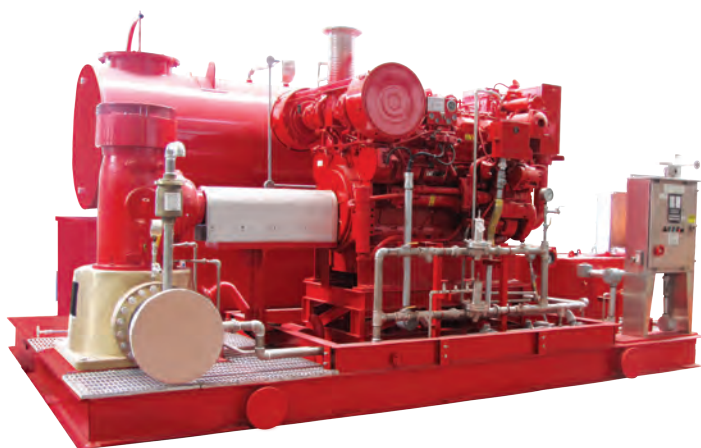


FIRE PUMPS AND SYSTEMS

Our fire protection pumping solutions can be found all around the world in a variety of industrial, commercial and residential applications. We are able to supply single pumping units or complete pre-packaged fire systems (with or without enclosure), always tailored and built to the requirements of the customer, ensuring that they meet international and local safety regulations.



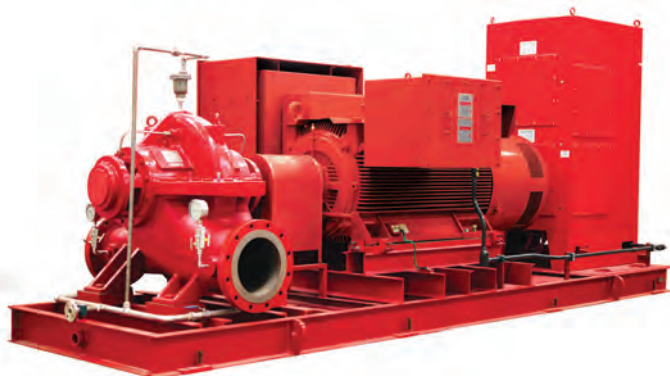
CHARACTERISTICS

All 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.

- Available with electric motor or diesel engine
- ETL/C-ETL third party listing components
- UL listed and FM approved components
- NFPA 20 full compliance
- NFPA 850 compliant
- Wide range of construction materials available. Metallurgies available for sea/brackish water application and harsh environments.

BENEFITS

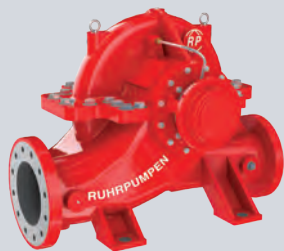
- Single source responsibility for complete system
- System is completely wired and factory tested
- Delivered on site in a single shipment, ready for installation
- Engineered to customer requirements
- International distribution and start-up capabilities
- ABS certification for offshore platform fire pump packages and fire skid units



APPLICATIONS

- Commercial, municipal and residential high-rise buildings
- Large industrial premises and storage warehouses
- Offshore and remote facilities
- Airports
- Commercial centers
- Power stations
- Marine

Ruhrpumpen fire pumps: the heart of your fire protection system



Split case fire pumps

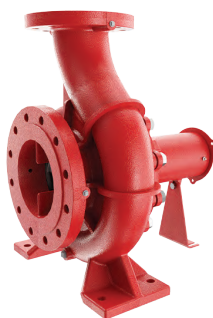
Horizontal, single and two stage, split case centrifugal pumps

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
- EN12845 options

Benefits

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



End suction fire pumps

Horizontal, single stage, end suction centrifugal pumps

Characteristics

- Flows from 150 to 1,500 GPM
- Pressures from 40 to 250 + PSI
- Electric or Diesel driven
- UL-448 listed
- FM-1319 approved
- NFPA-20 design
- Factory tested
- EN12845 options

Benefits

- Space-saving and simplified maintenance with back pull-out design without disturbing pipe work



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

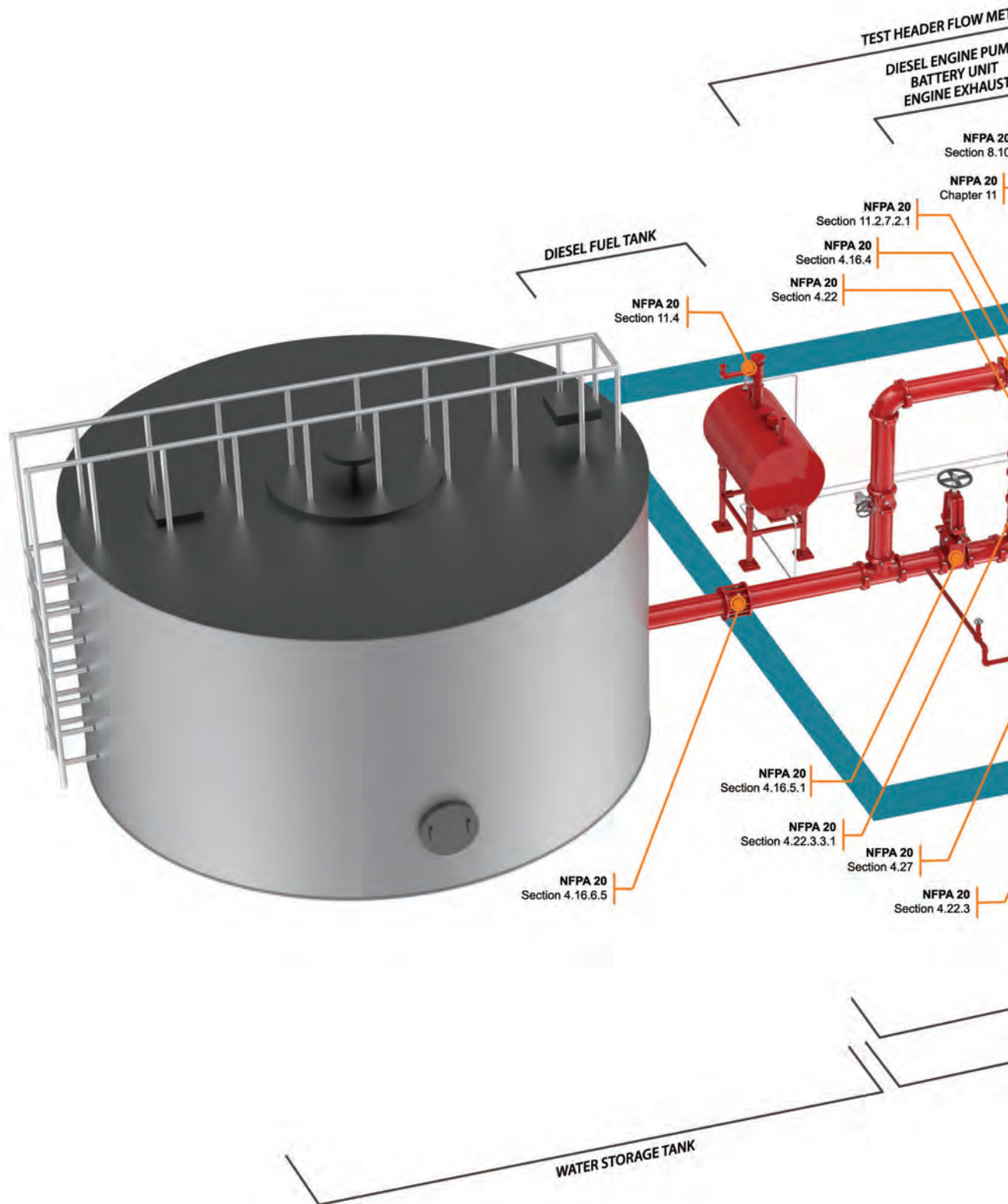
- Flows from 150 to 1000 GPM
- Only available with electric drive
- Pending UL Listing and FM Approval
- NFPA-20 design
- Factory tested

Benefits

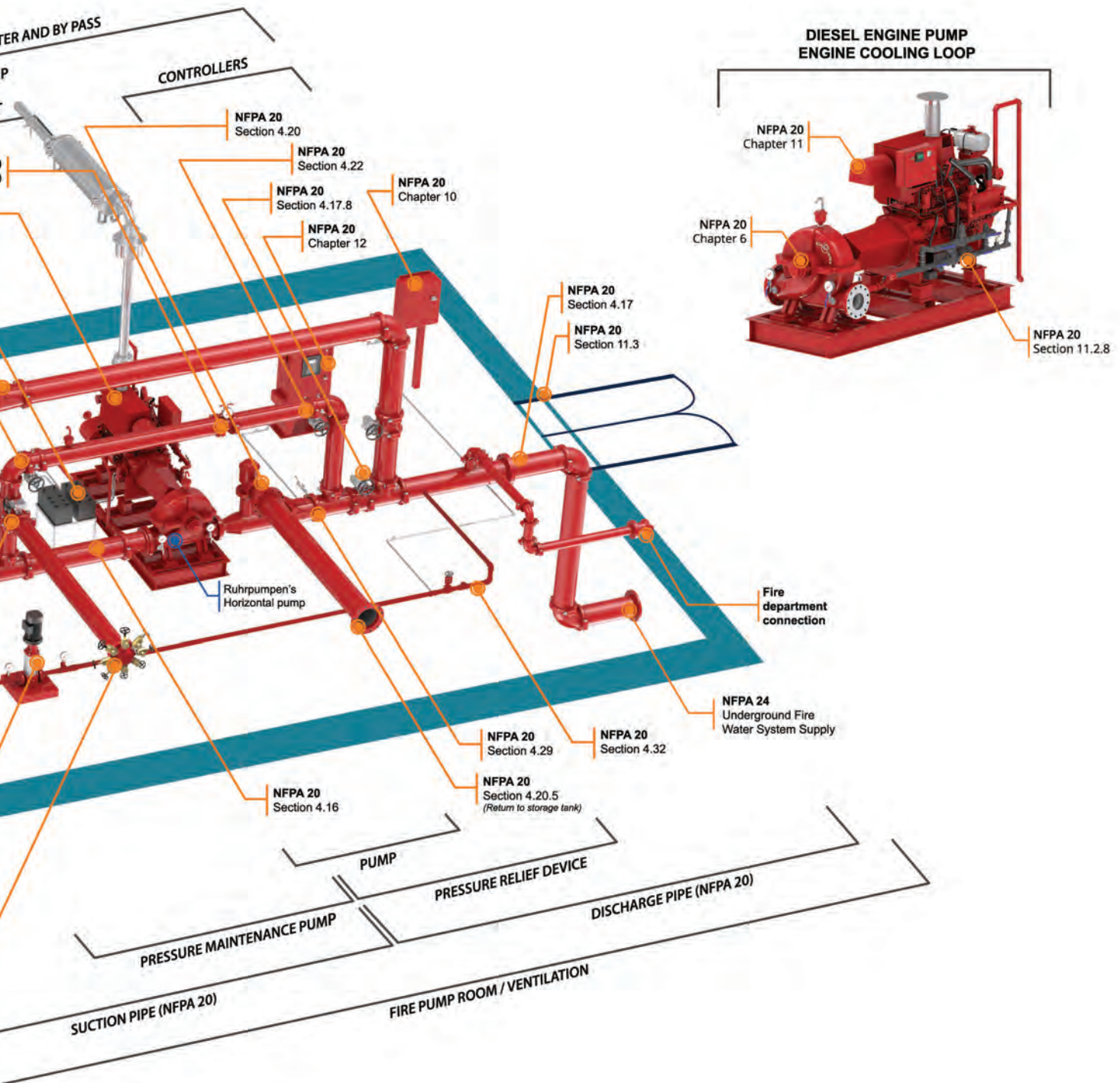
- Top pull-out design simplifies maintenance
- Compact, space-saving design

Fire Pump Installation Arrangement According to NFPA 20

- Pump shall furnish not less than 150% of rated capacity at not less than 65% of total rated head.
- Shutoff head will range from a minimum of 101 percent to a maximum of 140 percent of rated head.
- As per NFPA-20 we can offer ranges over 5,000 gpm, these cases are subject to individual review by the authority having jurisdiction or a listing laboratory.
- As required by NFPA-20, each pump is tested at our factory to provide detailed performance data and to demonstrate its compliance with the required specifications.

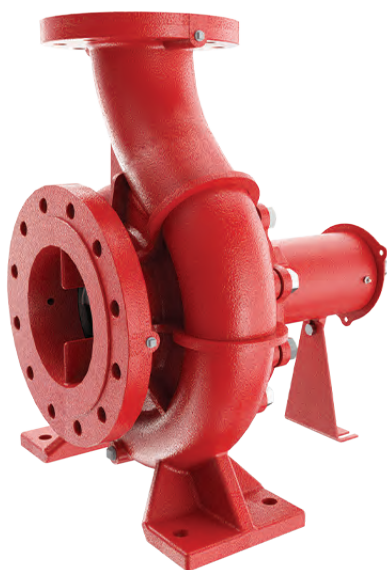


- In compliance with NFPA-20, hydrostatic tests are performed on the pump for a period of not less than 5 minutes. In the case of vertical turbine pumps, both the discharge head and the bowl assembly are tested.
- The use of a Diesel Engine requires the proper environmental temperature (minimum 4.5°C / 40°F), to ensure correct operation of the Fire System. A Pump House may be required in order to meet these specific conditions, please contact the factory for more information.



Source: NFPA 20-19 Standard for the Installation of Stationary Pumps for Fire Protection, NFPA 22 Standard for Water Tanks for Private Fire Protection

END SUCTION - IRP



Rated Capacity	Up to 1341 m ³ /h (1500 USgpm)
Head	Up to 123 m (175 psi)
Temperature	Up to 260 °C
Pressure	Up to 16 bar



Materials of construction	Metallurgies for sea/brackish water - available upon request
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TECHNICAL SUMMARY

DESIGN STANDARD	NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) NFPA 20 Standard for the Installation of Stationary Pumps for Fire Protection
FIRE PUMP SPECIFICATION	Centrifugal end suction back-pull-out type design. Central end in suction and top delivery flanges both drilled to BS EN 1092 PN16 standards. In accordance with DIN 24255.
CASING	CAST IRON The suction and discharge branches together with mounting feet are cast integral with the volute casing. Back-pull-out facility permits removal of back cover, stuffing box and impeller without disturbance of casing or suction / discharge pipework.
CASE WEAR RING	Close running clearance minimizes pressure leakage, maximizes pump efficiency and are easily replaceable if required.
IMPELLER	STAINLESS STEEL Dual shrouded with balancing vanes. It is machined and hand finished smooth. The impeller is keyed to the shaft.
SHAFT	CARBON STEEL Larger-diameter, precision machined, high strength steel shaft provides maximum strength with minimum shaft deflection, so ensuring maximum reliability.
SHAFT SLEEVE	STAINLESS STEEL Protects the shaft against corrosion and wear, extends through gland for maximum shaft protection.
STUFFING BOX	GRAPHITE PTFE GLAND PACKING Deep stuffing boxes are designed to accept rings of packing with lantern ring. External flushing line to provide lubrication to the packing area.
GLAND	STAINLESS STEEL Simplifies maintenance of gland packing.
LIQUID THROWER	NATURAL RUBBER Designed to protect the bearings from water during operation.
BEARINGS	Greased-for-life Radial and Thrust Bearings for maximum life at minimum maintenance cost. Operating hours based on 17,500 L10 Life. Mounted in bearing housing secured to cover plate and volute to ensure perfect alignment.
COUPLING	SPACER Allows removal of rotor without disturbing the motor.
BASEPLATE	STEEL Extended to carry the driving unit.
ACCESSORIES	GAUGES Compound Pressure and Vacuum gauge on Suction branch. Pressure gauge on Discharge branch. Fitted with handles.
COMPACT DESIGN	Heavy shaft and short bearing span reduce shaft deflection to a minimum, providing longer packing and bearing life and lower maintenance costs, while requiring less floor space.

END SUCTION - IRP



Optimised Maintenance...

- Back Pull-Out
- Greased for Life Bearings
- 17,500 L¹⁰ Life

UL Listed Coupling...

- Underwriters Laboratories Listed as Standard

UL Listed Motor...

- IEC Standard
- Underwriters Laboratories Listed as Standard

Robust Design...

- Fall-safe soft packed arrangement
- 16 Bar Pressure
- Keyed Impeller
- Solid Shaft with sleeve options

Quality Assured Components...

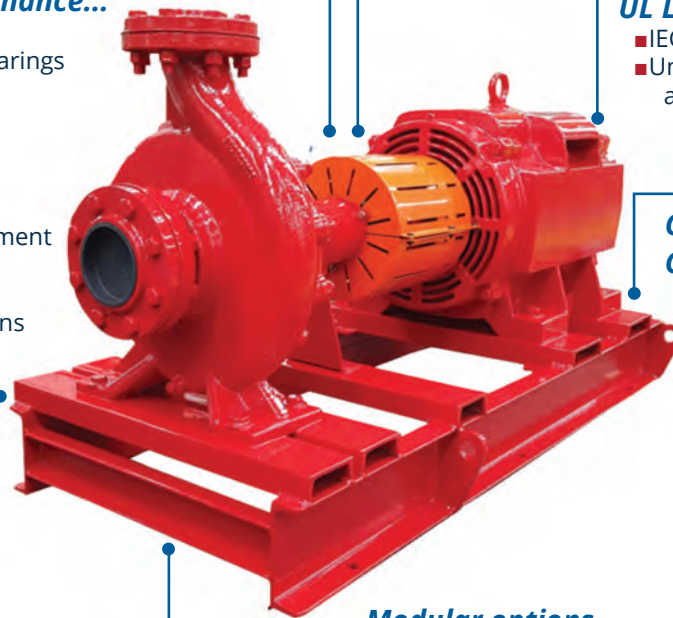
- Factory Mutual (FM) and Underwriters Laboratories (UL) Listed Pumps

Compact Rigid Design...

- Fabricated steel baseplate designs

Modular options...

- Baseplate mounted fuel tanks all pre-piped and pre-wired
- Single and common preassembled baseplate options
- Jockey pumps and pressure initiation boards baseplate mounted and pre-connected

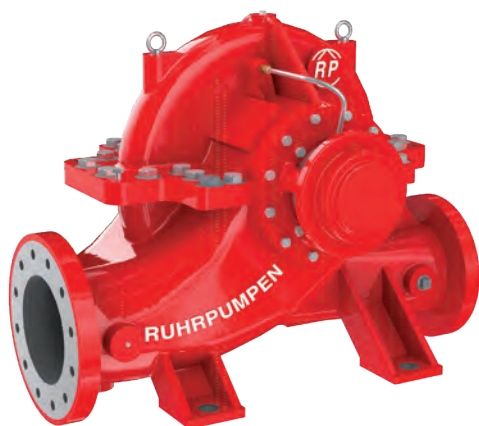


APPLICATIONS

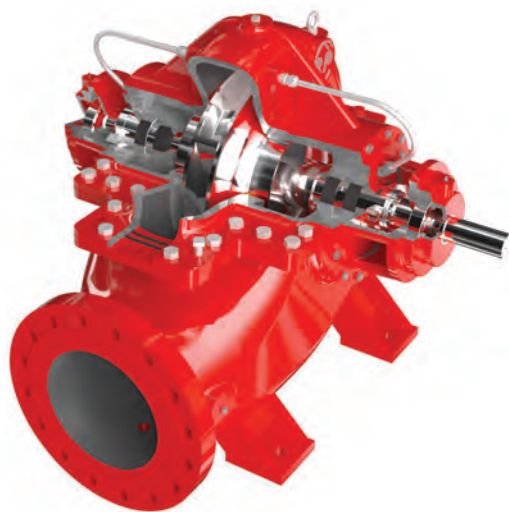
- Offices
- Residential buildings
- Schools
- Hospitals
- Airports
- Commercial centers
- Power stations
- Chemical Plants



HORIZONTAL SPLIT CASE - ZW



Rated Capacity	From 150 to 5000 USgpm
Rated Head	Up to 339 PSI
Temperature	Up to 250 °C
Pressure	Up to 16 bar



Materials of construction	Metallurgies for sea/ brackish water - available upon request
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TECHNICAL SUMMARY

DESIGN STANDARD	NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) NFPA 20 Standard for the Installation of Stationary Pumps for Fire Protection
CERTIFICATION	FACTORY MUTUAL (FM) UNDERWRITERS LABORATORIES (UL)
FIRE PUMP SPECIFICATION	Centrifugal axial split case. Lower half casings comprise the suction and discharge flanges. In accordance with ASME / ANSI B16.1, B16.42 and B16.5
CASING AND CASING COVER	CAST IRON / DUCTILE IRON Horizontally split, upper and lower half bolted and dowelled. Flanged suction and discharge connections located in the lower-half casing, allowing inspection and maintenance without disturbing piping or drive alignment
CASE WEAR RING	DUPLEX STAINLESS STEEL Close running clearance minimizes pressure leakage between suction and discharge chambers of the casing, maximizes efficiency and are easily replaceable.
IMPELLER	STAINLESS STEEL Enclosed, double-suction type. Cast in one-piece and balanced to minimize thrust and to ensure longer bearing life Keyed to shaft and locked in position by threaded shaft sleeves
IMPELLER WEAR RINGS	IMPELLER WEAR RINGS Impeller wear rings are optional and case wear rings are standard. Listed material options available on request.
SHAFT	CARBON STEEL Larger-diameter, precision machined, high strength steel shaft provides maximum strength with minimum shaft deflection, so ensuring maximum reliability.
SHAFT SLEEVE	STAINLESS STEEL Protects the shaft against corrosion and wear, extends through gland for maximum shaft protection.
STUFFING BOXES	GLAND PACKING Deep stuffing boxes are designed to accept a minimum of five rings of packing with lantern ring. Internally drilled liquid passage in upper-half casing provides lubrication to the packing area.
GLAND	STAINLESS STEEL Simplifies maintenance of gland packing.
BEARINGS	BALL (DE) / BALL (NDE) Radial and Thrust Bearings with grease lubrication for maximum life at minimum maintenance cost.
COMPACT DESIGN	Heavy shaft and short bearing span reduce shaft deflection to a minimum, providing longer packing and bearing life and lower maintenance costs, while requiring less floor space. Clockwise rotation standard; counter-clockwise rotation optional.

HORIZONTAL SPLIT CASE - ZW



Plug-and-Play Solutions...

- UL 142 Fuel Tanks - loose or pre-installed
- Reduced on site installation time and activities

Listed Driveshaft Couplings...

- Listed and pre-tested
- Engine manufacturer balancing certificate available on request
- CE compliant shaft guarding

Quality Assured Components...

- Automatic Air Release Valves (AARV)
- Pressure Gauges

Starting Devices...

- Listed diesel engine controllers
- NEMA 2/4/4X Listed enclosure options
- Seawater suitable initiation lines
- Optional Listed features



Performance Guarantee...

- Every fire pump Factory Tested
- Non Witness and Witness Tested options.

Approved Assemblies...

- Listed and pre-tested cooling line arrangements
- Alternate Listed Materials of construction including Sea Water suitable options

Modular options...

- Baseplate mounted fuel tanks all pre-piped and pre-wired
- Single and common preassembled baseplate options
- Jockey pumps and pressure initiation boards baseplate mounted and pre-connected

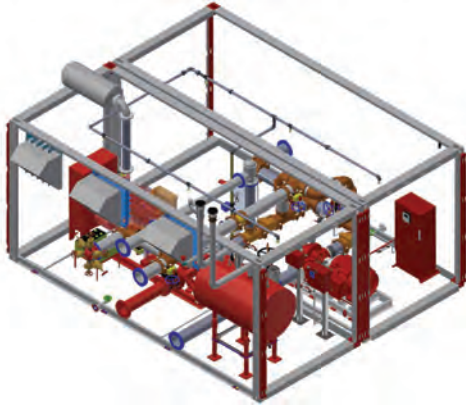
APPLICATIONS

- Large industrial premises and storage warehouses
- Commercial, municipal and residential high-rise buildings
- Offshore and remote facilities
- Airports
- Commercial centers
- Power stations



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

The Ruhrpumpen Industrial Europa range of pre-packaged fire pump houses can be containerised or weatherproof, non-combustible enclosure type designs, constructed per NFPA 20 requirements and typically include:



Weatherproof Enclosures

- Converted (High Cube) container type and fire rated panel system designs
- Original large cargo doors
- Internal dividing wall
- C5-1 industrial finish or saline environment suitable finishes
- Drainage



Quality Assured Components

- Suction and Discharge Valves
- Main Pressure Relief Valve (PRV)
- Waste Cone
- Automatic Air Release Valve (AARV)
- Pressure Gauges

Turnkey plug-and-Play Solutions

- From 3D standardized and designed-to-order specifications
- Cuts down the supply chain
- Reduces contractor activity on site
- Commissioning and Testing on site
- On site training

Performance Guarantee

- Every fire pump is Factory Tested
- Non witness and Witness Tested pumps set and pump house options

Standard Features

- Standard personnel fire rated doors
- Bespoke plant maintenance doors and hatches

Easy Access

- Standard personnel fire rated doors
- Bespoke plant maintenance doors and hatches

APPLICATIONS

- Commercial, municipal and residential high-rise buildings
- Large industrial premises and storage warehouses
- Offshore and remote facilities
- Airports
- Commercial centers
- Power stations
- Marine

