



10-30 HP FIXED SPEED ROTARY SCREW COMPRESSORS

L-Series

Advanced Technology. Inspired Simplicity.

L-Series compressors from Champion feature more than just the latest compressor technology. They contain the cleanest, simplest, most intuitive machine layouts on the market. Equipped with standard TEFC main motors, wye-delta starters, Pilot™ microprocessor controllers and quiet enclosures, an L-Series unit from Champion is the optimal solution when a feature-rich, simple-to-operate compressor is required.

First Class Serviceability

The L-Series units set a new standard in serviceability. By utilizing integrated airend design techniques, Champion delivers unprecedented access to service items such as; a high efficiency air filter, air/oil separator and oil filter. At the same time, the compact design eliminates unneeded connections and minimizes piping; reducing the opportunity for leaks. Couple these features with standard automatic belt tensioning and you have a world class small horsepower compressor package.

Configuration Flexibility

L-Series compressors are available in base mount or AirStation™ configurations. The plug-and-play AirStation™ configuration is an L-Series compressor mounted on a horizontal receiver tank with or without a refrigerated air dryer. Featuring standard high-end and optional components such as a three-way bypass valve, stainless steel piping, integrated fork lift slots and an automatic tank drain, the L-Series AirStation™ is the ideal solution for a compressed air system that requires minimal installation time and cost.



L07-L22 ROTARY SCREW COMPRESSOR

| MODEL | DRIVE MOTOR | | 50 Hz | | | | 60 Hz | | | | | | | | DIMENSIONS L x W x H IN. (MM) |
|-------|-------------|----|-------------------|---------------------|------------------------|----------------------|-------------------|--------------------|------------------------|----------------------|--------------------------|--------|-----|------------------------------------|-------------------------------------|
| | | | NOMINAL PRESSURE | | FAD ¹ | | NOMINAL PRESSURE | | FAD ¹ | | NOISE LEVEL ² | WEIGHT | | | |
| | HP | KW | PSIG | BAR | ACFM | M ³ /MIN | PSIG | BAR | ACFM | M ³ /MIN | DB(A) | LBS | KG | | |
| L07 | 10 | 7 | 110 145 190 | 7.5 10.0 13.0 | 45.9 37.4 30.0 | 1.30 1.06 0.85 | 100 125 190 | 6.9 8.6 13.0 | 44.5 38.7 26.4 | 1.26 1.10 0.75 | 71 | 452 | 205 | 27 x 25 x 41 (686 x 635 x 1041) | |
| L11 | 15 | 11 | 110 145 190 | 7.5 10.0 13.0 | 66.0 56.8 46.6 | 1.87 1.61 1.32 | 100 125 190 | 6.9 8.6 13.0 | 63.1 57.9 44.1 | 1.79 1.64 1.25 | | 483 | 219 | | |
| L15 | 20 | 15 | 110 145 190 | 7.5 10.0 13.0 | 95.3 79.8 63.5 | 2.70 2.26 1.80 | 100 125 190 | 6.9 8.6 13.0 | 89.4 83.4 63.1 | 2.53 2.36 1.79 | 73 | 739 | 335 | | |
| L18 | 25 | 18 | 110 145 190 | 7.5 10.0 13.0 | 114.7 96.7 82.6 | 3.25 2.74 2.34 | 100 125 190 | 6.9 8.6 13.0 | 110.9 101.9 80.2 | 3.14 2.89 2.27 | 74 | 796 | 361 | 31 x 28 x 47 (787 x 711 x 1194) | |
| L22 | 30 | 22 | 110 145 190 | 7.5 10.0 13.0 | 128.8 113.3 92.1 | 3.65 3.21 2.61 | 100 125 190 | 6.9 8.6 13.0 | 125.8 116.5 92.0 | 3.56 3.30 2.61 | | 810 | 367 | | |

1) Data measured and stated in accordance with ISO1217, Ed. 4, Annex C & Annex E at the following conditions:

Air Intake Pressure 1 bar A, Air Intake Temperature 20° C, Humidity 0 % (Dry)

2) Measured in free field conditions in accordance with ISO 2151, tolerance +/- 3 dB

AIR STATION SPECIFICATIONS, 60 HZ

| MODEL | DRYER MODEL | RECEIVER SIZE GAL. (LITERS) | REFRIGERANT | WEIGHT LBS (KG) | DIMENSIONS L x W x H IN. (MM) |
|-------|----------------------|---|-------------|---|--|
| | | | | 120 GAL | 120 GAL |
| L07 | GSRN XCNC | 80, 120, 240 (303, 454, 908) | R134A | less dryer 953 (433) with GSRN dryer 1079 (489) with XCNC dryer 1030 (467) | less dryer 73 x 32 x 66 (1854 x 819 x 1676) |
| L11 | GSRN XCNC | | | less dryer 984 (446) with GSRN dryer 1128 (512) with XCNC dryer 1078 (489) | with dryer 72 x 32 x 66 (1829 x 819 x 1676) |
| L15 | GSRN XCNC XCCY | less dryer 1240 (563) with GSRN dryer 1506 (683) with XCNC dryer 1359 (616) with XCCY dryer 1415 (642) | | | |
| L18 | GSRN XCNC XCCY | 120, 240 (454, 908) | | less dryer 1297 (589) with GSRN dryer 1574 (714) with XCNC dryer 1471 (667) with XCCY dryer 1477 (670) | less dryer 72 x 32 x 72 (1829 x 813 x 1829) with dryer 72 x 32 x 72 (1829 x 813 x 1829) |
| L22 | GSRN XCNC XCCY | | | less dryer 1311 (595) with GSRN dryer 1598 (725) with XCNC dryer 1486 (674) with XCCY dryer 1492 (677) | |

Dryer on AirStation™ package has separate electrical connection and voltage.

L-Series Features (10-30 HP)

- Belt drive, oil flooded, single stage rotary screw air compressor
- RotorLube 4000 lubricant
- Air-cooled only
- Optional automatic zero-loss condensate drain (with receiver tank selection)
- CRN and ASME rated aftercooler
- Pilot™ microprocessor controller
- Integrated spin-on oil filter, spin-on air/oil separator and two-stage air filter
- Integrated thermostatic thermal mixing valve
- IP54 electrical enclosure
- Load/no load control and timed shutdown
- Moisture separator (shipped loose)
- Mounted and wired wye-delta starter
- Optional ASME receiver tank (80, 120, 240 gallons)
- Optional mounted cycling or non-cycling refrigerated dryer (with receiver tank selection)
- Quiet enclosure
- TEFC main motor
- Optional three-way bypass valve (with receiver tank and mounted dryer)
- Second pressure band control for lead/lag operation
- Stainless steel piping (with receiver tank and mounted dryer)
- UL labeled electronics (including C-UL-US open industrial control panel)
- Standard manual tank drain (with receiver tank)
- Voltage: 208/230/380/400/460/575V

*Dryer on AirStation package has separate electrical connection and voltage.

CHAMPION®



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CSCS-L07-L22 4th Ed. 3/21

Product specifications and materials are subject to change without notice.

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Princeton, Illinois 61356 USA
866-276-4330
www.ChampionPneumatic.com



A **VONTIER** COMPANY

AtlasX

Next-Gen Commercial Refueling

9800G Electronic High Flow Pumps and Dispensers

Introducing AtlasX 9800G commercial series. Leveraging the strength of our legacy Atlas and Encore brands, AtlasX pumps and dispensers offer centralized, optimized, and efficient commercial refueling.

The AtlasX electronic series is built with anodized aluminum panels that enable greater durability without welding points. The AtlasX electronic dispenser incorporates enhanced security features and real-time monitoring and reporting capabilities.

The Gasboy electronic dispenser is equipped with advanced electronic metering technology, ensuring accurate and precise fuel measurements.



| Model number | Description | Type | Hoses | Products | Register | Flow rating |
|--------------|------------------|-----------|-------|----------|----------|-------------|
| 9853G | Single Pump | Pump | 1 | 1 | Elec | 22 gpm |
| 9853GTW1M | Twin Pump | Pump | 2 | 1 | Elec | 22 gpm |
| 9853GTW2 | Twin Pump | Pump | 2 | 2 | Elec | 22 gpm |
| 9853GX | Single Dispenser | Dispenser | 1 | 1 | Elec | 22 gpm |
| 9853GXTW1 | Twin Dispenser | Dispenser | 2 | 1 | Elec | 22 gpm |
| 9853GXTW2 | Twin Dispenser | Dispenser | 2 | 2 | Elec | 22 gpm |

| Feature | Description | 9853G |
|-------------------|--|--------|
| Approvals | Safety, UL and cUL Listed W&M, NCWM, Measurement Canada (MC) | S |
| Working Pressure | 50 psi maximum | S |
| Unit of Measure | Gallons/Liters Selectable | S |
| Filters | Internal spin-on style External canister style | S O |
| Piping | Internal fuel piping | 1" |
| Discharge | Hose connection-NPT | 1" |
| Satellite Piping | Satellite piping connections (S)-dispenser only | O |
| Inlet | Island connection-NPT | 1 1/2" |
| Junction Box | Field wiring junction box | S |
| Housing | G30 Galvanized steel | 13GA |
| Panels/Sheathing | Lockable removeable-precoated aluminum 2mm thick Lockable removeable-stainless steel-22 gauge | S O |
| Motors/voltages | 1HP 115/230 VAC, 60HZ 1HP 115/230 VAC, 50Hz | S O |
| Meter | Gilbarco 4 piston PD V10 meter | O |
| Calibration | Electronic | S |
| Pump models | GPU + gear pump | S |
| Solenoid valve | 2-stage valve for preset operations (PP) | 1" |
| Connectivity | 2 Wire Communication Protocol Pulse Output, Dual Channel | S |
| Brand Panel | Lighted brand panel | O |
| Totalizer | Mechanical 10-digit Totalizer | O |
| Power fail backup | Display retained 15 minutes | S |
| ATC | Automatic Temperature Compensation (Canada only) | O |

Operating Environment

| Environment | Range | |
|---|---------------------------|---|
| Relative humidity | 20% to 95% non-condensing | S |
| Electronics Minimum Ambient Temperature | -22°F (-30° C) | S |
| Electronics Maximum Ambient Temperature | 131°F (55° C) | S |
| Hydraulics Minimum Ambient Temperature | 29°C (-20°F) | S |
| Hydraulics Maximum Ambient Temperature | 52°C (125° F) | S |



1 Year Warranty

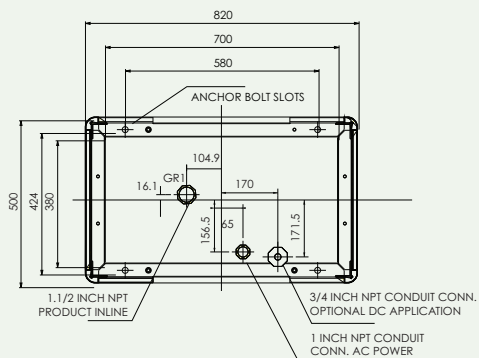
Commercial and Retail Pumps and Dispensers are warranted against defects in material and workmanship for 12 months from date of installation or 24 months from date of original invoice, whichever occurs first. AtlasX PRIME factory installed fuel management system electronics are also warranted against defects in material and workmanship for 12 months from date of installation or 24 months from date of original invoice. Warranty coverage for AtlasX and AtlasX PRIME includes parts and labor. Field-installed kits are warranted against defects in material and workmanship for 12 months from date of installation or 24 months from date of original invoice, whichever occurs first. The warranty coverage is for parts only.

S = Standard
O = Optional
– = Not available

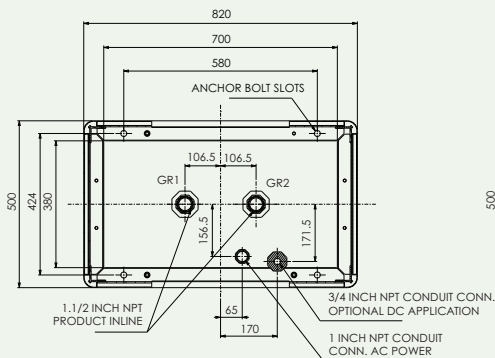
Technical Specification and Foundation Layout

(Measurements in mm)

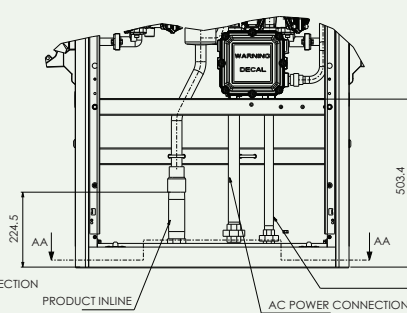
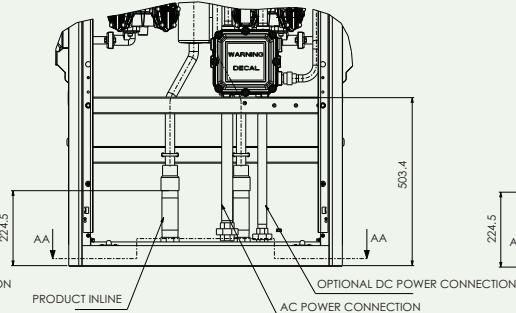
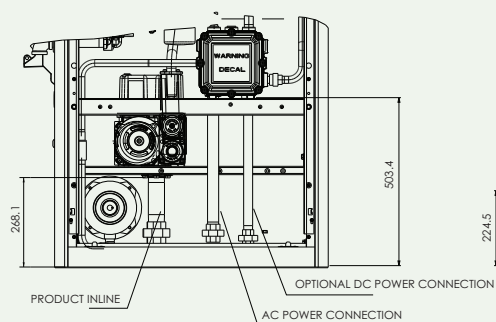
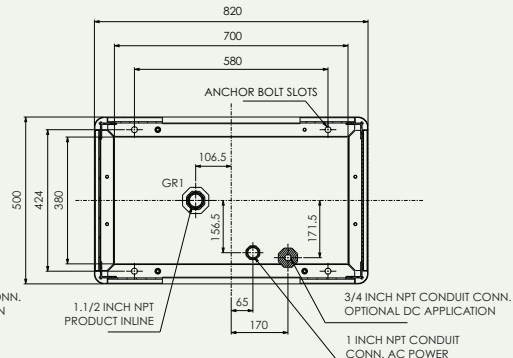
9853G



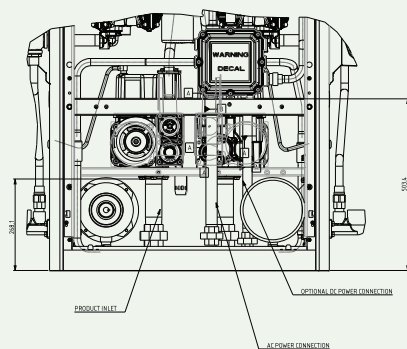
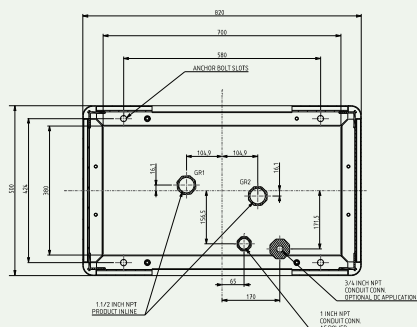
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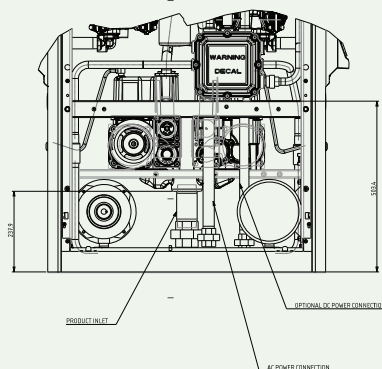
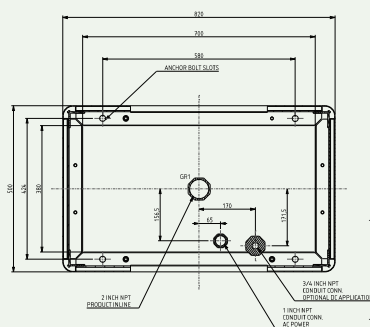
9853GX / 9853GXTW1



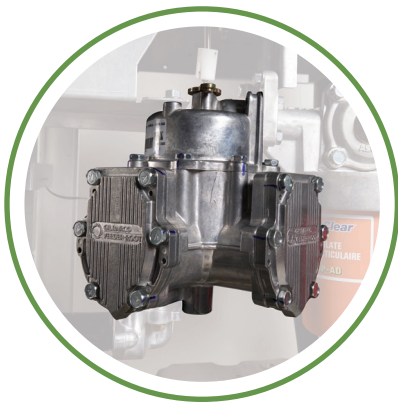
9853GTW2



9853GTW1M

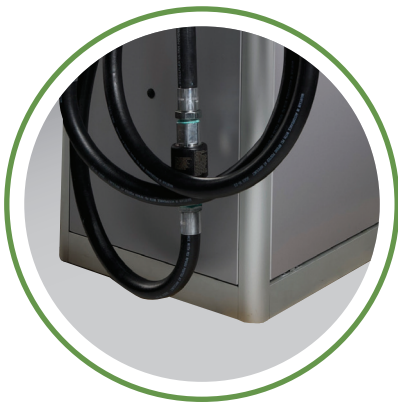


AtlasX Key Enhancements



Best-in-class engineering

The Gasboy 4 piston PD V10 Meter includes enhanced performance features that reduce calibration drift over time.



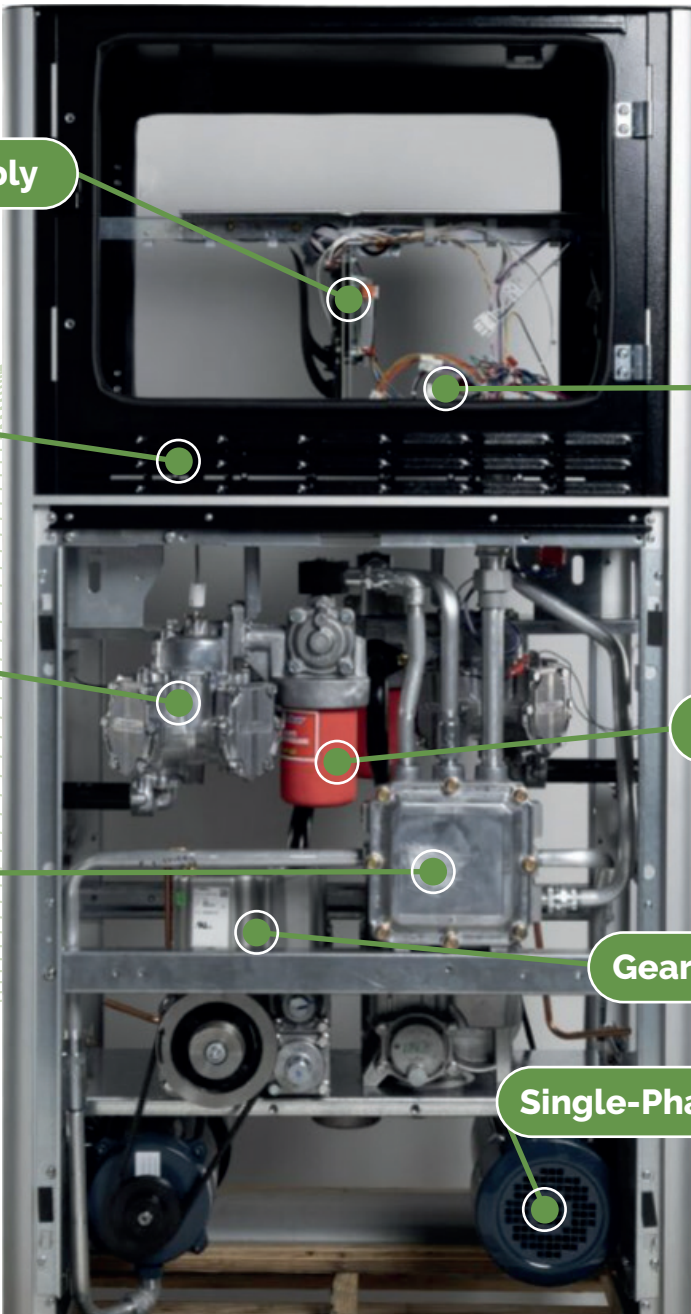
Modern design

Taller, sleeker design with smooth modern lines built with anodized aluminum panels that enable greater durability.



Future-proof

Modern Encore Electronics platform provides the foundation for future applications (remote diagnostics, remote software updates, secure payments etc.)



Manual Sink Faucets 2300-ABCP

Product Type

Deck-mounted manual faucet, single-hole mounting

Features & Specifications

- Single-hole
- Pressure compensating Softflo aerator 2.2 GPM
- 4-5/8" lever handle
- Ceramic operating cartridge with volume control and hot water limit stop
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.
- CFNow! Item Ships in 3 Days





Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F (Note: 180°F max. during temporary high-temperature system flush)

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1
- NOTE: This fitting is not intended to be sold in California after January 1, 2016
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI/CAN 61: Q ≤ 1

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

☐ Submitted as Shown

☐ Submitted with Variations

Date _____

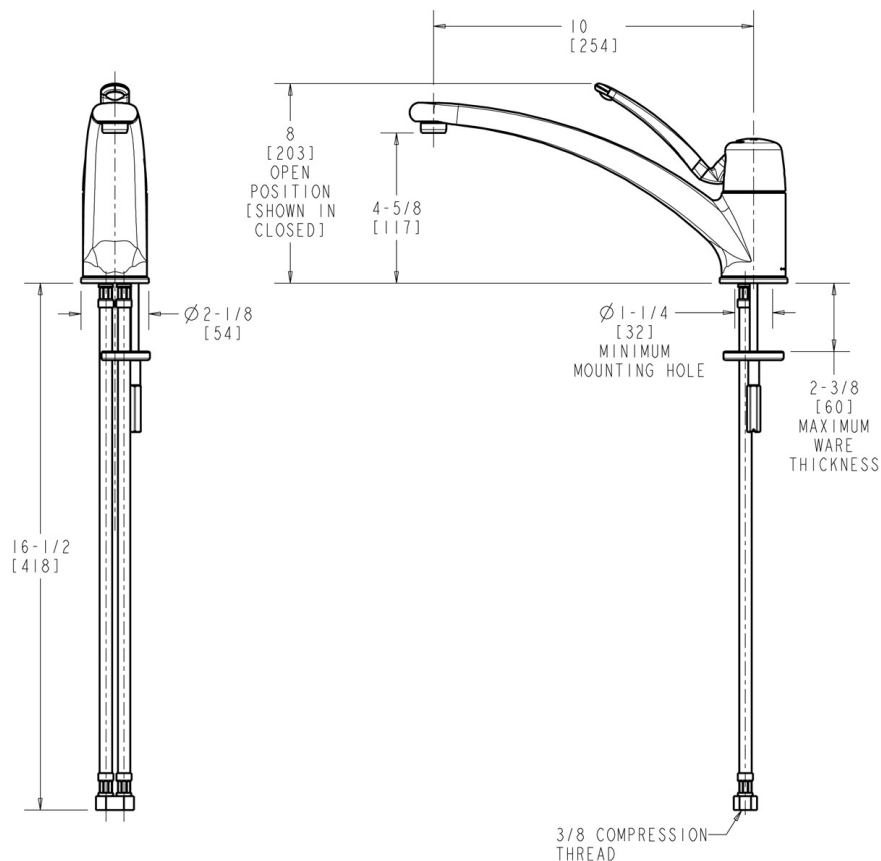


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 2300-ABCP, Sink Faucet for hot and cold water, single lever, single-hole deck mount, chrome plated. Integral, cast brass, swing spout, 10" center-to-center. 2.2 GPM (8.3 L/min) pressure compensating Softflo aerator. 4-5/8" metal lever handle with blue-and-red temperature indicator. Ceramic quarter-turn cartridge, features square, tapered stem. Flexible supply hoses with 3/8" compression fitting. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, and NSF/ANSI 372 Low Lead Content.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



SPECIFICATIONS

PRODUCT SPECIFICATIONS

Just Mfg Stainless Steel 37" x 22" x 6-1/2" Equal Double Bowl Drop-in ADA Sink. Sink is manufactured from 18 gauge 304 Stainless Steel with a Lustrous Satin finish, Rear Center drain placement, and Bottom only pads.

| | |
|------------------------------|----------------------------|
| Installation Type: | Drop-in |
| Material: | 304 Stainless Steel |
| Finish: | Lustrous Satin |
| Gauge: | 18 |
| Sound Deadening: | Bottom only pads |
| Number of Bowls: | 2 |
| Sink Dimensions: | 37" x 22" x 6-1/2" |
| Bowl 1 Dimensions: | 16" x 16" x 6-3/8" |
| Bowl 2 Dimensions: | 16" x 16" x 6-3/8" |
| Drain Size: | 3-1/2" (89mm) |
| Drain Location: | Rear Center |
| Minimum Cabinet Size: | 42" |
| Cutout Template #: | 1000001267 |

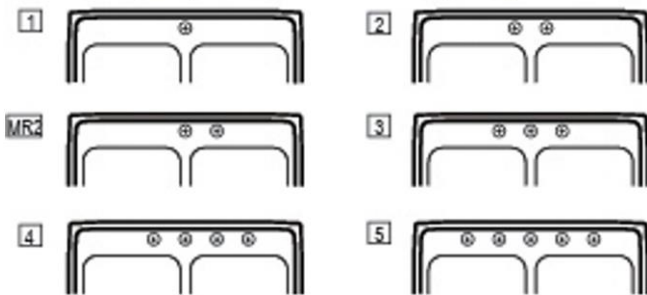
Template is available for download at justmfg.com. CAD software will be required to open the template.

Cutout Dimensions for Drop-in Installation:

36-3/8" x 21-3/8" (924mm x 543mm) with 1-1/2" (38mm) corner radius

Hole Drilling Configurations:

1-1/2" (38mm) Diameter Faucet Holes on 4" (102mm) Centers



Quality Grade Plumbing Products.

Since 1933 we have become the industry standard for designing and producing quality grade plumbing products and fixtures. Our role as an industry leader remains unsurpassed.



Product Compliance:

ASME A112.19.3/CSA B45.4
ADA & ICC A117.1

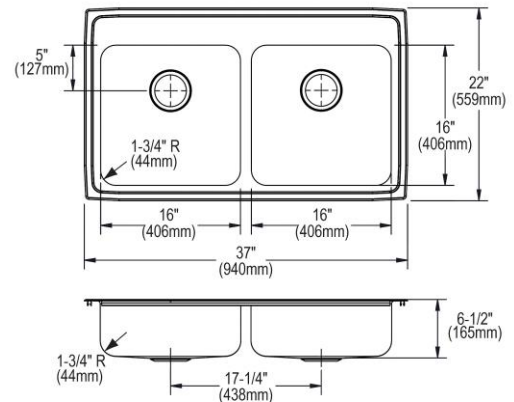


Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards.

[Clean and Care Manual \(PDF\)](#)

[Installation Instructions \(PDF\) - 2000000856](#)

[Warranty \(PDF\)](#)



PART: _____ QTY: _____

PROJECT: _____

CONTACT: _____

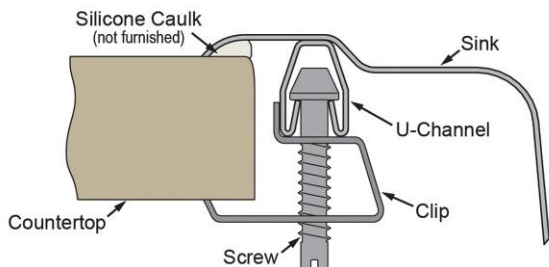
DATE: _____

NOTES: _____

APPROVAL: _____

In keeping with our policy of continuing product improvement, Just Mfg reserves the right to change product specifications without notice. Please visit justmfg.com for the most current version of Just Mfg product specification sheets. This specification describes a product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

SPECIFICATIONS

Model(s) DLADA2237A65-J**Installation Profile:**

In keeping with our policy of continuing product improvement, Just Mfg reserves the right to change product specifications without notice. Please visit justmfg.com for the most current version of Just Mfg product specification sheets. This specification describes a product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

Submittal Data

| | | |
|-----------------|------------------|-----------|
| PROJECT: | UNIT TAG: | QUANTITY: |
| REPRESENTATIVE: | TYPE OF SERVICE: | DATE: |
| ENGINEER: | SUBMITTED BY: | DATE: |
| CONTRACTOR: | APPROVED BY: | DATE: |
| | ORDER NO.: | DATE: |

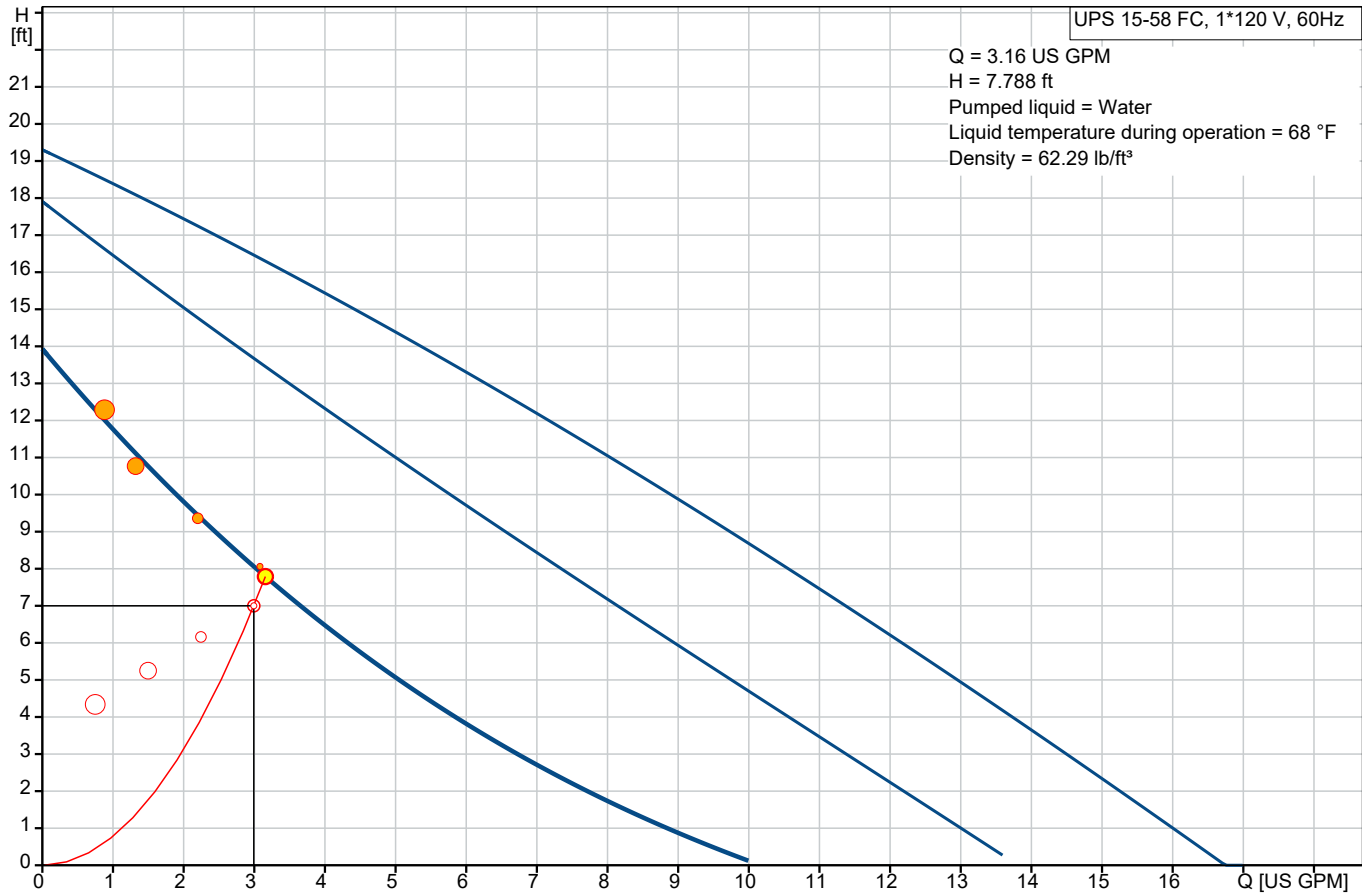


UPS 15-58 FC

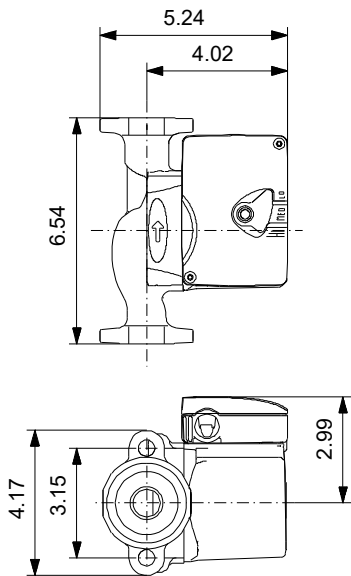
UPS is a three-speed circulator pump designed for heating and air-conditioning systems and is also used for central and district heating systems. The pump provides reliable and maintenance-free operation.

Note! Product picture may differ from actual product

| Conditions of Service | | Pump Data | | Motor Data | |
|-----------------------|-------------|------------------------------|----------------|---------------------|-------|
| Flow: | 3.16 US GPM | Liquid temperature range: | 35.6 .. 230 °F | Max. power input: | 87 W |
| Head: | 7.788 ft | Maximum ambient temperature: | 104 °F | Mains frequency: | 60 Hz |
| Efficiency: | 5.3 % | Type of connection: | C.I. Flange | Thermal protection: | IMP. |
| Liquid: | Water | Pipe connection: | 2-BOLT FLANGE | | |
| Temperature: | 68 °F | Product number: | 59896341 | | |
| NPSH required: | 32.81 ft | | | | |
| Specific Gravity: | 1.000 | | | | |



Submittal Data



Materials:
Pump housing: Cast iron
Pump housing: ASTM A48-25B
Impeller: Composite

Qty. Description

1 UPS 15-58 FC



Note! Product picture may differ from actual product

Product No.: [59896341](#)

The pump is of the canned rotor type, i.e. pump and motor form an integral unit without shaft seal and with only two gaskets for sealing.

The bearings are lubricated by the pumped liquid.

The pump has 3-step speed selector.

The pump is characterized by:

- * Ceramic shaft and radial bearings.
- * Carbon axial bearing.
- * Stainless steel rotor can and bearing plate.
- * Corrosion-resistant impeller, Composite.
- * Cast iron pump housing.

The motor is a 1-phase motor.

No additional motor protection is required.

Liquid:

Pumped liquid: Water
 Liquid temperature range: 35.6 .. 230 °F
 Selected liquid temperature: 68 °F
 Density: 62.29 lb/ft³
 Kinematic viscosity: 1 cSt

Technical:

Actual calculated flow: 3.16 US GPM
 Resulting head of the pump: 7.788 ft
 Approvals: UL, CSA

Materials:

Pump housing: Cast iron
 EN 1561 EN-GJL-200
 ASTM A48-25B
 Impeller: Composite
 PES+30% GF

Installation:

Maximum ambient temperature: 104 °F
 Amb. max at 80 dgr C liquid: 176 °F
 Maximum operating pressure: 145.04 psi
 Type of connection: 2-BOLT FLANGE
 C.I. Flange
 Pipe connection: 2-BOLT FLANGE
 Pressure rating for connection: PN 10
 Port-to-port length: 6.54 in

Electrical data:



Company name:

Created by:

Phone:

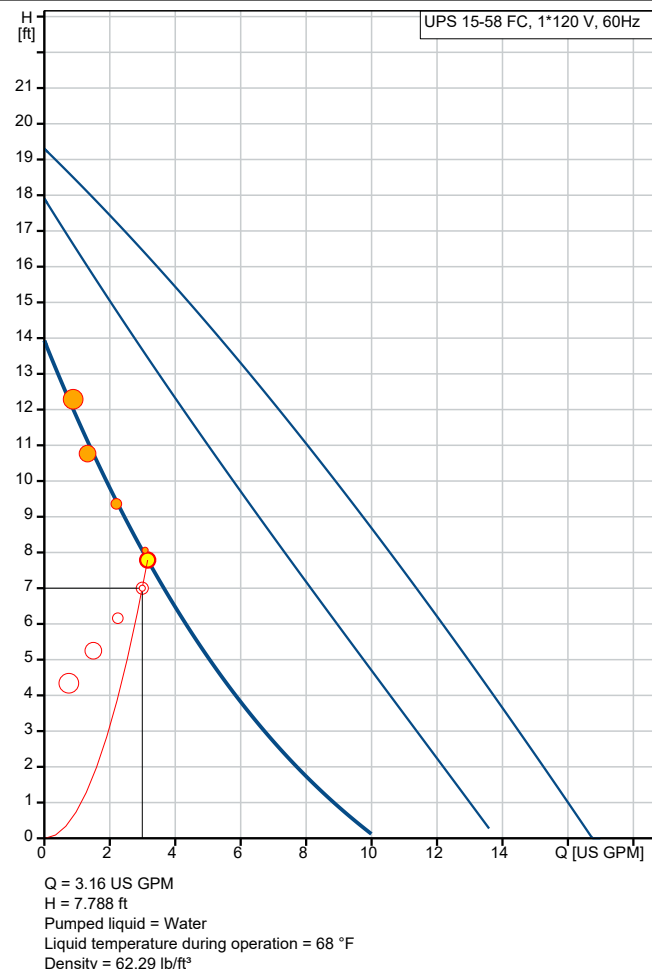
Date:

07/03/2024

| Qty. | Description |
|------|-------------|
|------|-------------|

| | |
|---|------------------------------------|
| 1 | Power input in speed 1: 0.0805 HP |
| | Power input in speed 2: 80 W |
| | Max. power input: 87 W |
| | Mains frequency: 60 Hz |
| | Rated voltage: 1 x 115 V |
| | Current in speed 1: 0.55 A |
| | Current in speed 2: 0.66 A |
| | Current in speed 3: 0.75 A |
| | Capacitor size - run: 10 µF/180 V |
| | Number of poles: 2 |
| | Insulation class (IEC 85): F |
| | Built-in motor protection: CONTACT |
| | Others: |
| | Terminal box position: 9H |
| | Net weight: 6.26 lb |
| | Gross weight: 6.75 lb |
| | Country of origin: US |
| | Custom tariff no.: 8413.70.2005 |

| Description | Value |
|---|--------------------|
| General information: | |
| Product name: | UPS 15-58 FC |
| Product No: | 59896341 |
| EAN number: | 5700395855203 |
| Technical: | |
| Speed no: | 3 |
| Actual calculated flow: | 3.16 US GPM |
| Max flow: | 17.2 US GPM |
| Resulting head of the pump: | 7.788 ft |
| Maximum head: | 19.36 ft |
| Approvals: | UL, CSA |
| Y = pump with built-in isolating and non-return valves: | Y |
| Materials: | |
| Pump housing: | Cast iron |
| Pump housing: | EN 1561 EN-GJL-200 |
| Pump housing: | ASTM A48-25B |
| Impeller: | Composite |
| Impeller: | PES+30% GF |
| Installation: | |
| Maximum ambient temperature: | 104 °F |
| Amb. max at 80 dgr C liquid: | 176 °F |
| Maximum operating pressure: | 145.04 psi |
| Type of connection: | 2-BOLT FLANGE |
| Type of connection: | C.I. Flange |
| Pipe connection: | 2-BOLT FLANGE |
| Pressure rating for connection: | PN 10 |
| Port-to-port length: | 6.54 in |
| Liquid: | |
| Pumped liquid: | Water |
| Liquid temperature range: | 35.6 .. 230 °F |
| Selected liquid temperature: | 68 °F |
| Density: | 62.29 lb/ft³ |
| Kinematic viscosity: | 1 cSt |
| Electrical data: | |
| Power input in speed 1: | 0.0805 HP |
| Power input in speed 2: | 80 W |
| Max. power input: | 87 W |
| Mains frequency: | 60 Hz |
| Rated voltage: | 1 x 115 V |
| Current in speed 1: | 0.55 A |
| Current in speed 2: | 0.66 A |
| Current in speed 3: | 0.75 A |
| Capacitor size - run: | 10 µF/180 V |
| Number of poles: | 2 |
| Insulation class (IEC 85): | F |
| Built-in motor protection: | CONTACT |
| Thermal protec: | IMP. |
| Others: | |
| Terminal box position: | 9H |
| Net weight: | 6.26 lb |
| Gross weight: | 6.75 lb |
| Country of origin: | US |
| Custom tariff no.: | 8413.70.2005 |



☐ **G1750** Eye/Face Wash, Wall Mounted, Stainless Steel Bowl



Application: Eye/face wash with stainless steel bowl for wall mounting. Two large FS-Plus™ spray-type outlet heads deliver a flood of water for rinsing eyes and face.

Spray Head Assembly: Two FS-Plus™ spray heads. Each head has a "flip top" dust cover, internal flow control and filter to remove impurities from the water flow.

Valve: 1/2" IPS chrome plated brass stay-open ball valve. Valve is US-made with chrome plated brass ball and PTFE seals.

Bowl: 11-1/8" diameter stainless steel.

Mounting: Heavy duty cast aluminum wall bracket with corrosion resistant powder coated finish.

Supply: 1/2" NPT female inlet.

Waste: 1-1/4" NPT female outlet.

Sign: ANSI-compliant identification sign.

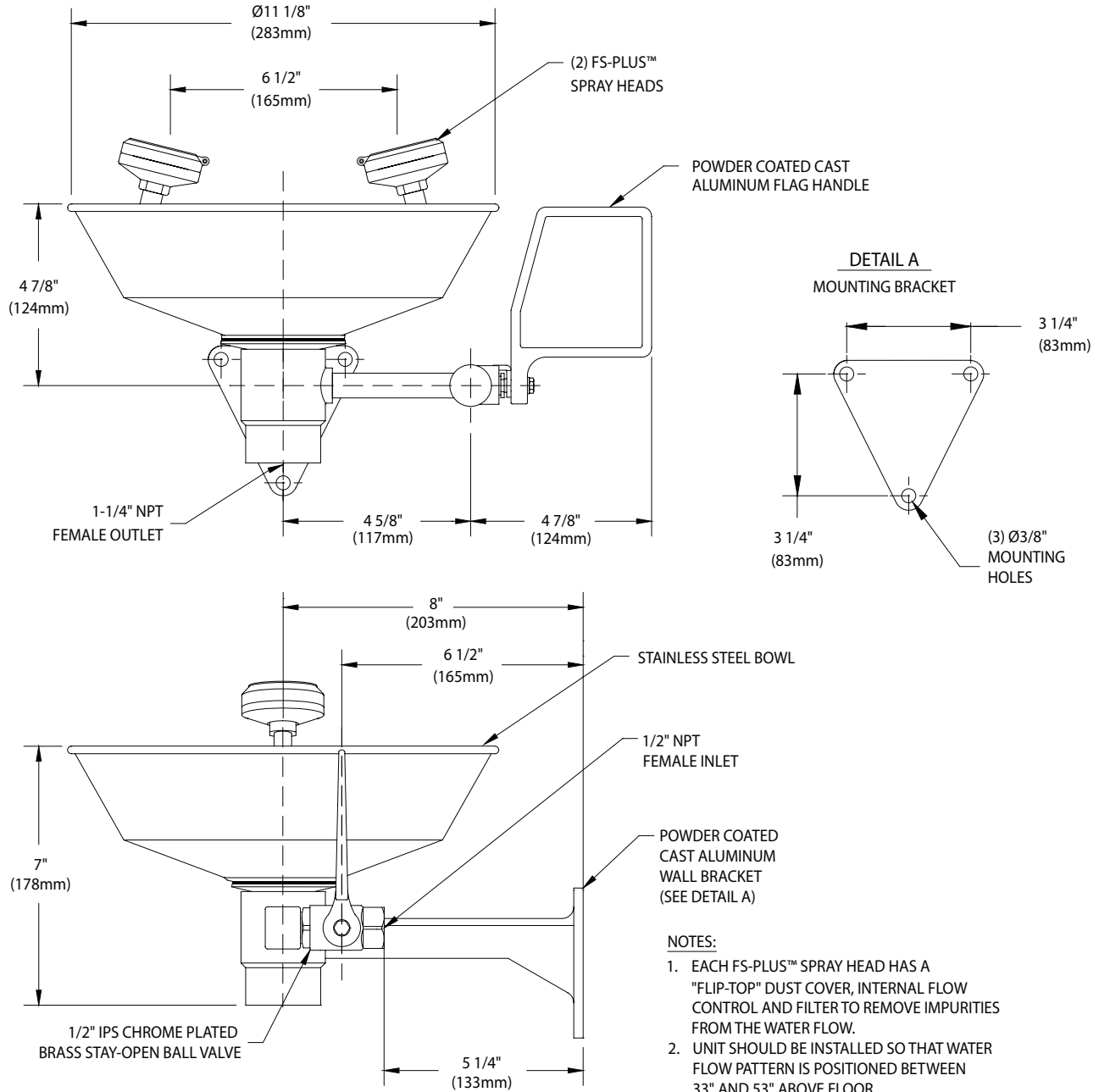
Quality Assurance: Unit is completely assembled and water tested prior to shipment.

Available Options

- ☐ **G6020** Thermostatic mixing valve precisely blends hot and cold water to deliver tepid water as required by ANSI Z358.1-2014. Refer to "Thermostatic Mixing Valves" section for complete technical and product selection information.
- ☐ **BC** Stainless steel bowl cover. Cover protects unit against contaminants. Cover is automatically raised when unit is activated.
- ☐ **HS** Auxiliary hand-held drench hose for rinsing eyes, face or body.
- ☐ **T** Chrome plated brass tailpiece and trap with 1-1/2" IPS waste connection.
- ☐ **TP** 1-1/2" OD chrome plated brass tailpiece.



□ G1750 Eye/Face Wash, Wall Mounted, Stainless Steel Bowl



THIS SPACE FOR ARCHITECT/ENGINEER APPROVAL

Due to continuing product improvement, the information contained in this document is subject to change without notice. All dimensions are $\pm 1/4"$ (6mm). rev. 081018

Sign Included





- ☐ **G1909** Safety Station with WideArea™ Eye/Face Wash, Stainless Steel Bowl
- ☐ **G1909P** Safety Station with WideArea™ Eye/Face Wash, Plastic Bowl

Application: Combination WideArea™ eye/face wash and shower safety station. Eye/face wash features four GS-Plus™ spray-type outlet heads that deliver a flood of water over a wide area of coverage for complete rinsing of eyes and face.

Shower Head: 10" diameter orange ABS plastic with 20 GPM flow control.

Shower Valve: 1" IPS chrome plated brass stay-open ball valve. Valve is US-made with chrome plated brass ball and PTFE seals. Furnished with stainless steel actuating arm and 29" stainless steel pull rod.

Spray Head Assembly: Four GS-Plus™ spray heads. Each head has a "flip top" dust cover, internal flow control and filter to remove impurities from water flow.

Eye/Face Wash Bowl: 11-1/8" diameter stainless steel (G1909) or 11-3/4" diameter orange ABS plastic (G1909P).

Eye/Face Wash Valve: 1/2" IPS chrome plated brass stay-open ball valve. Valve is US-made with chrome plated brass ball and PTFE seals.

Pipe And Fittings: Schedule 40 galvanized steel. Furnished with orange polyethylene pipe covers for high visibility and corrosion resistance.

Supply: 1-1/4" NPT female top or side inlet.

Waste: 1-1/4" NPT female outlet. Outlet can be positioned at either 9-1/4" or 19-5/8" above finished floor by reversing lower pipe nipples.

Sign: ANSI-compliant identification sign.

Quality Assurance: Valve and spray head assemblies are factory assembled and water tested prior to shipment.

Available Options

- ☐ **G6040** Thermostatic mixing valve precisely blends hot and cold water to deliver tepid water as required by ANSI Z358.1-2014. Refer to "Thermostatic Mixing Valves" section for complete technical and product information.
- ☐ **GC** Powder coated finish on galvanized pipe and fittings. Available colors include orange, yellow, red and green.
- ☐ **GRN** Green ABS plastic shower head.
- ☐ **YEL** Yellow ABS plastic shower head.
- ☐ **SSH** Stainless steel shower head.
- ☐ **AP275-200** Electric flashing light and alarm horn unit for mounting on wall or vertical pipe. Light illuminates and horn sounds when eye/face wash or shower is activated. Furnished complete with flow switch and mounting hardware.
- ☐ **AP250-015** Modesty curtain for mounting on safety station.



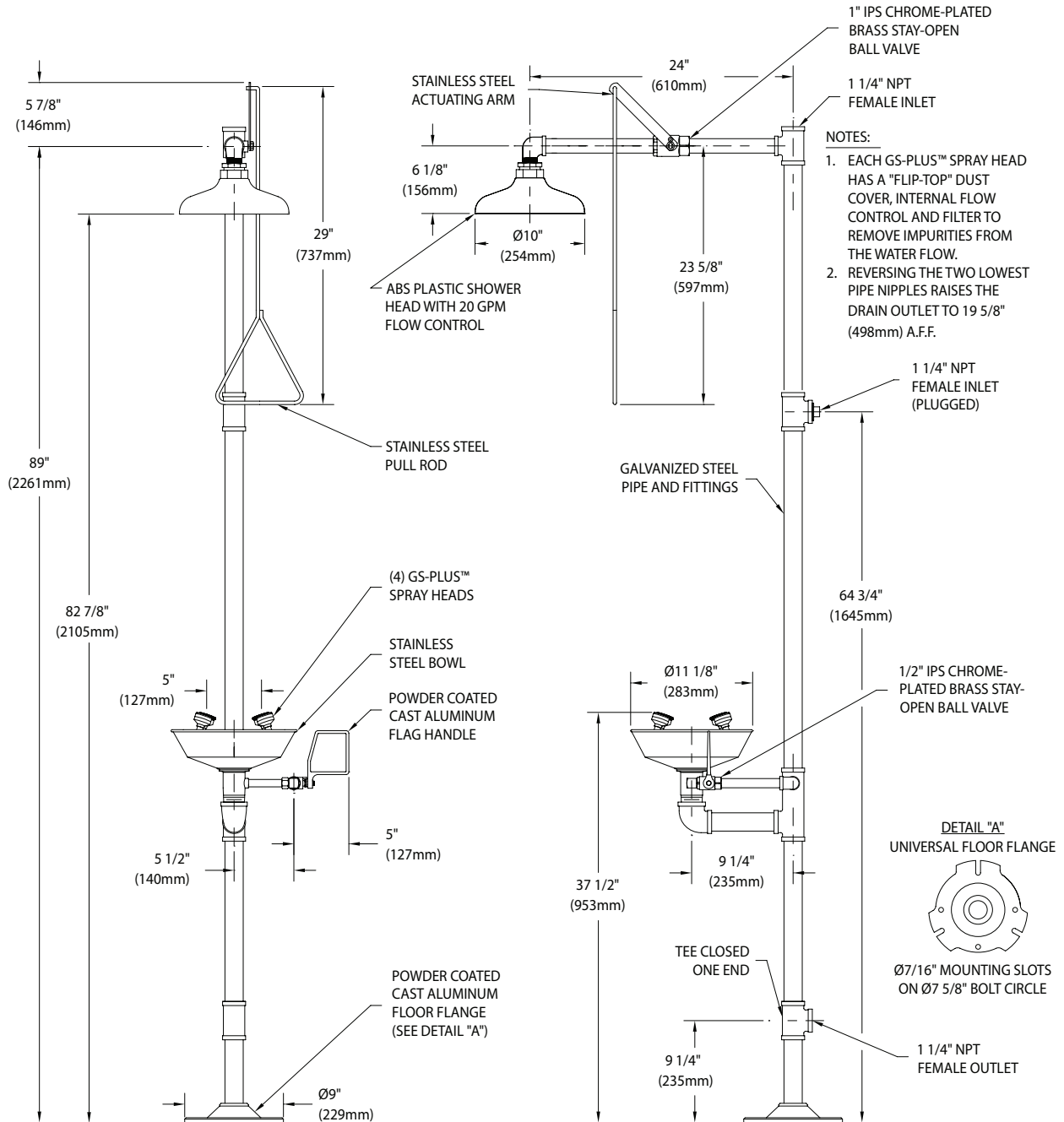


Guardian

Safety Stations with WideArea™ Eye/Face Wash

□ **G1909** Safety Station with WideArea™ Eye/Face Wash, Stainless Steel Bowl

□ **G1909P** Safety Station with WideArea™ Eye/Face Wash, Plastic Bowl



Rev. 022618

Sign Included



THIS SPACE FOR ARCHITECT/ENGINEER APPROVAL

Due to continuing product improvement, the information contained in this document is subject to change without notice. All dimensions are $\pm 1/4"$ (6mm). rev. 031419

Guardian Equipment
1140 N North Branch St
Chicago, IL 60642

312 447 8100 TELEPHONE
312 447 8101 FACSIMILE
gesafety.com

Listed 8116. Units have been tested to and comply with ANSI Z358.1-2014 and the Uniform Plumbing Code.





THERM-X-TROL®

Thermal Expansion Tanks: Diaphragm ST-C Series ASME

150 PSIG Working Pressure

Construction

| | |
|-------------------|---|
| Shell | ST-5C through ST-42VC: Deep Drawn Steel ST-60VC through ST-210VC: Steel Head & Shell |
| Diaphragm | Heavy Duty Butyl NSF/ANSI 61 |
| Liner | Antimicrobial Polypropylene w/Anti-Legionella Protection |
| System Connection | Stainless Steel |
| Finish | Red Oxide Primer |
| Water Circulator | Turbulator® (Deep Drawn Models) |
| Air Valve | Schrader Valve w/ EPDM Seat |
| Factory Precharge | 55 PSIG (3.8 bar) |

Performance

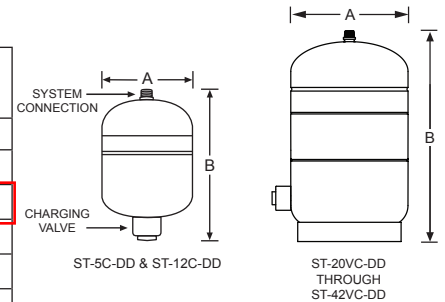
| | |
|-------------------------------|---------------------|
| Maximum Operating Temperature | 200°F (93°C) |
| Maximum Working Pressure | 150 PSIG (10.3 bar) |
| Warranty | 3-Years |

Application

- For use in closed, domestic hot water systems to control pressure buildup.
- Fixed diaphragm construction.
- Designed and constructed per ASME Code Section VIII, Division 1.
- Tested to JIS Z 2801 for reduction of Legionella, Staphylococcus and E. coli.
- Follows ASHRAE 188 Anti-Legionella guidelines.
- All models available with optional sight glass.
- Seismic restraints available on stand models only.
- Deep drawn models are lighter, stronger and more compact than traditional head and shell construction.

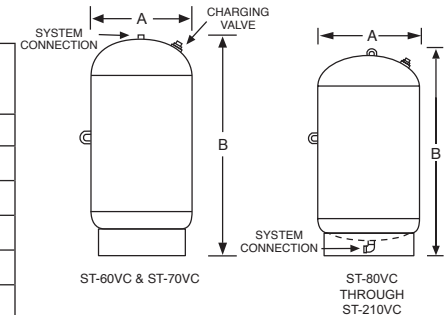
Deep Drawn In-Line & Stand Models

| Model Number | Tank Volume | | Max. Accept. Factor | A Tank Diameter | | B Tank Height | | System Conn. (NPTM) | Shipping Weight | |
|--------------|-------------|-----|---------------------|-----------------|-----|---------------|-----|---------------------|-----------------|----|
| | Gal | Lit | | In | mm | In | mm | | Lbs | Kg |
| ST-5C-DD | 2.0 | 8 | .45 | 8 | 203 | 14 | 356 | 3/4 | 10 | 5 |
| ST-12C-DD | 6.4 | 24 | .50 | 12 | 305 | 18 | 457 | 3/4 | 26 | 12 |
| ST-20VC-DD | 8.6 | 33 | .37 | 12 | 305 | 22 | 559 | 3/4 | 36 | 16 |
| ST-30VC-DD | 16.5 | 63 | .68 | 15 | 381 | 25 | 636 | 3/4 | 48 | 22 |
| ST-42VC-DD | 23.0 | 88 | .49 | 15 | 381 | 33 | 838 | 3/4 | 68 | 31 |



Head & Shell Stand Models

| Model Number | Tank Volume | | Max. Accept. Factor | A Tank Diameter | | B Tank Height | | System Conn. (NPTF) | Shipping Weight | |
|--------------|-------------|-----|---------------------|-----------------|-----|---------------|------|---------------------|-----------------|-----|
| | Gal | Lit | | In | mm | In | mm | | Lbs | Kg |
| ST-60VC | 25.0 | 95 | .44 | 16 | 406 | 32 | 813 | 3/4 | 85 | 39 |
| ST-70VC | 34.0 | 129 | .32 | 16 | 406 | 45 | 1143 | 3/4 | 99 | 45 |
| ST-80VC | 53.0 | 201 | .66 | 24 | 610 | 37 | 940 | 1 1/4 | 224 | 102 |
| ST-120VC | 68.0 | 257 | .51 | 24 | 610 | 44 | 1118 | 1 1/4 | 266 | 121 |
| ST-180VC | 77.0 | 291 | .45 | 24 | 610 | 49 | 1245 | 1 1/4 | 285 | 129 |
| ST-210VC | 90.0 | 341 | .39 | 24 | 610 | 57 | 1448 | 1 1/4 | 319 | 145 |



All dimensions and weights are approximate.

| | |
|------------------|-------------|
| Job Name _____ | Notes _____ |
| Engineer _____ | _____ |
| Contractor _____ | _____ |
| P.O. No. _____ | _____ |
| Sales Rep. _____ | _____ |
| Model No. _____ | _____ |

188
AntiLegionella.

Antimicrobial



Location: _____



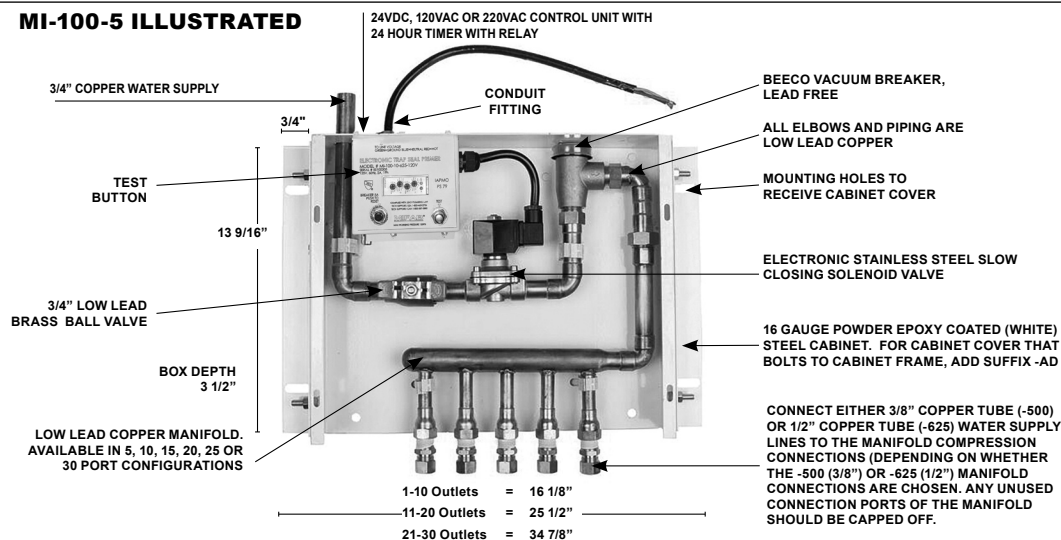
MI-100

ENCLOSED ELECTRONIC TRAP SEAL PRIMER

Specification: The MI-100 is engineered for equal distribution of water to all ports. It's the perfect solution to keep sewer gas from entering the building from seldom used floor drains. The MI-100 can be located anywhere in the water supply and is engineered to permit the building owner to adjust the frequency and amount of water delivery through a timer and stainless steel solenoid valve. A manifold ensures that a minimum of 2 ounces of water are delivered to every port over a twenty-four hour period. The unit must be mounted 12" above the finished floor for every 20' of water supply line. The MI-100 can be installed with a cabinet cover. The system is capable of priming from 1 to 30 floor drain traps. The MI-100 is practical to serve many floor drain traps in infrequently used buildings such as convention centers and sports facilities. The MI-100 is made of lead free materials that touch water.

Function: The MI-200 is engineered to connect to the low-voltage building energy management system used to control the services in commercial, educational and institutional buildings. It can be located anywhere in the water supply. The MI-200 is practical for infrequently used buildings such as convention centers and sports facilities. It is manufactured in accordance to the ANSI/ASME A112.1.2 air gap in plumbing systems Standard. The UA 12" x 12" access door is suggested for access to the MI-200 when installed into the wall.

MI-100-5 ILLUSTRATED



"The newly designed MI-100 with all brass and metal manifold construction has been a big improvement on the overall quality and performance of this electric trap primer. It has been a great improvement for the commercial environments we install and design in."

— Gary Risse, Project Engineer, Intech Mechanical, Roseville, CA

The MI-100 Series of electronic trap seal primers are tested and third party listed to the A.S.S.E. 1044 Standard.

Note: All of MIFAB's electronic trap seal primers ordered with the 24VDC power option are equipped with a 120VAC plug adapter. The 120VAC plug adapter is designed to plug into a standard 120VAC three prong outlet. The plug adapter converts the voltage from 120VAC to 24VDC. The electronic trap seal primer internal components operate on the 24VDC supplied by the plug adapter. 24VAC direct connect electrical supply is also available, Specify Suffix -24VAC. No add.

M-200

| MODEL NO. | DESCRIPTION | SHIPPING WT. |
|-----------|----------------------------------|--------------|
| MI-100-5 | 1-5 opening ports with cabinet | 25 lbs. |
| MI-100-10 | 6-10 opening ports with cabinet | 26 lbs. |
| MI-100-15 | 11-15 opening ports with cabinet | 27 lbs. |
| MI-100-20 | 16-20 opening ports with cabinet | 28 lbs. |
| MI-100-25 | 21-25 opening ports with cabinet | 35 lbs. |
| MI-100-30 | 26-30 opening ports with cabinet | 36 lbs. |

The MI-100 Series of electronic trap seal primers are tested and third party listed to the A.S.S.E. 1044 Standard.

Specify Suffix - LM for MI-100 without the copper manifold for single drain line use. (1/2" F.I.P. connection) and **See current TSP price book.**

24VAC direct connect electrical supply is also available, Specify Suffix -24VAC. No Add.

| SUFFIX | OPTIONAL VARIATIONS |
|--------|---|
| -3P | 120VAC 3 Prong plug |
| -A | Allen key lock for access door (door is separate) |
| -AD | Cabinet Cover (bolted to cabinet frame and non hinged) (16 gauge powder epoxy coated steel white) |
| -ADSS | Stainless Steel (Type 304) Cabinet Cover (bolted to cabinet frame and non hinged) (16 gauge fabricated stainless steel (Type 304) |
| -BA | Buy American Act compliant product |
| -BP | Battery Pack |
| -C | Cylinder key lock for access door (door is separate) |
| -DW | Drywall bead frame for access door (5" cabinet depth) (door is separate) |
| -ENC | Steel Cabinet to enclose MI-200 / MI-300 (16 gauge powder epoxy coated steel (white) cabinet |
| -ENCSS | Stainless Steel (Type 304) Cabinet to enclose MI-200 / MI-300 (16 gauge fabricated stainless steel (Type 304) |

| | |
|---------|---|
| -MFRU | Uninsulated fire rated access door, flush mount (6" minimum overall depth) (door is separate) |
| -PL | Paddle latch for access door (door is separate) |
| -SS | Stainless Steel (Type 304) Cabinet (16 gauge fabricated stainless steel (Type 304) (MI-100, MI-100-DR) |
| -UA | Access door, prime coated (5" minimum overall depth) |
| -UASS | Access door, stainless steel (5" minimum overall depth) |
| -24VAC | 24VAC |
| -24VDC | 24VAC |
| -75WS | 3/4" water supply connection |
| -120VAC | 120VAC |
| -220VAC | 220VAC |
| -500 | 3/8" copper tube connection ports |
| -625 | 1/2" copper tube connection ports |

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____

Page No: _____

Section No: _____

Contractor: _____

Schedule No: _____

Purchase Order No: _____

Location: _____



MI-100

**ENCLOSED ELECTRONIC TRAP
SEAL PRIMER**

TRAP SEAL PRIMER TROUBLESHOOTING

Following are some things to trouble shoot when it comes to our M-500-NPB Series of Trap Seal Primers (M1-500-NPB, M2-500-NPB, MR-500-NPB).

1) What is the line pressure for the Installation?

The M-500-NPB Series will work in 35-80psi.

2) How far away is the trap seal primer from the source of the pressure drop?

Anything farther away than 20 feet is an issue, as the farther the primer is away from the source of the pressure drop, the less likely it will sense it and work.

3) What is the pressure drop where the primer is?

MIFAB's M-500-NPB Series of primers will work with as little as 3 psi in pressure drop. With today's low flow and consumption faucets, there is less pressure drop being created when the faucets and toilets are used.

4) Water hammer arrestors on the line can also affect pressure drop in the line.

It would be best to get a pressure reading where the trap primer is installed. The M-500-NPB series needs a fast, sharp pressure drop to activate. The long pipe run to the trap primer and the water hammer arrestor may not be allowing the trap primer to function properly.

5) Look at the gauge fluctuation

Is it a quick and sharp pressure drop? Or did it gradually drop? The trap primers need a quick pressure drop to activate. A slow gradual pressure drop may not be enough to activate the M-500-NPB. That is why we state that they should be as close to the pressure drop source as possible. The M1-500 has the most buoyant cartridge and should perform the best. If the trap primer looked good and was filled with water then it is the rate of the pressure drop that is causing the issue.

**Also refer to the copy in the Trap Seal Primer section in
the current MPB List Price book.**

CALIFORNIA PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____

Page No: _____

Section No: _____

Contractor: _____

Schedule No: _____

Purchase Order No: _____

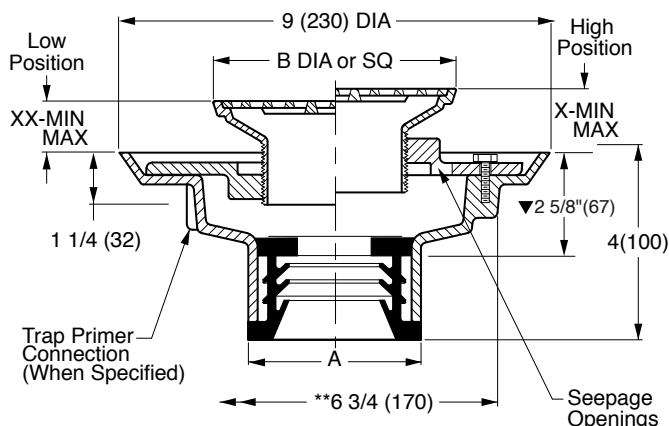
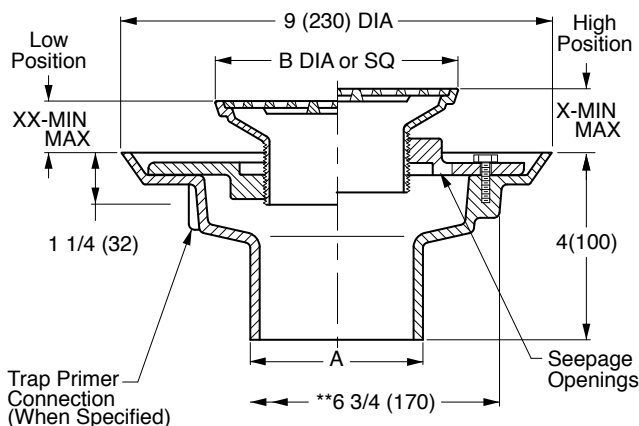
| | | | | | | | | | | |
|---|--|----------------------|---|----------|----------|-------------------------|----------------------|---------------|--------------------|--|
| P | <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;"> SMITH® JAY R. SMITH MFG. CO.® <small>MEMBER OF MORRIS GROUP INTERNATIONAL POST OFFICE BOX 3237 MONTGOMERY, ALABAMA 36109-0237 (USA) TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com</small> </div> <div style="text-align: center;"> <small>MEMBER OF:</small> </div> <div style="text-align: center;"> <small>MEMBER OF:</small> </div> </div> | | | | | LOCATION | | | | |
| | <h2 style="margin: 0;">FLOOR CLEANOUTS WITH "TWIS-TO-FLOOR®" ADJUSTABLE TOPS FOR UNFINISHED AREAS</h2> | | | | | | | | | |
| 4220 SERIES | DRAWING NUMBER | S4220 | | | | | | | | |
| | SIZE | A | | | | | | | | |
| | SCALE: | NONE | | | | | | | | |
| | DATE: | 2-16-70 | | | | | | | | |
| | APPROVED BY: | JM | | | | | | | | |
| CHECKED BY: | BH | | | | | | | | | |
| DRAWN BY: | RK | | | | | | | | | |
| <small>WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA</small> <small>DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE</small> | | | | | | | | | | |
| <h3 style="margin: 0;">ROUND EXTRA HEAVY DUTY CAST IRON TOP</h3> <p style="margin: 5px 0;">FUNCTION: Used in floors and areas where appearance of cast iron is satisfactory. Will withstand heavy load traffic.</p> <p style="margin: 10px 0;">"A" (Pipe Size) = 02(50), 03(75) or 04(100)</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p>REGULARLY FURNISHED: Duco Cast Iron Cleanout with Round Adjustable Scoriated Secured Cast Iron Top. Closure Plug Type as Indicated By Figure Number Selected.</p> </div> <div style="width: 45%;"> <p>VARIATIONS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Flashing Flange -F <input type="checkbox"/> Flange with Flashing Clamp -F-C <input type="checkbox"/> Vandal Proof Top -U </div> </div> <div style="margin-top: 20px;"> <p>OPTIONAL MATERIALS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Galvanized Cast Iron -G <input type="checkbox"/> Ductile Iron Cover -M </div> <p style="margin-top: 20px;">(Twis-to-Floor® design shown with gasketed plug.)</p> <p>NOTE: Dimensions shown in parentheses are in millimeters.</p> | | | | | | | | | | |
| FIGURE NUMBER | P N | 05/08/07 12/17/04 | Revised Outlet Text Added Width Dimension at Top | JJ JJ | CL CL | WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER | 4220 SERIES | |
| REV. | DATE | DESCRIPTION | | | BY | CKD. BY | | | | |



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

FLOOR OR SHOWER DRAINS WITH ADJUSTABLE STRAINER HEADS

FUNCTION: General service floor drain for use in showers, toilets, kitchens and other finished areas where foot traffic is expected. The round top strainer head is used for all types of poured finished floors. The square top is particularly adaptable to floors that are finished in material of square or straight line pattern. Reversible flashing collar permits adjustment of the strainer to meet finished floor level.



A (Pipe Size) = 02(50), 03(75), 04(100), 05(125) or 06(150)

NO-HUB OUTLET

- ☐ Fig. 2005Y.....(A) ROUND TOP
☐ Fig. 2005Y.....(B) SQUARE TOP

| Outlet Size | Nickel Bronze Strainer Head |
|-------------|-----------------------------|
| ▲ 02(50) | 05(125) DIA or SQ |
| ▲ 03(75) | 06(150) DIA or SQ |
| ▲ 04(100) | 08(205) DIA or SQ |

SPEEDI-SET OUTLET

- ☐ Fig. 2005L.....(A) ROUND TOP
☐ Fig. 2005L.....(B) SQUARE TOP

| Strainer Size B | *Collar In High Position X | | *Collar In Low Position XX | | Free Area SQ IN (SQ CM) | |
|-----------------|----------------------------|-----------|----------------------------|-----------|-------------------------|--------------|
| | DIA or SQ | MIN | MAX | MIN | MAX | ROUND SQUARE |
| 05 (125) | 1 1/4(32) | 2 1/4(57) | 3/4(19) | 1 5/8(41) | 7(45) | 6.5(42) |
| 06 (150) | 1 1/4(32) | 2 1/4(57) | 3/4(19) | 1 5/8(41) | 9(58) | 12.5(81) |
| 07 (180) | 1 1/4(32) | 2 1/4(57) | 7/8(22) | 1 7/8(48) | 14(90) | 11(71) |
| 08 (205) | 1 1/2(38) | 2 1/2(64) | 1(25) | 1 7/8(48) | 17(110) | 14(90) |
| *09 (230) | 1 1/2(38) | 2 3/8(60) | 1(25) | 1 7/8(48) | 18(116) | 16(103) |
| *10 (255) | 1 1/2(38) | 2 3/8(60) | 1(25) | 1 7/8(48) | 23(48) | 16(103) |

- ▼ This dimension to internal stop of speedi-set gasket.
 • Add 3/8"(10) to all min/max dimensions for round strainers.
 * Collar is reversible to obtain extreme high and low strainer positions.
 ** Not available for 5"(125) size strainer.
 ** MIN 6 3/4"(170) hole required for core drilled application.

REGULARLY FURNISHED:

Duco Cast Iron Body with Flashing Collar and Adjustable Strainer Head as Indicated by Suffix Letter Selected.

VARIATIONS:

- ☐ Flapper Type Backwater Valve -V
☐ Hinged Grate -H
☐ L Speedi-Set Service Weight 2(50), 3(75) & 4"(100) only
☐ LXH Speedi-Set Extra Heavy 2(50), 3(75) & 4"(100) only
☐ Sediment Bucket -B
☐ Trap Primer Connection -P050 1/2" (13) & -P075 3/4" (19)
☐ Vandal Proof Screws -U
☐ Wide Flanged Strainer (Specify Fig. DX2005)
☐ T Threaded Outlet
☐ Heelproof Grate -HP -AHP (Round) or -BHP (Square)
☐ Quad Close Trap Seal (Specify Fig. 2692)

OPTIONAL MATERIALS:

- ☐ Bronze Body -BB
☐ Chrome Plated Strainer -CP
☐ Galvanized Cast Iron Body -G
☐ Nickel Bronze Strainer -NB
☐ Polished Bronze Strainer -PB
☐ All Stainless Steel (Specify Fig. 9700)
☐ Stainless Steel Strainers -SS [Available in 05(125) & 06(150) sizes only]

NOTE: Dimensions shown in parentheses are in millimeters.

- ▲ Meets ASME Standard A112.6.3-2001 02(50), 03(75) or 04"(100) sizes only.





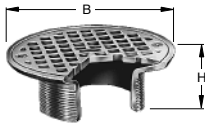
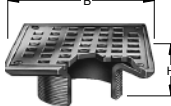
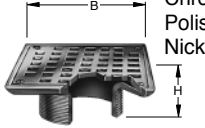
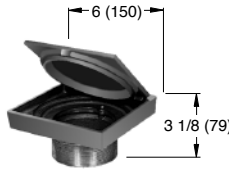
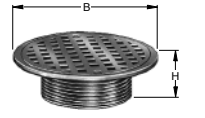
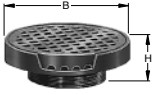
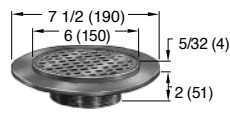
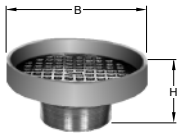
SEE PM0457 FOR OPTIONAL STRAINER HEADS.

| REV. | DATE | DESCRIPTION | BY | CKD. BY |
|------|----------|----------------------------|-----|---------|
| S | 11-3-16 | Revised Optional Materials | TBW | CL |
| R | 6-10-15 | Revised Variations | TBW | CL |
| Q | 11-18-11 | Rev. Dwg., Var. | TBW | CR |
| P | 11-20-09 | Revised Variations | RN | BW |

| WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER |
|---------------|-------------------|---------------|
| | | 2005 |



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

| H |     | | | | LOCATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|-------------------------------------|------------------------------|--|------------|------------|------------|---|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|------------|------------|------------|------------|------------|------------|------------|--|---|--|-----|-------|----------|----------|------------|------------|------------|--------|----------|------------|------------|------------|------------|------------|------------|------------|-------|------------|------------|------------|
| | OPTIONAL STRAINER HEADS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ROUND STRAINER | | | FLAPPER TYPE BACKWATER VALVE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| |  <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB Stainless Steel Strainers -SS [Available in 05(125) & 06(150) sizes only]</p> <p>VARIATIONS: •Hinged Grate (Specify Suffix -AH) Sediment Bucket -B Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>B DIA</th> <th>05 (125)</th> <th>06 (150)</th> <th>07 (180)</th> <th>08 (205)</th> <th>09 (230)</th> <th>10 (255)</th> </tr> <tr> <td>H</td> <td>2 (51)</td> <td>2 (51)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> <td>2 1/2 (64)</td> <td>2 3/4 (70)</td> </tr> <tr> <td>X MIN</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/2 (38)</td> <td>1 1/2 (38)</td> <td>1 1/2 (38)</td> </tr> <tr> <td>X MAX</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> <td>2 1/2 (64)</td> <td>2 3/4 (70)</td> </tr> </table> <p>Specify Type, Size & Finish eg: A05NB *Not available for 05" (125) size</p> | | | B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | 09 (230) | 10 (255) | H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | 2 1/2 (64) | 2 3/4 (70) | X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 1/2 (38) | 1 1/2 (38) | X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 1/2 (64) | 2 3/4 (70) |  <p>FUNCTION: Provides backwater protection at point where protection is needed.</p> <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: •Hinged Grate (Specify Suffix -AH) Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>B DIA</th> <th>05 (125)</th> <th>06 (150)</th> <th>07 (180)</th> <th>08 (205)</th> </tr> <tr> <td>H</td> <td>2 (51)</td> <td>2 (51)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> </tr> <tr> <td>X MIN</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/2 (38)</td> </tr> <tr> <td>X MAX</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> </tr> </table> <p>Specify Type, Size & Finish eg: AV05NB *Not available for 05" (125) size</p> | | | B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) |
| B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | 09 (230) | 10 (255) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | 2 1/2 (64) | 2 3/4 (70) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 1/2 (38) | 1 1/2 (38) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 1/2 (64) | 2 3/4 (70) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX -A | | | SUFFIX -AV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SQUARE STRAINER | | | STRAINER HEAD w/SQUARE HINGED COVER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: Flapper Type Backwater Valve (Specify Suffix -BV) 05 (125), 06 (150), 07 (180) or 08" (205) sizes only *Hinged Grate (Specify Suffix -BH) Sediment Bucket -B Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>B DIA</th> <th>05 (125)</th> <th>06 (150)</th> <th>07 (180)</th> <th>08 (205)</th> <th>09 (230)</th> <th>10 (255)</th> </tr> <tr> <td>H</td> <td>2 (51)</td> <td>2 (51)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> </tr> <tr> <td>X MIN</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/2 (38)</td> <td>1 1/2 (38)</td> <td>1 1/2 (38)</td> </tr> <tr> <td>X MAX</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> <td>2 1/4 (57)</td> <td>2 3/8 (60)</td> </tr> </table> <p>Specify Type, Size & Finish eg: B05NB *Not available for 05" (125) size</p> | | | B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | 09 (230) | 10 (255) | H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | 2 1/4 (57) | 2 1/4 (57) | X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 1/2 (38) | 1 1/2 (38) | X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 1/4 (57) | 2 3/8 (60) |  <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: Gasketed Water Tight Cover -GC Secured Cover -SC Secondary Strainer Grate-SG</p> <p>Specify Type, Size & Finish eg: BSNB</p> | | | | | | | | | | | | | | | | | | | | | | |
| B DIA | 05 (125) | 06 (150) | 07 (180) | 08 (205) | 09 (230) | 10 (255) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 2 (51) | 2 (51) | 2 1/4 (57) | 2 1/2 (64) | 2 1/4 (57) | 2 1/4 (57) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 1/2 (38) | 1 1/2 (38) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 1/4 (57) | 2 3/8 (60) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX -B | | | SUFFIX -BS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REINFORCED ROUND STRAINER | | | REINFORCED TRACTOR STRAINER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>FUNCTION: Used in finished floors where light wheeled loads are anticipated.</p>  <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: Flapper Type Backwater Valve (Specify Suffix -CV) Sediment Bucket -B Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>B DIA</th> <th>05 (125)</th> <th>06 (150)</th> <th>08 (205)</th> <th>10 (255)</th> </tr> <tr> <td>H</td> <td>2 (51)</td> <td>2 (51)</td> <td>2 1/2 (64)</td> <td>2 3/4 (70)</td> </tr> <tr> <td>MIN</td> <td>1 1/4 (32)</td> <td>1 1/4 (32)</td> <td>1 1/2 (38)</td> <td>1 7/8 (48)</td> </tr> <tr> <td>MAX</td> <td>2 1/4 (57)</td> <td>2 1/4 (57)</td> <td>2 1/2 (64)</td> <td>2 3/4 (70)</td> </tr> </table> <p>Specify Type, Size & Finish eg: C06NB</p> | | | B DIA | 05 (125) | 06 (150) | 08 (205) | 10 (255) | H | 2 (51) | 2 (51) | 2 1/2 (64) | 2 3/4 (70) | MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 7/8 (48) | MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 3/4 (70) | <p>FUNCTION: Used in finished floors where medium weight wheeled loads are anticipated and loose set non-tilt tractor grate is desired.</p>  <p>MATERIALS: Cast Iron -CI Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: Flapper Type Backwater Valve (Specify Suffix -DV or -EV) Sediment Bucket -B Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>SUFFIX</th> <th>B DIA</th> <th>H</th> <th colspan="2">X</th> </tr> <tr> <td></td> <td></td> <td></td> <td>MIN</td> <td>MAX</td> </tr> <tr> <td>-D</td> <td>07 (180)</td> <td>3 1/4 (83)</td> <td>2 5/8 (67)</td> <td>3 1/2 (89)</td> </tr> <tr> <td>-E</td> <td>09 (230)</td> <td>3 1/2 (89)</td> <td>2 3/4 (70)</td> <td>3 1/2 (89)</td> </tr> </table> <p>Specify Type, Size & Finish eg: D09PB E09PB</p> | | | SUFFIX | B DIA | H | X | | | | | MIN | MAX | -D | 07 (180) | 3 1/4 (83) | 2 5/8 (67) | 3 1/2 (89) | -E | 09 (230) | 3 1/2 (89) | 2 3/4 (70) | 3 1/2 (89) | | | | | | | | |
| B DIA | 05 (125) | 06 (150) | 08 (205) | 10 (255) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 2 (51) | 2 (51) | 2 1/2 (64) | 2 3/4 (70) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN | 1 1/4 (32) | 1 1/4 (32) | 1 1/2 (38) | 1 7/8 (48) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAX | 2 1/4 (57) | 2 1/4 (57) | 2 1/2 (64) | 2 3/4 (70) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX | B DIA | H | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | MIN | MAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -D | 07 (180) | 3 1/4 (83) | 2 5/8 (67) | 3 1/2 (89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -E | 09 (230) | 3 1/2 (89) | 2 3/4 (70) | 3 1/2 (89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX -C | | | SUFFIX -D-E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TILE FLANGE | | | ADJUSTABLE STRAINER HEAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>FUNCTION: Provides integral flange set 5/32" (4) below rim to receive floor covering. Flange may have option of tapped holes for securing pan and gasket.</p>  <p>MATERIALS: Chrome Plated -CP Polished Bronze -PB Nickel Bronze -NB</p> <p>VARIATIONS: Flapper Type Backwater Valve (Specify Suffix -FV) Holes in Flange -SH Sediment Bucket -B Vandal Proof Screws -U</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="2">X</th> </tr> <tr> <td>MIN</td> <td>MAX</td> </tr> <tr> <td>1 1/4 (32)</td> <td>2 1/8 (54)</td> </tr> </table> <p>Specify Type, Size & Finish eg: F06NB</p> | | | X | | MIN | MAX | 1 1/4 (32) | 2 1/8 (54) | <p>FUNCTION: Used in a non-traffic area when a funnel type strainer head is required and space does not allow use of the 3500 series funnel. The extended rim allows use as an anti-flood and anti-splash drip pan.</p>  <p>VARIATIONS: Flapper Type Backwater Valve (Specify Suffix -F37V or F38V)</p> <p>MATERIALS: Cast Iron -CI Chrome Plated -CP Galvanized Cast Iron -G Polished Bronze -PB Nickel Bronze -NB</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>SUFFIX</th> <th>-F37</th> <th>-F38</th> </tr> <tr> <td>B DIA</td> <td>07 (180)</td> <td>09 (230)</td> </tr> <tr> <td>H</td> <td>3 1/4 (83)</td> <td>3 1/2 (89)</td> </tr> <tr> <td>X MIN</td> <td>2 5/8 (67)</td> <td>2 3/4 (70)</td> </tr> <tr> <td>X MAX</td> <td>3 1/2 (89)</td> <td>3 1/2 (89)</td> </tr> </table> <p>Specify Type, Size & Finish eg: F37NB F38CP</p> | | | SUFFIX | -F37 | -F38 | B DIA | 07 (180) | 09 (230) | H | 3 1/4 (83) | 3 1/2 (89) | X MIN | 2 5/8 (67) | 2 3/4 (70) | X MAX | 3 1/2 (89) | 3 1/2 (89) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN | MAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 1/4 (32) | 2 1/8 (54) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX | -F37 | -F38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B DIA | 07 (180) | 09 (230) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 3 1/4 (83) | 3 1/2 (89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MIN | 2 5/8 (67) | 2 3/4 (70) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X MAX | 3 1/2 (89) | 3 1/2 (89) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUFFIX -F | | | SUFFIX -F37-F38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H G E F | 11-3-16 10-4-01 8-24-99 6-11-99 | Revised Suffix-A Revised Suffix-BS Revised Revised Tables | TBW RN TBW CMD | CL CL BS | FIGURE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV. | DATE | DESCRIPTION | BY | CKD. BY | 2010 SERIES OPTIONAL STRAINER HEADS 1 of 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NOTE: Dimensions shown in parentheses are in millimeters.



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

| R | <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;"> SMITH® JAY R. SMITH MFG. CO.® <small>MEMBER OF MORRIS GROUP INTERNATIONAL POST OFFICE BOX 3237 MONTGOMERY, ALABAMA 36109-0237 (USA) TEL: 334-277-8520 FAX: 888-377-7818 www.jrsmith.com</small> </div> <div style="text-align: center;"> <small>MEMBER OF:</small> </div> <div style="text-align: center;"> <small>MEMBER OF:</small> </div> <div style="text-align: center;"> <small>MEMBER OF:</small> </div> </div> | | | | LOCATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|----------|----------|-------------------------|---------------|--------------------|-------------|--------------------------|----------------------|--------------------------|--------------------------|-----|---------------------|--------------------------|-----|---------------------------|--------------------------|-----|---------------------------|--------------------------|-----|---|--------------------------|-----|--|--------------------------|-----|----------------------------------|--------------------------|-----|---|--------------------------|-----|---|--------------------------|-----|---|--------------------------|-----|--|--------------------------|-----|-----------------------------|--------------------------|-----|---------------------------------|--------------------------|-----|---------------------------------|--------------------------|-----|--|
| | SANI-CEPTOR® ACID RESISTANT COATED FLOOR & INDIRECT WASTE DRAINS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SQUARE NICKEL BRONZE TOP 8 1/2" (215) TOP - MEDIUM RECEPTORS Conforms to ASME A112.6.7/CSA B79.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> WITH DOME BOTTOM STRAINER </div> <div style="text-align: center;"> WITH SEDIMENT BUCKET </div> </div> <p style="text-align: center;">Free Area 19.43 SQ IN (125) SQ CM</p> <p style="text-align: center;">A (Pipe Size) = 02(50), 03(75) or 04(100)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Fig. 3100C CAULK OUTLET <input type="checkbox"/> Fig. 3100Y NO-HUB OUTLET </div> <div> <input type="checkbox"/> Fig. 3101C <input type="checkbox"/> Fig. 3101Y </div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FEATURES, OPTIONS & ORDERING INFORMATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REGULARLY FURNISHED: Cast Iron Flanged Receptor with Seepage Holes, Acid Resistant Coated Interior, Nickel Bronze Rim and Secured ADA Grate. Aluminum Dome Bottom Strainer or White ABS Sediment Bucket as Indicated by Figure Number. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> OPTIONAL MATERIALS: <input type="checkbox"/> All Duco Cast Iron Receptor -CI <input type="checkbox"/> All Galvanized Receptor -G </div> <div style="width: 45%;"> VARIATIONS: <input type="checkbox"/> Aluminum Flat Bottom Strainer -FBS <input type="checkbox"/> Flashing Clamp -C <input type="checkbox"/> Polished Aluminum Dome Bottom Strainer -PDBS <input type="checkbox"/> Vandal Proof Screws -U <input type="checkbox"/> L Speedi-Set® Service Weight <input type="checkbox"/> LXH Speedi-Set® Extra Heavy <input type="checkbox"/> S.S. Mesh Lined Bucket -BS <input type="checkbox"/> Drain Installation Device -DID </div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 10%;">SUFFIX NUMBER</th> <th style="width: 10%;">SQUARE RIM</th> <th style="width: 80%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/></td><td>-10</td><td>Less NB Rim and Grate</td></tr> <tr><td><input type="checkbox"/></td><td>-11</td><td>Less Grate w/NB Rim</td></tr> <tr><td><input type="checkbox"/></td><td>-12</td><td>With NB Rim and 1/2 Grate</td></tr> <tr><td><input type="checkbox"/></td><td>-13</td><td>With NB Rim and 3/4 Grate</td></tr> <tr><td><input type="checkbox"/></td><td>-14</td><td>With NB Rim and Grate with 2 1/2" (64) SQ Center Hole</td></tr> <tr><td><input type="checkbox"/></td><td>-15</td><td>With NB Rim and Aluminum Recessed Grate (Fig. 3100 Only)</td></tr> <tr><td><input type="checkbox"/></td><td>-19</td><td>With NB Rim and Hinged ADA Grate</td></tr> <tr><td><input type="checkbox"/></td><td>-21</td><td>With NB Rim and Grate with 4" (100) DIA NB Funnel</td></tr> <tr><td><input type="checkbox"/></td><td>-22</td><td>With NB Rim and Grate with 6" (150) DIA NB Funnel</td></tr> <tr><td><input type="checkbox"/></td><td>-25</td><td>With NB Rim and Grate with 8 1/4(210) x 3 1/4(83) x 4 1/2"(115) High Oval NB Funnel</td></tr> <tr><td><input type="checkbox"/></td><td>-26</td><td>With NB Rim and Grate with 6(150) x 2 1/2(64) x 1"(25) High Oval NB Funnel</td></tr> <tr><td><input type="checkbox"/></td><td>-41</td><td>With NB Rim and Solid Cover</td></tr> <tr><td><input type="checkbox"/></td><td>-42</td><td>With NB Rim and 1/2 Solid Cover</td></tr> <tr><td><input type="checkbox"/></td><td>-43</td><td>With NB Rim and 3/4 Solid Cover</td></tr> <tr><td><input type="checkbox"/></td><td>-44</td><td>With NB Rim and Solid Cover with 2 1/2" (64) DIA Center Hole</td></tr> </tbody> </table> | | | | | | SUFFIX NUMBER | SQUARE RIM | DESCRIPTION | <input type="checkbox"/> | -10 | Less NB Rim and Grate | <input type="checkbox"/> | -11 | Less Grate w/NB Rim | <input type="checkbox"/> | -12 | With NB Rim and 1/2 Grate | <input type="checkbox"/> | -13 | With NB Rim and 3/4 Grate | <input type="checkbox"/> | -14 | With NB Rim and Grate with 2 1/2" (64) SQ Center Hole | <input type="checkbox"/> | -15 | With NB Rim and Aluminum Recessed Grate (Fig. 3100 Only) | <input type="checkbox"/> | -19 | With NB Rim and Hinged ADA Grate | <input type="checkbox"/> | -21 | With NB Rim and Grate with 4" (100) DIA NB Funnel | <input type="checkbox"/> | -22 | With NB Rim and Grate with 6" (150) DIA NB Funnel | <input type="checkbox"/> | -25 | With NB Rim and Grate with 8 1/4(210) x 3 1/4(83) x 4 1/2"(115) High Oval NB Funnel | <input type="checkbox"/> | -26 | With NB Rim and Grate with 6(150) x 2 1/2(64) x 1"(25) High Oval NB Funnel | <input type="checkbox"/> | -41 | With NB Rim and Solid Cover | <input type="checkbox"/> | -42 | With NB Rim and 1/2 Solid Cover | <input type="checkbox"/> | -43 | With NB Rim and 3/4 Solid Cover | <input type="checkbox"/> | -44 | With NB Rim and Solid Cover with 2 1/2" (64) DIA Center Hole |
| SUFFIX NUMBER | SQUARE RIM | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -10 | Less NB Rim and Grate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -11 | Less Grate w/NB Rim | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -12 | With NB Rim and 1/2 Grate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -13 | With NB Rim and 3/4 Grate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -14 | With NB Rim and Grate with 2 1/2" (64) SQ Center Hole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -15 | With NB Rim and Aluminum Recessed Grate (Fig. 3100 Only) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -19 | With NB Rim and Hinged ADA Grate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -21 | With NB Rim and Grate with 4" (100) DIA NB Funnel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -22 | With NB Rim and Grate with 6" (150) DIA NB Funnel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -25 | With NB Rim and Grate with 8 1/4(210) x 3 1/4(83) x 4 1/2"(115) High Oval NB Funnel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -26 | With NB Rim and Grate with 6(150) x 2 1/2(64) x 1"(25) High Oval NB Funnel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -41 | With NB Rim and Solid Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -42 | With NB Rim and 1/2 Solid Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -43 | With NB Rim and 3/4 Solid Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | -44 | With NB Rim and Solid Cover with 2 1/2" (64) DIA Center Hole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTE: Dimensions shown in parentheses are in millimeters. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FIGURE NUMBER | R | P | Q | N | REV. | DATE | DESCRIPTION | BY | CKD. BY | WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div style="display: flex; justify-content: space-between; align-items: center;"> <div> 4-19-24 2-21-24 7-28-23 3-13-23 </div> <div> Added ASME Note Revised Variations Removed Function Added ® to Speedi-Set </div> <div> HS HS HS KK </div> <div> BW CL CL CL </div> <div> </div> <div> </div> <div> 3100, 3101 </div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Anti-Siphon Wall Faucets

Model 24/B24/Y24

The Model 24 and B24 are anti-siphon, vacuum breaker protected wall faucets designed for irrigation purposes in mild climate areas. The Model B24 is enclosed in a flush mounted wall box. Both models are designed to blend with modern architecture for installation on or in homes, service stations, churches, motels, drive-in restaurants, etc. The Model Y24 is designed to be used on a stand pipe in the lawn and garden, etc.

SPECIFICATIONS:

VACUUM BREAKER - ANTI-SIPHON:

- NIDEL® Model 34HF with $\frac{3}{4}$ inch male hose thread
- ASSE Standard 1011 approved
- IAPMO® listed
- Canadian Standards Association

EPDM PACKING: Prevents leaking.

PACKING NUT: Adjustable brass nut with deep stem guard.

VALVE SEAT: Standard "O" size washer.

HANDLES: Furnished with polycarbonate wheel handle and loose tee key.

Optional: Metal wheel handle.

INLETS: Model 24 as shown below.
Model B24: 24P- $\frac{1}{2}$ or 24P $\frac{3}{4}$ only.
Model Y24: $\frac{3}{4}$ " FPT.

MAX PRESSURE: 125 p.s.i.

MAX TEMPERATURE: 120° F

SHIPPING WEIGHT: (per unit)

MODEL 24 & Y24: 1 lb

MODEL B24: 13 lbs (brass or chrome box)
6 lbs (aluminum box)



MODEL 24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)



MODEL B24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Brass (PB)

Other Options: Anodized Aluminum Box (AL)



MODEL Y24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)

Inlet Descriptions

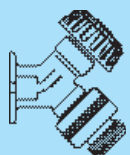
MODEL 24/B24

P- $\frac{1}{2}$ Inlet

$\frac{1}{2}$ " FPT

P- $\frac{3}{4}$ Inlet

$\frac{3}{4}$ " FPT



MODEL 24 ONLY

CP Inlet

COMBINATION

$\frac{1}{2}$ " COPPER TUBE

$\frac{1}{2}$ " MPT



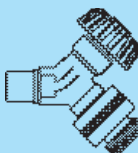
MODEL 24 ONLY

C Inlet

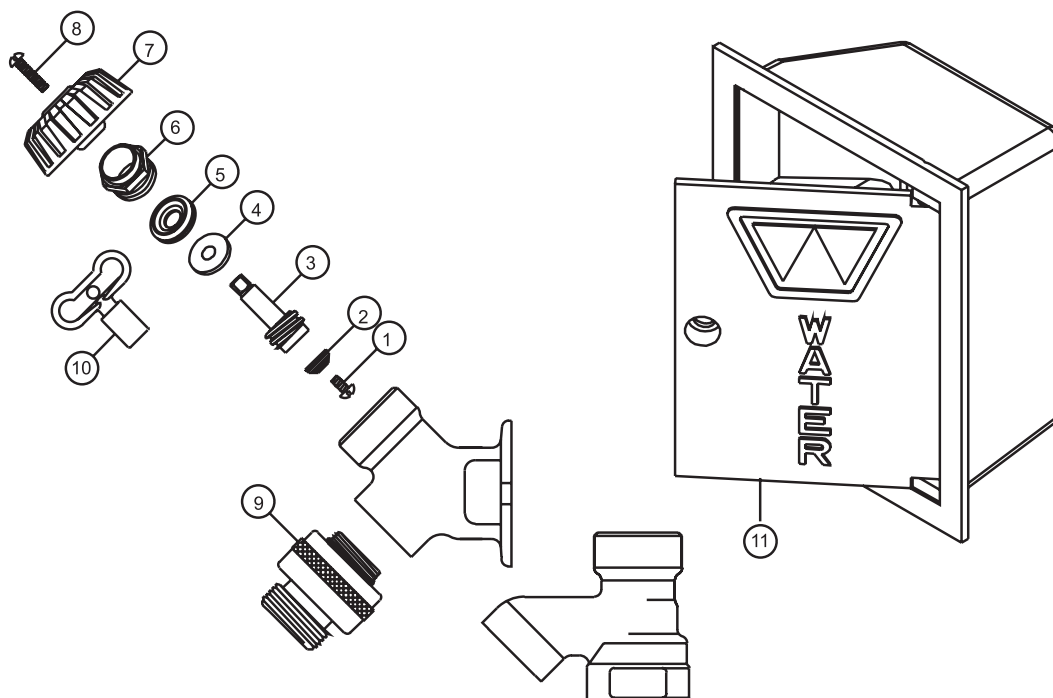
COMBINATION

$\frac{1}{2}$ " COPPER TUBE

$\frac{3}{4}$ " COPPER TUBE



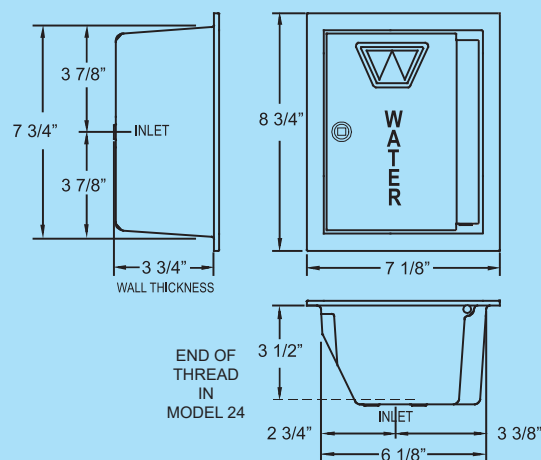
**For Installation / Troubleshooting Instructions go to
www.woodfordmfg.com or call 1-800-621-6032**



MODEL 24/B24/Y24 PARTS LIST

| ITEM | PART# | DESCRIPTION |
|------|----------|--|
| 1 | 30009 | Washer Screw |
| 2 | 30008 | Washer |
| 3 | 30104 | Operating Stem |
| 4 | 30105 | Packing Support Washer |
| 5 | 30247 | EPDM Packing |
| 6 | 30109 | Packing Nut - Chrome |
| | 30107 | Packing Nut - Brass |
| 7 | 30120 | Wheel Handle - Clear |
| | 30233 | Wheel Handle - Tan |
| 8 | 30121 | Handle Screw - Nickel |
| | 30002 | Handle Screw - Brass |
| 9 | 34HF-CH | 34HF Vacuum Breaker - Chrome |
| | 34HF-BR | 34HF Vacuum Breaker - Brass |
| 10 | 50009 | Tee Key |
| 11 | B24BX | Box/Door Assembly - Chrome |
| | B24BX-BR | Box/Door Assembly - Brass |
| | B24BX-PB | Box/Door Assembly - Polished Brass |
| | B24BX-AL | Box/Door Assembly - Anodized Aluminum |
| | RK-24 | Chrome Repair Kit (Includes items 1-8) |
| | RK-H34 | Brass Repair Kit (Includes items 1-8) |

MODEL B24 Rough-In Dimensions



Patent Information is available at <https://www.Woodfordmfg.com/patents/>

For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC.

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

Manual Sink Faucets 897-CCP

Product Type

Wall-mounted manual faucet with 8" centers

Features & Specifications

- Handles include color-coded index
- Includes supply stops
- 8" body, adjustable arms 7-5/8" - 8-3/8" centers
- Vandal Proof 2-3/8" lever handle
- Ceramic 1/4-turn operating cartridge, right-hand
- Ceramic 1/4-turn operating cartridge, left-hand
- 3/8" Offset Inlet Supply Arm with Integral Check
- Complies with the requirements of the Buy American Act of 1933.
- CFNow! Item Ships in 3 Days



Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

☐ Submitted as Shown

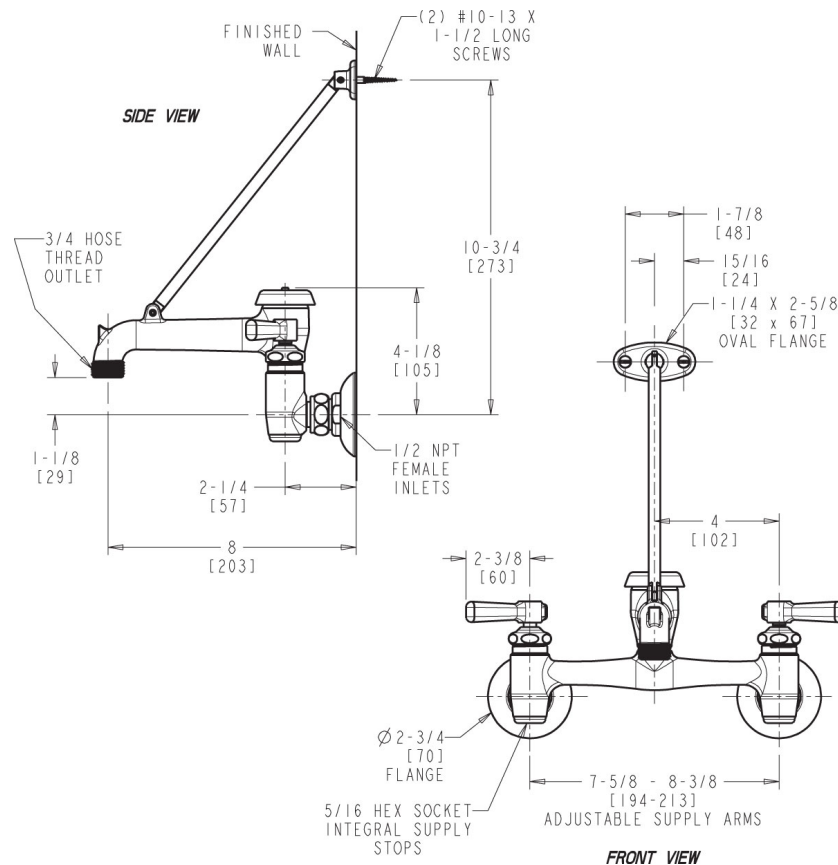
☐ Submitted with Variations

Date _____



Architect/Engineer Specification

Chicago Faucets No. 897-CCP, Sink Faucet for hot and cold water, wall-mounted with 7-5/8" - 8-3/8" adjustable centers. Body and spout made of durable cast brass with polished chrome finish. Includes integral hot and cold water supply stops. Vacuum breaker spout with pail hook and wall brace. 2-3/8" metal, vandal-proof, lever handles with sixteen-point, tapered broach and secured blue and red index buttons. Quatern™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. Adjustable supply arms include 1/2" NPT female union nut and integral check valves. 3/4" male hose thread outlet. Round wall escutcheons. Integral stop valves for servicing the faucet. NOTE: Atmospheric vacuum breaker is NOT intended for continuous pressure applications. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



SPECIFICATIONS

PRODUCT SPECIFICATIONS

Just Mfg Stainless Steel 27" x 27" x 16" Single Station Laundry Tub Sink w/Integra Drain. Sink is manufactured from 14 gauge 304 Stainless Steel with a Buffed Satin finish, Rear Center drain placement.

| | |
|----------------------------------|---------------------|
| Material: | 304 Stainless Steel |
| Finish: | Buffed Satin |
| Gauge: | 14 |
| Weight Without Packaging: | 76 |
| Number of Bowls: | 1 |
| Sink Dimensions: | 27" x 27" x 33" |
| Bowl 1 Dimensions: | 24" x 24" x 16" |
| Drainboard Location: | No drainboard |
| Drain Size: | 3-1/2" (89mm) |
| Drain Location: | Rear Center |
| Minimum Cabinet Size: | 9999" |



Included with Product: Integra Drain

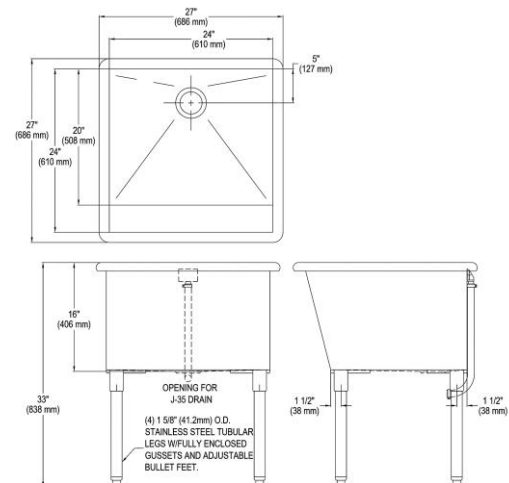
Quality Grade Plumbing Products.
 Since 1933 we have become the industry standard for designing and producing quality grade plumbing products and fixtures. Our role as an industry leader remains unsurpassed.



Product Compliance: ASME A112.19.3/CSA B45.4



[Clean and Care Manual \(PDF\)](#)
[Warranty \(PDF\)](#)



PART: _____ QTY: _____

PROJECT: _____

CONTACT: _____

DATE: _____

NOTES: _____

APPROVAL: _____

In keeping with our policy of continuing product improvement, Just Mfg reserves the right to change product specifications without notice. Please visit justmfg.com for the most current version of Just Mfg product specification sheets. This specification describes a product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.



SPECIFICATIONS

Just Mfg Stainless Steel 27" x 27" x 16" Single Station Laundry
Tub Sink w/Integra Drain
Model(s) J127JHL-35-J

In keeping with our policy of continuing product improvement, Just Mfg reserves the right to change product specifications without notice. Please visit justmfg.com for the most current version of Just Mfg product specification sheets. This specification describes a product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

Manual Sink Faucets 2200-4VPE64AABCP

Product Type

Deck-mounted manual faucet with 4" centers

Features & Specifications

- 4" fixed centers
- Vandal Proof Pressure compensating laminar flow non-aerating outlet 1.0 GPM
- 2-3/4" lever handle
- Ceramic operating cartridge with volume control and hot water limit stop
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.

Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

- ASME A112.18.1/CSA B125.1
- ADA ANSI/ICC A117.1
- NSF/ANSI/CAN 61: Q ≤ 1
- Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

☐ Submitted as Shown

☐ Submitted with Variations

Date _____

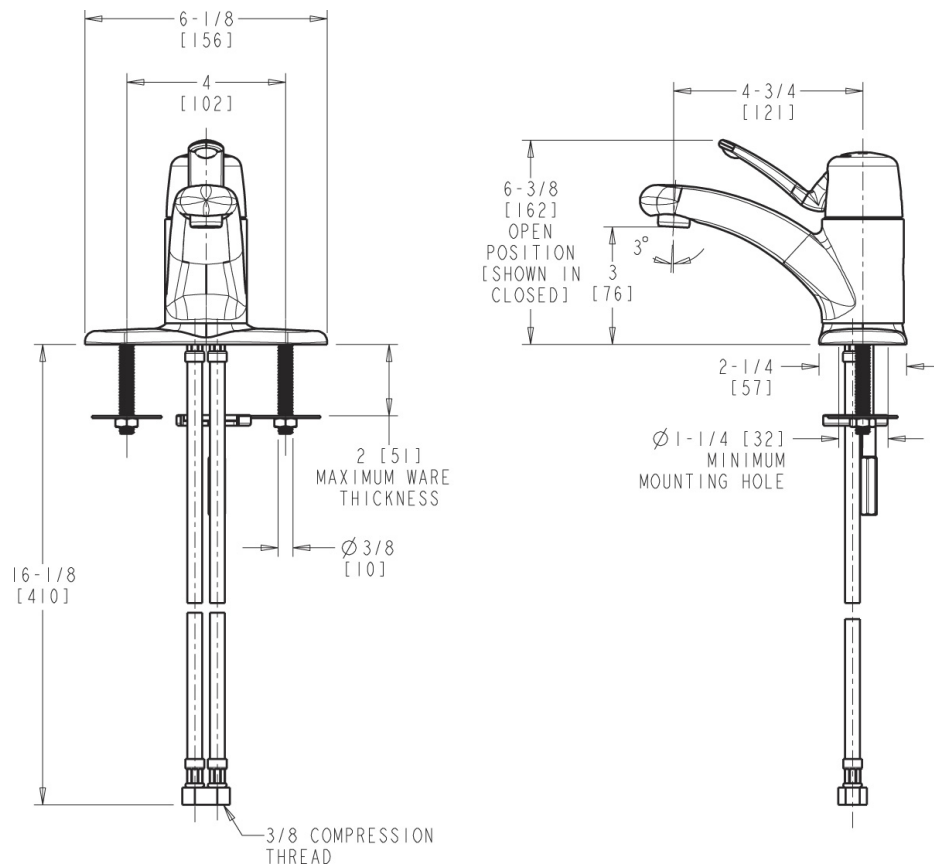


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 2200-4VPE64AABCP, Sink Faucet for hot and cold water, single lever, deck-mounted with 4" fixed centers, chrome plated. Integral cast brass spout, 4-3/4" center-to-center. 1.0 GPM (3.8 L/min) vandal-proof, pressure compensating, laminar flow non-aerating outlet. 2-3/4" metal lever handle. Ceramic quarter-turn cartridge, features square, tapered stem. Flexible supply hoses with 3/8" compression fitting. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, and Certified to NSF/ANSI 61, Section 9.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

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1917C WILLOW RUN™



Wall-Mount, Vitreous China Lavatory

FEATURES

- 19-1/2" x 16-3/4" compact wall-mount lavatory
- 13-1/2" x 10" basin
- Concealed front overflow
- Available in 4" faucet center
- Mansfield® limited lifetime warranty
- Available in White



MODEL 1917C

COMPONENTS


| MODEL # | DESCRIPTION | CODES/STANDARDS |
|----------|---|---|
| 1917C-4 | Commercial wall-mount lavatory with 4" faucet center. Complete with hanger and installation instructions. Includes holes under front coners for use with metal console base/legs. Less faucet, drain assembly and supply. | The logo for the Uniform Plumbing Code (UPC), featuring a shield with the letters "UPC" inside, and a small "C" and registered trademark symbol (®) below it. |
| 1917C-L0 | Same as above with less overflow. | |

1917C WILLOW RUN™



Wall-Mount, Vitreous China Lavatory

SPECIFICATIONS

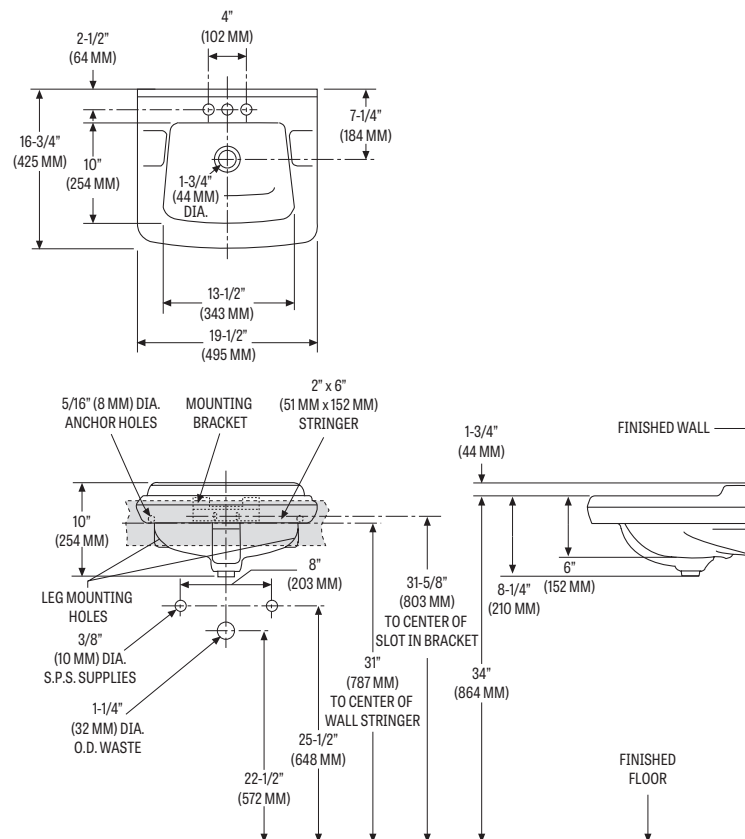
| MODEL # | DESCRIPTION | CODES/STANDARDS |
|---------|-------------------------------------|---|
| 1917C | Wall-mount, vitreous china lavatory |  |

| | |
|----------|-----------------------------------|
| MATERIAL | Vitreous China |
| WARRANTY | Vitreous China - Limited Lifetime |

| | |
|-----------------|-------------------------------|
| SHIPPING WEIGHT | Model 1917C - 38 lbs. (17 kg) |
| FAUCET HOLES | 4" |

TECHNICAL INFORMATION

Note: these dimensions are nominal and subject to change without notice.



Fixture performance and specifications meet or exceed ASME A112.19.2/CSA B45.1 standards, and other state and local codes.



oil/water separation

rectangular aboveground

HT-2027

PRODUCT DETAILS

Highland Tank Rectangular Oil/Water Separators are of the highest quality – constructed to American Petroleum Institute (API) and Underwriters' Laboratories (UL) specifications.

Highland Tank's separators are designed for the removal of free-floating oil, grease and settleable oily-coated solids from oil/water

mixtures associated with many types of petroleum, industrial, commercial, military and municipal facilities.

Our high-efficiency oil/water separators are recommended for many industrial and commercial applications, such as:

- » Airports & aircraft services
- » Automobile dealers

- » Electric utilities & power plants
- » Environmental remediation
- » Military & government facilities
- » Petroleum marketing facilities
- » Railroad yards
- » Trucking and transportation
- » Facility vehicle services

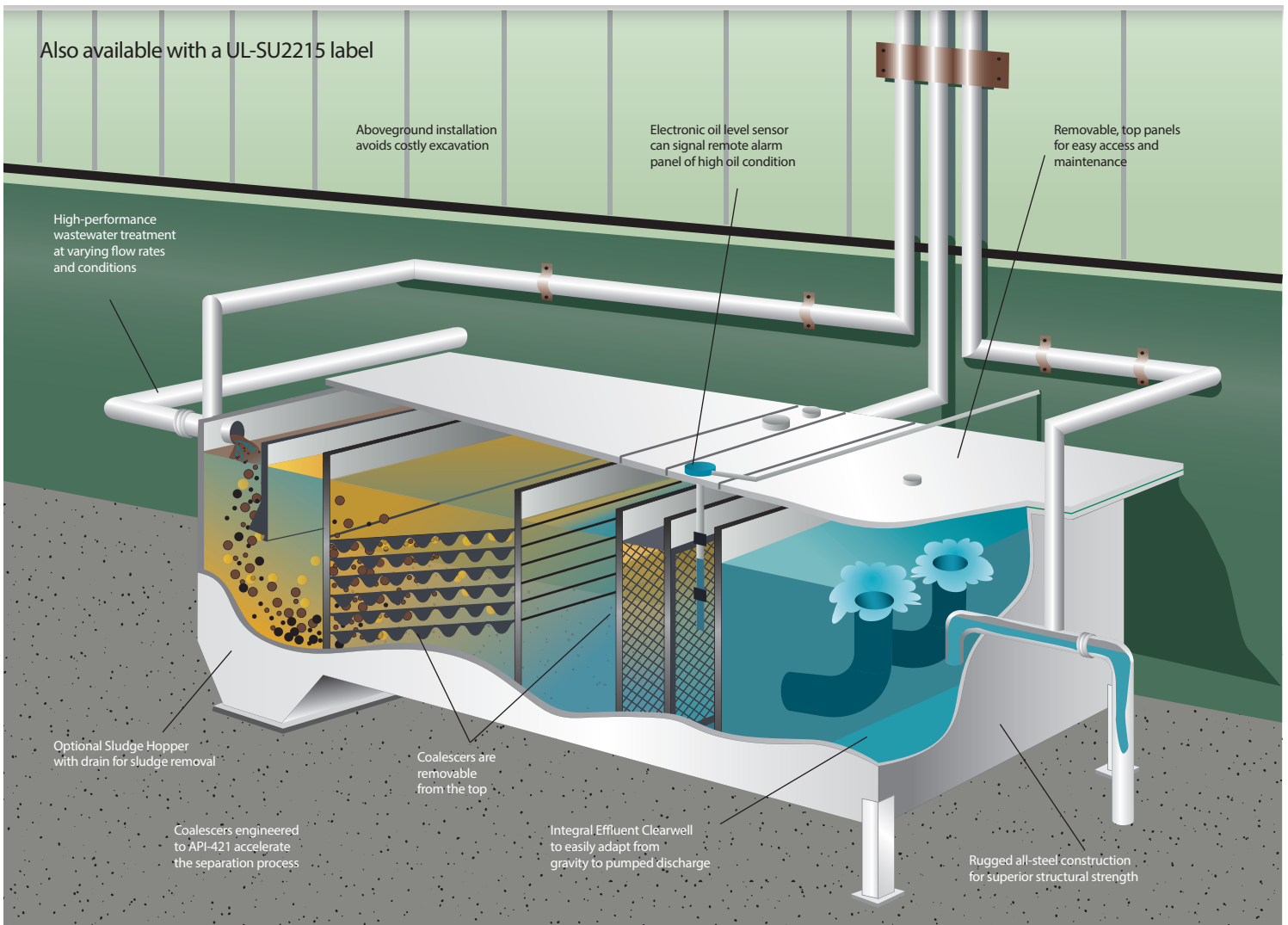


Rectangular oil/water separators can be installed aboveground to help industrial facilities comply with the EPA's spill and discharge regulations. Like our cylindrical underground units, these separators are equipped with our non-clogging Corella® coalescers that accelerate the separation process and greatly reduce the level of oil and oily-coated solids discharged into municipal storm or sanitary sewer.

Highland Tank oil/water separators set the standard for reliability. Our separators are highly efficient-treating wastewater under a wide range of conditions at fueling facilities, repair and maintenance shops, vehicle wash areas and many other industrial locations.

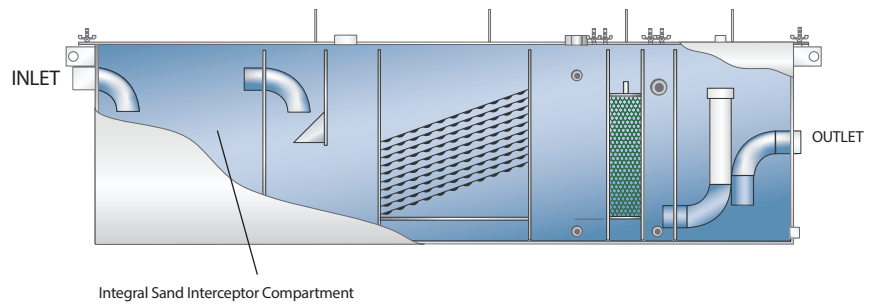
easy to install, operate & maintain

UL-2215 LISTED

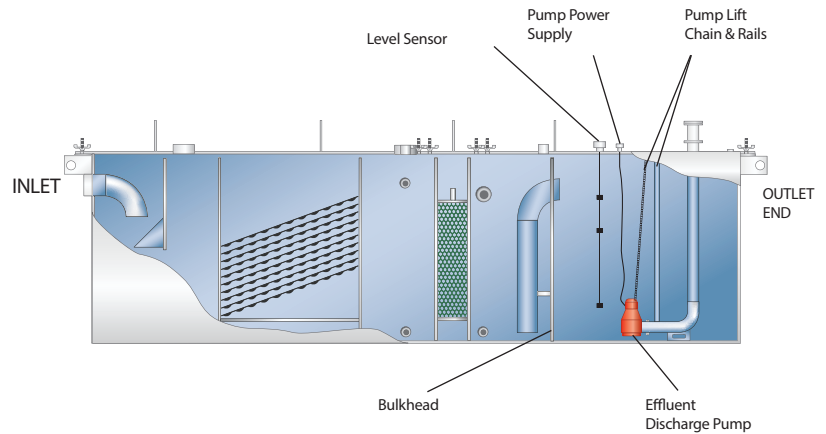


G**Series - G Oil/Water Separators**

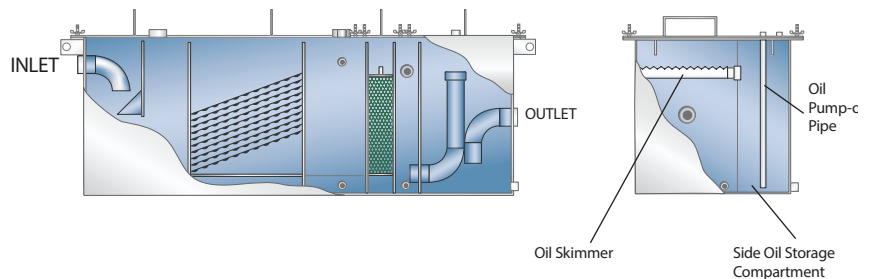
Feature an integral sand interceptor compartment to permit sand and gravel to settle out before the wastewater enters the separation chamber.

**J****Series - J Oil/Water Separators**

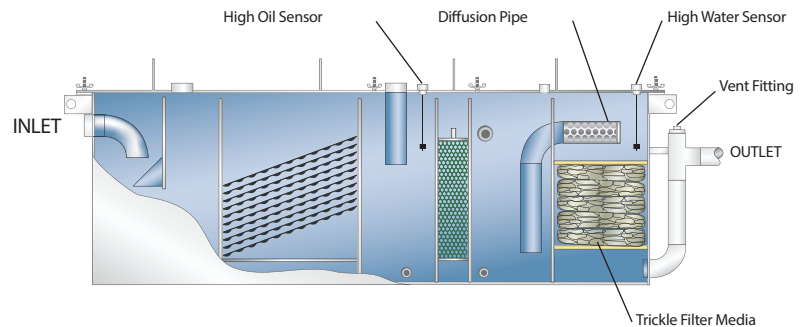
Feature an integral effluent pump-out compartment with level controls to operate a pump at prescribed levels. The pumped effluent can then be routed through Highland's Advanced Hydrocarbon Filtration System to further improve performance.

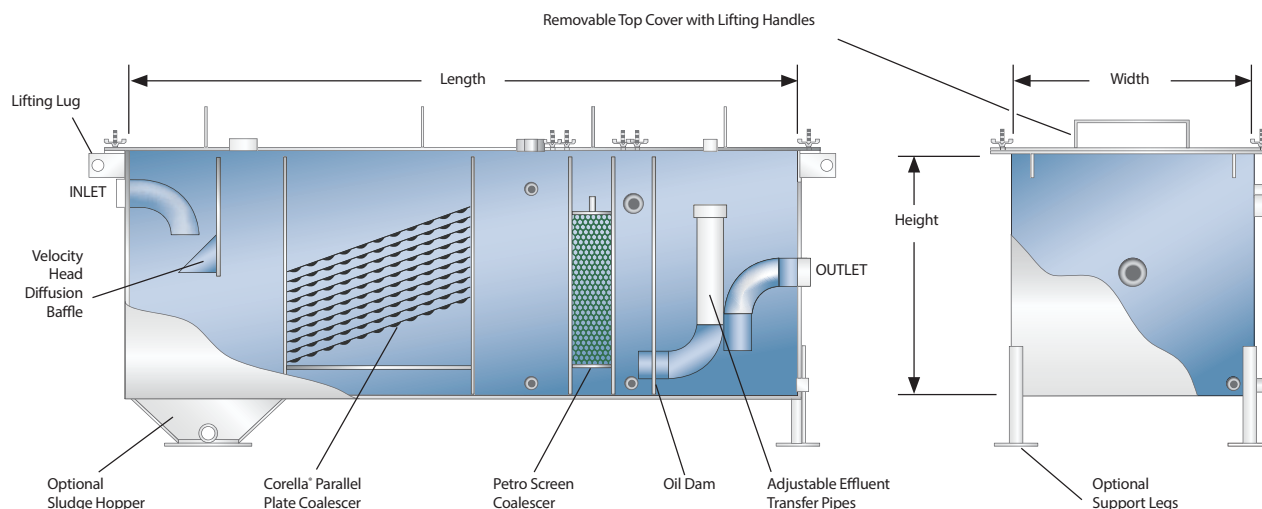
**S****Series - S Oil/Water Separators**

Feature an integral side product compartment for storing separated oil. The special side product compartment permits the removal of only the skimmed oil by pump-out. The effluent is discharged either by pump or gravity flow.

**TF****Series - TF Oil/Water Separators**

Feature an integral "trickle filter" to remove dispersed and mechanically emulsified oils that may pass through the separator untreated. Water flows freely out of the separator to the diffusion pipe and passes through the oleophilic trickle filter media bags to remove any troublesome discharges. The media bags can be easily removed and replaced when necessary.





| Model HT or HTC | Flow Rate Gal/Min | Total Volume Gallons | Recommended Oil Pump-Out Gallons | Dimensions | | | Inlet & Outlet Diameter |
|--------------------|----------------------|-------------------------|--|------------|--------|--------|----------------------------|
| | | | | Length | Width | Height | |
| 100 | 5 | 100 | 20 | 5'-0" | 1'-6" | 3'-0" | 1" |
| 200 | 10 | 200 | 40 | 5'-0" | 2'-0" | 3'-0" | 2" |
| 300 | 25 | 300 | 60 | 7'-0" | 2'-0" | 3'-0" | 3" |
| 600 | 50 | 600 | 120 | 9'-0" | 3'-0" | 3'-0" | 4" |
| 900 | 75 | 900 | 180 | 10'-0" | 3'-0" | 4'-0" | 6" |
| 1,000 | 100 | 1,000 | 200 | 11'-0" | 4'-0" | 4'-0" | 6" |
| 2,000 | 200 | 2,000 | 400 | 12'-0" | 5'-0" | 5'-0" | 8" |
| 3,000 | 300 | 3,000 | 600 | 18'-0" | 5'-0" | 5'-0" | 10" |
| 4,000 | 400 | 4,000 | 800 | 18'-0" | 6'-0" | 5'-0" | 10" |
| 5,000 | 500 | 5,000 | 1,000 | 20'-0" | 6'-0" | 6'-0" | 10" |
| 6,000 | 600 | 6,000 | 1,200 | 19'-2" | 7'-0" | 6'-0" | 10" |
| 7,000 | 700 | 7,000 | 1,400 | 19'-2" | 7'-0" | 7'-0" | 10" |
| 8,000 | 800 | 8,000 | 1,600 | 19'-2" | 8'-0" | 7'-0" | 10" |
| 9,000 | 900 | 9,000 | 1,800 | 18'-10" | 8'-0" | 8'-0" | 12" |
| 10,000 | 1,000 | 10,000 | 2,000 | 20'-11" | 8'-0" | 8'-0" | 12" |
| 12,000 | 1,200 | 12,000 | 2,400 | 19'-10" | 9'-0" | 9'-0" | 12" |
| 15,000 | 1,500 | 15,000 | 3,000 | 24'-9" | 9'-0" | 9'-0" | 14" |
| 20,000 | 2,000 | 20,000 | 4,000 | 29'-9" | 10'-0" | 9'-0" | 16" |
| 25,000 | 2,500 | 25,000 | 5,000 | 33'-6" | 10'-0" | 10'-0" | 18" |
| 30,000 | 3,000 | 30,000 | 6,000 | 40'-10" | 10'-0" | 10'-0" | 20" |



Stoystown, PA
One Highland Road
Stoystown, PA 15563-0338
814.893.5701

Manheim, PA
4535 Elizabethtown Road
Manheim, PA 17545-9410
717.664.0600

Watervliet, NY
958 19th Street
Watervliet, NY 12189-1752
518.273.0801

Greensboro, NC
2700 Patterson Street
Greensboro, NC 27407-2317
336.218.0801

Friedens, PA
1510 Stoystown Road
Friedens, PA 15541-7402
814.443.6800

Clarkston, MI
4701 White Lake Road
Clarkston, MI 48346-2554
248.625.8700

Mancelona, MI
9517 Lake Street
Mancelona, MI 49659-7968
231.587.8412



PROUDLY MADE IN AMERICA

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FLEET & COMMERCIAL

FUELING



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ATLAS SERIES

FUELING EQUIPMENT

Gasboy has been producing refueling equipment since the 1920's. The Atlas Series is the latest generation in a long line of fleet-fueling equipment and is the workhorse for the tough Fleet and Commercial environment. It's compatible with the Gasboy PLUS Fuel Management System or a wide range of third-party controllers.

The Atlas Platform Offers:

- A wide range of models and flow rates
- Sophisticated electronics or simple mechanical registers which cover all requirements
- Use in Underground Tanks (UST) or Aboveground Tanks (AST) applications

Common Features in the Atlas Platform Include:

- Rugged and welded G90 galvanized-steel frame
- Structural foam bezel with a clear polycarbonate window, and a backscreen polycarbonate dialface
- Field-wiring junction box for easy installation
- Replaceable sheathing — painted or optional 304 embossed stainless steel
- Standard hydraulics — compatible with traditional motor fuels such as Biodiesel (up to B20) and Ethanol (up to E15); custom models are available for E85, B100 or DEF
- Safety listed and with NTEP CoC for W&M sealing for fuel resale application
- Optional High Retrievers and Catlow's hanging hardware to complete your fleet fueling equipment

9853K

ATLAS 9853K

ELECTRONIC HIGH FLOW

Basic High Flow

The 9853K Series Basic High Flow Atlas has electronic displays. Available in a complete range of pump or dispenser style models. Versatile for most high-flow fleet fueling applications.

EASY USE

Large 1" LCD display with LED backlight and capacitor back up. LED lighting to identify fuel grade and illuminate the front panel.

FAST

High-flow rated at 22 gpm with side load or optional front load nozzle positions.

INTEGRATED

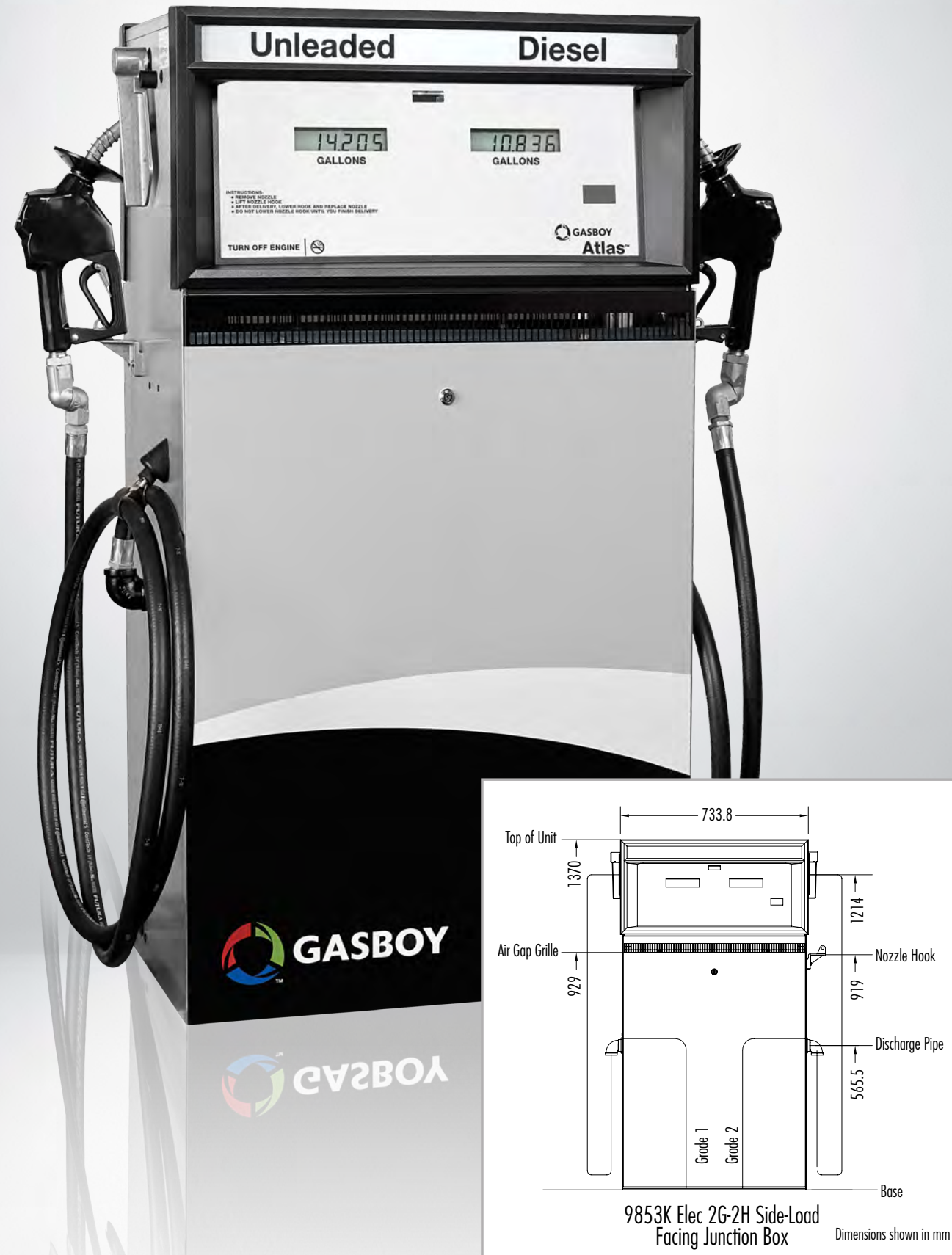
RS485 or Pulse Output interface for connectivity to Gasboy PLUS or other third-party site controllers.

DURABLE

Four-piston CFT meter with flow-through center chamber for harsh fuels. Large 1" internal piping for high flow rates in a variety of site conditions. Steel internal tubing on most models. 10-vane suction pump with 1-HP motor.

OPTIONS

Satellite piping option can turn your Atlas into a master / satellite fueling position.



ATLAS 9850K

ELECTRONIC ULTRA-HI

Ultra-Hi Flow

The 9850K Series Ultra-Hi Atlas has electronic displays. Available in pump or dispenser style models. Heavy-duty, ultra-hi flow equipment is designed for the fleet market. Lane-oriented nozzles offer easy, saddle-tank fueling or side-load fueling for conventional islands.

EASY USE

Large 1" LCD display with LED backlight and capacitor back up. LED brand lighting.

ULTRA FAST

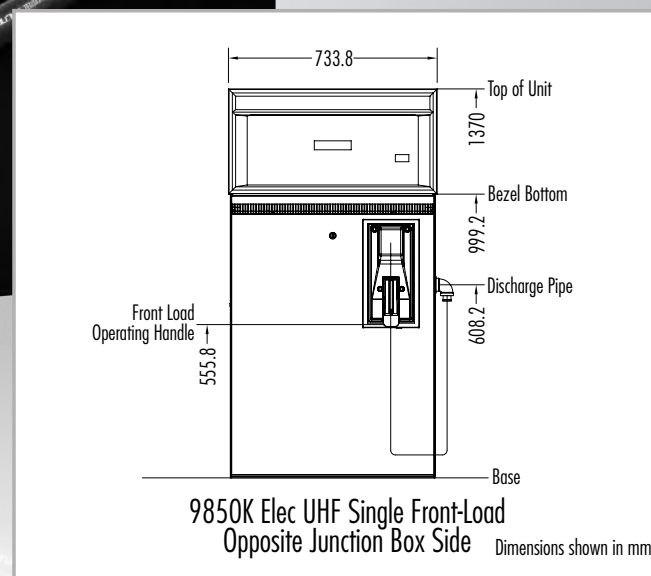
Rated at 50 gpm for the 9850 and 40 gpm for the 9840. LC meter in 9850, 2 CFT meters in the 9840.

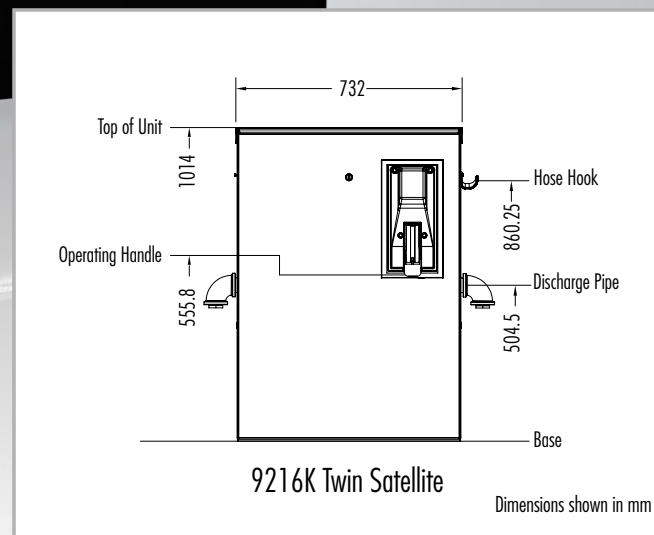
DURABLE

Large 1-1/2" internal piping will give ultra-hi flow rates.

OPTIONS

Satellite piping option can turn your Atlas in to a master / satellite fueling position.





ATLAS 9216K

GENERAL PURPOSE SATELLITE

Satellite Dispenser

The 9216K Series general purpose satellite dispenser for use with Atlas or other master dispensers has front-load, lane-oriented nozzle boots. The 9216K is convenient for toll-gate island layout with fuel from both sides of the fueling lane, with a single or twin hose.

A perfect companion to the Atlas masters for either saddle-tank refueling, Encore® masters, or other third-party master dispensers.

DURABLE Rugged Atlas welded frame with 13 gauge G90 galvanized steel.

FAST Ultra-hi flow hydraulics standard with large 1-1/2" valve and piping to maximize flow rate / throughput.

COMPATIBLE Wire to operate simultaneously with the master dispenser or independently. Image companion for Atlas, matches the frame size and footprint.

EASE OF USE Large and open hydraulic cabinet for easy installation and service.

OPTIONS Stainless-steel sides, top and door panels (replaceable). Embossed finish available. High-flow external filters and external high retrievers are available.

9862K

ATLAS 9862K DEF

ELECTRONIC DEF

Gasboy Atlas DEF

Integrate Diesel Exhaust Fluid (DEF) into your site with the Gasboy 9862 DEF dispenser, available in a heated or unheated cabinet. The 9862K offers the same rugged Atlas welded frame and a familiar interface for users. The Coriolis Mass Flow meter has no moving parts and protects from crystallization. The optional electronic interface works with the Gasboy PLUS or other third-party controller.

VERSATILE

Cold weather (-40°C) and warm weather (-11°C) models are available. The cold weather (CW) model incorporates an improved heat-insulated cabinet with internal hose reel and enclosed nozzle area to protect from freezing and crystallization. Front-load nozzle position.

Warm weather (WW) model is for use in climates or applications where freeze protection is not required. Models are available in a front or side-load styles.

DEPENDABLE

Atlas electronics with electronic calibration.

ACCURATE

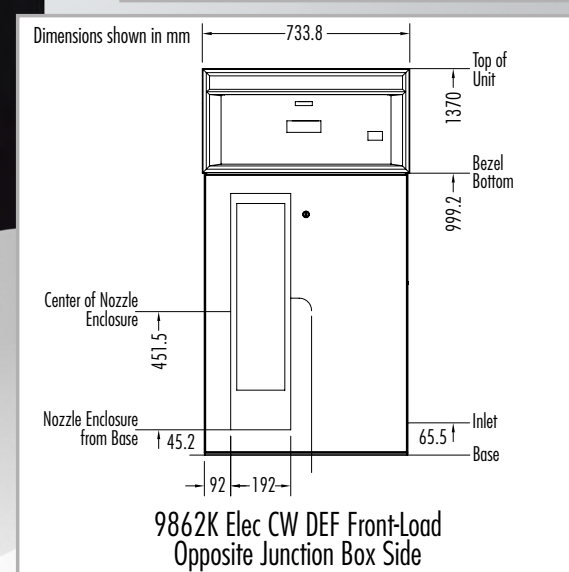
Same reliable Coriolis meter used in both CW or WW models

CORIOLIS MASS FLOW METER



Both Atlas DEF dispenser models are equipped with a Coriolis Mass Flow Meter for exceptional accuracy.

- Mass flow technology delivers industry leading accuracy — even as the product characteristics change
- No moving parts that wear or stick, delivering reliable operation
- Measures mass directly and independently from viscosity and density changes, allowing the meter to be unaffected by temperature, conductivity and solid content
- Weights & Measures approved for transfer sales
- Electronic calibration for accuracy



9872K

ATLAS 9872K E85

ELECTRONIC E85

Atlas E85 Dispenser

The 9872K Series is specifically designed and UL listed for use with E85 fuels. Works with the same site controllers as other Atlas electronic models.

DURABLE Rugged Atlas welded G90 galvanized-steel frame.

EASY USE Large 1" LCD display with LED backlight and capacitor back up.

ACCURATE Electronic calibration. Rated at 15 gpm.

DEPENDABLE Proven hydraulics from the Encore E85 series.

FLEXIBLE Use with alternative fuels up to E85 or B100 along with conventional motor fuels.





PRIME

ATLAS PRIME

GASBOY FUEL MANAGEMENT

Gasboy Atlas PRIME

The newest Gasboy development integrates the Gasboy PRIME fuel-authorization terminal into the Atlas electronic platform. This provides full fuel management from the pump. The PRIME can operate as a stand alone or remote terminal.

EASY USE

Large, user-friendly, 40-key, and full alpha-numeric keypad with 4.3" high-brightness, LCD color screen and four soft-function keys.

ADVANCED TECHNOLOGY

MIFARE contactless reader with insert magnetic card reader. Optional HID reader.

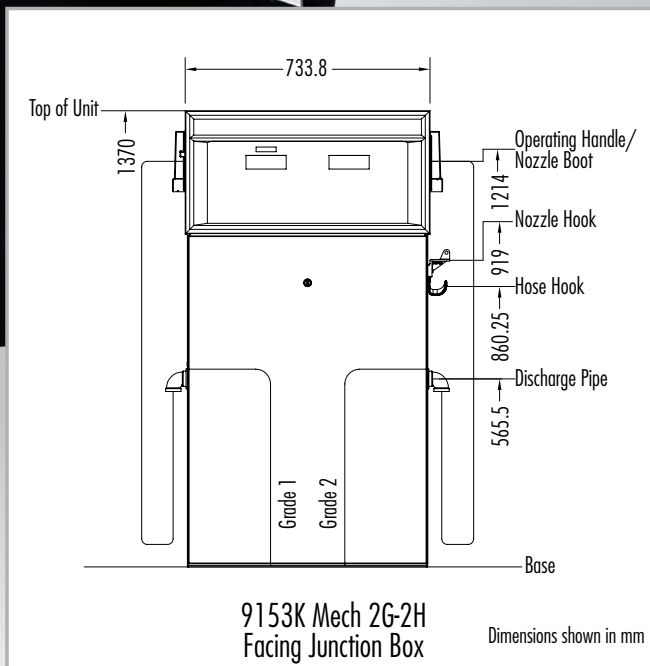
Web connection to Home Base FHO.

Use in combination with an external printer.

FLEXIBLE

Optional FuelPoint PLUS controller.





9153K

ATLAS 9153K

MECHANICAL HIGH FLOW

High Flow with Mechanical Register

The 9153K Series High Flow Atlas uses a mechanical register in the pump and dispenser models. Traditional refueling platform without electronics — simple to service.

| | |
|------------|---|
| DEPENDABLE | Same hydraulics as 9853 series with reliable VR10 mechanical register. |
| FAST | High-flow rated at 22 gpm. |
| DURABLE | 10-vane suction pump with 1 HP motor. Power-operated reset mechanism. |
| FLEXIBLE | Pulser options for interface to site controllers. Keytrol option still available. |

9823K

ATLAS 9823K

ELECTRONIC AST

Tank-Mounted Pump

The Atlas 9823K ASTRA is a split-remote, AST-mounted pump with an electronic display and a nozzle hang-up at grade. It has easy access and viewing at just the right user height.

EASY USE

W&M sealable Fleet pumps for above ground storage tanks (AST). Large 1" LCD display with LED backlight and capacitor backup.

DEPENDABLE

UL, cUL listed. NCWM approved. MC approved.

FLEXIBLE

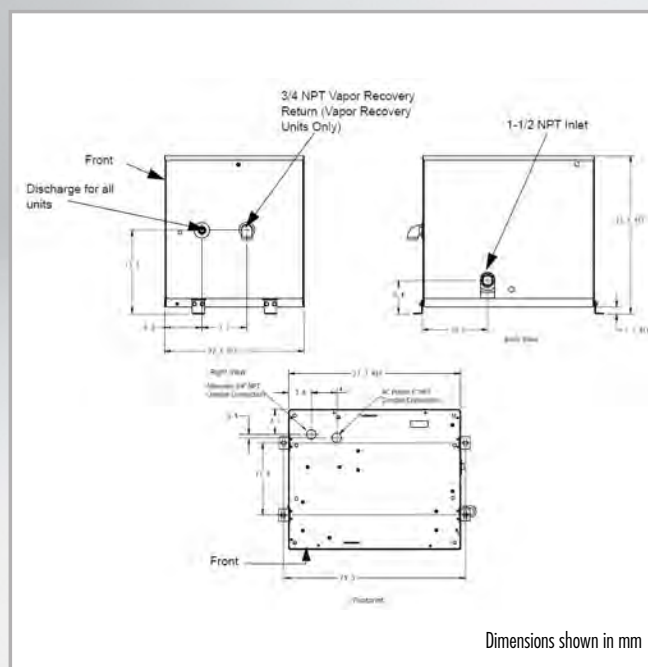
Mount pump on top, side of tank or at grade.

FAST

Rated at 21 gpm.

VERSATILE

Use with Gasboy PLUS or competitive, fuel-management controllers for complete fuel management.



ATLAS MODELS

G A S B O Y M O D E L S

| Model Number | Description | Type | Hoses | Products | Register | Flow Rating |
|--------------|---------------------------|-----------|-------|----------|----------|-------------|
| 9153K | | | | | | |
| 9153K | Hi-flow Single Pump | Pump | 1 | 1 | Mech | 22 gpm |
| 9152KTW1 | Std-flow Twin 1 Pump | Pump | 2 | 1 | Mech | 15 gpm |
| 9153KTW1M | Hi-flow Twin 1 Pump | Pump | 2 | 1 | Mech | 22 gpm |
| 9153KTW2 | Hi-flow Twin 2 Pump | Pump | 2 | 2 | Mech | 22 gpm |
| 9153KX | Hi-flow Single Dispenser | Dispenser | 1 | 1 | Mech | 22 gpm |
| 9153KXTW1 | Hi-flow Twin 1 Dispenser | Dispenser | 2 | 1 | Mech | 22 gpm |
| 9153KXTW2 | Hi-flow Twin 2 Dispenser | Dispenser | 2 | 2 | Mech | 22 gpm |
| 9853K | | | | | | |
| 9853K | Hi-flow Single Pump | Pump | 1 | 1 | Elec | 22 gpm |
| 9852KTW1 | Std-flow Twin 1 Pump | Pump | 2 | 1 | Elec | 15 gpm |
| 9853KTW1M | Hi-flow Twin 1 Pump | Pump | 2 | 1 | Elec | 22 gpm |
| 9853KTW2 | Hi-flow Twin 2 Pump | Pump | 2 | 2 | Elec | 22 gpm |
| 9853KX | Hi-flow Single Dispenser | Dispenser | 1 | 1 | Elec | 22 gpm |
| 9853KXTW1 | Hi-flow Twin 1 Dispenser | Dispenser | 2 | 1 | Elec | 22 gpm |
| 9853KXTW2 | Hi-flow Twin 2 Dispenser | Dispenser | 2 | 2 | Elec | 22 gpm |
| 9840K | | | | | | |
| 9840K | Super-hi Single Pump | Pump | 1 | 1 | Elec | 40 gpm |
| 9840KX | Super-hi Single Dispenser | Dispenser | 1 | 1 | Elec | 40 gpm |

| Model Number | Description | Type | Hoses | Products | Register | Flow Rating |
|--------------|---------------------------|------------|-------|----------|----------|-------------|
| 9850K | | | | | | |
| 9850K | Ultra-hi Flow Single Pump | Pump | 1 | 1 | Elec | 50 gpm |
| 9850KTW3 | Ultra-hi Flow Combo Pump | Pump Combo | 2 | 1 | Elec | 50 gpm |
| 9850KX | Ultra-hi Flow Single Disp | Dispenser | 1 | 1 | Elec | 50 gpm |
| 9850KXTW1 | Ultra-hi Flow Twin 1 Disp | Dispenser | 2 | 1 | Elec | 50 gpm |
| 9850KXTW2 | Ultra-hi Flow Twin 2 Disp | Dispenser | 2 | 2 | Elec | 50 gpm |
| 9850KXTW3 | Ultra-hi Flow Combo Disp | Disp Combo | 2 | 1 | Elec | 50 gpm |
| 9862K | | | | | | |
| 9862KX-Z | DEF — Cold Weather | Dispenser | 1 | 1 | Elec | |
| 9862KX-WW | DEF — Warm Weather | Dispenser | 1 | 1 | Elec | |
| 9862KX-ZWW | DEF — Warm Weather | Dispenser | 1 | 1 | Elec | |
| 9872K | | | | | | |
| 9872KX | E85 — Single | Dispenser | 1 | 1 | Elec | 15 gpm |
| 9872KXTW1 | E85 — Twin 1 | Dispenser | 2 | 1 | Elec | 15 gpm |
| 9823K | | | | | | |
| 9823K | ASTRA Split AST Pump | Pump | 1 | 1 | Elec | 21 gpm |
| 9216K | | | | | | |
| 9216K | Satellite | Satellite | 1 | 1 | None | |
| 9216KTW | Satellite | Satellite | 2 | 1 | None | |

ATLAS FEATURES

G A S B O Y M O D E L S

| Feature | Short Description | 9853 | 9840 | 9850 | 9823 | 9872 | 9862 CW | 9862 WW | 9153 | 9216 |
|------------------|--|-------|-------|----------|-------|-------|------------|------------|-------|-------|
| Approvals | Safety: UL and cUL Listed | S | S | S | S | S | MET | MET | S | S |
| | W&M: NCWM, Measurement Canada (MC) | S | S | S | S | S | S | S | S | S |
| Working Pressure | 50 psi maximum | S | S | S | S | S | S | S | S | S |
| Operating Temp | -30°C to +55°C | S | S | S | S | S | S | -11°C | S | S |
| Unit of Measure | Gallons (liters optional) | S | S | S | S | S | S | S | S | — |
| Meter | Gilbarco 4 piston PD CFT Meter | S | S | — | S | S | — | — | S | — |
| | Liquid controls 6 step rotary PD Meter | — | — | S | — | — | — | — | — | — |
| | Coriolis Mass Flow Meter | — | — | — | — | — | S | S | — | — |
| Motors/Voltages | 1 HP CD — 115V/60Hz (230V/50Hz optional) | S | S | — | S | — | — | — | S | — |
| | 1½ HP CD — 115V/60Hz (230V/50Hz optional) | — | — | S | — | — | — | — | — | — |
| | 3/4 HP CD 380V/50Hz/3-phase | 0 | 0 | — | 0 | — | — | — | 0 | — |
| Pump Models | 10 vane rotary w/air separator | S | S | — | S | — | — | — | S | — |
| | High speed rotary vane w/air separator | — | — | S | — | — | — | — | — | — |
| Solenoid Valve | 2-stage valve for Preset Operation (PP) | 1" | 1½" | 1½" | 1" | 1" | ¾" | ¾" | 1" | 1½" |
| Filters | Internal spin-on style (F) | S | S | Strainer | S | S | Strainer | Strainer | S | — |
| | External Canister Type | 0 | 0 | 0 | 0 | — | — | — | 0 | 0 |
| Piping | Internal Fuel Piping | 1" | 1½" | 1½" | 1" | 1" | ¾" | ¾" | 1" | 1½" |
| Discharge | Hose Connection — NPT | 1" | 1¼" | 1¼" | 1" | ¾" | 1" BSPP | 1" BSPP | 1" | 1¼" |
| Satellite Piping | Satellite piping connection (S) — disp only | 0 | 0 | 0 | — | — | — | — | 0 | — |
| Inlet | Island Connection — NPT | 1½" | 2" | 2" | 1½" | 1½" | 1" BSPP | 1" BSPP | 1½" | 1½" |
| Junction Box | Field Wiring Junction Box | S | S | S | S | S | S | S | S | S |
| Housing | G90 Galvanized Steel | 13 GA | 13 GA | 13 GA | 11 GA | 13 GA | 13 GA | 13 GA | 13 GA | 13 GA |
| Panels | Lockable removable — Painted Galvanized Steel (std) — gauge | 20 | 20 | 20 | 16 | 20 | 20 | 20 | 20 | 20 |
| | Lockable removable — Kooline Stainless Steel — 22 gauge | 0 | 0 | 0 | — | 0 | — | 0 | 0 | 0 |
| Sheathing | Replaceable — Painted G60 Galvanized Steel (std) — gauge | 20 | 20 | 20 | 16 | 20 | 20 | 20 | 20 | 20 |
| | Replaceable — Kooline Stainless Steel — 22 gauge | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 |

| Feature | Short Description | 9853 | 9840 | 9850 | 9823 | 9872 | 9862 CW | 9862 WW | 9153 | 9216 |
|-------------------------|---|------|------|------|------|------|------------|------------|------|------|
| Computer/Register | Electronic Register — Volume only display | S | S | S | S | S | S | S | — | — |
| | Mechanical Register — VR10 volume only | — | — | — | — | — | — | — | S | — |
| Electronic Display | 1" LCD w/LED Backlight & Capacitor Backup | S | S | S | S | S | S | S | — | — |
| Interface Options | Pulser — 10:1 or 100:1 volume (CC or CX) | — | — | — | — | — | — | — | 0 | — |
| | RS-485 — Gasboy CFN, Islander, or TopKat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| | Pulse Output I/F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| | DC conduit and junction box (D) | S | S | S | — | S | S | S | — | — |
| | Keytrol (EK) | — | — | — | — | — | — | — | 0 | — |
| TopKAT PLUS | TopKAT PLUS with Ethernet conduit (factory install) | 0 | 0 | 0 | — | 0 | 0 | 0 | — | — |
| Brand Panel Lighting | LED Lighted brand panel (L) | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | — |
| Totalizers | Electronic | S | S | S | S | S | S | S | — | — |
| | Non-resettable Electro-mechanical | 0 | 0 | — | — | 0 | 0 | 0 | — | — |
| | Non-resettable mechanical | — | — | 0 | 0 | — | — | — | S | — |
| Nozzle Position | Side load | S | S | S | — | S | — | S | S | — |
| | Front load (Z) | 0 | 0 | 0 | S | 0 | S | 0 | — | S |
| Hose Retractors | Internal hose retractor (I) | 0 | 0 | — | — | — | — | — | 0 | — |
| | Internal hose reel | — | — | — | — | — | S | — | — | — |
| | High hose retractor — external post mounted | 0 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 |
| AST Applications | Pressure Regulating Valve Model 52A — suction pumps only | 0 | — | — | 0 | — | — | — | 0 | — |
| | 9850 Above Ground Tank Kit — suction pumps only | — | — | 0 | — | — | — | — | — | — |
| Warranty | 12 month — Parts and labor | S | S | S | S | S | S | S | S | S |
| | Extended — 2, 3, 4 or 5 years | 0 | 0 | 0 | 0 | 0 | — | — | 0 | 0 |
| Miscellaneous | ATC (Canada only) | 0 | 0 | 0 | — | — | — | — | — | — |
| | Hand crank (K) | — | — | — | — | — | — | — | 0 | — |
| | Power reset | — | — | — | — | — | — | — | S | — |
| | Display power fail backup | S | S | S | S | S | S | S | — | — |
| | Internal cabinet heater (DEF only) | — | — | — | — | — | S | — | — | — |
| | Balanced vapor recovery | 0 | — | — | 0 | — | — | — | 0 | — |
| | Healy Universal Kit compatible | 0 | — | — | — | — | — | — | 0 | — |
| | Hose, nozzle, swivel, breakaway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

S = Standard; 0 = Optional; — = not available

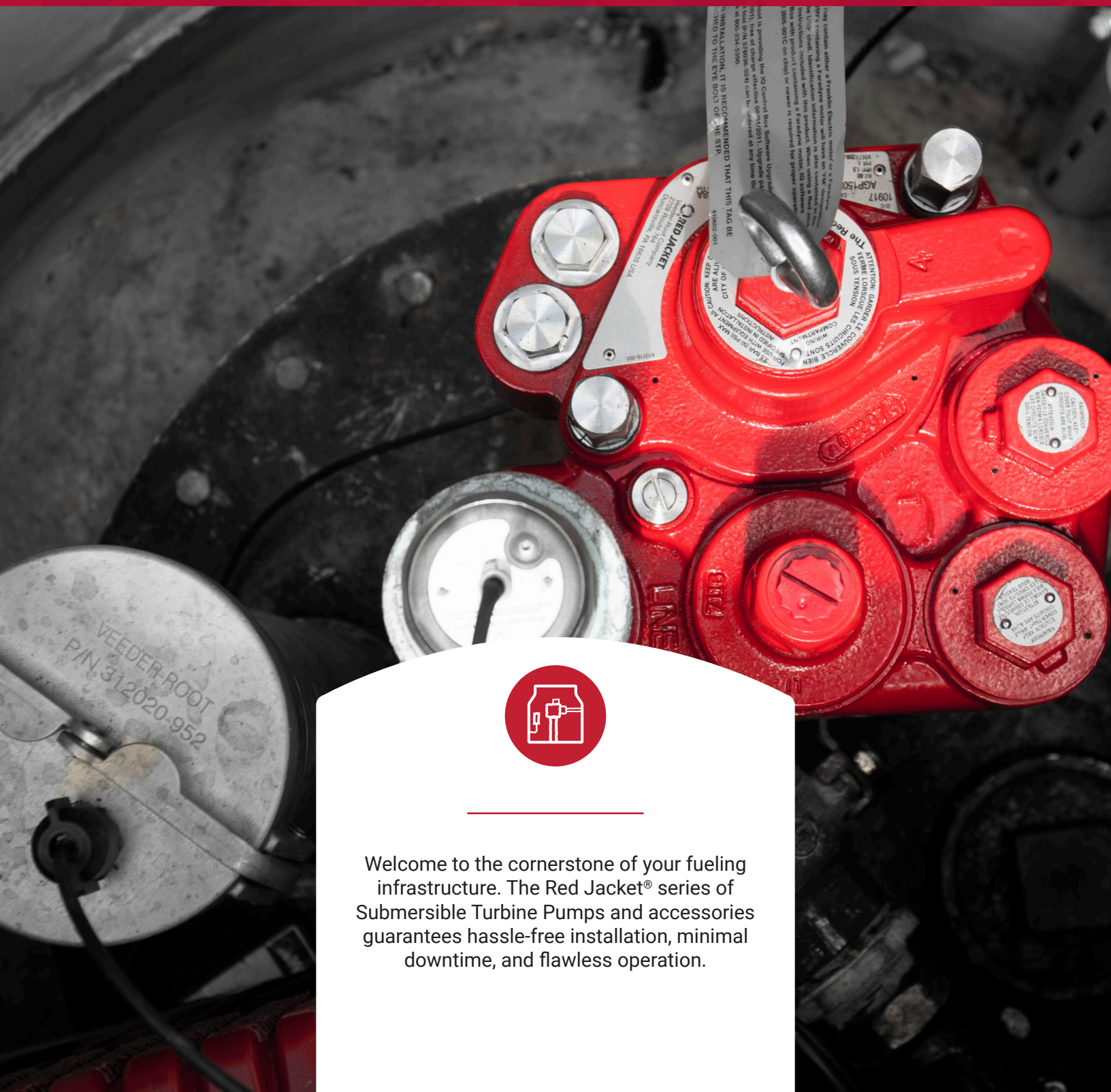


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RED JACKET®

PRODUCT GUIDE



Welcome to the cornerstone of your fueling infrastructure. The Red Jacket® series of Submersible Turbine Pumps and accessories guarantees hassle-free installation, minimal downtime, and flawless operation.



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System Solutions

The Hub of Site Operations

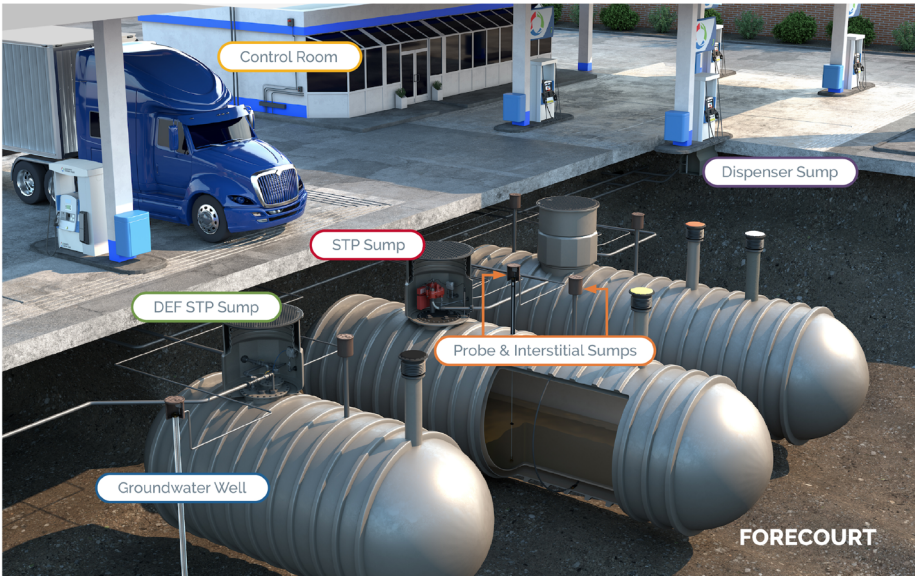
Veeder-Root is a leading global supplier of fuel management solutions with a tradition of excellence in the fueling industry. Our products improve profitability and abate risk for customers by delivering solutions to manage on-site operations, compliance reporting, fuel procurement, inventory reconciliation, and accounting processes. Veeder-Root products and services are installed in over 500,000 tanks globally and are responsible for 22 billion gallons of gasoline and diesel fuel annually.



FUELING STATION ECOSYSTEM



CONTROL ROOM



FORECOURT

Control Room

- ① TLS-450PLUS Automatic Tank Gauge
- ② TLS-XB Expansion Box
- ③ Red Jacket® CoreDEF™ Control Box
- ④ Red Jacket® IQ Smart Control Box
- ⑤ Red Jacket® ISOTROL™ 1-8 Control Box

STP Sump

- Red Armor® Submersible Turbine Pump
- Red Jacket® Sump-Dri™ Desiccant System
- Stainless Steel Riser Pipe
- Digital Pressurized Line Leak Detector (DPLLD)
- Magnetostrictive Containment Sump Sensor

DEF STP Sump

- Red Jacket® CoreDEF™ Submersible Turbine Pump
- Adjustable Pressure Relief Valve

Probe & Interstitial Sumps

- Magnetostrictive Plus Probe with In-Tank Leak Detection Capabilities
- Solid-State Discriminating Interstitial Sensor for Fiberglass Tanks

Dispenser Sump

- Magnetostrictive Dispenser Pan Sensor
- Non-Discriminating Standalone Dispenser Pan Sensor (not pictured)

Groundwater Well

- Groundwater Sensor

ADVANCED FUEL MANAGEMENT



Flow Optimization

Monitor demand at the site and stage on additional pumps to ensure optimal fuel flow at all demand conditions.



System Redundancy

Manifold together two Red Jacket Submersible Turbine Pumps (STPs) at sites with high demand to ensure flow rates and the ability for pumps to back each other up.



Inventory Optimization

Configure your fueling system to optimize inventory using multiple settings for dispensing fuel from the storage tanks.



Connectivity

Connect to your TLS-450PLUS Automatic Tank Gauge (ATG) to activate tanks based on fuel height in line manifolded tanks.



The Red Jacket STP Key Benefits

The Red Jacket® STP

The Red Jacket is a Submersible Turbine Pump solution that optimizes fuel flow and dispensing, while providing industry leading reliability. Its advanced packer manifold design makes it an easy and safe STP to install and service within the industry. Available in $\frac{3}{4}$ HP to 2 HP configurations and fixed or Quick Set® adjustable lengths. As a Veeder-Root flagship product line, Red Jacket is backed by the largest network of distributors and authorized service contractors worldwide.



WHY CHOOSE THE RED JACKET



Owner/Operator

- ▶ **Most Reliable**
Minimal Downtime
- ▶ **Lowest Total Cost Ownership (TCO)**
Affordable to Buy, Own, and Operate
- ▶ **Improve Inventory Management**



Distributor

- ▶ **Industry's Most Reliable**
Satisfied Customers
- ▶ **Lower Purchase Cost**
Stay Competitive
- ▶ **Hydraulic Hammer**
No Concern



Contractor

- ▶ **Simple Installation**
Easy to Service
- ▶ **Low Cost Controller**
Affordable to Stock
- ▶ **No Electrical Interference**
Avoid Signal Conflicts

Superior Product Performance

Unitized Motor and Pump (UMP)



► PERFORMANCE

- High efficiency
- Maximum flow output
- Low power consumption

► SAFETY

- Separation of connectors helps meet the most demanding flameproof standards

► PROVEN RELIABILITY

- Industry proven low field failure rates
- Bearing design and high insulation rating yield long motor life

► INDUSTRY EXPERTISE

- Our superior motor design delivers high efficiency, high fuel flow, and low power consumption, allowing Red Jacket to continue to offer the most advanced STPs

The Red Jacket Packer Manifold

► FAST INSTALLATION AND SIMPLE SERVICE AND TESTING

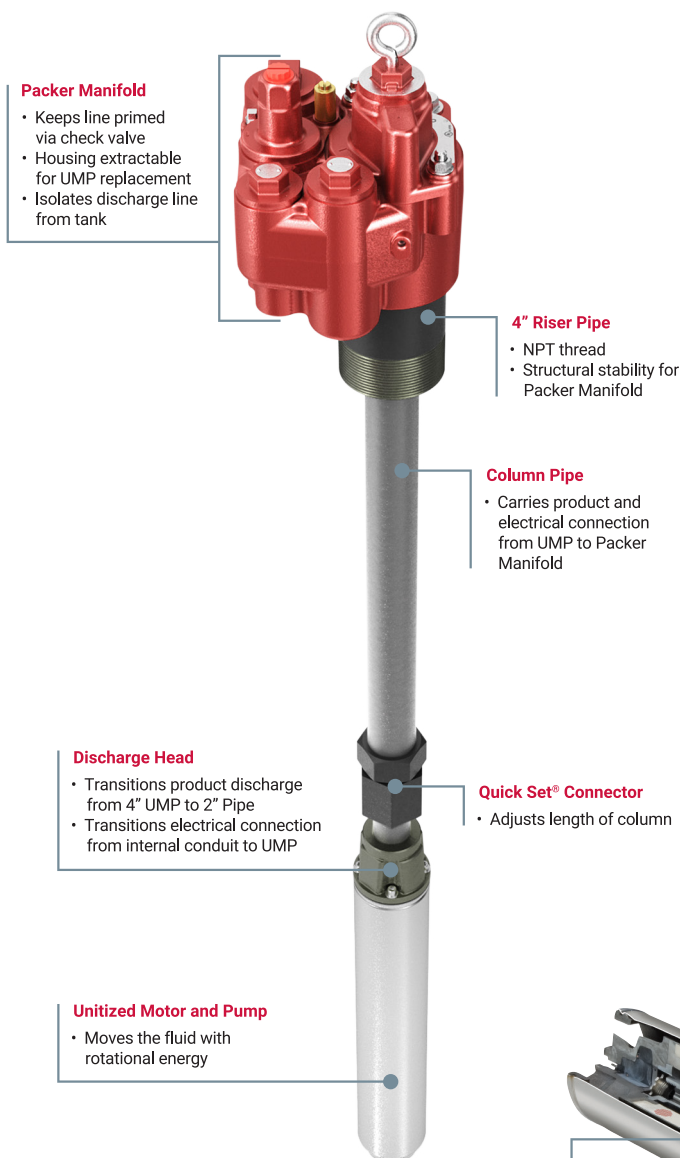
- Spring mechanisms reduce lifting force during maintenance
- Automatic electrical disconnect for safety during maintenance
- Automatic fuel drain to avoid product spillage during maintenance
- Contractor's Box and Capacitor Housing are isolated from the fuel path and integrated into the packer manifold to improve safety
- Easy line tests and servicing with unique check valve design
- Two vacuum ports support applications requiring multiple vacuum connections



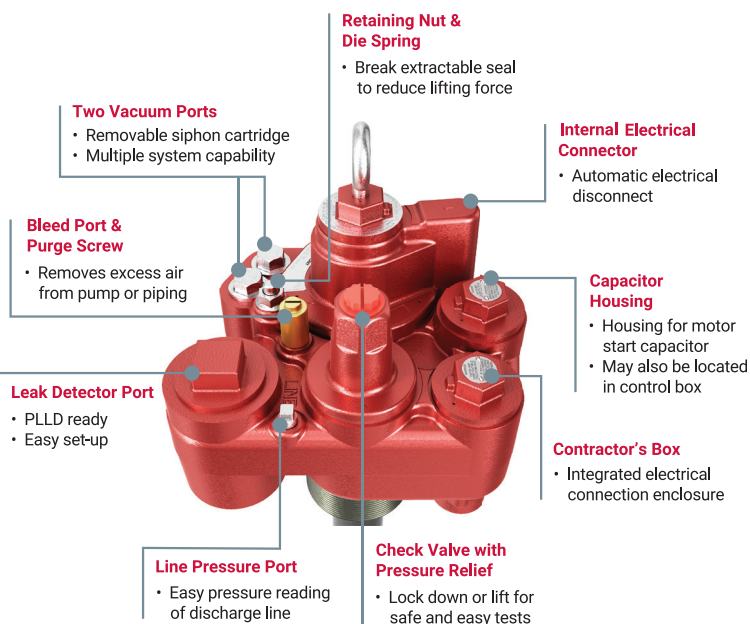


Components of The Red Jacket STP

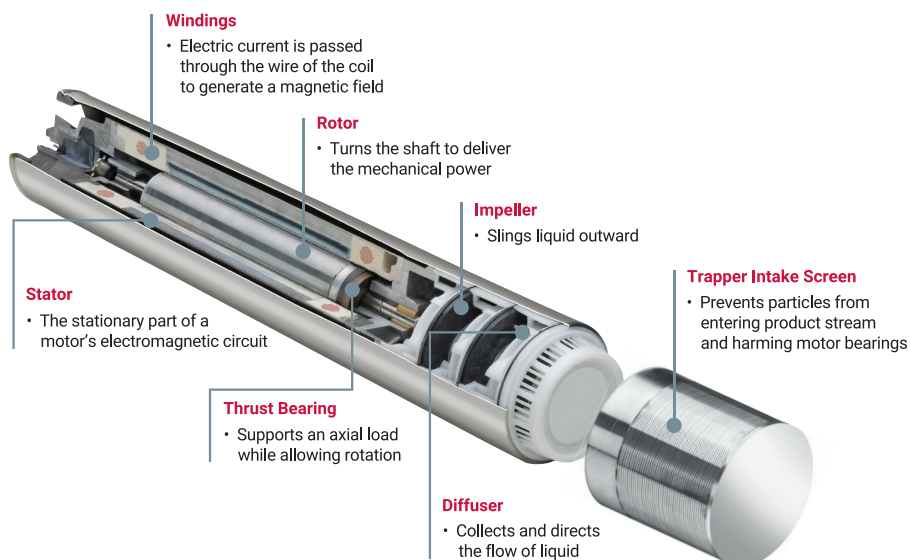
The Red Jacket® STP



Packer Manifold

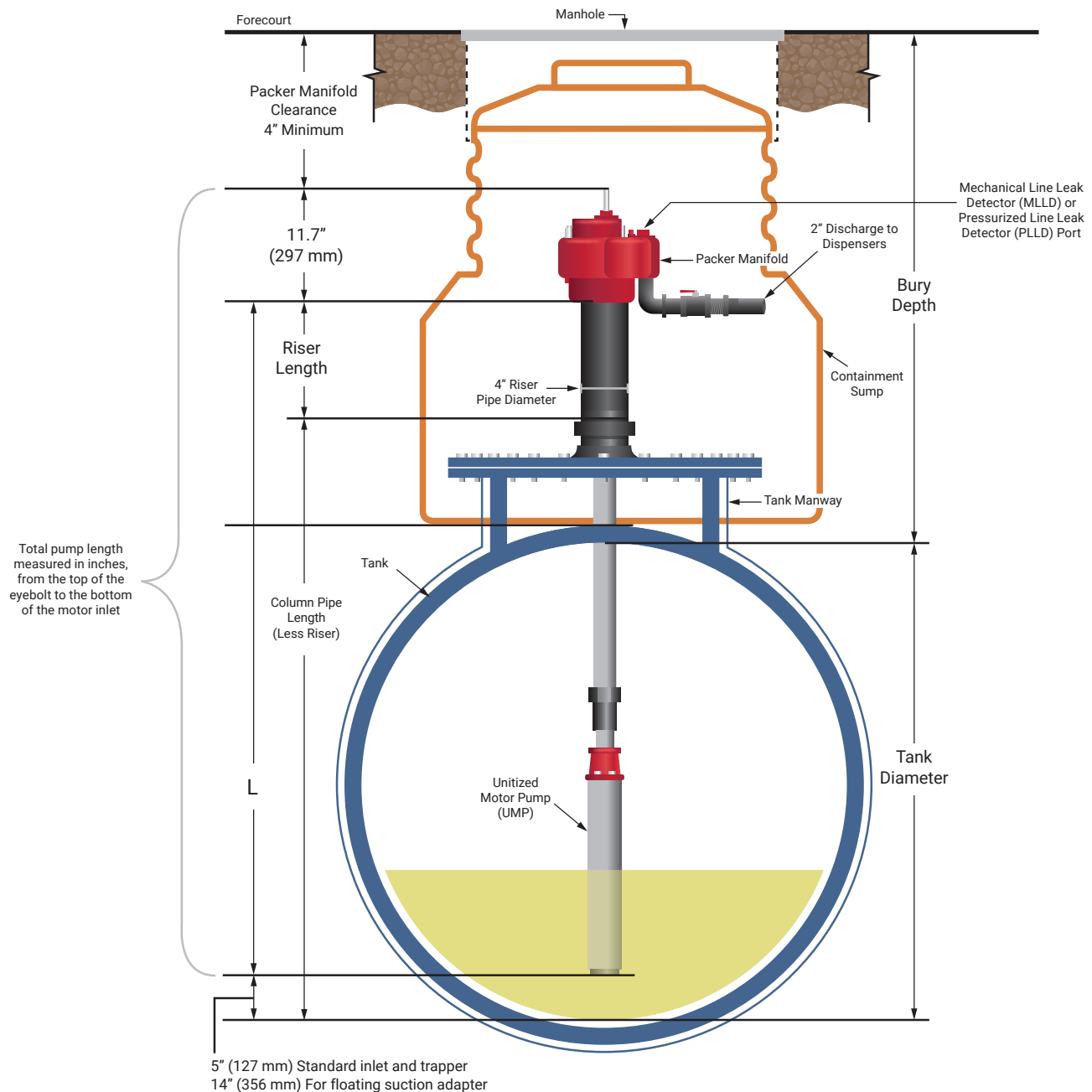


Unitized Motor and Pump (UMP)



Ordering Guide

Red Jacket's unsurpassed expertise helps sites optimize fuel flow. Part of the industry-leading Veeder-Root suite of products, Red Jacket's family of Submersible Turbine Pumps and Pump Controllers ensures that sites can pump fuel quickly, efficiently, and safely – whether it's motor fuel, diesel, aviation gasoline, liquid petroleum gas, ethanol/methanol, or kerosene – in aboveground or underground storage tanks.





Ordering Guide

The Red Jacket® STP portfolio has seven components that make up its different model numbers, for a variety of options depending on your specific site needs¹:

1. Pump Type
2. Horsepower
3. Pump Design Code
4. Electrical Code
5. Number of Stages (Impellers)
6. Quick Set® Options

MODEL IDENTIFICATION

Example: **AGP 200 S 1 -3 RJ2**

PUMP TYPE

- P** = Petroleum
- PL** = Petroleum Low Pressure*
- AGP** = Alcohol
- AGPL** = Alcohol Low Pressure*
- X3P** = 3 Impeller Petroleum**
- X4P** = 4 Impeller Petroleum**
- X3AGP** = 3 Impeller Alcohol**
- X4AGP** = 4 Impeller Alcohol**

* 2 HP Only

** 1.5 HP Only

HORSEPOWER

- 75** = .75 (¾)
- 150** = 1.50 (1 ½)
- 200** = 2.00 (2)
- 300** = 3.00 (3)
- 500** = 5.00 (5)

PUMP DESIGN CODE

- S** = Alcohol Gas Fixed Speed
- U** = Non Alcohol Gas Fixed Speed

QUICK SET® LENGTH OPTIONS

- Blank** = Fixed Length Pump
- RJ1** = (74.5" - 105") The Red Jacket
- RJ2** = (104.4" - 165") The Red Jacket
- RJ3** = (164" - 225") The Red Jacket
- RA1** = (74.5" - 105") The Red Armor®
- RA2** = (104.4" - 165") The Red Armor
- RA3** = (164" - 225") The Red Armor

* Assumes 1.5 HP

NUMBER OF STAGES (IMPELLERS)

- Blank** = 2 Stages
- 2** = 2 Stages
- 3** = 3 Stages
- 4** = 4 Stages
- 19** = 19 Stages
- 21** = 21 Stages
- 24** = 24 Stages

Note: Not used – with "X" series pumps

ELECTRICAL CODE

| | | | | | | | |
|-----------|---------|-------|----------|-----------|---------|--------|------|
| 0 | 1 Phase | 60 Hz | 115V | 11 | 3 Phase | 50 Hz | 346V |
| 1 | 1 Phase | 60 Hz | 208/230V | 12 | 3 Phase | 50 Hz | 220V |
| 1 | 1 Phase | 60 Hz | 230V | 13 | 3 Phase | 50 Hz | 200V |
| 2 | 1 Phase | 50 Hz | 110/120V | 14 | 3 Phase | 60 Hz | 200V |
| 3 | 1 Phase | 50 Hz | 220/230V | 15 | 3 Phase | 50 Hz | 440V |
| 4 | 3 Phase | 60 Hz | 208/230V | 16 | 3 Phase | 50 Hz | 415V |
| 4 | 3 Phase | 60 Hz | 230V | 17 | 3 Phase | 50 Hz | 380V |
| 5 | 3 Phase | 60 Hz | 460V | 18 | 3 Phase | 60 Hz | 400V |
| 6 | 3 Phase | 60 Hz | 550/575V | 19 | 3 Phase | 60 Hz | 380V |
| 7 | 1 Phase | 60 Hz | 208V | 20 | 3 Phase | 100 Hz | 230V |
| 8 | 3 Phase | 60 Hz | 208V | 21 | 1 Phase | 50 Hz | 230V |
| 9 | 3 Phase | 50 Hz | 380/415V | 22 | 3 Phase | 50 Hz | 400V |
| 10 | 1 Phase | 50 Hz | 200V | | | | |

¹ = This is not a customization guide just a key for the meaning of the numbers and letters in a pump model number.

Testing and Certification of the Industry's Most Advanced Motor

In-House Performance Testing and Manufacturing

Our manufacturing facilities focus on product reliability to ensure superior performance and dependability for all of our Red Jacket® Submersible Turbine Pumps. Maintaining high standards throughout the manufacturing process ensures our Red Jacket products continually and consistently meet your on-site fueling infrastructure needs.



To ensure proper performance, our engineering facilities perform a multitude of check-points and testing protocols to maintain our high levels of performance expectations:

- Endurance testing using various fuel types, including, for example, gasoline, diesel, ethanol based fuels, biodiesels, and Diesel Exhaust Fluid (DEF), which reflect real world pumping applications
- Hydraulic performance testing using gasoline, diesel fuel, DEF, or Liquid Petroleum Gas (LPG) as the test fuel, which reflects real world fuels
- Motor performance testing ($\frac{3}{4}$ HP up to 5 HP) to determine amperage, efficiency and temperature ratings
- Electronic and mechanical leak detection testing (3 GPH and precision) uses steel, fiberglass, and flex pipe lines, which ensures compliance to EPA and/or any other regulatory leak detection performance standards
- All instrumentation is calibrated in compliance to ISO/IEC 17025 to ensure measurements are accurate and will meet or exceed UL Data Acceptance Program requirements for in-house UL, IECEx, and ATEX certification testing
- Data Acquisition using LabVIEW measurement instrumentation to continuously monitor and control testing
- Thermal cycling to assess a wide range of temperatures, representing various geographic climate applications
- Fuel compatibility of elastomers and plastics (static and dynamic) in various test fuels
- Hydrostatic testing of castings to ensure designs have four times safety margin



Trusted Technical Expertise

Delivering World-Class Customer Service

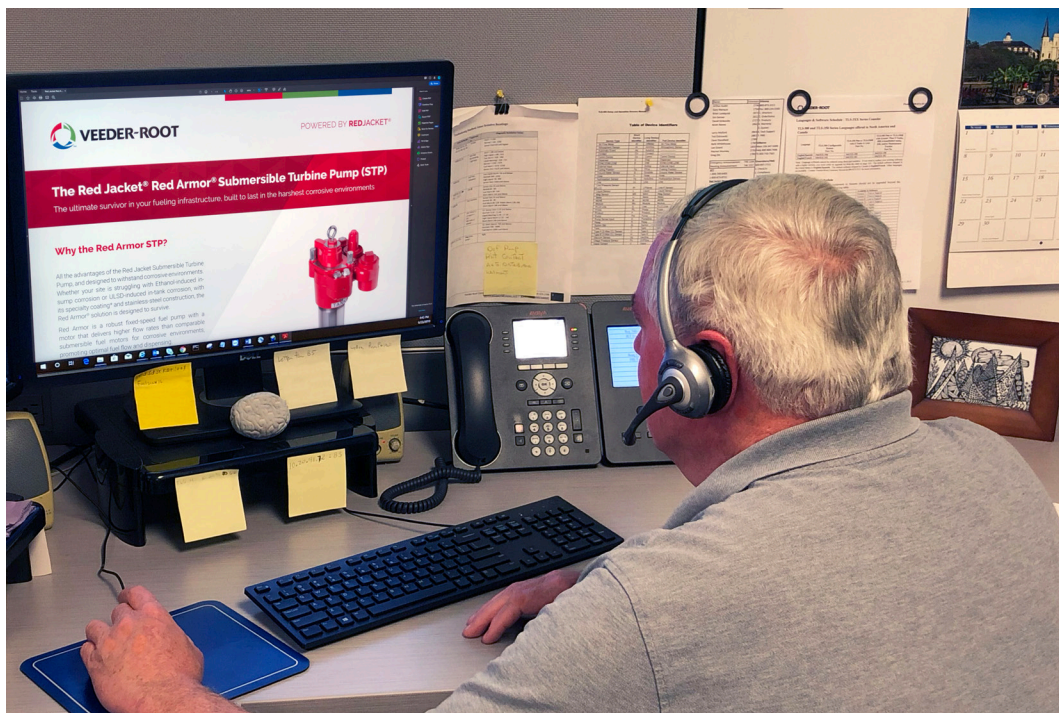
- Providing transactional accuracy to ensure customer product delivery satisfaction
- Quick-turn responsiveness to ensure customer inquiries are handled expeditiously and professionally

Providing Exceptional Technical Support

- Dynamic and knowledgeable support team with over 80+ years of collective expertise in the fueling infrastructure industry
- Fielding, trouble-shooting, and resolving customer inquiries, installation and compliance questions
- Providing top-notch industry know-how in guiding customers toward selecting the right equipment for the right application

Ensuring Exceptional Quality Standards

- Maintain Veeder-Root's ISO 9001:2015 Registered Quality Management System to ensure product quality standards
- Assure Veeder-Root's products are manufactured in compliance with UL/cUL Listings and the ATEX Directive
- Continuous monitoring of Veeder-Root's product performance in the field





The Red Jacket Product Portfolio



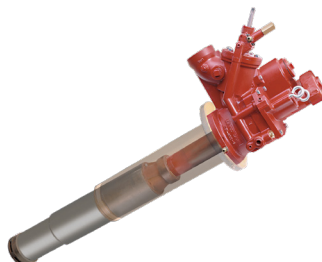
The Red Jacket® Product Portfolio



4" Pumps

- The Red Jacket STP
- The Red Jacket AG STP
- The Red Armor STP

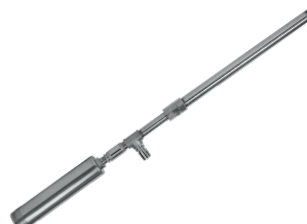
Pages 12 - 21



Maxxum 6" High Capacity Pumps

- The Red Jacket 3 HP Maxxum Pump
- The Red Jacket 5 HP Maxxum Pump

Page 22



Diesel Exhaust Fluid (DEF) Pumps

- The Red Jacket CoreDEF™ STP

Pages 23 - 25



Liquefied Petroleum Gas (LPG) Pumps

- The Red Jacket LPG Premier Pump
- The Red Jacket LPG Premier MidFlow Pump
- The Red Jacket LPG Premier HiFlow Pump

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Combat Corrosion Accessories

- Sump-Dri™ Desiccant System
- The Red Jacket Stainless Steel Riser Pipes
- The Red Jacket Trapper Intake Screen

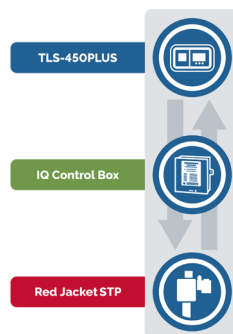
Pages 27 - 31



Control Boxes

- The Red Jacket Standard Control Box
- The Red Jacket ISOTROL™ 1-8 Control Box
- The Red Jacket IQ Smart Control Box
- The Red Jacket 2 HP STP Fixed Speed Conversion Kit

Pages 32 - 34



Monitoring Software

- Intelligent Pump Control for Red Jacket Diagnostic Monitoring
- Intelligent Pump Control for 3rd Party Pump Controllers

Pages 35 - 36



Leak Detection

- FXV Series Mechanical Line Leak Detectors
- Electronic Pressurized Line Leak Detection System

Pages 37 - 38



The Red Jacket 4" STP Portfolio

The Red Jacket 4" STP Platform

The Red Jacket Submersible Turbine Pump platform delivers fast, reliable fuel flow and a low cost of ownership. With a range of motor offerings, The Red Jacket provides flow rates to meet your individual site needs, whether that is a single fueling point or more. It features Red Jacket's advanced packer manifold design, making it a simple and safe STP to install and service within the industry.



The Red Jacket STP

The Red Jacket STP solution optimizes fuel flow and dispensing. The STP also features Red Jacket's advanced packer manifold design, making it the fueling industry's simple and safest submersible pump to install and service.



The Red Jacket Alcohol Gas (AG) STP

All the advantages of The Red Jacket STP, designed for alternative fuels – such as alcohol and ethanol. Red Jacket Submersible Turbine Pump AG is a fixed-speed alcohol gas fuel pump, that optimizes fuel flow and dispensing.



The Red Armor® STP

All the advantages of The Red Jacket STP, and designed to withstand corrosive environments. Whether your site is struggling with Ethanol-induced in-sump corrosion or ULSD-induced in-tank corrosion, with its specialty coating* and stainless-steel construction, the Red Armor solution is designed to survive.



Fuel Compatibility

As Biofuels, Vehicle Technology, and Biofuel Infrastructures Expand, so do the Needs of Your Fueling Systems.

If your fueling system is used with incompatible fuel types, infrastructure degradation and corrosion could result. Therefore, as fuels containing higher amounts of ethanol (such as E15 and E85) and biodiesels are added to fueling sites, it is important in the design phase of new sites and during upgrades to existing sites to consider STPs that are compatible with renewable fuels, as well as fuels focused on improved emissions and fuel economy. The Red Jacket® STP portfolio offers solutions tailored for both traditional and renewable fuels and provides protection against corrosive environments.



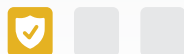
The Red Jacket STP

The cornerstone of your fueling infrastructure, The Red Jacket STP solution optimizes fuel flow and dispensing. It is the foundation model that sets the standard for high throughput, high reliability fueling applications.

Compatible with:

- 100% Diesel or Gasoline
- Ethanol, Methanol, MTBE, ETBE, or TAME concentrations up to 20%

Protection Level:



The Red Jacket Alcohol Gas (AG) STP

The Red Jacket AG STP Packer Manifold has all the advantages of The Red Jacket Submersible Turbine Pump platform, while also including an additional 25% in stainless steel hardware of its major components.

In addition to fuel types supported by The Red Jacket STP, The Red Jacket AG STP is also compatible with:

- Methanol concentrations up to 100%
- Ethanol concentrations up to 90%
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil

Protection Level:



The Red Armor® STP

The Red Armor STP Packer Manifold has an over 30% increase in stainless steel hardware of major components from The Red Jacket AG STP. It has all the advantages of The Red Jacket Submersible Turbine Pump Platform, but is specifically designed to withstand corrosive environments.

The Red Armor STP is compatible with the same fuel types as The Red Jacket STP and AG STP, but also protects against:

- Microbial Growth in Tank (Ultra-Low Sulfur Diesel)
- Constant Moisture Presence or Water Ingress into Sump
- Known Corrosive Environment

Protection Level:



The Red Jacket STP



Advanced STP Design

The Red Jacket STP solution optimizes fuel flow and dispensing. The STP also features Red Jacket's advanced packer manifold design, making it a simple and safe STP to install and service within the industry. This STP solution is available in $\frac{3}{4}$ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

Red Jacket's unsurpassed expertise helps your customers optimize fuel flow. Part of the industry's leading Veeder-Root suite of products, Red Jacket's family of Submersible Turbine Pumps and Pump Controllers ensure that your customers can pump fuel quickly, efficiently, and safely – whether it's motor fuel, diesel, aviation gasoline, ethanol/methanol, or kerosene – in aboveground or underground storage tanks.

► KEY FEATURES

Superior Motor Design:

- **Robust Bearing Alignment System** – Quiet running, low bearing wear, true running of motor shaft
- **Low Power Consumption** – Efficient motor design results in low wattage being used
- **High Quality** – Red Jacket's motor manufacturing yields advanced quality, which means more station uptime than other STPs on the market
- **High Reliability** – Unique bearing design and high insulation temperature rating yield a long motor life
- **High Safety Standards** – Connectors separation meets latest flameproof standards

Advanced Packer Manifold Design:

- **Built-in Isolated Contractor's Box** – Electrical connection housing is built into the manifold and is completely isolated from the fuel path
- **Easy to Install and Service** – Quick assembly, with no adjustment required to fit the yoke
- **High Electrical Safety** – Automatic electrical yoke disconnects upon removal of extractable bolts
- **Environmentally Friendly** – Automatic breaking of extractable seal upon bolt removal ensures automatic fuel drain back into tank, protecting the environment from contamination and site owners from related liability
- **Innovative Check Valve Design** – "Open" setting makes for easy line tests and servicing

Protection Level





The Red Jacket STP

Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Ethanol, Methanol, MTBE, ETBE, or TAME concentrations up to 20%

Motor Sizes Available:

- $\frac{3}{4}$ HP, 60 Hz, 1-phase
- 1 $\frac{1}{2}$ HP, 60 Hz, 1-phase
- X3 1 $\frac{1}{2}$ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 Hz, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: N/A

Operation Environment:

- Class 1, Group D atmospheres
- Low corrosion environment
- Dry sump space (no water ingress)

Installation Depth Range:

- Fixed Length: 3'6" to 11'6"
- Quick Set® (Adjustable Length):
 - RJ 1 = 74.5" - 105"*
 - RJ 2 = 104.4" - 165"
 - RJ 3 = 164" - 225"

* Assumes 1.5 HP

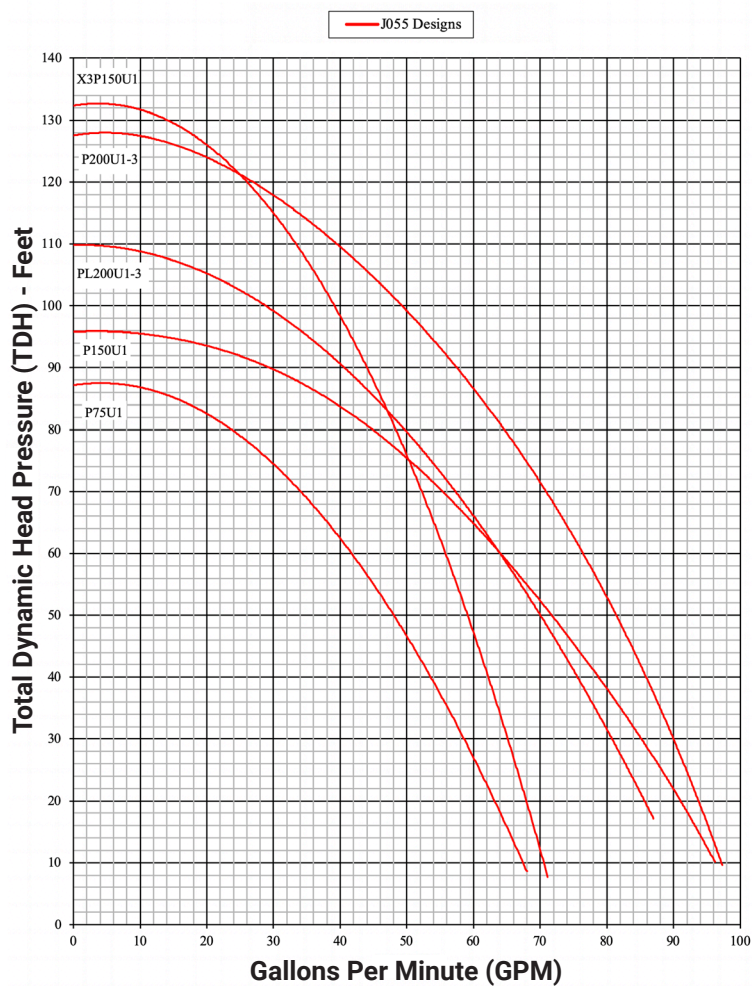
Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, $\frac{1}{4}$ " NPT
 - Vacuums generated up to 25 in Hg
- Line Pressure Port: 1 Available, $\frac{1}{4}$ " NPT
- Vent Port: 1 Available, $\frac{1}{4}$ " NPT

Check Valve Compatibility:

- Standard VR ready check valve for PLLD (0410152-001)
- High pressure check valve for high pressure applications (0410152-002)

Performance @ 230V; SG = 0.78



UL Listings:

- 100% Diesel
- 100% Gasoline
- Gasoline and up to: 10% Ethanol, 15% Methanol, 20% MTBE, 20% ETBE, 20% TAME

Other Agency Listings: cUL

The Red Jacket Alcohol Gas STP



Created for Alternate Fuels

All the advantages of The Red Jacket STP, designed for alternative fuels – such as alcohol and ethanol. The Red Jacket AG STP is a fixed-speed alcohol gas STP that delivers optimal flow to meet site demand. The STP also features Red Jacket's advanced packer manifold design, making it a simple and safe STP to install and service within the industry. This STP solution is available in $\frac{3}{4}$ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

► KEY FEATURES

Alternative Fuel ready with AG Compatible Hardware:

- **Specialized Design** – Compatible with Alternate Fuels. Ethanol concentrations up to 90%, Methanol concentrations up to 100%, and MTBE, ETBE, or TAME concentrations up to 20%
- **Certified** – UL79A and UL79B for use with renewable biofuels

Plus, all the Advantages of The Red Jacket STP Features



The Red Jacket AG STP is compatible with Ethanol concentrations up to 90%, Methanol concentrations up to 100%, and MTBE, ETBE, or TAME concentrations up to 20%, and is UL79A and UL79B certified for use with renewable biofuels.

Protection Level





The Red Jacket Alcohol Gas STP

Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil
- Ethanol concentrations up to 90%
- Methanol concentrations up to 100%
- MTBE, ETBE, or TAME concentrations up to 20%

Motor Sizes Available:

- $\frac{3}{4}$ HP, 60 Hz, 1-phase
- 1 $\frac{1}{2}$ HP, 60 Hz, 1-phase
- X3 1 $\frac{1}{2}$ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 Hz, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: N/A

Operation Environment:

- Class 1, Group D atmospheres
- Low corrosion environment
- Dry sump space (no water ingress)

Installation Depth Range:

- Fixed Length: 3'6" to 11'6"
- Quick Set® (Adjustable Length):
 - RJ 1 = 74.5" - 105"*
 - RJ 2 = 104.4" - 165"
 - RJ 3 = 164" - 225"

* Assumes 1.5 HP

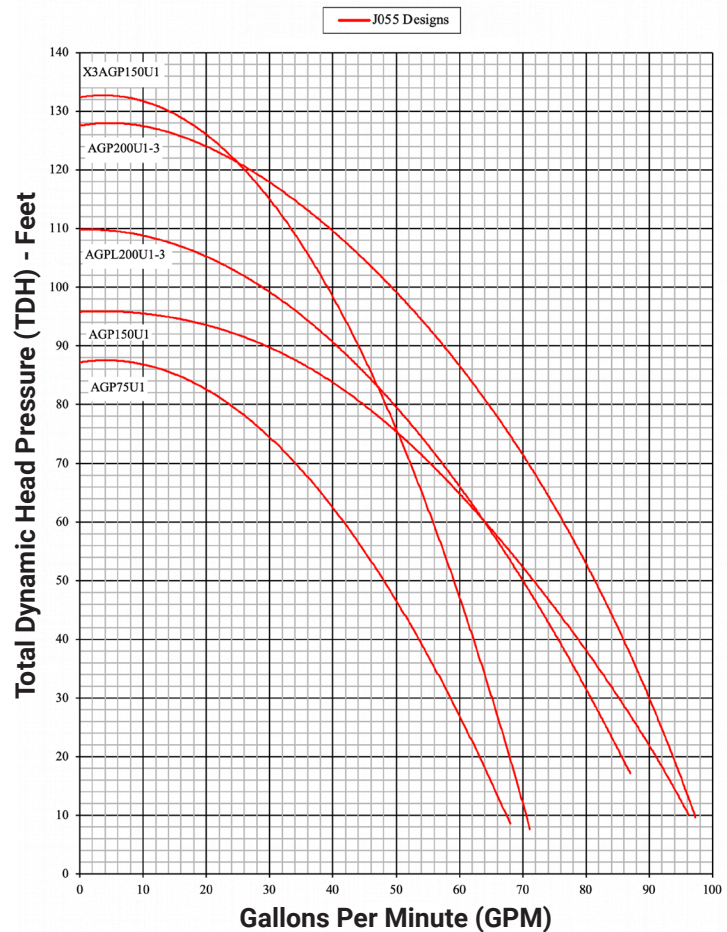
Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, $\frac{1}{4}$ " NPT
 - Vacuums generated up to 25 in Hg
 - Equipped with stainless siphon cartridge for survivability in corrosive fuels (0410151-002)
- Line Pressure Port: 1 Available, $\frac{1}{4}$ " NPT
- Vent Port: 1 Available, $\frac{1}{4}$ " NPT

Check Valve Compatibility:

- Standard VR ready check valve for PLLD (0410152-001)
- High pressure check valve for high pressure applications (0410152-002)

Performance @ 230V; SG = 0.78



UL Listings:

- 100% Diesel
- 100% Gasoline
- 100% Biodiesel (B100)
- Kerosene and Fuel Oil
- 85% Ethanol (E85)
- 0-20% Biodiesel blends
- Gasoline and up to: 15% Methanol, 20% MTBE,
- 20% ETBE, 20% TAME

Other Agency Listings: cUL



Red Armor® STP



In-Sump and In-Tank Protection from Corrosion

The ultimate survivor in your fueling infrastructure, the Red Armor series of STPs is built to last in the harshest corrosive environments created by ULSD and ethanol blends. Red Armor is a fixed-speed STP that delivers optimal flow to meet site demand for corrosive environments, promoting maximum fuel flow and dispensing. The Red Armor STPs also feature Red Jacket's advanced packer manifold design, making it a simple and safe STP to install and service within the industry. This STP solution is available in $\frac{3}{4}$ HP to 2 HP motor configurations and fixed or Quick Set® adjustable lengths.

► KEY FEATURES

Added Protection on all Exposed Surfaces:

- **Specialty coating*** on all cast surfaces withstands acetic acid exposure to prevent pitting and deterioration over time
- **Stainless Steel construction** on all exposed surfaces ensures easy maintenance for the life of the pump, including: riser, nuts, springs, screws, check valve seat, eye bolt, and check valve guide
- **Constructed with upgraded materials** including powder-coated discharge head, stainless column pipe, and Quick Set connector

Plus, all the Advantages of The Red Jacket STP

Protection Level





Product Specifications

Fuel Compatibility:

- 100% Diesel or Gasoline
- Biodiesel concentrations up to 100%
- Jet Fuel and AVGAS
- Kerosene and Fuel Oil
- Ethanol concentrations up to 90%
- Methanol concentrations up to 100%
- MTBE, ETBE, or TAME concentrations up to 20%

Motor Sizes Available:

- ¾ HP, 60 Hz, 1-phase
- 1 ½ HP, 60 Hz, 1-phase
- X3 1 ½ HP, 60 Hz, 1-phase, high pressure
- LP 2 HP, 60 Hz, 1-phase, low pressure
- 2 HP, 60 Hz, 1-phase

Protective Coatings: Exposed Cast Iron covered with specialized dual powder/e-coating

Operation Environment:

- Class 1, Group D atmospheres
- High corrosion environment
- Wet or dry sump space (water ingress)

Installation Depth Range:

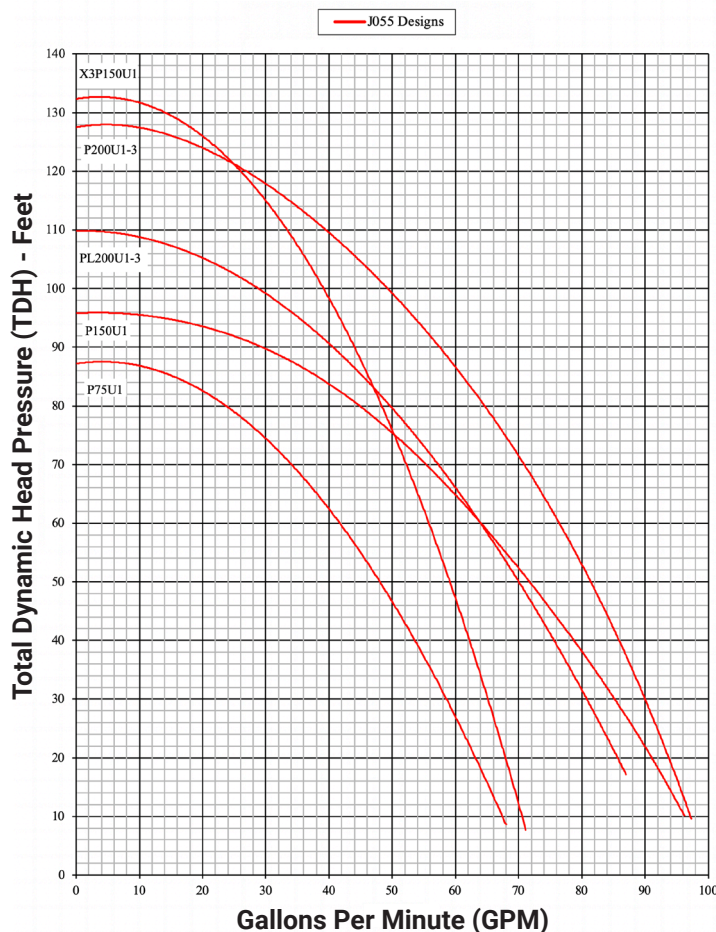
- Fixed Length: 3'6" to 11'6"
- Quick Set® (Adjustable Length):
 - RA 1 = 74.5" - 105"*
 - RA 2 = 104.4" - 165"
 - RA 3 = 164" - 225"

* Assumes 1.5 HP

Packer Manifold Access Ports:

- Siphon Ports:
 - 2 available, ¼" NPT
 - Vacuums generated up to 25 in Hg
- Line Pressure Port: 1 Available, ¼" NPT
- Vent Port: 1 Available, ¼" NPT

Performance @ 230V; SG = 0.78



Check Valve Compatibility:

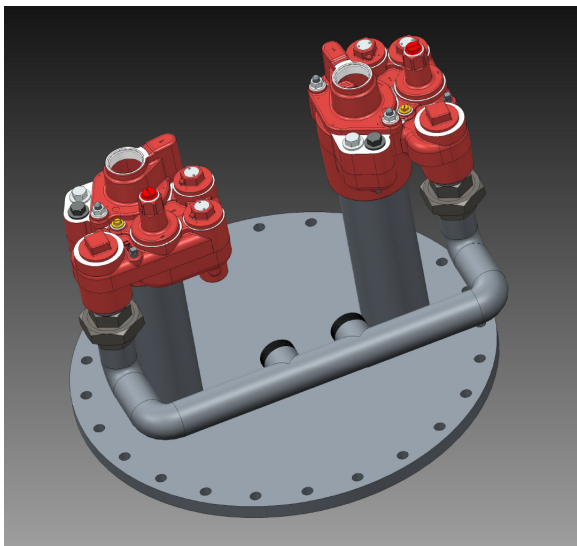
- Standard VR ready check valve for PLLD
- (0410152-001)
- High pressure check valve for high pressure applications
- (0410152-005)

UL Listings:

- 100% Diesel or Gasoline
- Gasoline and up to: 10% Ethanol, 15% Methanol, 20% MTBE, 20% ETBE, 20% TAME

Other Agency Listings: cUL

2+2 The Red Jacket Fixed Speed STP



Line Manifolding & The Red Jacket 2+2 Solution

Increase pumping capacity by manifolded two Red Jacket STPs together in the sump and using Red Jacket IQ Control Boxes to stage the pumps on and off as demand needs dictate. For busy sites this allows them to keep pumping even while maintenance is being performed on one of the pumps.

Two fixed-speed 2 HP pumps manifolded together provide profit-saving protection against outage and better flow than a single 4 HP pump. The sump must be 42" in diameter or greater. When using a single 4 HP pump, a pump or controller failure brings down a fueling site. The 2+2 solution provides seamless redundancy, optimal flow for your site, and backup operation with automatic failover.

Switch-on-the-fly will switch STPs in live mode, without waiting for an on-hook condition, essential for maintaining balance at busy sites. Integrates control with Mechanical Line Leak Detection (MLLD) or Pressurized Line Leak Detection (PLLD).

► KEY BENEFITS

REDUNDANCY

The Key to Uptime:

- Automatic failover
- Service one STP while the other keeps your site running

EFFICIENCY

Working Smarter:

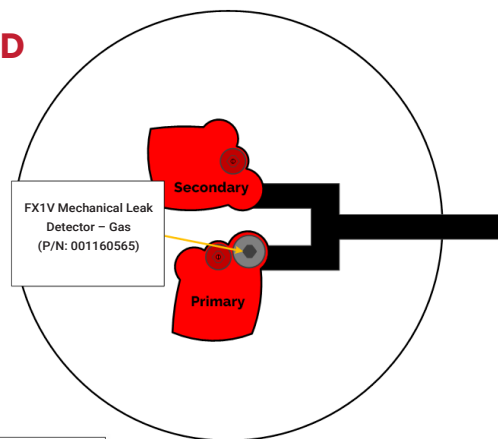
- 2+2 will produce 50% higher flow than a 4 HP variable-speed design
- Demand based staging to even wear and for low power consumption

STANDARDIZE

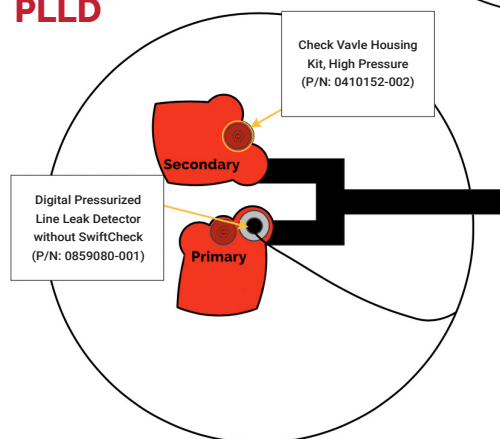
Simplify Inventory:

- Reduce overall part numbers with Red Jacket manifolded systems

MLLD



PLLD





Automated Fuel Management

The TLS-450PLUS Automatic Tank Gauge (ATG) Virtual Siphon feature provides site operators the ability to control tanks' inventory levels based on operational needs.

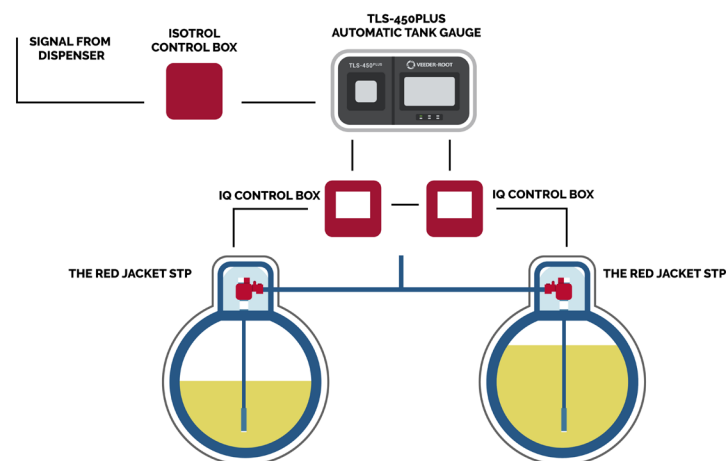
Using a line manifold system with two or more tanks allows the site operators to use the TLS-450PLUS ATG system to decide when to activate a specific tank based on the tanks fuel height, volume, or other setting specific to the pump configuration. In addition to this capability, the TLS-450PLUS will activate the unused tank while the other tank is still active to ensure no disruption of dispensing occurs during the tank switch over event.

With the Veeder-Root TLS-450PLUS ATG, Virtual Siphon is easy to program, monitor, and maintain, and provides the site with STP redundancy and backup operation.

There are several modes for managing the fuel inventory in each tank:

- 1. Manifolded: Alternate-Volume or Alternate-Height** – The TLS-450PLUS alternates the pumps to maintain a volume or height differential
- 2. Manifolded: Alternate Pump** – Pumps alternate until one tank is empty
- 3. Manifolded: Sequential** – Pumps empty each tank one at a time
- 4. Manifolded: All Pumps** – All pumps on until respective tanks are empty

Virtual Siphon connects your TLS-450PLUS ATG to your Red Jacket STPs using the IQ and Isotrol Control Boxes.



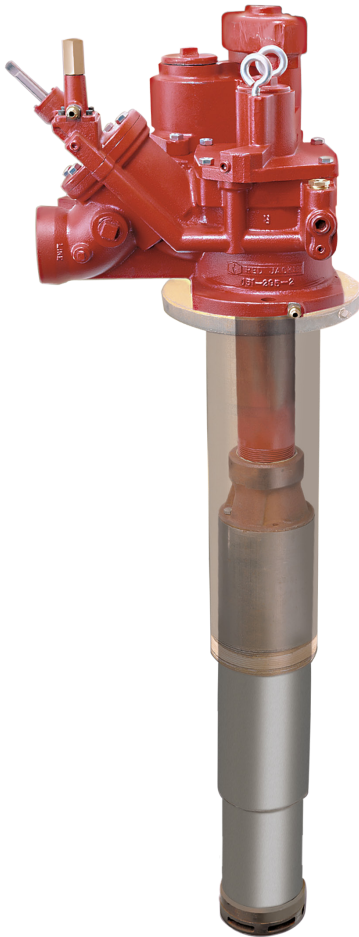
VIRTUAL SIPHON ALLOWS SITE OWNERS TO MANIFOLD TWO OR MORE TANKS TOGETHER FOR COMPLETE CONTROL OVER INVENTORY LEVELS IN ALL TANKS

► KEY FEATURES

- Inventory and delivery reporting
- Consolidated delivery information for easy fuel ordering
- Maintain constant at the nozzle flow when switching from tank to tank
- Programmable switch levels to reduce STP cycling
- Continuous inventory monitoring with built in pump control logic
- Alarm and warning notifications when fuel tanks require fuel delivery intervention

Required Equipment: To take advantage of the Virtual Siphon feature customers must have the TLS-450PLUS ATG, Veeder-Root Electronic Line Leak Detection System and/or our pump control Universal Input-Output interface Module (UIOM).

Maxxum STP



Overview

The Red Jacket Maxxum Submersible Turbine Pump is intended for 6" high flow applications and provides high industry flow rates. The Maxxum series boasts leading serviceability and safety features. With a 3 or 5 HP motor, it's specifically engineered for high throughput applications such as truck stops, where extreme demand, multiple fuel points, and long piping runs reduce fuel flow to the nozzle.

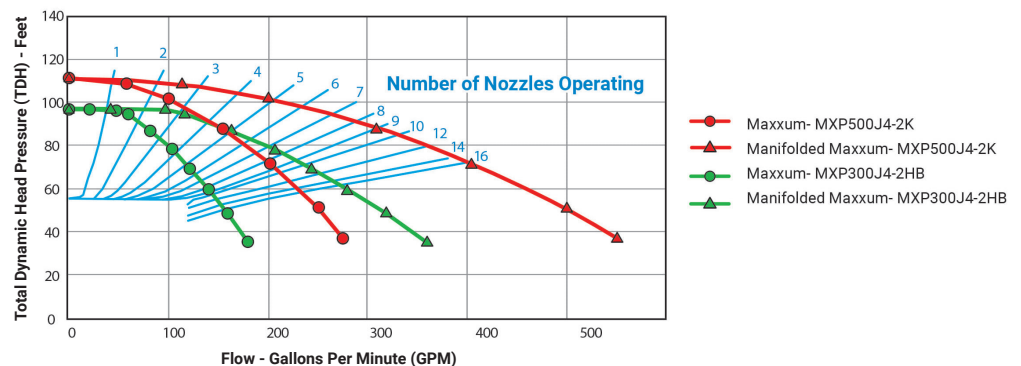
Product Description

The Maxxum (formerly Big Flo) STPs and Unitized Motor Pumps (UMPs) provide high industry flow rates by reducing the number of restrictions within the flow path. The efficient design also leads to minimum power consumption, contributing to a low lifetime cost of operation. Easy access to valves and ports allows for reliable diagnostics and fast service.

► KEY FEATURES

- **Minimal Wear** – Design results in quiet operation and low levels of wear
- **Insulation Rating** – High insulation temperature rating assures long running life
- **Corrosion Protection** – Stainless components result in high protection for use with blended fuels
- **Backwards Compatible** – Maxxum UMPs are compatible with previous 3 and 5 HP Maxxum STPs
- **Explosion Proof** – Design provides high levels of safety; certified UL/cUL/IECEX/ATEX Explosion proof motor
- **Continuous Safety Improvements** – Design enhancements guided by newer international flame proofing standards

Red Jacket 3 & 5 HP Maxxum Performance in Diesel





Overview

The Red Jacket® CoreDEF™ STP is an innovative solution that sets a new standard in the optimization of Diesel Exhaust Fluid (DEF) pumping infrastructure. CoreDEF is an entirely customizable DEF delivery system, designed for a complete range of light- to heavy-duty submersible DEF applications.

Various motor sizes, Quick Set® variable lengths, and the only adjustable pressure relief offering on the market, make the CoreDEF pump a flexible solution that can be tailored to maximize value, while controlling cost. The CoreDEF sub DEF pump is pre-assembled and factory leak tested, which cuts out the stress and time of installation and get you pumping sooner.

► KEY FEATURES

- The submersible pump and supplied components satisfy the ISO 22241 standard for DEF quality
- Durable stainless-steel construction for longevity and DEF compatibility
- Pressure relief valve allows for continuous running and protects motor when nozzles are idle with adjustable pressure relief option available
- Portfolio of motors available to meet global power or demand requirements for both Single- and Three-Phase
- Same field proven Quick Set® design as The Red Jacket portfolio

Factory Leak Tested:

Diesel Exhaust Fluid is extremely hard to contain and even harder to clean up.

- CoreDEF submersible DEF pumps are factory-tested to prevent any possibility of leaks in the field
- Using a competitive pump may allow leaks and crystallization, seriously complicating serviceability

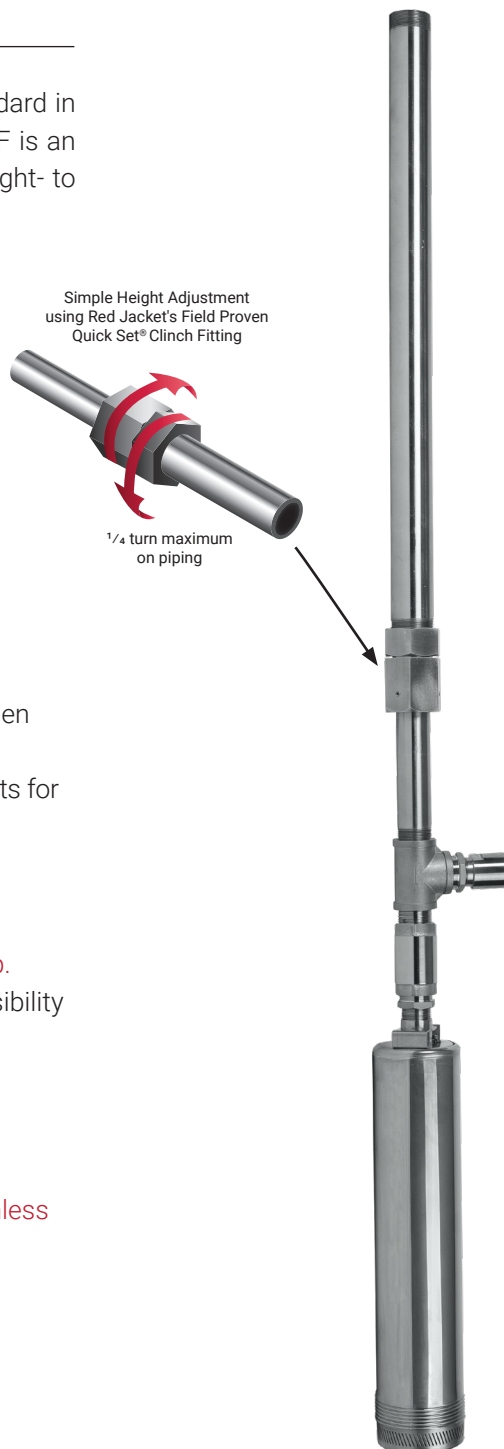
Adjustable Line Pressure Relief Option:

Enables the user to adjust line pressure between 20 - 45 PSI, making for painless post-installation flow rate tuning.

- Optimize operation with any dispenser
- Avoid excessive nozzle squeeze
- Prevent nozzle spit back

Product Compatibility:

- Designed for DEF consisting of 32.5% Urea and 67.5% deionized water



CoreDEF™ STP

Model Portfolio for Varying Applications

The CoreDEF Series Portfolio contains the perfect power setting for your site. Model selection is made easy using the guide below:

Medium to Heavy Throughput Location



2 HP Submersible Application (Model Number – DP200):

- Fits sites with 3 - 7 fueling points
- Available in Single- or Three-Phase options

Light Throughput Location

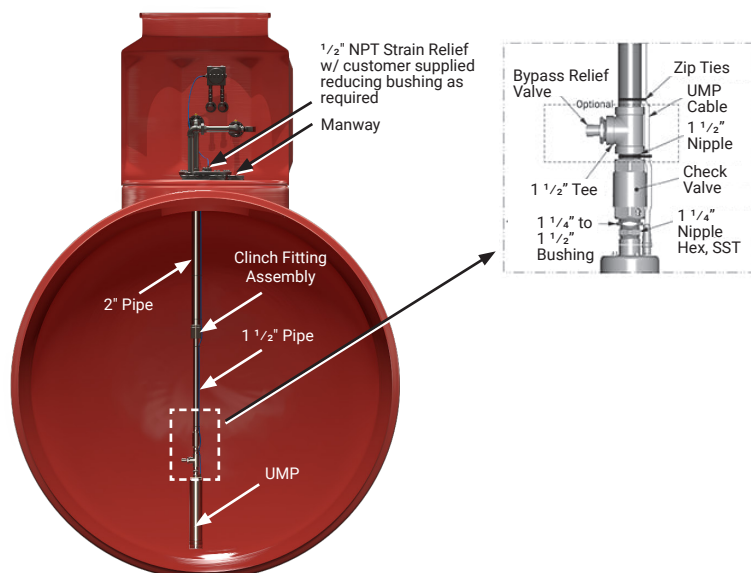


¾ HP Submersible Application (Model Number – DP75):

- Fits sites with 1 - 2 fueling points
- Available in Single-Phase

► FIXED LINE PRESSURE RELIEF OPTION

Easy out-of-box installation to protect your fueling system from excessive pressure.



► EXTREME DEMAND?

CoreDEF STPs can easily be manifolded together to double throughput and meet high demand requirements.





Site Configuration

► STEP 1: Final Assembly Configuration

| Final Assembly Configuration Builder | | | | | | Adjustable Pressure Relief Kits | |
|--------------------------------------|---------|---------------------------|---|------------------------------|----------------------|--|-------------------------------|
| A UMP Size (HP) | B Phase | C Type of Pressure Relief | D Adjustment Range - See Manual Diagram | E Final Assembly Description | F Final Assembly P/N | G Adjustable Pressure Relief Kit P/N 0410881-001 | H Check Valve P/N 0410875-001 |
| 3/4 | 1 | Fixed | D1: 66.0" - 97.0" | DP75U1-D1 w/ relief | 0410870-001 | Not Required | |
| | | | D2: 96.0" - 157.0" | DP75U1-D2 w/ relief | 0410870-002 | | |
| | | Adjustable | D1: 66.0" - 97.0" | DP75U1-D1 w/o relief | 0410870-005 | Required | Recommended ¹ |
| | | | D2: 96.0" - 157.0" | DP75U1-D2 w/o relief | 0410870-006 | | |
| 2 | 1 | Fixed | D1: 73.0" - 104.0" | DP200U1-D1 w/ relief | 0410870-009 | Not Required | |
| | | | D2: 103.0" - 164.0" | DP200U1-D2 w/ relief | 0410870-010 | | |
| | | Adjustable | D1: 73.0" - 104.0" | DP200U1-D1 w/o relief | 0410870-013 | Required | Recommended ¹ |
| | | | D2: 103.0" - 164.0" | DP200U1-D2 w/o relief | 0410870-014 | | |
| | 3 | Fixed | D1: 73.0" - 104.0" | DP200U4-D1 w/ relief | 0410870-017 | Not Required | |
| | | | D2: 103.0" - 164.0" | DP200U4-D2 w/ relief | 0410870-018 | | |
| | | Adjustable | D1: 73.0" - 104.0" | DP200U4-D1 w/o relief | 0410870-019 | Required | Recommended ¹ |
| | | | D2: 103.0" - 164.0" | DP200U4-D2 w/o relief | 0410870-020 | | |

¹ = Adjustable Pressure Relief Option can be operated without a check valve, but will allow the system to depressurize to 0 PSI between dispense cycles. Line depressurization will not be noticed while dispensing. Finals with fixed pressure relief include a check valve in the piping assembly.

► STEP 2: Control Box Configuration

A Control Box is recommended to activate the pump in response to a dispense request. In **Single-Phase applications**, the Control Box houses the Pump Start Capacitor. (Not required for Three-Phase.)

| Control Box Configuration (Includes integrated capacitor for single-phase) | | | | |
|--|---------|----------------|---------------------------|--|
| A Hook Signal Voltage | B Phase | C UMP Model | D Control Box P/N | E Control Box Description |
| 120V | 1 | DP75 (3/4 HP) | 008800455 | Standard Control Box 17.5uF 120VAC for 3/4 HP |
| | | DP200U1 (2 HP) | 0410861-001 | Standard Control Box 40uF 120VAC for 2 HP |
| | 3 | DP200U4 (2 HP) | 0410648-001 & 0410649-010 | Magnetic Starter 115VAC for 3 Phase & (qty. 3) Heaters 2 HP 60Hz |



Control Box

► STEP 3: Isotrol™ Box Configuration

The Isotrol Box is optional for sites that require dispenser hook isolation.

| Isotrol Box Configuration | | | |
|---------------------------|-------------------|------------------------------------|------------------------|
| A Hook Signal Voltage | B Manifold Pumps? | C Isotrol Part Number ¹ | D Isotrol Description |
| 120V | Yes | 008800471 | Isotrol 120v w/ relay |
| | No | 008800491 | Isotrol 120v w/o relay |

¹ = An Isotrol with relay is utilized to activate the second pump when operating manifolded pumps. Reference the CoreDEF Installation Manual (577014-360).



Isotrol Control Box

► Piping Accessories

If you are using the Adjustable Pressure Relief Valve, considering a DEF Recirculation system or expanding an existing site. Select optional plumbing accessories based on the following scenarios.

| Optional Piping Accessories | | | |
|--|---|-------------------------------------|--------------------|
| Pressure Gauge | | NPT to BSP Adapters | |
| Need Gauge for Pressure Tuning? ¹ | Recommended Pressure Gauge ³ | Need to transition from NPT to BSP? | NPT to BSP Adapter |
| Using Adjustable Pressure Relief? | 0410880-001 (1/4" NPT fitting) | No | Not Required |
| Using DEF Recirculation? ² | | Female 1 1/4" BSP | 0410878-001 |
| | | Female 2" BSP | 0410879-001 |

¹ = Additional information can be found in the DEF Recirculation Installation Manual.

² = DEF recirculation was developed as a solution for DEF sites affected by extreme temperature conditions.

³ = Though not required, a pressure gauge (P/N: 0410880-001) can be used in any CoreDEF application.

LPG Premier STP

Overview

The Red Jacket® Liquified Petroleum Gas (LPG) Premier range of STPs* meet a wide variety of site configurations and demands for high flow performance, durability, and adaptability, while maximizing profitability. Compatible with butane, propane, or any blend of the two, these multistage centrifugal pumps supply exceptional performance at peak efficiency. The LPG Premier STPs are the industry's most efficient, cost-effective explosion-proof submersible pump/motor units, designed to pump LPG.

The Premier and Premier MidFlow are designed for standard LPG refueling applications with low to intermediate flow requirements, while the Premier HiFlow is intended for high capacity installations such as commercial vehicle fueling facilities and LP cylinder filling plants.

Product Description

LPG is a mixture of gasses, primarily propane and butane and remains a vapor until pressurized to the point of liquification. The LPG Premier Series operates under sufficient pressure to retain the liquid state at optimal delivery rates.

This multi-stage technology provides maximum performance with efficient energy consumption:

- 2.25 kW (3 HP) for the Premier pump
- 2.25 kW (3 HP) for the MidFlow pump
- 3.75 kW (5 HP) for the HiFlow pump

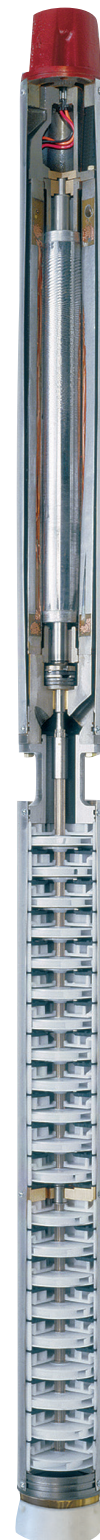
A floating impeller design eliminates unnecessary resistance and maximizes flow. All diffusers are interlocked and are enclosed in a stainless steel shell.

Staging consists of three ruggedized components:

1. The diffuser
2. The diffuser plate
3. The impeller

The Premier series controls motor temperature using an innovative internal bleed (by-pass) in the motor. Motors meet all flameproof requirements per DEMKO 13 ATEX 9483031U and IECEx UL 13.0034U certificates. The minimum differential pressure requirement for The Red Jacket Premier Series LPG pumps is 400 kPa (58 PSI).

The Red Jacket Premier Series LPG pumps requires at least 127 mm (5.0 inches) of submersion (or Net Positive Section Head).



** The LPG pumps are not available in the US. International only.*



Combat In-Sump Corrosion

Why is Corrosion of In-Sump Equipment an Issue?

Corrosion of equipment in sumps causes deterioration and shortens its useful life span. As corrosion advances it has the potential to affect the integrity of piping and electrical systems, and the serviceability of submersible turbine pump equipment.

Corrosive conditions are caused when three common components are present:

1. Ethanol Vapors
2. Water
3. Bacteria



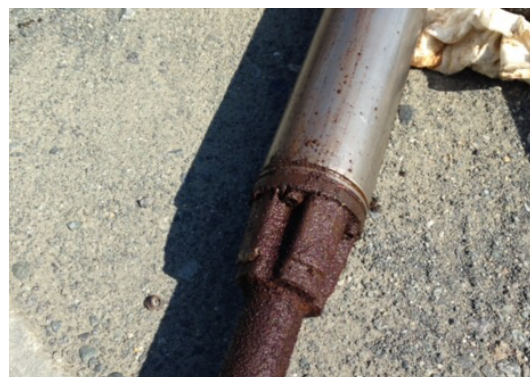
Categories of Observed Fuel Corrosion

Vapor Space Corrosion In-Sump

- Affects of ethanol-blended fuels
- Damages 'above-the-line' in the vapor space, ullage space in UST, and sump space

Microbial Induced Corrosion in the UST

- Affects of ULSD fuels
- Damages 'below-the-line' wetted surfaces UST, in-tank equipment, piping, shear valves
- Accompanied by microbial 'sludge' growth



Sump-Dri™ Desiccant System

Protect In-Sump Equipment From Corrosion

The Red Jacket® Sump-Dri™ Desiccant System uses a specifically formulated desiccant blend that protects equipment in the STP sump from corrosive conditions. The Sump-Dri Desiccant System should be installed in sump spaces that frequently have increased moisture or ethanol vapors. Any moisture in the sump, whether it be high humidity, condensation or water ingress, can combine with ethanol vapors to create conditions for corrosion. Sump-Dri keeps the sump in better condition and ensures longer life of parts contained in the sump.



Up to 6 Months of Protection

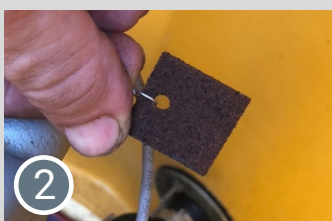
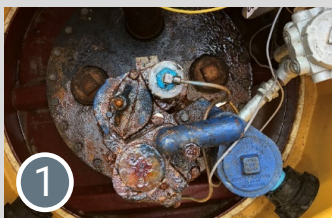
Sump-Dri units are expected to protect a 75 - 100 cu.ft. space for up to 6 months under typical conditions, but functional duration may be shorter or longer depending on humidity level, temperature, how well the sump is sealed, and frequency that the sump space is opened. Larger spaces or extended maintenance periods may elect to install multiple units. Sump-Dri units should be changed when the desiccant in the upper chamber has completely depleted.

Field Test Results

At the conclusion of a year long study the results were clear:

Sites with the Sump-Dri installed had more sustainable conditions within the sump space, including limited condensation on the equipment, reduced levels of humidity and low acetic acid concentration in the vapor space. In sump spaces that were not installed with the Sump-Dri at the same site, accelerated corrosion on the equipment, extreme condensation, high levels of humidity and high acetic acid concentrations were all present.

Regular Unleaded Without Sump-Dri Installed



Regular Unleaded With Sump-Dri Installed



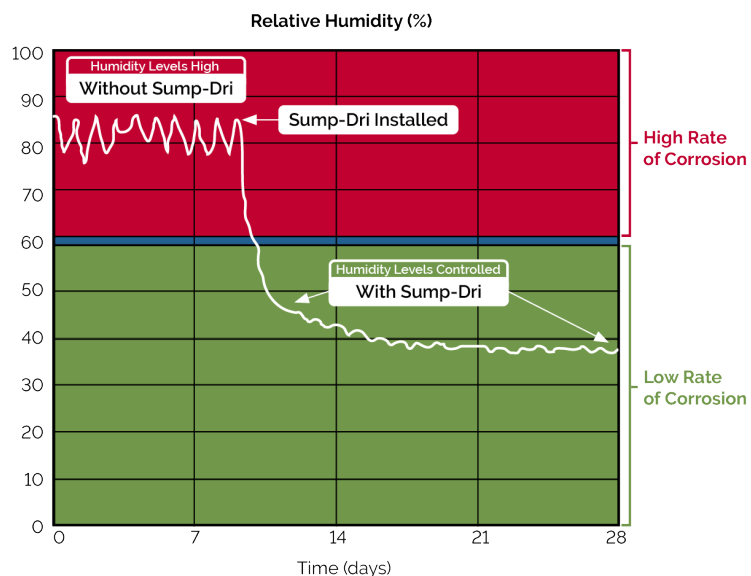
- 1 Extreme Corrosion
- 2 Test Coupon Fully Corroded
- 3 Dry & Clean
- 4 Test Coupon Clean



Sump-Dri™ Desiccant System

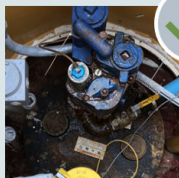
Visualize Corrosion

- Corrosion is 'controlled' if humidity levels **below 60% are maintained**¹. If humidity is greater than 60%, corrosion will not be controlled and will be accelerated with the presence of ethanol vapors.
- Depending on the conditions in a specific sump, there are a number of different solutions to help mitigate the effects of corrosion and reduce the likelihood that it will occur.



Ideal Conditions

Suitable Conditions & Requirements for Optimal Sump-Dri Performance Usage



Humid & Extreme Weather Conditions

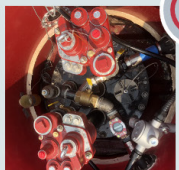


Water-tight Sump Space



Consistent Maintenance/Service Plan

Conditions Not Suitable for Sump-Dri Installation



Dry-Heat/Arid Environment



Standing Water in the Sump Space



Irregular Maintenance

1. E. Cano, J. M. Bastidas, J. L. Polo, and N. Moraa. "Study of the Effect of Acetic Acid Vapor on Copper Corrosion at 40 and 80% Relative Humidity". Journal of The Electrochemical Society 148, (September 20, 2011): B431-B437



The Red Jacket Stainless Steel Riser Pipes

Corrosion Defense

The Red Jacket® Stainless Steel Riser Pipes are impervious to in-sump corrosion caused by acetic acid. They improve submersible turbine pump serviceability in corrosive environments and avoid water intrusion into your tank from corroding riser pipe threads.



Take a Stand Against Rising Water

If the sump frequently has standing water and water in the tank is an issue, consider installing 4" Red Jacket Stainless Steel Riser Pipes, Type 304, NPT thread, in all new and reconfigured submersible turbine pump applications.

Red Jacket Stainless Steel Riser Pipes address water intrusion at tank top interfaces due to accelerated corrosion of riser pipe threads in damp sumps.

Specify "omit riser" on any STP final order and add the properly sized stainless steel riser on any Red Jacket STP order to replace the standard material riser with the stainless-steel version.

Note: Replaces standard 4" riser pipes, 7.5", 10.5", 12.5", 15.5", 19.5", and 27.5" lengths in-stock and additional lengths available upon request.





Trapper Intake Screen

Overview

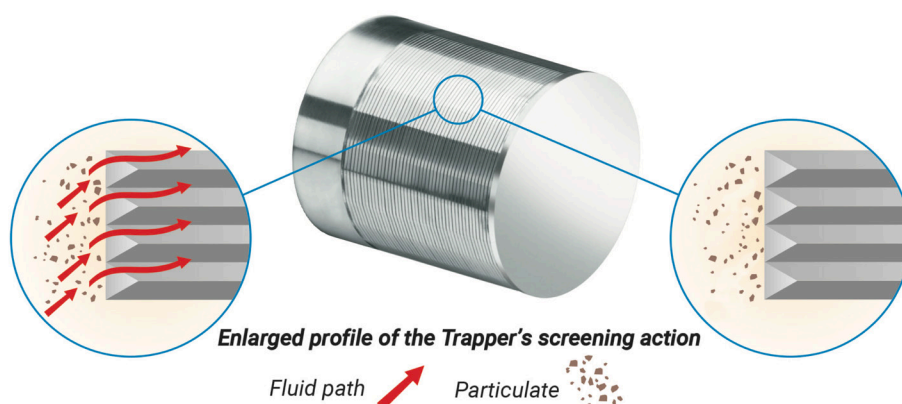
The Red Jacket® Trapper Intake Screen is the first line of defense against debris from microbial induced corrosion or other harmful particulate from entering the site fueling system.

Prolong fueling equipment life and save money with the Red Jacket Trapper Intake Screen. Unique, triangular slot design prevents accumulation and lodging of particles from underground storage tanks, maintaining peak performance of the submersible pump and keeping debris from entering the site's fueling system and dispensers. The Red Jacket Trapper Intake Screen is the perfect accessory to the industry leading line of submersible turbine pumps provided by Red Jacket.

How The Red Jacket Trapper's Unique Screening Action Works

Pump ON: The triangular design of the filter allows the free flow of fluid but blocks particulate from entering the fluid system without reducing pump performance.

Pump OFF: Self-cleaning design allows particulate to fall away from the intake when the submersible pump is turned off.



► KEY FEATURES

- High-quality continuous slot design specifically engineered to fit at the end of the Red Jacket STPs. Available as a field retrofit kit for Red Jacket STPs.
- Easy, low-cost retrofit kit makes the Red Jacket Trapper Intake Screen a money saver at any Red Jacket site.
- Triangular profile screen blocks tank particulates from entering the pump.
- Self-cleaning every time the submersible pump is turned off.
- Rugged 304 stainless steel construction.
- Protects STPs from rags and other larger debris.
- Reduces submersible intake filter changes to as low as once per year per line, saving on labor and filter costs by preventing tank particulates from entering the fluid system.
- Decreases environmental liability by reducing the potential for filter seal leaks due to frequent filter changes.
- Reduces the amount of hazardous waste generated by used filters.
- Non-clog design does not require scheduled maintenance.
- Prolongs dispenser life.

Control Boxes



Standard Control Box Pump Control Box

Maintain safe, reliable, efficient fuel flow with Red Jacket's most basic submersible turbine pump interface. Our Standard Control Box interfaces between the fuel dispenser and the turbine pump and has an indicator light that signals when a customer begins fueling.

▶ KEY FEATURES

- Easy interface between dispenser and turbine pump
- Enables "lock-out-tag-out" for safe pump servicing
- Available with internal capacitor for ease of troubleshooting and repair, saving time and money



IQ Smart Control Box Pump Control Box

Red Jacket's IQ Control Box is a submersible turbine pump interface that improves the longevity of the submersible pump motor. It's engineered to provide protection from dry-run conditions, locked rotor and site voltage fluctuations. It cuts downtime and boosts bottom line profits by warning site personnel of conditions impacting the ability to fuel. Plus, it meets fuel flow requirements, provides seamless backup and extends motor life by staging multiple pumps based on site fuel demand.

▶ KEY FEATURES

- Allows for demand-based staging of multiple pumps to control fuel flow based on changing fuel demand
- Automatically resets after dry run condition when fuel is added to the tank to minimize downtime
- Protects wiring and controls from locked rotor or high current
- Warns site personnel of conditions impacting the ability to fuel
- Monitors site power conditions to ensure long motor life and uninterrupted fueling



ISOTROL™ 1-8 Control Box Dispenser Hook Isolation Box

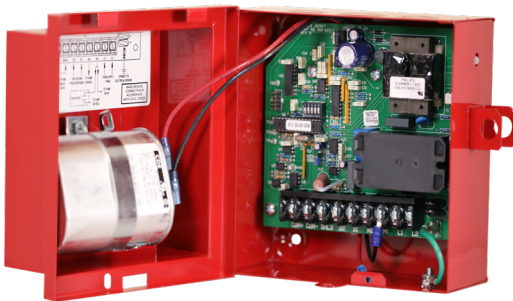
The Red Jacket ISOTROL 1-8 Control Box is the most versatile dispenser handle signal isolation system available. It isolates handle signals between each dispenser and protects against wiring shorts and phasing issues. Plus, it keeps technicians working on-site safe from dangerous feedback. The ISOTROL 1-8 Control Box is available with a built-in relay or without.

▶ KEY FEATURES

- Dedicated Automatic Tank Gauge (ATG) line leak output and coil for easy compatibility with PLLD
- Terminals are labeled for easy wiring and compatibility
- Compatible with Red Jacket's Submersible Turbine Pump, Maxxum, IQ Control Box, or as a stand-alone
- Easily retrofitted to existing locations
- Compliant with NEC requirements for handle isolation



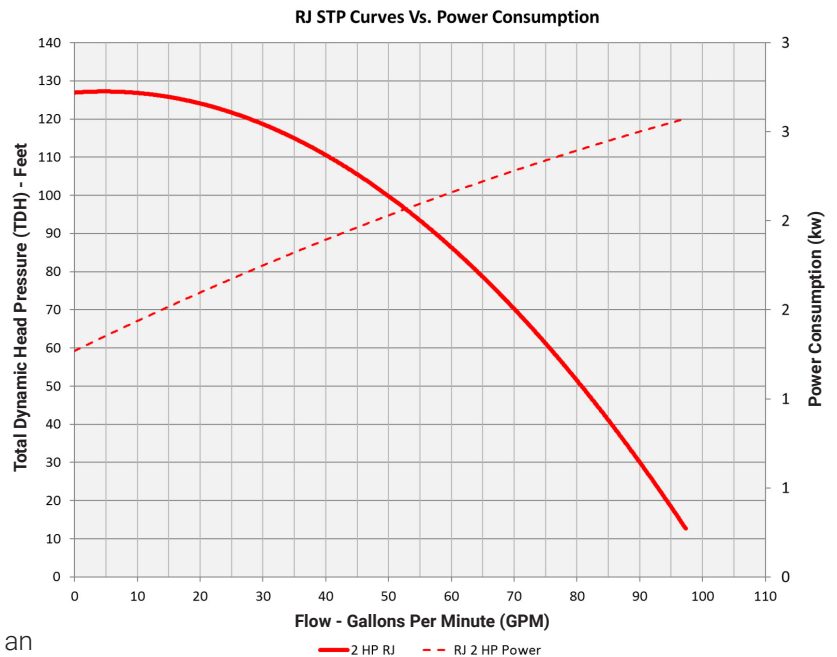
IQ Smart Control Box



Overview

- The amount of current a STP draws is proportional to the flow rate
- IQ Control Box stages on a second pump when demand is high
- IQ Control Box will also call for help when it senses a fault

Note: IQ Control Boxes are available with or without an integrated capacitor. The IQ Control Box shown has an integrated capacitor.



The Red Jacket 2 HP STP Fixed Speed Conversion Kit

Focused on Reliability

Red Jacket's unsurpassed expertise helps your customers optimize fuel flow. Focused on reliability and quality, The Red Jacket STP Fixed Speed Conversion Kit ensures that your customers have the most optimal system to pump fuel quickly, efficiently, and safely – whether it's motor fuel, diesel, aviation gasoline, ethanol/methanol, or kerosene – in aboveground or underground storage tanks.

In order to convert from a FE Petro three phase, variable speed pump to a Red Jacket single phase, fixed speed pump, you need one of the following conversion kits. You have the option to install the capacitor in the packer manifold or in the Standard or IQ control box depending on preference.

| Capacitor Location | Control Box Type | Voltage | Conversion Kit Part Number |
|--|----------------------|---------|----------------------------|
| Capacitor Included in Red Jacket Control Box | Standard Control Box | 120V | 0410893-003 |
| | IQ Control Box | 120V | 0410893-007 |
| Capacitor to be Installed in FE Petro STP Junction Box | Standard Control Box | 120V | 0410893-001 |
| | IQ Control Box | 120V | 0410893-005 |

- 1 **0410893-003:** Standard Control Box with capacitor included (0410861-001)
- 2 **0410893-007:** IQ Control Box with capacitor included (008800581)
- 3 **0410893-001:** Standard Control Box (008800415) with separate Capacitor Kit (0410164-003)
- 4 **0410893-005:** IQ Control Box (008800511) with separate Capacitor Kit (0410164-003)



1 0410893-003



Capacitor in
Standard Control Box
0410861-001

2 0410893-007



Capacitor in
IQ Control Box
008800581

3 0410893-001



Standard Control Box
008800415

and



Capacitor Kit
0410164-003

4 0410893-005



IQ Control Box
008800511

and



Capacitor Kit
0410164-003

Included in All Kits:

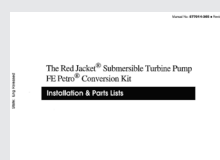


4" Pigtail 20-Foot Kit
0410156-001

NOTICE:

THIS PUMP HAS BEEN MODIFIED
PER V-R MANUAL 577014-365
AND NOW UTILIZES A
VEEDER-ROOT UMP, PIGTAIL,
AND CONTROL BOX.

Identification Plate



Installation Manual
577014-365

Included in All Kits

- 4" Pigtail 20-foot Kit (0410156-001)
- Identification Plate with Attachment Wire, to be tied around FE Petro yoke
- Installation Manual (577014-365)

UMP Sold Separately

- UMP200U1-3 Petroleum UMP (008522215)
- AGUMP200S1-3 Alcohol Gas UMP (008522225)



Monitoring Software

Intelligent Pump Control for Red Jacket Diagnostic Monitoring

Diagnose and Troubleshoot STP Equipment through the TLS-450PLUS

Provide Insight to Your Fueling Operations

Gain real-time visibility regarding the performance of your Red Jacket Submersible Turbine Pumps, make informed maintenance decisions, and ensure efficient service calls. Intelligent Pump Control (IPC) Software with Red Jacket Diagnostics runs on the TLS-450PLUS Automatic Tank Gauge (ATG), and communication flows between the ATG and STP through the IQ Smart Control Box.

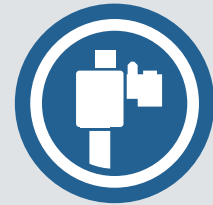
TLS-450PLUS



IQ Control Box



Red Jacket® STP



- **The TLS-450PLUS ATG** provides the most comprehensive site data for advanced fuel asset management, including real time updates and alerts on dispense modes, manifolding, communication and system faults.
- **The IQ Smart Control Box** contains the intelligent circuitry that allows the communication path to flow between the ATG and STP, providing key data for site owners to make informed business decisions.
- **The Red Jacket Fixed Speed STP** optimizes the fueling process and provides real-time performance data. The IPC Software with Red Jacket Diagnostics empowers you with the data needed to make informed site operation decisions.

► DIAGNOSTICS & FAULTS

Here is a list of the new equipment alarms provided on the TLS-450PLUS through IPC that helps diagnose and troubleshoot Red Jacket STP conditions before technicians are dispatched.

| Communication Failures | | |
|--|--|---------------------------------------|
| TLS Alarm/Pump Controller Comm Screen Status | Description/Cause | IQ Control Box Red LED Indicator |
| Uncalibrated | • IQ Control Box has not been calibrated to the current STP | Device is Uncalibrated (1 Flash) |
| Overload/Locked Rotor | • Overcurrent Condition (e.g., Locked Rotor, Pump Shutoff) | Overcurrent Fault (2 Flashes) |
| Dry Run | • Protection to prevent UMP from spinning without product available in the tank • Motor trying to pump when no product is available | Dry Run Fault (3 Flashes) |
| Underload | • Low AC Current | Low AC Current (4 Flashes) |
| Network Area | • Setup/Communications Error | Setup/Communication Error (5 Flashes) |
| Under Voltage | • Voltage level below threshold levels for 5 consecutive reads | Low Line Voltage (6 Flashes) |
| Bypassed | • IQ Control Box Normal/Bypass jumper left in Bypass position | Bypass Mode (7 Flashes) |
| Extended Run | • Unitized Motor Pump (UMP) is being monitored to determine if it has been running for too long | Extended Run (8 Flashes) |
| Open Circuit | • IQ Control Box is off or the motor is completely disconnected | LED Off |

Monitoring Software

Intelligent Pump Control for 3rd Party Pump Controllers

The TLS-450PLUS ATG can also monitor and control Non-Red Jacket submersible pump controller/pump sets with Intelligent Pump Control (IPC).

IPC allows the TLS-450PLUS ATG to display and report STP activity through a direct communication link between a STP pump controller and the TLS-450PLUS system via a RS-485 connection.

- Receive communication alarms from the pump controller/STP when issues arise for immediate action
- Use data to better understand STP performance and needed maintenance measures
- Proactively service equipment to ensure maximum uptime



► For further information, refer to [Intelligent Pump Control Sell Sheet \(576047-409\).pdf](#).



FXV Series Mechanical Line Leak Detectors

Overview

Red Jacket® FXV Mechanical Line Leak Detectors (MLLD) are permanently installed in the fuel line, and continuously performs 3 gal/h testing. If a leak is detected, fuel flow is restricted continuously to the dispensers.

Product Description

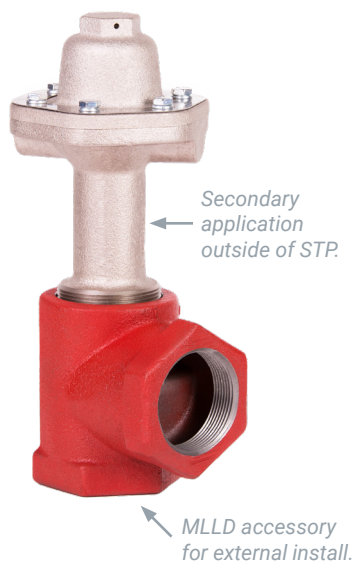
Red Jacket FXV Mechanical Line Leak Detectors are built for superior performance and keeping operators in compliance – even in the most challenging environments. They offer a fast Mechanical line leak test for continuous monitoring – a cost-effective and reliable means to meet U.S. Federal Environmental Protection Agency (EPA) catastrophic line leak detection requirements. FXV Leak Detectors are UL listed and third party certified to ensure quality, performance, and durability.

► KEY FEATURES

- **UL listing:** 100% diesel, 100% gasoline, gasoline and up to 10% ethanol
- Meets EPA requirements in environments that experience extreme temperature changes
- Robust design that works effectively in the most common and difficult testing environments
- Adapts to applications using high-resiliency lines, such as flexible piping
- Handles up to 11 feet of static head
- Installs and troubleshoots without requiring special tools
- Guaranteed to detect at a rate of 3 GPH at 10 PSI (11.4 LPH at 0.69 Bar)
- Can be used with any Red Jacket or competitive submersible turbine pump

Fuel Compatibility for all models of the FXV Leak Detector are UL Listed:

- 100% Diesel
- 100% Gasoline
- Gasoline and up to 10% Ethanol



Gas



Diesel

Electronic Pressurized Line Leak Detection System

Overview

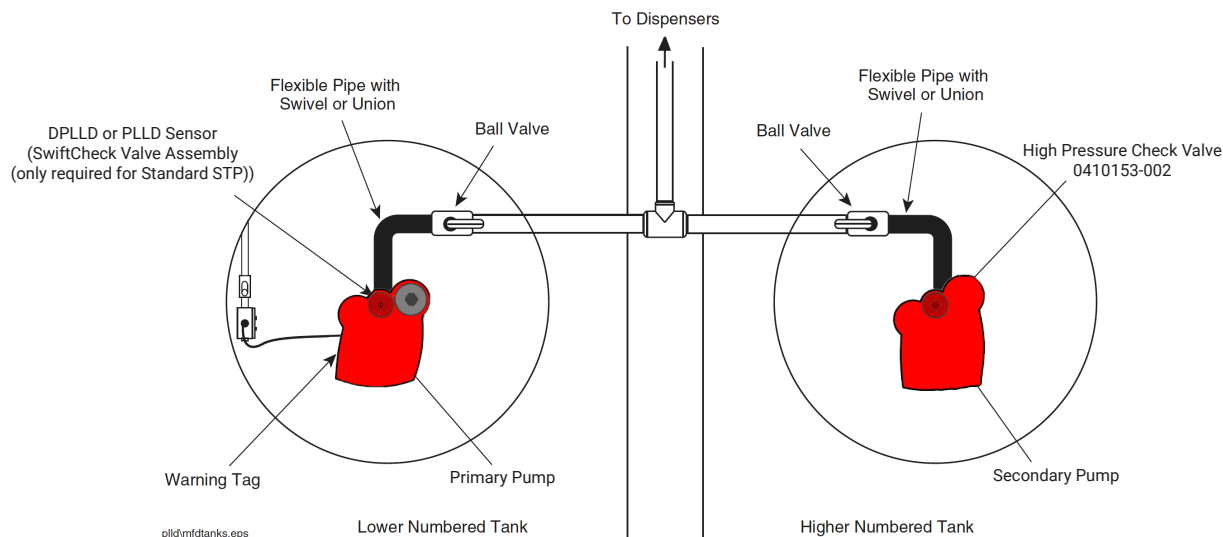
The Veeder-Root Electronic Pressurized Line Leak Detection (PLLD) system can be used in a variety of pressurized line applications. Our patented technology performs a leak test at full pump pressure for 0.1 GPH (0.38 LPH) precision and a pressure decay test to meet the US EPA continuous 3.0 GPH (11.4 LPH) gross test requirement. When partnered with our TLS-450PLUS ATG, large volume customers can now monitor lines that exceed 1,100 gallons (4,164 liters).

► KEY FEATURES

- Proven pressure transducer technology
- No restriction of fuel flow
- Utilizes SwiftCheck Valve on early generation Red Jacket (Standard) Submersible Pumps; SwiftCheck Valve is not required when DPLLD/PLLD is installed with the Red Jacket versions
- Test lines at full pressure for quick and accurate results
- Standard 3.0 GPH (11.4 LPH), Optional 0.2 and 0.1 GPH (0.76 and 0.38 LPH) testing
- Not impacted by thermal contraction of fuel
- Installs without breaking piping or adding a new sump
- Supports a wide-range of pump and pipe types
- Several options based on TLS system
- Pressure Sensor constructed with stainless steel to meet the challenges of a highly corrosive environment

Fuel Compatibility for all models of the Electronic Pressurized Line Leak Detection System:

- Unleaded Gasoline
- Leaded Gasoline
- 5% Methanol
- Up to 100% Ethanol
- 15% MTBE
- Diesel
- Biodiesel (Up to B100)
- Kerosene
- Jet Fuel
- Aviation Gasoline







Tub & Shower Fittings

SH-PB1-13-034

Product Type

Pressure balancing tub and shower system with shower head and hand spray

Features & Specifications

- Includes shower head arm and wall flange
- 1.5 GPM hand spray with 59" stainless steel hose and pause control
- 36" wall-mounted ADA grab bar with hand spray holder
- Hand spray with pause control, 1.5 GPM max.
- Pressure balancing valve cartridge
- Inline atmospheric vacuum breaker
- Complies with the requirements of the Buy American Act of 1933.




Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-120°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1
- ASSE 1014
- Complies with ASSE 1016/ASME A112.1016/CSA B125.16
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

☐ Submitted as Shown

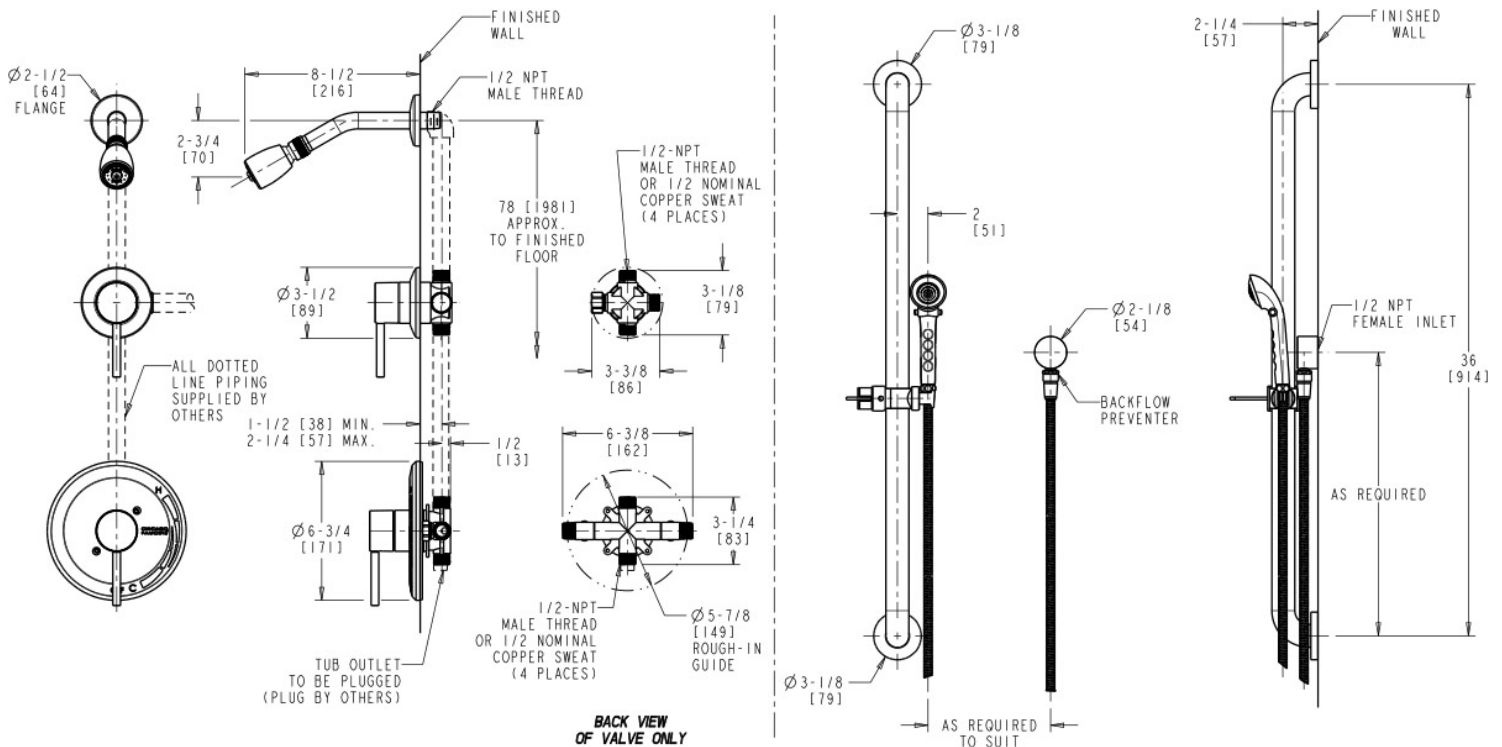
☐ Submitted with Variations

Date _____



Architect/Engineer Specification

Chicago Faucets No. SH-PB1-13-034, Tub and Shower System with pressure balancing valve and shower head, wall-mounted. Chrome plated. Shower head with ball joint, 1.5 GPM max. flow rate @ 80 PSI. Hand spray, 1.5 GPM max. flow rate @ 80 PSI. Includes pressure balancing cartridge. 1/2" nominal copper and 1/2" NPT hot and cold supply inlets and outlets. Shower head includes arm and wall flange. Shower valve cycles from cold to hot. Wall plate includes embossed and color-coded temperature index. Integral service stops with checks to prevent cross-flow. Diverter valve with indexed wall flange, diverts water flow between shower head and hand spray. Includes wall elbow and in-line vacuum breaker. Hand spray with 59" stainless steel hose and pause control. 36" wall-mounted ADA grab bar with hand spray holder. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, and ASSE 1016.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucets products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.





Submittal Sheet

Aquatic products may be specified as Lasco Bathware.

13636BFSBTTR

ADA Compliant

CUSTOMER: _____

JOB NAME: _____

PO #: _____ QUOTE #: _____

DATE: _____ QUANTITY: _____

SHIP TO: _____

_____/_____/_____
PLUMBING CONTRACTOR APPROVAL DATE

_____/_____/_____
GENERAL CONTRACTOR APPROVAL DATE

_____/_____/_____
ENGINEER APPROVAL DATE

_____/_____/_____
ARCHITECT APPROVAL DATE

STANDARD FEATURES

- Pre-leveled base
- AcrylX™ applied acrylic surface
- ½" skirt
- ½" COL exterior threshold
- Compliant when properly installed
- Center drain outlet
- Integral front trench drain
- Lifetime Limited Warranty Residential Use/ 30-year Commercial Use
- 12" x 24" subway tile
- Slip resistant, textured bottom [ASTM F-462]
- Code compliant when fully equipped and installed according to guidelines

CONFIGURATION (handed by seat location)

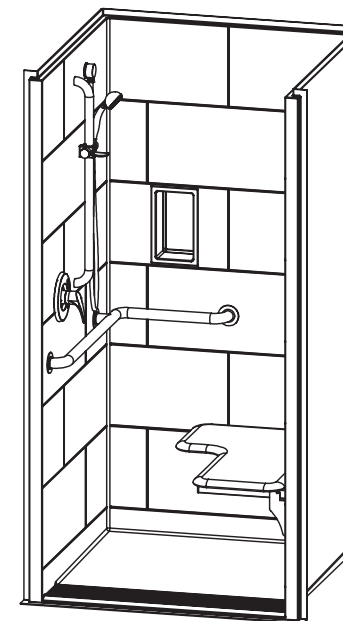
- ☐ Shell reinforced for future accessory installation
 - Seat Wall ☐ LH ☐ RH
 - ☐ Optional vertical bar reinforcement (entry wall)
 - ☐ LH ☐ RH ☐ Both
 - ☐ Fully configured with seat — ADA
 - Seat Location ☐ LH ☐ RH
- Includes 1 ¼" diameter stainless L-shaped grab bar; white cushioned, L-shaped fold-up seat; pressure balancing mixing valve; hand-held shower assembly; and stainless steel grate. Grab bar, mixing valve and handheld shower installed opposite seat per ADA guidelines.

CUSTOM OPTIONS (not avail. if ADA configuration is selected)

- ☐ L-shaped fold-up seat ☐ LH ☐ RH
- ☐ Cushioned white ☐ Phenolic teak ☐ Phenolic white
- Horizontal L-shaped grab bar
 - Stainless steel (1 ¼" dia.) ☐ LH ☐ RH
 - Powder-coated white (1 ¼" dia.) ☐ LH ☐ RH
- Fixture Wall ☐ LH ☐ RH ☐ Back wall
- ☐ Hand-held shower assembly with 30" slide bar and 60" hose
- ☐ Pressure balancing mixing valve
- Grate:
 - ☐ Stainless steel
 - ☐ White

OPTIONAL ACCESSORIES (available for all models)

- ☐ Large soap dish (12 ½ W x 3 ½ D x 1 ½ H), shipped loose
- ☐ Small soap dish (7 W x 3 ½ D x 1 ½ H), shipped loose
- ☐ Curtain rod (Not ADA compliant)
- ☐ Shower curtain
- ☐ Brass drain
- Colors:
 - Standard ☐ White
 - Upgraded ☐ Biscuit ☐ Bone
 - ☐ Other (contact customer service for custom color options)
- ☐ Additional accessories:



Int. Dim. 36 W x 36 D x 76 ¾ H

Ext. Dim. 42 W x 38 ½ D x 78 ¾ H

Skirt Ht. ½ skirt, ½ COL exterior threshold

Packaged Wt. 150 lbs.

Material AcrylX™ applied acrylic

Warranty Lifetime Limited Residential Use/ 30-year Commercial Use*

* See terms and conditions for details

inches

To complete your order, this document must be signed and faxed to the Aquatic Centralized Customer Service Center.

Fax (866) 544-5353 • Phone (800) 945-2726

For pricing of units and additional options, reference the Aquatic Price Book. • Please indicate custom changes on reverse side drawings.

Rev. 04.28.20

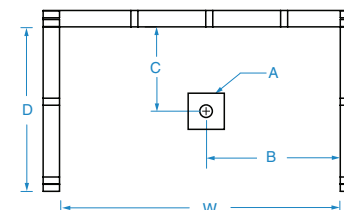


Submittal Sheet

Aquatic products may be specified as Lasco Bathware.

13636BFSBTTR ADA Compliant

Please indicate changes needed.

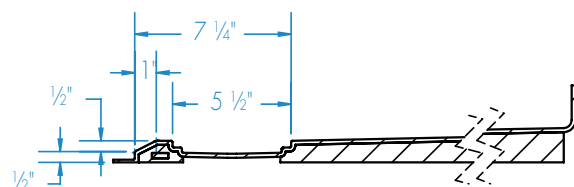
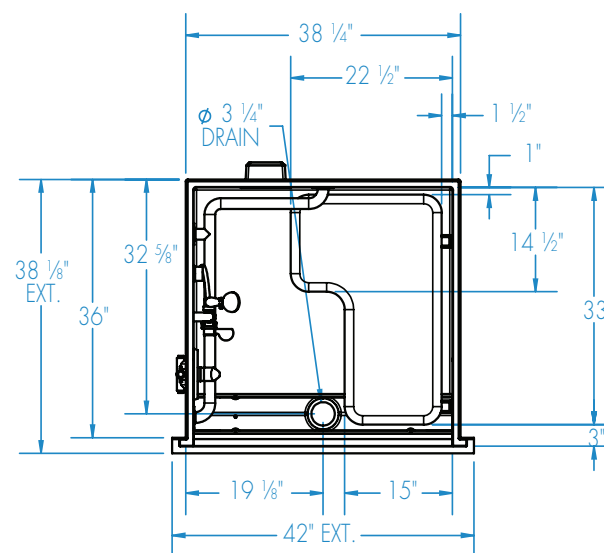
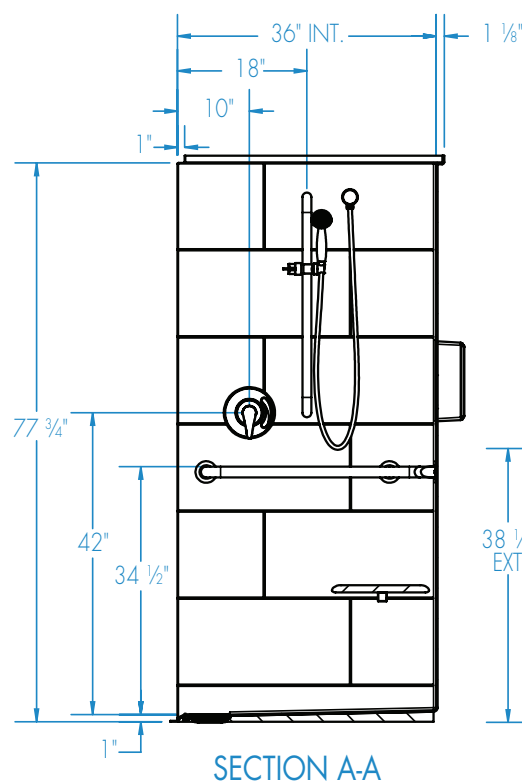
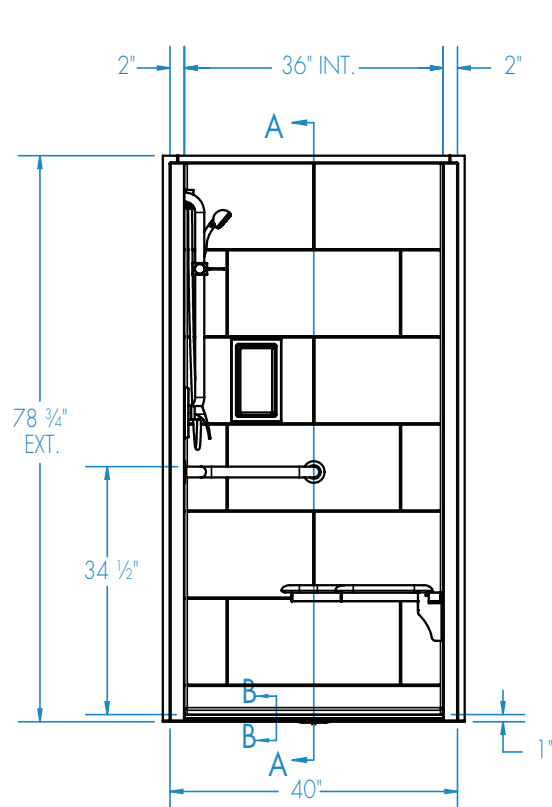


FRAMING DIMENSIONS inches (mm)

| Type | D Depth | W Width | A | B | C |
|--------|------------|------------|---------|--------|--------|
| Alcove | 36 | 38 1/4 | Box Out | 19 1/8 | 32 5/8 |

Installation Options:

1. Install in a recessed pit for rough-in floor installation.
2. Build sub-floor to level finished floor with top of shower threshold.



SECTION B-B
trench grate (included), not shown

ADA/ANSI compliant when fully equipped and installed according to guidelines.

Shell tolerance: +0, - 3/8" All other tolerances: ± 1"



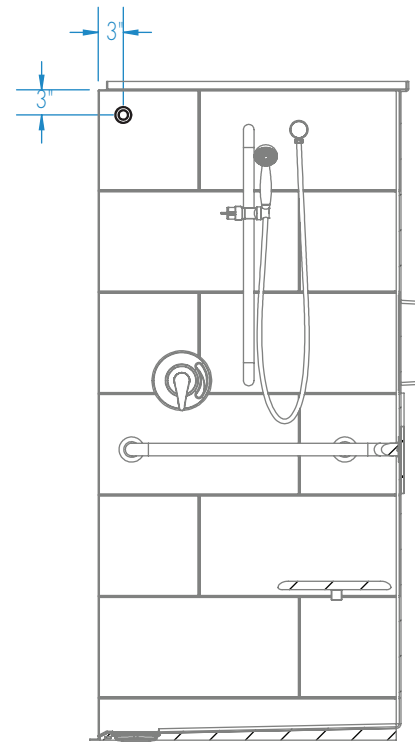
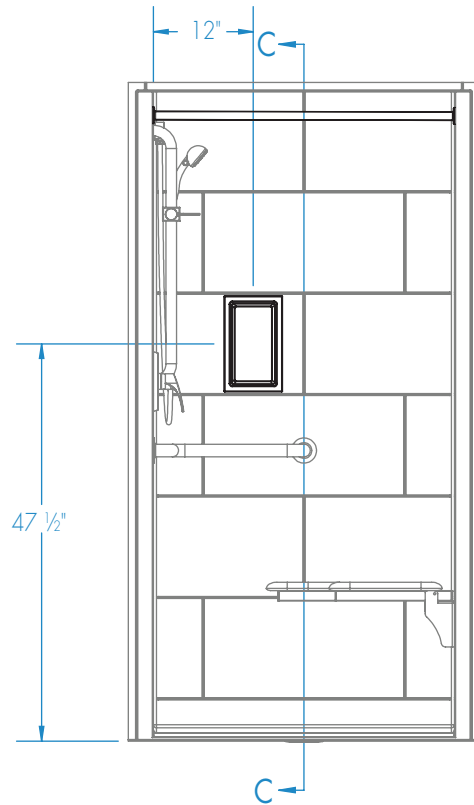
Submittal Sheet

Aquatic products may be specified as Lasco Bathware.

13636BFSBTTR ADA Compliant

Please indicate changes needed.

Curtain Rod and Soap Dish Locations (Standard Valve Configuration)



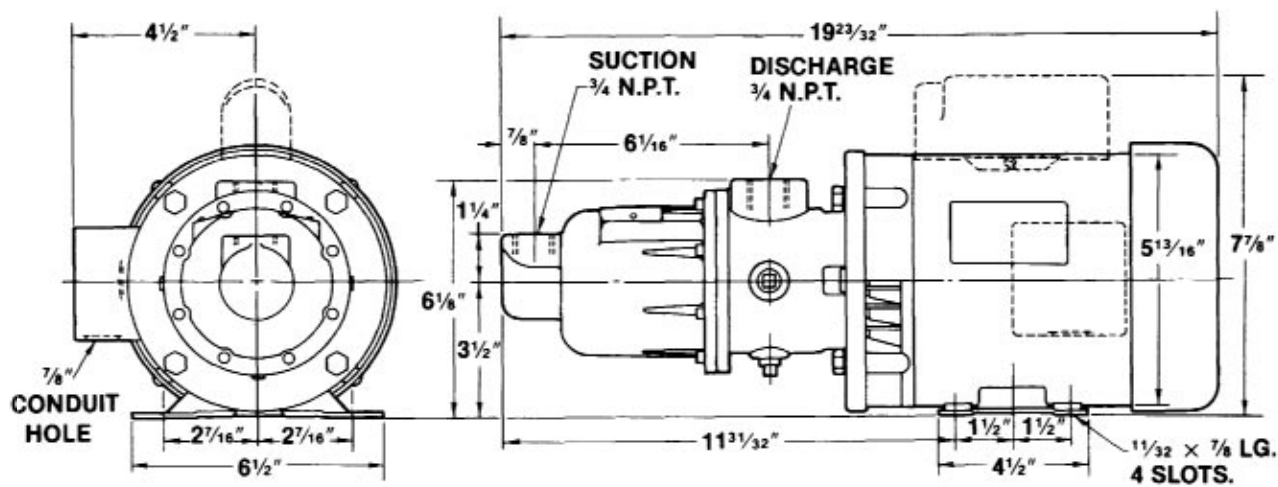
SECTION C-C

Shell tolerance: +0, - $\frac{3}{16}"$ All other tolerances: $\pm 1"$

SPECIFICATION DATA
MOYNO® 500 PUMPS
300 SERIES MOTORIZED
331, 332, 333, 344, 356 AND 367 MODELS

331, 332, 333, 344 MODELS

DIMENSIONS

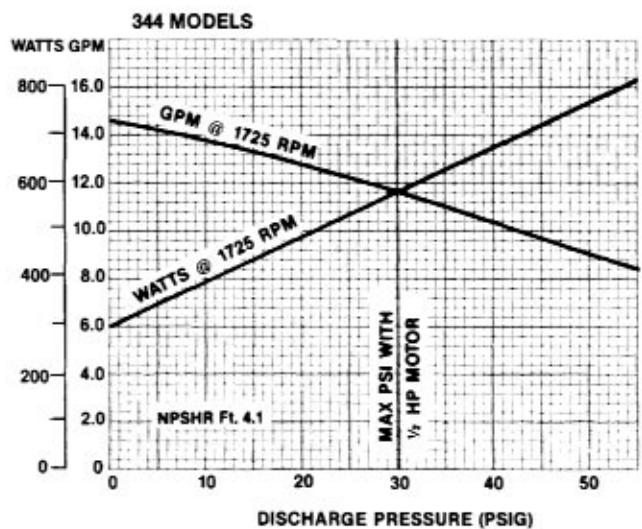
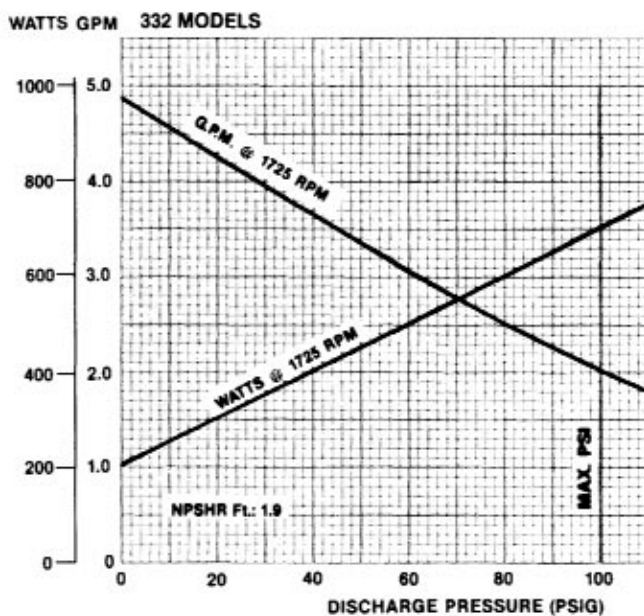
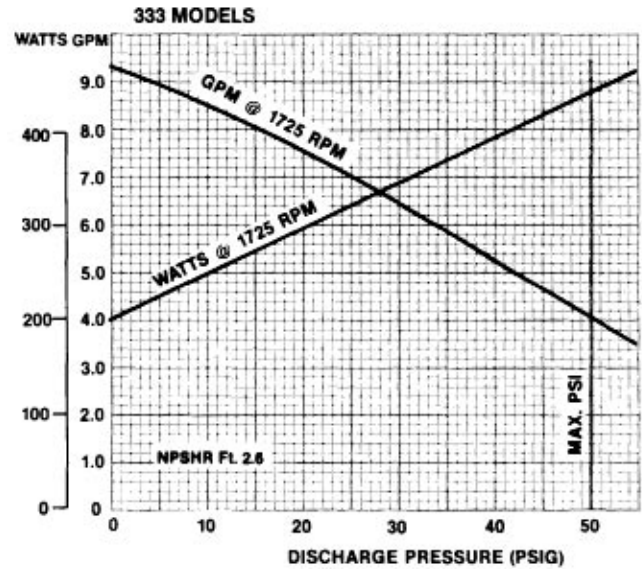
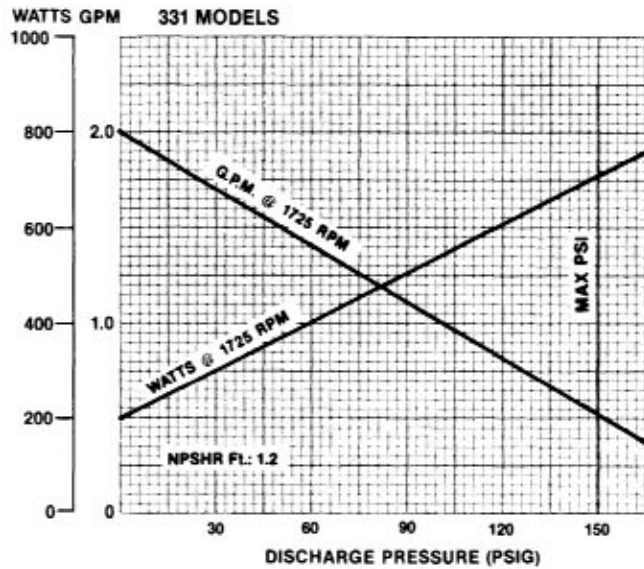


MATERIALS OF CONSTRUCTION

| COMPONENT | MODELS | | | |
|--------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | 33159, 33259 33359, 34459 | 33160, 33260 33360, 34460 | 33152, 33252 33352, 34452 | 33150, 33250 33350, 34450 |
| Housing | Cast iron | Cast iron | 316SS | 316SS |
| Rotor | 416 SS/CP | 416 SS/CP | 316 SS/CP | 316 SS/CP |
| Stator | NBR (Nitrile) | NBR (Nitrile) | NBR (Nitrile) | NBR (Nitrile) |
| Motor Data | 1/2 HP, 1 PH | 1/2 HP, 3 PH | 1/2 HP, 1 PH | 1/2 HP, 3 PH |
| | 115/230 VAC | 230/440 VAC | 115/230 VAC | 230/440 VAC |
| | 60 HZ TEFC | 60 HZ TEFC | 60 HZ TEFC | 60 HZ TEFC |
| Weight (lbs) | 41 | 41 | 41 | 41 |

CP = Chrome plated

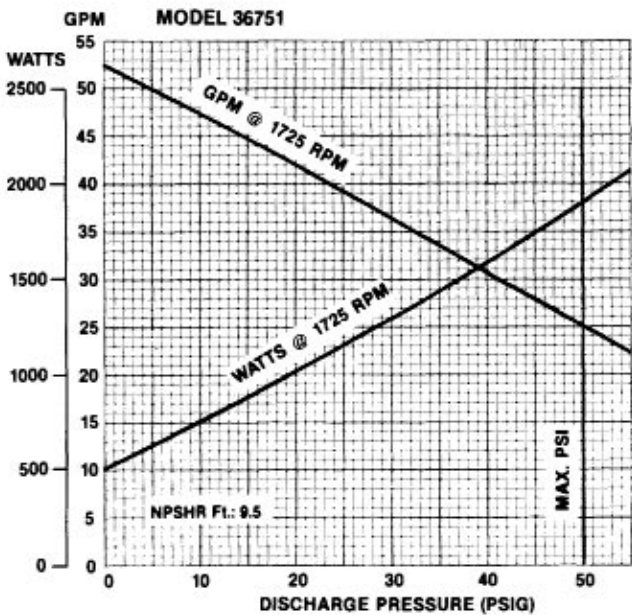
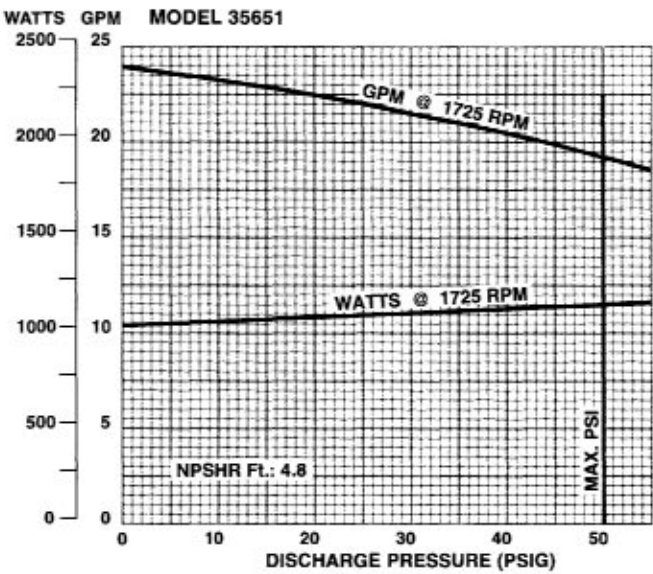
PERFORMANCE (Water at 70°F)



NOTE: With the standard 1/2 HP motor, maximum fluid viscosity is 100 CP (500 SSU).

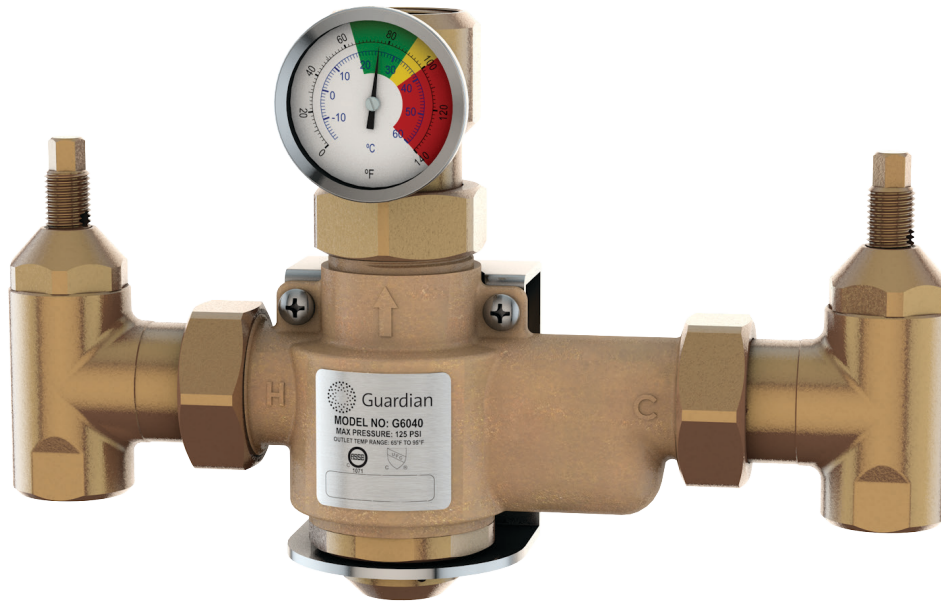
356 AND 367 MODELS DIMENSIONS

PERFORMANCE (Water at 70°F)



NOTE: With the standard
1 ½ HP (Model 35651)
2 HP (Model 36751)
motor, maximum fluid
viscosity is 100 CP
(500 SSU).

G6040 Thermostatic Mixing Valve, 50 Gallon/189 Liter Capacity



Application: Thermostatic mixing valve to blend hot and cold water to deliver tepid water. Valve has flow capacity of 50 gallons (189 liters) per minute at 30 PSI (2.1 bar) pressure drop. Valve can be used to supply emergency shower or combination safety station. Depending on water supply size and pressure, valve can supply multiple units.

Mounting: Valve inlets can be positioned on top, back or bottom of valve. Outlet can be on top or bottom. Valve can be configured in the field for any mounting position. Furnished with heavy duty stainless steel mounting bracket.

Temperature Control: Valve has precision thermal actuator that senses incoming water temperature and automatically blends water to preset temperature. Valve is factory set to deliver 85°F (29°C) water. Temperature of tepid water can be adjusted as required and then locked. Furnished with dial temperature gauge as standard to monitor temperature of tepid water.

Cold Water Bypass: If the supply of hot water is restricted or interrupted, an internal bypass allows the valve to deliver cold water only. In bypass mode, the valve delivers 38 GPM (144 L/min) at 30 PSI (2.1 bar) pressure drop.

Hot Water Shutoff: Valve has internal PTFE valve seat. If the supply of cold water is interrupted, the valve will close completely and *not deliver any water at all*, eliminating any possibility of scalding.

Flow Capacity: Refer to table below for flow capacity of valve at specified pressure drops.

Checkstops/Filters: Each inlet has a lockable shutoff valve for maintenance, internal check valve to prevent backflow and stainless steel basket filter to remove debris from the water flow.

Construction: Valve meets the requirements of the U.S. Safe Drinking Water Act as lead-free.

Inlet/Outlet: 1" NPT female inlets and 1-1/4" NPT female outlet as standard.

Quality Assurance: Valve is ASSE certified under ANSI/ASSE 1071. Valve is fully assembled and factory tested prior to shipment.

Water Pressure/Temperature Requirements

Supply Pressure: Maximum incoming water pressure is 125 PSI (8.6 bar). Pressure of hot and cold water supplies can vary up to 25% and still deliver the flow and temperature required by ANSI/ASSE 1071.

Hot Water Supply Temperature: Incoming hot water temperature range is 120° - 180°F (49° - 82°C). Guardian recommends that the hot water temperature not exceed 140°F (60°C).

Cold Water Supply Temperature: Incoming cold water temperature range is 40° - 70°F (4° - 21°C). Cold water temperature must be at least 10°F (5.6°C) less than the temperature of the delivered tepid water.

Tepid Water Temperature: Temperature of tepid water is adjustable within a range of 65° - 95°F (18° - 35°C) and then locks in position. High temperature limit stop is set at 90°F (32°C) to prevent misadjustment.

G6040 Thermostatic Mixing Valve, 50 Gallon/189 Liter Capacity

| Pressure Drop (PSI) | 1 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|------------------------|-----|----|----|----|----|----|----|----|----|
| Flow Rate (GPM) | 0.5 | 17 | 28 | 34 | 41 | 46 | 50 | 55 | 59 |
| Bypass Flow Rate (GPM) | 0.5 | 13 | 20 | 25 | 30 | 34 | 38 | 41 | 45 |

| Pressure Drop (Bar) | 0.1 | 0.3 | 0.7 | 1.0 | 1.4 | 1.7 | 2.1 | 2.4 | 2.8 |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Flow Rate (L/min) | 2 | 64 | 106 | 129 | 155 | 174 | 189 | 208 | 223 |
| Bypass Flow Rate (L/min) | 2 | 49 | 76 | 95 | 114 | 129 | 144 | 155 | 170 |

Ordering Information

Models

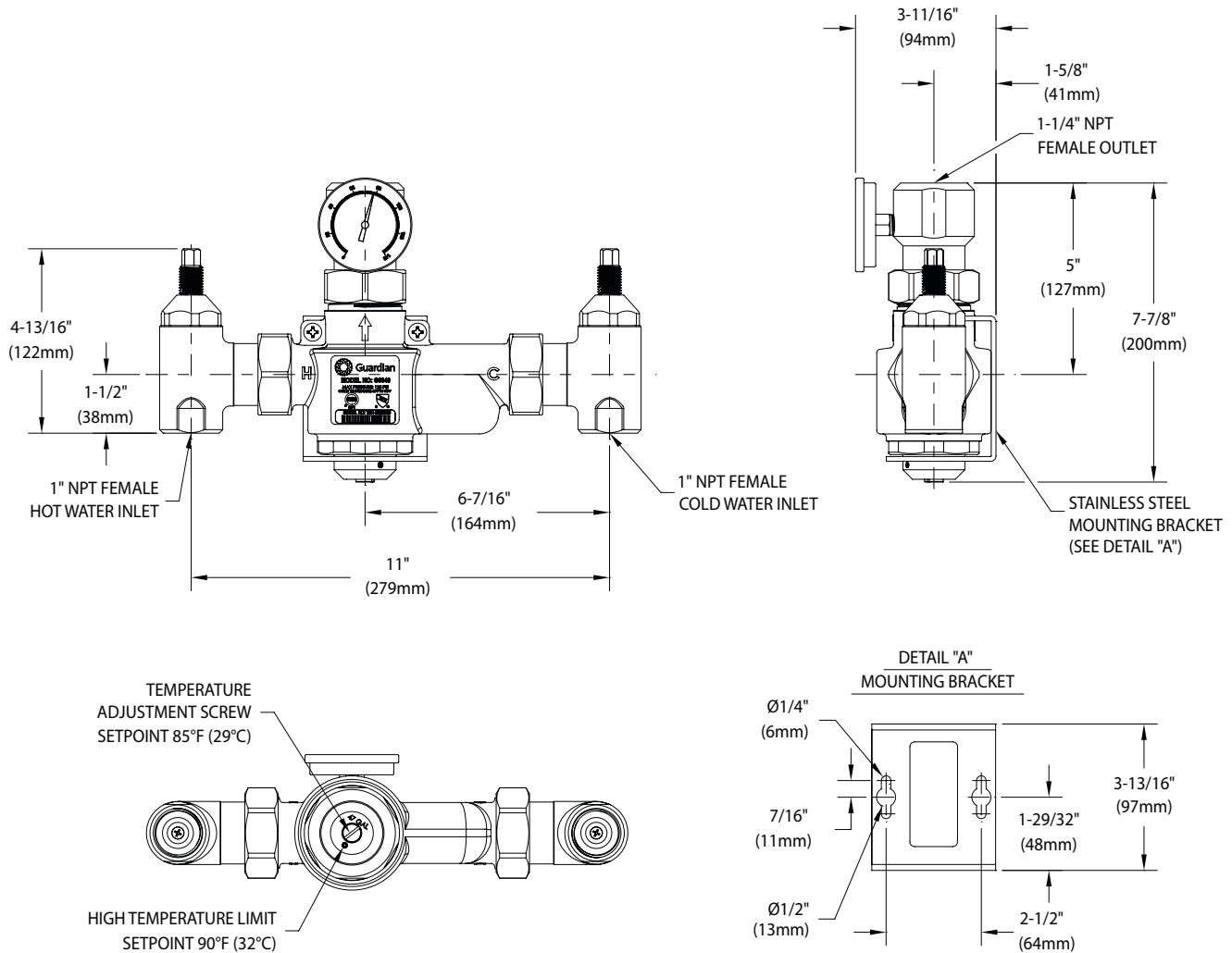
| | | |
|--------------------------|------------------|--|
| <input type="checkbox"/> | G6040 | Thermostatic Mixing Valve, 50 Gallon/189 Liter Capacity |
| <input type="checkbox"/> | G6041-XXX | G6040 valve installed in surface mounted powder coated steel cabinet |
| <input type="checkbox"/> | G6042-XXX | G6040 valve installed in surface mounted stainless steel cabinet |
| <input type="checkbox"/> | G6043-XXX | G6040 valve installed in recess mounted powder coated steel cabinet |
| <input type="checkbox"/> | G6044-XXX | G6040 valve installed in recess mounted stainless steel cabinet |

Available Options

| | | |
|--------------------------|------------------------------------|---|
| <input type="checkbox"/> | Finish | Chrome plated finish in place of raw brass (add suffix "CP") |
| <input type="checkbox"/> | Inlet/Outlet Threads | G1 female thread on inlets and G1-1/4 female thread on outlet (add suffix "G") |
| <input type="checkbox"/> | Temperature Gauges | Temperature gauges on hot and cold water inlets (add suffix "IT") |
| <input type="checkbox"/> | Pressure Gauges | Pressure gauges on hot and cold water inlets (add suffix "IP") |
| <input type="checkbox"/> | Temperature/Pressure Gauges | Temperature and pressure gauges on hot and cold water inlets (add suffix "ITP") |

Note: Installation of temperature and/or pressure gauges will change rough-in dimensions of valve. Contact factory for catalog drawing.

G6040 Thermostatic Mixing Valve, 50 Gallon/189 Liter Capacity



Notes:

1. ANSI Z358.1-2014 states that the water temperature delivered by emergency equipment should be “tepid”. Tepid is defined as 60°F - 100°F (16°C - 38°C). However, in circumstances where a chemical reaction can be accelerated by water temperature, a medical professional should be consulted to determine the optimum water temperature for the application.
2. For thermostatic mixing valves to deliver the required water temperature and volume, the system must be sized correctly. Please refer to the flow capacity, pressure and temperature requirements herein when designing the tepid water system.
3. Valve is factory set to deliver 85°F (29°C) tepid water. Depending on pressure and temperature of the incoming water supplies, this setting may require adjustment in the field. The adjustment screw is locked in position after adjusting.
4. Thermostatic mixing valves, like all emergency equipment, must be installed in accordance with the manufacturer’s instructions and maintained on a regular basis. Per ANSI Z358.1-2014, all emergency equipment should be activated weekly and inspected at least annually. Thermostatic mixing valves should be treated the same.
5. Per ANSI Z358.1-2014, plumbed emergency equipment must be connected to a potable water supply. This valve meets the requirements of the U.S. Safe Drinking Water Act as lead-free and is safe for use with potable water.
6. This valve is supplied with shutoff valves. Per ANSI Z358.1-2014, if shutoff valves are installed on the water supply to emergency equipment, the valves must be lockable to prevent unauthorized shutoff. Accordingly, each shutoff valve stem on this valve has a hole for installing a lock to secure the stem in the open position.

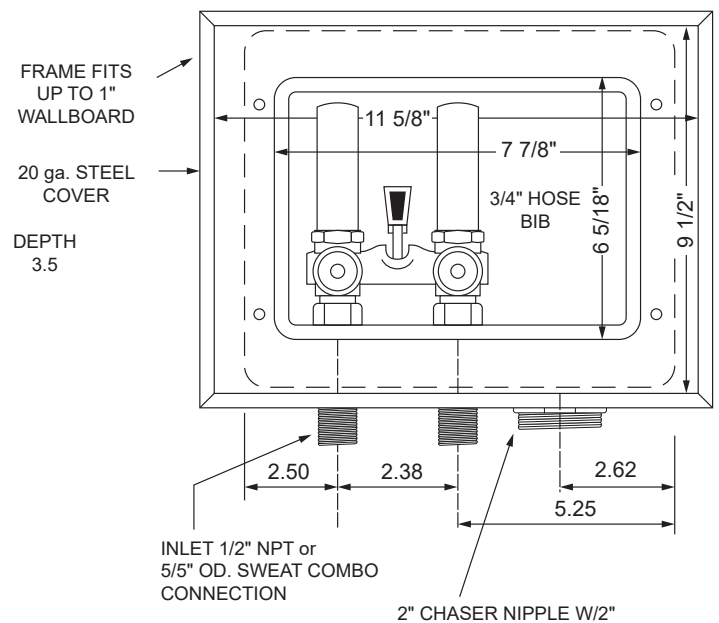
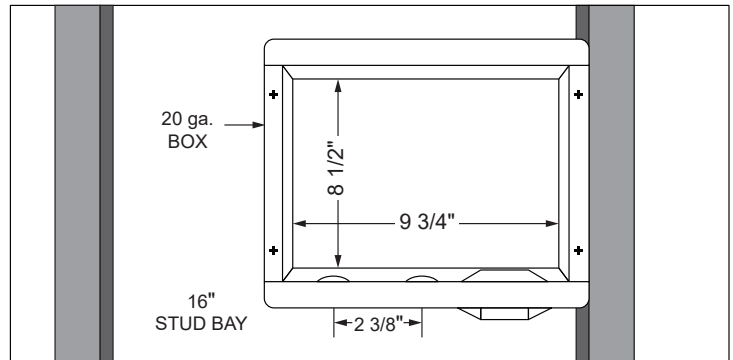
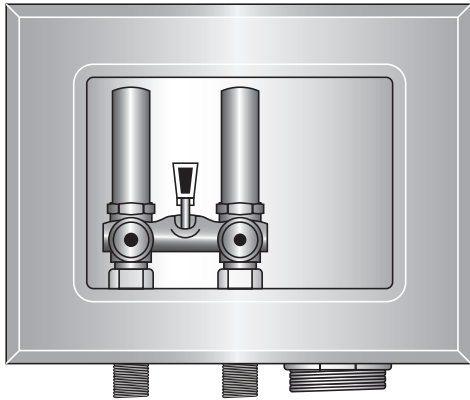
THIS SPACE FOR ARCHITECT/ENGINEER APPROVAL

Due to continuing product improvement, the information contained in this document is subject to change without notice. All dimensions are $\pm 1/4"$ (6mm). Rev. 022420





Right Drain Galvanized WMOB with Single Lever Arrestor Valve



Specifications:

Furnish and install Guy Gray metal washing machine outlet box with integral hammer arrestor single lever valve. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

G90 Hot Dipped Galvanized Steel (unpainted)
20 gauge box with 20 gauge faceplate

Valve & Drain Option:

Single Lever Arrestor Valve kit with 1/2" MIP/Sweat connection. 2" threaded drain. Valves comply with ASME A112.18.1. Hammer arresters comply with ASSE 1010.

| Item # | Product Description | Model # | Quantity | UPC |
|--------|--|-----------|----------|--------------|
| 82048 | Single Lever Valve w/Hammer Arresters, 2" Drain | WB200HA | 6 | 012181820483 |
| 82049 | Single Lever Valve w/Hammer Arresters, 2" Drain/Top Supply | WB200HATM | 6 | 012181820490 |



500 Distribution Parkway, Collierville, TN 38017 • Phone: 800-888-8312 • Fax: 901-853-5008 • www.ipscorp.com

1301 ERIE™

MANSFIELD®




Wall-Mount, Rear Outlet, Elongated Front, *1.28 or 1.6 Toilet Bowl

FEATURES

- Perfect for clinical applications
- *1.28 or 1.6 gpf / 4.86 or 6.05 lpf low water consumption
(*when using the proper 1.28 flushometer)
- Elongated front bowl
- 1-1/2" top spud for flush valve installation that accommodates many brands of flush valves
- High performance, high efficiency (HET)
- The Mansfield® Limited lifetime warranty
- Available in White only



COMPONENTS




| MODEL # | DESCRIPTION | CODES/STANDARDS |
|---------|---|--|
| 1301 | Wall-mount, rear outlet, elongated front toilet bowl. Includes a 1-1/2" top spud for flush valve installation. Less carrier mounting system, wall bolts, caps, toilet seat and flush valve. |    <small>HIGH EFFICIENCY TOILET</small> <small>C</small> <small>ADA COMPLIANT</small> |

1301 ERIE™

MANSFIELD®

Wall-Mount, Rear Outlet, Elongated Front, *1.28 or 1.6 Toilet Bowl

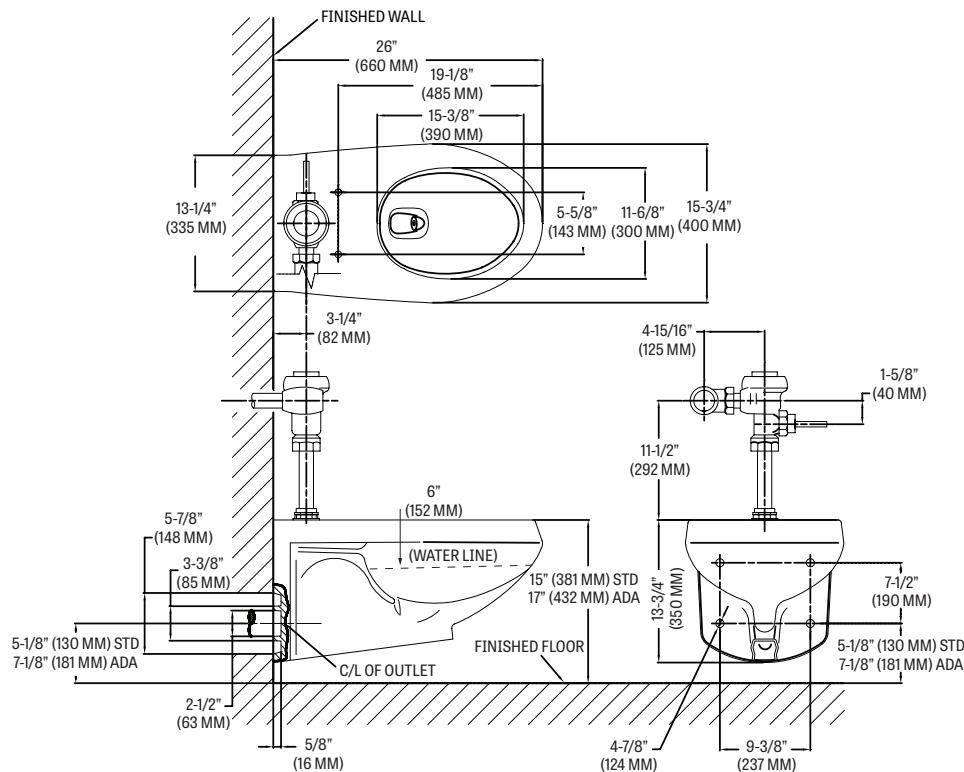
SPECIFICATIONS

| MODEL # | DESCRIPTION | CODES/STANDARDS |
|---------|--|---|
| 1301 | Elongated front, (*1.28 or 1.6 gpf / 4.86 or 6.05 lpf) wall mount bowl |    |

| | | | |
|-----------------------------|------------------------------------|------------------------|---|
| MATERIAL | Vitreous China | TRAP DIAMETER | 1-7/8" |
| WATER PRESSURE RANGE | 20 to 80 PSI | TRAP SEAL | 2-1/8" |
| FLUSH SYSTEM | Siphon jet technology | SHIPPING WEIGHT | Model 1301 - 54 lbs. (25 kg) |
| WATER USAGE | 1.28 or 1.6 gpf / 4.86 or 6.05 lpf | WARRANTY | Vitreous China - Limited Lifetime Tank Trim - Limited One Year |
| WATER SURFACE AREA | 8-1/2' X 10-1/2' | | |
| ROUGH-IN | Rear outlet | | |
| MAP RATING | 1,000 grams | | |

TECHNICAL INFORMATION

Note: these dimensions are nominal and subject to change without notice.



Fixture performance and specifications meet or exceed ASME A112.19.2-2013/CSA B45.1-13 standards, and other state and local codes.

CODE NUMBER

3910168

DESCRIPTION

1.28 gpf, Polished Chrome Finish, Fixture Connection Top Spud, Single Flush, Royal® Exposed Manual Water Closet Flushometer.

DETAILS

- Flush Volume: 1.28 gpf (4.8 Lpf)
- Finish: Polished Chrome (CP)
- Valve: Diaphragm
- Valve Body Material: Semi-red Brass
- Fixture Type: Water Closet
- Fixture Connection: Top Spud
- Rough-In Dimension: 11 ½" (292mm)
- Spud Coupling: 1 ½" (38mm)
- Supply Pipe: 1" (25mm)

FEATURES

- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass
- Sweat Solder Adapter with Cover Tube & Cast Wall Flange with Set Screw
- Non-Hold-Open Handle, Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Diaphragm, Handle Packing and Vacuum Breaker to be molded from PERMEX® Rubber Compound for Chloramine Resistance
- ADA Compliant Metal Oscillating Non-Hold-Open Handle
- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop with Free Spinning Vandal Resistant Stop Cap

VIDEOS

- PVD Special Finishes


COMPLIANCES & CERTIFICATIONS


(ADA Compliant, BAA Compliant, BREEAM Materials Credit, BREEAM Water Credit, Carbon Neutral, cUPC Green Certified, cUPC Certified, EPD, Green Globes Materials & Resources Credit, Green Globes Water Credit, HPD, LBC Credit, LEED Materials & Resources EPD Credit, LEED Materials & Resources HPD Credit, LEED V4 Water Efficiency Credit, WaterSense Listed, Made in the USA, Satisfies LEED Credits, WELL Building Standard)

RECOMMENDED SPECIFICATION

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

VALVE OPERATING PRESSURE (FLOWING)

15–80 PSI (103–552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

DOWNLOADS

- [Royal Exposed Installation Instructions](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [Royal Manual Diaphragm Flushometer Repair and Maintenance Guide](#)
- [Tools/Accessories](#)
- [Flushometer Pressure gauges](#)
- [Additional Downloads](#)

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com

NOTES

All information contained within this document subject to change without notice.

Looking for other variations of the ROYAL 111 product? [View the general spec sheet with all options.](#)

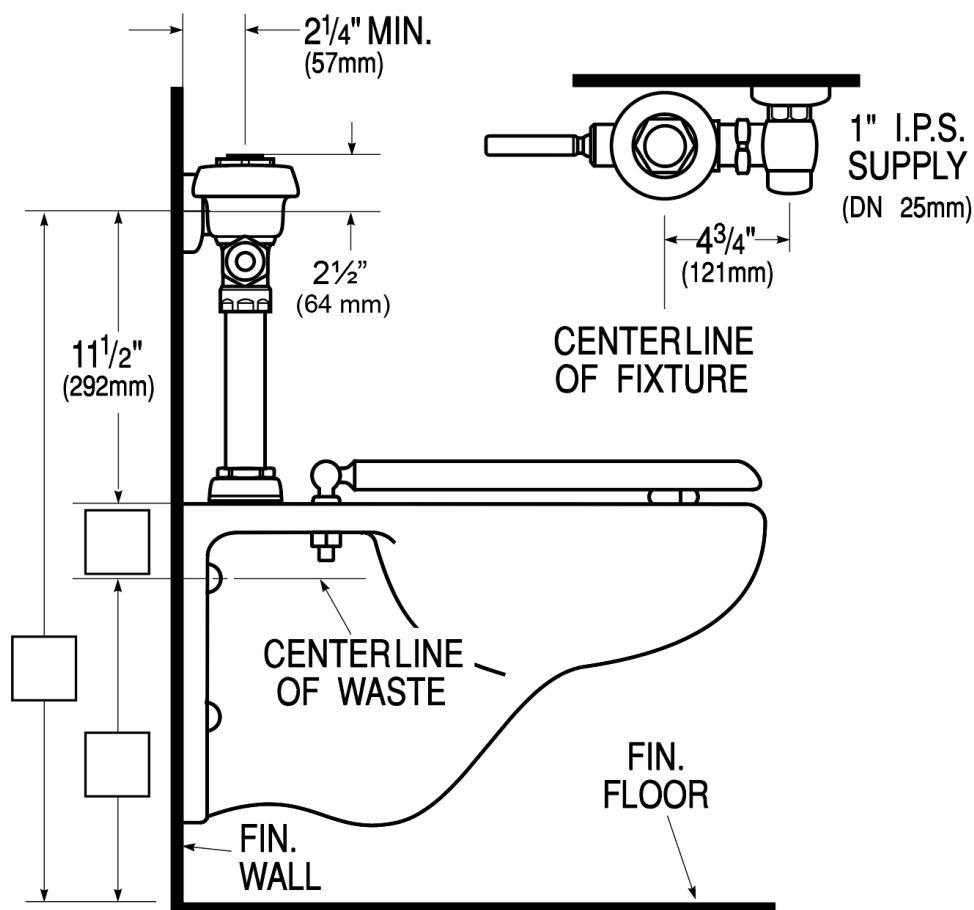
[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

WaterSense compliant when used with a WaterSense compliant fixture

WARRANTY

[View Warranty Information](#)

ROUGH-IN

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com



COMMERCIAL HEAVY-DUTY PLASTIC TOILET SEAT

MODEL #

COLOR #

1055/1055SSC

DESCRIPTION:

Open front less cover, elongated, heavy-duty, injection molded solid plastic toilet seat. Features two molded-in bumpers, non self-sustaining (1055) or self-sustaining (1055SSC) check hinges with non-corrosive 300 Series stainless steel posts, pintles and hardware. This seat complies with IAPMO/ANSI Z124.5-2013 Plastic Toilet Seats as a class Commercial Heavy Duty.

SPECIFICATIONS:

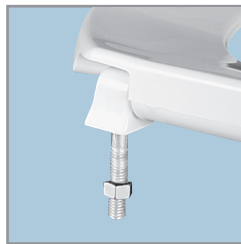
| | |
|-------------------|---|
| Size: | Elongated |
| Material: | Plastic |
| Style: | Open Front less Cover |
| Bumpers: | Two |
| Hinges: | Plastic Non Self-Sustaining (1055) or Self-Sustaining (1055SSC) with 300 Series Stainless Steel Posts and Pintles |
| Fastening System: | Non-Corrosive 300 Series Stainless Steel Nuts |

FEATURES:

Non-Corrosive 300 Series Stainless Steel Posts, Pintles and Nuts

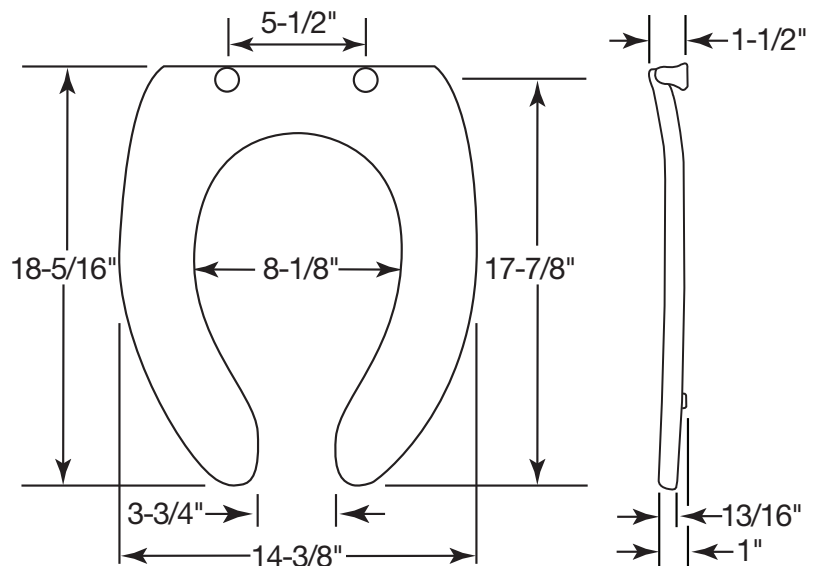


PLASTIC HINGES WITH
STAINLESS STEEL POSTS
AND PINTLES



NON-CORROSIVE
STAINLESS STEEL NUTS

DIMENSIONS:



Proudly Made in the USA

Bemis Manufacturing Co., Sheboygan Falls, WI 53085
www.ToiletSeats.com

Phone: 800-558-7651 Fax: 800-292-3647

©2014 0B7012284 REV B



PREMIER[™]

Commercial Hot Water Makers[®]



Efficiency at its Best[™]



Commercial Hot Water Makers®

Amtrol Premier™ Indirect-Fired water heaters are perfect for larger homes and commercial applications. High output heat exchangers and increased storage capacity supply efficient, reliable hot water to meet the toughest demands. All Premier Hot Water Makers® are Made in the USA in our ISO 9001:2015 certified facilities.

Features

High Output for Increased Demands

- Steady-state heat transfer up to 400,000 BTUH.
- Multiple pass heat exchanger minimizes pressure drop.
- Domestic supply temperatures up to 180°F.

Durable Construction

- High grade stainless tank or high-temp poly bottle.
- Heat exchanger coating resists scale buildup.
- Removable heat exchangers for easy service.
- All controls rated for 24 or 120VAC up to 15A.

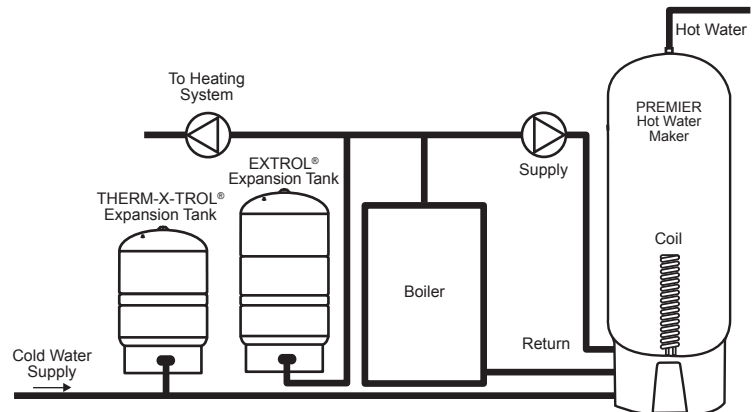
Flexible Model Options

- Sizes from 41 to 119 gallons to fit any installation.
- Mechanical dial aquastat for simple, 2-wire hookup.
- Digital Control offers built-in relays and diagnostics.
- Double-Wall heat exchanger coil meets stringent codes.

Convenient Accessories

- All models include common installation components.
 - Factory-supplied temperature control and dry well.
 - Temperature & Pressure (T&P) relief valve.
 - Bottom drain valve with hose connection.

Typical Installation



How to Order: Specify Series & Options

WHS-80ZCDW

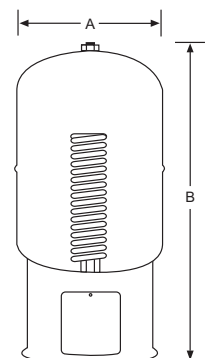
Series _____
 Tank Size _____
 Dial Aquastat Option _____
 Commercial Coil Option _____
 Double Wall Coil Option _____
 80 Gallon St. Steel Tank with Dial Aquastat & Commercial Double Wall Coil



WH Series

High Temp Poly Bottle with Single Coil

- Good choice for larger homes and apartments.
- Compact size to fit small spaces.
- Corrosion-proof Bi-modal HDPE Bottle rated to 180°F.
- Factory Warranty: 6 years (residential), 5 years (commercial).



WH Series Specifications

| Model Number | Tank Volume (Gallons) | A Diameter (Inches) | B Height (Inches) | Cold Water Inlet-NPTM (Inches) | Hot Water Outlet-NPTF (Inches) | Boiler Supply/Return (Inches) | Shipping Weight (lbs.) |
|--------------|-----------------------|---------------------|-------------------|--------------------------------|--------------------------------|-------------------------------|------------------------|
| WH-7C | 41 | 22 | 48 | 3/4 | 3/4 | 3/4 NPTM | 144 |
| WH-7CDW | 41 | 22 | 48 | 3/4 | 3/4 | 3/4 Sweat | 154 |

Model Specifications & Options



Dial
Aquastat

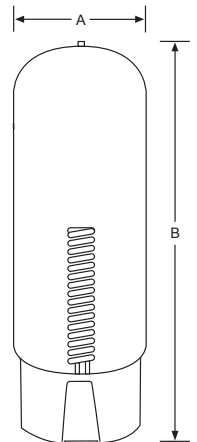


Digital
Control

WHS Series

Stainless Steel with Single Coil

- Increased capacity for large homes and commercial applications.
- Durable, high grade 316-L stainless steel tank.
- Thick, urethane insulation with heat loss under 1/2°F per hour.
- Tough, rotomolded poly jacket resists dents and scratches.
- Removable heat exchanger coil for easy cleaning.
- Plumb multiple units in tandem for increased output.
- Factory warranty: 10 years (residential), 5 years (commercial).



WHS Series Specifications

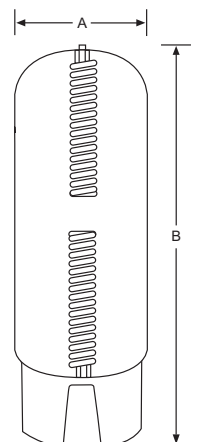
| Model Number | Tank Volume (Gallons) | A Diameter (Inches) | B Height (Inches) | Cold Water Inlet-NPTM (Inches) | Hot Water Outlet-NPTF (Inches) | Boiler Supply/Return (Inches) | Shipping Weight (lbs.) |
|--------------|-----------------------|---------------------|-------------------|--------------------------------|--------------------------------|-------------------------------|------------------------|
| WHS-60 | 60 | 26 | 54 | 1 | 1 | ¾ NPTM | 160 |
| WHS-60DW | 60 | 26 | 54 | 1 | 1 | ¾ Sweat | 170 |
| WHS-60C | 60 | 26 | 54 | 1 | 1 | 1 NPTM | 170 |
| WHS-60CDW | 60 | 26 | 54 | 1 | 1 | 1 Sweat | 180 |
| WHS-80 | 80 | 26 | 66 | 1 | 1 | ¾ NPTM | 170 |
| WHS-80DW | 80 | 26 | 66 | 1 | 1 | ¾ Sweat | 180 |
| WHS-80C | 80 | 26 | 66 | 1 | 1 | 1 NPTM | 180 |
| WHS-80CDW | 80 | 26 | 66 | 1 | 1 | 1 Sweat | 190 |
| WHS-120 | 119 | 30 | 71 | 1 | 1 | ¾ NPTM | 200 |
| WHS-120DW | 119 | 30 | 71 | 1 | 1 | ¾ Sweat | 210 |
| WHS-120C | 119 | 30 | 71 | 1 | 1 | 1 NPTM | 210 |
| WHS-120CDW | 119 | 30 | 71 | 1 | 1 | 1 Sweat | 220 |



DC Series

Stainless Steel with Dual Coils

- Twin heat exchanger coils for maximum recovery.
- Up to 688 gallons per hour continuous flow.
- ASME-exempt design offers commercial performance at less cost.
- Coils may be piped separately for dual energy sources:
 - Wood boilers
 - Solar thermal input
 - Radiant heat and snowmelt
- Factory warranty: 10 years (residential), 5 years (commercial).



DC Series Specifications

| Model Number | Tank Volume (Gallons) | A Diameter (Inches) | B Height (Inches) | Cold Water Inlet-NPTM (Inches) | Hot Water Outlet-NPTF (Inches) | Boiler Supply/Return (Inches) | Shipping Weight (lbs.) |
|--------------|-----------------------|---------------------|-------------------|--------------------------------|--------------------------------|-------------------------------|------------------------|
| DC-80 | 80 | 26 | 66 | ¾ | ¾ | ¾ NPTM | 190 |
| DC-80DW | 80 | 26 | 66 | ¾ | ¾ | ¾ Sweat | 200 |
| DC-120 | 119 | 30 | 71 | ¾ | ¾ | ¾ NPTM | 220 |
| DC-120DW | 119 | 30 | 71 | ¾ | ¾ | ¾ Sweat | 230 |



Sizing Guide

Hot Water Performance

| | Boiler Output (BTUH) | WH-7C | | WHS-60 | | WHS-80 | | WHS-120 | | Boiler Output (BTUH) | DC-80 | | DC-120 | |
|------------------------|----------------------|------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|----------------------|------------|-----------------|------------|-----------------|
| | | First Hour | Continuous Flow | First Hour | Continuous Flow | First Hour | Continuous Flow | First Hour | Continuous Flow | | First Hour | Continuous Flow | First Hour | Continuous Flow |
| Standard Single Coil | 80,000 | 144 | 138 | 161 | 138 | 179 | 138 | 214 | 138 | 200,000 | 340 | 344 | 375 | 344 |
| | 100,000 | 171 | 172 | 188 | 172 | 206 | 172 | 241 | 172 | 220,000 | 367 | 379 | 402 | 379 |
| | 120,000 | 198 | 207 | 215 | 207 | 233 | 207 | 268 | 207 | 240,000 | 393 | 413 | 428 | 413 |
| | 140,000 | 224 | 241 | 241 | 241 | 259 | 241 | 294 | 241 | 260,000 | 420 | 448 | 455 | 448 |
| Commercial Single Coil | 160,000 | 251 | 275 | 268 | 275 | 286 | 275 | 321 | 275 | 280,000 | 447 | 482 | 482 | 482 |
| | 180,000 | 278 | 310 | 295 | 310 | 313 | 310 | 348 | 310 | 300,000 | 474 | 516 | 509 | 516 |
| | 200,000 | 305 | 344 | 322 | 344 | 340 | 344 | 375 | 344 | 320,000 | 500 | 551 | 535 | 551 |
| | 220,000 | 332 | 379 | 349 | 379 | 367 | 379 | 402 | 379 | 340,000 | 527 | 585 | 562 | 585 |
| | 240,000 | 358 | 413 | 375 | 413 | 393 | 413 | 428 | 413 | 360,000 | 554 | 620 | 589 | 620 |
| | 260,000 | 385 | 448 | 402 | 448 | 420 | 448 | 455 | 448 | 380,000 | 581 | 654 | 616 | 654 |
| | 280,000 | 412 | 482 | 429 | 482 | 447 | 482 | 482 | 482 | 400,000 | 607 | 688 | 642 | 688 |

First-Hour Rating: Gallons at 90°F temperature rise. Continuous Flow: Gallons/Hr at 70°F temperature rise.

Residential Sizing

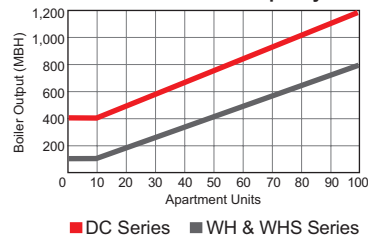
| Boiler BTU Rating | Number of People in Home | | | | | | |
|----------------------|--------------------------|---|---|--------|---|---------|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 60,000 | WHS-60 | | | | | | |
| 80,000 | | | | | | | |
| 100,000 | WH-7C | | | WHS-80 | | WHS-120 | |
| 120,000 | | | | | | | |
| 140,000 | | | | | | | |



Apartment Sizing

| Apartment Units | Number of Premier™ Hot Water Makers® | | | | | |
|-----------------|--------------------------------------|----------|----------|-----------|-------|--------|
| | WH-7C | WHS-60ZC | WHS-80ZC | WHS-120ZC | DC-80 | DC-120 |
| 1-2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3-5 | 2 | 1 | 1 | 1 | 1 | 1 |
| 6-25 | 3 | 2 | 2 | 2 | 2 | 1 |
| 26-50 | 4 | 3 | 3 | 2 | 2 | 2 |
| 51-75 | 5 | 4 | 3 | 3 | 3 | 2 |
| 76-100 | 6 | 5 | 4 | 4 | 3 | 3 |

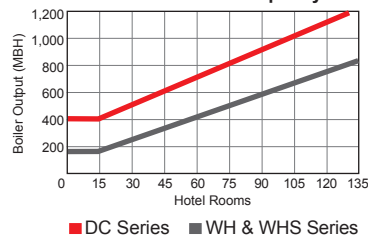
Heat Generator Capacity



Hotel Sizing

| Hotel Rooms | Number of Premier™ Hot Water Makers® | | | | | |
|-------------|--------------------------------------|----------|----------|-----------|-------|--------|
| | WH-7C | WHS-60ZC | WHS-80ZC | WHS-120ZC | DC-80 | DC-120 |
| 1-5 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6-25 | 2 | 1 | 1 | 1 | 1 | 1 |
| 26-50 | 3 | 2 | 2 | 2 | 2 | 2 |
| 51-75 | 4 | 3 | 3 | 2 | 2 | 2 |
| 76-100 | 5 | 4 | 3 | 3 | 3 | 2 |
| 100-135 | 6 | 5 | 4 | 4 | 3 | 3 |

Heat Generator Capacity



1400 Division Road, West Warwick, RI USA 02893
T: 800.426.8765 www.amtrol.com





The new degree of comfort®



Commercial Electric
Point-of-Use

Point-of-Use commercial electric line is designed to provide hot water at the consumption point, eliminating costly temperature loss in long piping runs

Features & Benefits

Our family of point-of-use electric water heaters come in 2.5, 6, 10, 15, 19.9 and 30-gallon models. They are available in 1440 W through 6000 W and in 120, 208, 240, 277 and 480 voltages with a maximum temperature setting of 170°F for 6-30 gallon models and 150°F for the 2.5 gallon model. These units are suited for a wide variety of applications and small enough for installation in limited spaces where modest quantities of hot water are required.

Long Life Tank Design

Proprietary steel formulation with a unique coat of high temperature porcelain enamel maximizes corrosion resistance of the tank. Our heavy duty anode rod provides advanced technology and equalizes aggressive water action. This prolongs the effective life of the anode rod and in turn, the life of the tank.

Long Life Heating Elements

Our patented resistor elements are designed with a specially treated, double layer of magnesium oxide and copper to resist corrosion.

Efficient Design

Rigid polyurethane foam insulation provides superior insulating qualities resulting in reduced operating costs.

Optional Wall Mount Kit

The wall mounting kit provides an easy way to mount the unit off the floor, out of the way for more useable floor space in a small area. Each kit is designed to be used on walls with 16" stud centers. All necessary parts are included in this easy to install kit. (Note: The 2-1/2 gallon model comes standard with a wall mounting kit.)

Automatic Temperature Control

A surface mounted thermostat automatically cycles on and off to maintain the water temperature at a desired preset level.

Temperature Limiting Control

Automatically and safely cuts off the power in the unlikely event that the water temperature exceeds 190°F.

Temperature and Pressure Relief Valve

CSA/ASME rated and factory installed.

Warranty

3-Year limited tank warranty

See Commercial Warranty Certificate for complete information.

NEW UL Approved Electric Conversion Kits*

- Provides an easy way to convert standard models to different wattages, volt or phase depending on installation requirements
- Kits are designed for EGSP models in all gallon capacities
- All parts needed for the electric conversion are included with Rheem electric conversion kits
- Rheem electric conversion kits provide convenience for contractors, plumbers and installers which saves time and money

* Not available in Canada.

Safety and Construction | These products are design certified by Underwriters Laboratories (UL) to meet UL standard 174 as electric storage tank water heaters. All models are North Carolina and Massachusetts Code compliant. **Certified for 150 PSI maximum working pressure.**



Rheem Point-of-Use

2.5 to 30-Gallon Capacities
1.5 kW through 6 kW
120, 208, 240, 277 and
480 Voltages
Single Phase
Electric



Continued next page



INTEGRATED AIR & WATER



The new degree of comfort.®



Commercial Electric
Point-of-Use

| DIMENSIONAL INFORMATION (All dimensions shown in inches) | | | | | | | | | |
|--|-----------|----------------------------------|------------------------------------|---|--------|--------------------------------|--------|-------|------------------------|
| MODEL | MIN WATTS | MAX WATTS | TANK GALLONS | A | B | C | D | E | SHIPPING WEIGHT (LBS.) |
| EGSP2 | 1,440 | 1,500 | 2-1/2 | 14 | 9-3/4 | — | — | — | 18 |
| EGSP6 | 1,500 | 6,000 | 6 | 15-1/8 | 15-3/4 | 12-5/8 | 11-5/8 | 4-1/4 | 41 |
| EGSP10 | 1,500 | 6,000 | 10 | 22-7/8 | 15-3/4 | 20-3/8 | 19-3/8 | 4-1/4 | 53 |
| EGSP15 | 1,500 | 6,000 | 15 | 24-1/4 | 17-3/4 | 21-7/8 | 19-3/8 | 4-5/8 | 65 |
| EGSP20 | 1,500 | 6,000 | 19.9 | 25-1/8 | 19-3/4 | 22-5/8 | 19-5/8 | 5-1/8 | 76 |
| EGSP30 | 1,500 | 6,000 | 30 | 32 | 22-1/4 | 23 | 23 | 3 | 115 |
| Water Temp. Ratings: | | Thermostat Type: Surface Mounted | Min. Delivered Temperature: 110° F | Max. Delivered Temperature: 170°F (6-30 Gallon Models) 150°F (2.5 Gallon Model) | | High Temperature Limit: 190° F | | | |

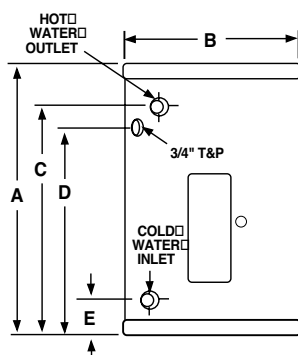
NOTE: Basic model numbers are listed. When ordering, specify electrical input and kW to determine specific model number.

Canadian models have different model numbers than the U.S. models. Add a "C" before the model number (e.g. CEGSP2) when ordering.

Models:

EGSP6
EGSP10
EGSP15
EGSP20
EGSP30

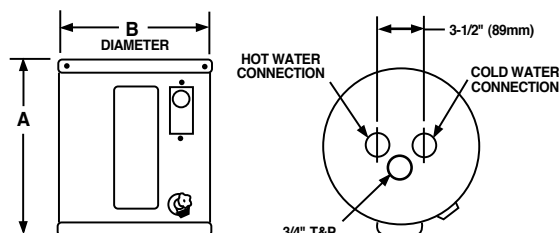
Water Connections
3/4" NPT



Model:

EGSP2

Water Connections
1/2" NPT



| ELEMENT AVAILABILITY | | | | | |
|----------------------|-------|-------|-------|-------|-------|
| WATTAGE | 120 V | 208 V | 240 V | 277 V | 480 V |
| 1,440 | **Y | N/A | N/A | N/A | N/A |
| 1,500 | Y | Y | **Y | N/A | N/A |
| 2,000 | Y | Y | Y | Y | Y |
| 2,500 | Y | Y | Y | N/A | N/A |
| 3,000 | Y | Y | Y | Y | Y |
| 4,500 | N/A | Y | *Y | *Y | *Y |
| 6,000 | N/A | Y | Y | Y | Y |

*Not available in EGSP6 & EGSP10

**EGSP2 available only in these configurations.

ELECTRICAL CHARACTERISTICS

| ELEMENT WATTAGE | FULL LOAD CURRENT IN AMPERES | | | | |
|-----------------|------------------------------|-------|-------|-------|-------|
| | 120 V | 208 V | 240 V | 277 V | 480 V |
| 1,440 | 12.0 | N/A | N/A | N/A | N/A |
| 1,500 | 12.5 | 7.2 | 6.3 | N/A | N/A |
| 2,000 | 16.7 | 9.6 | 8.3 | 7.2 | 4.2 |
| 2,500 | 20.8 | 12.0 | 10.4 | N/A | N/A |
| 3,000 | 25.0 | 14.4 | 12.5 | 10.8 | 6.3 |
| 4,500 | N/A | 21.6 | 18.8 | 16.2 | 9.4 |
| 6,000 | N/A | 28.8 | 25.0 | 21.7 | 12.5 |

All models employ 1 heating element resulting in a 2-wire outlet (single phase) electrical configuration.

RECOVERY CAPACITIES

| ELEMENT WATTAGE | TEMPERATURE RISE - DEGREES F - GALLONS PER HOUR | | | | | |
|-----------------|---|------|------|-------|-------|-------|
| | 40°F | 60°F | 80°F | 100°F | 120°F | 140°F |
| 1,440 | 15 | 10 | 7 | 6 | 5 | 4 |
| 1,500 | 15 | 10 | 8 | 6 | 5 | 4 |
| 2,000 | 20 | 14 | 10 | 8 | 7 | 6 |
| 2,500 | 25 | 17 | 13 | 10 | 8 | — |
| 3,000 | 30 | 20 | 15 | 12 | 10 | 9 |
| 4,500 | 46 | 30 | 23 | 18 | 15 | 13 |
| 6,000 | 61 | 41 | 30 | 24 | 20 | 17 |

Recommended Specifications (for trade reference only)

Water heater(s) shall be model _____, manufactured by Rheem, having electrical input of _____ kW and a recovery rate of _____ GPH at a 100°F temperature rise. Water heater(s) shall have a storage capacity of _____ gallons. Water heater(s) shall have the UL/CSA seal of certification and be factory equipped with an CSA/ASME rated temperature and pressure relief valve. Tank(s) interior shall be coated with a high temperature

porcelain enamel and furnished with a magnesium anode rod rigidly supported. Water heater(s) shall meet or exceed the energy factor requirements of ASHRAE. Tanks shall have a working pressure rating of 150 psi, and shall be completely assembled. Water heater(s) shall be equipped with a copper, resistored, "screw-in" type element. Tank shall be insulated with rigid polyurethane foam insulation. Water heater(s) shall be equipped with a surface mounted thermostat with an integral, manual reset, high limit control. Water heater(s) shall be covered by a three year limited warranty against tank leaks.

In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

Rheem Water Heating • 1115 Northmeadow Parkway, Suite 100
Roswell, Georgia 30076 • www.rheem.com

Rheem Canada Ltd./Ltée • 125 Edgeware Road, Unit 1
Brampton, Ontario L6Y 0P5 • www.rheem.ca



INTEGRATED AIR & WATER