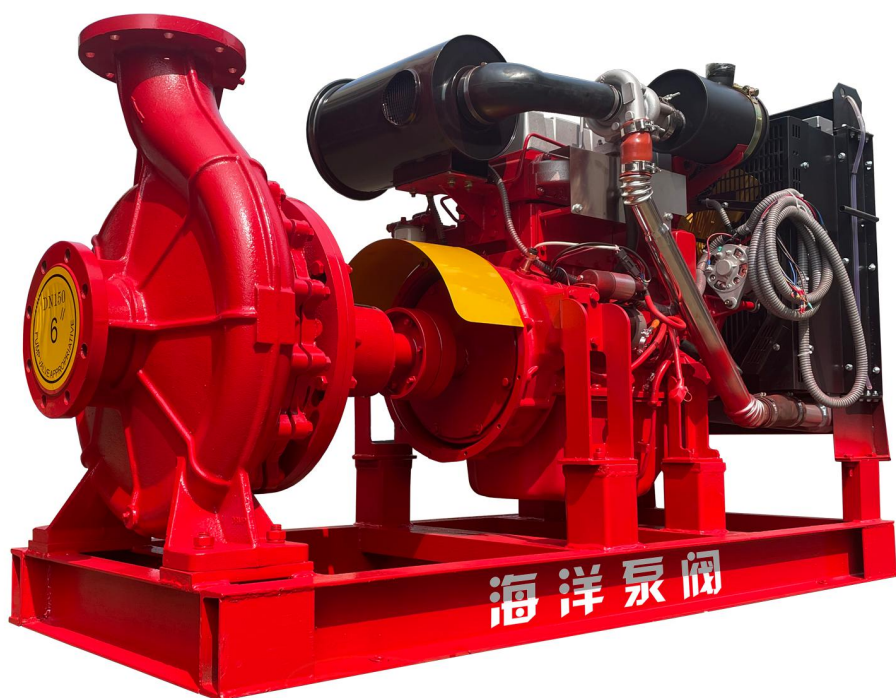




海洋水泵



消防泵系列
Fire Pump Series

XBC-ISW系列柴油机消防泵组
XBC-ISW TYPE DIESEL FIER PUMP

SEAPUMP

上海海洋泵阀制造有限公司
SHANGHAI SEA PUMP & VALVE MFG CO.,LTD



企业简介+ ABOUT US

在离心泵制造领域,上海海洋泵阀制造有限公司是中国大型的制造商之一,是专业生产水泵、生活消防成套智能控制给水设备及水泵智能电气控制设备的大型企业,下设十六大分公司及二十几个售后服务中心,遍布全国各大中城市,为海洋创造快速的售后服务打下坚实的基础。

海洋泵阀始终致力于科技和管理的创新,开发出适用于工矿企业、城市供水、城市污水处理、农田排灌、石油化工、高层建筑供水消防、空调供暖等各行各业的用泵。产品发往东南亚和欧洲等地区,以可靠的性能和合理的价格受到国内外用户的青睐。

海洋泵阀现有员工800多名,其中工程技术人员50余名,占地面积80余亩,固定资产2亿元,拥有现代化的微机控制的测试设备,保证了每一台产品合格出厂。年生产各类水泵90000台,“上海海洋泵阀制造有限公司”已成为以水泵生产为龙头,集科、工、贸于一体的多门类,管理现代化的大型企业。

海洋泵阀目前能生产30多个系列,上万种规格,适用于工矿企业、城市供水、城市污水处理、石油化工、农业排灌等行业的用泵。主导产品DL、LG、GDL、CDL、TSPA系列高层建筑给水泵被国家建设部批准为工程建设推荐产品。

海洋泵阀秉承“产品决定前途、质量决定命运、效益决定兴衰、素质决定成败”的经营理念,不断开拓进取进取,铸就客户百分之百满意工程:ISO9001-2008质量体系品质保证,以及快速反应售后服务和定期咨询双重服务保障。

海洋泵阀以人为本,以诚待人,以国际质量管理体系为管理标准不断拓展相关领域--承揽环保工程、提供成套生活供水和消防设施,制造出优质、高效、节能的国际产品,服务于人类建设美好家园!

In the centrifugal pump manufacturing field, Shanghai Sea Pump & Valve Manufacturing Co.,Ltd. is one of the biggest manufacturers in China and a big joint-stock enterprise specializing in producing water pumps, domestic and fire intelligent control water supply systems and intelligent electric control devices for water pumps. It has 16 branches and over 20 after service centers throughout middle and big cities of China, laying a solid foundation for Sea's fast after service.

Sea pump & valve has all along been committed to innovation in technology and management to develop pumps applicable for all industries, like industrial and mining enterprises, urban water supply, urban sewage treatment, farmland irrigation and drainage, petrochemical industry, water supply and fire control for high-rise buildings, air conditioning and heating. Its products are exported to Southeast Asia, Europe and so on, which have won favor of both domestic and foreign users on the strength of their reliable performance and fair price.

Sea pump & valve now has more than 800 employees, including more than 50 engineers and technicians. It covers a floor area of 80-plus mu and has fixed assets exceeding RMB200 million. Boasting modern testing equipment with microcomputer control, it guarantees acceptability of every product to be delivered. With an annual production capacity of 90000 sets of water pumps of different kinds, Shanghai Sea Pump & Valve Manufacturing Co., Ltd. has become a big and diversified enterprise with modern management, which is led by production of water pumps and integrates scientific research, industry and trade.

At present Sea Pump & Valve is able to produce more than 30 pump lines with more than tens of thousands of specifications, applicable for such industries as industrial and mining enterprises, urban water supply, urban sewage treatment, petrochemical industry and agricultural irrigation and drainage. Its main products, DL, LG, GDL, CDL and TSPA high-rise water supply pump lines, have been approved as Recommended Product for Engineering Construction by the Ministry of Construction.

Upholding this operational concept: products tell the prospect, quality tells the fate, benefits tell ups or downs while accomplishments tell success or failure. Sea Pump & Valve has been opening up and advancing continually to make project satisfying customers 100%: quality assurance by ISO9001-2008 plus double service guarantee: quick-response after service and periodical consultations.

Being people-friendly and treating others sincerely, Sea Pump & Valve has been extending towards relevant fields with the management standard of international Quality Management System—undertaking environmental protection projects, providing domestic water supply and fire fighting systems, manufacturing high-quality, high-efficiency and energy-saving international products and serving the mankind to build a beautiful home!



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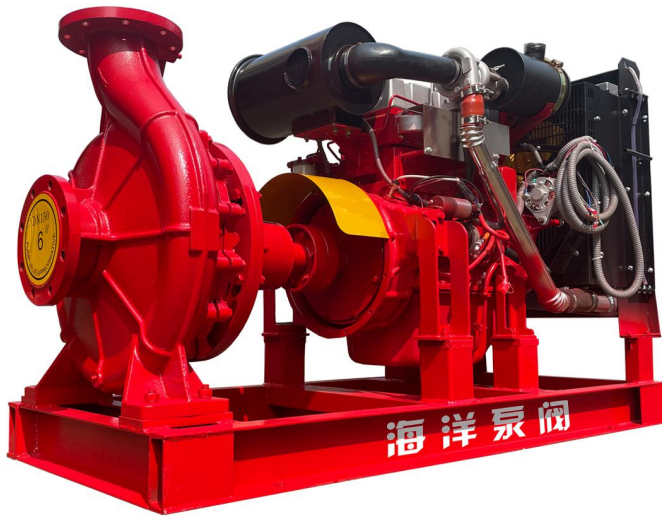
海洋泵阀

SEA PUMP & VALVE

XBC-ISW柴油机消防泵组

XBC-ISW DIESEL ENGINE FIRE PUMP SET

消防泵系列 Fire Pump Series



型号意义 Type Designation

XB C 5.0 / 300G - ISW

ISW单级单级离心泵
ISW single stage centrifugal pump

SOW单级双级离心泵
Sow single stage two stage centrifugal pump

流量 300 (L/S)
Flow 300 (L/S)

出口压力 0.5 (Mpa)
Outlet pressure 0.5 (Mpa)

柴油机驱动
Diesel engine drive

消防泵
Fire pump

概述

本企业生产的XBC系列柴油机消防泵组严格按照国家标准GB6245-2006《消防泵性能要求和试验方法》及美国消防协会标准NEPA20《离心消防泵的安装》等标准研究开发的，同时根据市场需求和使用特点而研制的当建筑物发生火灾，供电系统有故障，电动消防泵不能投入工作时，柴油机应急消防泵会自动投入运转确保消防灭火工作正常进行，保障生命财产安全。

XBC系列柴油机消防泵组所配用的消防泵可用我公司生产的ISW系列单级单吸式、SOW系列新型单级双吸式、TSWA系列分段多级式。该系列设备配用的柴油机均采用国产或进口优质产品，具有启动特性好、过载能力强、结构紧凑、维修方便、使用简单、自动化程度高等特点，是一种先进、性能可靠的消防设备。

性能范围

流量范围:10-800L/S

压力范围:0.2-2.2Mpa

转速:1500r/min 1800r/min 2400r/min

环境大气压力:>90KPa

环境温度:-15℃-55℃

空气相对湿度≤80%

在非正常的条件下柴油机的功率会达不到额定功率，为保证正常工作，应选用较大功率的柴油机与水泵配套。

SUMMARY

Production XBC series diesel engine pump group research and development in strict accordance with the standard GB62456-2006 "fire pump performance requirements and experimental method" and the NEPA20 "centrifugal fire pump installation", at the same time according to the market demand and application features develop the. When building fires, power supply system is faulty, electric fire pump could not work, diesel engine emergency fire pump will be put into operation to ensure fire extinguishing work, and guarantee the security of lives and property.

The fire pump of XBC series diesel engine fire pump groups could use the production of our company IS series single grade single suction, SOS series new single stage double suction and subsection TSWA series multistage type. The engine all adopt high quality product domestic or imported and has good startup property, strong overload ability, compact structure, convenient maintenance, simple to use, higher automation degree, etc. It is also a kind of advanced, reliable in performance of the fire fighting equipment.

PERFORMANCE

Flow range: 10-800L/S

Pressure range: 0.2-2.2 MPa

Speed: 1500r/min 1800r/min 2400r/min

Environment atmospheric pressure: >90KPa

Environmental temperature: -15℃~55℃ RH<80%

In an unusual condition, diesel engine power will not reach power rating. To guarantee the normal work, you should choose higher power of diesel engine and pump matched.



性能特点

- 一、具有完善的三种起动功能：
 - 1、手动起动功能：通过转换开关可完成手动、自动联锁并可实现手动起动功能；
 - 2、自动起动功能：允许起动三次、如三次起动不成功则发出“起动失败报警”并自动退出起动状态：一次起动成功后起动到额定负载时间为5-10-15S(按机组容量大小各异)；
 - 3、紧急手动直接起动功能：当自控装置故障时可实现紧急手动直接起动功能。
- 二、自动运行：当水泵机组接到有效消防信号后，如果电动机消防泵供电系统断电或缺相或电泵故障不能正常起动时，柴油机消防泵组会自动起动运行，一旦供电系统恢复正常或电动泵可正常运行时，可自动切换到电动泵。
- 三、自动停机：当消防信号消失后，柴油机消防泵会自延迟停机。
- 四、蓄电池自充电稳压功能：蓄电池可利用市电供柴油机充电电机自动充电，保证机组的顺利起动。
- 五、具有完善的指示系统：准备起动、手动起动、自动起动、机组运行、机组停机、蓄电池充电、超速、柴油机润滑油滑低(或缺少)、柴油机冷却水水温过低预热、定时巡检。
- 六、具有完善的报警或保护系统：三次起动失败报警或保护、超速报警或保护、润滑油油压过低报警或保护、增压器油压过低报警或保护、冷却水水温过高报警或保护、润滑油油温过低报警或保护、自动充电装置故障报警、蓄电池电压过低报警、蓄电池电压过高报警、机油油位低报警或保护。
- 七、具有完善的显示系统：柴油机润滑油压力、柴油机转速、蓄电池充电电流、蓄电池充电电压。
- 八、直联式：柴油机与水泵直接联轴器联接，采用公共槽钢底座、结构紧凑、整体性能好，故障少、振动小，现场施工安装方便。
- 九、设备压力、流量范围广：机组选用ISW系列单级单吸式、SOW系列新型单级双吸式、TSWA系列分段多级式水泵，可满足不同场合的消防需求。
- 十、流量、压力可调整：柴油机水泵装有机械调速器或电子调速器，当水泵的流量、扬程与实际不一致时，可调节改变柴油机的转速。
- 十一、具有水加热预加热装置：机组装有AC220V冷却水预热装置，可保证机组在低于5℃环境下正常工作。
- 十二、双蓄电池回路：当一组蓄电池失效时可自动投入另一组蓄电池。
- 十三、免维修蓄电池：不需频繁添加补充液。
- 十四、自动定时巡检测试：消防系统通常处于备用状态，该机组设备能自动完成对机组的备用状态进行测试并及时报警。

注：以上功能可根据用户需要选用。也可根据用户特殊需要设计定做。

PERFORMANCE CHARACTERISTICS

One, With perfect three stages functions:

- 1, Manual starting function: through the conversion switch can accomplish the manual, automatic interlocking and can realize manual starting function;
- 2, Automatic functions: allow starting three times, such as three times starting unsuccessful will emit "start-up failure alarm" and exit start-up status automatically. A start-up success after starting to rated load time for 5-10-15 S (according to the unit capacity);
- 3, Emergency manual direct starting function when control equipment failure can implement emergency manual direct starting function.

Two, Automatic operation: when the pump unit received effective fire signal, if the power supply system of motor fire pump without electricity or phase lack or pumps fault can not normally start, diesel engine fire pump group will automatic starting operation, once the power supply system restore normal or electric pump can be normal operation, it can automatic switch to electric pump.

Third, automatic stop: when the fire signal disappears, diesel engine fire pump will delay stop.

Four, battery self-charging voltage stabilizing function: since battery charger for diesel engine available utility automatically charges and ensure its smooth start-up.

Five, with perfect indicator system: ready to start, manual starting, automatic starting, unit operation, unit downtime, battery charge, speeding, diesel engine lube oil pressure is too low, turbocharger oil pressure is too low, diesel engine lube oil temperature is too low, diesel engine cooling water temperature exorbitant battery voltage is too low, fuel oil level too low (or the lack of), diesel engine cooling water temperature too low preheating, regular inspection.

Six, with perfect alarm or protection system: three times start-up failure alarm or protection, speeding alarm or protect, lubricating oil hydraulic too low alarm or protect, turbocharger oil pressure too low alarm or protection, cooling water temperature exorbitant alarm or protection, lubricant oil temperature too low alarm or protection, automatic charging device fault alarm, battery voltage is too low alarm, battery voltage is too high alarm, oil level low alarm or protection.

Seven, perfect display system: diesel oil pressure, diesel engine speed, battery charging electric current, battery voltage.

Eight, straight association-like: diesel engine coupling directly with pump, using public channel steel base, compact structure, good overall performance, low malfunction, little vibration, convenient on-site construction and installation.

Nine, equipment pressure and flow range: unit select ISW series single grade single suction and GTOS series new single stage double suction and subsection TSWA series multistage type pumps, can meet the fire demand of different occasions.

Ten, adjustable flow rate and pressure diesel engine pump with mechanical governor or electronic governor. when pump capacity and head inconsistent with the actual, it can adjust the speed of engine.

Eleven, with water heating unit equipped and heating device: gets AC220V cooling water preheater can guarantee it to work properly below the 5 °C

Twelve, double battery loop: when a group of battery failure can be automatically into another group of battery.

Thirteen, free maintenance battery: forbid to frequently add supplementary fluid.

Fourteen, automatic timing circuit test: fire system usually in the standby mode, this unit equipment can automatically accomplish standby mode of the unit test and alarm timely

Note: this function can be chosen according to the user needs and can also designed according to user's special order.



配置

- 一、水泵: ISW系列单级单吸式、SOW系列新型单级双吸式
- 二、柴油机: 配单缸、双缸、四缸、六缸柴油机, 转速: 1500r/min 1800r/min 2400r/min等。
- 三、其它配件: 滤清系统、消音系统、冷却系统、燃油箱、公用槽钢底座。
- 四、控制柜: 单板机、PLC编程器、传感器、全自动控制柜。

功能说明

柴油机消防泵可与电动泵、稳压泵等组成自动水消防供水系统, 并可与消防控制中心实现联动。

当柴油机消防泵组接到启动命令时, 如果市电断电, 则柴油机自动控制柜立即向泵组的启动马达发出开启信号, 启动马达, 使柴油机怠速启动, 然后逐渐调节柴油机油门, 使柴油机加速, 直至额定转速。控制系统会自动监控柴油机的运转情况, 如柴油机的油压、油温、转速、水泵的出口压力等, 通过自动监控来判定柴油机是否正常启动, 如果启动失败则控制系统会发出重新启动信号, 若三次启动均失败, 则自控系统会发出启动失败报警。当柴油机消防泵组接到管网压力恢复或市电恢复正常的信号时, 泵组会迅速降速并在怠速位置监视一段时间后自动停机。

结构与原理

自动消防供水系统通常由稳压泵、电动消防泵(主泵)、自动柴油机消防泵组(备泵)组成。

工作原理: 平常管网压力在低压P1至高压P2之间, 当管网压力低于P1时, 则稳压泵自动启动, 压力逐渐上升到P2, 由于管网泄漏, 管网的压力会慢慢下降到P1, 稳压泵又会自动启动, 如此反复使管网压力始终保持在P1至P2之间。当管网压力无法维持在P1到P2之间时(如用水量大增), 管网压力下降到最低压力P3时, 电动泵自动启动, 压力上升至PW并满足消防用水。如果市电断电或电动泵出现故障时, 压力由P3继续下降至极限压力P4时, 则柴油机泵组自动启动, 压力上升至PW并满足消防用水。电动泵或柴油机泵的停机(自动切换除外)须由人工判断后手动停机。

CONFIGURATION

- One, Pump: ISW series single grade single suction and SOW series new single stage double suction and TSWA series piecewise more suction method
- Two, Single cylinder diesel engine: match one, four cylinder, and six cylinder diesel engine speed: 1500r/min, 1800r/min, 2400r/min, etc
- Third, Other accessories: filtration system, sound insulation system, cooling system, Ran You Xiang, public channel steel base
- Four, Control cabinet: a single board computer, PLC programme, sensors, full automatic control cabinet

FUNCTION SPECIFICATIONS

Diesel engine fire pump, electric pumps and stabilized pressure pump can form an automatic voltage fire water supply system and can realize linkage with fire control center

When diesel engine fire pump group received orders, if utility without power time, then automatically control cabinet of diesel power immediately to the starter of pump group issued open signal, the starter, engine idle starting, then gradually adjust diesel engine accelerator and make the diesel engine speed until the rated speed. The control system will automatic monitoring of diesel engine, such as the workings of diesel oil, oil temperature, rotational speed and pump outlet pressure, etc. Through the automatic monitoring to determine whether the normal starting diesel, if starting failure criterion control system will be issued to start signal. If 13 times are starting the automatic control system failure will be issued starting failure alarming. When diesel engine fire pump group received pipe pressure recovery or mains supply, oil resume normal signal, pump group will rapidly slow down and in idle position monitor after a period of automatic stop.

STRUCTURE AND PRINCIPLE

Automatic fire water supply system is usually combine with stabilizing pump, electric fire pump (main pump) automatic diesel engine fire pump group (Drepare pump)

Working principle: ordinary pipe pressure between low-pressure P1 to high pressure P2, when pipe pressure below P1 the voltage stabilizing pump automatic start, pressure rise gradually to P2 stop the pump, because pipeline leak, pipe pressure will slowly down to P1, voltage stabilizing pump will automatically start, so repeatedly made pipe pressure remains between P1 with P2. When the pipe pressure can be maintained between P1 to P2 (such as when water soar), pipe pressure drops to the lowest pressure P3, electric pump automatic starting, pressure goes up to PW and satisfy the water for fire control. If utility power off and electric pumps appear malfunction, pressure will by P3 continue to fall to limit stress P4, the diesel pump group automatic starting, pressure rose to PW and satisfy the water for fire control, electric pump or diesel pump stop (automatic excision outside) should be made by manual stop after artificial judgment.



发动机冷却方式

一般情况下，本企业提供的柴油机消防泵组其柴油机冷却系统常为闭式强制水循环冷却系统，由水箱、风扇、水泵、节温器、导风罩、进出水胶管等组成。发动机表面及其散热器水箱通过与其风扇产生的空气流进行热交换来实现发动机的冷却。如需要开式循环方式冷却(即用水泵输送冷却水与柴油机内循环水通过热交换器实现发动机冷却)，请在订货时注明。

柴油机功率损失

柴油机在不同的情况下其功率损失是不一样的，因此为保证柴油机正常运转，选用柴油机时应充分考虑柴油机的工作环境对功率的影响。以保证柴油机的功率与水泵的合理匹配。

柴油机功率损失系数表

EGL (m)	Ambient temp (°C)									
	0	5	10	15	20	25	30	35	40	45
0	0	0	0	0	0	0	0	0	0	0.120
200	0	0	0	0	0	0	0	0	0	0.125
400	0	0	0	0	0	0	0	0	0	0.138
600	0	0	0	0	0	0	0	0	0	0.152
800	0	0	0	0	0	0	0	0	0	0.171
1000	0	0	0	0	0	0	0	0	0.121	0.179
1500	0	0	0	0	0	0	0.137	0.141	0.191	0.198
2000	0	0	0	0	0.120	0.137	0.174	0.179	0.223	0.249
2500	0	0	0	0.212	0.156	0.187	0.212	0.237	0.258	0.281
3000	0	0	0.118	0.165	0.193	0.222	0.238	0.271	0.287	0.307
3500	0	0.137	0.169	0.207	0.228	0.254	0.277	0.311	0.319	0.338
4000	0.145	0.182	0.208	0.238	0.264	0.288	0.311	0.336	0.346	0.366

ENGINE COOLING METHODS

General condition, our company provides diesel fire pump group the diesel engine cooling system is compulsory closed circulating water cooling system, by tank, fan, pumps, thermostat, wind scooper, inlet and outlet water hose and other components. Engine surface and cooling water tank through its fan produce air flow heat change to realize engine cooling if need be open cycle way cooling (i.e. pump transportation cooling water and diesel engine inside circulating water by heat exchanger to realize engine cooling), please indicate when ordering.

DIESEL POWER LOSS

Diesel power loss in no use circumstances, diesel engine's power loss is different, so to ensure the normal operation of diesel engine, when choose diesel engine should fully consider the work environment of diesel engine influence the power, and the influence of guarantee of diesel engine power and water pump the rational matching, to ensure the diesel engine's power and water pump the rational matching.

DIESEL POWER LOSS COEFFICIENT TABLE

由于我们在不断努力改进产品，我们保留样本数据更改的权利，敬主谅解。



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