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

HDR-100

100GPM Fire Pump Package

Submittal Packet

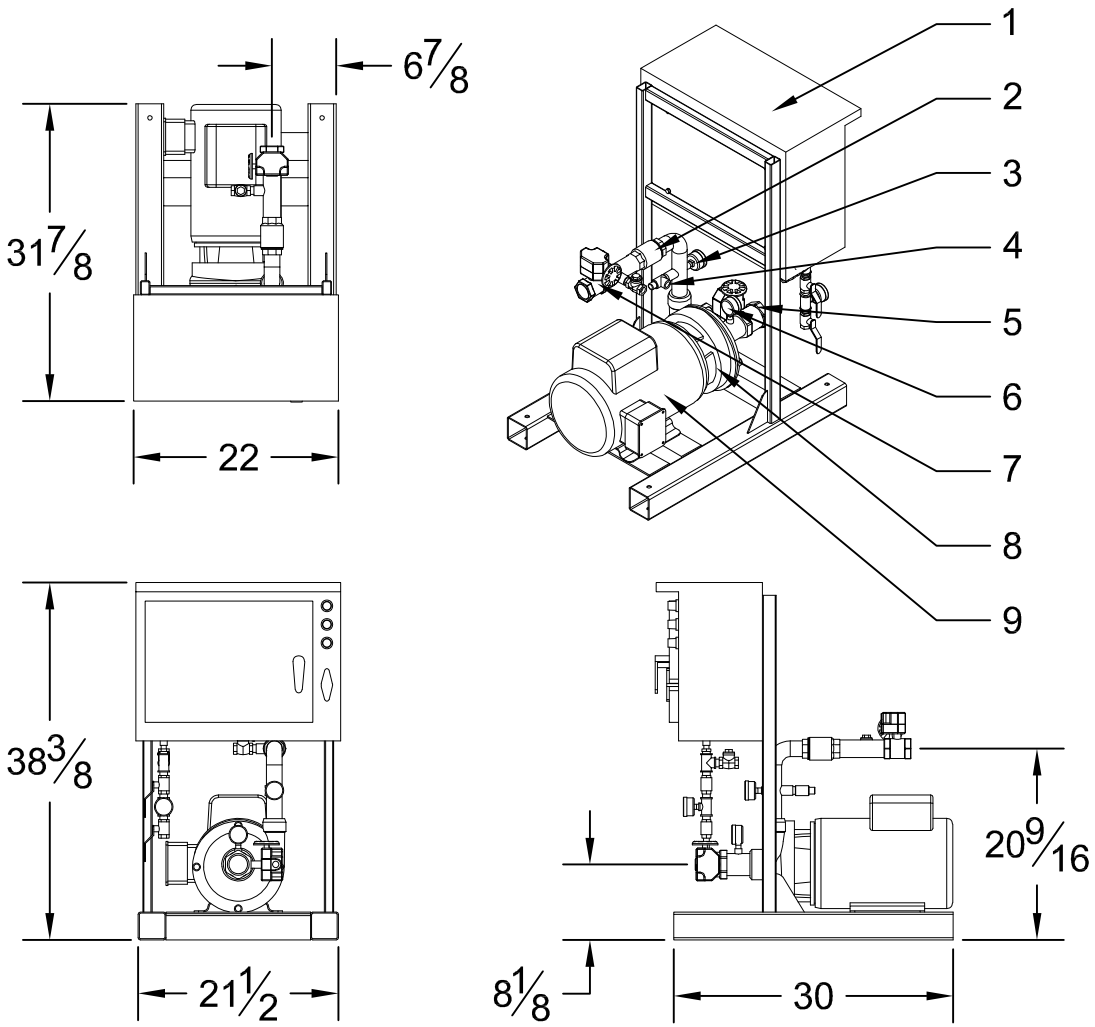
TALCO FIRE SYSTEMS

RESIDENTIAL & COMMERCIAL FIRE PUMP SPECIALISTS
6040 NE 112TH AVE. PORTLAND, OR 97220
800-878-8055 WWW.TALCOFIRE.COM

Residential Packaged Fire Pump System

HDR-100

Heavy Duty Residential Package
Design Condition: 100GPM @ 83PSI



System Specifications:

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

Pump
-End Suction Centrifugal Pump
-2" Suction (NPT)
-1 ½" Discharge (NPT)
-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	25	50	75	100	125	150
PSI	98	96	94	90	83	72	60

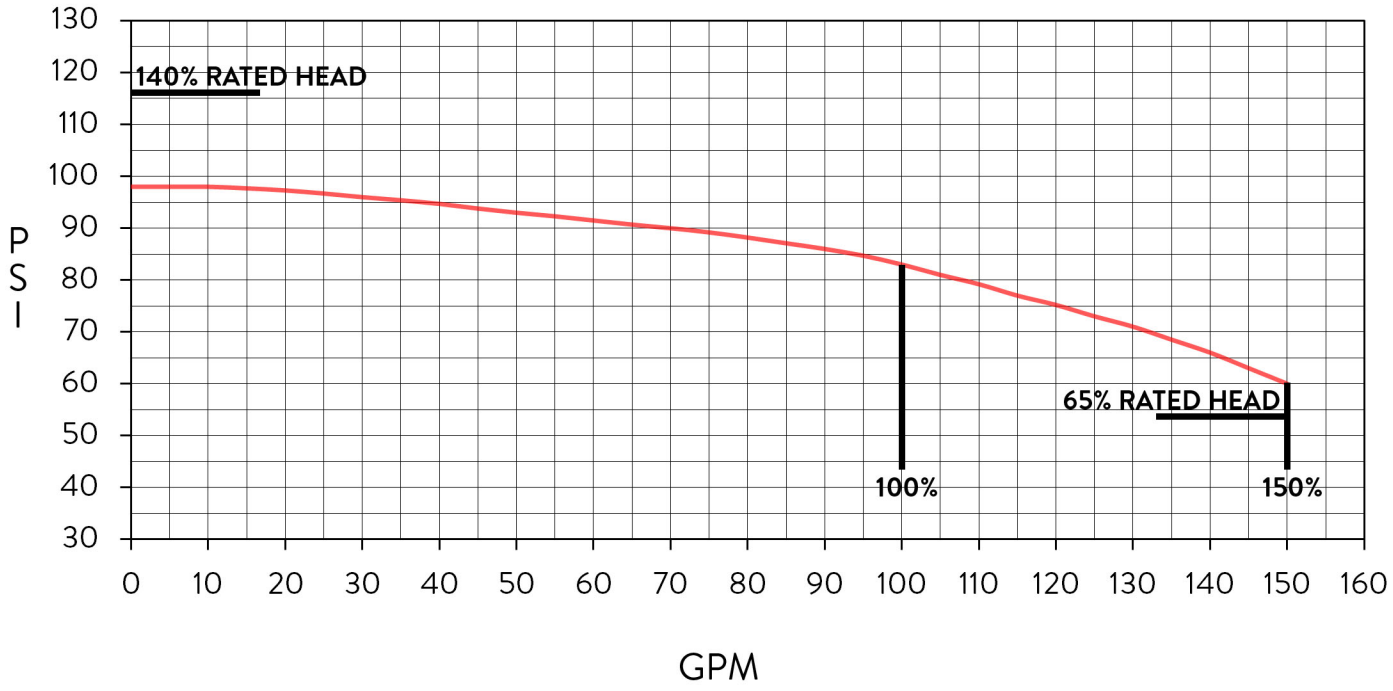
Please Note: This fire pump system uses an unlisted pump & a residential controller. Please submit to your AHJ for approval prior to ordering.

TALCO FIRE SYSTEMS

HDR-100

PUMP DATA

100GPM @ 83PSI



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
-2” Suction
-1 1/2” Discharge
-150 PSI Max Working Pressure

Product Description

Eaton Cutler Hammer Residential Fire Pump Controllers work in conjunction with single phase, electric, residential fire pumps and packages. Available as a Simplex or Duplex unit, all controllers are UL listed and meet or exceed NEMA requirements.

Product Features

Sequential Start Timer

A sequential start timer may be installed which is used to program a start delay after the pressure switch initiates an automatic start. In duplex controllers, a SST is standard and is wired to delay starting the second (lag) pump. The timer does not operate if starting is initiated via the start pushbutton or emergency start handle.

Run Period Timer

The run period timer turns on whenever the controller starts due to a drop in pressure. This ensures that the pump motor is not subjected to frequent starts if the pressure switch contact repeatedly closes and opens at short time intervals because of pressure fluctuations.

NEMA 2 Enclosures

All FDR controllers are supplied with NEMA 2 enclosures.
Contact factory for availability of other styles.

Alarm & Status Indication

Both Simplex and Duplex controllers are equipped with illuminated pushbuttons which have dual use.
The green “POWER ON” pushbutton functions as the “Start” pushbutton and indicates when the circuit breaker is closed.
The red “PUMP RUNNING” pushbutton functions as the “Stop” pushbutton and indicates when the pump is running.

When the controller starts the fire pump, the red Pump Running light turns on as well as the buzzer mounted on the front panel.

Mounting Bars

FDR residential controllers can be supplied with optional upper and lower mounting bars.

Optional Floor Mount Legs

Optional 12 inch high floor mounting legs are available upon request.

Dual Setting Pressure Switch

A dual setting 15 290 PSI pressure switch is used to sense a drop in pressure which actuates the residential controller. The setting adjustment screws are used for setting the pressure range and differential. There is one set of form C output contacts rated at 10 amps.

NEMA Rated Contactors

Cutler Hammer NEMA rated Freedom Contactors are used in all FDR Residential fire pump controllers. A wide variety of coil voltages are available for domestic and international use.

Emergency Start Operator

A mechanically operated emergency start handle activates the motor contactor independent of any electrical control circuits or pressure switch input.

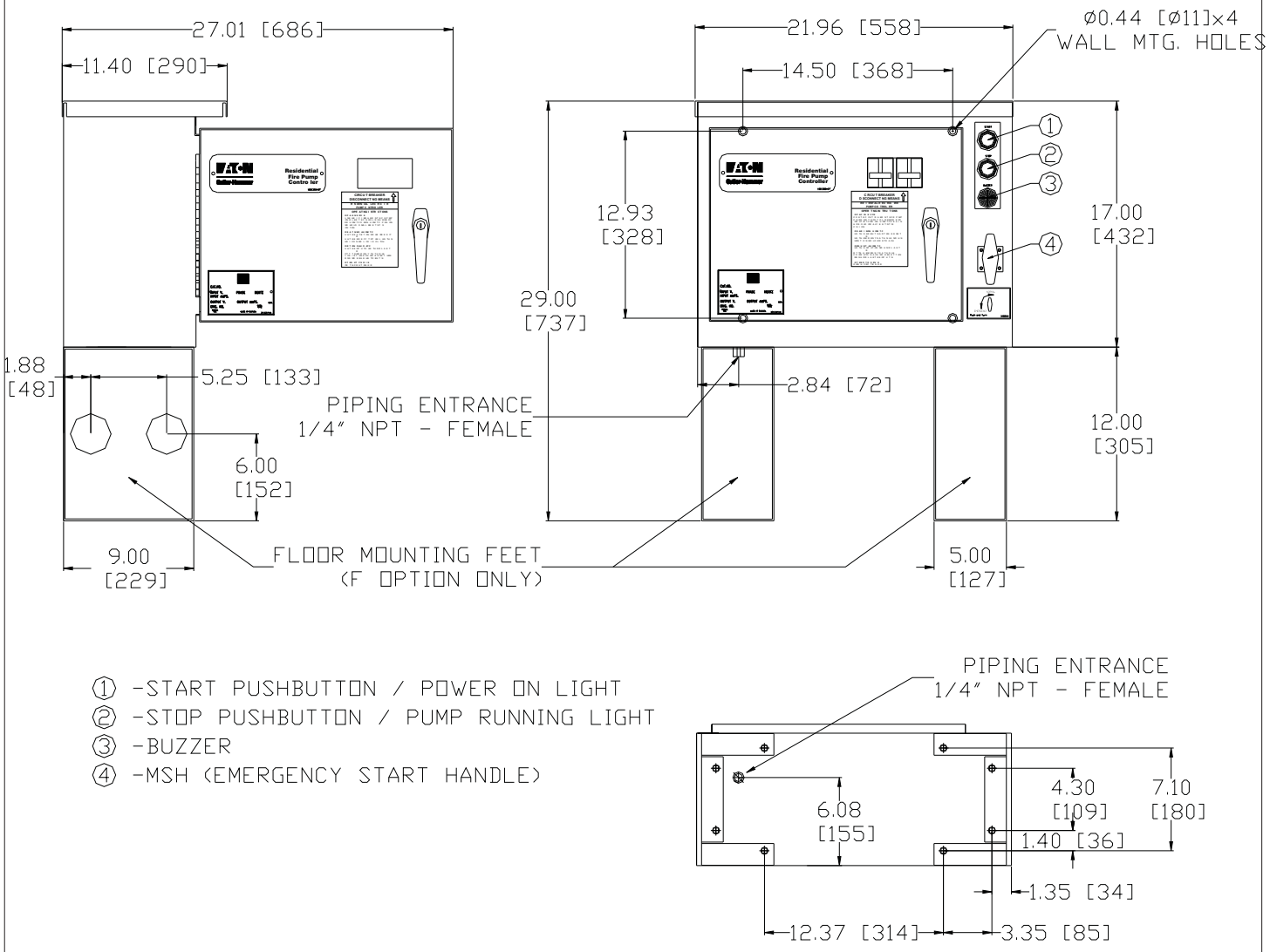
Standards & Certification

The FDR Residential Fire Pump Controllers meet or exceed the requirements of Underwriters Laboratories, Underwriters Laboratories Canada, the Canadian Standards Association, and the New York City building code.

N. Y. C. APPROVED

Dimensions

Standard Enclosure - Duplex - Type NEMA 2

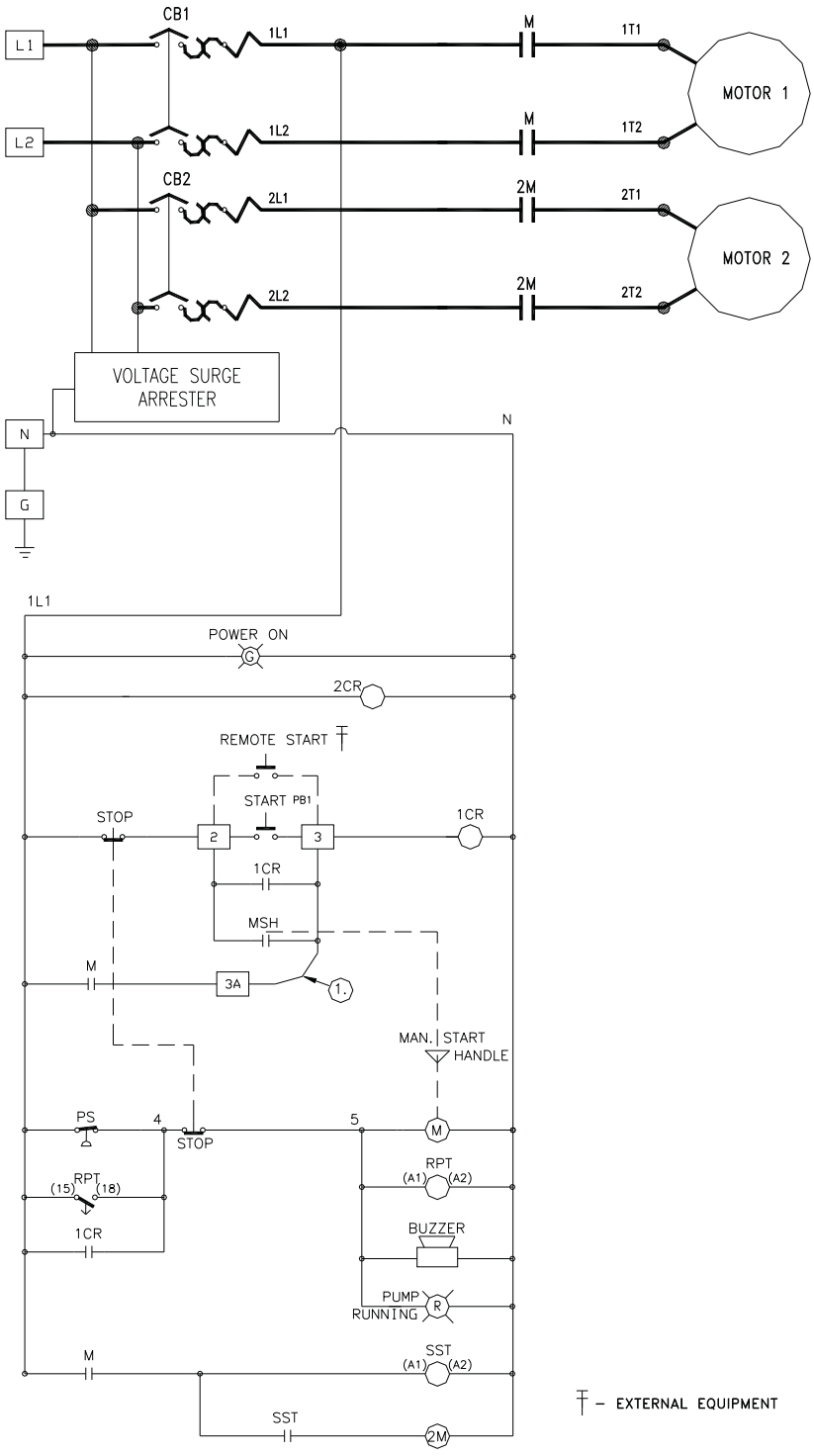


Motor Hp	Line Voltage	Withstand Rating		Approx. Weight Lbs. (Kg)
		Standard	Intermediate	
½ 10	230V Single Phase	10,000	22,000	60 (27)

c UL us N. Y. C. APPROVED CSA

NOTES:
1. All enclosures finished in FirePump red.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.
4. Add 12 inches height for optional floor stands.

Electrical Wiring Schematic



LEGEND:

M–PUMP 1 RUN CONTACTOR
2M–PUMP 2 RUN CONTACTOR
1CR–MANUAL CONTROL RELAY
2CR–POWER FAILURE RELAY
PS–PRESSURE SWITCH
CB–CIRCUIT BREAKER
STOP–LOCAL STOP SWITCH
START–LOCAL START SWITCH
MSH–MANUAL START HANDLE (AUX. CONTACT)
RPT–RUN PERIOD TIMER
SST–SEQUENTIAL START TIMER

NOTES:

1. ADD JUMPER TO CONVERT TO SEMI–AUTOMATIC.
2. ALL RELAY CONTACTS SHOWN IN NO POWER CONDITION.
3. FOR CUSTOMER REMOTE START, CONNECT DRY CONTACT BETWEEN TERMINALS 2 & 3.
4. SERVICE ENTRANCE EQUIPMENT. (DOES NOT MEET CSA SERVICE ENTRANCE REQUIREMENTS)

N. Y. C. APPROVED

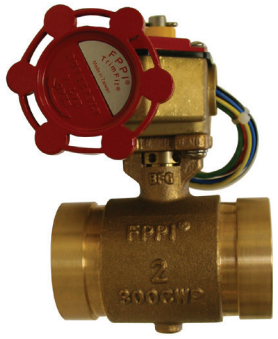
TrimFit® Bronze Butterfly Valve

INSIST ON FPPI®

Installation Instructions

Description

TrimFit® Model BFT (Threaded Butterfly Valve) and Model BFG (Grooved Butterfly Valve) close slowly to prevent water hammer. The butterfly valves are designed to be installed in any orientation and monitored to signal if the valve is opened or closed. They are Listed and Approved for use in a fire sprinkler system.



Installation

1. The valve can be installed in any orientation in a piping system with standard ASME B1.20.1 NPT or standard roll or cut grooved pipe.
2. When threading to pipe, apply PipeFit® or equivalent thread sealant or tape.
3. Use a wrench to cramp on the hexagon end of the valve.
4. The tamper switch features two switches: Switch-1 has dual leads on the terminals. This switch is used for connection of the supervisory circuit of a listed fire alarm control panel. Switch-2 has a single lead. This switch is used for connection of auxiliary equipment.
5. All the unused wires need to be capped with lead nuts and tucked into a junction box.
6. All connections need to be reviewed and approved by the appropriate jurisdictional authorities.
7. A No. 14 green wire is fixed inside the switch housing. It is provided as a ground for the housing.
8. The valves are intended for use with ANSI B36.10 Schedule 40 and/or Schedule 80 pipes, sizes 1", 1-¼", 1-½", 2" and 2-½".

NOTE: ALL REPLACEMENT PARTS MUST BE OBTAINED FROM THE MANUFACTURER TO ASSURE PROPER OPERATION OF THE VALVE, AND TO MAINTAIN APPROVAL OF THE DEVICE.

Specifications

Rated to 300 PSI
Switch rating:
10.1Amps125/250VAC-60Hz
Actual switch application rating:
10 Amps/115 VAC-60Hz
0.5 Amps/28 VDC
Indoor/Outdoor Use

Materials

Body: Bronze ASTM 584 C83600
Disc: SS304
Handwheel: ASTM A216 WCB
Seat: ASTM D2000 Viton
Indicator: Powder Metal
Housing/Cover: Forged Brass JIS C3771 (Ref. ASTM C37700)

Available Sizes

TrimFit® Model BFT (Threaded)

06-500-00	1"	UL/FM
06-502-00	1¼"	UL/ULc/FM
06-504-00	1½"	UL/ULc/FM
06-506-00	2"	UL/ULc/FM
06-508-00	2½"	UL/ULc/FM

TrimFit® Model BFG (Grooved)

06-522-00	1¼"	UL/ULc/FM
06-524-00	1½"	UL/ULc/FM
06-526-00	2"	UL/ULc/FM
06-528-00	2½"	UL/ULc/FM

CA Bldg. Materials Listing # 7770-2164-0100

c UL us LISTED FM APPROVED

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

Simmons Manufacturing Company

Check Valve – 500 SB Series
Certified Lead Free*

- Silicon bronze cast body
- Silicon bronze cast poppet
- Female Threads
- Check Valves: 1/2″ – 2″ are VFD Compatible

*Certified Lead Free to NSF/ANSI 372 and NSF/ANSI 61. Meets all State and Federal safe water drinking acts including California Prop 65.

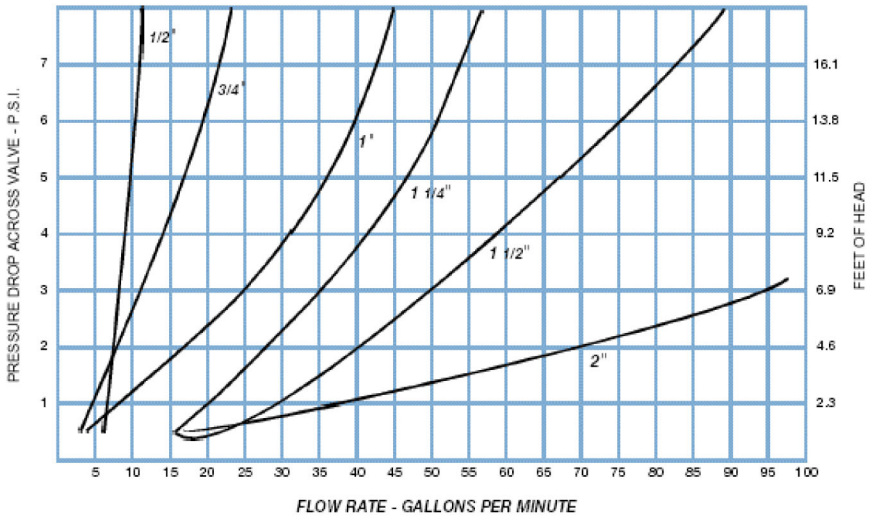
All check valves furnished with Buna-N O-Ring, stainless steel spring, stainless steel washer and stainless steel locknut.

Made In U.S.A

Certified Lead Free

NSF/ANSI 372

3rd Party Certified Truesdail Laboratories



Simmons Manufacturing
P.O. Box 1509
McDonough, GA. 30253
1608 Highway 20 East
McDonough, GA. 30252
USA

Call our Live Support Team!
(800) 241-1935

Quality Assurance is Top Priority at Simmons.

For Commercial, Institutional and Industrial Applications

Job Name _____ Contractor _____

Job Location _____ Approval _____

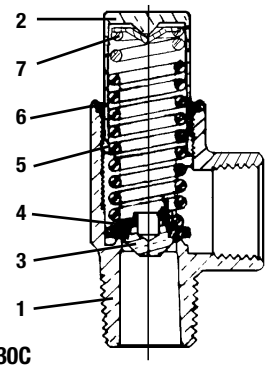
Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Series 530C
Calibrated Pressure Relief Valves

Sizes: ½" or ¾" (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.



Model 530C

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

½" or ¾" (15 or 20mm): 50 – 175psi (3.4 – 12.1 bar)
¾" (20mm): 100 – 300psi (6.9 – 20.7 bar)

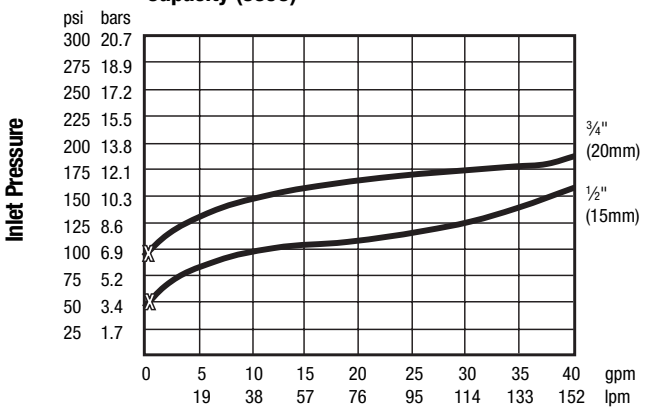
Application Note: The Watts Series 530C are not ASME approved safety relief valves and should not be used in system application with this requirement.

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

MODEL	SIZE (DN)		DIMENSIONS				WEIGHT	
			Height		Width			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kg.*
530C	½ or ¾	15 or 20	3	76	1⅝	41	.37	0.17

Capacity (530C)



X = Set Point Flow

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.

ISO 9001 CERTIFIED

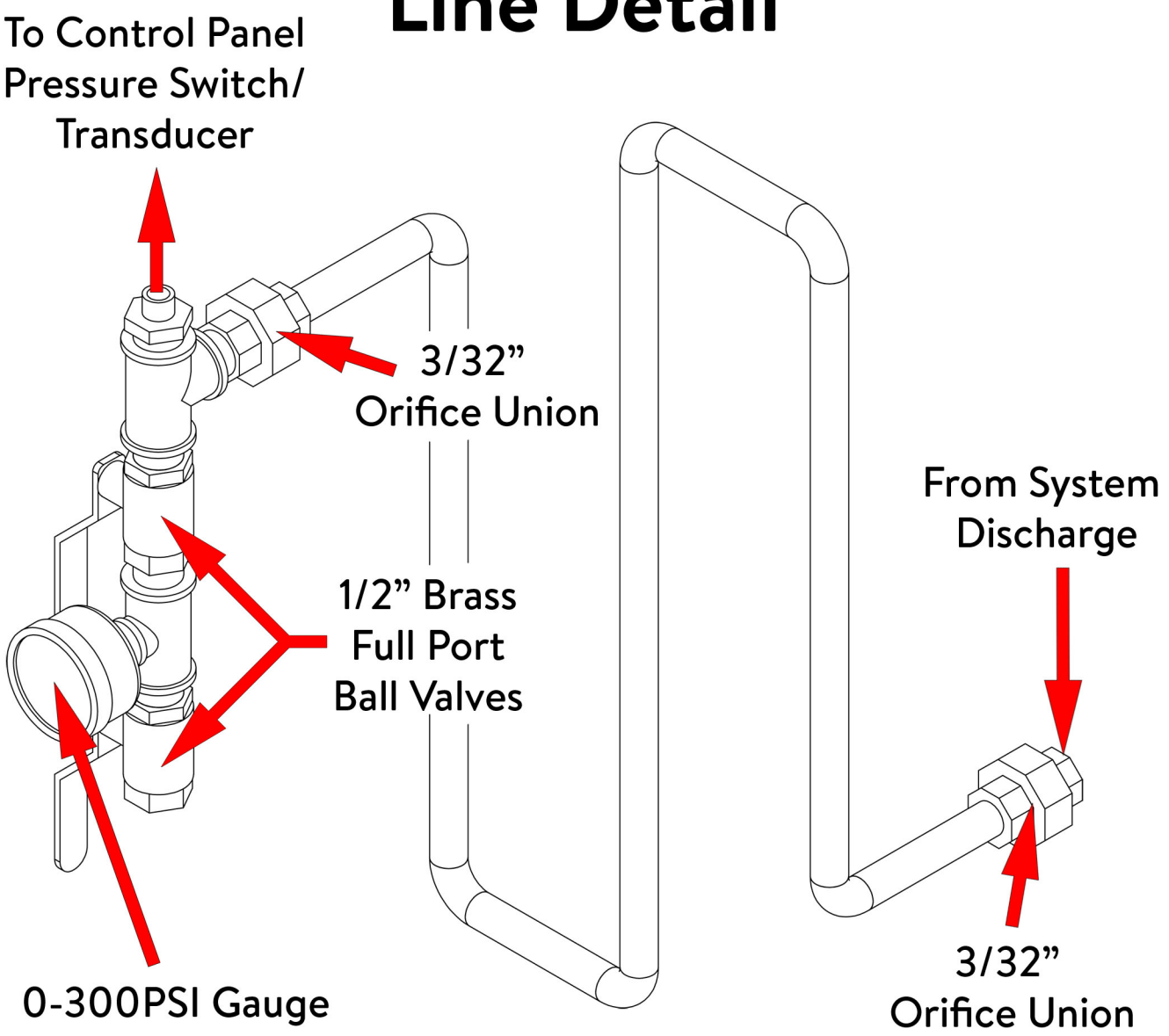
WATTS®

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



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