



شركة المصنع السعودي لأجهزة الإطفاء
SAUDI FACTORY FOR FIRE EQUIPMENT Co.

Empowering
a **Safer Future** for
the Kingdom



Fire Pump
Components
and
Accessories

Quality Approvals for Various Products and Services

VER: 00-05/26



Fire Pump Components

Diesel Tanks

All Sffeco steel above ground tanks for flammable and combustible liquid are assembled and tested to all requirements as follows

ANSI/UL-142-Complaint.

Installation standard compliance to NFPA 30, NFPA30A and NFPA31

Primary Containment Tanks

Horizontal Cylindrical Construction (Capacity upto 75000 Gallon)

Vertical Cylindrical Construction (Capacity upto 60000 Gallon)

Rectangular Construction (Capacity upto 550 Gallon)

Secondary Containment Tanks

Horizontal Cylindrical Construction (Capacity upto 75000 Gallon)

Vertical Cylindrical Construction (Capacity upto 60000 Gallon)

Jockey Pumps

Jockey pumps are small, motor driven pumps used in conjunction with main fire pumps to compensate for minor leaks in the fire protection system and automatically maintain stand-by pressure. This reduces wear on the main pump and controller caused by unnecessary, frequent operation. Jockey Pump controllers are available for across the-line starting.

Fire Pump Controllers

- ❖ Electrical Pump Controller
- ❖ Jockey Pump Controller
- ❖ Diesel Pump Controller
- ❖ Alarm Panel

All Fire Pump Controllers are factory assembled, wired, tested as a unit and comply with all requirements of the latest edition of NFPA-20 (Centrifugal Fire Pumps) and NFPA-70 (National Electrical Code). Controllers are listed by Underwriters Laboratories, Inc., in accordance with UL218, Standard for Fire Pump Controllers, CSA, and Standard for Industrial Control Equipment (CUL) and approved by Factory Mutual (FM). All controllers are Y2K compliant.

This component plays a vital role in operation of fire pumps as it controls the entire system. It is selected as per customer choice if any, otherwise it can be TORNATECH.



Fire Pump Components



1 - Pressure Gauge

Pressure gauge shall be supplied with the unit. Brand shall be SFFECO / Ashcroft / Amekai / Simir, subject to factory selection.



Specification

- ❖ Brand : Sffeco
- ❖ Type : Liquid filled Gauge (HDPG1130-A)
- ❖ Dial Size : 4.0
- ❖ Case & Ring : Stainless Steel Case, Roll Ring
- ❖ Window : Polycarbonate
- ❖ Thread : 1/2 (BSPT, NPT)
- ❖ Movements : Brass

2 - Pressure Gauge

Pressure gauge shall be supplied with the unit. Brand shall be SFFECO / Ashcroft / Amekai / Simir, subject to factory selection.



Specification

- ❖ Ashcroft Pressure Gauge
- ❖ 1005P XUL Fire Protection Sprinkler Service Gauge
- ❖ UL/FM Approval
- ❖ PowerFlex™ movement provides superior resistance to shock, vibration and pulsation
- ❖ TrueZero™ reduces reading errors by using a “zero box” instead of convectional dial pins
- ❖ Water or Air gauges available for wet/dry
- ❖ Heat-resistant polycarbonate push-in window
- ❖ Custom dials available

Key Benefits

- ❖ Single scale, dual scale and triple scale dials available (bar, kPa, psi)
- ❖ Corrosion resistant ABS case
- ❖ Custom Dials available
- ❖ Accuracy: $\pm 3-2-3\%$ of span (ASME B40.100 Grade B)
- ❖ Sizes: 3 1/2"

Maximum Temperature Limits

Version	Ambient	Process	Storage
1005P XUL	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)

Fire Pump Components



3 - Pressure Gauge

Pressure gauge shall be supplied with the unit. Brand shall be SFFECO / Ashcroft / Amekai / Simir, subject to factory selection.



A Suction and discharge gauge is furnished for each fire pump. Brand is Amekai type 411B.

Application

Liquid-filled pressure gauges provide users with a number of advantages in certain measurement applications. They are ideally suited for uses on equipment where excessive vibration and pulsation are encountered, such as pumps, compressors, machine tools, etc.

Size

1.5", 2", 2.5" & 4"

Accuracy

±2.5% of Span (Grade B ANSI B40.1)

Ranges

1.5" size - 30"Hg and above 15psi to 3000psi

2" size - 30"Hg and above 15psi to 5000psi

2.5" & 4" size - 30"Hg & above 15psi to 8000psi or other equivalent units of pressure or vacuum range.

Specification

- ❖ Amekai Liquid-Filled Gauge
- ❖ Copper Alloy Wetted Parts

Operating Temperature

Ambient: 30°F to 140°F (-1°C to 60°C)

Media: Max. 158°F (+70°C)

Connection

Material: Copper Alloy

Two-piece design

Lower mount (LM)

Center Back Mount (CBM)

1/8", 1/4", 1/2" NPT limited to wrench flat area

Bourdon Tube

Material: Copper alloy

30"Hg to 600psi by C-type

800psi and above by Helical type

Movement

Brass

Dial

Aluminum, white background with black markings

Pointer

Aluminum, black finish

Case

Drawn 300 series stainless steel, with removable nipple for venting, pressure relief & liquid-fill access

Ring

Permanent crimped SST ring

Window

Polycarbonate, sealed to case with BUNA-N gasket

Standard Liquid Glycerin

Fire Pump Components



4 - Pressure Gauge

Pressure gauge shall be supplied with the unit. Brand shall be SFFECO / Ashcroft / Amekai / Simir, subject to factory selection.



A Suction and discharge gauge is furnished for each fire pump. Brand is Amekai type 711.

Application

The Amekai Sprinkler gauges are approved by the Factory Mutual System and are listed by the UL for use on wet or dry sprinkler system.

Size

3.5"

Accuracy

+/- 3-2-3% of Span

Specification

- ❖ Amekai Sprinkler System Gauge
- ❖ Copper Alloy Wetted Parts
- ❖ UL/FM Approval

Ranges

0~300psi

0~80 retarded to 250psi

Connection

Material: Copper alloy

Lower mount (LM)

1/4" NPT

Bourdon Tube

Material: Copper alloy,

C-type

Dial

Aluminum, white background with black markings

Pointer

Aluminum, black finish

Case

ABS, black finish

Movement

Copper Alloy

Window

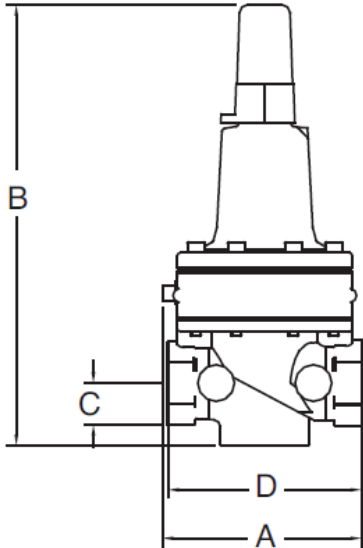
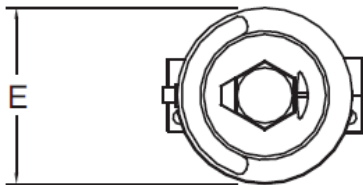
High impact-resistant twist-on polycarbonate

Fire Pump Components



1 - Relief Valve

Relief Valve shall be supplied with the unit. Brand shall be Zurn Wilkins / AGF / Watts / Simir, subject to factory selection.



Specification

- ❖ Brand : Zurn Wilkins or similar
- ❖ Type : Thermal Expansion Relief Valve
- ❖ Sizes: 1/2", 3/4"
- ❖ Threaded ends NPT ANSI B1.20.1
- ❖ Internal Sensing Port
- ❖ Standard Pilot Spring Range: 50 - 200 psi (UL)
- ❖ Optional Pilot Spring Range: 150 - 300 psi (UL)
- ❖ Temperature Rating: Water 33°F to 140°F
- ❖ Maximum Inlet Pressure: 300 psi

The Zurn Wilkins P4000A Thermal Expansion Relief Valve will relieve excess pressure in Fire Protection Systems, protecting fire distribution networks from high pressure build-up. The P4000A is an adjustable direct acting pressure relief valve which senses upstream pressure. The valve will open when the upstream pressure rises above the valve's set pressure.

Once the upstream pressure descends below the set pressure, the P4000A will close drip tight within close limits. The valve is designed for use in systems where thermal expansion, pumps or elevated plumbing could cause destructive pressure rise.

Materials

- Main Valve Body & Cover: Cast Bronze ASTM B 806
- Plunger: No Lead Brass
- Diaphragm: Nylon Reinforced Buna-N
- Plunger: Rubber EPDM (Rubber (FDA Approved))
- Stem & Seat: Stainless Steel

Dimension & Weight (do not include pkg.)

MODELS	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	D (in.)	D (mm)	E (in.)	E (mm)	WEIGHT (lbs.)	WEIGHT (kg.)
P4000A	3 9/16	91	7 15/16	202	4-Mar	19	3 1/2	89	3 1/4	84	5.25	2.38
P4000AHR	3 9/16	91	10	254	4-Mar	19	3 1/2	89	3 1/4	84	6.25	2.85

Fire Pump Components



2 - Relief Valve

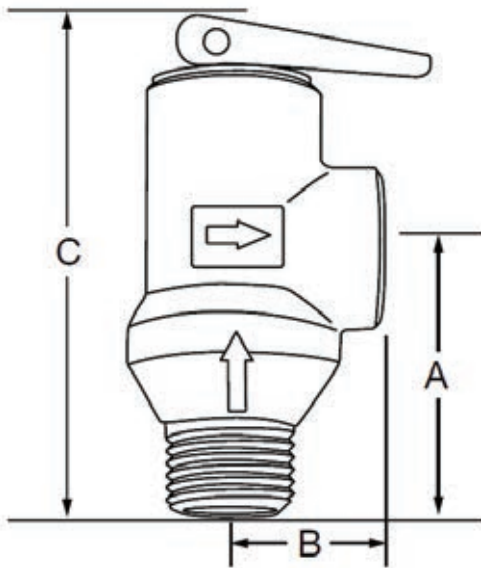
Relief Valve shall be supplied with the unit. Brand shall be Zum Wilkins / AGF / Watts / Simir, subject to factory selection.



Model 7000



Model 7200



Dimensions

Model	SIZE	A	B	C
7000	1/2"	13/4" (44 mm)	1" (25 mm)	35/16" (83 mm)
7200	3/4"	13/4" (44 mm)	1" (25 mm)	35/16" (83 mm)

Specification

- ❖ Brand : AGF or similar
- ❖ Type : Pressure Relief Valve
- ❖ UL Listed and FM Approved.
- ❖ Bronze body with stainless steel spring.
- ❖ Integral flushing handle to remove debris causing leaks through valve seat and disc.
- ❖ Factory rated at 175 PSI.*
- ❖ 165 PSI, 185 PSI, 195 PSI, 205 PSI, 225 PSI, and 250 PSI ratings are also available for the Model 7000.*

The AGF Manufacturing Inc. Models 7000 and 7200 are UL Listed/FM Approved pressure relief valves designed specifically for fire sprinkler systems. Both models relieve excess system pressure caused by surges or temperature changes. The Models 7000 and 7200 comply with the requirements of NFPA-13 that stipulate a pressure relief valve be installed on all gridded systems and downstream of all pressure reducing valves. The Model 7000 has a 1/2" MIPT inlet and FIPT outlet and is included with our Models 1011A, 1011T, 2511A, and 2511T TESTanDRAIN® valves, Models 3011A and 3011ASG Inspector's TEST® valves, and 1 1/4" - 6" Model 8011 RiserPACK®s. The Model 7200 has a 3/4" MIPT inlet and FIPT outlet and is included with our 1" Model 8011 Residential Riser PACK®.

* Note: It is important to note that the pressure rating of the relief valve indicates an operating range of pressure for both opening and closing of the valve. Standard relief valves are required to OPEN in a range of pressure between 90% and 105% of their rating. The valves are required to CLOSE at a pressure above 80% of that rating.

The relief valve should be installed where it is easily accessible for maintenance. Care should be taken that the relief valve CANNOT be isolated from the system when the system is operational.

A relief valve should NEVER have a shutoff valve or a plug downstream of its outlet.

Fire Pump Components



3 - Relief Valve

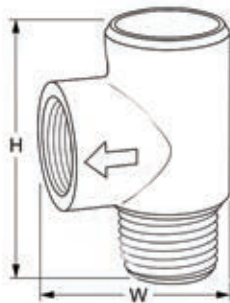
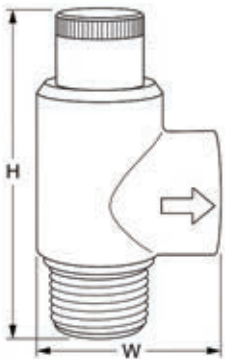
Relief Valve shall be supplied with the unit. Brand shall be Zum Wilkins / AGF / Watts / Simir, subject to factory selection.



LF530C



LF53



Materials

- ❖ Body : Lead Free* brass
- ❖ Springs : Stainless steel
- ❖ Disc : Buna-N

Pressure

1/2" - 3/4" LF530C Pressure Range : 50 - 175psi (3.4 - 12.1 bar)

3/4" LF530C Pressure Range: 100 - 300psi (6.9 - 20.7 bar)

LF53 Pressure Range: 75-125psi (5.2 - 8.6 bar)

Dimensions

MODEL	SIZE (in)	HEIGHT (mm)	WIDTH (mm)	WEIGHT (G)
LF53	1/2 or 3/4	73	44	227
LF530C	1/2 or 3/4	76	41	284

Note

The Watts products shown on this page are small type relief valves. Construction of these products does not meet the (ANSI Z21.22) nationally recognized applicable standard.

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Specification

- ❖ Brand : Watts or similar
- ❖ Type : Pressure Relief Valve

Sizes : LF53: 1/2" or 3/4" (Pressure relief valve)

LF530C: 1/2" or 3/4" (Pressure relief valve with calibrated adjustment feature)

Watts Series LF53 and LF530C Pressure Relief Valves are spring operated Lead Free* brass relief valves designed to be used only as protection from the build up of excessive pressure in systems containing water, oil or air. These valves are not ASME approved safety relief valves and should not be used in system applications with this requirement. They feature a Lead Free* brass construction with stainless steel springs. Ideally suited as a bypass thermal expansion relief valve, the Series LF530C valves incorporate a calibrated adjustment feature for setting the valve to the relief pressure required. Its adjustable pressure range is 50-175psi (3.4-12.1 bar). Series LF53 is factory preset to standard pressure settings of 75, 100 or 125 (5.2, 6.9 or 8.6 bar). The LF53, LF530C features Lead Free* construction to comply with Lead Free* installation requirements.

Features

- ❖ Lead Free* brass
- ❖ Stainless steel springs
- ❖ Calibrated adjustment feature (Model LF530C)
- ❖ Protects against buildup of excessive pressure
- ❖ For use in systems containing water, oil, and air

Fire Pump Components



Main Relief Valve

Optional



Pumps which are connected to diesel engine or steam turbine drives, shall be equipped with a listed main relief valve. The main relief valve size shall be greater than or equal to the values given in NFPA 20. The valves are set to prevent a pressure on the fire protection system greater than it can withstand. Spring loaded and pilot operated types are available in UL-FM Design. The main relief valves are also used when the shut off pressure plus the static suction pressure exceeds the rated system pressure.

Fire Valves

Optional



Certified Gate Valves, Check Valves or Butterfly Valves shall be installed where required within the system. Butterfly valves are intended for use only in the discharge assembly. Gate valves provide a full-bore opening equal to the pipe's internal diameter, resulting in minimal pressure loss. These valves are also suitable for throttling and controlling flow.

- ❖ Available in various sizes
- ❖ UL / FM approved options available on request
- ❖ Durable construction design
- ❖ High pressure rated
- ❖ Corrosion resistant finish
- ❖ Easy operation mechanism

Air Release Valve



The automatic air release valve releases air that may accumulate in the volute of the horizontal split case pumps. The valve is not required in self venting end suction pump. The minimum size is a ½ inch inlet and the valve is installed at the top of the pump volute.

*Air Release Valve shall be supplied with the horizontal split case pump.
Brand shall be SFFECO / Lifeco / Simir, subject to factory selection.*

Ball Drip Valve

Optional



When the hose header is located outside, or at distance from the pump, and danger of freezing exists, a ball valve or indicating drain valve shall be located in the pipeline to the hose header.

The valves will allow the water to be drained when not in use. Thus prevents the line from breakage, in winter due to freezing.

Fire Pump Components



Flow Meter System

Optional



In place of, or, in addition to the hose valve header with hose valves, we offer a complete line of UL/FM approved flow meter which can adequately test the fire pump performance in cases of liquid water supply. Available in calibrated venture design with a wall or pipe mounted dial meter reading in GPM. The system provides a +/- 1% accuracy, when installed properly. The venture principle provides a clog-free design and allows the most compact piping arrangement of any other flow meter design.

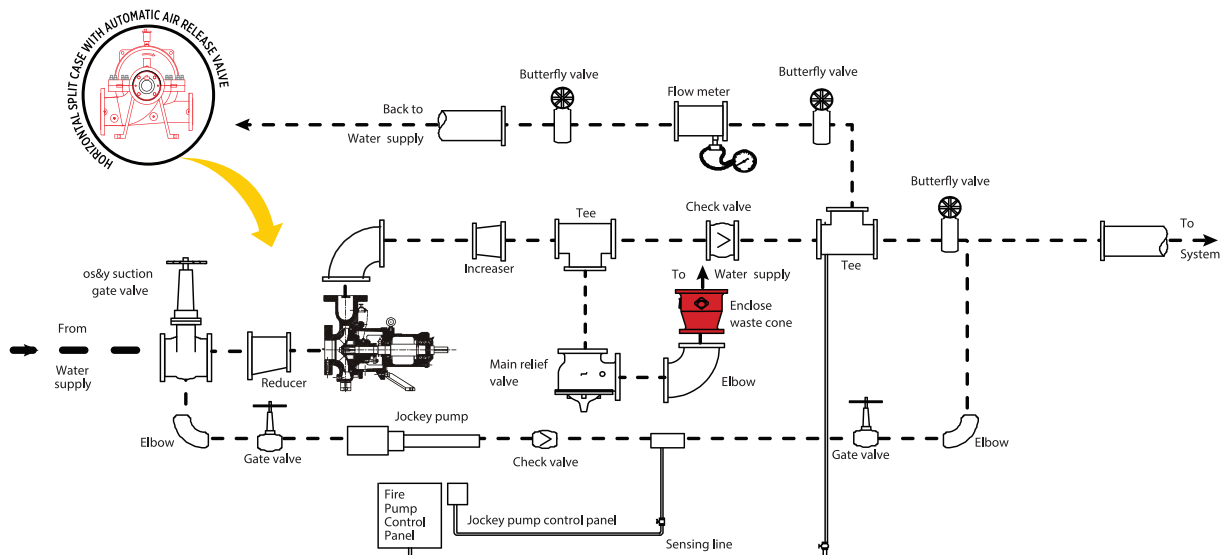
Enclosed Waste Cone

Optional



The enclosed or open waste cone is connected directly to the main relief valve and provides a visual indication of the water discharging through the line. The fitting also increases the line size from the relief valve as required by NFPA 20. The enclosed cone is provided with a sight glass.

- ❖ Available for Onshore and Offshore Applications.
- ❖ Manufactured in Accordance with NFPA 20 Requirements.
- ❖ Designed for use with UL/FM Approved Fire Pump Pressure Relief Valve
- ❖
- ❖ Material: High Quality Carbon Steel
- ❖ Painting: Red Powder Coating
- ❖ Flanges: Class 150
- ❖ (SS material and Class 300 Flange available upon request).





Since 1983, SFFECO has been a trusted name in fire protection, known for innovation and quality worldwide.

With state-of-the-art facilities in Riyadh and Dubai, we deliver a complete range of firefighting solutions that meet international standards.

Our innovative approach and comprehensive product portfolio make SFFECO the one-stop destination for reliable fire protection products and services.

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