

XSF系列消防泵

XSF SERIES FIREFIGHTING PUMP

依据美国NFPA20标准进行设计制造
Design&manufacture according to NFPA20



生产许可证
生产许可证编号
(湘) XK06-003-00003

高新技术企业

ISO9001:2008

中国节能产品认证

The world's largest split casing pump manufacturer

全球最大中开泵制造厂商

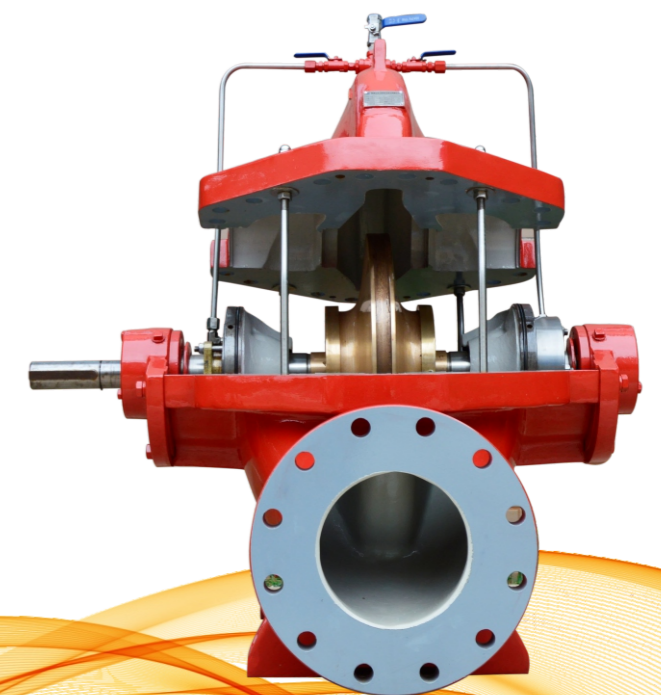
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公司简介 <<

湖南山水节能科技股份有限公司（证券名称：山水节能，证券代码：430570）是一家专业从事流体系统节能服务和流体节能装备制造的集团化公司

公司下设技术应用、节能服务和装备制造三大板块，由长沙山水节能研究院有限公司、长沙海川节能技术有限公司、湖南山水泵业有限公司、湖南山水换热设备有限公司等多家全资子公司组成。公司基于强大的技术应用和系统集成能力，持续3年保持50%以上的速度增长，先后通过了ISO9001、ISO14001、ISO18001认证、节能产品认证、节能服务资格认证、安全生产标准化认证是中国石油、中国石化一级物资供应商、“湖南省高新技术企业”、“中国中开泵生产十强企业”。

自1995年，公司已为国内外大中型项目提供中开水泵达20000余台，流量从150m³/h~25000m³/h,扬程从8m~246m。同时，公司与ANDERITZ、ITT、WILO、FLOWSERVE、EBARA等国际知名公司开展广泛业务合作，产品品质和服务水平均已达到国际先进水平。

多年的发展使公司具备了领先于行业的大规模定制化能力，拥有模具、铸造、加工、装配、试验全制造链，年产中开泵6000余套，水泵口径从50mm~1600mm，并针对一般供水、石化、节能、消防和采砂行业应用特点分别开发了5个系列，共计400余种规格的中开泵产品，为客户应用提供更优的选择。

我们将不断努力，以中开泵为核心，**打造全球最强大的中开泵制造基地。**

Company profile <<

Hunan M&W Energy Saving Technology&Science Co., Ltd (Stock Name: M&W Energy Saving, Stock Code: 430570) is a famous system integration service provider in fluid transportation field.

The company is integrated with technical application, energy-saving services and equipment manufacturing. The main wholly-owned subsidiaries include Changsha M&W Energy Saving Research Institute Co., Ltd, Changsha Haichuan Energy Saving Technology Co., Ltd and Hunan M&W Pump Co., Ltd. Based on strong technology application, integration ability and system integration ability, the performance of the company is increasing by more than 50% in last three years. It has been initially forming the overall advantages of industrial chain. It has passed ISO9001, ISO14001, ISO18001 certification, Certification of Energy Efficient Products, Qualification for Energy Saving Service and Safety Working Standardization Certificate. It also passed the first class material supplier qualification for Sinopec and Petro China. It is one of Hunan High and New Technology Enterprises and "Top ten split case pump manufacturer in China".

Since 1995 M&W has been supplied over 20000 sets of split casing pump for a lot of large and medium projects in domestic and overseas with pumps capacity cover from 150m³/h to 25000m³/h and head cover from 8m to 246m. Meanwhile, M&W carried out extensive business cooperation with world famous pump brand such as Andritz, ITT, Wilo, Flowserve, EBARA, etc which proves the product and service has been reached to international advanced level.

With years of experience, M&W has a leading ability of large scale customization and integration ability of moulding, casting, machining, assembling and testing. Currently M&W's annual output over 6000 sets with inlet size from 50mm to 1600mm. It has over 400 models with speciality series for 5 different application which for water supply, petrochemical, energy saving, firefighting and sand dredging projects to meet user's requirements.

M&W will continue efforts on centering on split casing pump and build the strongest manufacturing base of split casing pump in the world.

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1. 简介

XSF系列消防泵是我公司完全按照美国消防协会NFPA20（固定消防泵安装标准）设计制造的单级双吸中开离心泵（BB1型）系列化产品。广泛应用于各类工业及民用建筑固定消防系统。

2. 产品特点

全面达标

- ◆ 遵照NFPA20标准设计制造，技术指标符合UL488和FM认证标准
- ◆ 最大轴功率点是由水力性能而不是水泵汽蚀状态下而获得，真正符合NFPA20规范要求，功率点准确，保证机组安全可靠

广泛适应

- ◆ 性能范围
流量：500、750、1000、1250、1500、2000、2500、3000、4000、5000GPM
扬程：75psi~315psi
- ◆ 可适应电机和内燃机作为原动机；
- ◆ 可根据用户要求设计不同转速、不同性能的消防用泵。

经济便宜

- ◆ 最大轴功率点在1.5倍额定流量附近，原动机配套功率小，降低了机组成本；
- ◆ 关死点压力低，对机组配套件压力等级要求降低，降低了机组成本；
- ◆ 仅使用很少的规格就能满足了全部的性能要求，降低了库存，缩短了交期。

3. 泵型号描述

例：XSF 100-310 B

XSF: 单级双吸中开式消防专用离心泵

100: 泵出口直径 (mm)

310: 叶轮名义直径 (mm)

B: 不带字母表示标准泵型，带字母与标准泵型比较仅更换叶轮

1. Introduction

Series of XSF fire pumps are serialization products of single stage double suction centrifugal pumps(BB1 type) which designed and manufactured in fully compliance with NFPA20 "Standard for the Installation of Stationary Pumps for Fire Protection". They are widely used in fixed firefighting systems among various of industrial and civil buildings.

2. Product Feature

Fully meet requirements

- ◆ Designing applies to NFPA20 standard and specification in accordance with UL448 and FM approval.
- ◆ Max shaft power point is attained by hydraulic performance instead of pump cavitation, which truly qualified for NFPA20 requirements, as well as ensure safety and reliability of pump units.

Widely application

- ◆ Performance range
capacity: 500、750、1000、1250、1500、2000、2500、3000、4000、5000GPM
head: 75psi~315psi
- ◆ Adaptable of electric motor and combustion engine as prime mover
- ◆ Varied revolving speed or performance pumps can be supplied according to user's requests

Low cost

- ◆ Max shaft power point is closed to the point of 150% rated capacity, therefore the power and cost are lower than others.
- ◆ Pressure at shut off point is small which require lower pressure rating of fittings or accessories, save cost for whole unit.
- ◆ Single model covers wide performance range, no need to purchase different models which benefits clients by reducing inventory and shorten delivery.

3. Description of pump type

For example: XSF 100-310 B

XSF: Single stage double suction split casing centrifugal pump for firefighting application

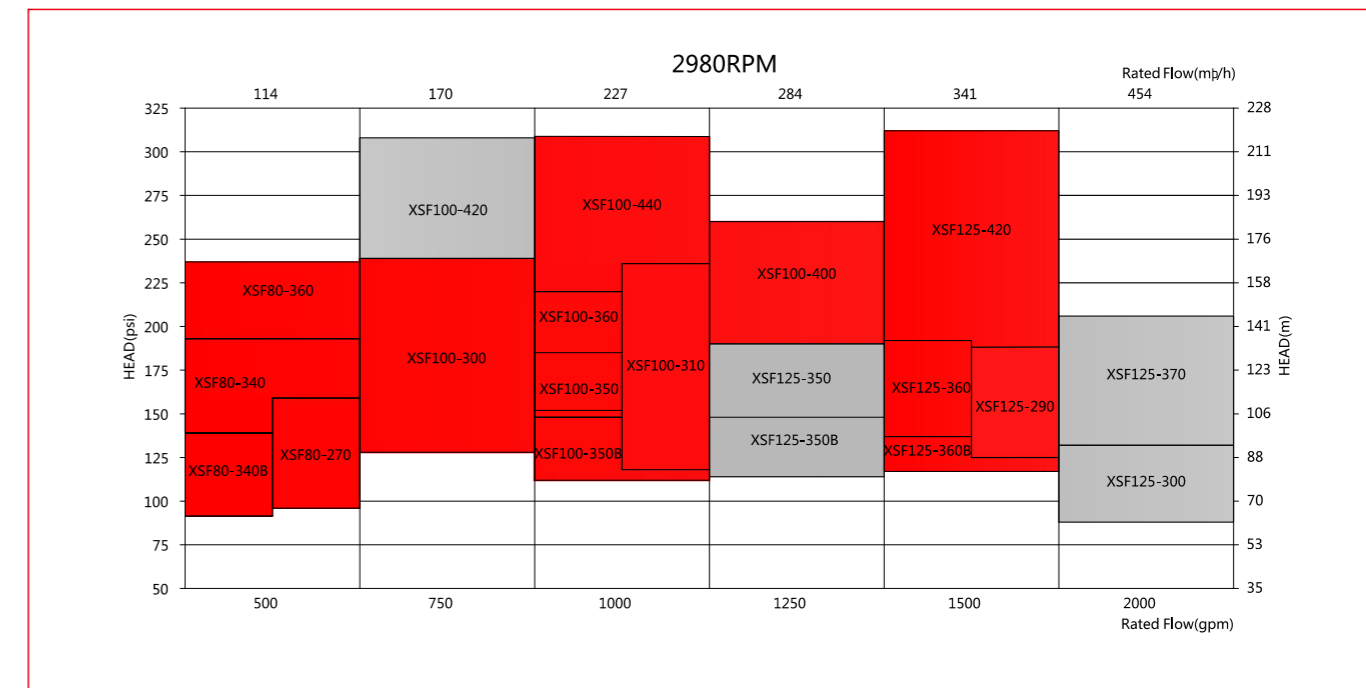
100: Discharge size

310: Nominal impeller diameter

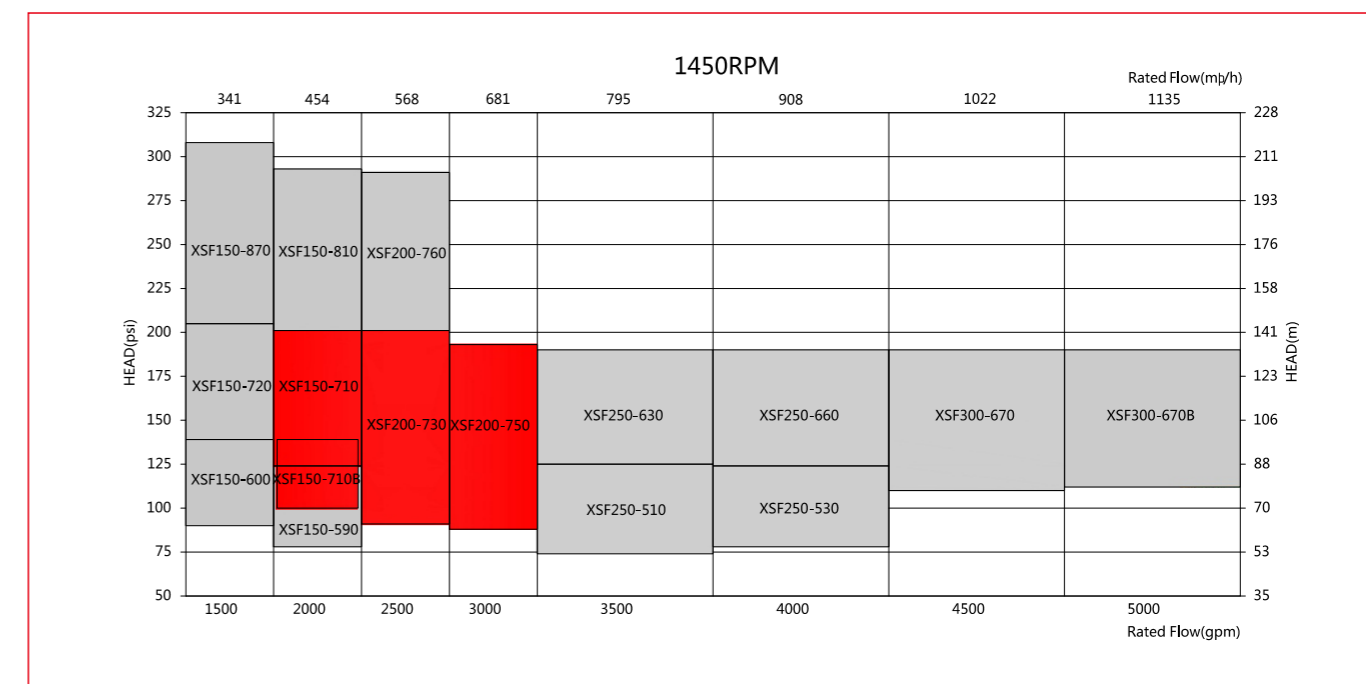
B: Standard pump model without letter Same model but change a different impeller with letter B

4. 型谱图 (Drawing for model selection)

型谱图 (一) (Hydraulic coverage 1)



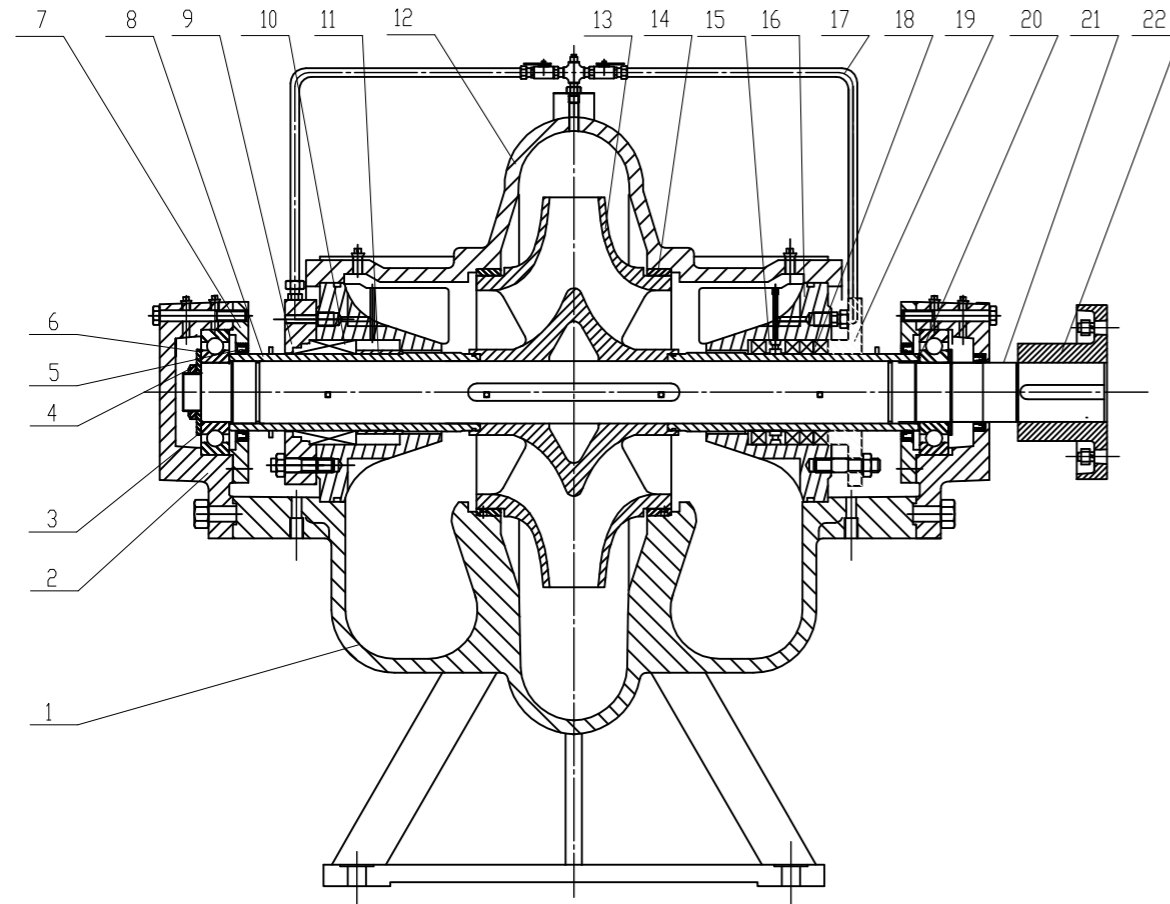
型谱图 (二) (Hydraulic coverage 2)



■ 已开发产品
Developed products

■ 待开发产品
Developing products

5. 产品结构图 (Structural drawing of pump)

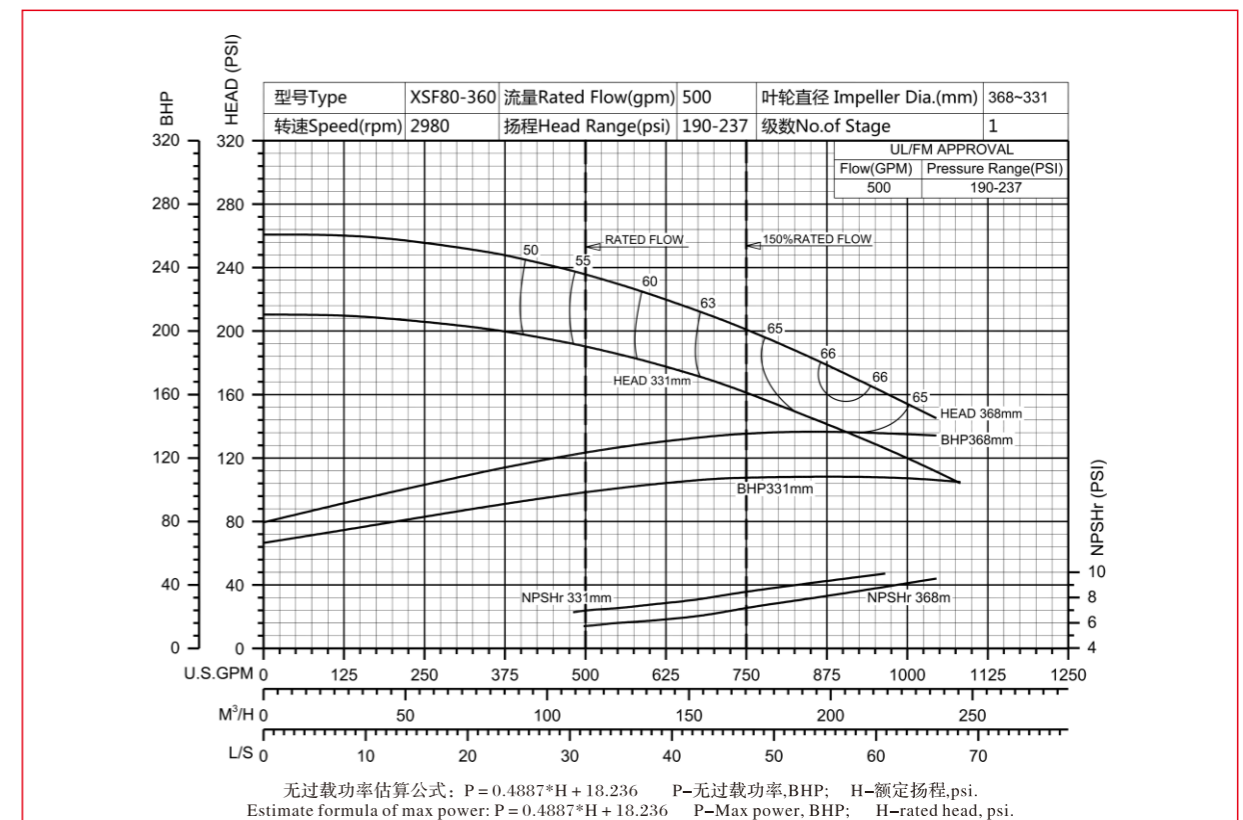
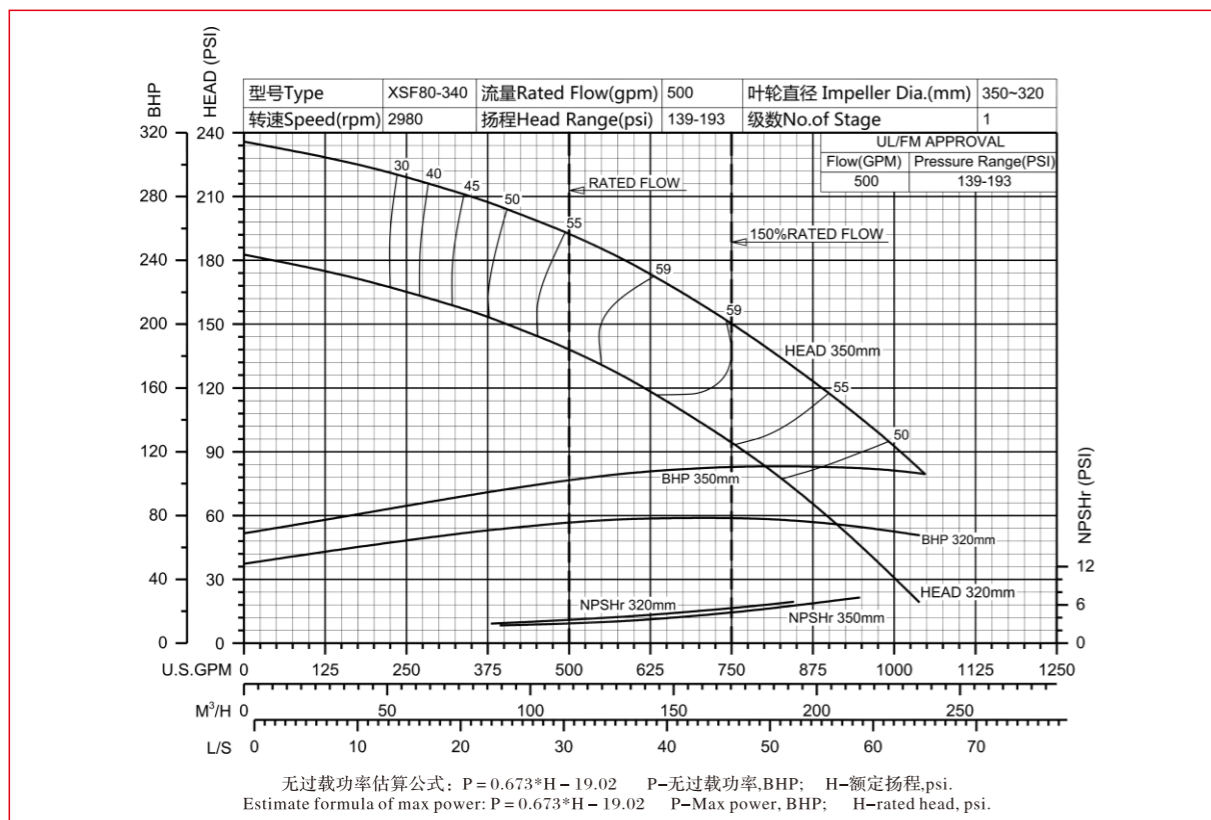
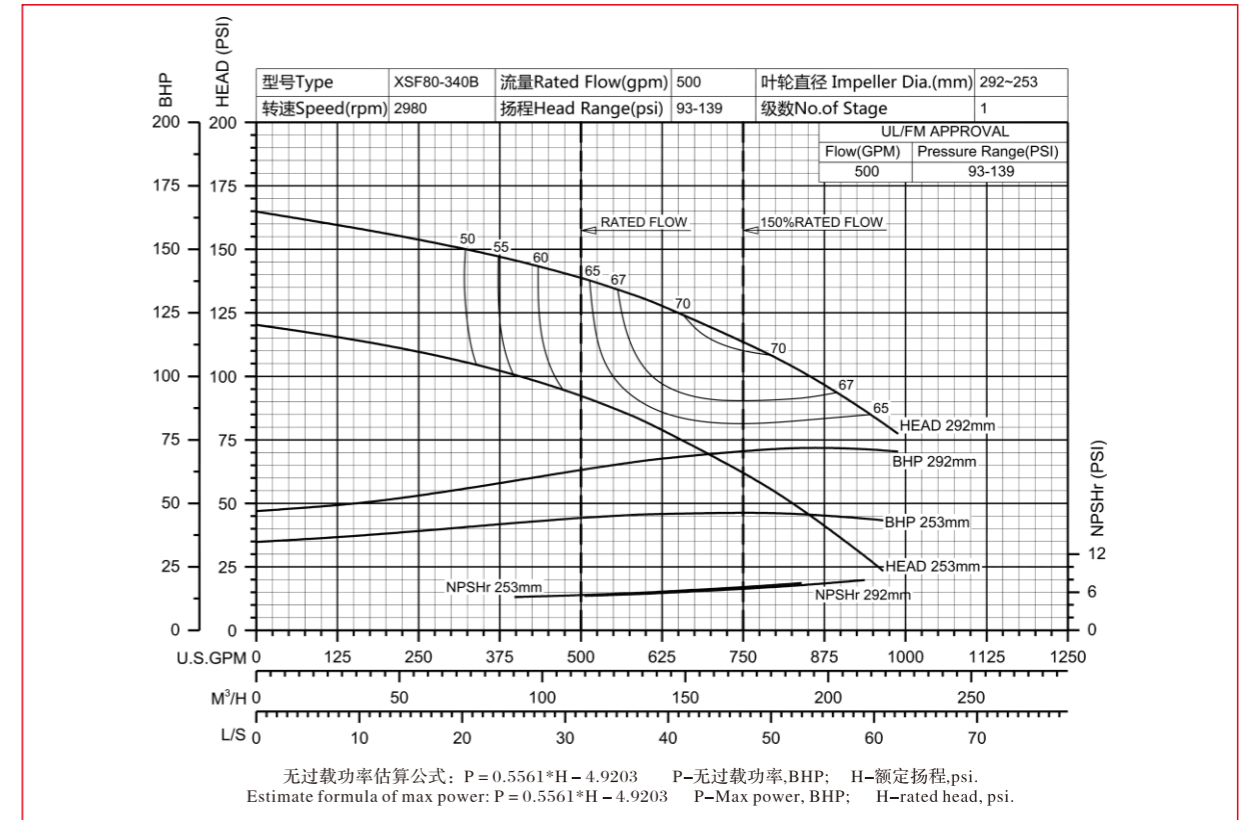
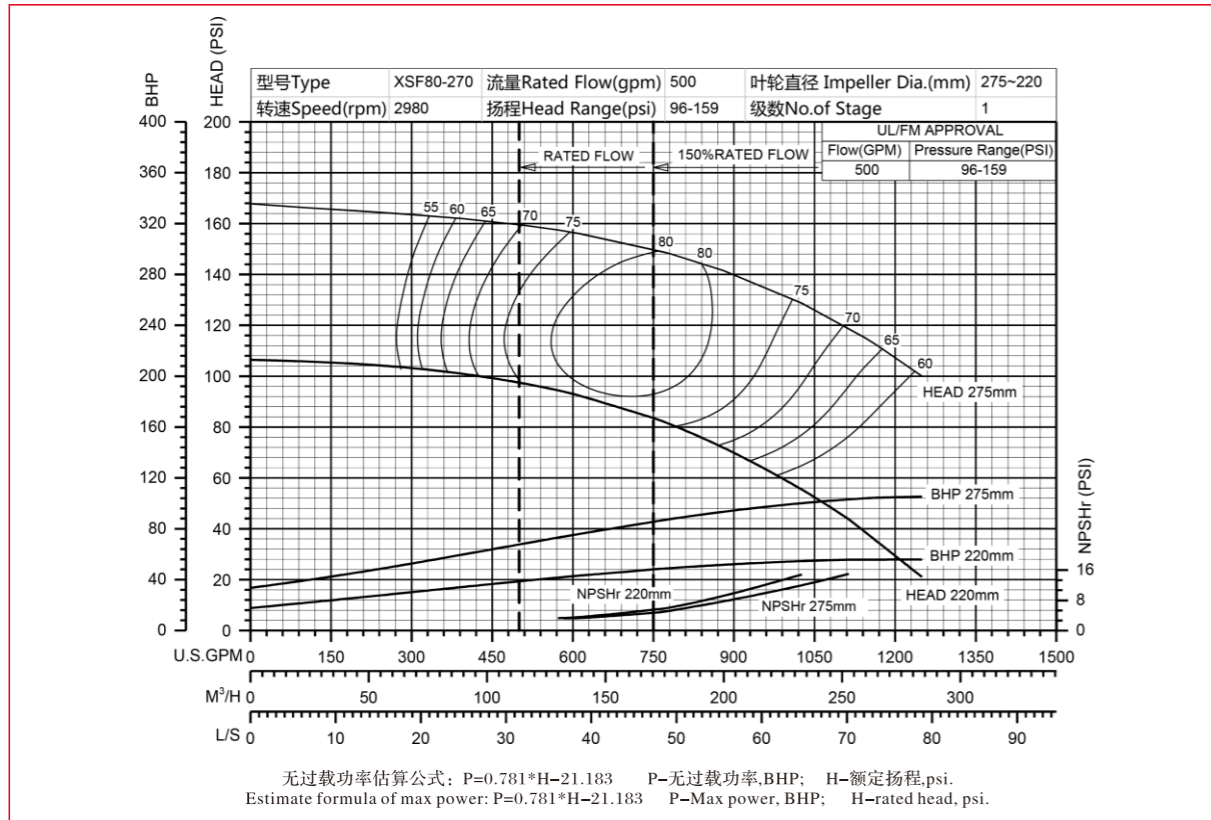


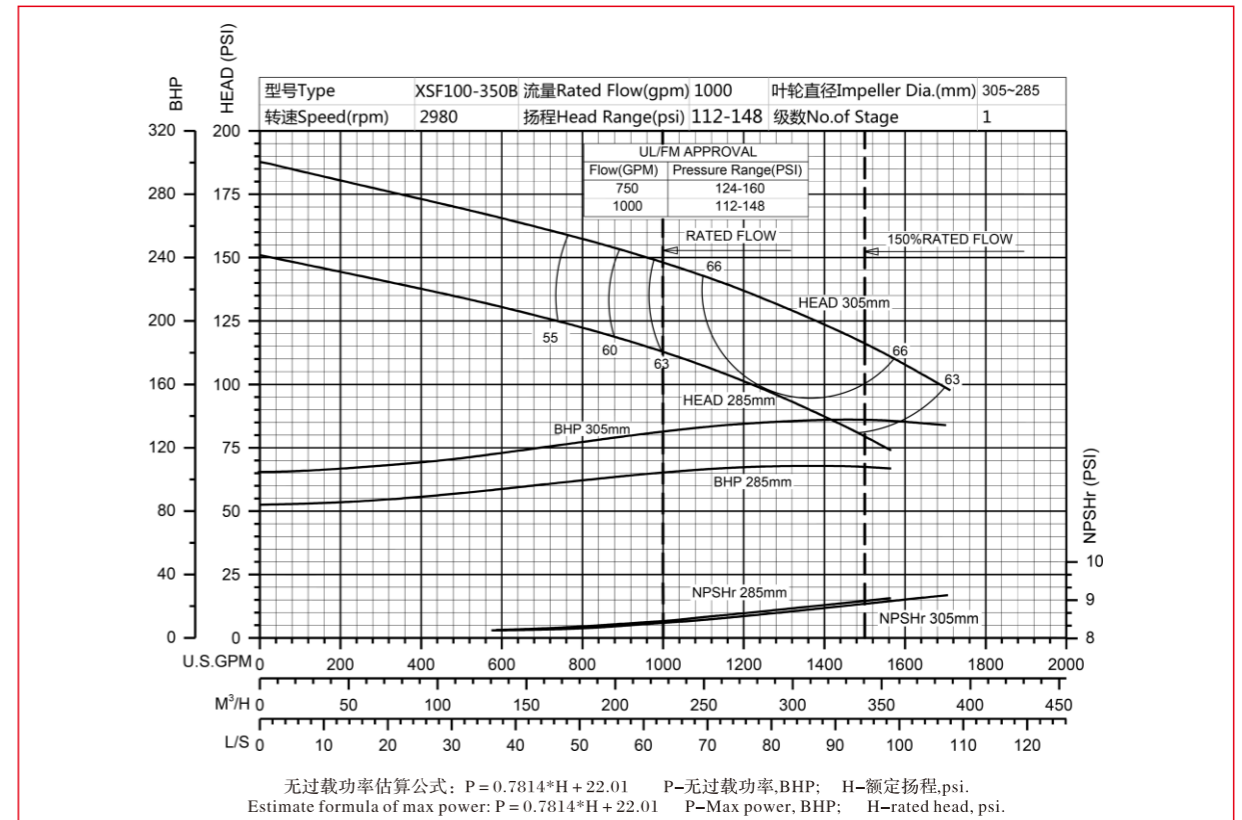
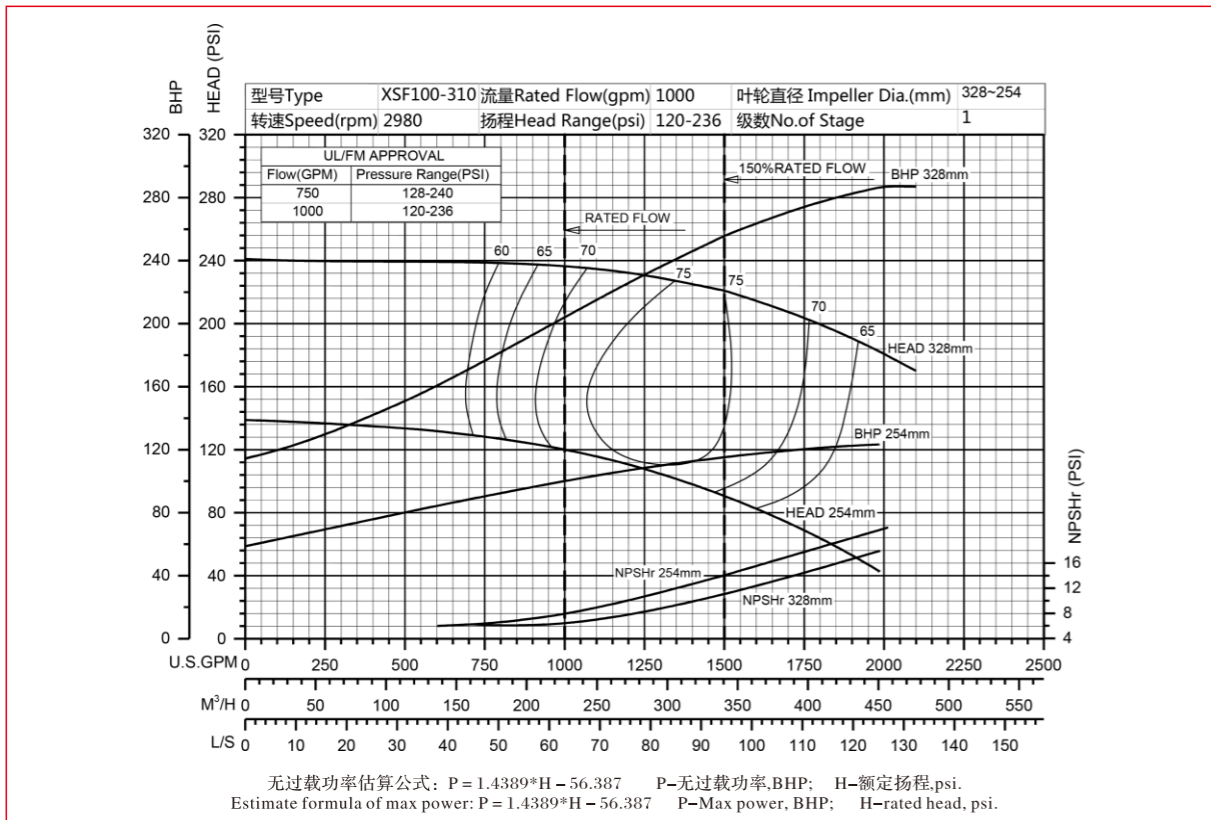
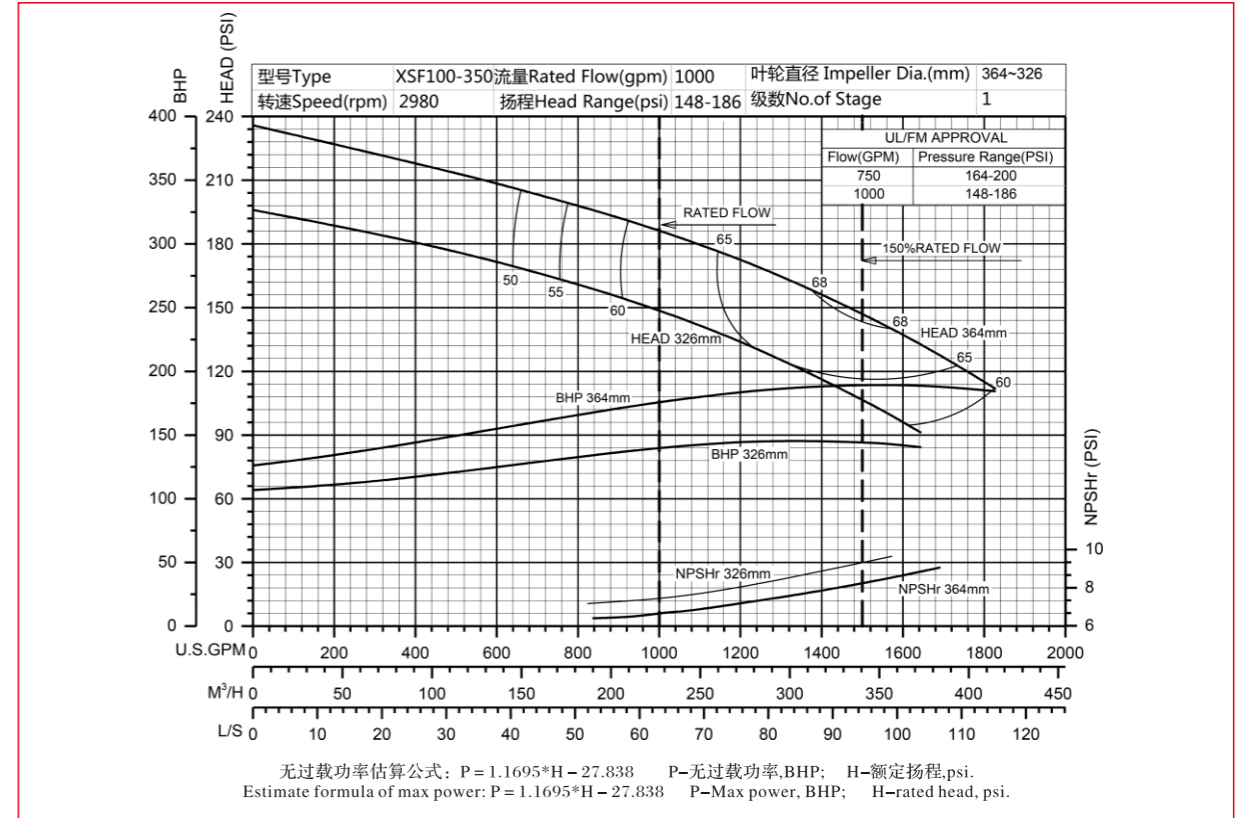
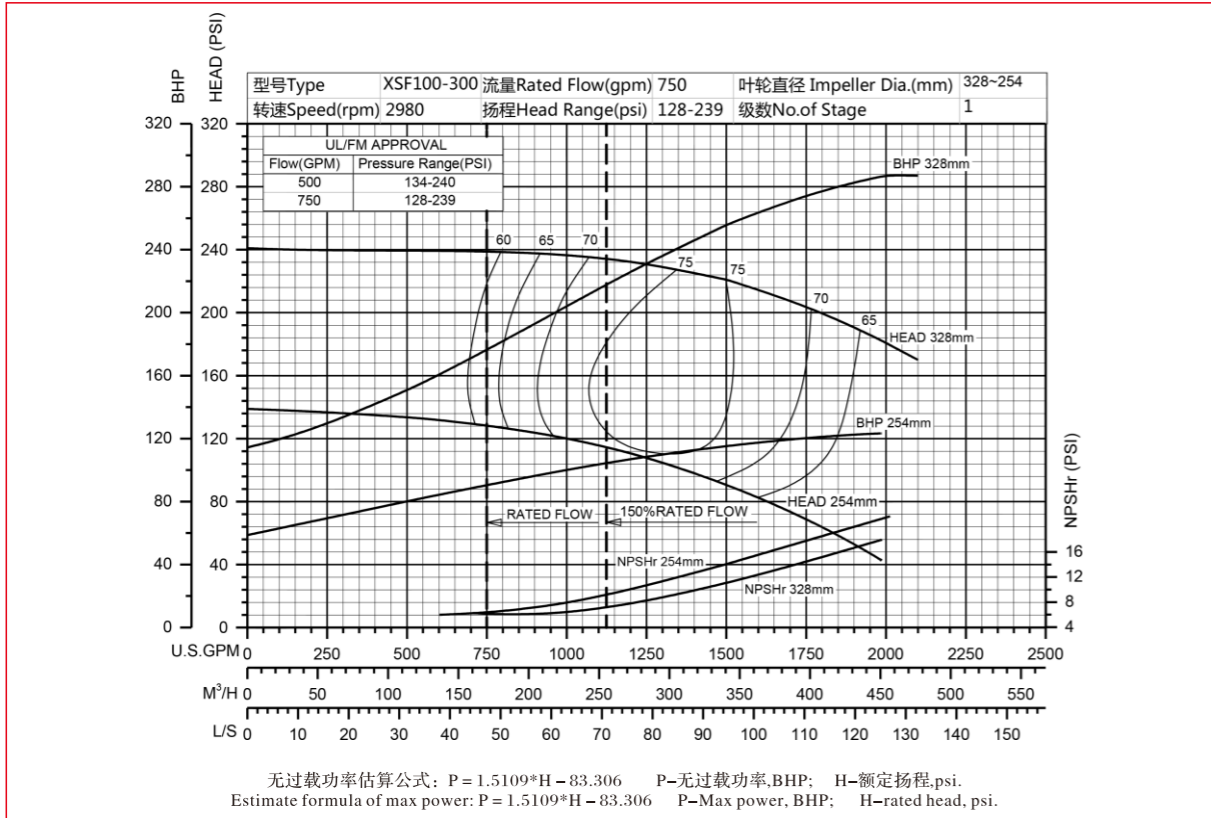
序号 NO.	零/部件名称 Part Name	材质 Material	序号 NO.	零/部件名称 Part Name	材质 Material
1	泵体 Casing	球铁 Ductile Cast Iron	12	泵盖 Casing cover	球铁 Ductile Cast Iron
2	轴承体 Bearing Housing	铸铁 Cast Iron	13	叶轮 Impeller	不锈钢/铜 Stainless Steel/Bronze
3	深沟球轴承 Deep groove ball bearing	轴承钢 Bearing Steel	14	口环 Impeller ring	不锈钢/铜 Stainless Steel/Bronze
4	锁紧螺母 Lock nut	碳钢 Carbon Steel	15	填料环 Packing ring	不锈钢 Stainless Steel
5	骨架油封 Lip seal	橡胶 Rubber	16	密封体 Seal housing	铸铁 Cast Iron
6	轴承压环 Bearing ring	碳钢 Carbon Steel	17	水封管部件 Flushing pipe	不锈钢/铜 Stainless Steel/Bronze
7	轴承压盖 Bearing gland	铸铁 Cast Iron	18	填料 Gland packing	油浸石棉 Oil-immersed asbestos
8	轴套 Shaft sleeve	不锈钢/铜 Stainless Steel/Bronze	19	填料压盖 Packing gland	铸铁 Cast Iron
9	机械密封 Mechanical seal	耐腐材料 Corrosion Resistant Material	20	轴承衬圈 Bearing liner	碳钢 Carbon Steel
10	密封衬套 Seal bushing	不锈钢/铜 Stainless Steel/Bronze	21	轴 Shaft	不锈钢 Stainless Steel
11			22	联轴器 Coupling	铸铁 Cast Iron

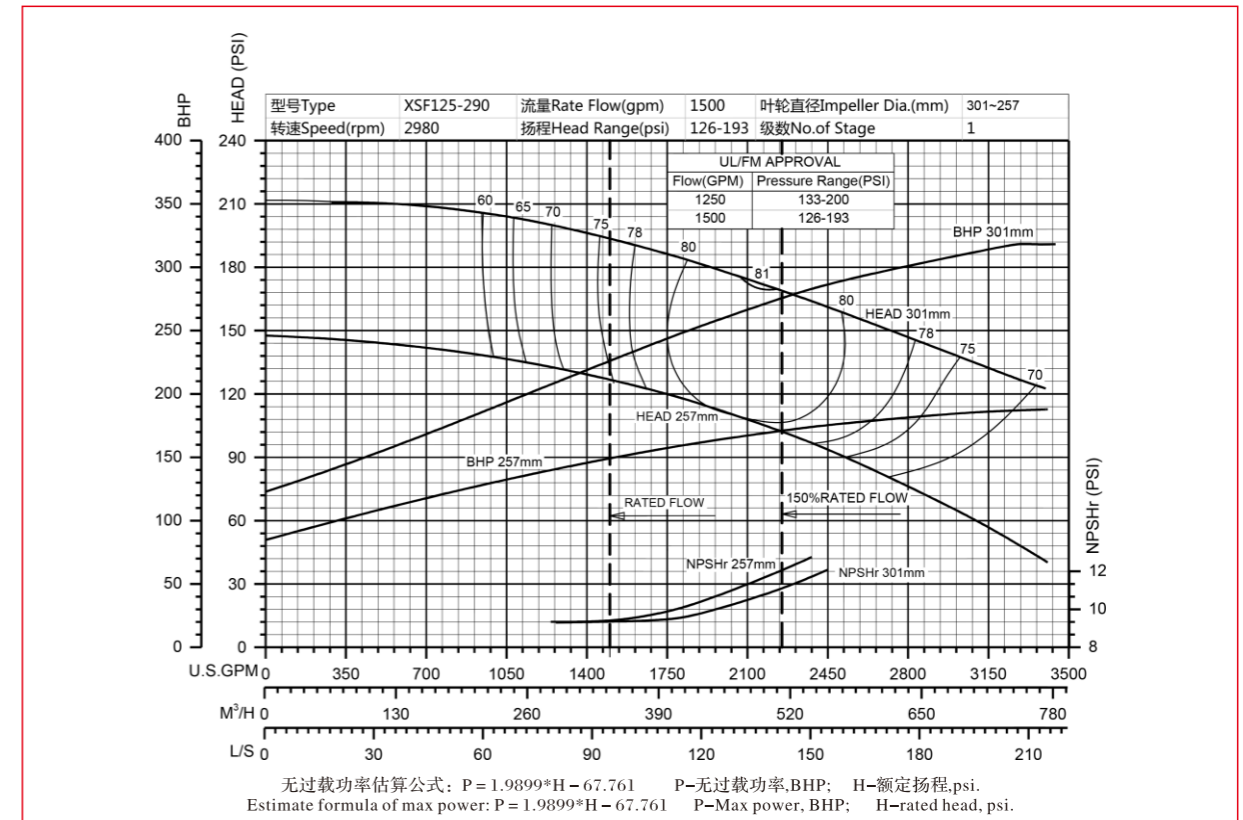
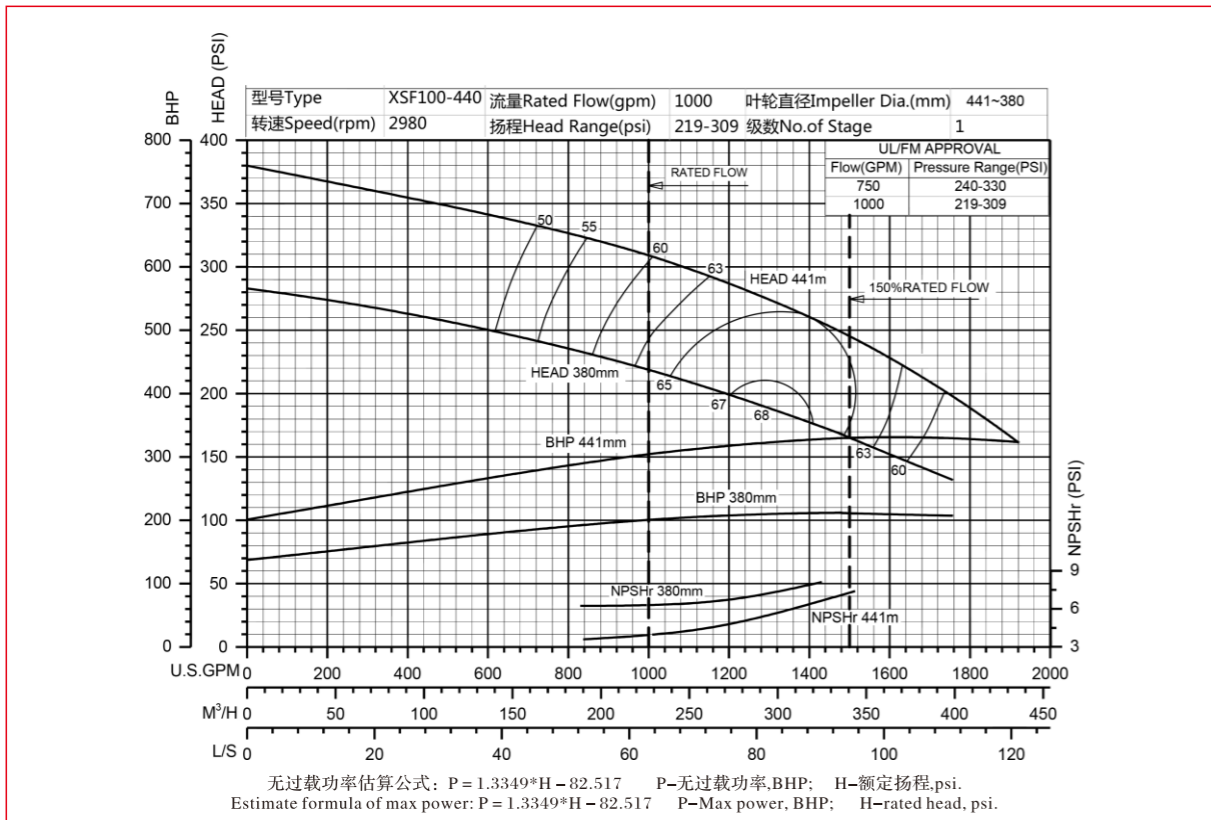
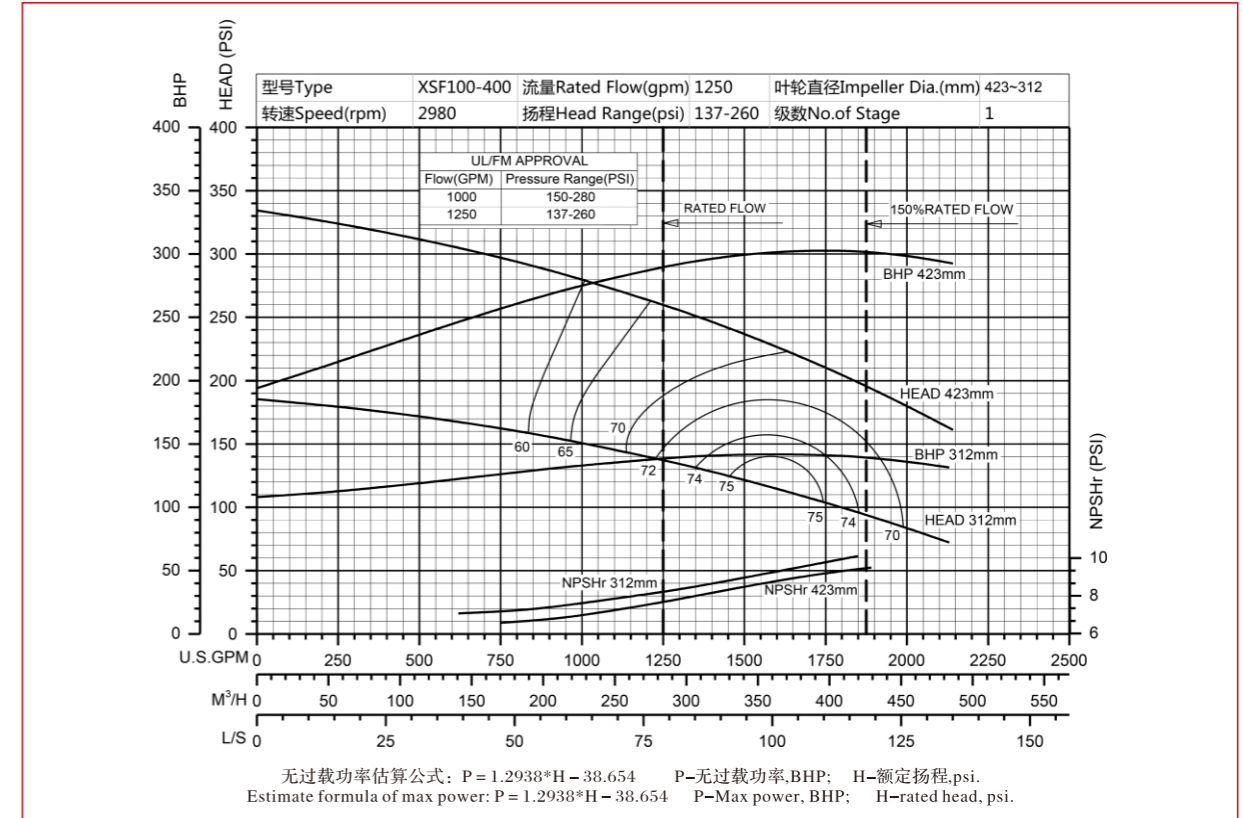
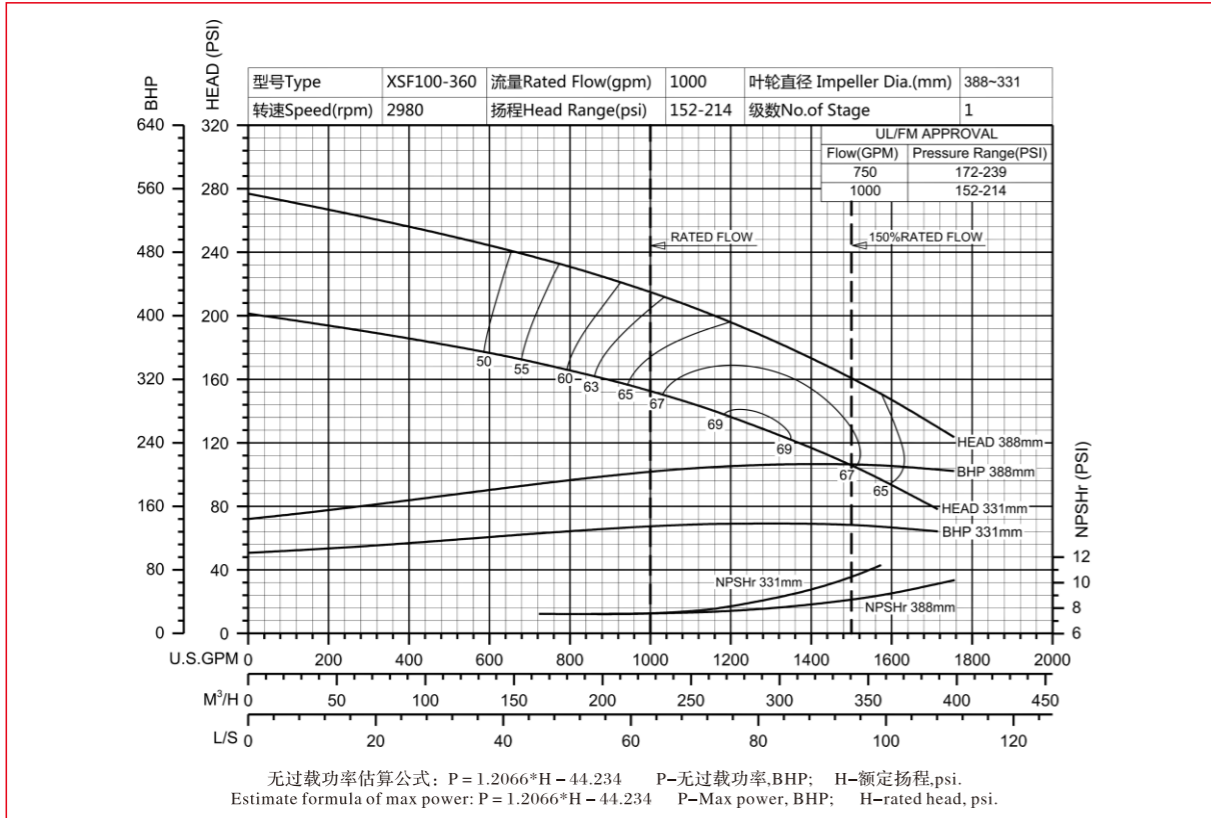
6. 性能参数 (Specification)

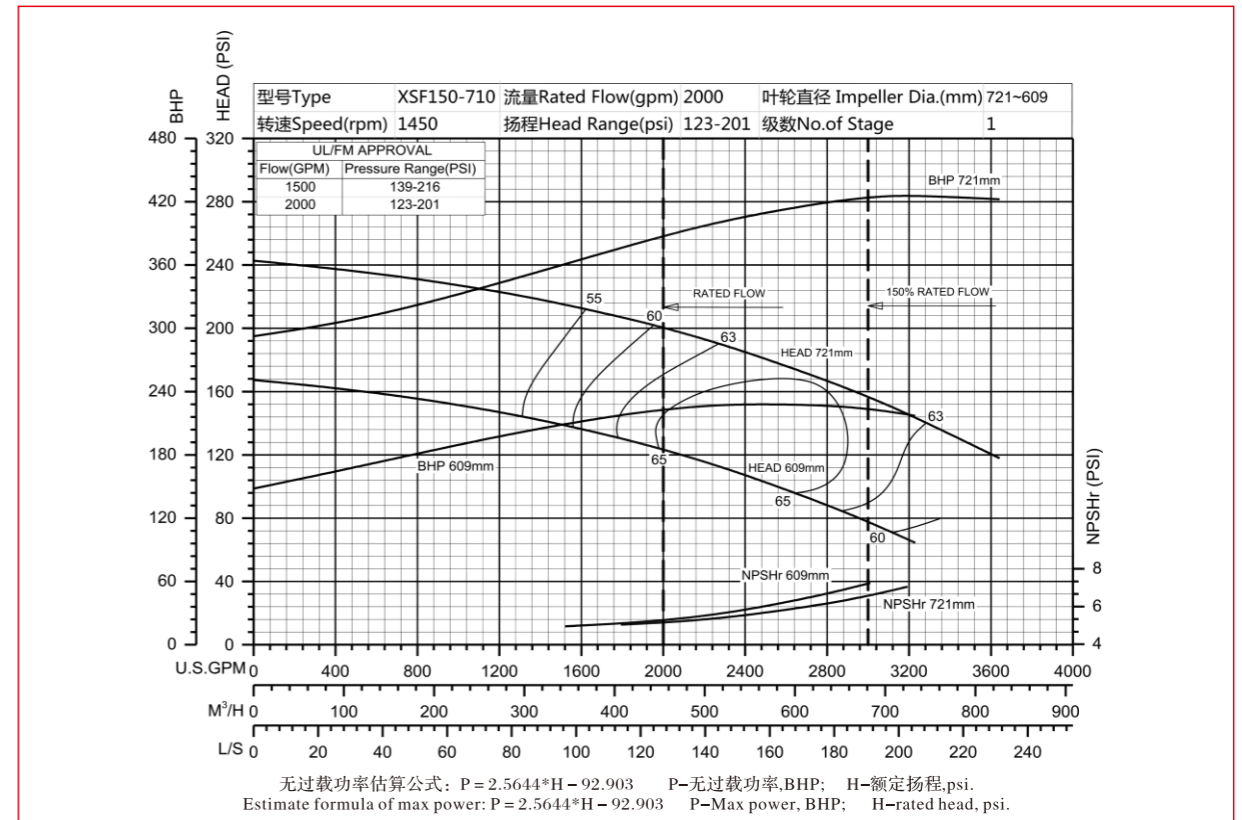
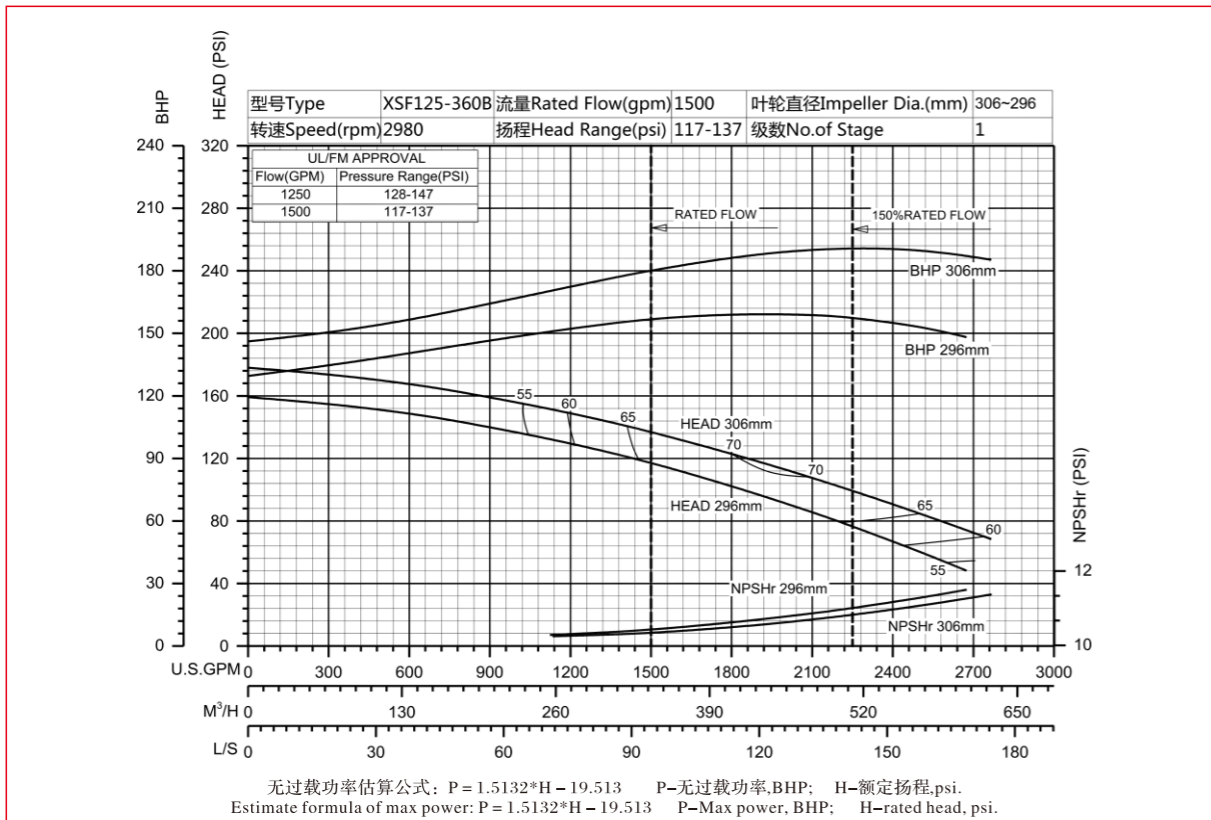
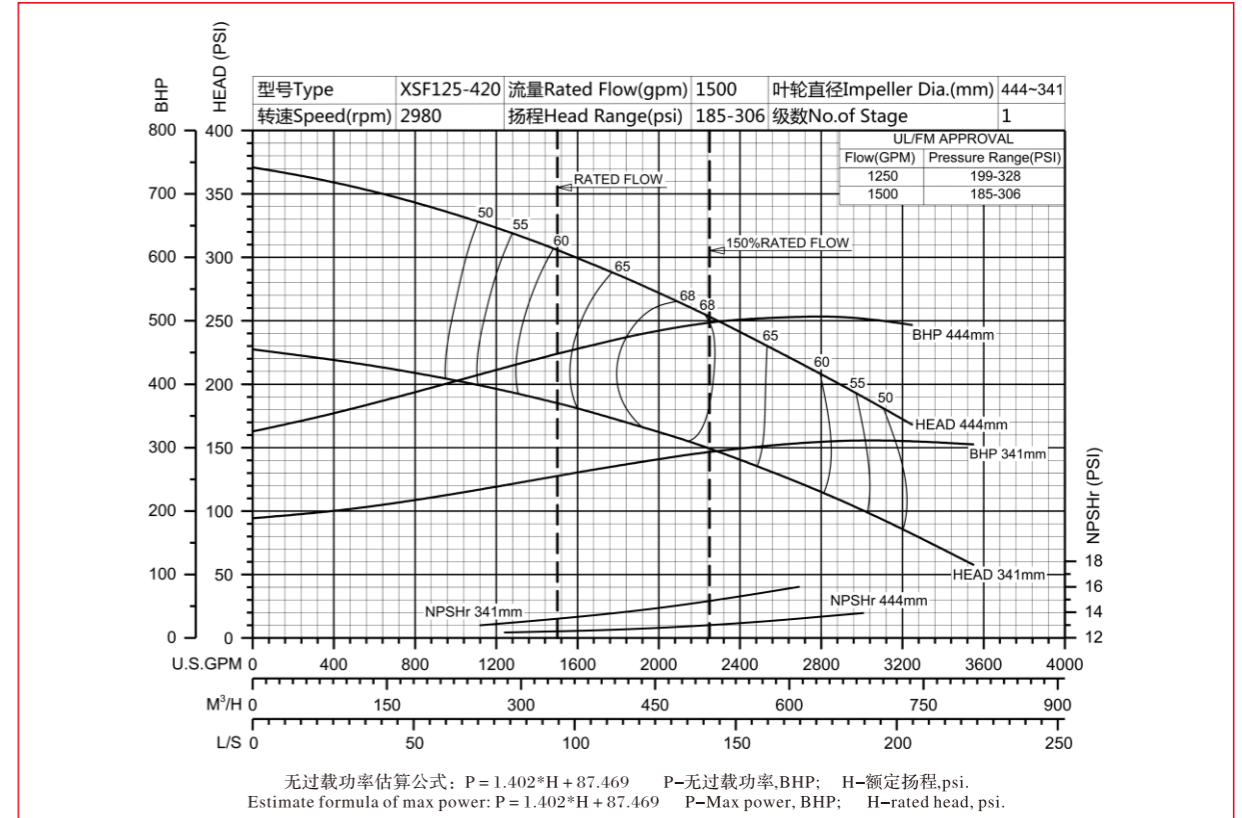
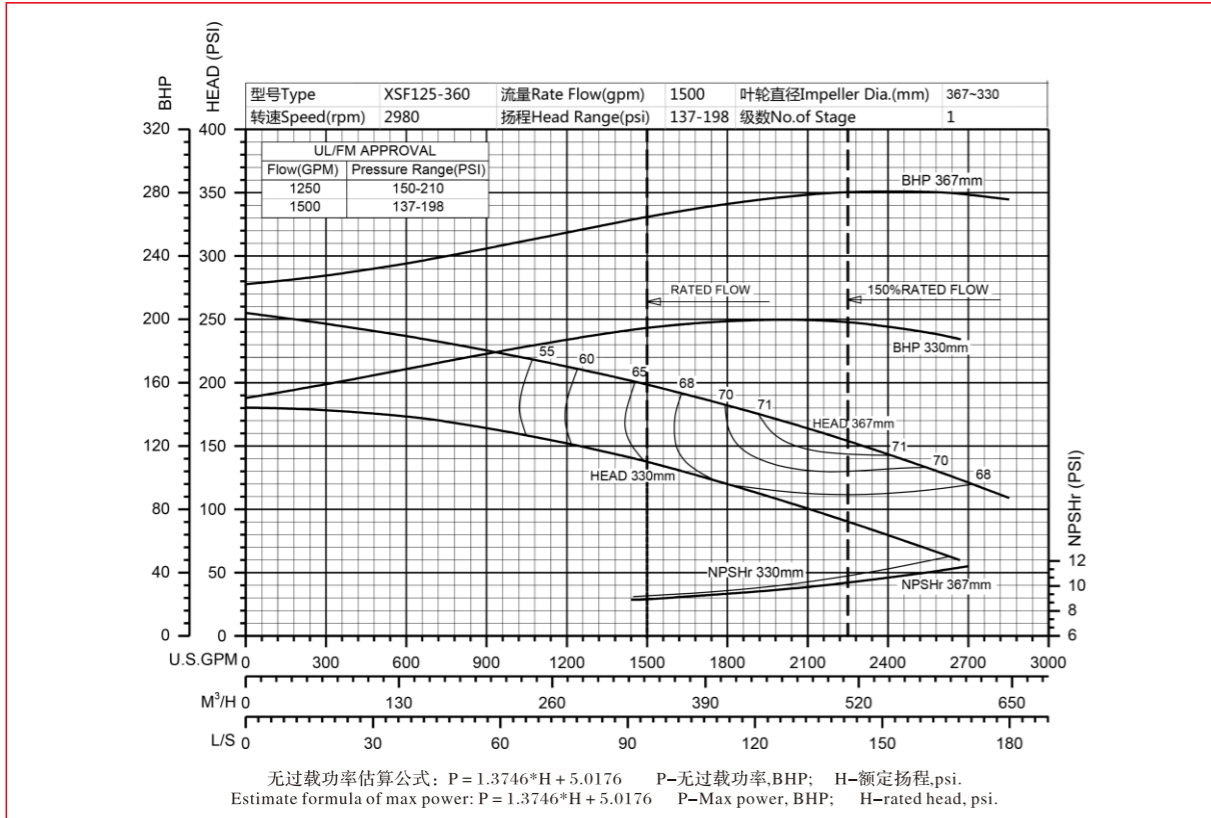
泵型号Type	转速 speed r/min	进/出口径 suction/discharge size		额定流量 Rated Flow		扬程范围 Head range		无过载功率 Max power		关死点扬程 Shut off head		1.5倍流量时扬程 Head at 150% rated flow		最大许用进口压力 Max allowable suction pressure		最大许用工作压力 Max allowable working pressure		重量 Weight kg
		mm	inch	GPM	m³/h	PSI	mH2o	BHP	KW	PSI	mH2o	PSI	mH2o	psi	kpa	psi	kpa	
XSF80-270	2980	125/80	5X3	500	114	96-159	68-112	105	78	168	118	150	105	70	483	238	1641	323
XSF80-340		150/80	6X3	500	114	139-193	68-136	111	83	236	166	151	106	70	483	306	2110	333
XSF80-340B		150/80	6X3	500	114	93-139	65-98	72	54	165	116	114	80	70	483	235	1620	330
XSF80-360		150/80	6X3	500	114	190-237	134-167	136	101	261	184	201	141	70	483	331	2282	252
XSF100-300		150/100	6X4	750	170	128-239	90-168	288	215	241	169	234	165	70	483	311	2144	372
XSF100-310		150/100	6X4	1000	227	120-236	84-166	288	215	240	169	221	155	70	483	310	2137	375
XSF100-350		200/100	8X4	1000	227	148-186	104-131	190	142	236	166	147	103	70	483	306	2110	365
XSF100-350B		200/100	8X4	1000	227	112-148	79-104	137	102	188	132	116	82	70	483	258	1779	360
XSF100-360		200/100	8X4	1000	227	152-214	107-150	214	160	277	195	161	113	70	483	347	2393	374
XSF100-440		200/100	8X4	1000	227	219-309	154-217	331	247	380	267	247	174	70	483	450	3103	453
XSF100-400		200/100	8X4	1250	284	137-260	96-183	303	226	335	236	195	137	70	483	405	2792	415
XSF125-290		200/125	8X5	1500	341	126-193	89-136	318	237	212	149	170	120	70	483	282	1944	455
XSF125-360		250/125	10X5	1500	341	137-198	96-139	281	210	255	179	154	108	70	483	325	2241	389
XSF125-360B		250/125	10X5	1500	341	117-137	82-96	190	142	178	125	99	70	70	483	248	1710	385
XSF125-420	250/125	10X5	1500	341	185-306	130-215	508	379	371	261	253	178	70	483	441	3041	635	
XSF150-710	1450	200/150	8X6	2000	454	123-201	87-141	426	318	243	171	157	110	70	483	313	2158	946
XSF150-710B		250/150	10X6	2000	454	100-139	70-98	283	211	170	120	110	77	70	483	240	1655	923
XSF200-730		250/200	10X8	2500	568	91-201	64-141	546	407	235	165	169	119	70	483	305	2103	1025
XSF200-750		250/200	10X8	3000	681	88-193	62-136	594	443	230	162	156	110	70	483	300	2069	1250

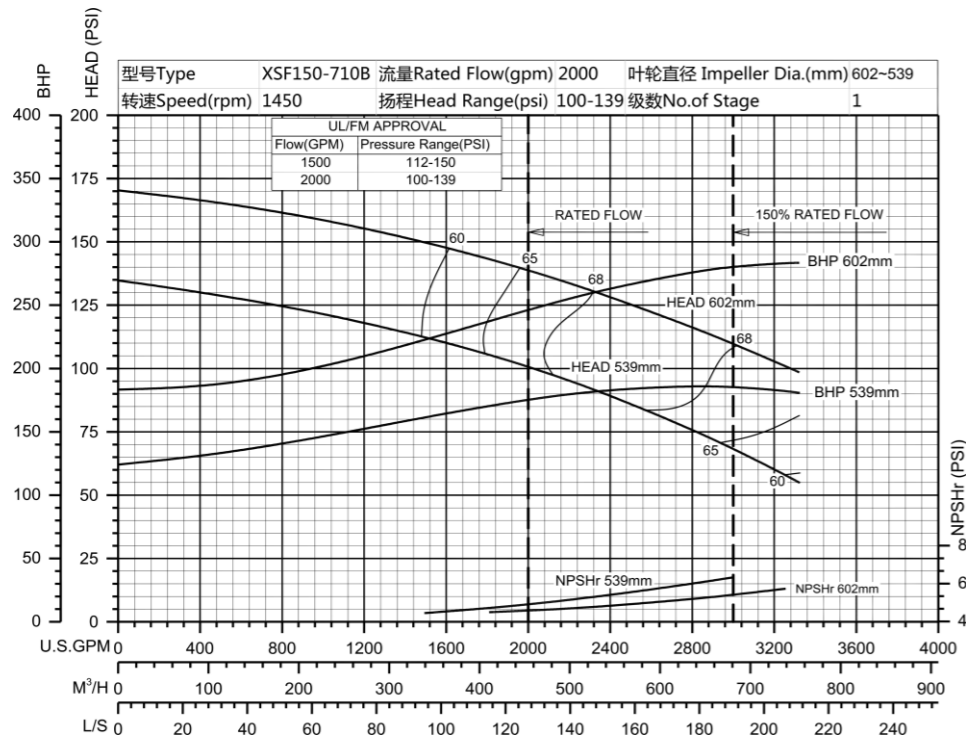
7.性能曲线 (Performance curve)



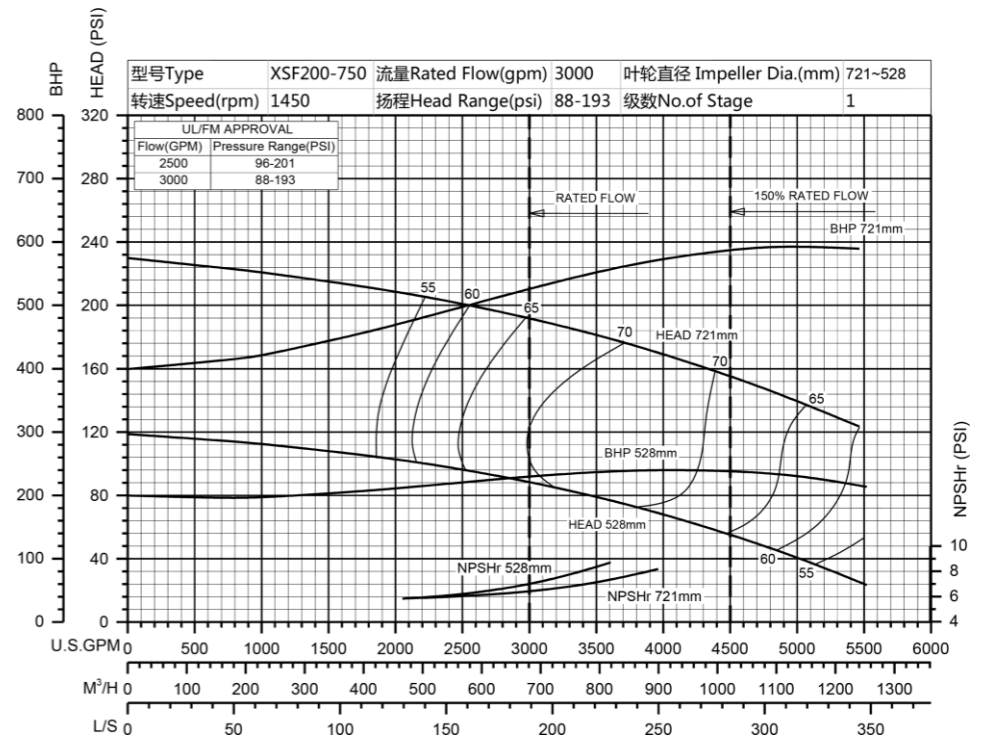




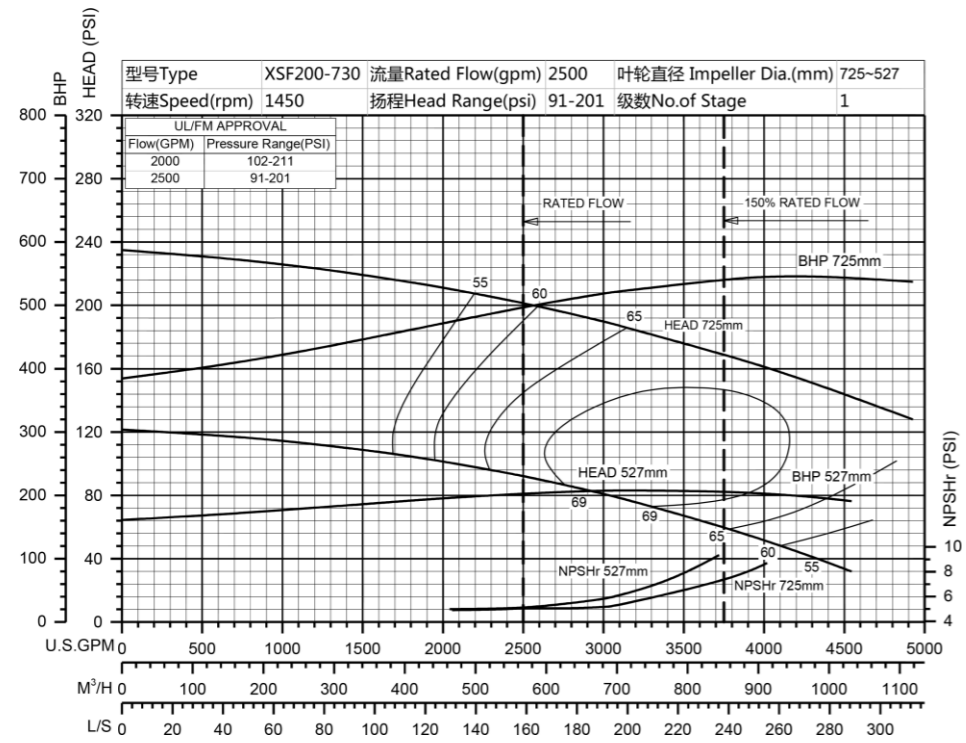




无过载功率估算公式: $P = 2.4398 * H - 58.703$ P-无过载功率, BHP; H-额定扬程, psi.
Estimate formula of max power: $P = 2.4398 * H - 58.703$ P-Max power, BHP; H-rated head, psi.

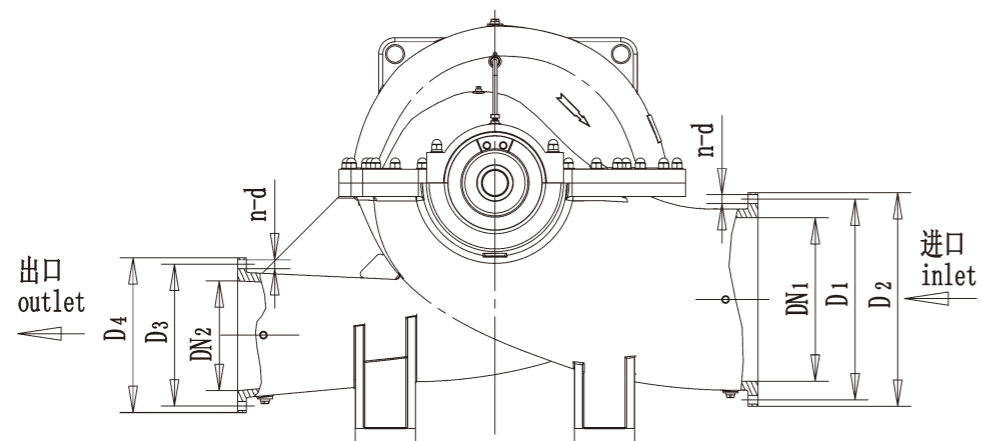


无过载功率估算公式: $P = 3.3165 * H - 59.321$ P-无过载功率, BHP; H-额定扬程, psi.
Estimate formula of max power: $P = 3.3165 * H - 59.321$ P-Max power, BHP; H-rated head, psi.



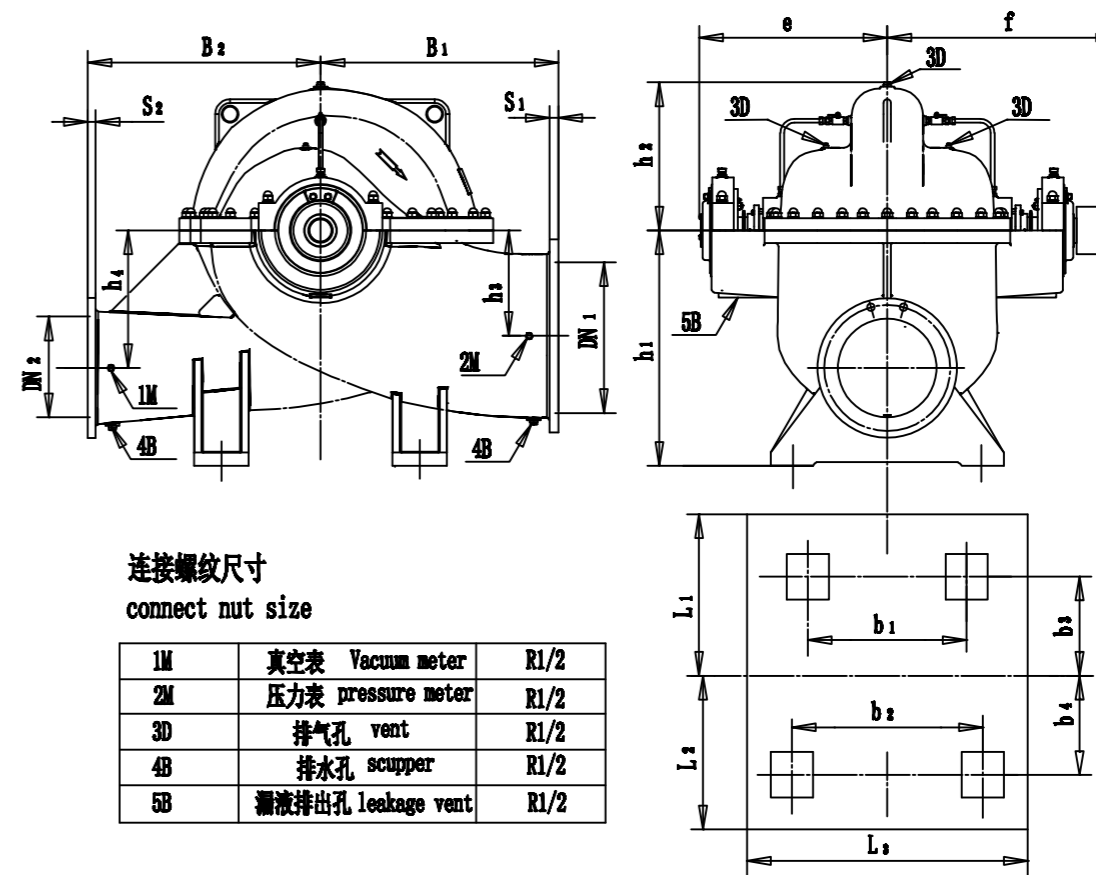
无过载功率估算公式: $P = 3.0528 * H - 77.263$ P-无过载功率, BHP; H-额定扬程, psi.
Estimate formula of max power: $P = 3.0528 * H - 77.263$ P-Max power, BHP; H-rated head, psi.

8. 连接法兰尺寸 (Size of connect flange)



泵型号	进口口径	进口法兰尺寸			出口口径	出口法兰尺寸		
	DN ₁	D ₁	D ₂	n-d	DN ₂	D ₃	D ₄	n-d
XSF80-270	125	210	250	8-Φ19	80	160	200	8-Φ19
XSF80-340	150	240	285	8-Φ22	80	160	200	8-Φ18
XSF80-340B	150	240	285	8-Φ22	80	160	200	8-Φ18
XSF80-360	150	240	285	8-Φ23	80	168	210	8-Φ22
XSF100-300	150	240	285	8-Φ23	100	180	220	8-Φ19
XSF100-310	150	240	285	8-Φ23	100	180	220	8-Φ19
XSF100-350	200	320	375	12-Φ31	100	190	235	8-Φ23
XSF100-350B	200	320	375	12-Φ31	100	190	235	8-Φ23
XSF100-360	200	320	375	12-Φ31	100	190	235	8-Φ23
XSF100-400	200	295	340	12-Φ23	100	200	255	8-Φ22
XSF100-440	200	330	380	12-Φ26	100	200	255	8-Φ22
XSF125-290	200	295	340	12-Φ23	125	210	250	8-Φ19
XSF125-360	250	355	405	12-Φ26	125	220	270	8-Φ26
XSF125-360B	250	355	405	12-Φ26	125	220	270	8-Φ26
XSF125-420	250	387.5	445	16-Φ29.5	125	235	280	8-Φ22
XSF150-710	250	387	445	16-Φ28	150	270	320	12-Φ23
XSF150-710B	250	387	445	16-Φ28	150	270	320	12-Φ23
XSF200-730	250	387	445	16-Φ28	200	330	380	12-Φ28
XSF200-750	250	387	445	16-Φ28	200	330	380	12-Φ28

9. 主要外形尺寸 (Outline dimension)



泵型号	法兰尺寸				泵尺寸															
	DN ₁	DN ₂	S ₁	S ₂	B ₁	B ₂	e	f	h ₁	h ₂	h ₃	h ₄	L ₁	L ₂	L ₃	b ₁	b ₂	b ₃	b ₄	
XSF80-270	125	80	35	29.0	300	300	336	445	315	285	140	140	205	205	320	270	270	170	170	
XSF80-340	150	80	21	23	366	340	373	469	330	322	180	184	220	220	350	270	270	180	180	
XSF80-340B	150	80	21	23	366	340	373	469	330	322	180	184	220	220	350	270	270	180	180	
XSF80-360	150	80	26	28.5	370	340	366	468	332.5	310	180	180	220	240	350	270	270	180	200	
XSF100-300	150	100	37	32	330	330	336	445	355	405	170	170	235	235	320	270	270	200	200	
XSF100-310	150	100	37	32	330	330	336	445	355	405	170	170	235	235	320	270	270	200	200	
XSF100-360	200	100	40	28	415	360	403	553.5	387.5	335	190	190	220	260	400	300	300	180	220	
XSF100-350	200	100	36	26	411	356	403	554	388	345	180	185	220	260	400	300	300	180	220	
XSF100-350B	200	100	36	26	411	356	403	554	388	345	180	185	220	260	400	300	300	180	220	
XSF100-400	200	100	30	32	435	380	403	553.5	380	352	200	210	250	290	400	320	320	200	240	
XSF100-440	200	100	41	32	450	405	403	553.5	425	362	225	225	290	290	400	320	320	240	240	
XSF125-290	200	125	41	35	370	370	336	517.5	400	430	200	200	265	265	390	340	340	225	225	
XSF125-360	250	125	26	25	447	354	456	606.5	422.5	342.5	210	210	230	325	460	400	400	180	275	
XSF125-360B	250	125	26	25	447	354	456	606.5	422.5	342.5	210	210	230	325	460	400	400	180	275	
XSF125-420	250	125	48	35	500	427	452	588	477.5	400	250	230	280	340	470	390	390	230	290	
XSF150-710	250	150	48	36.5	644	587	505	697	540	540	300	355	460	460	600	320	510	410	410	
XSF150-710B	250	150	48	36.5	644	587	505	697	540	540	300	355	460	460	600	320	510	410	410	
XSF200-730	250	200	48	41	682	608.5	520	712	600	555	300	395	490	490	600	500	500	440	440	
XSF200-750	250	200	48	41	709	621	535	727	620	580	300	400	490	560	600	520	520	430	500	