

## TL(R) 系列脱硫泵

### TL(R) Series FGD Pump



- **公司简介 Enterprise Profile**

石家庄翔浩机械有限公司，是以矿山、电力用渣浆泵、脱硫泵、疏浚泵、清水泵为主的工业水泵专业生产企业，集研发、设计、制造、营销、服务为一体，具有严格的质量保证及科学完善的服务体系。

公司技术力量雄厚，拥有资深的水泵设计、制造、应用工程师团队，立足持续为用户带来更大价值，不断提高服务水平与质量。我们不单单向用户提供产品，还可依据客户的工矿需求，采用系统一体化的设计方法，为客户提供渣浆输送的一整套解决方案，使得用户在环保、节能、运营持久、降低产品使用成本等方面取得了显著效果。

公司坚持“技术创新化、管理严格化、生产定制化、服务专业化”的经营理念，全力提升企业现代化管理水平，使企业实现了持续快速发展。

公司的主要产品为ZGB、ZJ、AH、HH、M型渣浆泵、WN型挖泥泵、TL型脱硫泵、G型砂砾泵、SP型液下泵、HDSN型双吸泵、WQ型潜污泵、IS型清水泵等，广泛应用于环境保护工程、

污水处理、城市工厂给排水、各种水利工程、冶金、矿山、电力、煤炭、疏浚、采砂、石油化工、建材、火电烟气脱硫等等诸多领域。国内市场占有率逐年递增，国际市场的占有份额不断提升，产品出口至东南亚、北美、欧洲、中亚、东亚等多个国家和地区。

长期以来，本公司坚持“诚信为本、客户至上”的原则，与众多厂家建立了长期合作关系，并赢得了广大客户的一致好评！

坚信凭借我们更优的产品，完善的服务，良好的信誉，必将赢得更多用户！

Shijiazhuang Soarho Machinery CO.,LTD, is a professional manufacture base of slurry pump, mine pump, FGD pump, dredge pump and clean water pump, combining scientific research, design, manufacture, marketing and service in one, with strict quality control system and science complete service system.

Having strong technical force, the company which has a senior pump design, manufacturing and application engineer team, continues to improves level and quality of service in order to bring greater value to the users. We not only provide products to users, but also provide a complete solution for slurry transportation for user to achieve a significant effect in environmental protection , energy saving , lasting trouble-free operation and cost reduction and so on, adopting a systematic and integrated design method and according to the working condition and the needing of user.

Adhering to the concept of 'technical innovation', 'strict management', 'customized production' and 'professional service', we strive to improve the modern management level and make the enterprises achieve sustained and rapid development.

The main products of the company are ZGB,ZJ,AH,HH,M slurry pumps ,WN dredge pumps , TL FGD pumps, G gravel pumps, SP sump pumps, HDSN double suction pumps. WQ submersible sewage pumps, IS clean water pumps and so on. They are widely used in many fields, such as environmental protection engineering, sewage treatment, municipal factory and water supply and drainage, various water conservancy projects, metallurgy, mine, electric power, coal, dredging, sand mining, petrochemical, building materials, thermal power flue gas desulfurization etc. The share of domestic market is increasing year by year, and the share of the international market is increasing. Products exported to Southeast Asia, North America, Europe, Central Asia, East Asia and many other countries and regions.

For a long time, adhering to the principle of "honesty and customer first", our company has established a long-term cooperative relationship with many manufacturers, and has won the praise of the customers.

Firmly believe that we will win more users by virtue of our better products, perfect service and good reputation.

## • 产品介绍 Product Introduction

TL(R)系列脱硫泵为卧式、悬臂离心泵，采用可更换的硬质合金内衬或橡胶内衬的双泵壳结构，具有良好的耐磨、耐腐蚀性，可靠性高。后拆式结构，在不拆卸进、出口管路的情况下，方便检查或更换叶轮与机械密封。具有易损件寿命长、维护方便、运行费用低、可靠性高等优点。

TL(R)系列脱硫泵主要用于火电厂烟气脱硫工程浆液循环泵。

TL(R) series desulfurization pump is cantilevered horizontal centrifugal and double casing structure pump. The lining adopts replaceable hard alloy or rubber, which has good wear resistance, corrosion resistance and high reliability. This series pump is equipped with compact X shaped bracket for significantly saving space. It is characterized by wide flow range, high efficiency.

TL(R) series desulfurization pump is mainly used in hydro FGD system as absorber circulating pump.

## • 产品特点 Product Feature

- 1、泵壳采用可更换的硬质合金内衬或橡胶内衬的双泵壳结构，具有良好的耐磨、耐腐蚀性，可靠性高。
- 2、采用后拆式结构，在不拆卸进、出口管路的情况下，方便检查或更换叶轮与机械密封。
- 3、叶轮采用新型的适用于FGD工艺的耐磨防腐材料，同时具有双相不锈钢的防腐性和高铬合金的耐磨性等优点。
- 4、泵端为双列圆锥滚子轴承，驱动端为圆柱滚子轴承，轴承为油润滑方式，这种轴承组件的结构型式改善了轴承工作条件，大大提高了轴承的寿命。
- 5、轴封采用专用于脱硫工艺的集装式机械密封，运行可靠。

1. The pump housing is made of replaceable hard alloy liner or rubber liner with double pump housing structure, which has good wear resistance, corrosion resistance and high reliability.
2. The structure of the pump is back disassembling type for easily maintenance, it is not necessary to dismantle the inlet or outlet pipeline when maintenance is needed.
3. The impeller are made from a new type of anti-abrasion and anti-corrosion material specially for FGD process, this type of material has advantages of anti-corrosion as duplex stainless steel and anti-abrasion of high chrome alloy.
4. Double-row tapered roller bearing is adopted at the pump end, cylindrical roller bearing is adopted at the drive end, and the bearings are lubricated by oil so that the condition the bearings works under is improved and the service life of the bearings is lengthened.
5. Cartridge mechanical seal which is specially adopted in desulfurization process is used to make its operation much stable.

- **性能范围 Range of Performance**

流量 Capacity      Q: 1500-14000m<sup>3</sup>/h  
 扬程 Head            H: 12-36m  
 吐出口直径 Discharge diameter: 350-1000mm

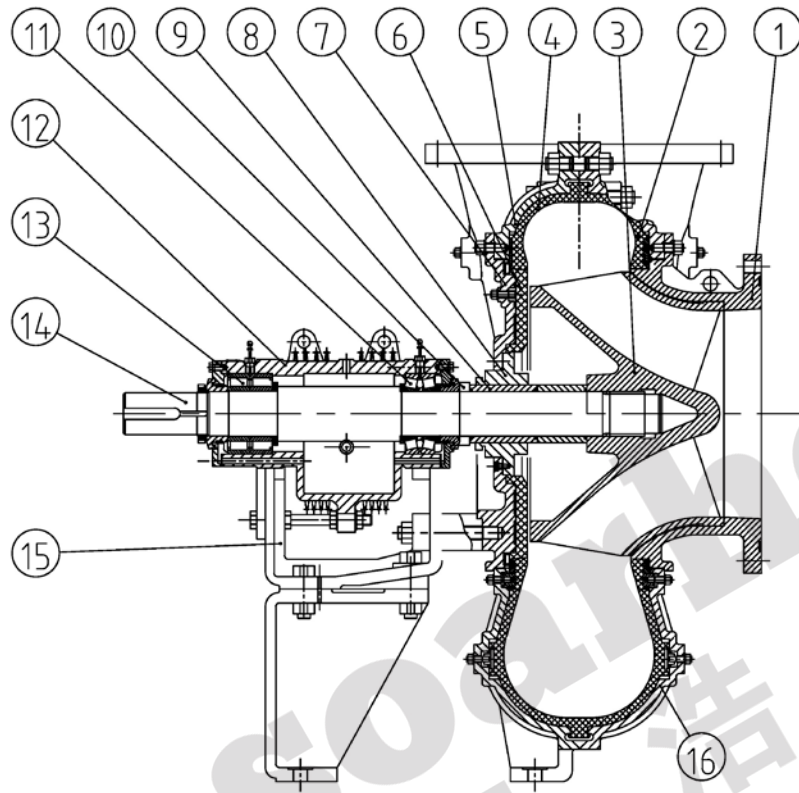
- **型号说明 Model Code**

600 X - TL (R)



• 结构图 Construction description

结构一 First type

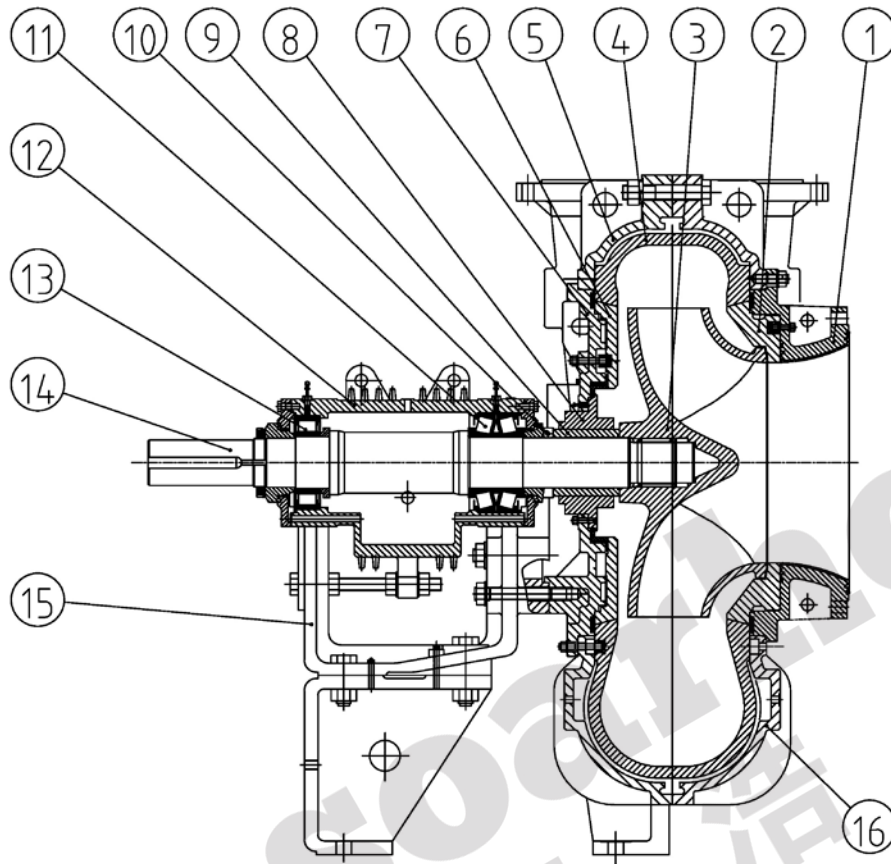


序号 NO.	名称 Name	材料 Material	序号 NO.	名称 Name	材料 Material
1	吸入盖 Suction cover	A49	9	叶轮拆卸环 Impeller release collar	不锈钢 Stainless steel
2	前护套 Cover plate liner	天然橡胶+A3 Natural rubber+A3	10	轴套 Shaft sleeve	316
3	叶轮 Impeller	A49	11	双列圆锥滚子轴承 Double-row tapered roller bearing	
4	后护套 Frame plate liner	天然橡胶+A3 Natural rubber+A3	12	轴承体 Bearing house	QT500-7
5	泵体 Frame plate	QT500-7	13	圆柱滚子轴承 cylindrical roller bearing	
6	后护板 Rear liner	天然橡胶+A3 Natural rubber+A3	14	轴 Shaft	45
7	接合板 Adaptor plate	QT500-7	15	托架 Bracket	QT500-7
8	机械密封 Mechanical seal	硬质合金 Hard alloy	16	泵盖 Cover plate	QT500-7

注：A49 材质是国际上通用于 FGD 工程的双相不锈钢耐磨耐蚀合金。

Note: A49 material is a kind of Duplex phase anti-abrasive and anti-corrosive alloy, it widely used for FGD projects in the word.

## 结构二



序号 NO.	名称 Name	材料 Material	序号 NO.	名称 Name	材料 Material
1	吸入盖 Suction cover	QT500-7+天然橡胶 QT500-7+Natural rubber	9	叶轮拆卸环 Impeller release collar	不锈钢 Stainless steel
2	前护板 Throat bushing	A49	10	轴套 Shaft sleeve	316
3	叶轮 Impeller	A49	11	双列圆锥滚子轴承 Double-row tapered roller bearing	
4	护套 Volute liner	A49	12	轴承体 Bearing house	QT500-7
5	泵体 Frame plate	QT500-7	13	圆柱滚子轴承 cylindrical roller bearing	
6	后护板 Rear liner	A49	14	轴 Shaft	45
7	接合板 Adaptor plate	QT500-7	15	托架 Bracket	QT500-7
8	机械密封 Mechanical seal	硬质合金 Hard alloy	16	泵盖 Cover plate	QT500-7

注：A49 材质是国际上通用于 FGD 工程的双相耐磨耐蚀合金。

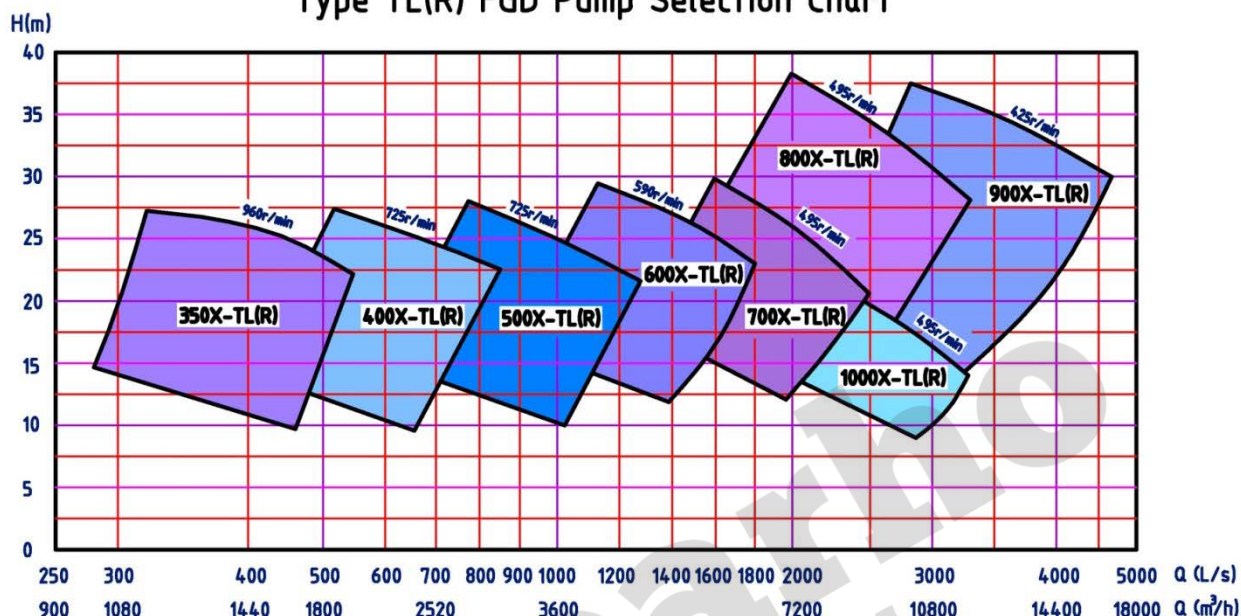
Note: A49 material is a kind of Duplex phase anti-abrasive and anti-corrosive alloy, it widely used for FGD projects in the word.



• 型谱 Selection Chart

TL(R) 型脱硫泵型谱

Type TL(R) FGD Pump Selection Chart



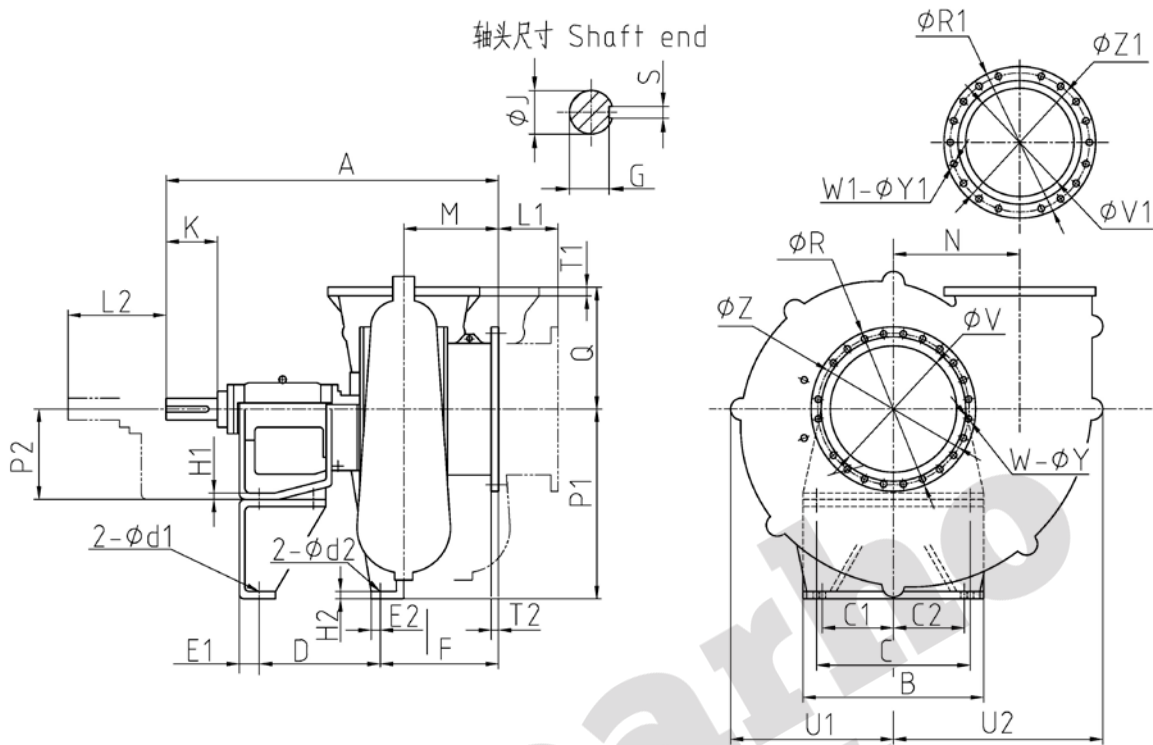
注: 清水性能, 仅供初步选型。

NOTE: Apprximate performance for clear water, to be used for primary selection only.

• 性能参数表 Performance List

型号 Type	允许配带最大功率 Allowable mating MAX. power (KW)	清水性能 Clear water performance						排出口直径/吸入口直径 Discharge diameter /Suction diameter (mm)	泵重 Pump weight (kg)
		流量 Capacity		扬程 Head (m)	转速 Speed (r/min)	效率 Eff. (%)	汽蚀余量 NPSHr (m)		
		(m <sup>3</sup> /h)	(l/s)						
350TL(R)	300	1600	444	25	960	82	4.5	350/400	1858
400TL(R)	560	2500	694	25	725	83	5.0	400/450	2500
500TL(R)	710	3750	1040	25	725	85	5.0	500/500	4000
600TL(R)	710	6300	1750	25.5	620	88	5.5	600/700	4575
700TL(R)	1600	6840	1900	26	485	87	6.0	700/800	7280
800TL(R)	1600	9360	2600	31	485	90	7.0	800/900	8300
900TL(R)	1900	15000	4167	30	485	90	8.5	900/1000	10720
1000TL	1600	10440	2900	15	485	89	7.0	1000/1200	10800

• 安装尺寸图 Outline Drawing



型号 Type	安装尺寸 Installation diameter													轴尺寸 Shaft diameter					
	A	B**	C1	C2	C	D	E1	E2	F*	H1	H2	M*	N	G	J	K	L1	L2	S
350X-TL(R)	1450	660/1040	390	490	560	589	90	30	340	25	30	340	430	76.00 75.80	85.03 85.01	218	160	360	22
500X-TL(R)	1773	1000/960	425	425	850	652	110	50	595	35	40	421	580	109.03 108.81	120.03 120.01	210	150	400	32
600X-TL(R)	1855	960	425	425	850	670	110	50	667	35	40	525	700	109.03 108.81	120.03 120.01	284	330	610	32
700X-TL(R)	2315	1300	550	730	1100	895	130	75	768	40	45	583	780	138.00 137.70	150.03 150.01	355	375	720	36
800X-TL(R)	2460	1300	550	550	1100	885	135	75	933	40	45	712	930	138.00 137.70	150.03 150.01	355	550	800	36
900X-TL(R)	2516	1350	575	575	1100	900	130	75	960	40	45	760	1075	185.00 184.70	200.04 200.01	365	550	900	45
1000X-TL(R)	2870	1330/1975	888	888	1100	860	130	130	1366	40	80	1016	940	138.00 137.70	150.03 150.01	355		870	36

型号 Type	安装尺寸 Installation diameter							吸入口法兰 Suction flange					吐出口法兰 Discharge flange					地脚 Anchor		泵重 Weight (kg)
	P1	P2	Q*	T1*	T2*	U1	U2	R	V	W	Y	Z	R1	V1	W1	Y1	Z1	d1	d2	
350X-TL(R)	700	400	505	50	38	559	728	580	400	16	30	525	580	350	14	30	525	28	28	1858
500X-TL(R)	950	500	665	60	44	735	946	715	500	20	33	650	715	500	18	33	650	42	40	4000
600X-TL(R)	1050	500	775	48	40	901	1155	910	600	24	30	840	840	600	18	36	770	39	39	4575
700X-TL(R)	1290	700	930	68	60	1080	1350	1025	768	24	40	950	1025	700	22	40	950	51	51	7280
800X-TL(R)	1400	700	985	62	62	1141	1493	1125	900	28	40	1050	1125	800	26	40	1050	51	51	8300
900X-TL(R)	1620	700	1050	70	70	1410	1765	1375	1000	28	51	1250	1330	900	26	39	1210	51	51	10720
1000X-TL(R)	1400	700	1000	50	56	1153	1586	1455	1200	32	39	1330	1230	1000	28	36	1160	51	42	10800

注：“\*”尺寸包括放入橡胶密封垫的尺寸；“\*\*”：托架/泵体

NOTE: “\*”Dimension including rubber gasket; “\*\*”:Support/Frame.