

# Optional Features

## PRESSURE GAUGES

### Windows (PLW/SGW)

Trerice offers a complete line of window options, including: plastic (acrylic) and laminated safety glass. Please consult the Option Application Table for window availability. Replacement windows are sold separately; please consult the price sheet for item numbers.

### Red Set Hand (RSH)

Attached at the center of the dial face, a red set hand can be adjusted to indicate a desired predetermined reference point. The set point is adjusted by removing the ring and window of the gauge (dry gauge only). When used on a liquid filled gauge, please specify the set point when ordering. Please consult the Option Application Table for set hand availability.



### Maximum Registering Pointers (MAX)

Maximum registering pointers can be furnished on most dry 3 1/2" dial size and larger pressure gauges having a pressure range of 60 psi or greater. The pointer is designed to indicate the maximum or minimum pressure attained by the process being measured since the pointer was last reset. The pointer assembly is installed to an acrylic window, with an external knob for manually resetting the pointer. Please consult the Option Application Table for maximum registering pointer availability.



### Electric Contacts

Electric contact assemblies can be supplied on most 4", 4 1/2" and 6" pressure gauges. These units are well suited for making the electrical contact required to activate alarms, signals, or other electrical devices. Each unit is provided with an external adjustment key, making it easy to adjust and providing for tamper-resistant operation. The contacts have adjustable magnets to eliminate pointer bounce caused by vibration, and have pass/repass capability, allowing the pointer to move past the set point while maintaining contact. For applications that require a liquid-filled gauge, a special inductive type contact is required. Please consult factory for additional information.



#### Electric Contact Configurations

| Optional Feature Code | Contact Style | Contact Action  |
|-----------------------|---------------|---|
| EC1                   | Single High   | Single contact:<br>Makes on clockwise rotation  |
| EC2                   | Single Low    | Single contact:<br>Breaks on clockwise rotation   |
| EC3                   | High-Low      | Double contact:<br>High contact makes on clockwise rotation<br>Low contact breaks on clockwise rotation |
| EC4                   | Double High   | Double contact:<br>1st makes on clockwise rotation<br>2nd makes on clockwise rotation                   |

Please consult the Option Application Table for electric contact availability.

#### Recommended Load Limits

| Volts   | Resistive | Inductive |
|---------|-----------|-----------|
| 110 Vac | 0.25 A    | 0.13 A    |
| 24 Vdc  | 0.40 A    | 0.25 A    |

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### Weatherproofed Cases (WPC)

Trerice pressure gauges may be sealed for outdoor use, or for use in applications where sprays and washes will come in contact with the gauge. Trerice Series 450, 700, 750 and all liquid-filled gauges are hermetically sealed and are inherently weatherproof. The weatherproofing option is available for most other pressure gauges.

### Pressure Relief Plugs (PRP)

This feature is designed to release non-instantaneously developed internal case pressure at 3 to 5 psi, and can be supplied on most 3 1/2" and larger pressure gauges. Please consult the Option Application Table for pressure relief plug availability.

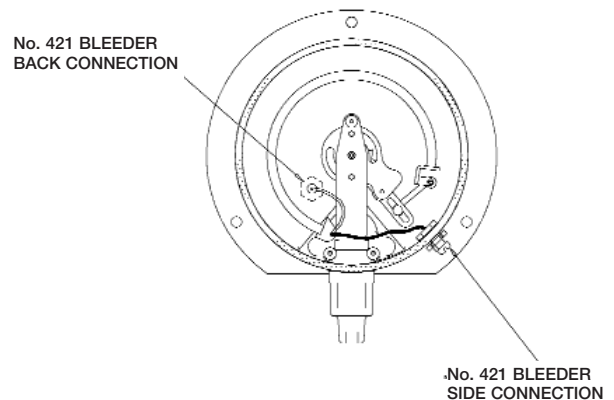


### Silicone Dampened Movements (SDM)

The application of a highly viscous silicone oil to the gear, sector, and all bearing points of the movement will help reduce the effects of vibration and pulsation to which the gauge may be subjected. This feature will extend the life of the gauge by reducing wear on the movement, and is available on most Trerice Pressure Gauges. Please consult the Option Application Table for silicone dampened movement availability.

### Capillary Tube Bleeders (CTB)

The No. 421 Capillary Bleeder has been designed as an accessory for the 500X Series Pressure Gauge. This feature makes it possible to completely eliminate air or other pressure media that may be trapped in the bourdon tube of a gauge. After installation, the bleeder must be opened to allow the entrapped air or medium to be purged from the bourdon tube. After purging, the bleeder can be closed, permitting proper action of the gauge. When used on a 500XB gauge, the bleeder assembly is manufactured from brass, and has a maximum pressure of 1000 psi. When used on a 500XSS gauge, the bleeder assembly is manufactured from 347 stainless steel, and has a maximum pressure of 5000 psi. Please consult the Option Application Table for capillary bleeder availability.



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## PRESSURE GAUGES

### Snubber Screws and Restrictors

A snubber screw or restrictor may be installed in the gauge socket to reduce shock to the gauge and prevent wear on the movement, and should be installed where sudden pressure surges or oscillations are expected. Snubber screws reduce the pulsation by forcing the pressure medium through a porous metal core, while restrictors use a small orifice for pulsation reduction. Trerice also offers externally installed pressure snubbers. Please consult the Accessories section for details.

#### Snubber Screws and Restrictors

| Optional Feature Code | Item No.                                    | Service  | Construction   |
|-----------------------|---|--|--|
| SS2                   | D368  | Air & other gases                                | 316 stainless steel body & core, 1/4-20 UNC thread                         |
| SS4                   | D369  | Vapor & low viscosity fluids under 30 SSU        | 316 stainless steel body & core, 1/4-20 UNC thread                         |
| SS6                   | D370  | Water and oils<br>30 SSU to 250 SSU              | 316 stainless steel body & core, 1/4-20 UNC thread                         |
| SS8                   | D371  | Heavy oils and viscous fluids 250 SSU to 500 SSU | 316 stainless steel body, 1/4-20 UNC thread<br>Core omitted, 0.040 orifice |
| RES                   | 104-0005.3                                  | Air, gases & fluids                              | Brass, push-in   |
| RSS                   | Optional feature only. Not sold separately. | Air, gases & fluids                              | 316L stainless steel, screw-in   |

Please consult the Option Application Table for snubber screw and restrictor availability.

### Alternate Fill Fluids (SLF & HLF)

By minimizing wear on the gauge internals resulting from vibration or oscillation, liquid filling can prolong the life of a pressure gauge. Liquid filling also acts a permanent lubricant to the moving parts of the instrument. Trerice provides glycerine as the standard fill material. Silicone (**SLF**) and halocarbon (**HLF**) are available as alternate fills. Please consult factory for availability.

### Recalibration and Certification

The factory is equipped to recalibrate and/or certify pressure gauges having  $\pm 0.5\%$  Full Scale ASME B40.100 Grade 2A or lesser accuracy in ranges from 30" Hg vacuum to 20,000 psi pressure. Price is determined by range, gauge accuracy and number of points certified; please consult factory.

# Optional Features

## OPTION AVAILABILITY TABLE

### Optional Feature Codes

|                                 | PLW                      | SGW                           | RSH                       | MAX                                      | EC-X                          | WPC                  | PRP                  | SDM                        | CTB                    | SS-X          | RES                | RSS              |
|---------------------------------|--------------------------|-------------------------------|---------------------------|--|-------------------------------|----------------------|----------------------|----------------------------|------------------------|---------------|--------------------|------------------|
|                                 | Plastic Window (Acrylic) | Laminated Safety Glass Window | Red Set Hand <sup>1</sup> | Maximum Registering Pointer <sup>2</sup> | Electric Contact <sup>3</sup> | Weather-Proofed Case | Pressure Relief Plug | Silicone Dampened Movement | Capillary Tube Bleeder | Snubber Screw | Push-in Restrictor | Restrictor Screw |
| <b>450 Series (Dry)</b>         | S                        | O                             | O                         | O  | O                             | S                    | N/A                  | O                          | N/A                    | O             | N/A                | N/A              |
| <b>450 Series Liquid Filled</b> | S                        | O                             | O                         | N/A                                      | O                             | S                    | N/A                  | N/A                        | N/A                    | O             | N/A                | N/A              |
| <b>500X Series</b>              | O                        | O                             | O                         | O  | O                             | O                    | O                    | O                          | O                      | O             | N/A                | N/A              |
| <b>600 Series</b>               | O                        | N/A                           | O                         | N/A                                      | N/A                           | O                    | O                    | O                          | N/A                    | N/A           | O                  | N/A              |
| <b>690 Series</b>               | S                        | N/A                           | O                         | O  | N/A                           | O                    | O                    | O                          | N/A                    | N/A           | O                  | N/A              |
| <b>700 Series</b>               | O                        | S                             | N/A                       | O  | O                             | S                    | S                    | O                          | N/A                    | N/A           | N/A                | O                |
| <b>750 Series</b>               | O                        | S                             | N/A                       | O  | N/A                           | S                    | S                    | N/A                        | N/A                    | N/A           | N/A                | O                |

<sup>1</sup> Red set hand is not available with 1 1/2", 2", 3 1/2", or 12" dial size. Set hand per 2 1/2", dial size is an adhesive decal, applied directly to inside surface window.

<sup>2</sup> Maximum registering pointer not available on liquid filled gauges or 2 1/2", dial sizes.

<sup>3</sup> Electric contact only available with 4", 4 1/2", or 6" dial sizes. Consult factory for liquid filled gauge applications.

S – Standard Product Feature    O – Optional Feature at Additional Charge    N/A – Not Available

### How to Order

Specify the Optional Feature Ordering Code at the end of the Instrument Ordering Code.

Sample Order Number: **600CB 45 02 L A 110 PLW**

# Accessories

## PRESSURE GAUGES

### Impulse Dampeners

**870 Series** Pressure Impulse Dampeners are designed to improve readability and prevent wear on delicate gauge mechanisms by slowing rapid pressure changes and reducing shock and chattering. An impulse dampener should be installed on a gauge in any application where pressure spikes and/or pulsations may be present. Terice Impulse Dampeners are engineered for field serviceability (cleaning and parts replacement) and are constructed from brass or stainless steel for use on a variety of pressure media.



#### 870 Series Impulse Dampeners

| Item No. | Body & Insert Material | Connection Size (NPT) | Maximum Pressure (psig) | Service                                    | Approximate Shipping Weight |
|----------|------------------------|-----------------------|-------------------------|--|-----------------------------|
| 870-1    | Brass                  | 1/4                   | 1000                    | Air, water, steam and gases                | 0.5 lbs [0.23 kg]           |
| 870-2    | Brass                  | 1/4                   | 1000                    | Gasoline and light oils                    | 0.5 lbs [0.23 kg]           |
| 870-3    | Brass                  | 1/4                   | 1000                    | Lubricating and heavy oils                 | 0.5 lbs [0.23 kg]           |
| 870-7    | 303SS                  | 1/4                   | 5000                    | Includes 3 pistons for various viscosities | 0.5 lbs [0.23 kg]           |
| 870-10   | 303SS                  | 1/2                   | 10,000                  | Includes 3 pistons for various viscosities | 0.8 lbs [0.36 kg]           |
| 870-13   | 316SS                  | 1/4                   | 5000                    | Includes 3 pistons for various viscosities | 0.5 lbs [0.23 kg]           |
| 870-16   | 316SS                  | 1/2                   | 10,000                  | Includes 3 pistons for various viscosities | 0.8 lbs [0.36 kg]           |

### Pressure Snubbers

**872 Series** Pressure Snubbers are designed to improve readability and prevent wear on delicate gauge mechanisms by slowing rapid pressure changes and reducing shock and chattering. A pressure snubber should be installed on a gauge in any application where pressure spikes and/or pulsations may be present. If a single snubber does not correct the oscillation, it is recommended to place an additional snubber in line with the first. Terice Pressure Snubbers reduce the pulsation by forcing the pressure medium through a porous metal core and are constructed from brass or 303 stainless steel for use on a variety of pressure media.



#### 872 Series Pressure Snubbers

| Item No. | Body & Insert Material | Connection Size (NPT) | Maximum Pressure (psig) | Service                               | Approximate Shipping Weight |
|----------|------------------------|-----------------------|-------------------------|---------------------------------------|-----------------------------|
| 872-1    | Brass                  | 1/4                   | 1000                    | Air and gases                         | 0.1 lbs [0.05 kg]           |
| 872-2    | Brass                  | 1/4                   | 1000                    | Water, steam, gasoline and light oils | 0.1 lbs [0.05 kg]           |
| 872-3    | Brass                  | 1/4                   | 1000                    | Lubricating and heavy oils            | 0.1 lbs [0.05 kg]           |
| 872-4    | 303SS                  | 1/4                   | 2000                    | Air and gases                         | 0.3 lbs [0.14 kg]           |
| 872-5    | 303SS                  | 1/4                   | 2000                    | Water, steam, gasoline and light oils | 0.3 lbs [0.14 kg]           |
| 872-6    | 303SS                  | 1/4                   | 2000                    | Lubricating and heavy oils            | 0.3 lbs [0.14 kg]           |
| 872-7    | Brass                  | 1/2                   | 5000                    | Air and gases                         | 0.1 lbs [0.05 kg]           |
| 872-8    | Brass                  | 1/2                   | 5000                    | Water, steam, gasoline and light oils | 0.1 lbs [0.05 kg]           |
| 872-9    | Brass                  | 1/2                   | 5000                    | Lubricating and heavy oils            | 0.1 lbs [0.05 kg]           |
| 872-10   | 303SS                  | 1/2                   | 10,000                  | Air and gases                         | 0.3 lbs [0.14 kg]           |
| 872-11   | 303SS                  | 1/2                   | 10,000                  | Water, steam, gasoline and light oils | 0.3 lbs [0.14 kg]           |
| 872-12   | 303SS                  | 1/2                   | 10,000                  | Lubricating and heavy oils            | 0.3 lbs [0.14 kg]           |