

TALCO **FIRE**
SYSTEMS

Portland, OR
(503) 688-1231 / (503) 688-1234(FAX)

HDR-150

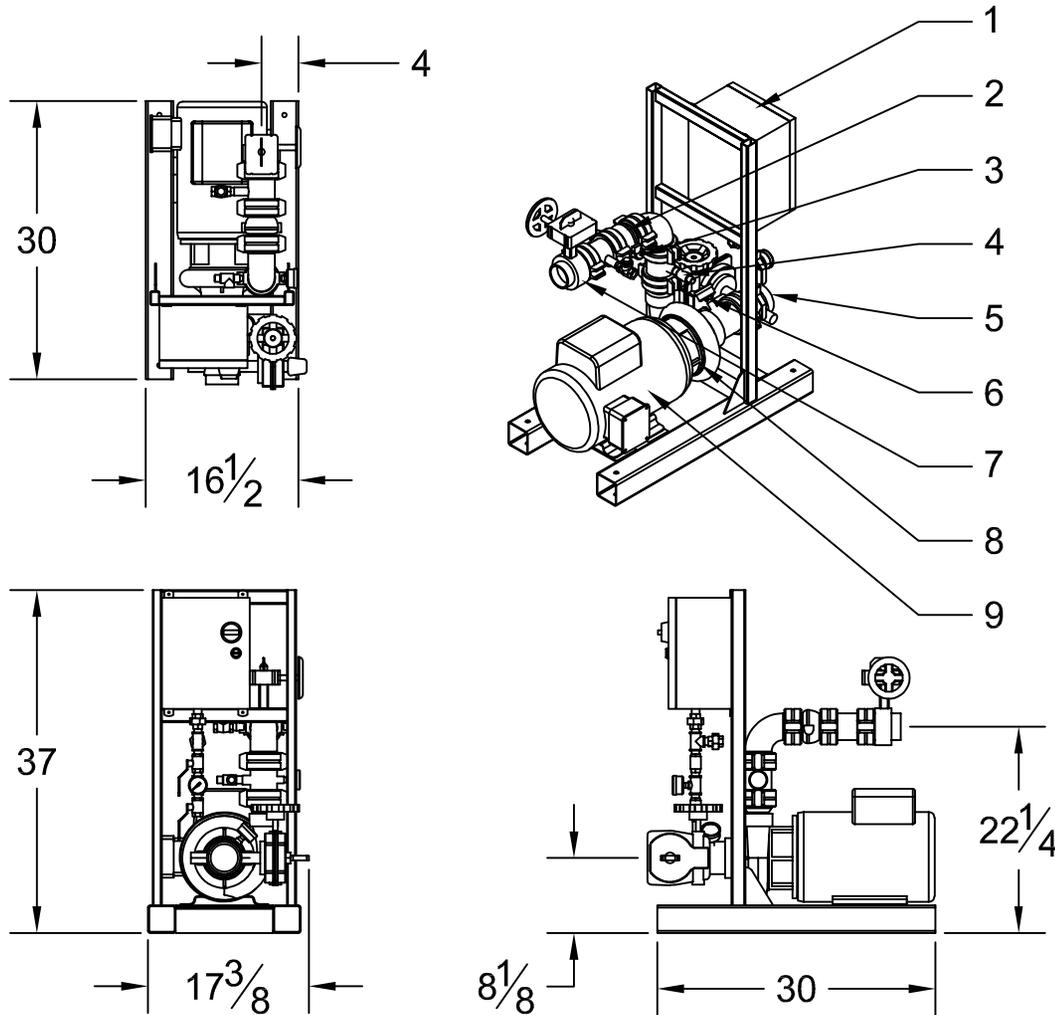
150GPM Fire Pump Package

Submittal Packet

Residential Packaged Fire Pump System

HDR-150

Heavy Duty Residential Package
 Design Condition: 150GPM @ 65PSI



System Specifications:

- Motor**
- 10 Horsepower Electric
 - 230 Volt
 - 46 Amp
 - Single Phase
 - 3450 RPM

- Pump**
- End Suction Centrifugal Pump
 - 3" Suction (Grooved)
 - 2 1/2" Discharge (Grooved)
 - 175 PSI max working pressure

- System Components**
- 1- Residential Fire Pump Controller
 - 2- Check Valve
 - 3- Discharge Pressure Gauge
 - 4- Case Relief Valve
 - 5- Suction Monitored Butterfly Valve
 - 6- Suction Pressure Gauge
 - 7- Discharge Monitored Butterfly Valve
 - 8- End Suction Pump
 - 9- Electric Motor
 - Not Shown- Copper Sensing Line (per NFPA20)

Performance

Performance values based on multiple pump tests. Not for certification purposes.

| | | | | | | | | |
|-----|----|----|----|-----|-----|-----|-----|-----|
| GPM | 0 | 60 | 90 | 110 | 150 | 180 | 200 | 225 |
| PSI | 72 | 72 | 71 | 70 | 67 | 64 | 62 | 57 |

Please Note: This fire pump system uses an unlisted pump & a residential controller. Please submit to your AHJ for approval prior to ordering.

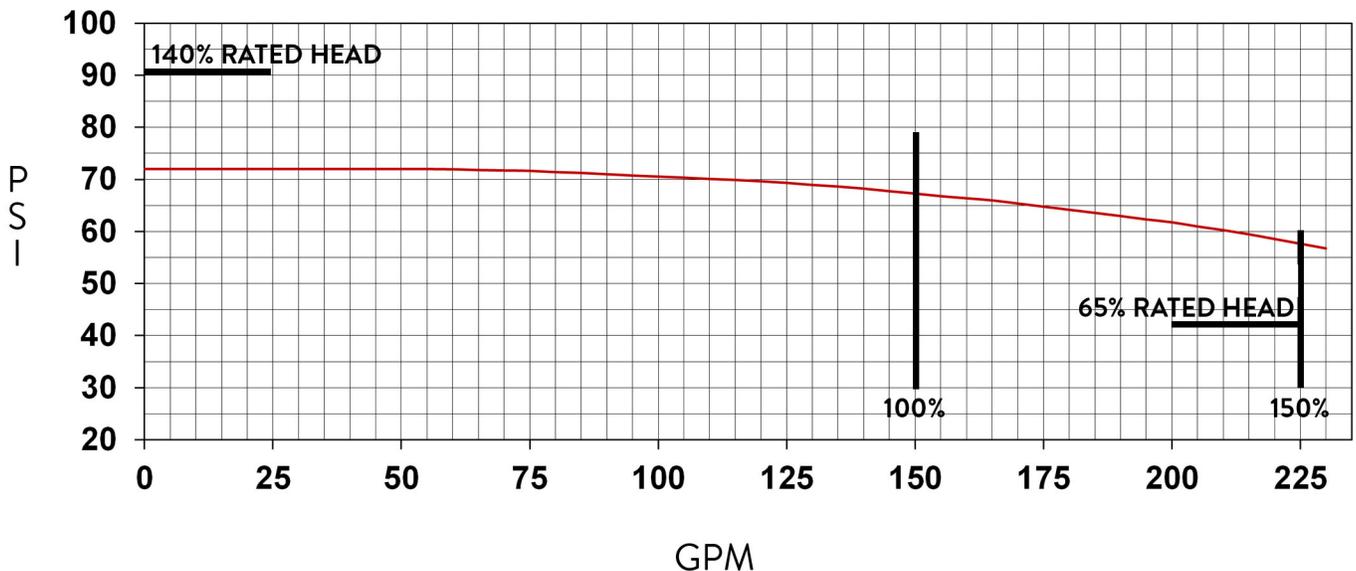


TALCO FIRE SYSTEMS

HDR-150

PUMP DATA

150GPM @ 65PSI



SYSTEM SPECIFICATIONS

MOTOR

- 10 HP ELECTRIC MOTOR
- 230 VOLT, 46 AMP
- SINGLE PHASE
- 3450 RPM
- JM FRAME
- SHAFT SLEEVE/O-RING FOR PROTECTION AGAINST SHAFT DAMAGE
- SEALED MOTOR BEARINGS TO CARRY AXIAL & THRUST LOADS
- OPEN DRIP PROOF (ODP)

PUMP

- HIGH PRESSURE CAST IRON VOLUTE
- MACHINED BRONZE IMPELLER
- 3" SUCTION
- 2" DISCHARGE
- 150 PSI MAX WORKING PRESSURE



TORNATECH

Project: _____

Customer: _____

Engineer: _____

Pump Manufacturer: _____

**Technical Data
Submittal Document**

Model JPLT

**Across the Line Start
Jockey Pump Controller**

Contents:

Data Sheets

Dimensional Data

Wiring Schematics

Field Connections

Note: The drawings included in this package are for controllers covered under our standard offering. Actual AS BUILT drawings may differ from what is shown in this package.



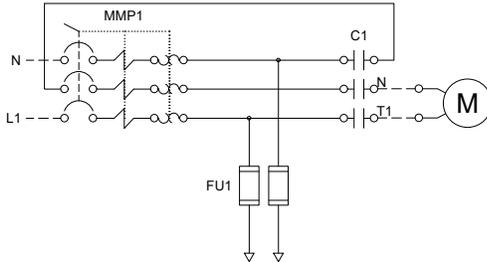
N.Y.C.
APPROVED



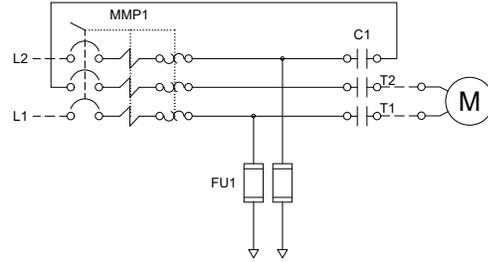
OPTIONAL
July 2024

Select Incoming Voltage

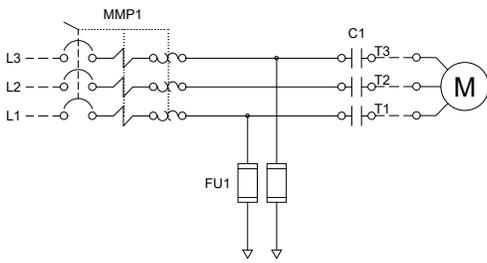
110-120V



200-240V



200-600V



N.Y.C.
APPROVED



OPTIONAL

| | | |
|------------------|------------------------------|---|
| Listing | Underwriters Laboratory (UL) | UL508A - Industrial Pump Controllers |
| | New York City | Accepted for use in the City of New York by the Department of Buildings |
| | Optional | |
| | CE Mark | Various EN, IEC & CEE directives and standards |
| Enclosure | Protection Rating | |
| | Standard: NEMA 2 | |
| | Optional | |
| | NEMA 12 | NEMA 4X-304 sst painted |
| | NEMA 3 | NEMA 4X-304 sst brushed finish |
| | NEMA 3R | NEMA 4X-316 sst painted |
| | NEMA 4 | NEMA 4X-316 sst brushed finish |
| | Accessories | Paint Specifications |
| | • Wall mounting lugs (x4) | • Red RAL3002 |
| | | • Powder coating |
| | | • Glossy textured finish |



Short circuit current rating

| HP | Voltage | | | | | | |
|------|--------------|------------|-------------|------------|------------|------------|------|
| | Single Phase | | Three Phase | | | | |
| | 110 - 120V | 200 - 240V | 200 - 208V | 220 - 240V | 380 - 415V | 440 - 480V | 600V |
| 0.25 | 65kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 0.5 | 65kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 0.75 | 42kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 1 | 42kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 1.5 | 42kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 2 | 42kA | 65kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 3 | CF | 42kA | 65kA | 65kA | 65kA | 65kA | 10kA |
| 4 | CF | 42kA | 42kA | 42kA | 65kA | 65kA | 10kA |
| 5 | CF | 42kA | 42kA | 42kA | 65kA | 65kA | 10kA |
| 5.5 | CF | CF | 42kA | 42kA | 65kA | 65kA | 10kA |
| 7.5 | CF | CF | 42kA | 42kA | 42kA | 65kA | 10kA |
| 10 | CF | CF | CF | 42kA | 42kA | 42kA | 10kA |
| 15 | CF | CF | CF | CF | 42kA | 42kA | 5kA |
| 20 | CF | CF | CF | CF | CF | 42kA | 5kA |
| 25 | CF | CF | CF | CF | CF | CF | 5kA |



| | | | |
|----------------------------------|--|-------------------------------------|---|
| Fuseless Motor Starter | <ul style="list-style-type: none"> • Type -F fuse-less magnetic motor starter • Rotary handle, padlockable • Door interlocked | | |
| Control Circuit | <ul style="list-style-type: none"> • 24V.AC | | |
| ViZiLT Operator Interface | <ul style="list-style-type: none"> • High luminosity alphanumeric digital display • HAND-OFF-AUTO pushbuttons • MENU navigation pushbuttons | | |
| Pressure Sensing | <ul style="list-style-type: none"> • Pressure transducer for fresh water application 316 stainless steel construction • Rated for 0-600psi working pressure • Pressure sensing line connection 1/2" brass Male NPT | | |
| Visual Indications | <ul style="list-style-type: none"> • H-O-A position • System pressure • Cut-out and Cut-In pressure setting • Manual motor run • Automatic motor run • Motor overload (occured) • Pump start counter • Elapsed time meter (hours / non-resettable) | | |
| Timers | <ul style="list-style-type: none"> • Minimum run timer (off delay) • Delay start timer (on delay) • Visual countdown | | |
| Counters | <ul style="list-style-type: none"> • Pump start counter • Elapsed timer meter (hours / non-resettable) | | |
| Operators | <ul style="list-style-type: none"> • Main disconnect handle • HAND-OFF-AUTO pushbuttons • MENU navigation pushbuttons | | |
| Operation | Automatic Start | Start on pressure drop | |
| | Manual Start | Start pushbutton | |
| | Stopping | Stop pushbutton | |
| | Timers | Field adjustable & visual countdown | <ul style="list-style-type: none"> • Minimum run timer (off delay) • Delay start timer (on delay) |

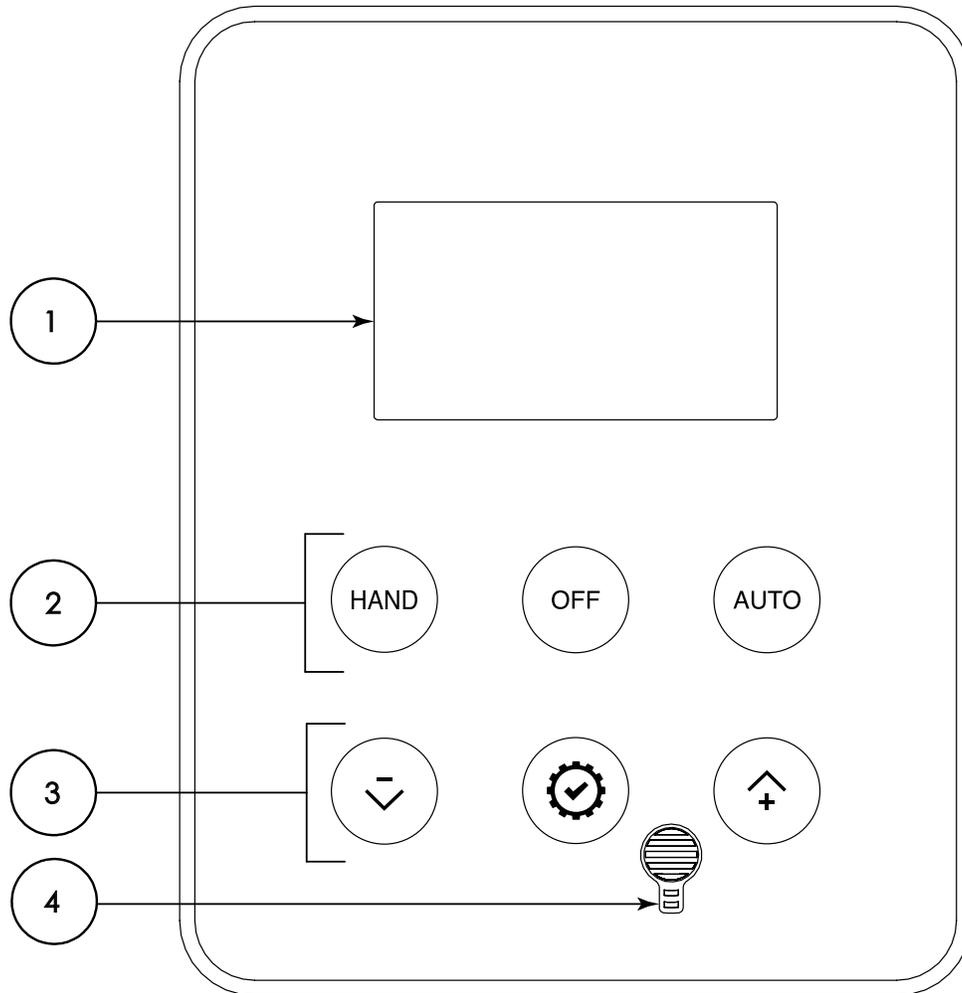


| | |
|------|--|
| A5 | Motor run alarm contact |
| A6 | Loss of power alarm contact |
| A7 | Overload or short circuit alarm contact |
| D11D | Pressure transducer 0-600psi with 1/2" MNPT 316 stainless steel bushing |
| D13A | Externally mounted wetted parts |
| D18 | Audible alarm |
| D19 | Anti-condensation heater and thermostat |
| D20 | Anti-condensation heater and humidistat |
| D21 | Tropicalization |
| D22 | Phase reversal / failure pilot light and alarm contact |
| D23 | Controller power healthy pilot light and alarm contact |
| D24 | Pump failure via current sensing relay with pilot light and dry alarm contact |
| D25 | Low zone pump control function |
| D26 | Mid zone pump control function |
| D27 | High zone pump control function |
| D28 | Controller in AUTO alarm contacts |
| D29 | Controller not in AUTO alarm contacts |
| D30 | Motor heater circuit |
| D35 | Seismic Certification compliant to CBC 2019, IBC 2018 rigid base/wall mounted only |
| D36 | Special Seismic Certification compliant to OSHPD rigid base/wall mounted only |
| D37 | 100kA high short circuit withstand rating for 200V to 600V |

| | |
|-----|--|
| L01 | Other language and English (bilingual) |
| L02 | French |
| L03 | Spanish |
| L04 | German |
| L05 | Italian |
| L06 | Polish |
| L07 | Romanian |
| L08 | Hungarian |
| L09 | Slovakian |
| L10 | Croatian |
| L11 | Czech |
| L12 | Portuguese |
| L13 | Dutch |
| L15 | Turkish |
| L16 | Swedish |
| L21 | Danish |
| L28 | Finnish |
| L29 | Norwegian |

Note: Options chosen from this page are not electrically represented on the wiring schematics in this submittal package.

ViZiLT Operator Interface



- 1 - High luminosity alphanumeric digital display
- 2 - HAND-OFF-AUTO pushbuttons
- 3 - MENU navigation pushbuttons
- 4 - Audible Alarm



BY DD/MM/YY
 DRAWN BY ACD 15/05/23
 FINAL APPROVAL FC 15/05/23

JOCKEY PUMP CONTROLLER

MODEL: JPLT

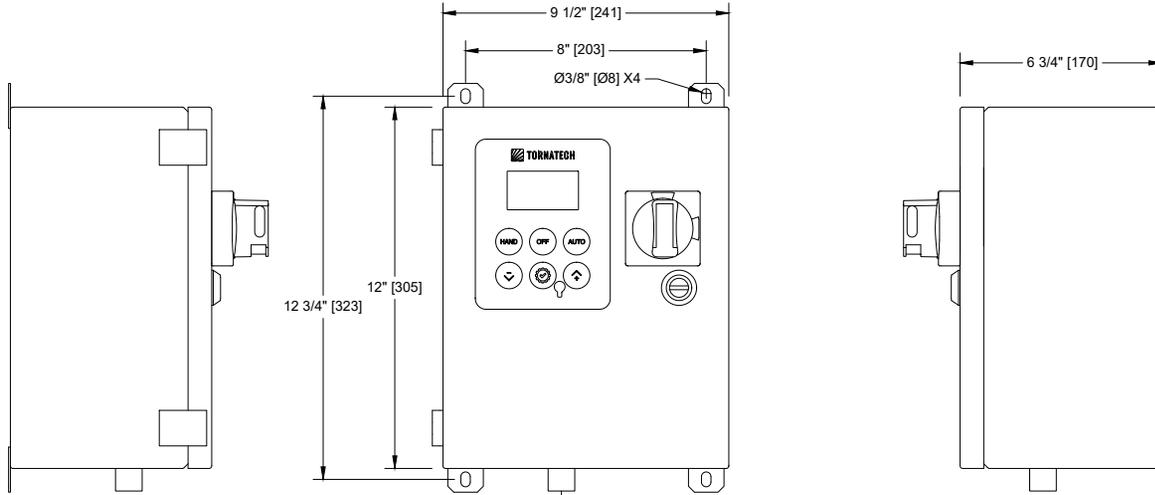
BUILT TO THE LATEST EDITION OF THE UL 508A



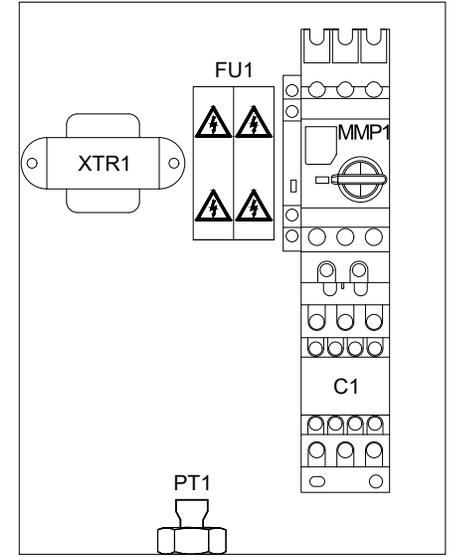
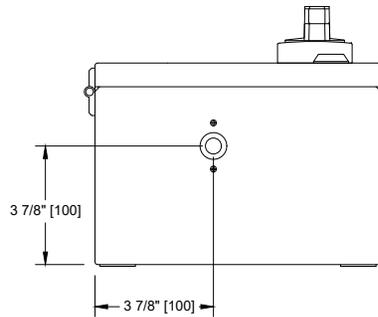
THIRD ANGLE PROJECTION

DRAWING NUMBER
JPLT-D1001/E
 DWG REV. 0
 SHEET 1 OF 1

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 Subject to change without notice.



Sensing Line Connection 1/2" M.NPT



Standard Internal Layout

Voltage / Power Table

| Voltage | Max HP |
|-----------------|--------|
| 1 Phase | |
| 110 - 120 | 2 |
| 200 - 208 | 5 |
| 220 - 240 | 5 |
| 3 Phases | |
| 200 - 208 | 7.5 |
| 220 - 240 | 10 |
| 380 - 400 - 415 | 15 |
| 440 - 480 | 20 |
| 600 | 25 |

Notes:

- Standard NEMA: NEMA 2
- Standard Paint: Textured Red RAL 3002.
- All Dimensions are in Inches [Millimeters]
- Use Watertight Conduit and Connector Only.
- Protect Equipment Against Drilling Chips.
- Door Swing Equal to Door Width

Drawing for information only.

Manufacturer reserves the right to modify this drawing without notice.

Contact manufacturer for "As Built" drawing.

*Dimensions may change depending on option required. Consult Factory for exact dimensions.



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| | | |
|----------------|-----|----------|
| BY | | DD/MM/YY |
| DRAWN BY | ACD | 15/05/23 |
| FINAL APPROVAL | FC | 15/05/23 |

JOCKEY PUMP CONTROLLER ACROSS THE LINE / 1 PHASE

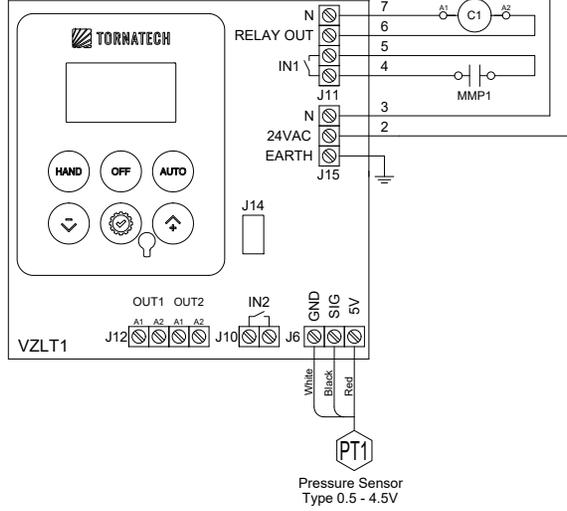
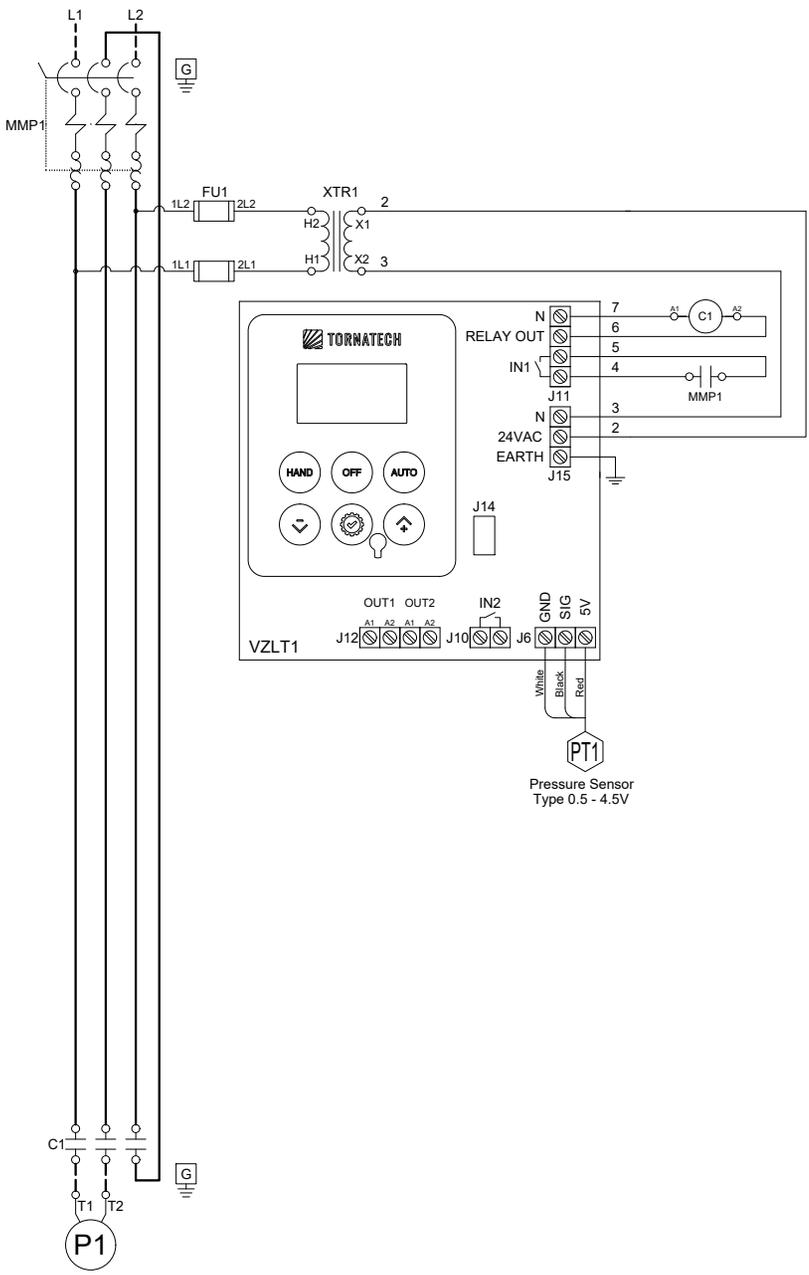
MODEL: JPLT

BUILT TO THE LATEST EDITION OF THE UL 508A



NYC
Dept of Building
Approved

| | |
|----------------|--------------|
| DRAWING NUMBER | JPLT-WS002/E |
| DWG REV. | 0 |
| SHEET 1 OF 1 | |





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|----------------|-----|----------|
| | BY | DD/MM/YY |
| DRAWN BY | ACD | 15/05/23 |
| FINAL APPROVAL | FC | 15/05/23 |

JOCKEY PUMP CONTROLLER ACROSS THE LINE / 1 PHASE

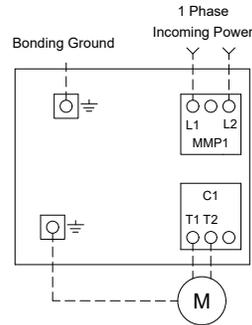
MODEL: JPLT

BUILT TO THE LATEST EDITION OF THE UL 508A



DRAWING NUMBER
JPLT-TD002/E
DWG REV. 0
SHEET 1 OF 1

Power Connections and Motor Connections



Line Terminals (L1,L2,GND)

| Maximum Motor Horsepower | | Wire Size Copper Only | Torque | Wire Size Ground Copper Only |
|--------------------------|----------|-----------------------|--------|------------------------------|
| 200-208V | 220-240V | | | |
| 5HP | 5HP | #14 AWG - #8 AWG | 2.5 Nm | #14 AWG - #2 AWG |

Motor Terminals (T1,T2,GND)

| Maximum Motor Horsepower | | Wire Size Copper Only | Torque | Wire Size Ground Copper Only |
|--------------------------|----------|-----------------------|--------|------------------------------|
| 200-208V | 220-240V | | | |
| 1.5HP | 1.5HP | #14 AWG - #10 AWG | 1.7 Nm | #14 AWG - #2 AWG |
| 5HP | 5HP | #14 AWG - #8 AWG | 2.5 Nm | #12 AWG - #2 AWG |



Model BFG-300 Supervised Butterfly Valve Grooved

cULus Listed, FM Approved

Product Description

The Reliable Model BFG-300 Supervised Butterfly valves are cULus Listed and FM Approved for fire protection systems. Reliable Supervised Butterfly Valves valves have AWWA C606 grooved end connections. They are available in 2-1/2" (65mm), 3" (80mm), 4" (100mm), 6" (150mm), and 8" (200mm) nominal sizes. The valves are listed for 300 psi (20.7 bar) working pressure. The maximum working temperature for the valves is 250°F (120°C).

Maintenance

The owner is responsible for maintaining the fire protection system in proper operating condition. Any system maintenance or testing that involves placing a control valve out of service will eliminate the fire protection that is provided by the fire protection system.

The Reliable Supervised Closed Butterfly valves and associated equipment shall periodically be given a thorough inspection and test. NFPA 25, "Inspection, Testing and Maintenance of Water Based Fire Protection Systems," provides minimum maintenance requirements.

Guarantee

For Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.



Supervised Grooved Butterfly Valve - Supervised Open



Supervised Grooved Butterfly Valve - Supervised Closed

Ordering Information

Specify the following when ordering:

Model BFG-300 Butterfly Valve Supervision

- Valve Supervised Open (yellow indicator)
- Valve Supervised Closed (white indicator)

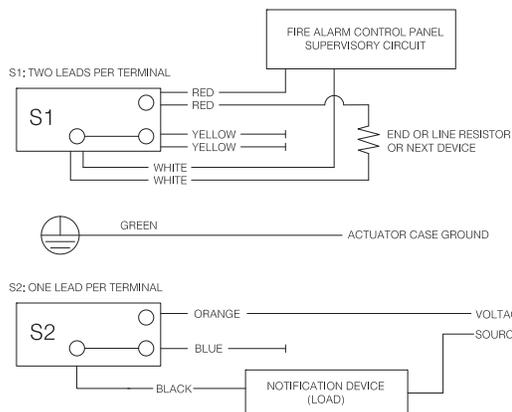
Valve Size

- 2-1/2" (65mm)
- 3" (80mm)
- 4" (100mm)
- 6" (150mm)
- 8" (200mm)

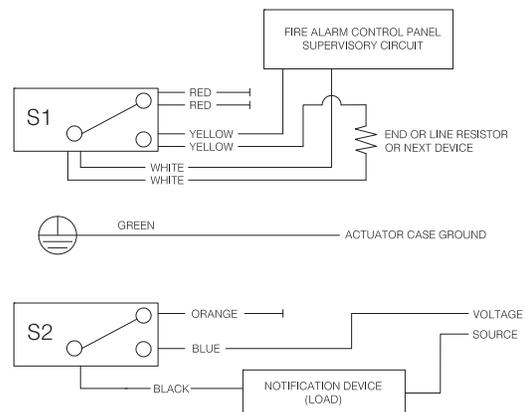
Reliable Supervised Butterfly Valve Wiring Diagram - Valve in Supervised Position

Figure 1

Supervised Normally Open Valve



Supervised Normally Closed Valve



Notes: Rated: 5A-1/6HP-125/250VAC
0.5A - 125VDC
0.25A - 250DC

Reliable Model BFG-300 Supervised Butterfly Valve Grooved

Technical Specifications

Pressure Rating:
300 psi (20.7 bar)

Material Specifications

Body: Ductile Iron ASTM A-536 Nylon-11 Coated
Disc: ASTM A-536 EPDM Encapsulated
Upper and Lower Stems: AISI 420-SS
Housing: ASTM A-536
Hand Wheel: ASTM A-536
Flag Indicator: ASTM A-536
Shear Pin: ASTM A-510
Segment Gear: ASTM B-148 or B-584
Housing Gasket: EDPM Grade E
O-Ring: EDPM Grade E

Specifications

Groove Inlet: AWWA C 606

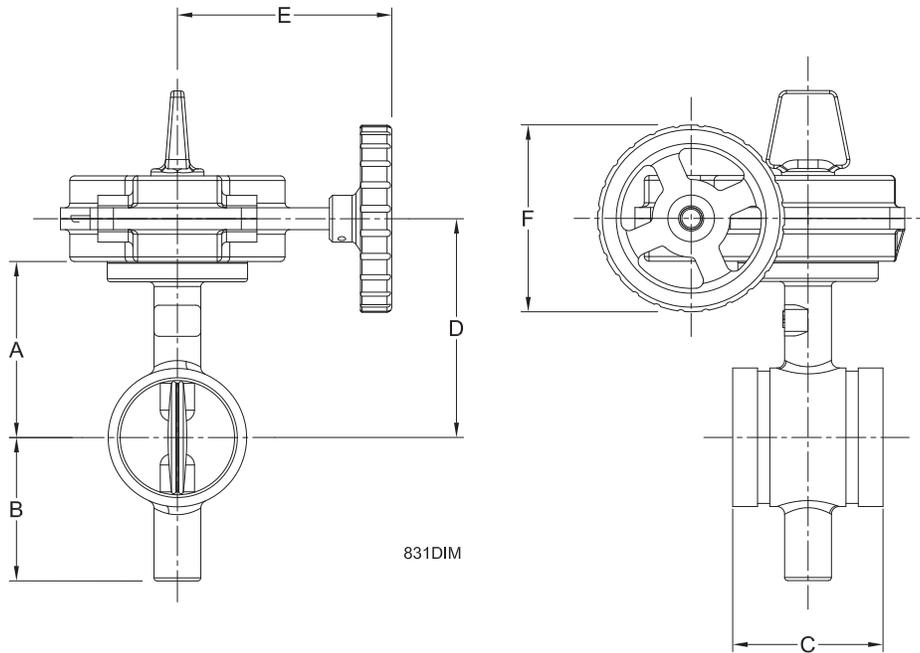
Listings and Approvals

cULus Listed
 FM Approved



Reliable Supervised Butterfly Valve Specification and Dimensions

Figure 2



Dimensions - in. (mm)

Table B

| Valve Size | A | B | C | D | E | F |
|-------------|---------------|---------------|---------------|---------------|--------------|-------------|
| 2-1/2" (65) | 4-1/8 (105) | 3-5/8 (92) | 3-13/16 (96) | 5-1/3 (135) | 5-5/16 (135) | 5 (128) |
| 3" (80) | 4-7/16 (112) | 3-11/16 (95) | 3-13/16 (96) | 5-5/8 (142) | 5-5/16 (135) | 5 (128) |
| 4" (100) | 5-11/16 (145) | 4-1/4 (108) | 4-1/2 (115) | 6-15/16 (175) | 5-5/16 (135) | 5 (128) |
| 6" (150) | 7 (179) | 5-11/16 (146) | 5-3/16 (132) | 8-1/4 (209) | 7-5/8 (193) | 8-5/8 (220) |
| 8" (200) | 8 (204) | 6-11/16 (170) | 5-13/16 (147) | 9-1/4 (234) | 7-5/8 (193) | 8-5/8 (220) |

Check Valves

UL LISTED AND FM APPROVED

WWW.FPPI.COM



3198 LIONSHEAD AVE
CARLSBAD, CA 92010
+ 1 (760) 599-1168
+ 1 (800) 344-1822
+ 1 (800) 344-3775 FAX

LISTED VALVE NOW
AVAILABLE IN
1 1/2" SIZE



- Brass Body* (C38000) for superior corrosion resistance
- Listed valves available in the following sizes: 1 1/2"**, 2", 2 1/2", 3" and 4"
- Available Grooved, Threaded, or Thread by Groove reducing the need for additional fittings and minimizing installation time.
- Pressure rated to up to 300 PSI
- Tapped and plugged for easy use of accessories such as ball drips or gauges



*Contains lead. Not for use in water systems intended for human consumption.

**1 1/2" size is UL/ULc listed only

For Commercial, Institutional and Industrial Applications

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Series 530C

Calibrated Pressure Relief Valves

Sizes: 1/2" or 3/4" (15 or 20mm)

Series 530C Calibrated Pressure Relief Valves are spring operated brass valves designed for use only as protection from the build up of excessive pressure in systems containing water, oil or air. Series 530C valves incorporate a calibrated adjustment feature for setting the valve to the relief pressure required. These valves are ideally suited for bypass thermal expansion relief.

Features

- Calibrated adjustment feature for setting valve to relief pressure required
- Adjustable range 50 – 175psi (3.4 – 12.1 bar)
- All brass construction
- All stainless steel spring
- Buna-N disc on machined body seat
- Inlet (bottom), male NPT threaded
- Outlet (side), female NPT threaded

Pressure – Temperature

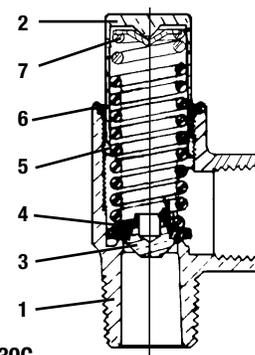
Maximum Temperature: 180°F (82°C)

Spring Ranges

1/2" or 3/4" (15 or 20mm): 50 – 175psi (3.4 – 12.1 bar)
 3/4" (20mm): 100 – 300psi (6.9 – 20.7 bar)

Application Note: The Watts Series 530C are not ASME approved safety relief valves and should not be used in system application with this requirement.

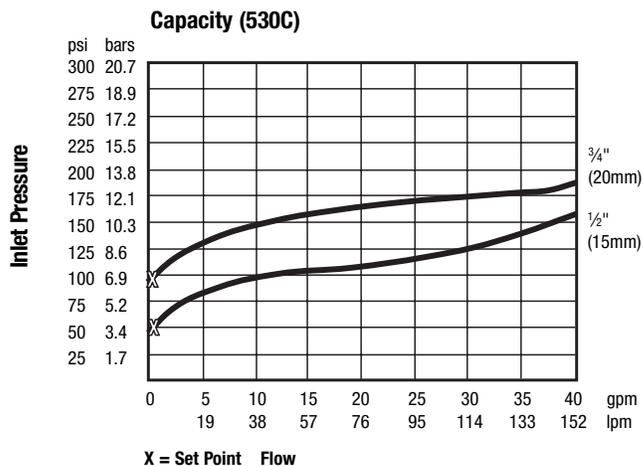
| MODEL | SIZE (DN) | | DIMENSIONS | | | | WEIGHT | |
|-------|------------|----------|------------|----|-------|----|--------|------|
| | in. | mm | Height | | Width | | lbs. | kg. |
| 530C | 1/2 or 3/4 | 15 or 20 | 3 | 76 | 1 3/8 | 41 | .37 | 0.17 |



Model 530C

Materials

- 1. Body** Brass
- 2. Bonnet** Brass
- 3. Disc Holder** Brass
- 4. Disc** Buna-N (Nitrile)
- 5. Adjustable Spring** Stainless Steel
- 6. O-ring** Buna-N (Nitrile)
- 7. Spring Washer** Brass



Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Water Safety & Flow Control Products

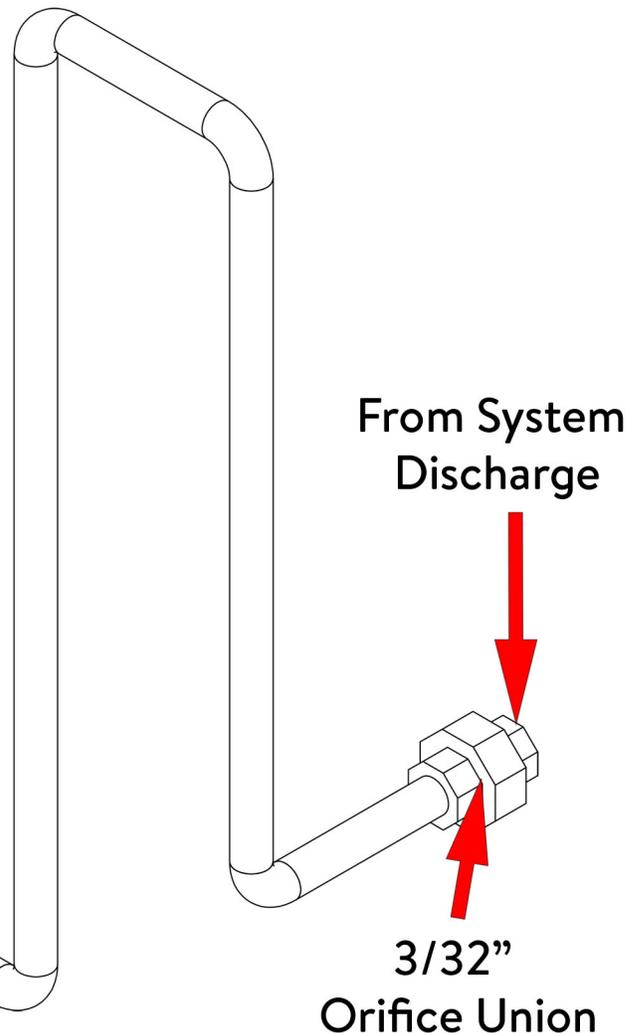
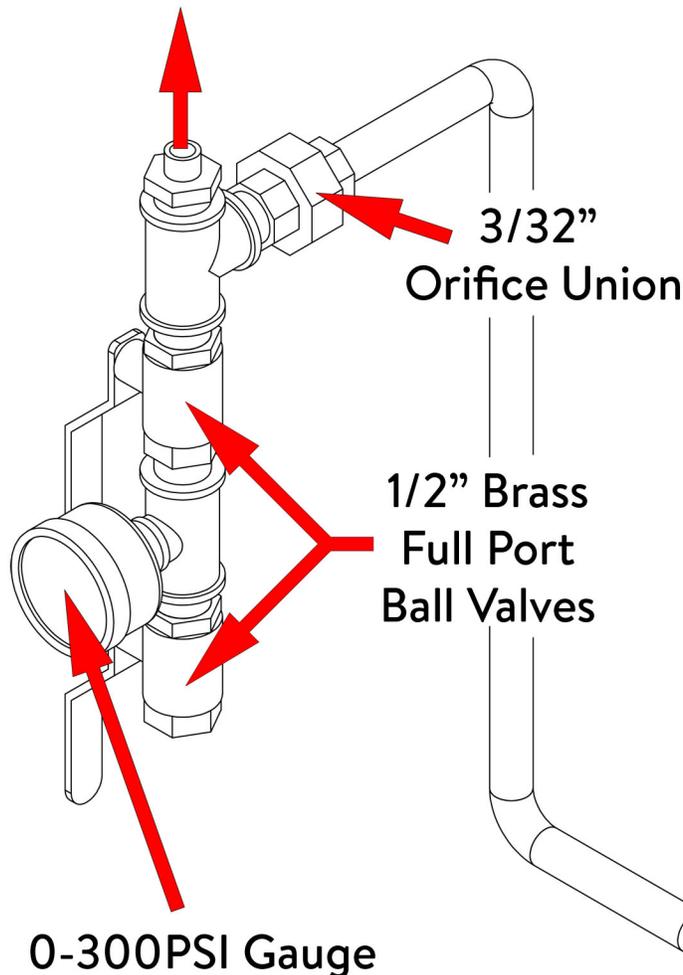
USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.watts.com
 Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca



TALCO FIRE SYSTEMS

NFPA-20 Pressure Sensing Line Detail

To Control Panel
Pressure Switch/
Transducer



Sensing line constructed in accordance with NFPA-20:
5 feet minimum 1/2" hard copper tubing
Brass or copper NPT components