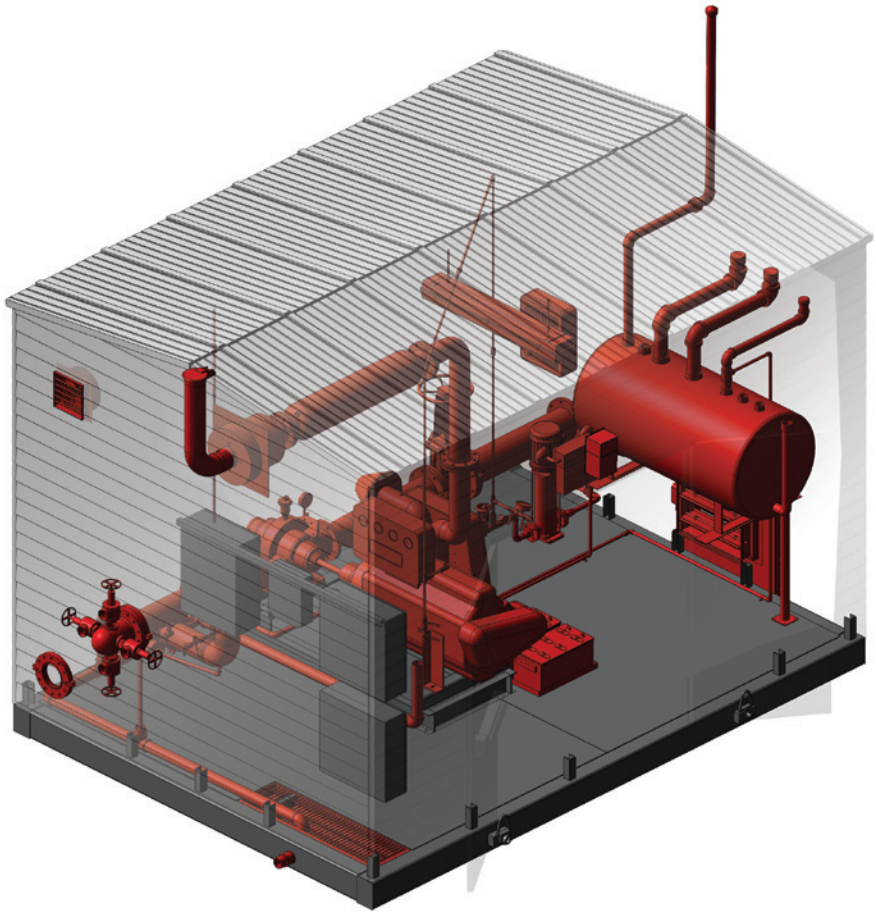
Enclosed Fire Packages

ARMSTRONG



Fire Pump Systems with Enclosures

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Factory-Built, Enclosed Fire Pump Packages.

Armstrong Enclosed Fire Pump Packages combine a fire pump system, piping, electrical and exhaust components, and a weather-proof enclosure to house the system. Armstrong Enclosed Fire Pump Packages are designed, built and tested in a controlled ISO 9001 factory environment and shipped to site ready for installation. Because the assembly and electrical wiring are already complete, Enclosed Fire Pump Packages are easy to install, which reduces on-site labor hours and shortens construction project timelines.

Making Your Life Easier

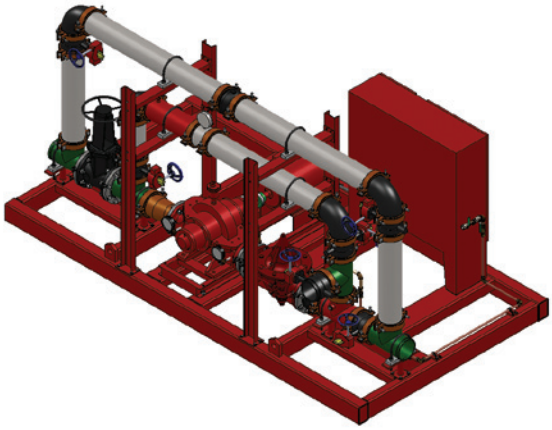
- Packaged and pre-tested at an ISO 9001 factory environment to ensure trouble-free installation and commissioning
- Improved job site safety due to increased free space for walkways inside the enclosure
- No materials lost due to on-site material handling
- Single source responsibility for the complete package
- Improves the speed of construction and reduces on-site installation time
- Installation can be completed in as little as 4 hours
- Only external suction, discharge and power connections are required on site
- Complete plumbing, mechanical and electrical designs approved before construction starts

Adding More Value

- Pumps are flow-tested prior to package assembly
- Complete system is pressure tested to eliminate on-site leaks
- All interior piping and electrical connections are complete
- Factory assembly and testing eliminates on-site assembly
- Enclosure floor is coated with glass-filled, anti-slip grey epoxy
- Superstructure design supports the piping, exhaust and electrical components from the roof, leaving more open floor space
- Insulated enclosure panels are designed and fabricated to last more than 25 years
- Enclosure panels are pre-painted with superior quality paint for a uniform color and long-lasting protection
- Approved lifting pads are welded to the base

Fire Pump Systems with Enclosures

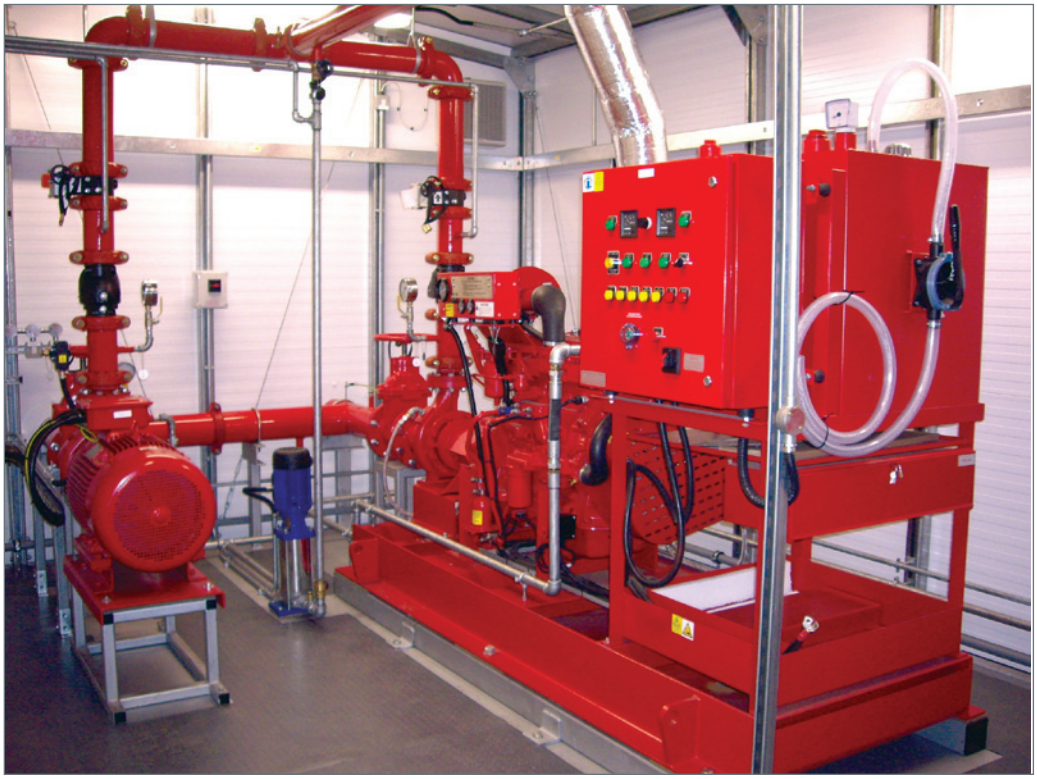
Covers a Wide Range of Installation Requirements



- The full range of Armstrong fire solutions available includes Horizontal Split Case, End Suction and Vertical In-Line pumps
- Single Electric, Single Diesel, 1 Electric and 1 Diesel, 2 Electric, 2 Diesel configurations are available
- Optional components include Tamper Switches, Test Header Lines, City By-pass, and Flow Meter Loops with all required piping and valves
- Wall panel color can be matched to any existing building

Meeting and Surpassing Industry Codes

- Includes all auxiliary systems prescribed by NFPA including:
  - Heating
  - Ventilation
  - Drainage
  - Lighting
  - Sprinklers
- Enclosure and auxiliary systems meet applicable NFPA codes
- Impact Rating: Wall and roof panels have been approved to FM Class Number 4881 - Approval Standard for Class 1 Exterior Wall Systems
- Severe hail resistance rating
- Certified for use in locations subject to both hurricane force winds and missile impact from wind-born debris. Wall and roof panels will stay attached in winds up to 150 mph.
- Fire systems and enclosures are designed to meet required codes and standards (NFPA, UL, FM, LPC and/or local codes)
- Packaged and factory tested at an ISO 9001 certified facility
- ASME Section 9 certified welding



Typical Specifications

Structure:

- Outer perimeter shall be HSS 8 × 8 × 0.25", while the cross members shall be HSS 6 × 3 × 0.25", spaced every 36" or less as necessary to support heavy equipment and floor deck perimeter
- 2¾" × 2¾" × ¼" thick heavy gauge mild steel galvanized super structure
- Superstructure and connecting members will be hot dip galvanizing to be 80 micron silver speckle typical 2000 hour salt
- Wind Load: 150 mph
- Snow Load: designed to 45 lb/ft^2

Floor:

- ¼" mild steel plate shall be laid over the insulation, overlapping the skid frame and fastened to the structural steel base using countersunk screws. Floor paint to be glass-filled epoxy, 0.58 VOC, anti-corrosion, anti-chemical, non-slip, suitable for coastal environments
- Floor drain incorporated
- BioBased 1701 Foam Floor Insulation or exterior rated foam insulation with an R6.0 or better value at 2" thick

Cladding System:

- Minimum 2" Thick composite insulated building panels
- Title 24 Energy Code
- FM approval in accordance to FM Class 4881
- Wall Cladding R-value 15.2 (large R values available upon request)
- Roof Cladding R-value 16 (large R values available upon request)
- Insulation core LPCB certified to LPS 1180 grade 'B' HCFC
- HCFC-free urethane foam core, 2.3-2.6 lb/ft^3
- Ozone Depletion Potential (ODP) of zero
- External pre-coated steel sheet 0.6mm thick, finished with a Plasticol coating
- Internal liner pre-coated steel 0.35 mm thick
- External face of the insulated panel to have FAA or SAA classification to BS476: Part 3: 1975
- Inner and outer facings, Class 1 surface spread of flame to BS476: Part 7: 1987, and are Class 0, as defined by Building Regulations
- Acoustic performance produces a predicted single Weighted Sound Reduction Index (Rw) value of 27dB or STC value of 25
- The roof shall be dual pitched at 7
- Performance life of the cladding system shall be 25 years in normal environments
- The insulation enclosure panels shall be provided with complimentary flashing for the sloping roof and for the four corners for sealing and protection from outside elements
- Further flashing provided for any protruding items on the roof

Doors:

- The door shall be honeycomb insulated hollow metal, 18 gauge, with 16 gauge welded frame, 5¾" typical depth. Single door is 3' × 7' with double doors as 6' wide and 7' high
- Door shall be supplied with suitable lock, handle, internal push bar for emergency exit, swing chain and stop/hold mechanism
- There shall be a minimum of 36" clearance in front of the door for egress in case of emergency

Environmental Conditions Internal to Enclosure:

- A ventilation fan is provided as minimum in all enclosure packages, sized for general ventilation rate of 2 cfm/ft^2 of enclosed floor
- Lighting: 4 ft fixtures for double T8 fluorescent tubes and ballasts supply lighting power of 1.3 watts/ft^2
- Switches for lighting and environmental controls should be located near the access door
- 2 × 15A power receptacles to be supplied as minimum, with GFCI (ground fault) breaker protection
- Emergency shutdown: emergency lights will turn on
- Optional, unit heaters should be sized to maintain a minimum of 50°F (10°C) internal temperature on design heating day
- Optional, air-conditioning units should be sized to provide 104°F (40°C) indoor temperature

Lifting points:

- Designed to be lifted from the base
- Approved lifting pads welded to the base

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