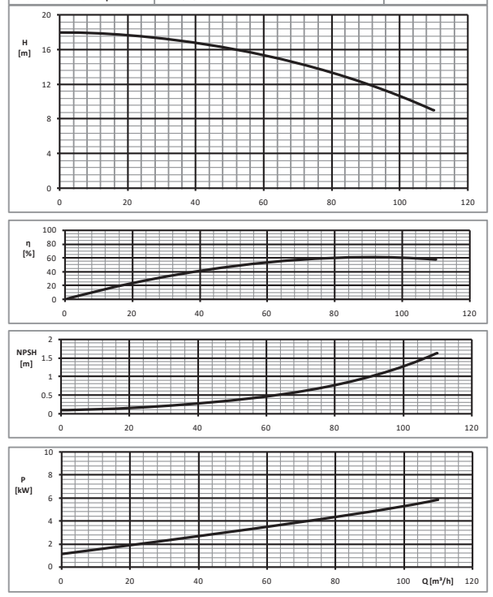
泵型 125-80-200F

转速：1450 rpm | 曲线编号：125-80-200-F4HC | 版次：A



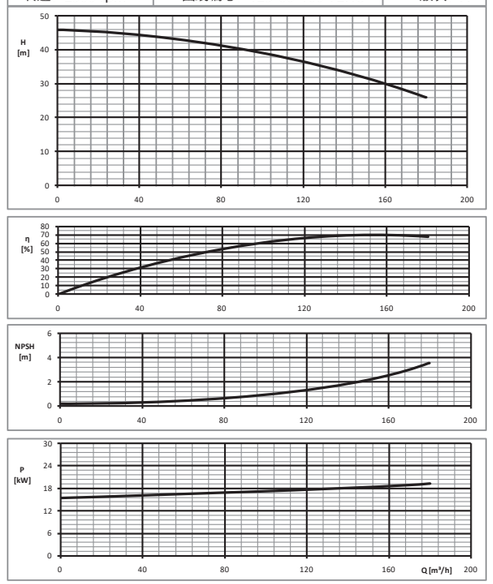
泵型 125-80-200R

转速：1450 rpm | 曲线编号：125-80-200-R4HC | 版次：A



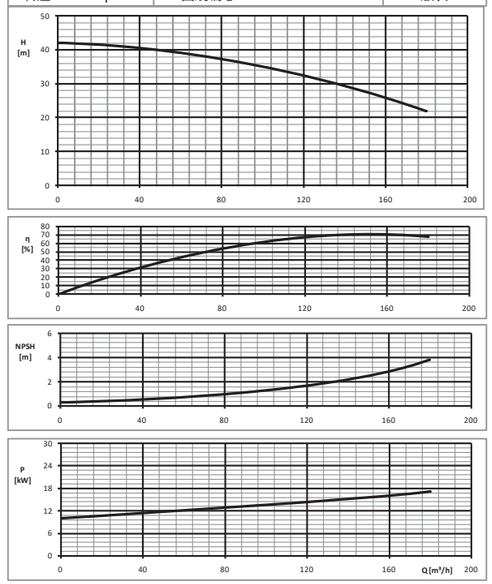
泵型 125-80-160F

转速：2900 rpm | 曲线编号：125-80-160-F2HC | 版次：A



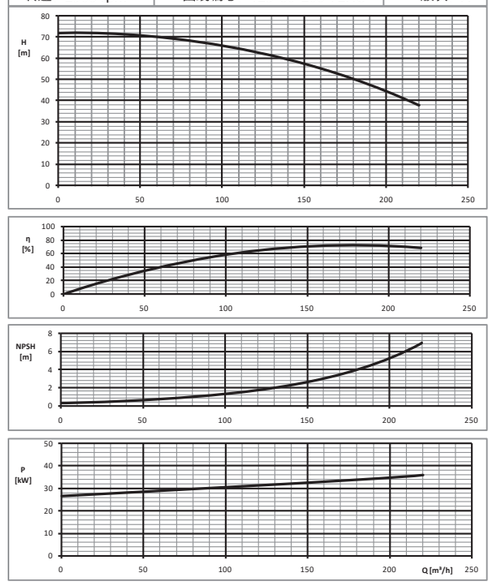
泵型 125-80-160R

转速：2900 rpm | 曲线编号：125-80-160-R2HC | 版次：A



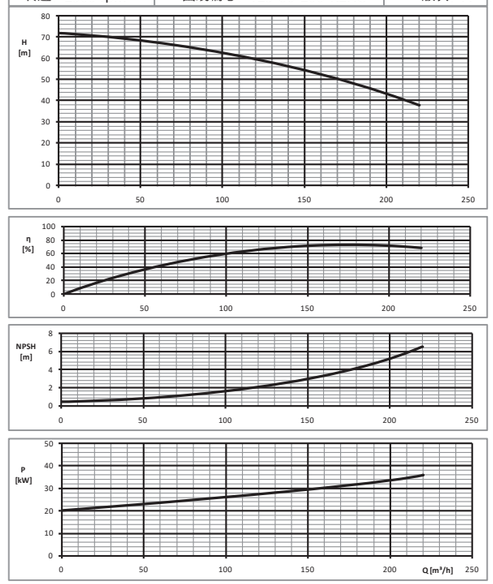
泵型 125-80-200F

转速：2900 rpm | 曲线编号：125-80-200-F2HC | 版次：A



泵型 125-80-200R

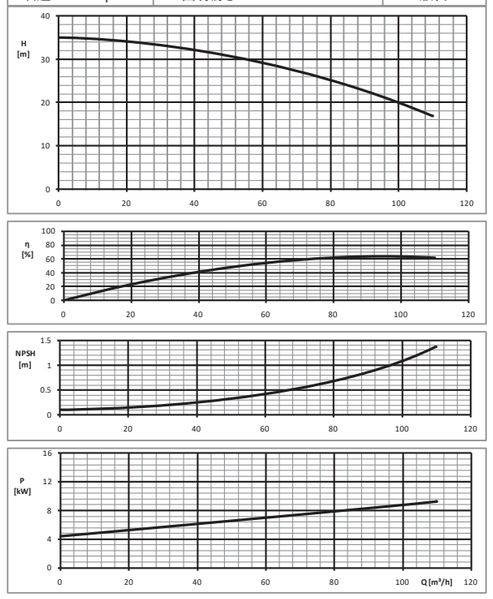
转速：2900 rpm | 曲线编号：125-80-200-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

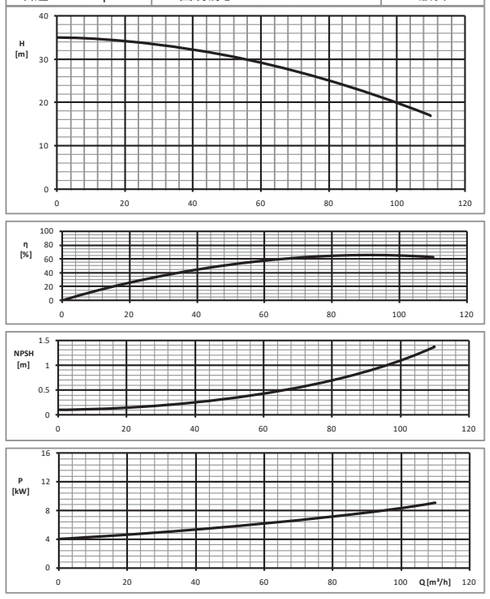
泵型 125-80-250F

转速：1450 rpm | 曲线编号：125-80-250-F4HC | 版次：A



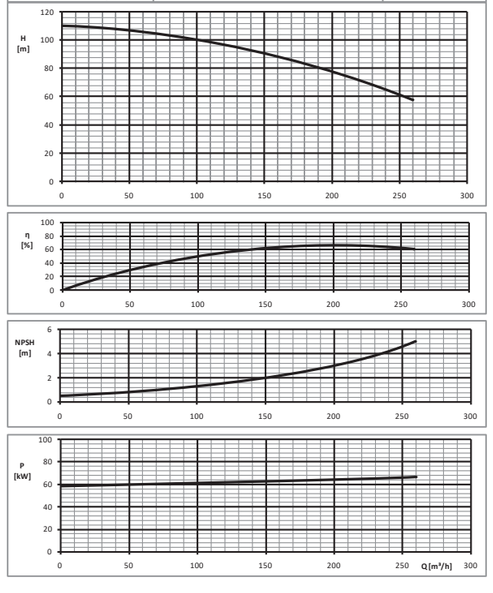
泵型 125-80-250R

转速：1450 rpm | 曲线编号：125-80-250-R4HC | 版次：A



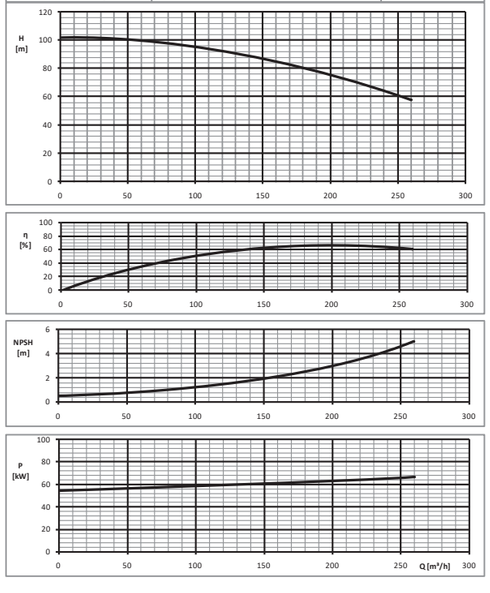
泵型 125-80-250F

转速：2900 rpm | 曲线编号：125-80-250-F2HC | 版次：A



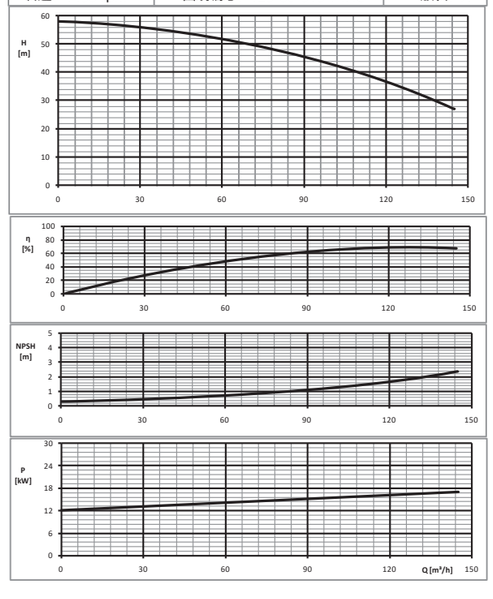
泵型 125-80-250R

转速：2900 rpm | 曲线编号：125-80-250-R2HC | 版次：A



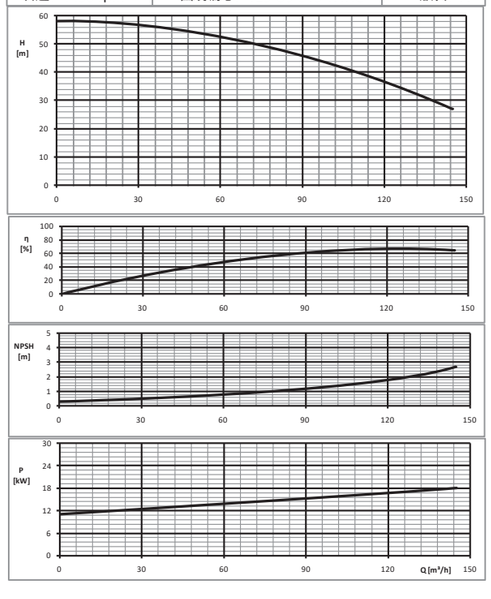
泵型 125-80-315F

转速：1450 rpm | 曲线编号：125-80-315-F4HC | 版次：A



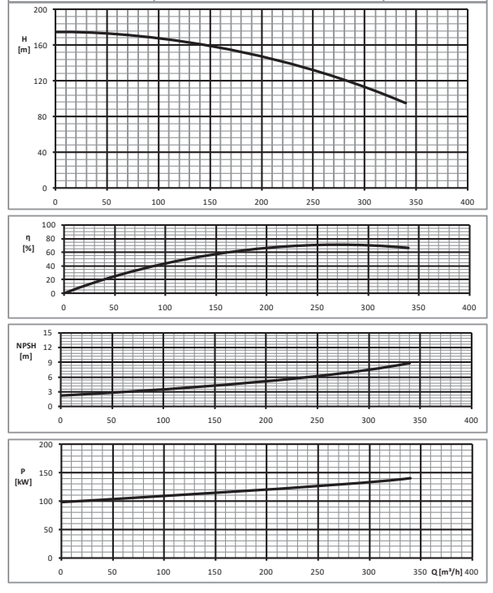
泵型 125-80-315R

转速：1450 rpm | 曲线编号：125-80-315-R4HC | 版次：A



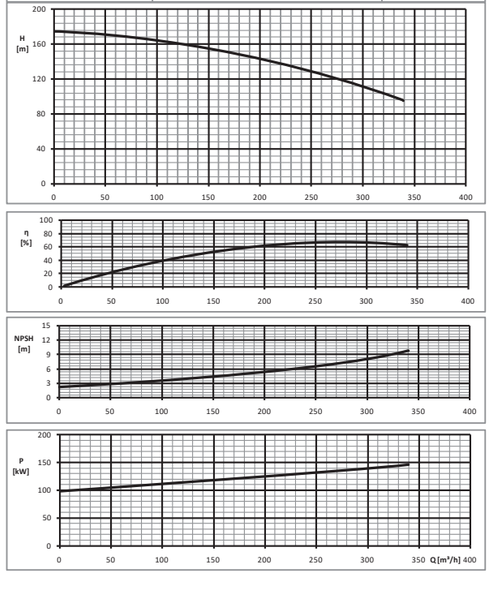
泵型 125-80-315F

转速：2900 rpm | 曲线编号：125-80-315-F2HC | 版次：A



泵型 125-80-315R

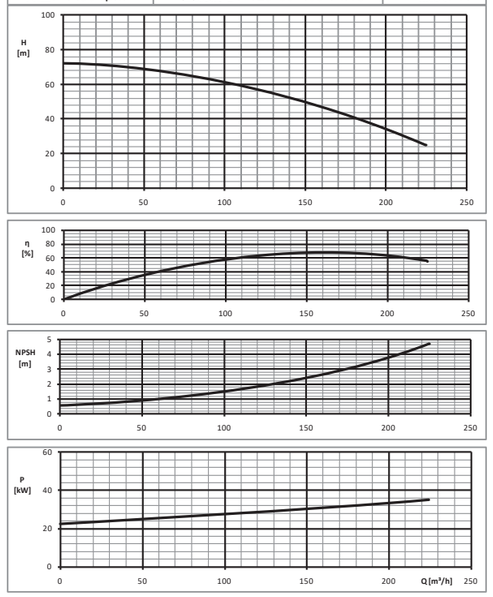
转速：2900 rpm | 曲线编号：125-80-315-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

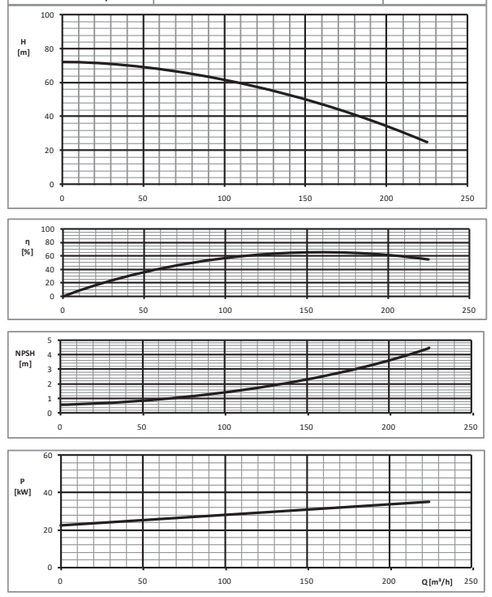
泵型 125-80-400F

转速：1450 rpm | 曲线编号：125-80-400-F4HC | 版次：A



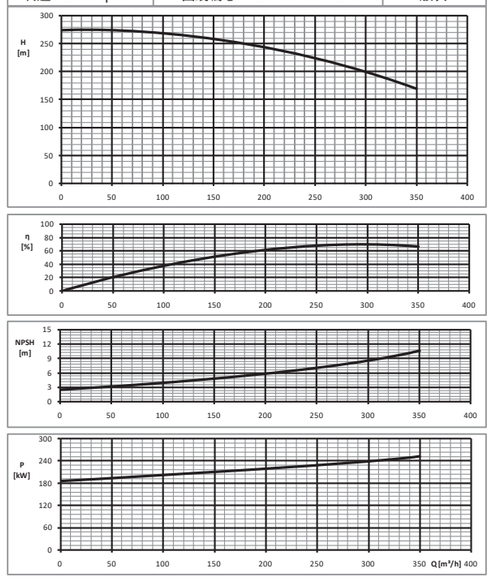
泵型 125-80-400R

转速：1450 rpm | 曲线编号：125-80-400-R4HC | 版次：A



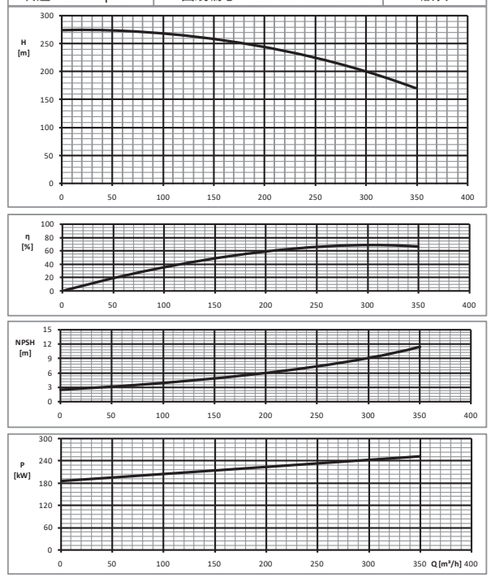
泵型 125-80-400F

转速：2900 rpm | 曲线编号：125-80-400-F2HC | 版次：A



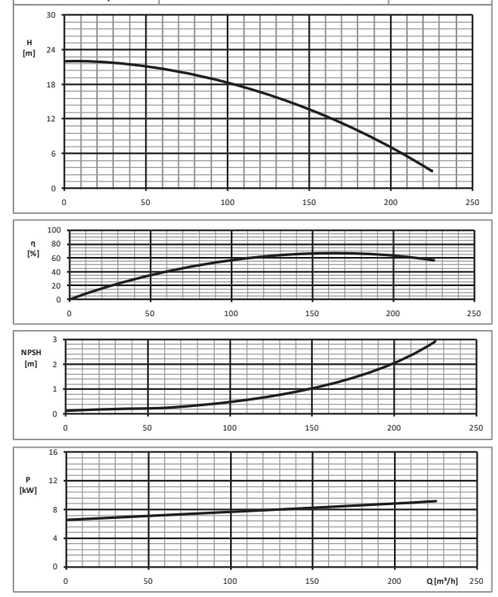
泵型 125-80-400R

转速：2900 rpm | 曲线编号：125-80-400-R2HC | 版次：A



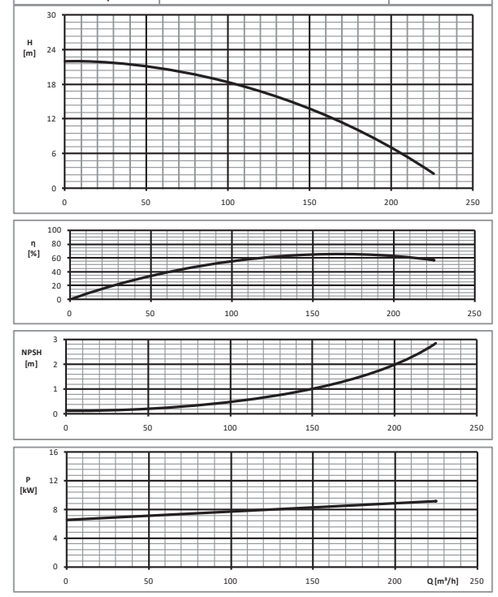
泵型 150-100-200F

转速：1450 rpm | 曲线编号：150-100-200-F4HC | 版次：A



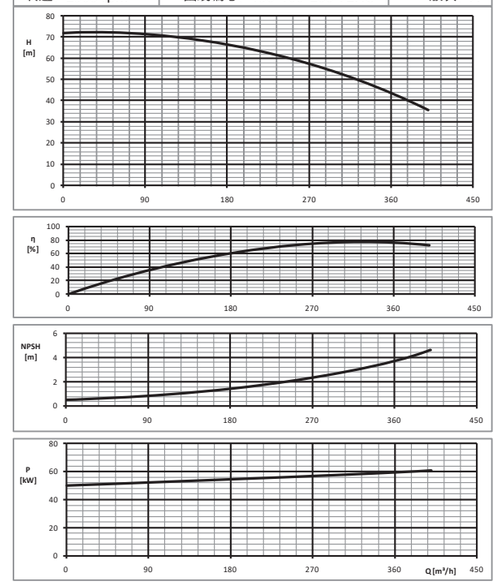
泵型 150-100-200R

转速：1450 rpm | 曲线编号：150-100-200-R4HC | 版次：A



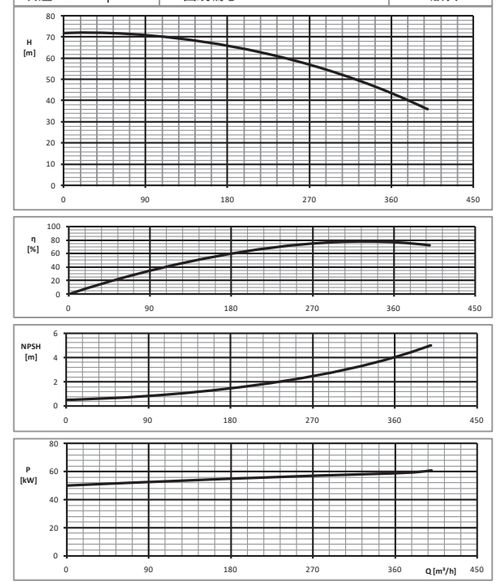
泵型 150-100-200F

转速：2900 rpm | 曲线编号：150-100-200-F2HC | 版次：A



泵型 150-100-200R

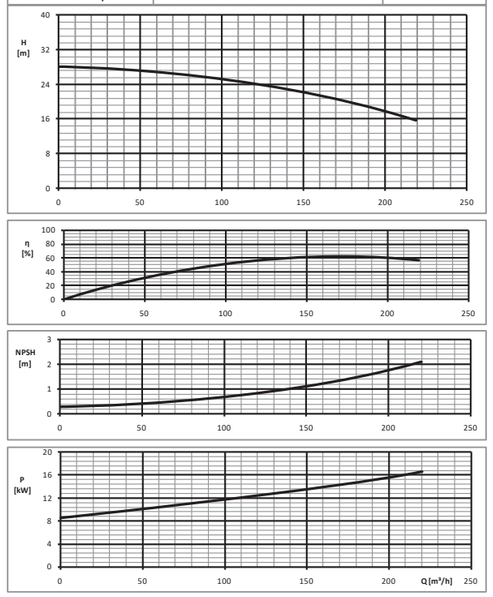
转速：2900 rpm | 曲线编号：150-100-200-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

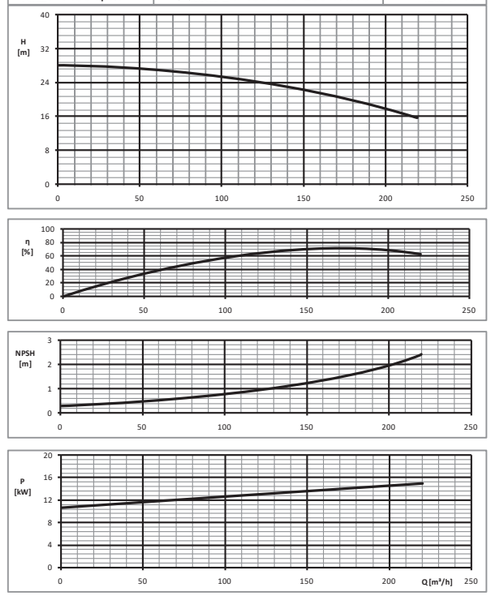
泵型 150-100-250F

转速：1450 rpm | 曲线编号：150-100-250-F4HC | 版次：A



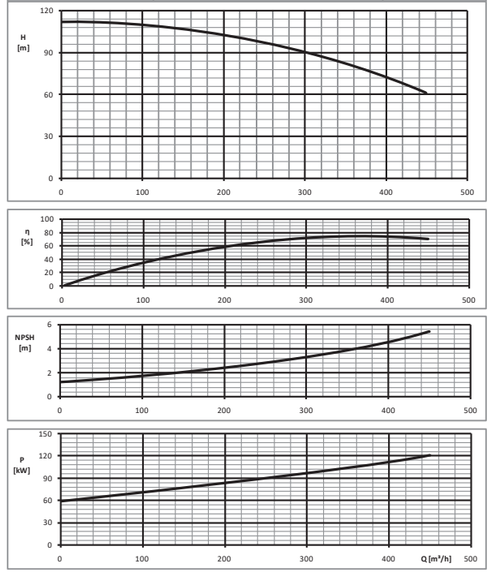
泵型 150-100-250R

转速：1450 rpm | 曲线编号：150-100-250-R4HC | 版次：A



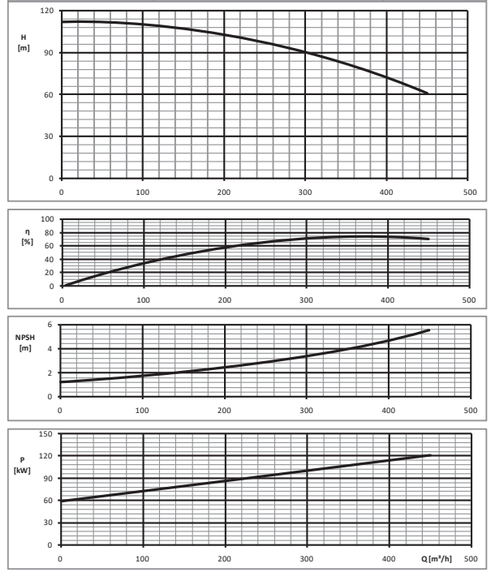
泵型 150-100-250F

转速：2900 rpm | 曲线编号：150-100-250-F2HC | 版次：A



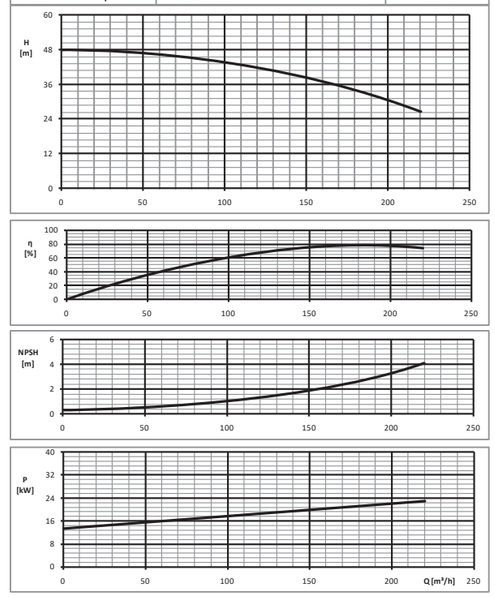
泵型 150-100-250R

转速：2900 rpm | 曲线编号：150-100-250-R2HC | 版次：A



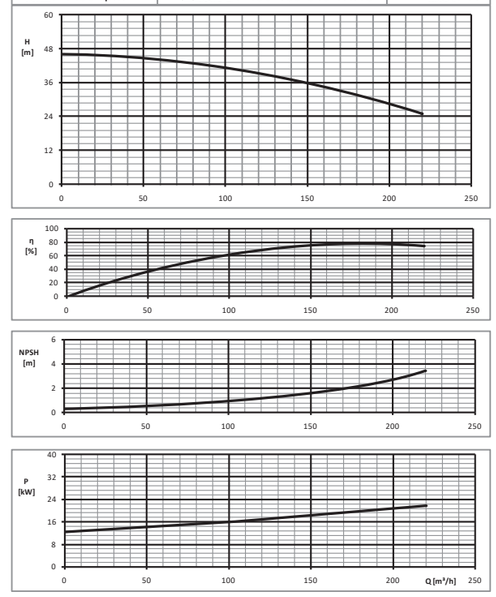
泵型 150-100-315F

转速：1450 rpm | 曲线编号：150-100-315-F4HC | 版次：A



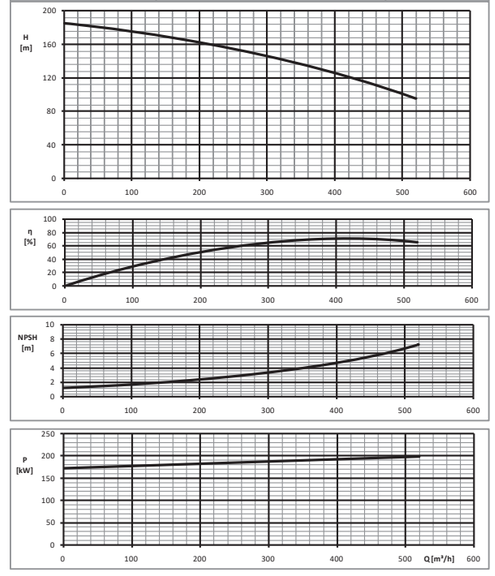
泵型 150-100-315R

转速：1450 rpm | 曲线编号：150-100-315-R4HC | 版次：A



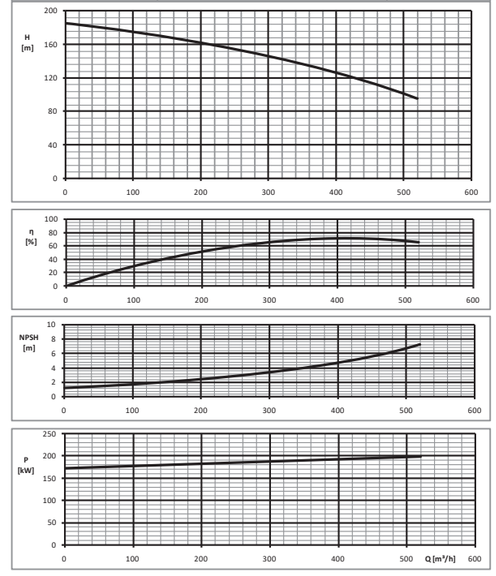
泵型 150-100-315F

转速：2900 rpm | 曲线编号：150-100-315-F2HC | 版次：A



泵型 150-100-315R

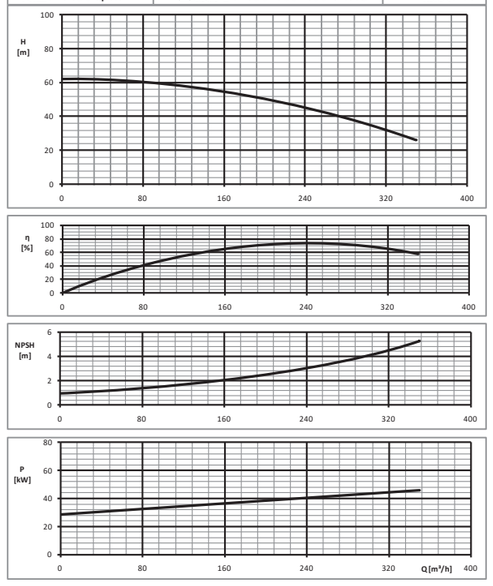
转速：2900 rpm | 曲线编号：150-100-315-R2HC | 版次：A



化工流程泵性能曲线
Performance curve of pump

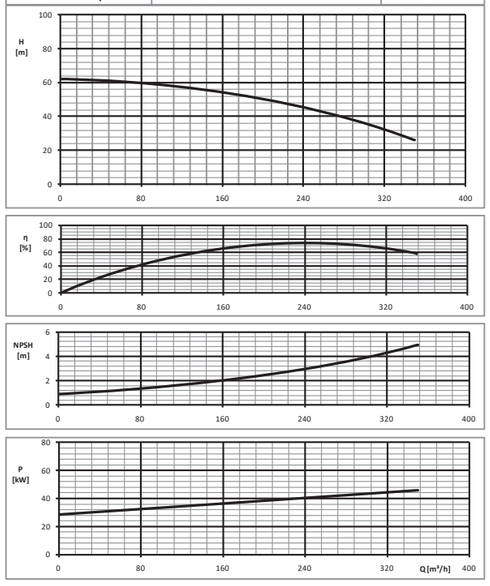
泵型 150-100-400F

转速：1450 rpm | 曲线编号：150-100-400-F4HC | 版次：A



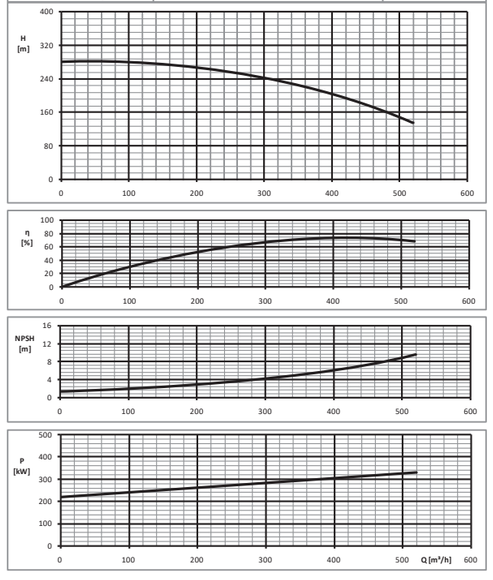
泵型 150-100-400R

转速：1450 rpm | 曲线编号：150-100-400-R4HC | 版次：A



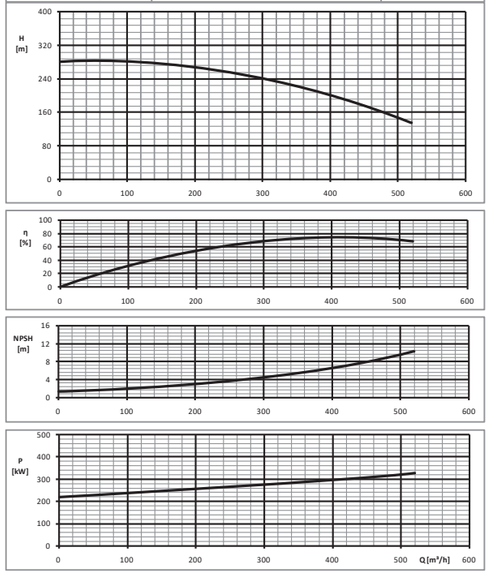
泵型 150-100-400F

转速：2900 rpm | 曲线编号：150-100-400-F2HC | 版次：A



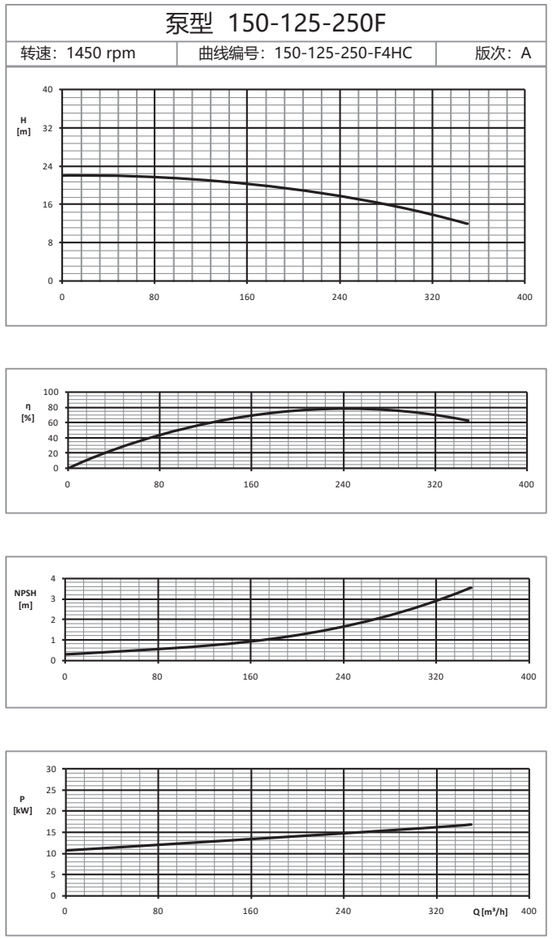
泵型 150-100-400R

转速：2900 rpm | 曲线编号：150-100-400-R2HC | 版次：A



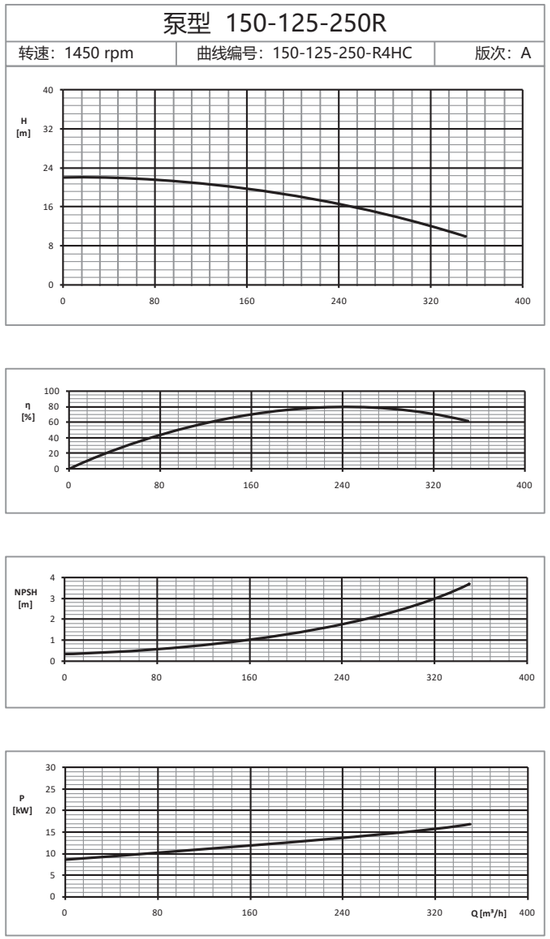
泵型 150-125-250F

转速：1450 rpm | 曲线编号：150-125-250-F4HC | 版次：A



泵型 150-125-250R

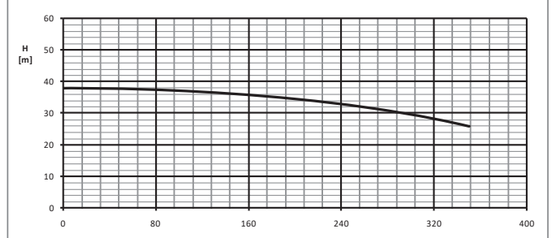
转速：1450 rpm | 曲线编号：150-125-250-R4HC | 版次：A

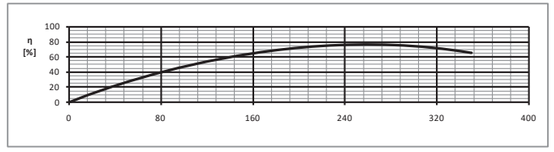


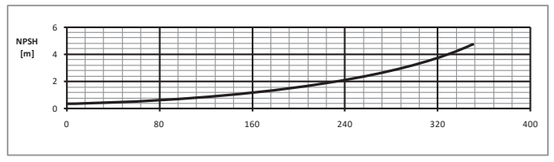
化工流程泵性能曲线
Performance curve of pump

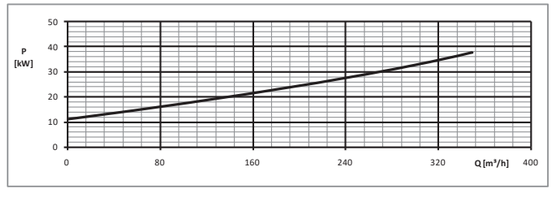
泵型 150-125-315F

转速：1450 rpm | 曲线编号：150-125-315-F4HC | 版次：A



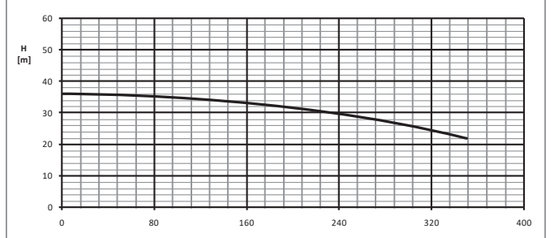


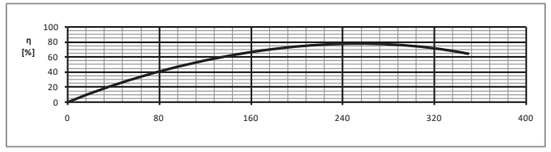


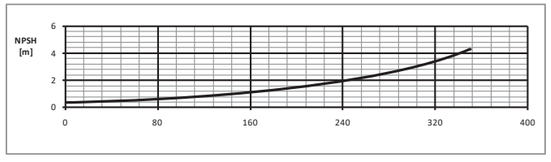


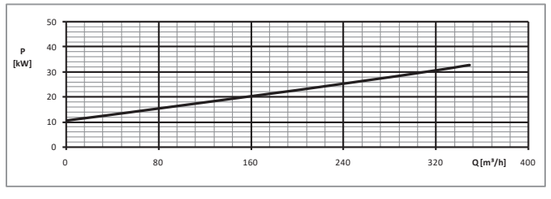
泵型 150-125-315R

转速：1450 rpm | 曲线编号：150-125-315-R4HC | 版次：A



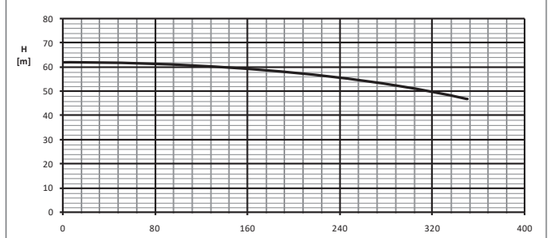


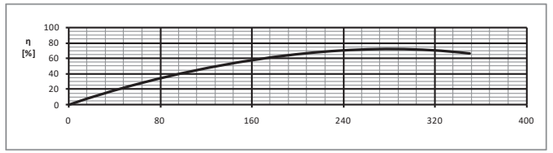


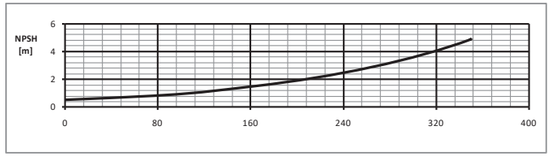


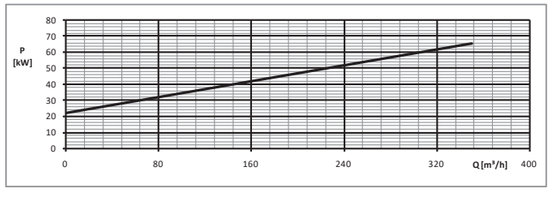
泵型 150-125-400F

转速：1450 rpm | 曲线编号：150-125-400-F4HC | 版次：A



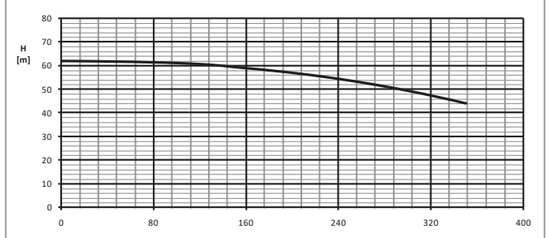


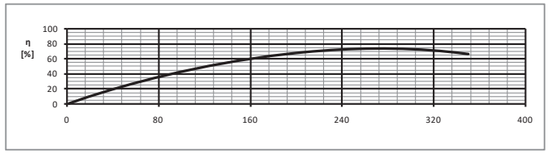


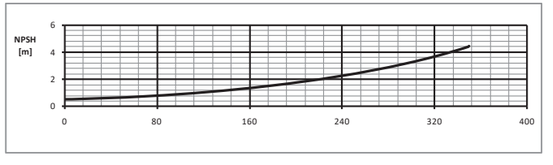


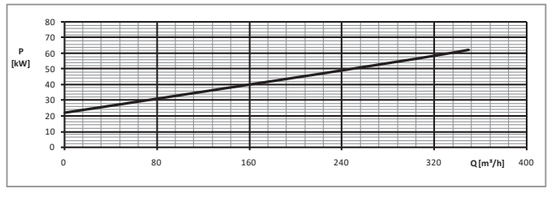
泵型 150-125-400R

转速：1450 rpm | 曲线编号：150-125-400-R4HC | 版次：A





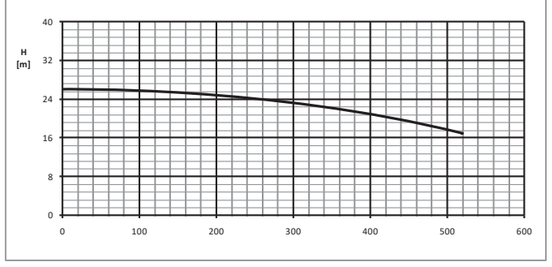


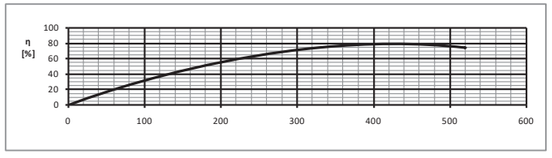


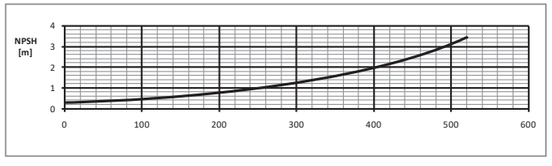
化工流程泵性能曲线
Performance curve of pump

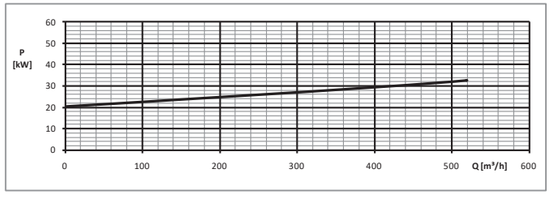
泵型 200-150-250F

转速：1450 rpm | 曲线编号：200-150-250-F4HC | 版次：A



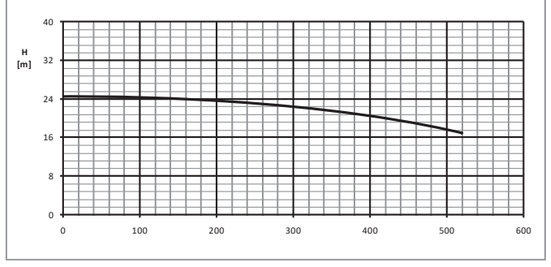


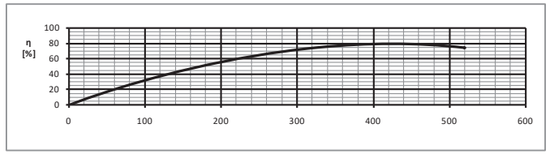


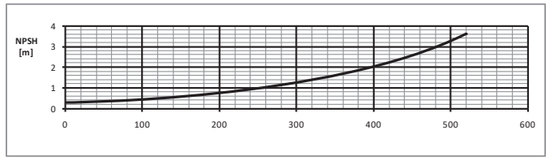


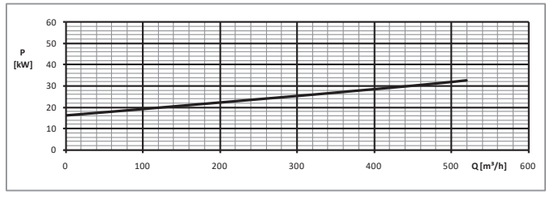
泵型 200-150-250R

转速：1450 rpm | 曲线编号：200-150-250-R4HC | 版次：A



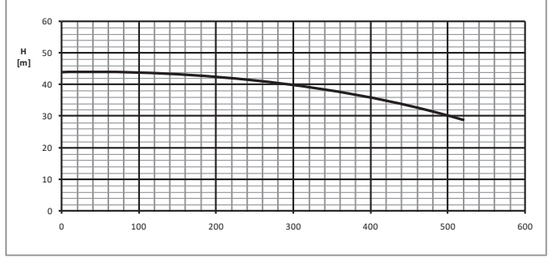


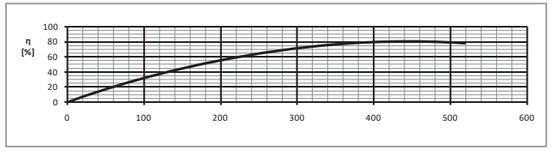


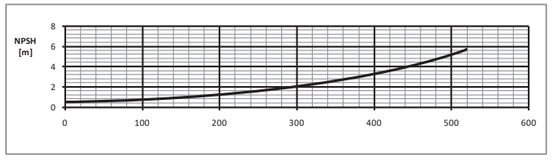


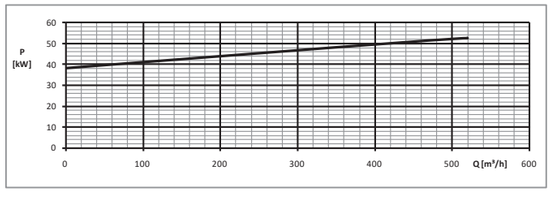
泵型 200-150-315F

转速：1450 rpm | 曲线编号：200-150-315-F4HC | 版次：A



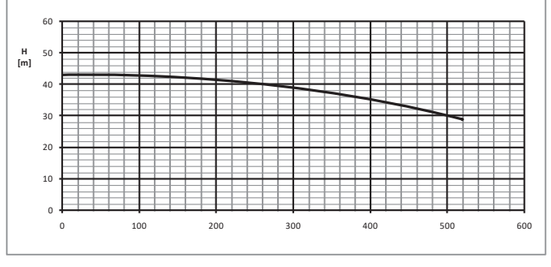


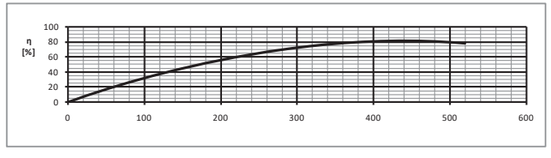


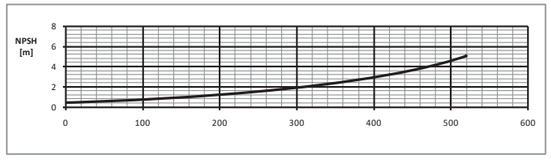


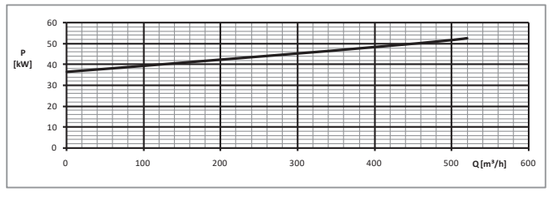
泵型 200-150-315R

转速：1450 rpm | 曲线编号：200-150-315-R4HC | 版次：A





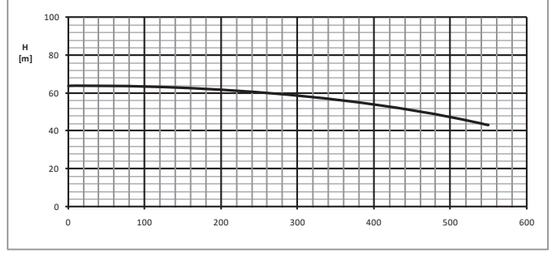


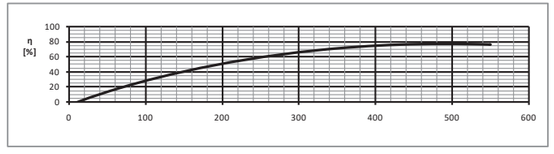


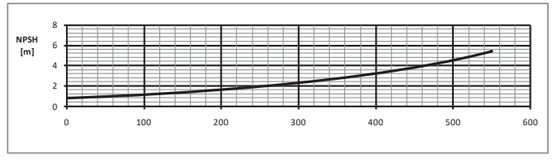
化工流程泵性能曲线
Performance curve of pump

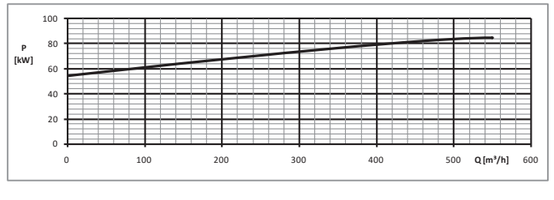
泵型 200-150-400F

转速：1450 rpm | 曲线编号：200-150-400-F4HC | 版次：A



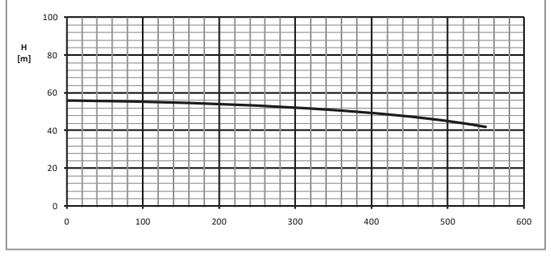


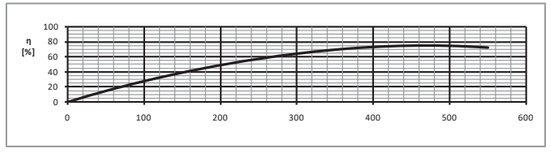


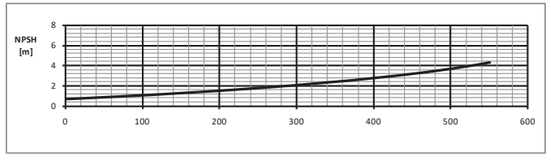


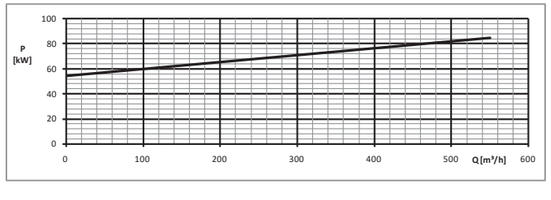
泵型 200-150-400R

转速：1450 rpm | 曲线编号：200-150-400-R4HC | 版次：A



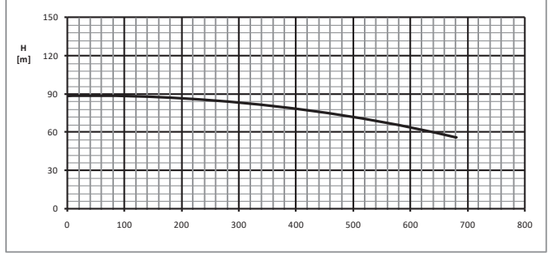


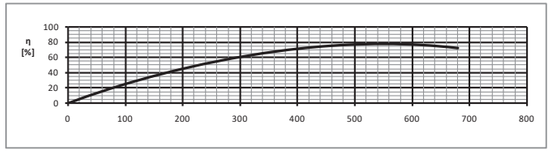


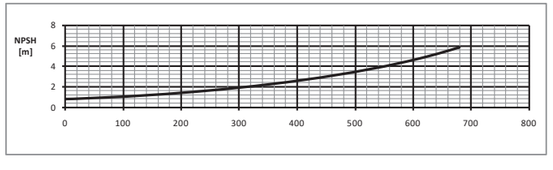


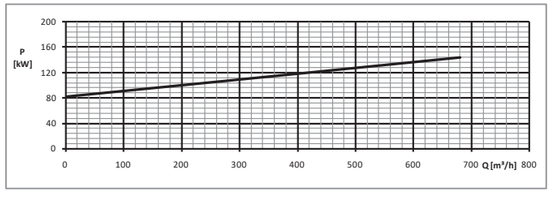
泵型 200-150-500F

转速：1450 rpm | 曲线编号：200-150-500-F4HC | 版次：A



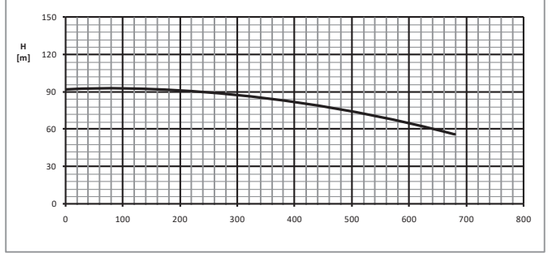


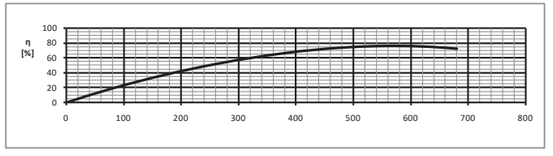


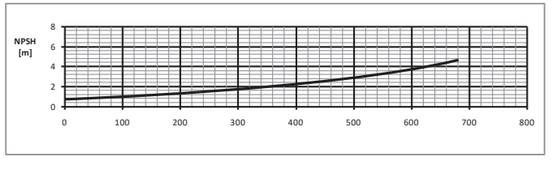


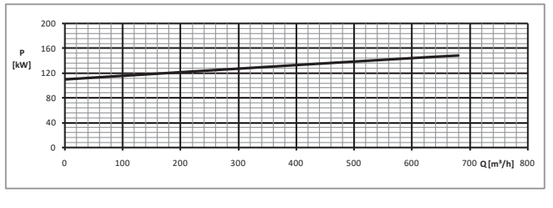
泵型 200-150-500R

转速：1450 rpm | 曲线编号：200-150-500-R4HC | 版次：A





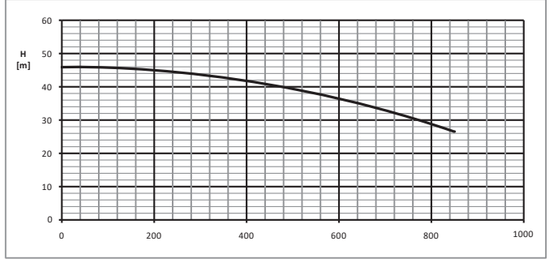


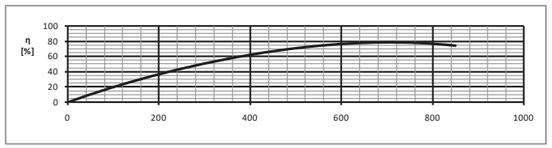


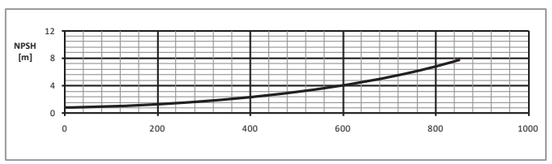
化工流程泵性能曲线
Performance curve of pump

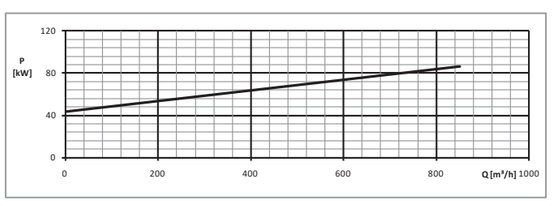
泵型 250-200-315F

转速：1450 rpm | 曲线编号：250-200-315-F4HC | 版次：A



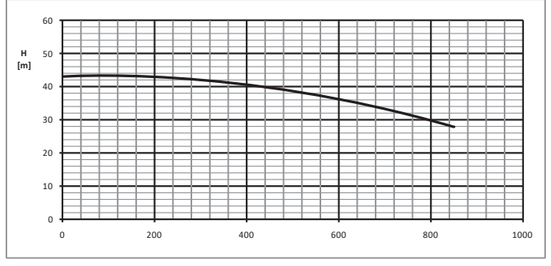


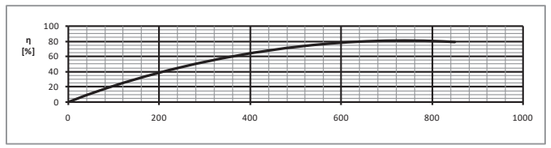


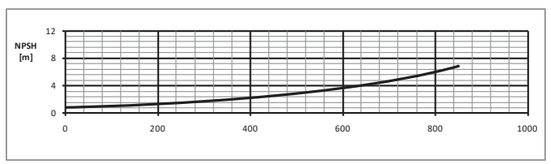


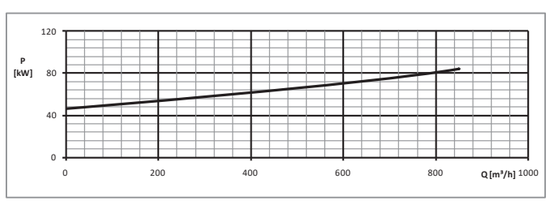
泵型 250-200-315R

转速：1450 rpm | 曲线编号：250-200-315-R4HC | 版次：A



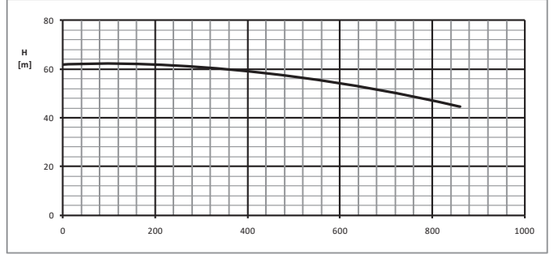


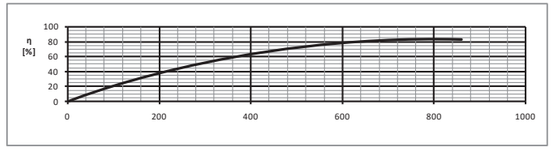


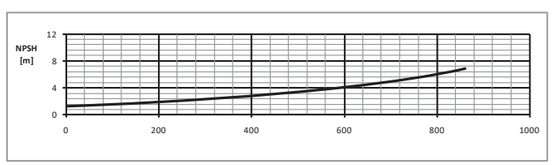


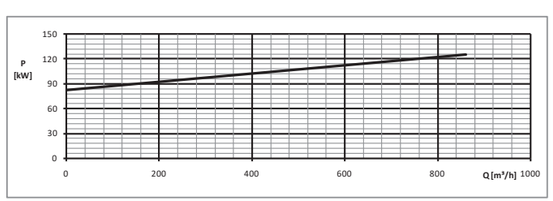
泵型 250-200-400F

转速：1450 rpm | 曲线编号：250-200-400-F4HC | 版次：A



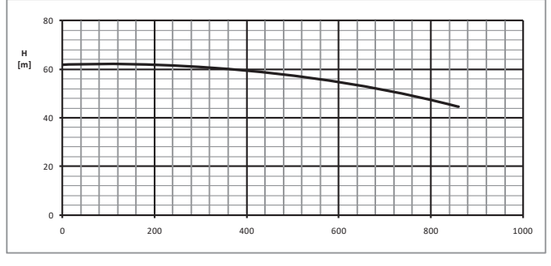


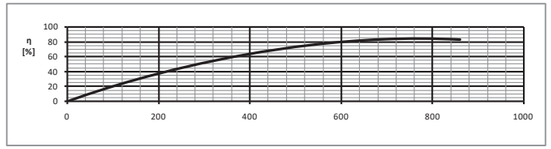


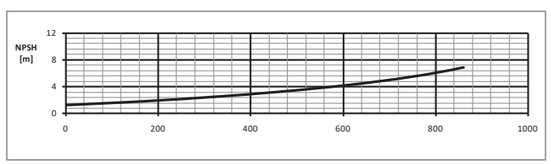


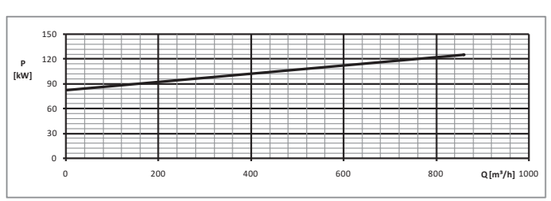
泵型 250-200-400R

转速：1450 rpm | 曲线编号：250-200-400-R4HC | 版次：A





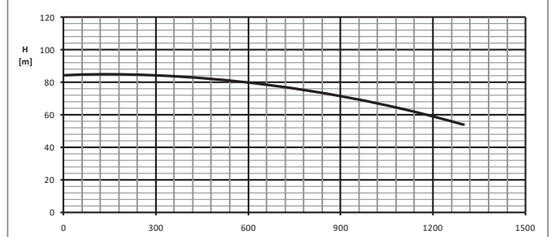


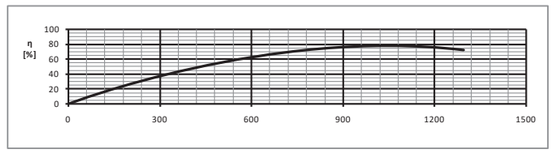


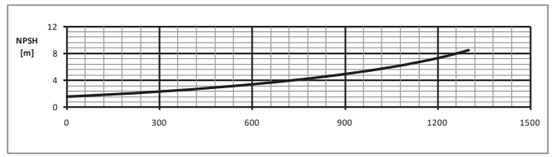
化工流程泵性能曲线
Performance curve of pump

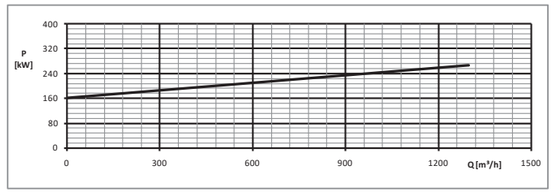
泵型 250-200-500F

转速：1450 rpm | 曲线编号：250-200-500-F4HC | 版次：A



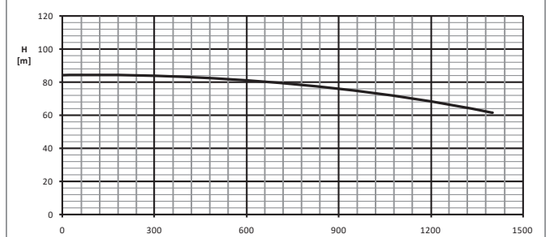


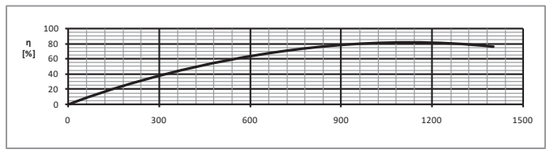


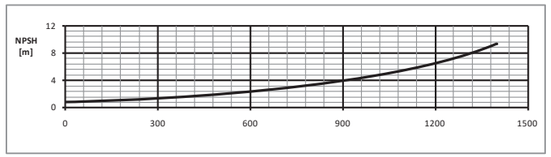


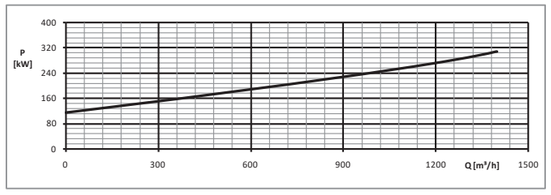
泵型 250-200-500R

转速：1450 rpm | 曲线编号：250-200-500-R4HC | 版次：A

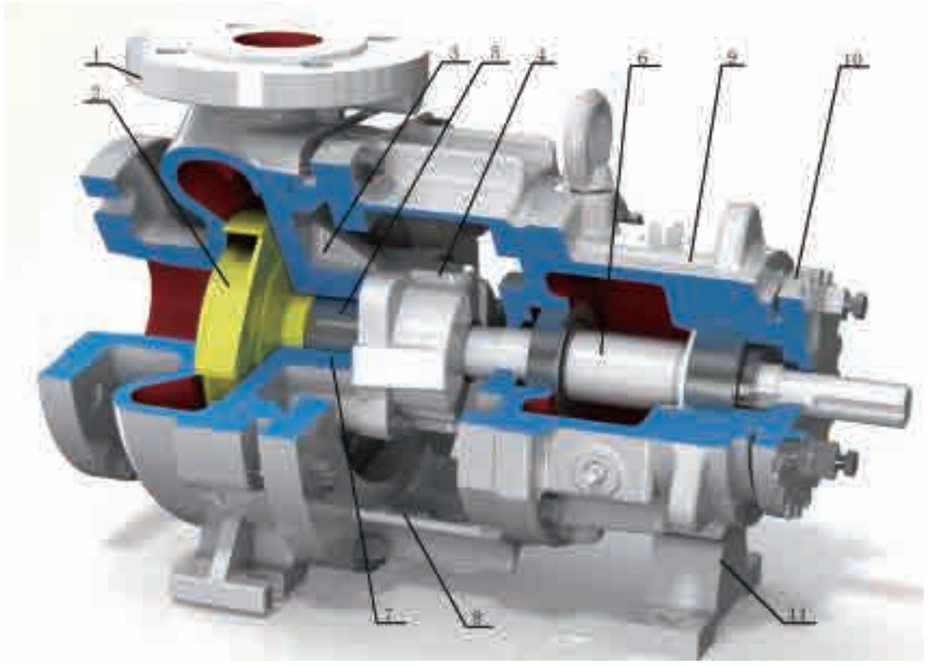








TI 主剖面图
Main section drawing



材料表
Material sheet

序号 Item No.	零部件 Part name	材料 Material	标准 Standard	应用 Application
1	泵体 Pump casing	球墨铸铁 QT400-18 Nodular cast iron QT400-18	GB/T 1348-2019	按合同或订单执行 By contractor or order execution
		铸造碳钢ZG230-450 Cast carbon steel ZG230-450	GB/T 11352-2009	
		奥氏体不锈钢 Austenitic stainless steel	GB/T 2100-2017	
		超级双相不锈钢 Super duplex stainless steel	JB/T 6405-2018	
		超低碳高合金化奥氏体不锈钢 Ultra-low carbon high alloy austenitic stainless steel	GB/T 2100-2017	
2	叶轮 Impeller	铸铁 HT250 Cast iron HT250	GB/T 9439-2010	按合同或订单执行 By contractor or order execution
		奥氏体不锈钢 Austenitic stainless steel	GB/T 2100-2017	
		超级双相不锈钢 Super duplex stainless steel	JB/T 6405-2018	
		超低碳高合金化奥氏体不锈钢 Ultra-low carbon high alloy austenitic stainless steel		
3	泵盖 Pump casing cover	球墨铸铁 QT400-18 Nodular cast iron QT400-18	GB/T 1348-2019	按合同或订单执行 By contractor or order execution
		铸造碳钢ZG230-450 Cast carbon steel ZG230-450	GB/T 11352-2009	
		奥氏体不锈钢 Austenitic stainless steel	GB/T 2100-2017	
4	密封压盖 Sealing gland	超级双相不锈钢 Super duplex stainless steel	JB/T 6405-2018	
		超低碳高合金化奥氏体不锈钢 Ultra-low carbon high alloy austenitic stainless steel	GB/T 2100-2017	
5	轴套 Shaft sleeve	不锈钢耐热钢 20Cr13 Stainless heat-resistant steel 20Cr13	GB/T 1221-2007	标配 Standard configuration
		超低碳高合金化奥氏体不锈钢 Ultra-low carbon high alloy austenitic stainless steel		选配 Optional
6	轴（实心） Shaft (solid)	316棒料或锻件 316 Bar stock or forging	GB/T 2100-2017	标配 Standard configuration
		超级双相不锈钢棒料或锻件 Super duplex stainless steel	JB/T 6405-2018	选配 Optional
	轴（带轴套） Shaft (with shaft sleeve)	碳素结构钢45 carbon structural steel 45	GB/T699—2008	标配 Standard configuration
7	密封 Seal	按合同或订单执行 By contractororder execution		选配 Optional
8	中间支架 Centre-stands	HT250/ZG230-450（当泵要求按API610制作时应采用碳钢） When the pump is required to be manufactured according to API610, carbon steel shall be used		标配 Standard configuration 选配碳钢 Optional(Carbon Steel)
9	轴承箱 Bearing housing	HT250/ZG230-450（当泵要求按API610制作时应采用碳钢） When the pump is required to be manufactured according to API610, carbon steel shall be used		标配 Standard configuration 选配碳钢 Optional(Carbon Steel)
10	可调节轴承座 Adjustable bearing block	ZG230-450	GB/T 11352-2009	标配 Standard configuration
11	悬架支脚 Suspension supporting bolste	Q235	GB/T 700-2006	标配 Standard configuration

总体结构特点和优点
Overall structural features and advantages

反向叶片叶轮是唯一能在泵的整个使用寿命内提供可重复泵性能的叶轮设计，也可提供前叶片开式叶轮。

锥形密封腔配备导流板，延长密封寿命，并提供自冲洗能力。

外部微米级叶轮间隙调节装置可在 20 秒内精确设置叶轮间隙，无论在车间还是现场。减少轴承座上的公差叠加，改进轴的同心度，优于会引起压簧杆现象的顶丝类设计，延长轴承和机械密封使用寿命。

标准TI泵中的最大型的轴与轴承组件减少轴挠曲和振动，进而延长轴承使用寿命并提高可靠性。

后拉式设计可在不拆卸泵壳、管道系统或电机的情况下拆出转子部件。

The reverse blade impeller is the only impeller design that provides repeatable pump performance throughout the entire life of the pump, and also provides the front blade open impeller.

The tapered sealing chamber is equipped with diversion plates to extend the sealing life and provide self-flushing capability.

The external micron-level impeller clearance adjustment device can accurately set the impeller clearance within 20 seconds, whether in the workshop or on site. Reduce the tolerance superposition on the bearing seat, improve the concentricity of the shaft, which is better than the top wire design which will cause the phenomenon of pressure spring rod, and extend the service life of the bearing and mechanical seal.

The largest shaft and bearing components in the standard TI pump reduce shaft deflection and vibration, thereby extending the bearing life and improving reliability.

The rear pull design removes the rotor without removing the pump housing, plumbing, or motor.

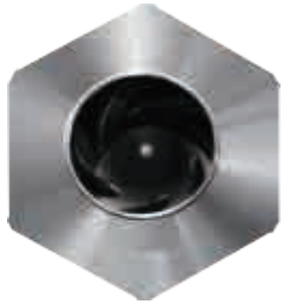
叶轮
Impeller

反向叶片叶轮

反向叶片叶轮降低泵的总拥有成本

TI泵采用带有平衡孔的反向叶片叶轮，实现无与伦比的效率和ISO2858及更大流量区间性能。专有的设计使维护更加轻松并延长轴和轴承使用　寿命，从而降低泵的拥有成本。

- 可预测的低密封腔压力和推力载荷
- 在标准单级单吸离心泵当中的 NPSHr 最低
- 磨损发生在可机加工的后盖上，而不是在更昂贵的泵壳上
- 唯一充分利用后拉式特点的叶轮设计，可在车间进行叶轮调节
- 确保可重复的性能
- 含固物处理能力
  - 最大颗粒直径≤28mm (1.1in)
  - 最大软颗粒含量≤35%
  - 最大硬颗粒含量≤10%



前 Forward

后 Back

可预测、可重复的性能

每次经过调节，反向叶片叶轮都能提供如新的性能。

反向叶片叶轮

反向叶片叶轮只有一套泵送叶片和一个关键间隙。这种唯 一的间隙（叶轮与后盖之间）设置：

- 性能
- 效率
- 密封腔压力
- 推力载荷

摩擦导致轴向推力载荷随着密封腔间隙变宽而减小。密封　腔压力也随之增加。不过，对反向叶片叶轮而言，通过重　新设置反向叶片叶轮与后盖板之间的间隙，可以重新建立原始密封腔压力和轴向推力载荷，从而获得稳定如新的性能。

Reverse Blade Impeller

The reverse blade impeller reduces the total cost of ownership of the pump

The TI pump uses a reverse blade impeller with balance holes to achieve unparalleled efficiency and ISO2858 and greater flow range performance. The proprietary design makes maintenance easier and extends the shaft and bearing life, thus reducing the pump cost of ownership.

- Predictable low sealing chamber pressure and thrust load
- The lowest NPSHr in the standard single-stage single-suction centrifugal pump
- Wear occurs on the machinable back cover, not on the more expensive pump shell
- The only impeller design that makes full use of the characteristics of the rear pull type can be adjusted by the impeller in the workshop
- Ensure a repeatable performance
- Solid solid handling capacity
  - Maximum particle diameter≤28mm (1.1in)
  - Maximum soft particle content≤35%
  - Maximum hard particle content≤10%

Predictive, reproducible performance

Each time after adjustment, the reverse blade impeller can provide such as new performance.

Reverse blade impeller

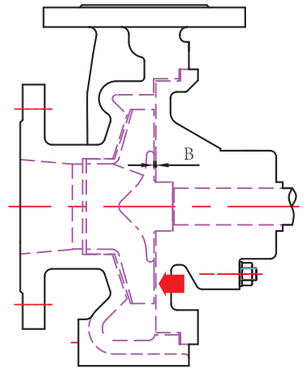
The reverse blade impeller has only a set of pumping blades and a key gap. This only clearance (between the impeller and the rear cover) is set:

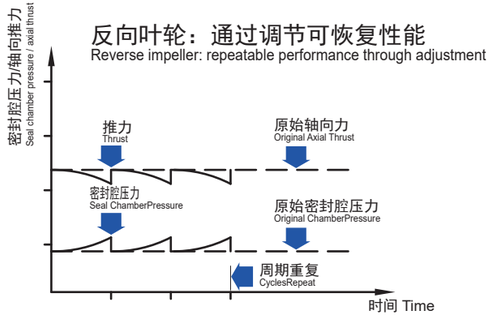
- performance
- efficiency
- Seal cavity pressure
- thrust load

The friction causes the axial thrust load to decrease as the sealing cavity gap widens. The sealing chamber pressure also increases accordingly. However, for the reverse blade impeller, it can be rebuilt by reset the gap between the reverse blade impeller and the rear cover plate Vertical original sealing cavity pressure and axial thrust load, thus obtaining stability such as new performance.

反向叶片叶轮调节
Reverse Blade Impeller Adjustment

只有一种间隙：
叶轮叶片到后盖
There is only one
clearance:
Impeller blades to
rear cover





适应性设计

TI还可配备前叶片开式叶轮。它与反向叶片叶轮可完全互换，非常适合纤维质粘性材　料的应用和需要抗泵壳高剪切力的场合。

- 含固物处理能力
  - 最大颗粒直径≤25mm (1.0in)
  - 最大软颗粒含量≤35%
  - 最大硬颗粒含量≤10%
  - 最大纸浆含量≤10%

Adaptive design

The TI can also be equipped with a front blade open impeller. It's with the reverse The blade impeller is completely interchangeable, which is very suitable for the application of fibrous viscous materials and requires the high shear force resistance of the pump shell.

- Solid solid handling capacity
  - Maximum particle diameter≤25mm (1.0in)
  - Maximum soft particle content≤35%
  - Maximum hard particle content≤10%
  - Maximum pulp content≤10%

叶轮
Impeller

前叶片开式叶轮 Front vane open impeller

前 Forward

后 Back

前叶片开式叶轮

开式叶轮有两套泵送叶片和两个关键间隙位置。

泵壳的前叶片间隙设置：

- 性能
- 效率

后泵出叶片到后盖的间隙设置：

- 密封腔压力及密封寿命
- 推力载荷和轴承寿命

磨损导致轴向推力载荷随着密封腔间隙变宽而增大，但叶　轮无法同时调节到两个间隙为止。在每次调节之后，密封　腔压力和轴承载荷增加，从而导致性能降低，且密封和轴承寿命受影响。

Front vane open impeller

The open impeller has two sets of pumping blades and two key clearance positions.

Front blade clearance setting of the pump housing:

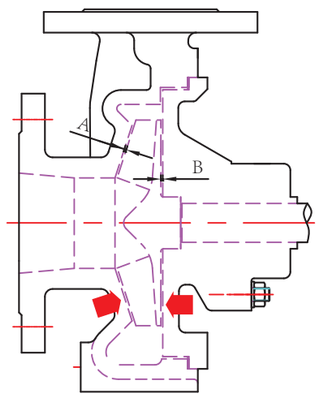
- performance
- efficiency

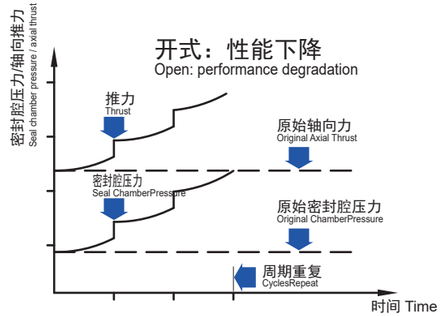
Set setting from rear pump blade to rear cover:

- Seal chamber pressure and sealing life
- Thrust load and bearing life

Wear causes the axial thrust load increasing as the sealing cavity gap widens, but the impeller cannot be adjusted to two gaps at the same time. After each adjustment, the sealing chamber pressure and bearing load increase, resulting in reduced performance and the seal and shaft The bearing life is affected

前向叶片叶轮调节
Forward Blade Impeller Adjustment

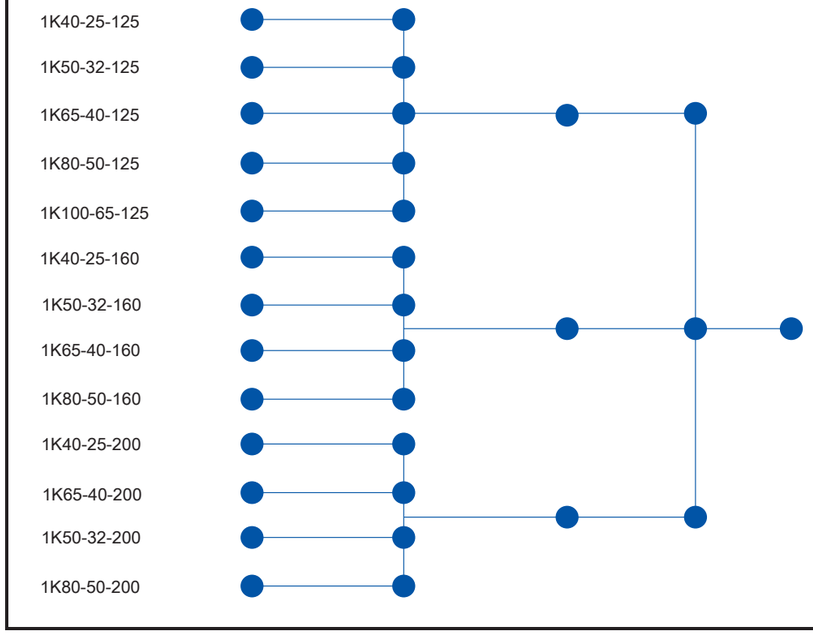




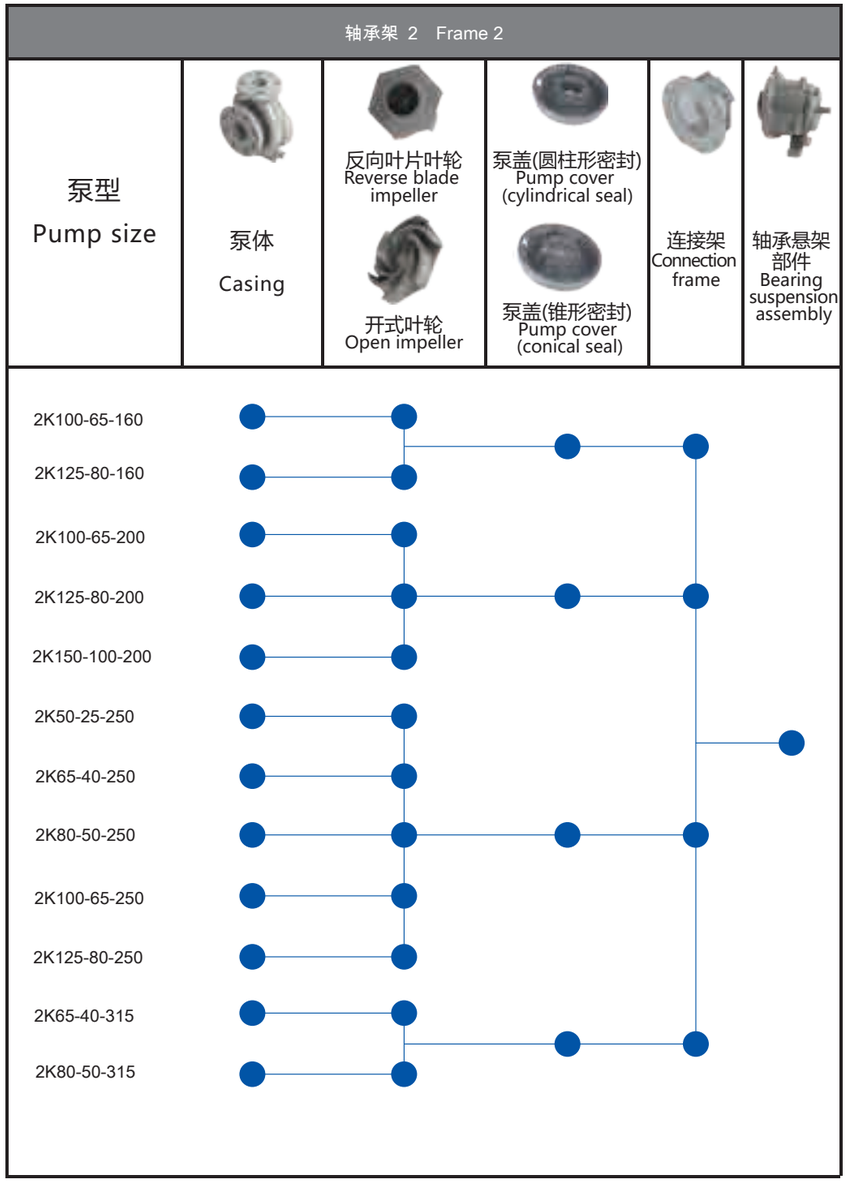
互换性
Interchangeability

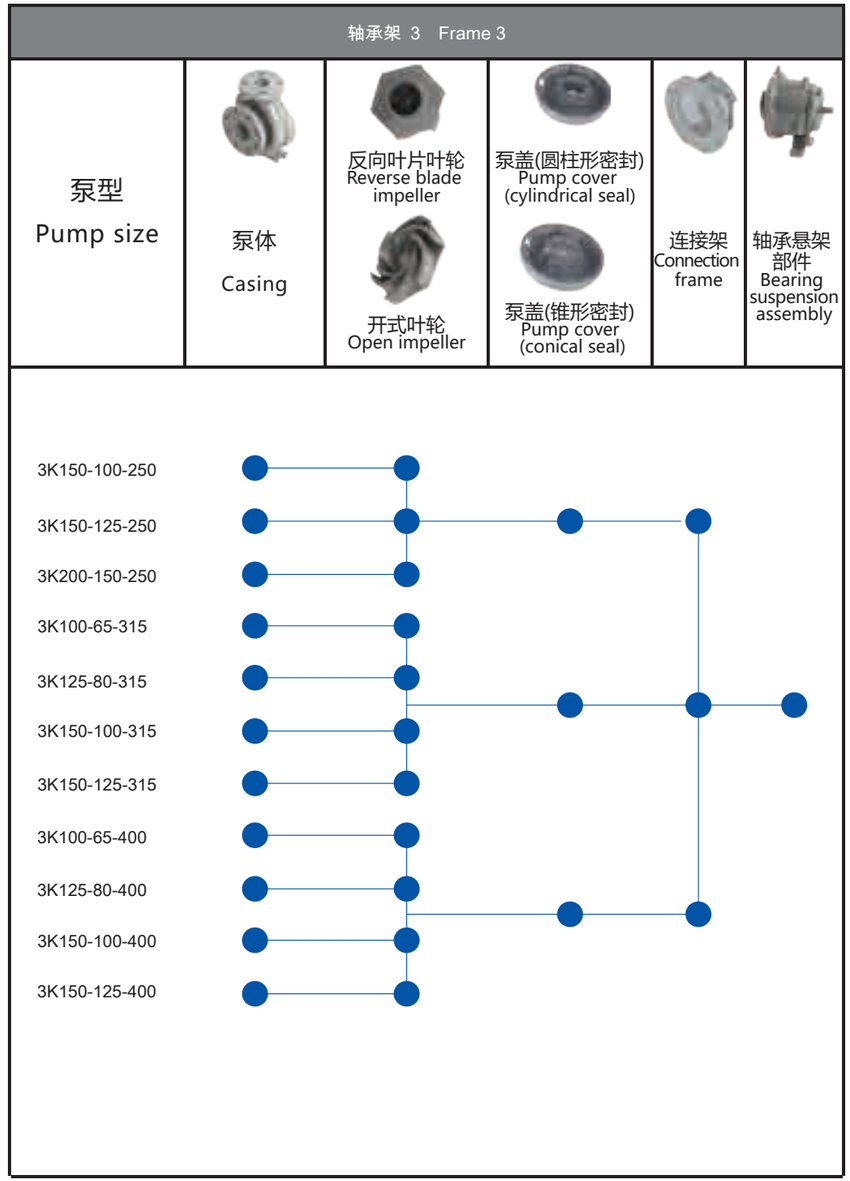
TI系列的42款泵仅采用四种不同的动力框架和两种密封腔配置，因此零件互换性程度较高。
The 42 pumps of the TI series use only four different power frames and two sealing chamber configurations, so the parts are exchanged High degree.

轴承架 1 Frame 1					
泵型 Pump size	 泵体 Casing	 反向叶片叶轮 Reverse blade impeller  开式叶轮 Open impeller	 泵盖(圆柱形密封) Pump cover (cylindrical seal)  泵盖(锥形密封) Pump cover (conical seal)	 连接架 Connection frame	 轴承悬架部件 Bearing suspension assembly

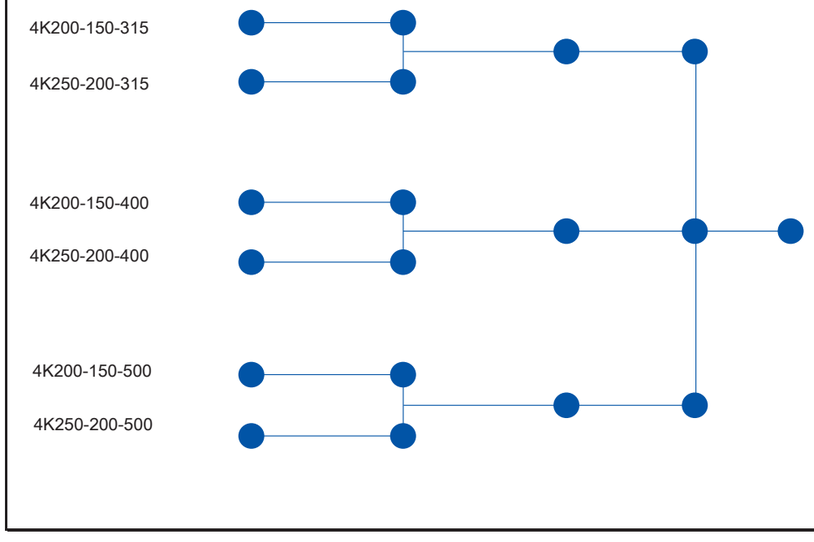


互换性
Interchangeability



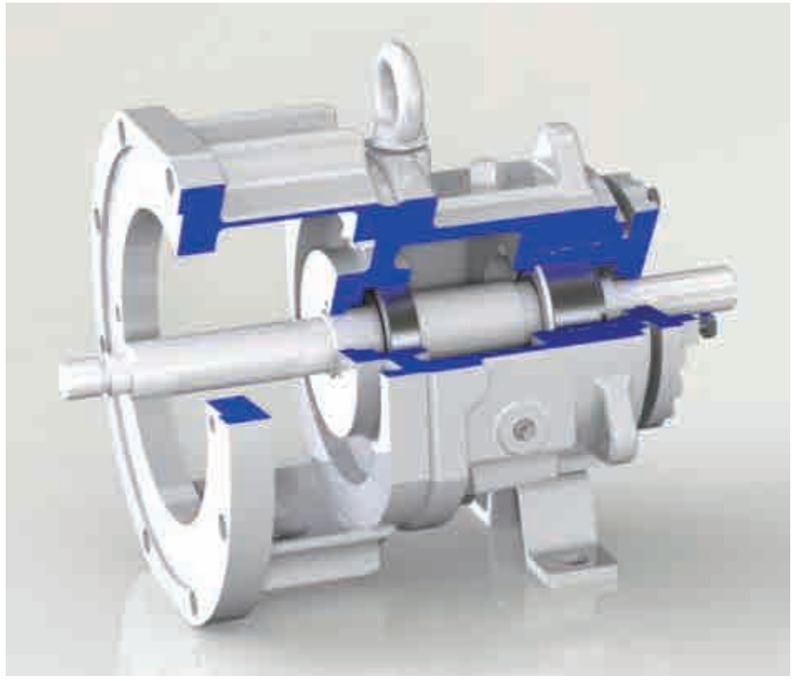


互换性
Interchangeability

轴承架 4 Frame 4					
泵型 Pump size	 泵体 Casing	 反向叶片叶轮 Reverse blade impeller  开式叶轮 Open impeller	 泵盖(圆柱形密封) Pump cover (cylindrical seal)  泵盖(锥形密封) Pump cover (conical seal)	 连接架 Connection frame	 轴承悬架部件 Bearing suspension assembly
					

备注:
1、标准和高输出水力可用。
2、反向叶片叶轮并非适用于所有尺寸。
3、如有需要，请要求更详细的资料。
Notes:
1．Standard and high output hydraulics available.
2．Reverse blade impeller is not available for all sizes.
3．Please request more detailed information if needed.

轴承悬架部件
Bearing suspension assembly



TI 产品系列专门采用独特的轴承箱动力端设计 ，以提高可靠性、维护性和性能。它符合GB/T5656 & ISO5199标准，非常先进且享有终身保修服务。*

其特点包括：

• 在已认证的干净环境中装配
• 外部微米级叶轮调节装置轻松恢复泵效率。
• 天泉轴承油封可按GB标准选择
• 双列角接触（驱动端外侧）和单列深沟轴承（驱动端内侧）提供卓越的轴向和径向载荷支撑
• 采用状况监控器
• 金属面的配合确保运行的公差要求以延长轴承和密封寿命
• 重要轴表面上 0.4 微米 (16 微英寸) 的挠曲确保机械密封的二次密封能力
• 磁性排放堵头
• 坚固的支脚设计

The TI product line specifically features a unique bearing case power end design to improve reliability, maintainability, and performance. It fits with the GB / T5656 & ISO5199 Standard, is very advanced and provided with a lifetime warranty service.*

Its characteristics include:

• Assembled in a certified, clean environment
• The external micron-stage impeller regulator easily restores the pump efficiency。
• Tianquan bearing oil seal can be selected according to the GB standard
• Tianquan bearing oil seal can be selected according to the GB standard
• Use a condition monitor
• The coordination of metal surfaces ensures tolerance requirements for operation to extend the bearing and sealing life
• The 0.4 micron (16 microinches) twist on the critical shaft surface ensures the secondary sealing capability of the mechanical seal
• Magnetic emission blocking head
• Strong support foot design

轴承悬架部件
Bearing suspension assembly

此设计提供下列可选的配置：
- 具有整体视窗的恒位油杯
- 双唇油封
- 顶置放气口和注油口

润滑方式可选项包括：
- 油浴
- 油雾系统
- 油脂
- 带护罩的油脂润滑

This design provides the following optional configurations:
- Constant-level oil cup with an integral window
- two-lip seal
- Top vent vent and oil injection

The options for lubrication methods include:
- oil bath
- Oil fog system
- grease
- Grease lubricating with shield

* 注：必须遵循正确的安装、操作和维护程序才能享有终身保修服务。如需了解详 细的条款和条件，请联系 售代表。
* Note: Proper installation, operation and maintenance procedures must be followed to enjoy a lifetime warranty service. For detailed terms and conditions, please contact the sales representative.

外部微米级叶轮调节装置缩短维护时间并降低维护成本
External micron-level impeller adjustment device is shortened Maintenance time and reduce maintenance costs

创新的外部微米级叶轮调节装置简单易用，可减少维护时间和成本。该装置优于顶丝调节，可以在 20 秒内 精确 设置反向叶片叶轮间隙，无论在车间还是现场。

The innovative external micron-level impeller adjustment device is easy to use to reduce maintenance time and cost. The device is superior to top wire adjustment by accurately setting the reverse blade impeller clearance in 20 seconds, both in the workshop and field.

步骤1： 松开定位螺丝。用扳手逆时针 旋转轴承座，直到反向叶片叶轮轻微触及后盖板。

Step 1: Release the positioning screw. Rotate the bearing seat counterclockwise with a wrench until the reverse blade impeller is light Microtouch of the rear cover plate.

步骤 2: 选择叶轮设置值。轴承座圈 上的每个刻痕精确地表示了0.10 mm (0.004 in) 的间隙。如果需要 0.5 mm (0.020 in) 的叶轮设置 值，应逆时针数五个刻痕。

Step 2: Select the impeller setting value. Each nick on the bearing ring accurately represents a gap of 0.10 mm (0.004 in). If an impeller setting value of 0.5 mm (0.020 in) is required, five nicks shall be counted counterclockwise.

步骤 3: 顺时针将轴承座顺时针移动 至选定的刻痕数。锁紧定位螺丝并用塞规检查叶轮间隙。

Step 3: Move the bearing base clockwise to the selected number of nicks. Lock the positioning screws and check the impeller clearance with the plug gauge.

轴和轴承
Axis and bearing

轴和轴承选项 Axis and bearing options

TI轴和轴套设计专门改善可靠性和性能。它们采用多种材料，适应不同的应用需求。

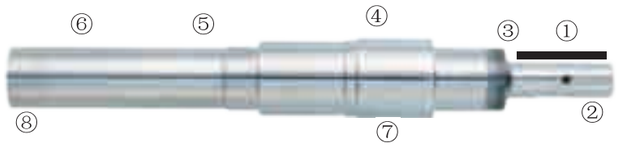
The TI axes and shaft sleeves are designed specifically to improve reliability and performance. They use a variety of materials to meet different application needs.

**实心：端部到端部的实心钢或不锈钢

**Solid: solid steel from end to end or stainless steel

钩型套筒：轴采用端部到端部实心钢或钢制动力端摩擦焊接在不锈钢湿端上；两者均适配钩型套筒

Hook sleeve: shaft using end to end solid steel or steel dynamic end friction welding on the stainless steel wet end; Both are fitted to the hook-type sleeve



① 偏移键槽帮助轴平衡。
Offset keyway to help balance the shaft.

② 合金材料标识确保每次零件正确。
Alloy material markings ensure the right part every time.

③ 大半径圆角和强度。
Large radius fillets and strength.

④ 精确加工确保完美的轴承适配，且无振动或热磨合。
Precision machining ensures perfect bearing fit without vibration or thermal run-in.

⑤ 0.03mm(<0.001in)的跳动量符合密封面运行的公差要求。
A runout of 0.03mm (<0.001in) meets the tolerance requirements for sealing face operation.

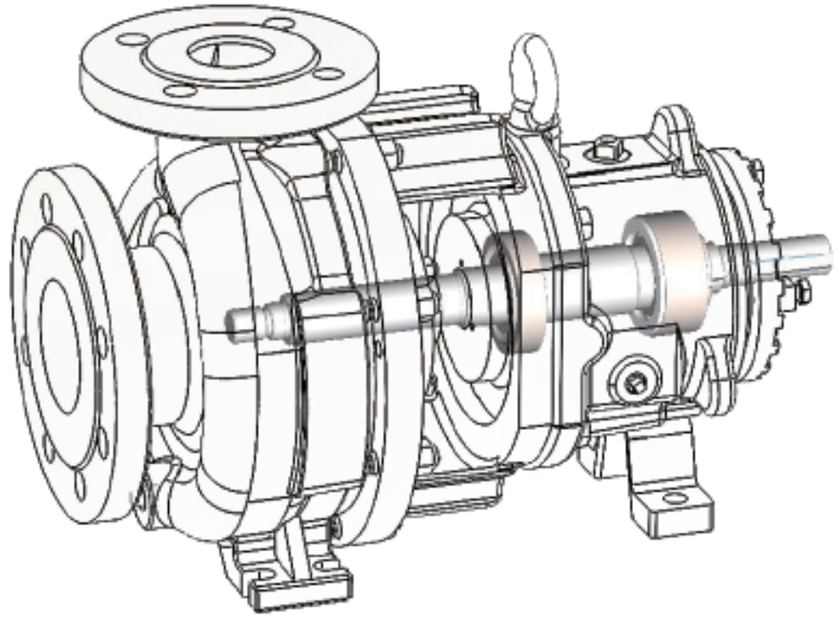
⑥ 关键表面研磨粗糙度为0.4 μm(16μin)确保机械密封的二次密封能力。
Critical surfaces are ground to a roughness of 0.4 μm (16μin) to ensure the secondary sealing capability of the mechanical seal.

⑦ 钢制动力端比不锈钢能应对更高的马力载荷。
Steel power ends can handle higher horsepower loads than stainless steel.

⑧ 最小的半径边缘确保完全接触叶轮，从而减少跳动量。
Minimum radius edges ensure complete contact with the impeller, thus reducing the amount of runout.

*** 使用实心轴来取代轴套，这样可以减少挠曲和振动的不利影响。轴套可以简化维护，但实心轴减少了维护工作量。

*** Use a solid shaft to replace the shaft sleeve, which reduces the adverse effects of deflection and vibration. The shaft sleeve simplifies maintenance, but the solid shaft reduces maintenance work.



轴和轴承
Axis and bearing

无与伦比的轴和轴承设计

TI轴与轴承系统采用ISO & ASME (ANSI) 标准泵当中最大的轴和轴承组件，提升了泵性能和可靠性。

Unrivalled shaft and bearing design

The TI Shaft and Bearing System utilises the largest shaft and bearing assemblies available in an ISO & ASME (ANSI) standard pump to enhance pump performance and reliability.

轴和轴承配置 Shaft and bearing configurations

			单位	40-25-125	50-32-125	65-40-125	80-50-125	100-65-125	40-25-160	50-32-160	65-40-160	80-50-160	40-25-200	50-32-200	65-40-200	80-50-200	100-65-160	125-80-160	100-65-200	125-80-200	150-100-200	50-32-250	65-40-250	80-50-250	100-65-250	125-80-250	65-40-315	80-50-315
轴承架			No.	1K													2K											
	F	出口宽	mm						9.8		13	19.4	5		9	12.9			25					11	11.1			12.4
		外径	mm						159		158.8	158.8	208		211	203			208					250	254			330.2
	R	进口直径	mm						52		63.5	69.9	52		70	76.2			102			60.5		76	104			78.5
		进口端面至中心	mm						39			49	42		45													
		出口宽	mm						7		12.7	15.6	5		5.3	12			34.9			12.5		11	10.2			7.1
		外径	mm						159		158.8	158.8	208		214	203			208			250		250	254			330.2
轴径	与轮配合螺纹M		mm	20（外螺纹）													24（外螺纹）										
	轴承（泵盖）		mm	35													45										
	轴承（电机）		mm	30													45										
	轴承侧与轴套配合处		mm	30													40										
	联轴器		mm	24													30										
轴套	外径		mm	40													50										
轴承	泵盖侧		mm	6207													6309										
	电机端		mm	3306 C3(4p-1450rpm) /7306 B/DB (2p)													3309 C3(4p-1450rpm) /7309 B/DB (2p)										
轴偏差			μm	50（根据GB/T5656或ISO5199）																							
压力限制	最高运行压力		bar	16												25											
	最高试验压力		bar	24												37.5											
温度限制介质最高温度			℃	-80至+400																							
驱动 P/n-V				功率/转速-电压取决于介质密度、材料和温度-按需要																							

			单位	150-100-250	150-125-250	200-150-250	100-65-315	125-80-315	150-100-315	150-125-315	100-65-400	125-80-400	150-100-400	150-125-400	200-150-315	250-200-315	200-150-400	250-200-400	200-150-500	250-200-500
轴承架			No.	3K											4K					
	F	出口宽	mm	33			11		35				33		50	70	37	64.9		
		外径	mm	254			330		330				406		356	356	##	406		
	R	进口直径	mm	127			104		154				152		193	229	##	229		
		进口端面至中心	mm																	
		出口宽	mm	29			16		32				25		34	72.2	43	60.3		
		外径	mm	254			330		330				406		356	356	##	406		
轴径	与轮配合螺纹M		mm	33（内螺纹）											42（内螺纹）					
	轴承（泵盖）		mm	55											65					
	轴承（电机）		mm	55											65					
	轴承侧与轴套配合处		mm	50											60					
	联轴器		mm	50											60					
轴套	外径		mm	60											70					
轴承	泵盖侧		mm	6311											6313					
	电机端		mm	3311 C3(4p)/7311 B/DB (2p)											3313 C3(4p)/7313 B/DB (2p)					
轴偏差			μm	50（根据GB/T5656或ISO5199）																
压力限制	最高运行压力		bar	16			25				16									
	最高试验压力		bar	24			37.5				24									
温度限制介质最高温度			℃	-80至+400																
驱动 P/n-V				功率/转速-电压取决于介质密度、材料和温度-按需要																

挠曲指数 Deflection index(math.)

轴承架 Frame size	挠曲指数 shaft stiffness ratio L^3/D^4		最高转速 max. speed (r/min)	轴传递的最大功率(kW) max. shaft power (kW)					
				不锈钢 stainless steel		碳钢 carbon steel		双相钢 duplex steel	
	F	R		螺纹	键	螺纹	键	螺纹	键
1	3.5	3.06	3600	39.6	22.7	52.6	30.2	58.3	33.5
2	1.8	1.64	3600	97.2	81	129.4	107.6	142.9	119.2
3	0.94	0.85	3600	198	136.8	263.5	181.8	291.2	201.2
4	1.07	0.92	1800	158.4	180	210.6	239.4	232.9	264.6

锥形密封腔
Tapered sealing chamber

先进的密封腔技术

作为后盖的一个整体组成部分，锥形密封腔延长密封使用寿命、改善泵可靠性并降低泵的总拥有成本：

- 提供最优的密封腔环境
- 延长机械密封命 – 自冲洗
– 自排气
– 自排残
- 维护和维修成本更低
- 允许采用较廉价的密封和冲洗计划；可以免去冲洗方案 Plan 11, 32, 52, 53 等
- 为操作人员提供安全的工作环境

导流板可延长密封的使用寿命

- 导流板使流体从绕轴改为沿轴向流动。
- 平衡的流体与密封室的低压降有助于保持固体悬浮，使磨蚀降到最低。
- 机械密封可产生一个使介质脱离机封部件的离心力。
- 固体和浆料将并入回流路径并被冲出密封腔外。

Advanced seal chamber technology

Advanced seal chamber technology

As an integral part of the back cover, the conical seal chamber extends seal life, improves pump reliability and reduces the total cost of ownership of the pump:

•Provides optimum seal chamber environment
•Extended mechanical seal life - self flushing
-Self-venting
- Self-venting
• Lower maintenance and repair costs
• Allows for cheaper sealing and flushing programmes; flushing programmes Plan 11, 32, 52, 53, etc. can be dispensed with.
•Safe working environment for operators

Deflector plate extends seal life

•The deflector changes the fluid flow from around the shaft to axial.
• The balanced fluid and low pressure drop in the seal chamber help keep solids in suspension and minimise abrasion.
• Mechanical seals generate a centrifugal force that dislodges the medium from the seal components.
• Solids and slurry will merge into the return path and be flushed out of the seal chamber.

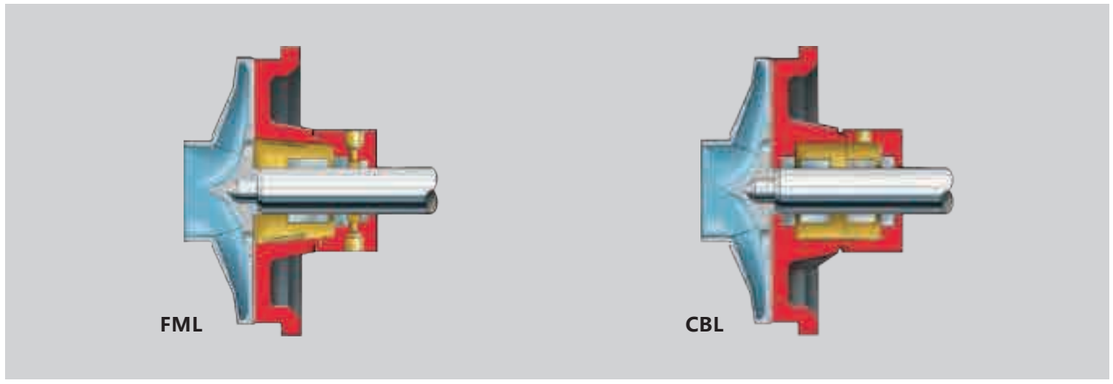
采用夹套后盖

可以使用配锥形密封腔的夹套后盖。天泉工程师将帮助你正确地选择适合具体应用的夹套盖。

Use of Jacketed Back Covers

A jacketed back cover with a tapered seal chamber can be used. Tianquan engineers will help you select the correct jacketed cover for your specific application.

FML	配导流板的大型锥形孔设计 Large tapered hole design with deflector plate
CBL	选配碳衬套的大型圆柱孔设计 Large cylindrical bore design with optional carbon bushing



导流板设计

FML — FML 采用大压盖螺栓和垫圈的大型锥形孔设计， 是大多数应用的首选：

- 集装式和非集装式单密封配置
- 集装式和非集装式双密封配置

圆柱孔设计

CBL — 采用大压盖螺栓和垫圈的超大圆柱孔设计。它可与下列项目搭配使用：

- 集装式和非集装式单密封配置
- 集装式和非集装式双密封配置
- 通常与冲洗方案系统结合使用
- 选配碳衬套，用于过程隔离、冷却或密封腔升压应用

Deflector design

FML - FML's large tapered bore design with large gland bolts and washers is preferred for most applications:

- Cartridge and non-cartridge single-seal configurations
- Cartridge and non-cartridge double seal configurations

Cylindrical Hole Design

CBL - Oversized cylindrical hole design with large gland bolts and washers. It can be used with the following items:

- Cartridge and non-cartridge single seal configurations
- Cartridge and non-cartridge double seal configurations
- Typically used in conjunction with a flushing programme system
- Optional carbon bushings for process isolation, cooling or seal chamber pressurisation applications

底座
Foundation

采用支脚固定式底座

支脚固定式底座允许将装配件移动到最小阻力点，从而 减少外部管道负荷。

- 标准支脚允许改善泵与过程管道之间的对准。
- 弹簧加载式支脚吸收振动，并减少对管道回路或膨胀接头的需要。

Adoption of a foot-mounted base

The foot-mounted base allows the assembly to be moved to the point of least resistance, thereby reducing external piping loads.

- Standard feet allow for improved alignment between the pump and process piping.
- Spring-loaded feet absorb vibration and reduce the need for piping loops or expansion joints.

四种预制底座设计延长泵和密封使用寿命

天泉提供四种预制底座设计来改善泵性能及可靠性，同时降低拥有成本。通过减少内部泵应力和振动来延长泵和密封 使用寿命。每种底座设计都能：

- 横向和纵向扭转刚度增强
- 改进减震性能
- 可防止运输损坏
- 在安装期间不容易扭曲
- 保持轴对中
- 缩短安装和轴对中时间
- 增加与灌浆的结合
- 改进泵、电机和密封可靠性
- 降低泵、电机和密封整个生命周期的成本

Four pre-fabricated base designs extend pump and seal life

Tianquan offers four pre-fabricated base designs to improve pump performance and reliability while reducing cost of ownership. Extend pump and seal life by reducing internal pump stress and vibration. Each base design can:

- Enhanced lateral and longitudinal torsional stiffness
- Improved vibration damping
- Prevents transport damage
- Less prone to twisting during installation
- Maintains shaft alignment
- Reduced installation and shaft alignment time
- Increased integration with grouting
- Improved pump, motor and seal reliability
- Reduced pump, motor and seal life cycle costs

编号 serial number	标准选项 Standard Options	Type A		Type B	Type C	Type C w/Rim	Type D
		Gp 1 & 2	Gp 3				
1	机加工的共面安装表面，达 0.17 mm/m (0.002 in/ft) 且粗糙度为 3.2 micron (125µin) Machined coplanar mounting surfaces to 0.17 mm/m (0.002 in/ft) with a roughness of 3.2 micron (125 µin)	O	O	O	O	O	Y
2	增加结构（横梁）支撑 Increased structural (beam) support	N	N	Y	Y	Y	Y
3	利用端盖增加扭曲支撑 Increased torsional support with end caps	NR	Y	D	O	O	Y
4	锥形孔，适合四 (4) 颗电机控制器螺栓 Tapered hole for four (4) motor controller bolts	O	O	O	O	O	Y
5	四 (4) 颗 — SS 横向夹套螺栓——电机控制器 Four (4) - SS Cross Jacket Bolts - Motor Controller	O	O	O	O	O	Y
6	整体式排残斜面 Integral Displacement Ramp	N	N	N	N	N	Y
7	整体倾斜集液边槽底座 Integral tilting collector side channel base	N	N	N	N	Y	Y
8	102 mm (4 in) 直径的灌浆孔 —最长 762 mm (30 in) 通气口距离 102 mm (4 in) dia. grout holes -Maximum 762 mm (30 in) vent distance	Y	Y	N	Y	Y	Y
9	位于每个腔体角落处的 13 mm (½ in) 排气孔 13 mm (½ in) air vents located in the corners of each chamber	NR	O	NA	Y	Y	Y
10	下表面形状灌浆锚固 Lower surface shape grouting anchors	N	N	NA	Y	Y	Y
11	四 (4) 角处的整体式吊眼 IV (4) Integral eyelets at corners	O	Y	O	Y	Y	Y
12	四 (4) 角处的锥形调平孔 IV (4) Tapered levelling holes at corners	Y	O	S	Y	Y	Y
13	连续焊缝结构 Continuous weld structure	NA	Y	O	Y	Y	Y
14	灌浆孔周围的焊接式凸唇 Welded raised lip around grout holes	NR	NR	NA	NR	NR	Y
15	可先的高脚安装，带地面脚杯 Pre-emptive high mount with ground level foot cups	NR	NA	Y	D	D	NA
16	弹簧安装式载荷设计 Spring Mounted Load Design	NA	NA	O	D	D	NA
17	贮槽 (304 不锈钢或其他材料) Tank (304 stainless steel or other materials)	O	O	O	O	NR	NA
18	可选 的八 (8) 个总电机调节器 Optional Eight (8) Total Motor Regulators	O	O	O	O	O	Y
19	尺寸符合 ASME B73.1 Dimensions in accordance with ASME B73.1	Y	Y	Y	Y	Y	Y

Y = 标准
O = 可选
Y = Standard
O = Optional

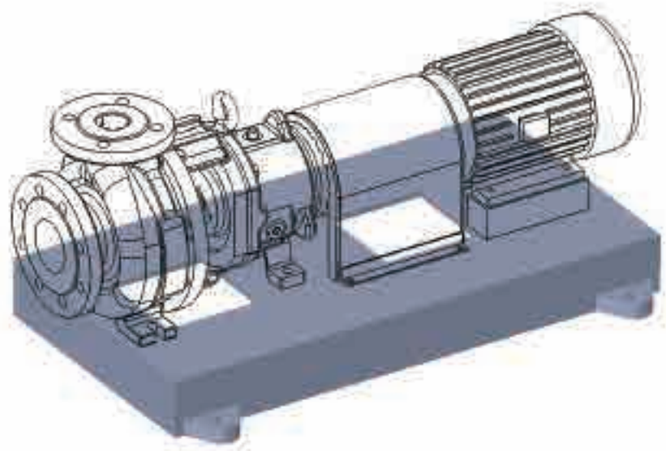
N = 不可用
NA = 不适用
N = Not available
NA = Not available

NR = 不推荐
NR = Not recommended

D= 需要设计时间
S = 调平支脚
D = Design time required
S = levelling feet

*共面度达 0.42 mm/m (0.005 in/ft)
*Co-planarity up to 0.42 mm/m (0.005 in/ft)

底座
Foundation



A 型
标准ISO & ASME (ANSI)底座；
地基固定
Type A
Standard ISO & ASME (ANSI) base;
Foundation Fixing

B 型
加固型底座；支脚固定
Type B
Reinforced base; feet fixed

C 型
加固型底座；地基固定；集液边槽可选
C-Type
Reinforced base; solid Foundation Reinforced Base;
Foundation Fixed;
Liquid Trap Side
Tank Optional

D 型
重载地基固定；
Type D
Heavy duty foundation fixing;

刚性结构

金属底座尺寸：

• 139 至 258 采用 12 mm (1⁄2 in) 钢板

• 264 至 280 采用 16 mm (5⁄8 in) 钢板

• 368 至 398 采用 19 mm (3⁄4 in) 钢板

Polybase 底座采用 76 至 102 毫米 (3 至 4 英寸)实心聚合物胶接混凝土。

B，C 和 D 型采用附加结构支撑来加固，由此提升刚度。

Rigid construction

Metal base dimensions:

• 139 to 258 with 12 mm (1⁄2 in) steel plate

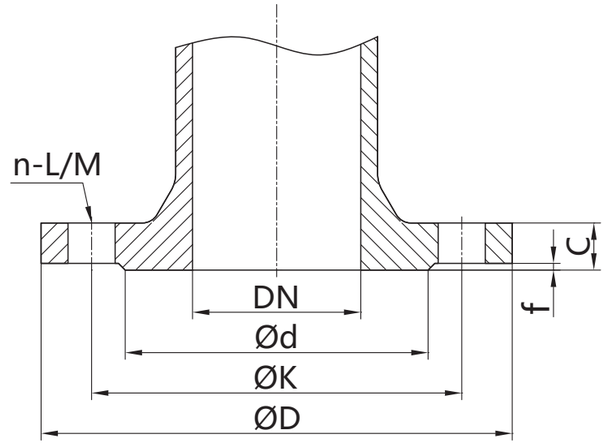
• 264 to 280 with 16 mm (5⁄8 in) steel plate

• 368 to 398 in 19 mm (3⁄4 in) steel plate

Polybase bases use 76 to 102 mm (3 to 4 in.) solid polymer-glued concrete.

Models B, C and D are reinforced with additional structural bracing to increase stiffness.

法兰
Flange



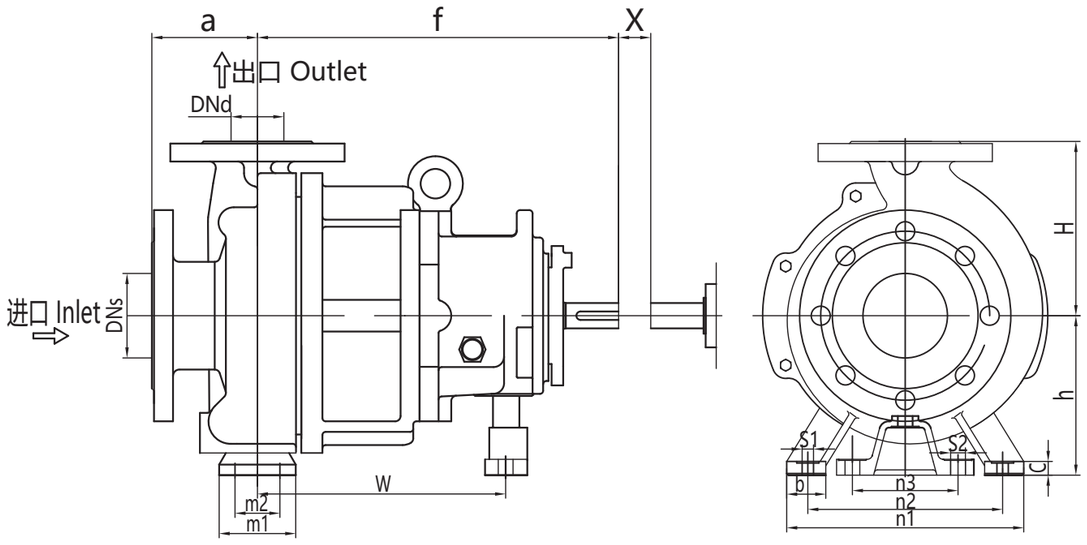
符合 HG/T20592-2009，共PN16 PN25 PN40 三个等级，配合安装尺寸图和表一起使用

Constent with HG/T20592-2009 , PN16 PN25 PN40，Use it together with the installation size drawing and the table

整体铸造法兰HG/T20592-2009 RF（未注单位：mm）
Integral casting flange HG/T20592-2009 RF (unlisted unit: mm)

DN	PN (bar)	D	K	L	n （个） (pcs.)	M	d	f	C
25	16	115	85	14	4	12	68	2	18
32	16	140	100	18	4	16	78	2	18
40	16	150	110	18	4	16	88	2	18
40	25	150	110	18	4	16	88	2	18
50	16	165	125	18	4	16	102	2	18
50	25	165	125	18	4	16	102	2	20
65	16	185	145	18	8	16	122	2	18
65	25	185	145	18	8	16	122	2	22
65	40	185	145	18	8	16	122	2	22
80	16	200	160	18	8	16	138	2	20
80	25	200	160	18	8	16	138	2	24
80	40	200	160	18	8	16	138	2	24
100	16	220	180	18	8	16	158	2	20
100	25	235	190	22	8	20	162	2	24
100	40	125	190	22	8	20	162	2	24
125	16	250	210	18	8	16	188	2	22
125	25	270	220	26	8	24	188	2	26
125	40	270	220	26	8	24	188	2	26
150	16	285	240	22	8	20	212	2	22
150	25	300	250	26	8	24	218	2	26
150	40	450	385	26	8	24	218	2	28
200	16	340	295	22	12	20	268	2	24
250	16	405	355	26	12	24	328	2	26

外形尺寸图
External Dimensions



外形安装尺寸表
Outline installation Dimension table

泵的口径			泵的尺寸				支撑尺寸										
DNs	DNd	D2	a	f	h	H	m1	m2	w	b	n1	n2	n3	S1	S2	C	x
40	25	125	80	385	112	140	106	70	285	45	180	140	110	M12	M12	12	100
50	32	125															
65	40	125									200	160					
80	50	125	100		132	160					230	190					
100	65	125			160	180	125	95		65	280	212				12	
40	25	160	80		132	160	106	70		45	230	190				16	
50	32	160															
65	40	160															
80	50	160	100		160	180					255	212		M12			
40	25	200	80								230	190					
50	32	200															
65	40	200	100								255	212					
80	50	200				200											
100	65	160		500			125	95	370	60	270					19	140
125	80	160	125		180	225				65	320	250					
100	65	200	100							60	310					16	
125	80	200	125			250				75	350	280		M16			
150	100	200			200	280	160	120									
50	25	250	100		180	225	125	95		60	310	250		M12			100
65	40	250															
80	50	250	125														
100	65	250			200	250	160	120		75	350	280		M16			140
125	80	250			225	280					390	315				19	
65	40	315			200	250	125	95		60	335	280		M12		16	100
80	50	315			225	280											
150	100	250	140	530			160	120		75	390	315		M16		19	140
150	125	250			250	355											
200	150	250	160		280	375	200	150		95	490	400		M20		20	180
100	65	315	125		225	280	160	120		75	390	315		M16		19	140
125	80	315			250	315				79	398					24	
150	100	315	140	530	250	315	160	120	370	80	400	315	110	M16	M12	24	140
150	125	315			280	355				95	490	400		M20		20	
100	65	400	125							75	440	355		M16		19	
125	80	400									440	355					
150	100	400	140				200	150		94	500	400		M20			
150	125	400			315	400				95	490					24	
200	150	315	160	670					500		540	450	140		M16	20	180
250	200	315	180													24	180
200	150	400	160		315	450											
250	200	400	180	670	355	500											
200	150	500			400												
250	200	500			440												

订货须知
Notes on Order –placing

亲爱的客户：

请在天泉销售人员或代理商的协助下填写下表，以便为您提供的泵解决方案可以满足您在泵型号、材料、轴封、附件、安装条件等各方面要求

化工流程泵数据单	编号：
客户信息	产品信息
公司名称：	项目名称：
联系人：	产品型号：
电话：	台数：
传真：	
E-mail：	

介质

液体类型：_____

最高温度：_____（℃）

最低温度：_____（℃）

浓度：_____（%）

PH值：_____

运动粘度：_____（mm^2/s）

密度：_____（kg/m^3）

固体颗粒含量：_____（质量%）

是否结晶？ 是：_____ 否 _____

环境

环境温度：_____（℃）

环境湿度：_____（%）

海拔高度：_____（m）

压力

最低入口压力：_____（bar）

最高入口压力：_____（bar）

参数

主要工况点 Q：_____（m^3/h） H：_____（m）

最大工况点 Q：_____（m^3/h） Hmax：_____（m）

最小工况点 Q：_____（m^3/h） Hmin：_____（m）

材质：_____

_____

_____

机封：_____

电机：_____

其他附件（阀、挠性接头等）：_____

Dear customer:

Please fill in the following table with the assistance of Tianquan sales personnel or agent, so that the pump solution provided for you can meet your requirements in the pump model, material, shaft seal, accessories, installation conditions and other aspects.

Chemical process pump data sheet	No.:
customer information	On-product information
corporate name:	Project name:
contacts:	Product type:
telephone:	Set quantity:
portraiture:	
E-mail:	

Medium

Liquid type: _____

Max. temperature: _____ (℃)

Min. temperature: _____ (℃)

Potency: _____ (%)

pH value: _____

Kinematic viscosity: _____ (mm^2/s)

Density: _____ (kg/m^3)

Solid particle content: _____ (quality %)

Is crystallization? Yes: _____ No: _____

Environment

Ambient temperature: _____ (℃)

Ambient humidity: _____ (%)

Above sea level: _____ (m)

Pressure

Min. inlet temperature: _____ (bar)

Max. inlet temperature: _____ (bar)

Parameter

Rated flow point Q: _____ (m^3/h) H: _____ (m)

Min. Flow point Qmin: _____ (m^3/h) Hmax: _____ (m)

Max. Flow point Qmax: _____ (m^3/h) Hmin: _____ (m)

Material: _____

_____

_____

Mechanical seal: _____

Motor (power, pole, energy efficiency grade, level of protection, insulation grade, etc.) :

_____

Other attachments (reducer, valve, flexible connector, etc.) : _____