

# 1005, 1005P, 1005S Pressure Gauges

**TABLE 1 - OPTIONS (minimums may apply)**

|    |   |    |  |
|----|---|----|--|
| 13 | Glass window/chrome friction ring (not available on 1005P gauges)                   | SF | FlutterGuard™ (includes 0.013" orifice throttle plug)  |
| 14 | Lexan window/chrome friction ring (available on 1005P gauges)                       | T4 | 0.007" orifice throttle plug   |
| 7F | FlutterGuard™ logo (can only be used in conjunction with XSF (FlutterGuard option)) | T5 | 0.013" orifice throttle plug (0.013" orifice throttle plug standard in ranges 1000-6000 psi) |
| AP | Adjustable Pointer  | T6 | Dial Marking "Transmit"  |
| EP | Min/max pointer   | T7 | 0.020" orifice throttle plug   |
| M1 | Dial marking "Supply"   | T9 | 0.063" orifice throttle plug   |
| M2 | Dial Marking "Output"   | TC | Telfon® tape on process connection   |
| M3 | Dial marking "Instrument"   | UC | Panel mounting sleeve (1005P gauges only)  |
| NP | Nickel plated process connection  | UL | UL404 listed (2" dial Type 1005, 1005P; ranges 1000-6000 psi)                                |
| PR | Receiver gauge (3/15 psi; 0/10 sq. root; 0/100%)                                    | VH | Vent hole in case  |
| RG | Glass window/black friction ring (not available on 1005P gauges)                    | YZ | Chrome Plated case (Not available for 1005P; 1005S)  |
| RL | Lexan window/black friction ring (not available on 1005P gauges)                    | Z0 | Bulk pack  |
| RS | RoHS compliant  | ZP | Customer part number on carton/plain white label   |
| RU | UL252A listed (only available in 2" dial Type 1005, 1005P; ranges 30-300 psi)       | ZQ | Customer part number printed directly on carton  |

**TABLE 2**

| psi              | CODE      | bar                | CODE      | 1005       |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      | AVAILABILITY |              |  |
|------------------|-----------|--------------------|-----------|------------|------------|--------------|------|-------------|-------|------|-------|------|-------|-------|-------------|------|-------------|-------|--------------|-------|------|--------------|--------------|--|
|                  |           |                    |           | Model      |            | 1½"          | 1½"  | 2"          | 2"    | 2"   | 2"    | 2"   | 2"    | 2"    | 2"          | 2½"  | 2½"         | 2½"   | 2½"          | 3½"   | 3½"  | 3½"          | 3½"          |  |
|                  |           |                    |           | Case       | Conn. Size | ABS or Steel | SS   | ABS         | ABS   | ABS  | SS    | SS   | SS    | Steel | Steel       | ABS  | ABS         | Steel | ABS or Steel | ABS   | ABS  | Steel        | Steel        |  |
|                  |           |                    |           | Conn. Type | Conn. Type | Lower/ Back  | Back | Lower/ Back | Lower | Back | Lower | Back | Lower | Back  | Lower/ Back | Back | Lower/ Back | Back  | Lower/ Back  | Lower | Back | Lower        | Back         |  |
| 30IWCHgVac/0     | VAC       | -1/0               | VAC-ABE   | •          | •          | •            | •    | •           | •     | •    | •     | •    | •     | •     | •           | •    | •           | •     | •            | •     | •    | •            | •            |  |
| 30IWCHgVac/015   | 15#&VAC   | -1/0/1.5           | 15/V-AAA  |            |            | •            | •    |             |       |      | •     | •    |       | •     | •           | •    | •           | •     | •            | •     | •    | •            | •            |  |
| 30IWCHgVac/0/30  | 30#&VAC   |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 30IWCHgVac/0/60  | 60#&VAC   | -1/0/3             | 60/V-AAU  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 30IWCHgVac/0/100 | 100#&VAC  | -1/0/5             | 100/V-AAW |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 30IWCHgVac/0/160 | 160#&VAC  |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 30IWCHgVac/0/300 | 300#&VAC  | 0/15               | 300/V-ABB |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  | 15#       | 0/1                | 15#-AAA   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 0/1.6              | 20#-AAB   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/30             | 30#       | 0/2.5              | 30#-AAD   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/60             | 60#       | 0/4                | 60#-AAF   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/100            | 100#      | 0/6                | 100#-AAG  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 0/7                | 100#-AAH  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/160            | 160#      | 0/10               | 160#-AAI  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/200            | 200#      | 0/16               | 200#-AAL  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/300            | 300#      |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/400            | 400#      | 0/25               | 300#-AAN  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/600            | 600#      | 0/40               | 600#-AAP  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/1000           | 1000#     | 0/60               | 1000#-AMK |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/1500           | 1500#     | 0/100              | 1500#-AMM |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/2000           | 2000#     | 0/160              | 2000#-AMO |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/3000           | 3000#     |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/4000           | 4000#     | 0/250              | 4000#-AMQ |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/5000           | 5000#     |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/6000           | 6000#     | 0/400              | 6000#-AUE |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| kPa              | CODE      | kg/cm <sup>2</sup> | CODE      | 1005       |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              | AVAILABILITY |  |
| -100/0           | VAC-AGF   | 76cmHG/0           | VAC-ADP   | •          | •          | •            | •    | •           | •     | •    | •     | •    | •     | •     | •           | •    | •           | •     | •            | •     | •    | •            | •            |  |
|                  |           | 76cmHG/0/1         | 15V-ADB   |            |            | •            | •    |             |       | •    | •     | •    | •     | •     | •           | •    | •           | •     | •            | •     | •    | •            | •            |  |
| -100/0/150       | 30V-AFT   | 76cmHG/0/2         | 30V-ADD   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| -100/0/300       | 60V-AFV   | 76cmHG/0/3         | 60V-BEI   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 76cmHG/0/4         | 60V-ALQ   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| -100/0/500       | 100V-AFX  | 76cmHG/0/6         | 100V-BEJ  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| -100/0/900       | 160V-AFZ  | 76cmHG/0/6         | 160V-ADI  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 76cmHG/0/20        | 300V-BEL  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/100            | 15#-AFB   | 0/1                | 15#-ACK   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/160            | 20#-AFC   |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/200            | 30#-AFD   | 0/2                | 30#-ACM   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/250            | 30#-AFE   | 0/3                | 45#-ACO   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/400            | 60#-AFG   | 0/4                | 60#-ACP   |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/600            | 100#-AFH  | 0/6                | 100#-ACQ  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/800            | 120#-BAT  |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/1000           | 160#-AFJ  | 0/10               | 160#-ACS  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/1600           | 200#-AFM  | 0/15               | 200#-BEA  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 0/20               | 300#-BEB  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/2500           | 400#-AFQ  | 0/25               | 400#-ACX  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/4000           | 600#-AFQ  | 0/35               | 600#-BEC  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 0/40               | 600#-ACZ  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/5000           | 800#-AFQ  | 0/50               | 600#-BED  |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/6000           | 1000#-BAU | 0/70               | 1000#-ANB |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/8000           | 1000#-BAV |                    |           |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/10000          | 1500#-ATK | 0/100              | 1500#-ANC |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/16000          | 2000#-BAW | 0/150              | 2000#-BEE |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/25000          | 4000#-BAX | 0/250              | 4000#-ANG |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
|                  |           | 0/350              | 5000#-BFF |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |
| 0/40000          | 6000#-ATU | 0/500              | 6000#-BEG |            |            |              |      |             |       |      |       |      |       |       |             |      |             |       |              |       |      |              |              |  |

FOR DUAL SCALE RANGES CONSULT FACTORY

All specifications are subject to change without notice.

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**FEATURES**

- UL393 listed, UL Canada listed, FM approved
- Patented PowerFlex™ movement
- True Zero™ indicator, a unique safety feature
- "Water" or "Air" gauges available for wet/dry sprinkler installation
- Custom dials available

**SPECIFICATIONS**

|                              |  |
|------------------------------|--|
| Accuracy:                    | ±3-2-3% of span (ASME B40.100 Grade B)       |
| Process Connection Location: | Lower  |
| Movement:                    | PowerFlex™ movement, Brass/polyester segment |
| Pointer:                     | Black, aluminum                              |
| Weather Protection:          | Weather resistant                            |

**WETTED COMPONENTS**

| Model        | Bourdon Tube | Process Connection Materials |
|--------------|--------------|------------------------------|
| 35W1005P-XUL | Bronze       | Brass                        |

**NON-WETTED COMPONENTS**

| Model        | Case                      | Window        |
|--------------|---------------------------|---------------|
| 35W1005P-XUL | ABS (Polycarbonate blend) | Polycarbonate |

**MIN/MAX TEMPERATURE LIMITS**

| Version      | Process                        |
|--------------|--------------------------------|
| 35W1005P-XUL | -40°F to 150°F (-40°C to 65°C) |

**ORDERING CODE****Example:**

|   |   |      |   |      |    |                 |       |      |
|---|---|------|---|------|----|-----------------|-------|------|
| 35  | W | 1005 | P | H    | 02 | L               | XULZO | 100# |
| Dial Size<br>35 - 3½"   |   | 35   |   |      |    |                 |       |      |
| Movement Type<br>W - PowerFlex™   |   |      | W |      |    |                 |       |      |
| Model<br>1005   |   |      |   | 1005 |    |                 |       |      |
| Case/Window Material<br>P - ABS/Polycarbonate   |   |      |   |      | P  |                 |       |      |
| Process Connection Material<br>H - Brass  |   |      |   |      |    | H               |       |      |
| Process Connection Size<br>02 - ¼ NPT   |   |      |   |      |    | 02              |       |      |
| Process Connection Location<br>L - Lower  |   |      |   |      |    |                 | L     |      |
| Options (if choosing an option(s) must include an "X")<br>UL - (required - UL393 listed and FM approved)<br>ZO - Bulk pack<br>ZP - Customer part number on carton/plain white label<br>ZQ - Customer part number printed directly on carton   |   |      |   |      |    |                 | X__   | 100# |
| Ranges<br>Single Scale<br>100# - 0/80psi retard to 250psi outer scale<br>300# - 0/300psi outer scale<br>600# - 0/600psi outer scale<br>Dual Scale (psi/kPa)<br>100#-AGN - 0/80psi; 0/550 kPa retard to 1750 kPa inner scale<br>300#-AGS - 0/300psi; 0/2000 kPa inner scale<br>600#-AGV - 0/600psi; 0/4000 kPa inner scale<br>Triple Scale (psi/kPa/bar)<br>100#-CAA - 0/80psi retard to 250psi outer scale; 0/550 kPa retard to 1750 kPa middle scale; 0/5.5 bar retard to 17.5 bar inner scale<br>300#-CAB - 0/300psi outer scale; 0/2000 kPa middle scale; 0/20 bar inner scale<br>600#-CAC - 0/600psi outer scale; 0/4000 kPa middle scale; 0/40 bar inner scale |   |      |   |      |    | UL<br>ZO<br>X__ |       |      |

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**1005P XUL**  
3½" dial size

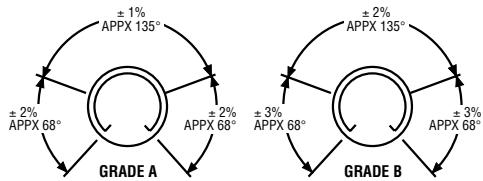


## Pressure Gauges General Information

### ACCURACY:

Accuracy – the conformity of indication to an accepted standard or true value. Accuracy is the difference (error) between the true value and the indication expressed as a percent of the span. It includes the combined effects of method, observer, apparatus and environment. Accuracy error includes hysteresis and repeatability errors but not friction error. It is determined under specific conditions. (Normal position, 73.4°F (23°C), and 29.92 in Hg barometric pressure.)

The following tables define the ASME B40.1\* accuracy grades used by Ashcroft products.



Accuracy of a pressure gauge may be expressed as percent of span or percent of indicated reading. Percent of span is the most common method. Percent of indicated reading is usually limited to precision test gauges and unless specifically spelled out, it may be assumed that an accuracy of ±0.5% means ±0.5% of span.

### GRADE 4A:

Gauges offering the highest accuracy and calibrated to ±0.1% of span over the entire range of the gauge. These gauges are called laboratory precision test gauges and are generally 8½", 12" or 16" dials. These high-accuracy gauges may be temperature compensated. They must be handled carefully in order to retain accuracy.

### ACCURACY EXAMPLES

| Range              | Accuracy Span | Grade | Permissible Error % of Span                 |
|--------------------|---------------|-------|---|
| 0/100 psi          | 100 psi       | 1A    | 1.0   |
| 0/400 kPa          | 400 kPa       | 2A    | 0.5   |
| 0/1000 bar         | 1000 bar      | B     | 3 (0/250 & 750/1000 bar)<br>2 (250/750 bar) |
| -100/400           | 400 kPa       | 2A    | 0.5   |
| 30 inHg/<br>30 psi | 44.7 psi      | 4A    | 0.1   |

The last item (30 inHg/30 psi) deserves some explanation. The span is defined as the algebraic difference between the limits of the scale. 30 inHg = -14.7 psi Span = 30 psi - (-14.7) = 44.7 psi. 0.1% of 44.7 psi = 0.045 psi or 0.022 Hg.

\*ASME B40.1 may be ordered from:

American Society of Mechanical Engineers  
Three Park Avenue, New York, NY 10016

### GRADE 3A:

Gauges are calibrated to an accuracy of ±0.25% of span over the entire range of these gauges. These gauges are called test gauges and are generally 4½", 6" or 8½" dials. The gauges are generally not temperature compensated (except Ashcroft Type 1082).

### GRADE 2A:

Gauges are calibrated to an accuracy of ±0.5% of span over the entire range of the gauge. They are often referred to as process gauges and are usually supplied as 4½" and 6" cases and are not temperature compensated.

### GRADE 1A:

Gauges are calibrated to an accuracy of ±1% over the entire range of the gauge. These gauges are high-quality industrial gauges and are supplied in 2½", 3½" and 4½" sizes.

### GRADE A:

Gauges are calibrated to an accuracy of ±1% of span over the middle half of the scale and ±2% of span over the first and last quarters of the scale.

### GRADE B:

Gauges are calibrated to an accuracy of ±2% of span over the middle half of the scale and ±3% of span over the first and last quarters of the scale. These gauges are often referred to as commercial or utility gauges and are supplied in 1½", 2", 2½", 3½" and 4½" case sizes.

### GRADE C:

Gauges are calibrated to an accuracy of ±3% of span over the middle half of the scale and ±4% of span over the first and last quarters of the scale.

### GRADE D:

Gauges are calibrated to an accuracy of ±5% of span over the entire scale.

### ACCURACY EXAMPLES

| Type of Gauge                           | Grade | Permissible Error % of Span |            |           | Max. Friction (% of Span) |
|---|-------|-----------------------------|------------|-----------|---------------------------|
|   |       | Lower 25%                   | Middle 50% | Upper 25% |                           |
| Precision Test (A4A)                    | 4A    | 0.1                         | 0.1        | 0.1       | See Note                  |
| Test (1082)                             | 3A    | 0.25                        | 0.25       | 0.25      | 0.25                      |
| Process (1279)                          | 2A    | 0.5                         | 0.5        | 0.5       | 0.5                       |
| Industrial/Hydraulic (1009)             | 1A    | 1.0                         | 1.0        | 1.0       | 1.0                       |
| Industrial/Hydraulic (1010, 1188, 1490) | A     | 2.0                         | 1.0        | 2.0       | 1.0                       |
| Commercial/Utility (1005, 3005, 1008A)  | B     | 3.0                         | 2.0        | 3.0       | 2.0                       |

Note: Grade 4A gauges must remain within 0.1% before and after being lightly tapped.