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RUHRPUMPEN

Specialist for Pumping Technology

FIRE SYSTEMS

Ruhrpumpen Fire Systems

Fire pumps play a vital role as the first response to a fire situation, saving countless lives and property from destruction. They are usually found in manufacturing and industrial facilities, housing complexes, power plants, schools, hospitals, airports, commercial buildings and offshore oil platforms.

A fire pump is the component responsible for supplying the adequate water pressure to fire sprinklers and hose standpipes in order to control or contain a fire. Ruhrpumpen's centrifugal pumps combine the latest in hydraulic design with decades of application experience to meet today's fire security requirements.

Per NFPA-20, we are able to supply ranges from 25 GPM up to 5000 GPM with net pressures of 40 PSI or more. Our fire pumps are available as single pumping units or complete pre-packaged fire systems (with or without full enclosure).

Single source responsibility and service

The combination of our engineering team, ISO 9001 manufacturing team, outstanding design, and quality construction, all ensure Ruhrpumpen's fire pumps and systems have strong reliability in case of an emergency. Ruhrpumpen's Global Service Network provides all forms of field services (start-up support, inspection, maintenance, and much more) no matter where your site is located.

Time and space saving

Our cost-effective packaged fire systems save you time and space as they can be dimensioned to precisely fit the specified area facilitating its installation. The system is delivered on a single shipment, leaving only pipe and power connections to be completed on site.

Fully customizable

In order to match the specific requirements of any application, our engineering team can design complete pre-packaged fire pump systems that can vary from a fire pump with an electric driver on a skid, to a fully prefabricated unit with environmental enclosures.

360°

Ruhrpumpen is your single source supplier

- Original Equipment
- Spare parts
- Installation and startup support
- Repair and maintenance
- Engineering, training and consulting

Benefits of our pumps:

- Proven reliability
- High efficiency designs ensure lowest operating cost
- Robust design allows for long system life with minimal maintenance
- Optimized total cost of ownership

As per NFPA-20, each pump is tested at our manufacturing facilities to provide detailed performance data and to demonstrate its compliance with the required specifications.

Before it's painted red...

Nothing is left to chance with a Ruhrpumpen fire pump system. It is completely built, tested and certified in our facility, ensuring that the stringent requirements of of governing bodies such as the National Fire Protection Association (NFPA), Factory Mutual (FM), Underwriter's Laboratories (UL) and Electrical Testing Laboratories (ETL) are met.

During the manufacturing and assembly processes, each pump goes through meticulous production controls, inspections and tests. We inspect all fire suppression equipment through advanced testing techniques and precise calibration instruments that enable us to guarantee that their operation complies with the required standards.

- Calculations for bearing life, bolt stress, shaft deflection and shear stress must be submitted and approved by UL & FM.
- Casing hydrostatically tested – two times rated maximum working pressure.
- Performance testing witnessed by UL & FM representatives.
- Quarterly follow-up audits of product and facilities is conducted by both UL & FM.
- Drawings of any component on the Primary Materials list must be approved before any change transpires.

Ruhrpumpen Fire Pumps: the heart of your fire protection system

Construction materials

Our fire pump components such as casing, impeller, shaft and bowls, are available in standard and special metallurgies to address specific applications.

Standard materials include:

- Cast iron
- Ductile iron
- Carbon steel

Metallurgies available for sea/ brackish water applications and harsh environments:

- Stainless steel
- Duplex
- Super Duplex
- Nickel-Aluminum-Bronze

Split case fire pump

Horizontal, single and two stage, split case centrifugal pumps

Characteristics

- Flows from 150 to 5000 GPM
- Pressures from 40 to 355 + PSI
- Electric or Diesel driven
- UL-448 listed
- FM-1311 approved
- NFPA-20 design
- Factory tested

Benefits

- Ease of installation and maintenance
- Wide range of applications
- Construction materials for seawater service are available

End suction fire pump

Horizontal, single stage, end suction centrifugal pumps

Characteristics

- Flows from 150 to 400 GPM
- Pressures from 40 to 250 + PSI
- Electric or Diesel driven
- UL-448 listed
- FM-1319 approved
- NFPA-20 design
- Factory tested

Benefits

- Back pull-out design simplifies maintenance and reduces problems associated with pipe strain

Vertical turbine fire pump

Vertical, single and multi-stage, turbine pumps

Characteristics

- Flows from 250 to 5000 GPM
- Pressures from 40 to 519 + PSI
- No priming
- Adaptability to water level
- Electric or Diesel driven
- UL-448 listed
- FM-1312 approved
- NFPA-20 design
- Factory tested

Benefits

- UL listed and FM approved pump for suction lift conditions
- Minimal maintenance
- Can be used where city water is not available and ponds or lakes are the only water supply
- Construction materials for seawater service are available

In-line fire pump

Vertical in-line centrifugal pumps

Characteristics

- Flows from 150 to 1000 GPM
- Only available with electric drive
- Pending UL Listing and FM Approval
- NFPA-20 design
- Factory tested

Benefits

- Top pull-out design simplifies maintenance
- Compact, space-saving design

Jockey pump

Pressure maintenance jockey pumps are available as vertical multi-stage and end suction pumps

Characteristics

- Jockey pumps are normally sized for 1% flow and a 10 to 20 PSI higher pressure of the fire pump
- Maintains system pressure to prevent the main fire pump from starting when small leaks occur
- Factory tested

Benefits

- Versatility in performance and design
- Low operating cost

Firefighting system arrangement according to NFPA

Source: NFPA 20 Stationary Fire Pumps Handbook 2019

Packaged Fire Pump Systems

Our fire protection pumping solutions can be found all around the world in a variety of industrial, commercial and residential applications. RP's pre-packaged fire systems are tailored and built to the requirements of the customer ensuring that they meet international and local safety regulations.

Our pre-packaged systems accommodate any of the RP fire pump models, with drivers, control systems and pipework on a common base for a plug-and-play installation. They can be skid mounted, with or without enclosure, and supplied with electric motor or diesel engine.

1. *UL-142 Double Wall Day Tank*
2. *UL Listed Jockey Pump Controllers*
3. *UL/FM Fire Pump*
4. *FM Flow Meter*
5. *Throttling Valve*
6. *Electric Motor*
7. *UL/FM Electric Control Panel*
8. *Jockey Pump*
9. *Tamper Switches*
10. *UL/FM Listed OS&Y Gate Valves*
11. *Copper Sensing Lines*
12. *Schedule 8-CPVC Containment Piping for Fuel Piping*
13. *UL/FM Listed Diesel Engine*
14. *ASTM A36 Structural Steel Skid*
15. *UL/FM Diesel Control Panel*
16. *Floor Drain System*

Other (optional) features of Ruhrpumpen's Pre-Packaged Fire Systems:

- Our marine fire suppression systems offer high performance coating systems for corrosive or coastal environments
- Stainless piping for seawater or brackish water applications
- NFPA-20 compliant mobile pre-packaged fire systems are available
- ABS certification for offshore platform fire pump packages and fire skid units
- Leveling bolts
- Custom alarm panels

Individual split case pump baseplate with on-skid control panel

NFPA-20 compliant Fire Pump Houses

Completely pre-assembled and fully enclosed packages for a trouble-free and quick installation

Our packaged systems can be contained on a weather-proof, non-combustible enclosure engineered and constructed per NFPA-20 and including:

- Heating and ventilation
- Approved or listed source of heat
- Normal and emergency lighting
- Drainage
- Convenience outlet

Optional features:

- Pre-wired and pre-piped
- Pre-piped sprinkler systems for pump house interior
- Exhaust fan
- Mini power zone
- Wall or floor access for piping
- Containment piping
- Architectural finishes
- Safety equipment
- Grating floor deck design
- Seismic calculations with PE Stamps
- Open skid design
- Diamond plate floor deck design

- UL Listed and FM Approved pumps
- ETL listed
- Single shipment delivery, ready for installation
- Plug-and-play installation
- Single source responsibililty for complete pump house
- Factory tested
- Engineered to customer requirements

General arrangement of a NFPA-20 compliant fire pump house.

Control Panels

When there's an emergency, it's better to count on a reliable fire pump controller. Ruhrpumpen can offer electric, diesel and jockey control panels; which are available for configurations with one or more drivers, and programming for fully automatic or manual operation types.

Electric and diesel control panels are UL/ULC listed and approved by FM and CSA, as well as meeting or exceeding the requirements of NFPA-20 and NFPA-70.

Electric panels

Low voltage configurations include:

- Across the line
- Soft start
- Delta open / closed
- Primary resistor
- Auto-transformer
- Part winding

Medium voltage configuration:

- Across the line

Diesel panels

Diesel control panels are available for 12 volt (120, 220/240 VAC) diesel fire pump engines.

Jockey panels

Single or three phase jockey fire pump panels designed for 50 & 60 Hz in a variety of voltages.

+75 years creating the pumping technology that moves our world

Ruhrpumpen is an innovative and efficient pump technology company that offers highly-engineered and standard pumping solutions for the oil & gas, power generation, industrial, water and chemical markets. We offer a broad range of centrifugal and reciprocating pumps that meet and exceed the requirements of the most demanding quality specifications and industry standards such as API, ANSI, UL, FM, ISO and Hydraulic Institute.

Ruhrpumpen Plants

- ARGENTINA, Buenos Aires
- BRAZIL, Rio de Janeiro
- CHINA, Changzhou
- EGYPT, Suez
- GERMANY, Witten
- INDIA, Chennai
- MEXICO, Monterrey
- UK, Lancing
- USA, Tulsa

Manufacturing plant & service center

Service center