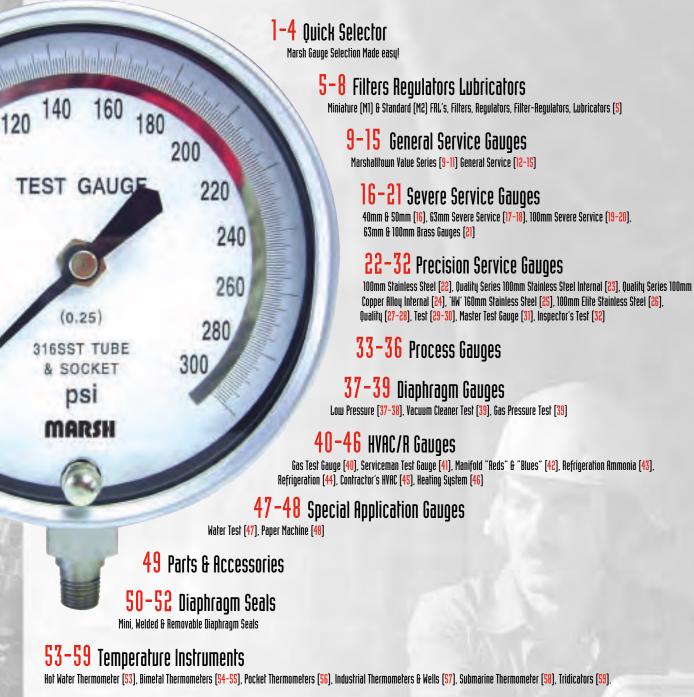


# INDEX

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## 60-62 Thermowells

## 63 Digital Pressure Indicator

## 64-72 General Information & Reference

Selection and Use of a Pressure Gauge (64), Pressure Gauge Operating Principle (65), How the Diaphragm Gauge Works (65), Marsh Chemical Compatibility Table (66), Accuracy Table (67), Pressure Units Cross Reference Chart (68), Part Number Prefix Guide (69), Part Number Suffix Guide (69), Abbreviations and Terms Used (69), Marshalltown Crossover Guide (69), Terms & Conditions (70), Distributor Return Policy (71), Product Classes and Options (71), Product Warnings, Claims, Recommendations and Notices (72).

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# **Quick Selector**

| PAGE 9   | PAGE 12  | PAGE 16  | PAGE 17-20   | PRE 2]   |  |
|--|--|--|--|--|--|
| GAUGE SERIES:<br>MARSHALLTOWN<br>VALUE SERIES  | GRUGE SERIES:<br>General Service   | GRUGE SERIES:<br>40/50MM LIQUID FILLED                                 | GAUGE SERIES:<br>SEVERE SERVICE<br>63MM & 100MM  | GAUGE SERIES:<br>63MM & 100MM<br>BRASS GAUGE   |  |
| ACCURACY ASME:<br>Grade B = $\pm 3/2/3 (\pm 2\% \text{ of})$<br>range across middle half of scale) | ACCURACY ASME:<br>Grade B = $\pm 3/2/3 (\pm 2\% \text{ of})$<br>range across middle half of scale)               | ACCURACY ASME:<br>±2.5% of range across full<br>scale                  | ACCURACY ASME:<br>63mm: Grade B = $\pm 3/2/3$<br>( $\pm 2\%$ of range across middle half<br>of scale) 100mm: Grade A $\pm 2/1/2$<br>( $\pm 1\%$ of range across middle half<br>of scale) | ACCURACY ASME:<br>63mm: ±1.6% of<br>range across full scale<br>100mm: Grade 1A-±1% of<br>range across full scale |  |
| CASE SIZE:<br>1½", 2", 2½", 3½", & 4½"<br>diameter   | CASE SIZE:<br>1½", 2", 2½", 3½", & 4½"<br>diameter   | CASE SIZE:<br>40mm & 50mm<br>diameter                                  | CASE SIZE:<br>63mm diameter<br>100mm diameter  | CASE SIZE:<br>63mm diameter (2.5")<br>100mm diameter (4.0")  |  |
| CASE MATERIAL:<br>Steel. black painted   | CASE MATERIAL:<br>Steel, black painted   | CASE MATERIAL:<br>304 Stainless Steel                                  | CASE MATERIAL:<br>304 Stainless Steel  | CASE MATERIAL:<br>Forged brass   |  |
| CASE STYLES:<br>Lower Mount, Center Back<br>Mount, U-Clamp, Right & Left<br>Mounts                 | CASE STYLES:<br>Lower Mount, Center Back, U-<br>Clamp & Front Flange Mounts                                      | CASE STYLES:<br>Center Back Mount                                      | CASE STYLES:<br>Rolled ring, hermetically sealed<br>case; Lower Mount, Center Back,<br>U-Clamp & Front Flange Mount  | CASE STYLES:<br>Lower mount  |  |
| TUBE & SOCHET:<br>Copper Alloy   | TUBE & SOCHET:<br>Copper Alloy   | TUBE & SOCHET:<br>Copper Alloy tube with nickel<br>plated brass socket | TUBE & SOCHET:<br>Copper Alloy<br>or 316 Stainless steel   | TUBE & SOCHET:<br>Copper Alloy   |  |
| MOVEMENT:<br>Brass   | MOVEMENT:<br>Brass   | MOVEMENT:<br>Brass   | MOVEMENT:<br>Brass   | MOVEMENT:<br>Brass   |  |
| CONNECTIONS:<br>% or % NPT   | CONNECTIONS:<br>% or % NPT   | CONNECTIONS:<br>40mm: % NPT<br>50mm: % NPT                             | CONNECTIONS:<br>% NPT  | CONNECTIONS:<br>63mm: ¼ NPT<br>100mm: ½ NPT  |  |
| RANGES:<br>15 to 5,000 psi   | RANGES:<br>0-30" Hg vacuum; compound<br>ranges 30" Hg vacuum to 400<br>psi; and 15 to 5,000 psi                  | RANGES:<br>15 to 160 psi   | RANGES:<br>O-30" Hg vacuum; compound<br>ranges 30" Hg vacuum to 400<br>psi; and 15-10,000 psi  | RANGES:<br>O to 30" Hg vacuum; compound<br>ranges 30" Hg vacuum to 200<br>psi; 15-10,000 psi                     |  |
| STANDARD DIAL:<br>Dual Scale psi and kPa   | STANDARD DIAL:<br>Dual scale psi and kPa   | STANDARD DIAL:<br>Triple scale psi/BAR/kPa                             | STANDARD DIAL:<br>Dual scale psi and kPa   | STANDARD DIAL:<br>Single scale psi   |  |
| DIAL COLOR:<br>Black markings on white   | DIAL COLOA:<br>Black markings on white   | DIAL COLOA:<br>Black markings on white                                 | DIAL COLOR:<br>Black markings on white   | DIAL COLOR:<br>Black markings on white   |  |
| POINTER:<br>Aluminum, black painted  | POINTER:<br>Aluminum, black painted  | POINTER:<br>Aluminum, black painted                                    | POINTER:<br>Aluminum, black painted  | POINTER:<br>Aluminum, black painted  |  |
| WINDOW:<br>Flat plastic with steel<br>friction ring  | WINDOW:<br>1½", 2", 2½", 3½" Acrylic, twist-<br>in Clearlok; 4½" flat glass win-<br>dow with steel friction ring | WINDOW:<br>Acrylic   | WINDOW:<br>Polycarbonate   | WINDOW:<br>Acrylic   |  |
| FILL MEDIUM:<br>N/A  | FILL MEDIUM:<br>N/A  | FILL MEDIUM:<br>Glycerine  | FILL MEDIUM:<br>Dry, glycerine, or silicone  | FILL MEDIUM:<br>Glycerine  |  |
| VENT:<br>N/A   | VENT:<br>N/A   | VENT:<br>Filler/Pressure relief plug                                   | VENT:<br>Rubber plug with snip-off<br>feature  | VENT:<br>Rubber plug with snip-off<br>feature  |  |



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| PRGE 22   | PRGE 23-24  | PAGE 25   | PRGE 26   | PRGE 27  |
|---|---|---|---|--|
| GAUGE SERIES:<br>100mm stainless steel  | GAUGE SERIES:<br>100mm stainless steel<br>Nace option         | GAUGE SERIES:<br>'HW' 160mm<br>Stainless steel                          | GAUGE SERIES:<br>100mm Elite  | GRUGE SERIES:<br>Quality gauge   |
| ACCURACY ASME:<br>Grade 1A = ±1% full scale   | ACCURACY ASME:<br>Grade 1A = ±1% full scale                   | ACCURACY ASME:<br>Grade 1A = ±1% full scale                             | ACCURACY ASME:<br>Grade 1A = ±1% full scale                                 | ACCURACY ASME:<br>Grade A = $\pm 2/1/2$ ( $\pm 1\%$ of<br>range across middle half of scale)                         |
| CASE SIZE:  | CASE SIZE:  | CASE SIZE:  | CASE SIZE:  | CASE SIZE:   |
| 100mm diameter  | 100mm diameter  | 160mm diameter  | 100mm diameter  | 3½" and 4¼" diameter   |
| CASE MATERIAL:  | CASE MATERIAL:  | CASE MATERIAL:  | CASE MATERIAL:  | CASE MATERIAL:   |
| 304 Stainless steel   | 304 Stainless steel   | 304 Stainless steel   | 304 Stainless steel   | Steel, black painted   |
| CASE STYLES:<br>Lower Mount, Panel Mount<br>with U-Clamp and three hole<br>Front Flange Mount | CASE STYLES:<br>Lower Mount                                   | CRSE STYLES:<br>Lower Mount   | CASE STYLES:<br>Safecase with blow-out<br>back construction;<br>Lower Mount | CASE STYLES: Lower Mount,<br>Flush case (Front Flange w/U-<br>Clamp), Back Flange with Lower or<br>Lower Back Mounts |
| TUBE & SOCHET:<br>316 Stainless steel   | TUBE & SOCHET:<br>316 Stainless steel                         | TUBE & SOCHET:<br>316 Stainless steel with<br>socket welded to the case | TUBE & SOCHET:<br>316 Stainless steel                                       | TUBE: Copper Alloy up to 1,000<br>psi. Stainless steel tube, above<br>1,000 psi<br>\$0CHET: Copper Alloy             |
| MOVEMENT:   | MOVEMENT:   | MOVEMENT:   | MOVEMENT:   | MOVEMENT:  |
| Stainless steel   | Stainless steel   | Stainless steel   | Stainless steel rotary movement   | Stainless steel  |
| CONNECTIONS:  | CONNECTIONS:  | CONNECTIONS:  | CONNECTIONS:  | CONNECTIONS:   |
| ¼ <b>NPT</b>  | ¼ or ½ NPT  | ½ NPT   | ½ NPT   | ¼ or ½ NPT   |
| RANGES:<br>30–10,000 PSI  | RANGES:<br>15-20,000 PSI                                      | RANGES:<br>15-20,000 PSI  | RANGES:<br>0-30" Hg vacuum<br>30-10,000 PSI                                 | RANGES:<br>0-30" Hg vacuum; compound<br>ranges 30" Hg vacuum to 300 PSI;<br>15-20,000 PSI                            |
| STANDARD DIAL:  | STANDARD DIAL:  | STANDARD DIAL:  | STANDARD DIAL:  | STANDARD DIAL:   |
| Dual scale PSI and kPa  | Dual scale PSI and kPa  | Dual scale PSI and kPa  | Dual scale psi and kPa  | Single scale PSI   |
| DIAL COLOR:   | DIAL COLOR:   | DIAL COLOR:   | DIAL COLOR:   | DIAL COLOR:  |
| Black markings on white   | Black markings on white                                       | Black markings on white   | Black markings on white   | Black markings on white  |
| POINTER:<br>Aluminum, black painted   | POINTER:<br>Aluminum, Adjustable<br>Micrometer, black painted | POINTER:<br>Aluminum, black painted                                     | POINTER:<br>Aluminum, black painted   | POINTER:<br>3½": Aluminum, black painted witl<br>recalibrator. 4½": Aluminum, black<br>painted, micro-adjustable     |
| WINDOW:   | WINDOW:   | WINDOW:   | WINDOW:   | WINDOW:  |
| Acrylic   | Safety glass  | Safety glass  | Safety glass  | Glass  |
| FILL MEDIUM:  | FILL MEDIUM:  | FILL MEDIUM:  | FILL MEDIUM:  | FILL MEDIUM:   |
| Dry, glycerine or silicone  | Dry, glycerine, or silicone                                   | Dry, glycerine, or silicone   | Dry, glycerine or silicone  | N/A  |
| VENT:<br>Rubber plug with snip-off<br>feature   | VENT:<br>Rubber plug with snip-off<br>feature                 | VENT:<br>Rubber plug with snip-off<br>feature                           | VENT:<br>Internal compensating<br>diaphragm                                 | VENT:<br>N/A   |

# Quick Selector

| PAGE 29  | PRGE 31   | PRGE 32  | PRGE 33-36  | PAGE 37   |
|--|---|--|---|---|
| GRUGE SERIES:<br>Test gauge  | GAUGE SERIES:<br>Master test gauge  | GAUGE SERIES:<br>Inspector's test gauge            | GAUGE SERIES:<br>Process gauge  | GAUGE SERIES:<br>Diaphragm gauge  |
| ACCURACY ASME:<br>Grade 2A = ±0.50% full scale   | ACCURACY ASME:<br>Grade 3A = ±0.25% full scale  | ACCURACY ASME:<br>Grade 2A = ±0.50% full scale     | ACCURACY ASME:<br>Grade 2A = ±0.50% full scale  | ACCURACY ASME:<br>Grade A = $\pm 2/1/2$ ( $\pm 1\%$ of<br>range across middle half of scale)<br>and Grade B = $\pm 3/1/3$ ( $\pm 2\%$ of<br>range for ranges below 30" H <sub>2</sub> O)  |
| CASE SIZE:<br>4½" diameter   | CASE SIZE:<br>6" diameter   | CASE SIZE:<br>3" diameter                          | CASE SIZE:<br>4½" and 6" diameter   | CASE SIZE:<br>2%", 3%", & 4½" diameter  |
| CASE MATERIAL:<br>Steel, black painted   | CASE MATERIAL:<br>304 Stainless steel   | CASE MATERIAL:<br>Brass, nickel plated             | CASE MATERIAL:<br>Safecase polypropylene<br>(turret style only) & aluminum                    | CASE MATERIAL:<br>Steel, black painted  |
| CASE STYLES:<br>Lower Mount, Flush Mount<br>(Front Flange with U-clamp &<br>hinged ring)     | CASE STYLES:<br>Lower Mount   | CASE STYLES:<br>Lower Mount                        | CASE STYLES:<br>Turret, Back Flange case,<br>Front Flange Mount, Lower<br>or Lower Back Mount | CASE STYLES:<br>Lower Mount, Center Back,<br>U-Clamp & Front Flange Mount   |
| TUBE & SOCHET:<br>Copper Alloy or<br>316 Stainless steel                                     | TUBE & SOCHET:<br>Copper Alloy  | TUBE & SOCHET:<br>Copper Alloy                     | TUBE & SOCHET:<br>Copper Alloy or<br>316 Stainless steel                                      | TUBE & SOCKET:<br>Phosphor bronze diaphragm soft-<br>soldered to brass socket   |
| MOVEMENT:<br>Stainless steel   | MOVEMENT:<br>Stainless steel  | MOVEMENT:<br>Brass                                 | MOVEMENT:<br>Stainless steel  | MOVEMENT:<br>Brass sector and pinion  |
| CONNECTIONS:<br>¼ or ½ NPT   | CONNECTIONS:<br>¼ or ½ NPT  | CONNECTIONS:<br>¼ NPT                              | CONNECTIONS:<br>¼ or ½ NPT  | CONNECTIONS:<br>% or % NPT and special connections  |
| RANGES:<br>O to 30" Hg vacuum; compound<br>ranges 30" Hg vacuum to 300<br>psi; 15-10,000 psi | RANGES:<br>O to 30" Hg vacuum;<br>compound ranges<br>30" Hg vacuum to 300 psi;<br>15-10,000 psi | RANGES:<br>O to 30" Hg vacuum;<br>15 to 1,000 psi  | RANGES:<br>O to 30" Hg vacuum;<br>compound 30" Hg vacuum<br>to 300 psi; 15 to 20,000 psi      | $\label{eq:response} \begin{array}{l} R  \text{A}  \text{WGES} : \ \text{Dual scale with kPa; 0} \\ \text{to } 200^{"}  \text{H}_{2} 0  \text{vacuum; 0 to } 300^{"} \\ \text{H}_{2} 0,  0  \text{to } 10  \text{psi, 0 to } 160  \text{oz/in}^2. \\ \text{Triple scale } 0.58  \text{oz/in}^2,  \text{inches} \\ \text{H}_{2} 0  \&  \text{kPa} \end{array}$ |
| STANDARD DIAL:<br>Single scale psi   | STANDARD DIAL:<br>Single scale psi  | STANDARD DIAL:<br>Dual scale psi and kPa           | STANDARD DIAL:<br>Single scale psi  | $\begin{array}{llllllllllllllllllllllllllllllllllll$  |
| DIAL COLOR:<br>Black markings on white with<br>mirrored dial to avoid parallax               | DIAL COLOR:<br>Black markings on white with<br>mirrored dial to avoid parallax                  | DIAL COLOR:<br>Black markings on white             | DIAL COLOR:<br>Black markings on white  | DIAL COLOR:<br>Black markings on white  |
| POINTER:<br>Aluminum, black painted, micro-<br>adjustable, knife-edge                        | POINTER:<br>Aluminum, black painted,<br>knife-edge  | POINTER:<br>Aluminum, black painted,<br>knife-edge | POINTER:<br>Aluminum, black painted,<br>micro-adjustable                                      | POINTER:<br>Aluminum, black painted   |
| WINDOW:<br>Glass   | WINDOW:<br>Glass  | WINDOW:<br>Beveled glass                           | WINDOW:<br>Acrylic  | WINDOW: 2½" & 3½": Acrylic<br>twist-in Clearlok 4½": Flat acrylic<br>with steel friction ring   |
| FILL MEDIUM:<br>N/A  | FILL MEDIUM:<br>N/A   | FILL MEDIUM:<br>N/A                                | FILL MEDIUM:<br>Dry, glycerine, or silicone   | FILL MEDIUM:<br>N/A   |
| VENT:<br>Blowout plug  | VENT:<br>Blowout plug   | VENT:<br>N/A                                       | VENT:<br>Internal compensating diaphragm  | VENT:<br>N/A  |



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|-----------------------------|---------------------------|
|                             |                           |
|                             |                           |

| PAGE 39  | PRGE 40  | PAGE 48  | PRGE 54  |
|--|--|--|--|
| GAUGE SERIES:<br>Gas pressure test set<br>Vacuum test set  | GAUGE SERIES:<br>Gas test gauges   | GAUGE SERIES:<br>PAPER MACHINE GAUGE   | GAUGE SERIES:<br>BIMETAL THERMOMETERS  |
| ACCURACY ASME:<br>Grade $A = \pm 2/1/2$ ( $\pm$ 1% of range<br>across middle half of scale) and Grade<br>$B = \pm 3/1/3\%$ for ranges (below 30"<br>$H_2O$ ) | ACCURACY ASME:<br>Grade B ±3/2/3% (±2% of range<br>across middle half of scale)  | ACCURACY ASME:<br>Grade A = ±2/1/2 (±1% of range<br>across middle half of scale)         | ACCURACY ASME:<br>±1% of span  |
| CASE SIZE:<br>2½"  | CASE SIZE:<br>2" Diameter  | CASE SIZE:<br>3½" diameter   | CASE SIZE:<br>2", 3" & 5", standard stem lengths of<br>2½" to 24"                        |
| CASE MATERIAL:<br>Provided in grey polyethylene case with<br>3 ft. of rubber tubing  | CASE MATERIAL:<br>Steel, black painted   | CASE MATERIAL:<br>Steel, chrome plated   | CASE MATERIAL:<br>304 Stainless steel  |
|  | CASE STYLES:<br>Mounting-Reducing Bell or Hex Style<br>Housing Material-Reducing Bell: Iron, Black<br>Painted Hex Body: Steel, Zinc Dichromate<br>Plated                                       | CASE STYLES:<br>Lower Back Mount; Hinged<br>ring case & moisture-proof with weep<br>hole | CASE STYLES:<br>Hermetically sealed;<br>Center Back or Adjustable                        |
| TUBE & SOCHET:<br>Phosphor bronze diaphragm soft-sol-<br>dered to brass socket   | TUBE & SOCHET:<br>Copper Alloy   | TUBE & SOCHET:<br>Copper Alloy   | TUBE & SOCHET:<br>304 Stainless steel stems  |
| MOVEMENT:<br>Brass sector and pinion   | MOVEMENT:<br>Brass   | MOVEMENT:<br>Stainless steel   | MOVEMENT: Bimetal sensing element with external reset feature                            |
|  | CONNECTIONS:<br>¾ NPTF   | CONNECTIONS:<br>¼ NPT  | CONNECTIONS:<br>¼ NPT (2" case only); ½ NPT<br>(3" & 5" cases)                           |
| RANGES:<br>O to 8.75 oz/in <sup>2</sup><br>O to 20 oz/in <sup>2</sup><br>O to 58 oz/in <sup>2</sup>  | RANGES:           Bell Type         Hex Type           0-15 psi         0-15 psi           0-30 psi         0-30 psi           0-60 psi         0-60 psi           0-100 psi         0-100 psi | RANGES:<br>30 to 1,000 psi   | RANGES:<br>11 dual scale ranges from<br>-50° F through 1000°F<br>(-50° C through 550° C) |
| STANDARD DIAL:<br>Triple scale oz/in², in. H <sub>2</sub> O,<br>& kPa  | STANDARD DIAL:<br>Single Scale psi   | STANDARD DIAL:<br>Single scale psi   | STANDARD DIAL:<br>Dual scale in degrees Celsius &<br>Fahrenheit                          |
| DIAL COLOA:<br>Black markings on white   | DIAL COLOA:<br>Black markings on white   | DIAL COLOR:<br>Black markings on white   | DIAL COLOR:<br>Black markings on white   |
| POINTER:<br>Aluminum, black painted  | POINTER:<br>Aluminum, black painted  | POINTER:<br>Aluminum, black painted with recali-<br>brator                               | POINTER:<br>Aluminum, black painted  |
| WINDOW:<br>Acrylic, twist-in Clearlok  | WINDOW:<br>Polycarbonate   | WINDOW:<br>Glass lens, chrome plated<br>brass ring with weather-tight seal               | WINDOW:<br>Glass   |



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MARSHALLTOWN VALUE SERIES GAUGE

• 5 Standard Mounting Options: LM, CB, UC, Right & Left

with water, oil, air, gas, or other non-corrosive media.

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# **General Service**

# 50 FPV 200 HALSHALLMAN

## STANDARD RANGES & PART NUMBERS

• ASME Grade B Accuracy

trial equipment.

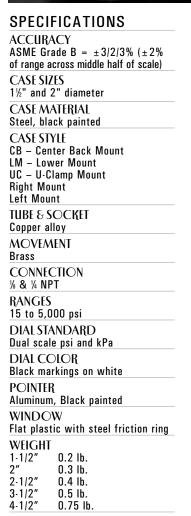
• Extra Savings with Quantity Pricing

| ТҮРЕ           | MARSHALLTOW | MARSHALLTOWN VALUE SERIES GAUGES |            |          |          |  |  |  |  |
|----------------|-------------|----------------------------------|------------|----------|----------|--|--|--|--|
| Size           |             | 1½"                              |            |          |          |  |  |  |  |
| Mounting       | LM          | UC                               | CB         | Right    | Left     |  |  |  |  |
| Connection     | 1% NPT      | ⅓ NPT                            | ⅓ NPT      | % NPT    | ½ NPT    |  |  |  |  |
| O to 15 psi    | GG1515L8    | GG1515U8                         | GG1515C8   |          |          |  |  |  |  |
| O to 30 psi    | GG1530L8    | GG1530U8                         | GG1530C8   | GG1530G8 | GG1530F8 |  |  |  |  |
| O to 60 psi    | GG1560L8    | GG1560U8                         | GG1560C8   | GG1560G8 | GG1560F8 |  |  |  |  |
| 0 to 100 psi   | GG15100L8   | GG15100U8                        | GG15100C8  |          |          |  |  |  |  |
| O to 160 psi   | GG15160L8   | GG15160U8                        | GG15160C8  |          |          |  |  |  |  |
| 0 to 200 psi   | GG15200L8   | GG15200U8                        | GG15200C8  |          |          |  |  |  |  |
| 0 to 300 psi   | GG15300L8   | GG15300U8                        | GG15300C8  |          |          |  |  |  |  |
| 0 to 400 psi   | GG15400L8   | GG15400U8                        | GG15400C8  |          |          |  |  |  |  |
| 0 to 600 psi   | GG15600L8   | GG15600U8                        | GG15600C8  |          |          |  |  |  |  |
| 0 to 1,000 psi | GG151000L8  | GG151000U8                       | GG151000C8 |          |          |  |  |  |  |

Marshalltown Value Series are the most economical, general purpose gauges in the Marsh gauge line. Suited for use

Typical applications include FRL's, compressors, pumps, boilers, regulators, dryers as well as commercial and indus-

| ТҮРЕ           | MARSHALLTOWN VALUE SERIES GAUGES |            |            |            |               |            |  |  |  |  |
|----------------|----------------------------------|------------|------------|------------|---------------|------------|--|--|--|--|
| Size           | 2"                               |            |            |            |               |            |  |  |  |  |
| Mounting       | LM                               | LM         | CB         | CB         | UC            | UC         |  |  |  |  |
| Connection     | ½ NPT                            | ¼ NPT      | ½ NPT      | ¼ NPT      | ½ NPT         | ¼ NPT      |  |  |  |  |
| 0 to 15 psi    | GG2015L8                         | GG2015L4   | GG2015C8   | GG2015C4   | GG2015U8      | GG2015U4   |  |  |  |  |
| 0 to 30 psi    | GG2030L8                         | GG2030L4   | GG2030C8   | GG2030C4   | GG2030U8      | GG2030U4   |  |  |  |  |
| 0 to 60 psi    | GG2060L8                         | GG2060L4   | GG2060C8   | GG2060C4   | GG2060U8      | GG2060U4   |  |  |  |  |
| O to 100 psi   | GG20100L8                        | GG20100L4  | GG20100C8  | GG20100C4  | GG20100U8     | GG20100U4  |  |  |  |  |
| 0 to 160 psi   | GG20160L8                        | GG20160L4  | GG20160C8  | GG20160C4  | GG20160U8     | GG20160U4  |  |  |  |  |
| 0 to 200 psi   | GG20200L8                        | GG20200L4  | GG20200C8  | GG20200C4  | GG20200U8     | GG20200U4  |  |  |  |  |
| 0 to 300 psi   | GG20300L8                        | GG20300L4  | GG20300C8  | GG20300C4  | GG20300U8     | GG20300U4  |  |  |  |  |
| 0 to 400 psi   | GG20400L8                        | GG20400L4  | GG20400C8  | GG20400C4  | GG20400U8     | GG20400U4  |  |  |  |  |
| 0 to 600 psi   | GG20600L8                        | GG20600L4  | GG20600C8  | GG20600C4  | GG20600U8     | GG20600U4  |  |  |  |  |
| 0 to 1,000 psi | GG201000L8                       | GG201000L4 | GG201000C8 | GG201000C4 | GG201000U8    | GG201000U8 |  |  |  |  |
| 0 to 1,500 psi | GG201500L8                       | GG201500L4 | GG201500C8 | GG201500C4 | Special Order | GG201500U4 |  |  |  |  |
| 0 to 2,000 psi | GG202000L8                       | GG202000L4 | GG202000C8 | GG202000C4 | Special Order | GG202000U4 |  |  |  |  |
| 0 to 3,000 psi | GG203000L8                       | GG203000L4 | GG203000C8 | GG203000C4 | Special Order | GG203000U4 |  |  |  |  |
| 0 to 5,000 psi | GG205000L8                       | GG205000L4 | GG205000C8 | GG205000C4 | Special Order | GG205000U4 |  |  |  |  |





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# **General Service**

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**STANDARD RANGES & PART NUMBERS** 

| ТҮРЕ           | MARSHALLTOWN | VALUE SERIES GAU | GES        |            |               |            |  |  |  |  |
|----------------|--------------|------------------|------------|------------|---------------|------------|--|--|--|--|
| Size           | 2½"          |                  |            |            |               |            |  |  |  |  |
| Mounting       | LM           | LM               | СВ         | CB         | UC            | UC         |  |  |  |  |
| Connection     | ½ NPT        | ¼ NPT            | ½ NPT      | ¼ NPT      | 1% NPT        | ¼ NPT      |  |  |  |  |
| O to 30 psi    | GG2530L8     | GG2530L4         | GG2530C8   | GG2530C4   | GG2530U8      | GG2530U4   |  |  |  |  |
| O to 60 psi    | GG2560L8     | GG2560L4         | GG2560C8   | GG2560C4   | GG2560U8      | GG2560U4   |  |  |  |  |
| 0 to 100 psi   | GG25100L8    | GG25100L4        | GG25100C8  | GG25100C4  | GG25100U8     | GG25100U4  |  |  |  |  |
| 0 to 160 psi   | GG25160L8    | GG25160L4        | GG25160C8  | GG25160C4  | GG25160U8     | GG25160U4  |  |  |  |  |
| 0 to 200 psi   | GG25200L8    | GG25200L4        | GG25200C8  | GG25200C4  | GG25200U8     | GG25200U4  |  |  |  |  |
| 0 to 300 psi   | GG25300L8    | GG25300L4        | GG25300C8  | GG25300C4  | GG25300U8     | GG25300U4  |  |  |  |  |
| 0 to 400 psi   | GG25400L8    | GG25400L4        | GG25400C8  | GG25400C4  | GG25400U8     | GG25400U4  |  |  |  |  |
| 0 to 600 psi   | GG25600L8    | GG25600L4        | GG25600C8  | GG25600C4  | GG25600U8     | GG25600U4  |  |  |  |  |
| 0 to 1,000 psi | GG251000L8   | GG251000L4       | GG251000C8 | GG251000C4 | GG251000U8    | GG251000U4 |  |  |  |  |
| 0 to 1,500 psi | GG251500L8   | GG251500L4       | GG251500C8 | GG251500C4 | GG251500U8    | GG251500U4 |  |  |  |  |
| 0 to 2,000 psi | GG252000L8   | GG252000L4       | GG252000C8 | GG252000C4 | Special Order | GG252000U4 |  |  |  |  |
| 0 to 3,000psi  | GG253000L8   | GG253000L4       | GG253000C8 | GG253000C4 | Special Order | GG253000U4 |  |  |  |  |
| 0 to 5,000psi  | GG255000L8   | GG255000L4       | GG255000C8 | GG255000C4 | Special Order | GG255000U4 |  |  |  |  |

| ТҮРЕ           | MARSHALLTOWN | MARSHALLTOWN VALUE SERIES GAUGES |            |  |  |  |  |  |
|----------------|--------------|----------------------------------|------------|--|--|--|--|--|
| Size           |              | 3½"                              |            |  |  |  |  |  |
| Mounting       | LM           | CB                               | UC         |  |  |  |  |  |
| Connection     | ¼ NPT        | 1/4 NPT                          | 1/4 NPT    |  |  |  |  |  |
| O to 30 psi    | GG3530L4     | GG3530C4                         | GG3530U4   |  |  |  |  |  |
| O to 60 psi    | GG3560L4     | GG3560C4                         | GG3560U4   |  |  |  |  |  |
| 0 to 100 psi   | GG35100L4    | GG35100C4                        | GG35100U4  |  |  |  |  |  |
| 0 to 160 psi   | GG35160L4    | GG35160C4                        | GG35160U4  |  |  |  |  |  |
| 0 to 200 psi   | GG35200L4    | GG35200C4                        | GG35200U4  |  |  |  |  |  |
| 0 to 300 psi   | GG35300L4    | GG35300C4                        | GG35300U4  |  |  |  |  |  |
| 0 to 400 psi   | GG35400L4    | GG35400C4                        | GG35400U4  |  |  |  |  |  |
| 0 to 600 psi   | GG35600L4    | GG35600C4                        | GG35600U4  |  |  |  |  |  |
| 0 to 1,000 psi | GG351000L4   | GG351000C4                       | GG351000U4 |  |  |  |  |  |
| 0 to 1,500 psi | GG351500L4   | GG351500C4                       | GG351500U4 |  |  |  |  |  |
| 0 to 2,000 psi | GG352000L4   | GG352000C4                       | GG352000U4 |  |  |  |  |  |
| 0 to 3,000psi  | GG353000L4   | GG353000C4                       | GG353000U4 |  |  |  |  |  |
| 0 to 5,000psi  | GG355000L4   | GG355000C4                       | GG355000U4 |  |  |  |  |  |

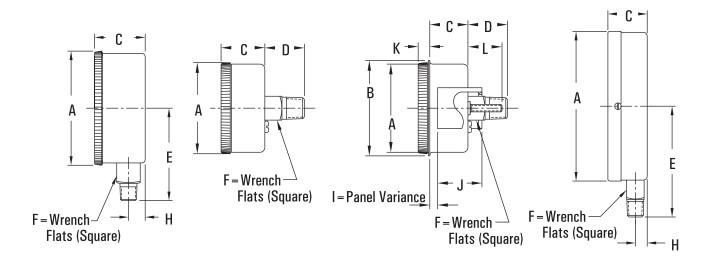
| ТҮРЕ           | MARSHALLTOWN |
|----------------|--------------|
| Size           | 4½"          |
| Mounting       | LM           |
| Connection     | ¼ NPT        |
| O to 30 psi    | GG4530L4     |
| 0 to 60 psi    | GG4560L4     |
| 0 to 100 psi   | GG45100L4    |
| 0 to 160 psi   | GG45160L4    |
| 0 to 200 psi   | GG45200L4    |
| 0 to 300 psi   | GG45300L4    |
| O to 400 psi   | GG45400L4    |
| 0 to 600 psi   | GG45600L4    |
| 0 to 1,000 psi | GG451000L4   |
| 0 to 1,500 psi | GG451500L4   |
| 0 to 2,000 psi | GG452000L4   |
| 0 to 3,000psi  | GG453000L4   |
| 0 to 5,000psi  | GG455000L4   |



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| Part Number | Dial Size | Mount   | Α     | В    | C     | D     | E     | F     | Н     | I      | J    | К    | L    |
|-------------|-----------|---------|-------|------|-------|-------|-------|-------|-------|--------|------|------|------|
| GG15XXXXL8  | 1.5"      | 1/8" LM | 1.606 |      | 0.89  |       | 1.488 | 0.433 | 0.296 |        |      |      |      |
| GG15XXXXC8  | 1.5"      | 1/8" CB | 1.57  |      | 0.92  | 1.61  |       | 0.433 |       |        |      |      |      |
| GG15XXXXU8  | 1.5"      | 1/8" UC | 1.606 | 1.86 | 0.89  | 0.61  |       | 0.433 |       | 0-0.25 | 1.05 | 0.16 | 0.52 |
| GG20XXXXL8  | 2.0"      | 1/8" LM | 2.047 |      | 1.122 |       | 1.787 | 0.534 | 0.376 |        |      |      |      |
| GG20XXXXC8  | 2.0"      | 1/8" CB | 2.047 |      | 1.122 | 0.64  |       | 0.534 |       |        |      |      |      |
| GG20XXXXU8  | 2.0"      | 1/8" UC | 1.97  | 2.24 | 1.01  | 0.64  |       | 0.534 |       | 0-0.26 | 1.15 | 0.16 | 0.52 |
| GG20XXXXL4  | 2.0"      | 1/4" LM | 2.047 |      | 1.122 |       | 1.787 | 0.551 | .0385 |        |      |      |      |
| GG20XXXXC4  | 2.0"      | 1/4" CB | 2.047 |      | 1.022 | 0.74  |       | 0.534 |       |        |      |      |      |
| GG20XXXXU4  | 2.0"      | 1/4" UC | 1.97  | 2.24 | 1.01  | 0.74  |       | 0.534 |       | 0-0.26 | 1.15 | 0.16 | 0.52 |
| GG25XXXXL8  | 2.5"      | 1/8" LM | 2.496 |      | 1.134 |       | 1.961 | 0.539 | 0.388 |        |      |      |      |
| GG25XXXXC8  | 2.5"      | 1/8" CB | 2.496 |      | 1.134 | 0.66  |       | 0.543 |       |        |      |      |      |
| GG25XXXXU8  | 2.5"      | 1/8" UC | 2.55  | 2.55 | 0.97  | 0.74  |       | 0.543 |       | 0-0.24 | 1.18 | 0.23 | 0.52 |
| GG25XXXXL4  | 2.5"      | 1/4" LM | 2.496 |      | 1.134 |       | 1.961 | 0.543 | 0.39  |        |      |      |      |
| GG25XXXXC4  | 2.5"      | 1/4" CB | 2.496 |      | 1.122 | 0.771 |       | 0.543 |       |        |      |      |      |
| GG25XXXXU4  | 2.5"      | 1/4" UC | 2.55  | 2.55 | 0.97  | 0.74  |       | 0.543 |       | 0-0.24 | 1.18 | 0.23 | 0.52 |
| GG35XXXXL4  | 3.5"      | 1/4" LM | 3.488 |      | 1.22  |       | 2.717 | 0.543 | 0.413 |        |      |      |      |
| GG35XXXXC4  | 3.5"      | 1/4" CB | 3.488 |      | 1.22  | 0.86  |       | 0.543 |       |        |      |      |      |
| GG35XXXXU4  | 3.5"      | 1/4" UC | 3.75  | 3.96 | 0.99  | 0.71  |       | 0.543 |       | 0-0.37 | 1.2  | 2    | 0.73 |
| GG45XXXXL4  | 4.5"      | 1/4" LM | 4.941 |      | 1.142 |       | 3.409 | 0.551 | 0.394 |        |      |      |      |



MARSH —

# **General Service**



## **SPECIFICATIONS**

ACCURACY ASME Grade  $B-\pm 3/2/3\%~(\pm 2\%~of$ range across middle half of scale) CASE SIZES 1½", 2", 2½", 3½", 4½" diameter CASE MATERIAL Steel, black painted CASE STYLE CB - Center Back Mount LM – Lower Mount UC – U-Clamp Mount See option tables for Front Flange TUBE & SOCKET Copper alloy MOVEMENT Brass CONNECTION 1% & 1/4 NPT RANGES O to 30" Hg VAC; Compound 30" Hg vac to 400 psi; 15 to 5,000 psi **DIAL STANDARD** Dual scale psi and kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW 1½", 2", 2½", 3½": acrylic, twist-in Clearlok 4½": flat glass window with steel friction ring RESTRICTOR Standard for ranges 1,000 psi and above WEIGHT 1-1/2" 0.2 lb. 2″ 0.3 lb. 2-1/2" 0.4 lb. 3-1/2″

4-1/2″ 0.75 lb.

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- **GENERAL SERVICE GAUGE**
- Dial Sizes: 1½", 2", 2½", 3½" & 4½"
- Superb quality, economical price
- Pressure ranges to 5000 psi

Marsh Instruments General Service Steel Case Gauges are an economical, general purpose gauge for pressure measurement from vacuum/compound through 5,000 psi. Suited for use with water, oil, air, gas, or other non-corrosive media.

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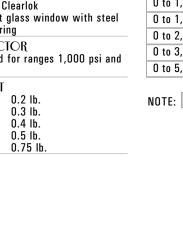
847-356-0566

Typical applications include FRLs, compressors, pumps, boilers, regulators, dryers as well as commercial and industrial equipment.

## **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ                  | GENERAL                         | SERVICE G    | AUGES |       |       |                                 |       |
|-----------------------|---------------------------------|--------------|-------|-------|-------|---------------------------------|-------|
| Size                  |                                 | 1½"          |       | 2"    |       |                                 |       |
| Case Material         |                                 | Steel        |       | Steel |       |                                 |       |
| Internals             |                                 | Copper Alloy | ,     |       | Coppe | r Alloy                         |       |
| Mounting / Case Style | LM                              | UC           | CB    | LM    | LM    | CB                              | CB    |
| Connection            | <sup>1</sup> ⁄ <sub>8</sub> NPT | ⅓ NPT        | ⅓ NPT | ⅓ NPT | ¼ NPT | <sup>1</sup> ∕ <sub>8</sub> NPT | ¼ NP1 |
| Scale Standard        |                                 | psi/kPa      |       |       | psi/  | kPa                             |       |
| O to 30" Hg VAC       | J0405                           | J0505        | J0605 | J1105 | J1405 | J1805                           | J2005 |
| 30" Hg VAC to 15 psi  | J0410                           | J0510        | J0610 | J1110 | J1410 | J1810                           | J2010 |
| 30" Hg VAC to 30 psi  | J0412                           | J0512        | J0612 | J1112 | J1412 | J1812                           | J2012 |
| 30" Hg VAC to 60 psi  | J0414                           | J0514        | J0614 | J1114 | J1414 | J1814                           | J2014 |
| 30" Hg VAC to 100 psi | J0416                           | J0516        | J0616 | J1116 | J1416 | J1816                           | J2016 |
| 30" Hg VAC to 150 psi | J0418                           | J0518        | J0618 | J1118 | J1418 | J1818                           | J2018 |
| 30" Hg VAC to 200 psi | J0420                           | J0520        | J0620 | J1120 | J1420 | J1820                           | J2020 |
| 30" Hg VAC to 300 psi | J0424                           | J0524        | J0624 | J1124 | J1424 | J1824                           | J2024 |
| 30" Hg VAC to 400 psi |                                 |              |       | J1126 | J1426 | J1826                           | J2026 |
| O to 15 psi           | J0440                           | J0540        | J0640 | J1140 | J1440 | J1840                           | J2040 |
| O to 30 psi           | J0442                           | J0542        | J0642 | J1142 | J1442 | J1842                           | J2042 |
| O to 60 psi           | J0446                           | J0546        | J0646 | J1146 | J1446 | J1846                           | J2046 |
| 0 to 100 psi          | J0448                           | J0548        | J0648 | J1148 | J1448 | J1848                           | J2048 |
| 0 to 160 psi          | J0452                           | J0552        | J0652 | J1152 | J1452 | J1852                           | J2052 |
| 0 to 200 psi          | J0454                           | J0554        | J0654 | J1154 | J1454 | J1854                           | J2054 |
| 0 to 300 psi          | J0458                           | J0558        | J0658 | J1158 | J1458 | J1858                           | J2058 |
| 0 to 400 psi          | J0460                           | J0560        | J0660 | J1160 | J1460 | J1860                           | J2060 |
| 0 to 600 psi          | J0464                           | J0564        | J0664 | J1164 | J1464 | J1864                           | J2064 |
| 0 to 1,000 psi        | J0472                           | J0572        | J0672 | J1172 | J1472 | J1872                           | J2072 |
| 0 to 1,500 psi        | J0474                           | J0574        | J0674 | J1174 | J1474 | J1874                           | J2074 |
| 0 to 2,000 psi        | J0476                           | J0576        | J0676 | J1176 | J1476 | J1876                           | J2076 |
| 0 to 3,000 psi        | J0478                           | J0578        | J0678 | J1198 | J1478 | J1878                           | J2078 |
| 0 to 5,000 psi        | J0482                           | J0582        | J0682 | J1182 | J1482 | J1882                           | J2082 |

Items are available on special order. However, minimums and lead times apply. Consult factory.



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# **General Service**



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## STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | GENER  | AL SERVI                        | CE GAU | GES                 |       |                                 |       |                     |                     |         |       |                                 |
|-----------------------|--------|---------------------------------|--------|---------------------|-------|---------------------------------|-------|---------------------|---------------------|---------|-------|---------------------------------|
| Size                  | 2      |                                 |        |                     | 2     | 1/2"                            |       |                     | 3½"                 |         |       | <b>4</b> ½"                     |
| Case Material         | St     | eel                             |        |                     | St    | eel                             |       |                     | Steel               |         |       | Steel                           |
| Internals             | Coppe  | r Alloy                         |        | Copper Alloy        |       |                                 |       |                     | Copper Alloy        |         |       |                                 |
| Mounting / Case Style | UC     | UC                              | LM     | LM                  | CB    | CB                              | UC    | UC                  | LM                  | CB      | UC    | LM                              |
| Connection            | 1% NPT | <sup>1</sup> ⁄ <sub>4</sub> NPT | ⅓ NPT  | <sup>1</sup> ⁄4 NPT | ⅓ NPT | <sup>1</sup> ⁄ <sub>4</sub> NPT | ⅓ NPT | <sup>1</sup> ⁄4 NPT | <sup>1</sup> ⁄4 NPT | ¼ NPT   | ¼ NPT | <sup>1</sup> / <sub>4</sub> NPT |
| Scale Standard        | psi    | kPa                             |        |                     | psi/  | kPa                             |       |                     |                     | psi/kPa |       | psi/kPa                         |
| O to 30" Hg VAC       | J2405  | J2605                           | J4005  | J4605               | J5005 | J5405                           | J6005 | J6205               | J8005               | J8605   | J8805 | J9005                           |
| 30" Hg VAC to 15 psi  | J2410  | J2610                           | J4010  | J4610               | J5010 | J5410                           | J6010 | J6210               | J8010               | J8610   | J8810 | J9010                           |
| 30" Hg VAC to 30 psi  | J2412  | J2612                           | J4012  | J4612               | J5012 | J5412                           | J6012 | J6212               | J8012               | J8612   | J8812 | J9012                           |
| 30" Hg VAC to 60 psi  | J2414  | J2614                           | J4014  | J4614               | J5014 | J5414                           | J6014 | J6214               | J8014               | J8614   | J8814 | J9014                           |
| 30" Hg VAC to 100 psi | J2416  | J2616                           | J4016  | J4616               | J5016 | J5416                           | J6016 | J6216               | J8016               | J8616   | J8816 | J9016                           |
| 30" Hg VAC to 150 psi | J2418  | J2618                           | J4018  | J4618               | J5018 | J5418                           | J6018 | J6218               | J8018               | J8618   | J8818 | J9018                           |
| 30" Hg VAC to 200 psi | J2420  | J2620                           | J4020  | J4620               | J5020 | J5420                           | J6020 | J6220               | J8020               | J8620   | J8820 | J9020                           |
| 30" Hg VAC to 300 psi | J2424  | J2624                           | J4024  | J4624               | J5024 | J5424                           | J6024 | J6224               | J8024               | J8624   | J8824 | J9024                           |
| 30" Hg VAC to 400 psi | J2426  | J2626                           | J4026  | J4626               | J5026 | J5426                           | J6026 | J6226               | J8026               | J8626   | J8826 | J9026                           |
| O to 15 psi           | J2440  | J2640                           | J4040  | J4640               |       | J5440                           |       | J6240               | J8040               | J8640   | J8840 | J9040                           |
| 0 to 30 psi           | J2442  | J2642                           | J4042  | J4642               | J5042 | J5442                           | J6042 | J6242               | J8042               | J8642   | J8842 | J9042                           |
| 0 to 60 psi           | J2446  | J2646                           | J4046  | J4646               | J5046 | J5446                           | J6046 | J6246               | J8046               | J8646   | J8846 | J9046                           |
| 0 to 100 psi          | J2448  | J2648                           | J4048  | J4648               | J5048 | J5448                           | J6048 | J6248               | J8048               | J8648   | J8848 | J9048                           |
| 0 to 160 psi          | J2452  | J2652                           | J4052  | J4652               | J5052 | J5452                           | J6052 | J6252               | J8052               | J8652   | J8852 | J9052                           |
| 0 to 200 psi          | J2454  | J2654                           | J4054  | J4654               | J5054 | J5454                           | J6054 | J6254               | J8054               | J8654   | J8854 | J9054                           |
| 0 to 300 psi          | J2458  | J2658                           | J4058  | J4658               | J5058 | J5458                           | J6058 | J6258               | J8058               | J8658   | J8858 | J9058                           |
| 0 to 400 psi          | J2460  | J2660                           | J4060  | J4660               | J5060 | J5460                           | J6060 | J6260               | J8060               | J8660   | J8860 | J9060                           |
| 0 to 600 psi          | J2464  | J2664                           | J4064  | J4664               | J5064 | J5464                           | J6064 | J6264               | J8064               | J8664   | J8864 | J9064                           |
| 0 to 1,000 psi        | J2472  | J2672                           | J4072  | J4672               | J5072 | J5472                           | J6072 | J6272               | J8072               | J8672   | J8872 | J9072                           |
| 0 to 1,500 psi        | J2474  | J2674                           | J4074  | J4674               | J5074 | J5474                           | J6074 | J6274               | J8074               | J8674   | J8874 | J9074                           |
| 0 to 2,000 psi        | J2476  | J2676                           | J4076  | J4676               | J5076 | J5476                           | J6076 | J6276               | J8076               | J8676   | J8876 | J9076                           |
| 0 to 3,000 psi        | J2478  | J2678                           | J4078  | J4678               | J5078 | J5478                           | J6078 | J6278               | J8078               | J8678   | J8878 | J9078                           |
| 0 to 5,000 psi        | J2482  | J2682                           | J4082  | J4682               | J5082 | J5482                           | J6082 | J6282               | J8082               | J8682   | J8882 | J9082                           |

NOTE:

Items are available on special order. However, minimums and lead times apply. Consult factory.



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# **General Service**



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| Dial Divisions           | General Service<br>3/2/3% of Span |              |                           |    |  |  |
|--------------------------|-----------------------------------|--------------|---------------------------|----|--|--|
| Ranges                   |                                   | ure<br>rvals | Minor<br>Gradua<br>-tions |    |  |  |
| Vacuum                   | 5                                 | i            |                           | 1  |  |  |
| COMPOUND                 |                                   |              |                           |    |  |  |
| 30" Hg VAC to<br>15 psi  | 10                                | 5            | 2                         | 1  |  |  |
| 30" Hg VAC to<br>30 psi  | 10                                | 10           | 2                         | 1  |  |  |
| 30" Hg VAC to<br>60 psi  | 10                                | 10           | 2                         | 2  |  |  |
| 30" Hg VAC to<br>150 psi | 30                                | 30           | 5                         | 5  |  |  |
| 30" Hg VAC to<br>300 psi | 30                                | 50           | -                         | 10 |  |  |
| PRESSURE                 |                                   |              |                           |    |  |  |
| 0 to 15 psi              | 3                                 | }            | 0                         | .2 |  |  |
| 0 to 30 psi              | 5                                 | i            |                           | 1  |  |  |
| 0 to 60 psi              | 1                                 | 0            |                           | 1  |  |  |
| 0 to 100 psi             | 1                                 | -            |                           | 2  |  |  |
| 0 to 160 psi             | 2                                 |              | 2                         |    |  |  |
| 0 to 200 psi             | 5                                 | -            | 4                         |    |  |  |
| 0 to 300 psi             | 5                                 | -            | 5                         |    |  |  |
| 0 to 400 psi             | 5                                 | -            |                           | 5  |  |  |
| 0 to 600 psi             | 5                                 | 0            | 1                         | 0  |  |  |
| HIGH PRESSURE            |                                   |              | -                         |    |  |  |
| 0 to 1,000 psi           | 20                                |              |                           | 0  |  |  |
| 0 to 1,500 psi           | 30                                | -            |                           | 0  |  |  |
| 0 to 2,000 psi           | 40                                | -            | 4                         | -  |  |  |
| 0 to 3,000 psi           | 50                                | -            |                           | 00 |  |  |
| 0 to 4,000 psi           | 1,0                               |              | 100                       |    |  |  |
| 0 to 5,000 psi           | 1,0                               | UU           |                           | 00 |  |  |

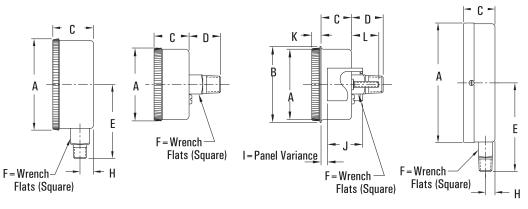
| GENERAL SERVICE     | GAUGE OPTIONS   |        |  |  |  |  |  |
|---------------------|---|--------|--|--|--|--|--|
| OPTION              | ТҮРЕ  | SUFFIX | AVAILABLE ON MODELS  |  |  |  |  |
| Restrictors         | Add restrictor  | Н      | All models – Consult factory for other sizes               |  |  |  |  |
|                     | psi only  | E      |  |  |  |  |  |
|                     | bar only  | L1     |  |  |  |  |  |
|                     | kg/cm² only   | L2     |  |  |  |  |  |
| Catalog Dials       | kPa only  | L3     | See Marsh Price List for minimums                          |  |  |  |  |
|                     | MPa only  | L4     |  |  |  |  |  |
|                     | psi & bar   | W1     |  |  |  |  |  |
|                     | psi & kg/cm²  | W2     |  |  |  |  |  |
|                     | psi & MPa   | W4     |  |  |  |  |  |
| Custom Dials        | Custom face   | М      | See Marsh Price List for minimums                          |  |  |  |  |
| Window              | Instrument glass w/ring (GS)  | F1     | 1½"- 3½" Consult factory for availability                  |  |  |  |  |
| WINDOW              | Acrylic   | F2     | 4½" Consult factory for availability                       |  |  |  |  |
|                     | Adjustable (slotted) pointer (AD)   | Z1     | 2"- 4½" Consult factory for availability                   |  |  |  |  |
| Pointer             | Max. Hand Assembly (MX)   | Z2     | 2"- 3½" CB or LM only,<br>Consult factory for availability |  |  |  |  |
| Increased Accuracy  | Grade A: (2/1/2%)   | В      | All models - 10 piece minimum order                        |  |  |  |  |
|                     | 3 hole front flange (FF)  |        | 11/2" - 31/2" See below for part number                    |  |  |  |  |
| Cases               | Part Numbers: 1½"x ¼" (J07XX), 2"x ¼" (J25XX), 2"x ¼" (J29XX), 2½" x ¼" (J61XX), 2½"x ¼" (J63XX), 3½"x ¼" (J85XX), 3½"x ¼" (J89XX).<br>¼" (J63XX), 3½"x ¼" (J85XX), 3½"x ¼" (J89XX).<br>Consult factory for availability. |        |  |  |  |  |  |
|                     | Brass (BR)  | J2     | Consult factory for availability                           |  |  |  |  |
|                     | Friction ring (external),<br>Polished stainless steel (FC)  | A1     | 1½" to 3½" CB or LM only                                   |  |  |  |  |
| Rings               | Friction ring (external), black<br>(FB)   | A2     | 1% to $3%$ CB or LM only                                   |  |  |  |  |
|                     | Press ring, black (PB)  | A3     | 2" to 3½" [Panel mount]                                    |  |  |  |  |
|                     | Press ring, chrome (PC)   | Α4     | 2" to 3½" [Panel mount]                                    |  |  |  |  |
| Special Connections |   |        | Consult Factory for availability                           |  |  |  |  |

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# **General Service**

(J90XX Only)



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| GENERAL | SERVICE C | ASE DIMEN       | ISIONS |      |      |     |      |                   |     |        |      |     |     |
|---------|-----------|-----------------|--------|------|------|-----|------|-------------------|-----|--------|------|-----|-----|
| Part#   | Dial Size | Mount           | A      | В    | C    | D   | E    | F                 | Н   | I      | J    | К   | L   |
| J04xx   | 1½        | ⅓" LM           | 1.67   |      | .90  |     | 1.50 | 7/16 <b>''</b>    | .26 |        |      |     |     |
| J05xx   | 1½        | %" UC           | 1.60   | 1.75 | .71  | .72 |      | 7⁄16"             |     | .0637  | .81  | .19 | .63 |
| J06xx   | 1½        | % <b>" CB</b>   | 1.67   |      | .90  | .72 |      | 7/16"             |     |        |      |     |     |
| J11xx   | 2.0       | 1∕8 <b>" LM</b> | 2.20   |      | 1.22 |     | 1.82 | <sup>9</sup> /16  | .40 |        |      |     |     |
| J14xx   | 2.0       | ¼" LM           | 2.20   |      | 1.22 |     | 1.82 | <sup>9</sup> /16" | .40 |        |      |     |     |
| J18xx   | 2.0       | %" CB           | 2.20   |      | 1.22 | .82 |      | <sup>9</sup> /16  |     |        |      |     |     |
| J20xx   | 2.0       | 1⁄4" CB         | 2.20   |      | 1.22 | .82 |      | <sup>9</sup> /16" |     |        |      |     |     |
| J24xx   | 2.0       | %" UC           | 2.06   | 2.25 | .94  | .88 |      | %16 <b>"</b>      |     | 0-0.43 | 1.22 | .20 | .92 |
| J26xx   | 2.0       | ¼" UC           | 2.06   | 2.25 | .94  | .88 |      | %16 <b>"</b>      |     | 0.0.43 | 1.22 | .20 | .92 |
| J40xx   | 2½        | 1∕8 <b>" LM</b> | 2.73   |      | 1.22 |     | 2.10 | <sup>9</sup> /16" | .40 |        |      |     |     |
| J46xx   | 21/2      | ¼" LM           | 2.73   |      | 1.22 |     | 2.10 | %16 <b>"</b>      | .40 |        |      |     |     |
| J50xx   | 2½        | %" CB           | 2.73   |      | 1.23 | .82 |      | <sup>9</sup> /16" |     |        |      |     |     |
| J54xx   | 2½        | ¼" CB           | 2.73   |      | 1.23 | .82 |      | <sup>9</sup> /16" |     |        |      |     |     |
| J60xx   | 21/2      | %" UC           | 2.58   | 2.81 | .94  | .88 |      | <sup>9</sup> /16  |     | 0-0.43 | 1.22 | .20 | .92 |
| J62xx   | 2½        | ¼" UC           | 2.58   | 2.81 | .94  | .88 |      | <sup>9</sup> /16" |     | 0-0.43 | 1.22 | .20 | .92 |
| J80xx   | 3½        | ¼" LM           | 3.71   |      | 1.22 |     | 2.77 | <sup>9</sup> /16" | .40 |        |      |     |     |
| J86xx   | 3½        | ¼" CB           | 3.71   |      | 1.15 | .80 |      | <sup>9</sup> /16" |     |        |      |     |     |
| J88xx   | 3½        | ¼" UC           | 3.65   | 3.98 | .91  | .87 |      | <sup>9</sup> /16" |     | 0-0.49 | 1.10 | .24 | .92 |
| J90xx   | 4½        | ¼" LM           | 4.53   |      | 1.22 |     | 3.16 | %16 <b>"</b>      | .40 |        |      |     |     |

# Severe Service



## SPECIFICATIONS

| ACCURACY  |
|---|
| ±2.5% of range across full scale<br>CASE SIZES                        |
| 40 or 50 mm diameter  |
| CASE MATERIAL<br>304 Stainless Steel                                  |
| CASE STYLE<br>CB – Center Back mount                                  |
| TUBE & SOCKET<br>Copper Alloy tube<br>with nickel plated brass socket |
| MOVEMENT<br>Brass   |
| CONNECTION<br>½ NPT & ¼ NPT   |
| RANGES<br>15 to 160 psi   |
| DIAL STANDARD<br>Triple scale psi/BAR/kPa                             |
| DIAL COLOR<br>Black markings on white                                 |
| POINTER<br>Aluminum, black painted                                    |
| WINDOW<br>Acrylic   |
| FILL MEDIUM<br>Glycerine Standard                                     |
| RESTRICTOR<br>Standard, all ranges                                    |
| VENT PLUG<br>Filler/pressure relief plug                              |
| TEMPERATURE LIMITS<br>0 – 140° F (filled)                             |
| WEIGHT  |
| 40mm 0.5 lb.<br>50mm 0.5 lb.  |
|   |

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## 800-876-0036 847-356-0566

# 40MM & 50MM SEVERE SERVICE GAUGE

• Copper Alloy Internals

- Glycerine Filled
- Center Back Mount Only

Marsh Instruments Liquid-Filled Gauges are designed to perform in rugged and harsh environmental conditions - especially where pulsation and vibration is a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and internal gauge damage. Liquid Filled Gauges feature a ventable top fill plug and can be mounted on a horizontal or vertical plane. The hermetically sealed construction reduces the chance of leaks and makes field filling an easy option.

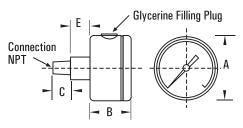
Typical applications include refineries, chemical, oil & gas, marine and OEM processes.

## STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | 40MM & 50MM GAUGES  |                     |
|-----------------------|---------------------|---------------------|
| Size                  | 40mm                | 50mm                |
| Case Material         | 304 Stainless Steel | 304 Stainless Steel |
| Internals             | Copper Alloy        | Copper Alloy        |
| Mounting / Case Style | СВ                  | СВ                  |
| Connection            | % NPT               | ¼ NPT               |
| Scale Standard        | psi/BAR/kPa         | psi/BAR/kPa         |
| O to 15 psi           | M4040P              | M5040P              |
| O to 30 psi           | M4042P              | M5042P              |
| O to 60 psi           | M4046P              | M5046P              |
| O to 100 psi          | M4048P              | M5048P              |
| 0 to 160 psi          | M4052P              | M5052P              |

## 40MM AND 50MM GAUGE OPTIONS

| OPTION       | ТҮРЕ          | SUFFIX | AVAILABLE ON MODELS               |
|--------------|---------------|--------|-----------------------------------|
| Custom Dials | Custom face   | М      | See Marsh Price List for minimums |
| Other Ranges |               |        | Consult factory for availability  |
| Fill Medium  | Silicone (SL) |        | Consult factory                   |



| A-Size   | В       | С      | E       |
|----------|---------|--------|---------|
| 40mm Dia | 27.00mm | 11.5mm | 13.00mm |
|          | 1.06"   | 0.45"  | 0.51"   |
| 50mm Dia | 30.00mm | 11.5mm | 10.00mm |
|          | 1.18"   | 0.45"  | 0.39"   |

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# Severe Service

# 63MM SEVERE SERVICE GAUGE

- 3 Standard Mounting Options: LM, CB and U-Clamp
- Glycerine Filled
- Ranges to 10,000 psi

Marsh Instruments Liquid-Filled Gauges are designed to perform in rugged applications and harsh environmental conditions especially where pulsation and vibration are a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and internal gauge damage; also lubricating the internals, and reducing corrosion.

All stainless steel Liquid Filled Gauges feature a ventable top fill plug for pressure relief and ease of venting after installation. Pressure ranges are available through 10,000 psi, with high pressure ranges offering a Helical Bourdon Tube for longer gauge life and increased durability. The hermetically sealed construction reduces the chance of leaks, and makes field filling an easy option. Typical applications include refineries, chemical plants, offshore platforms, oil rigs, marine applications, general industrial application and OEM processes.

## **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ                  | 63MM SEV            | ERE SERVIC     | E GAUGES            |                     |         |                     |  |
|-----------------------|---------------------|----------------|---------------------|---------------------|---------|---------------------|--|
| Size                  |                     | 63mm           |                     | 63mm                |         |                     |  |
| Case Material         | 30                  | 4 Stainless St | eel                 | 304 Stainless Steel |         |                     |  |
| Internals             |                     | Copper Alloy   |                     | Stainless Steel     |         |                     |  |
| Mounting / Case Style | LM                  | UC             | CB                  | LM                  | LM UC   |                     |  |
| Connection            | <sup>1</sup> ⁄4 NPT | 1⁄4 NPT        | <sup>1</sup> ⁄4 NPT | 1/4 NPT             | 1/4 NPT | <sup>1</sup> ⁄4 NPT |  |
| Scale Standard        |                     | psi/kPa        |                     |                     | psi/kPa |                     |  |
| O to 30" Hg VAC       | J7605P              | J7205P         | J6405P              | J7805P              | J7405P  | J6605P              |  |
| 30" Hg VAC to 15 psi  |                     |                |                     |                     |         |                     |  |
| 30" Hg VAC to 30 psi  | J7612P              |                |                     |                     |         |                     |  |
| 30" Hg VAC to 60 psi  | J7614P              |                |                     |                     |         |                     |  |
| 30"Hg VAC to 100 psi  |                     |                |                     |                     |         |                     |  |
| 30" Hg VAC to 150 psi | J7618P              | J7218P         | J6418P              | J7818P              | J7418P  | J6618P              |  |
| 30" Hg VAC to 200 psi | J7620P              | J7220P         | J6420P              | J7820P              | J7420P  | J6620P              |  |
| 30" Hg VAC to 300 psi | J7624P              | J7224P         | J6424P              | J7824P              | J7424P  | J6624P              |  |
| 30" Hg VAC to 400 psi | J7626P              | J7226P         | J6426P              | J7826P              | J7426P  | J6626P              |  |
| O to 15 psi           | J7640P              | J7240P         | J6440P              | J7840P              | J7440P  | J6640P              |  |
| 0 to 30 psi           | J7642P              | J7242P         | J6442P              | J7842P              | J7442P  | J6642P              |  |
| 0 to 60 psi           | J7646P              | J7246P         | J6446P              | J7846P              | J7446P  | J6646P              |  |
| 0 to 100 psi          | J7648P              | J7248P         | J6448P              | J7848P              | J7448P  | J6648P              |  |
| 0 to 160 psi          | J7652P              | J7252P         | J6452P              | J7852P              | J7452P  | J6652P              |  |
| 0 to 200 psi          | J7654P              | J7254P         | J6454P              | J7854P              | J7454P  | J6654P              |  |
| 0 to 300 psi          | J7658P              | J7258P         | J6458P              | J7858P              | J7458P  | J6658P              |  |
| 0 to 400 psi          | J7660P              | J7260P         | J6460P              | J7860P              | J7460P  | J6660P              |  |
| 0 to 600 psi          | J7664P              | J7264P         | J6464P              | J7864P              | J7464P  | J6664P              |  |
| 0 to 1,000 psi        | J7672P              | J7272P         | J6472P              | J7872P              | J7472P  | J6672P              |  |
| 0 to 1,500 psi        | J7674P              | J7274P         | J6474P              | J7874P              | J7474P  | J6674P              |  |
| 0 to 2,000 psi        | J7676P              | J7276P         | J6476P              | J7876P              | J7476P  | J6676P              |  |
| 0 to 3,000 psi        | J7678P              | J7278P         | J6478P              | J7878P              | J7478P  | J6678P              |  |
| 0 to 5,000 psi        | J7682P              | J7282P         | J6482P              | J7882P              | J7482P  | J6682P              |  |
| 0 to 6,000 psi        | J7684P              | J7284P         | J6484P              | J7884P              | J7484P  | J6684P              |  |
| 0 to 10,000 psi       |                     |                |                     | J7890P              | J7490P  | J6690P              |  |



Items are available on special order. However, minimums and lead times apply. Consult factory.



## **SPECIFICATIONS**

ACCURACY ASME Grade B -  $\pm 3/2/3\%$  (  $\pm 2\%$  of range across middle half of scale) CASE SIZES 63mm (2.47") diameter CASE MATERIAL 304 Stainless Steel CASE STYLE Rolled ring, hermetically sealed case CB – Center Back Mount LM – Lower Mount UC - U-Clamp Mount **TUBE & SOCKET** Copper alloy or 316 stainless steel MOVEMENT Brass CONNECTION 1/4 NPT RANGES O to 30" Hg VAC; Compound 30" Hg to 400 psi; 15 to 10,000 psi **DIAL STANDARD** Dual scale psi and kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW Polycarbonate FILL MEDIUM **Glycerine Standard** RESTRICTOR Standard for all ranges VENT PLUG Rubber plug with snip-off feature WEIGHT Filled 1.0 lb. Dry 0.7 lb.



# Severe Service

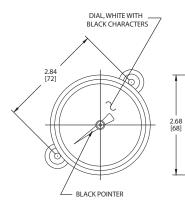


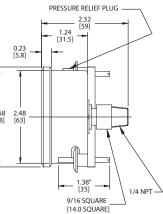
front flange mount



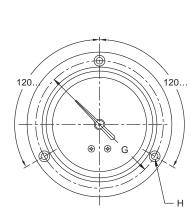
| 3MM SEVERE SERVI<br>2TION               | ТҮРЕ                  |    | SUFFIX             | AVAILAB                          |             |             |              |            |  |
|---|-----------------------|----|--------------------|----------------------------------|-------------|-------------|--------------|------------|--|
| FIIUN                                   |                       |    |                    | AVAILAD                          |             | VIUDELS     |              |            |  |
| Fill Medium                             | Dry (no fill)         |    | Delete<br>suffix P | All mode                         | All models  |             |              |            |  |
|   | Silicone (SL)         |    | I                  | All model                        | ls          |             |              |            |  |
| Front Flange                            | Adapter ring (3 hole) |    | R1                 | Center B                         | ack & U-    | Clamp onl   | y (factory   | Installed) |  |
| FIUIIL Fidilye                          | Adapter ring (no hole | R2 | U-Clamp            | only (fac                        | tory Insta  | (lled)      |              |            |  |
| Bayonet Case & Ring w/Safety Glass      |                       |    | J                  | Center B                         | ack or Lo   | wer Moun    | t (consult f | actory)    |  |
|   | psi only              | E  |                    |                                  |             |             |              |            |  |
|   | bar only              |    | L1                 |                                  |             |             |              |            |  |
|   | kg/cm² only           | L2 | Ĩ                  |                                  |             |             |              |            |  |
| Catalan Diala                           | kPa only              | L3 |                    | ah Duina I                       | :           |             |              |            |  |
| Catalog Dials                           | MPa only              | L4 | See wars           | See Marsh Price List for minimum |             |             |              |            |  |
| ,                                       | psi & bar             |    | W1                 |                                  |             |             |              |            |  |
| , i i i i i i i i i i i i i i i i i i i | psi & kg/cm²          |    | W2                 |                                  |             |             |              |            |  |
| ,                                       | psi & MPa             |    | W4                 | ĺ                                |             |             |              |            |  |
| Custom Dials                            | Logo or Custom face   | ;  | М                  | Consult f                        | factory fo  | r colors ar | nd minimun   | ns         |  |
|   | Special restrictor    |    | Н                  | All                              | N           |             | 1            | •••        |  |
| Restrictor                              | Restrictor removed    |    | H1                 | All model                        | IS - See IV | larsh Price | e List for m | iinimum    |  |
| Increased Accuracy                      | Grade A (2/1/2%)      |    | В                  | All mode                         | ls - See N  | Aarsh Price | e List for m | ninimum    |  |
| Special Connections                     |                       |    |                    | Consult Factory                  |             |             |              |            |  |

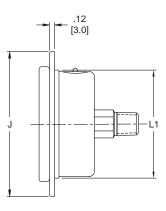
| sion<br>able | Gauge Size | Connection | A             | C             | G             | Н            | К             | J            | L             | L1           |
|--------------|------------|------------|---------------|---------------|---------------|--------------|---------------|--------------|---------------|--------------|
|              | 63mm       | 1/4"       | 2.66"<br>68mm | 1.03"<br>26mm | 2.95"<br>75mm | 0.15"<br>4mm | 0.56"<br>14mm | 3.35<br>85mm | 2.43"<br>62mm | 2.5"<br>64mm |





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# Severe Service

# **100MM SEVERE SERVICE GAUGE**

Brass or Stainless Steel Internals

- Ranges to 10,000 psi
- Glycerine Filled

Marsh Instruments Liquid Filled Gauges are designed to perform in rugged applications and harsh environmental conditions - especially where pulsation and vibration are a problem. Liquid Filled Gauges offer a significant cushioning and dampening effect, reducing pointer flutter and internal gauge damage; also lubricating the internals, and reducing corrosion. All stainless steel Liquid Filled Gauges feature a ventable top fill plug for pressure relief and ease of venting after installation. The hermetically sealed construction reduces the chance of leaks, and makes field filling an easy option.

Typical applications include refineries, chemical plants, offshore platforms, oil rigs, marine applications, general industrial application and OEM processes.

## **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ                  | 100MM SEV | ERE SERVIC     | E GAUGES |                 |         |         |  |
|-----------------------|-----------|----------------|----------|-----------------|---------|---------|--|
| Size                  |           | 100mm          |          |                 | 100mm   |         |  |
| Case Material         |           | Stainless Stee |          | Stainless Steel |         |         |  |
| Internals             |           | Copper Alloy   |          | Stainless Steel |         |         |  |
| Mounting / Case Style | LM        | CB             | UC       | LM              | CB      | UC      |  |
| Connections (NPT)     | 1/4 NPT   | 1/4 NPT        | ¼ NPT    | 1/4 NPT         | 1/4 NPT | 1/4 NPT |  |
| Scale Standard        |           | psi/kPa        | <u>.</u> |                 | psi/kPa |         |  |
| O to 30" Hg VAC       | X32965P   |                |          | X32967P         |         |         |  |
| 30" Hg VAC to 30 psi  | X32501P   |                |          |                 |         |         |  |
| 30" Hg VAC to 60 psi  | X32502P   |                |          |                 |         |         |  |
| 30" Hg VAC to 100 psi |           |                |          |                 |         |         |  |
| 30" Hg VAC to 150 psi | X32887P   | X32901P        | X32894P  | X32929P         | X32941P | X32935P |  |
| 30" Hg VAC to 200 psi | X32888P   | X32902P        | X32895P  | X32930P         | X32942P | X32936P |  |
| 30" Hg VAC to 300 psi | X32889P   | X32903P        | X32896P  | X32931P         | X32943P | X32937P |  |
| O to 15 psi           | X32504P   | X32546P        | X32525P  | X32630P         | X32678P | X32654P |  |
| 0 to 30 psi           | X32505P   | X32547P        | X32526P  | X32631P         | X32679P | X32655P |  |
| 0 to 60 psi           | X32506P   | X32548P        | X32527P  | X32632P         | X32680P | X32656P |  |
| 0 to 100 psi          | X32507P   | X32549P        | X32528P  | X32633P         | X32681P | X32657P |  |
| 0 to 160 psi          | X32508P   | X32550P        | X32529P  | X32634P         | X32682P | X32658P |  |
| 0 to 200 psi          | X32509P   | X32551P        | X32530P  | X32635P         | X32683P | X32659P |  |
| 0 to 300 psi          | X32510P   | X32552P        | X32531P  | X32636P         | X32684P | X32660P |  |
| 0 to 400 psi          | X32511P   | X32553P        | X32532P  | X32637P         | X32685P | X32661P |  |
| 0 to 600 psi          | X32512P   | X32554P        | X32533P  | X32638P         | X32686P | X32662P |  |
| 0 to 1,000 psi        | X32513P   | X32555P        | X32534P  | X32639P         | X32687P | X32663P |  |
| 0 to 1,500 psi        | X32514P   | X32556P        | X32535P  |                 |         |         |  |
| 0 to 2,000 psi        | X32515P   | X32557P        | X32536P  | X32641P         | X32689P | X32665P |  |
| 0 to 3,000 psi        | X32516P   | X32558P        | X32537P  | X32642P         | X32690P | X32666P |  |
| 0 to 5,000 psi        | X32518P   | X32560P        | X32539P  | X32644P         | X32692P | X32668P |  |
| 0 to 6,000 psi        | X32519P   | X32561P        | X32540P  | X32645P         | X32693P | X32669P |  |
| 0 to 10,000 psi       |           |                |          | X32647P         | X32695P | X32671P |  |

NOTE:

Items are available on special order. However, minimums and lead times apply. Consult factory.



## SPECIFICATIONS

ACCURACY ASME Grade A -  $\pm\,2/1/2\%$  (  $\pm\,1\%$  of range across middle half of scale) CASE SIZES 100mm (3.89") diameter CASE MATERIAL 304 Stainless Steel CASE STYLE Rolled ring, hermetically sealed case CB - Center Back Mount LM – Lower Mount UC- U-Clamp Mount **TUBE & SOCKET** Copper alloy or 316 stainless steel MOVEMENT Brass CONNECTION 1/4 NPT RANGES O to 30" Hg VAC Compound 30" Hg VAC to 300 psi 15 to 10,000 psi **DIAL STANDARD** Dual scale psi & kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW Polycarbonate FILL MEDIUM **Glycerine Standard** RESTRICTOR Standard for all ranges VENT PLUG Rubber plug with snip-off feature WEIGHT Filled 1.0 lb. Dry 0.8 lb.



# Severe Service

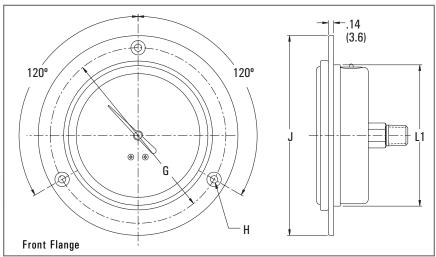


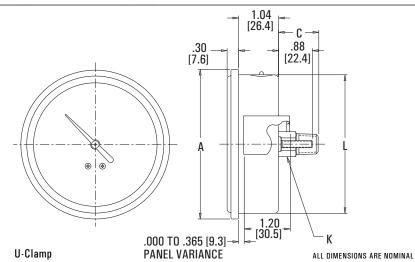
| 100MM SEVERE SER    | 100MM SEVERE SERVICE GAUGE OPTIONS |                    |  |  |  |
|---------------------|------------------------------------|--------------------|--|--|--|
| OPTION              | ТҮРЕ                               | SUFFIX             | AVAILABLE ON MODELS                            |  |  |
| Fill Medium         | Dry (no fill)                      | Delete<br>suffix P | All models                                     |  |  |
|                     | Silicone (SL)                      | I                  | All models                                     |  |  |
| Front Flange        | Adapter Ring (3 hole)              | R                  | U-Clamp & Center Back only (factory installed) |  |  |
|                     | psi only                           | E                  |  |  |  |
|                     | bar only                           | L1                 | -  |  |  |
|                     | kg/cm²                             | L2                 | -  |  |  |
| Catalan Diala       | kPa only                           | L3                 | See Marsh Price List for minimum               |  |  |
| Catalog Dials       | MPa                                | L4                 |  |  |  |
|                     | psi & bar                          | W1                 | -  |  |  |
|                     | psi & kg/cm²                       | W2                 | -  |  |  |
|                     | psi & MPa                          | W4                 | -  |  |  |
| Custom Dials        | Logo or custom face                | М                  | Consult factory for colors and minimums.       |  |  |
| Restrictor          | Special restrictor                 | H                  | All models - See Marsh Price List for minimum  |  |  |
| nestlictui          | Restrictor removed                 | H1                 | All models - See Marsh Price List for minimum  |  |  |
| Increased Accuracy  | Grade 1A ±1% full scale            | В                  | All models - See Marsh Price List for minimum  |  |  |
| Special Connections | ·                                  |                    | Consult factory for Availability               |  |  |

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| Dimension<br>Table | Gauge<br>Size | Conn-<br>ection | A                    | C             | G                     | Н | K             | J                     | L | L1            |
|--------------------|---------------|-----------------|----------------------|---------------|-----------------------|---|---------------|-----------------------|---|---------------|
|                    | 100mm         | 1/4"            | <u>3.90"</u><br>99mm | 1.03"<br>26mm | <u>4.57"</u><br>116mm |   | 9/16"<br>14mm | <u>5.20"</u><br>132mm |   | 3.68"<br>94mm |



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# Severe Service

# 63MM & 100MM BRASS GAUGE

- Forged Brass case (one piece construction)
- Ranges to 10,000PSI
- Heavy Duty Performance

Marsh forged brass gauges are designed for top performance in rugged applications and harsh environments, where corrosive gas or media is not an issue. Applications include Oil patch, Hydraulics, Natural gas, OEM and General Industrial applications where superior quality is required. Liquid Filling protects against pulsation and vibration offering a cushioning and dampening effect. The hermetically sealed one piece design reduces the chance of leaks and allows field filling as an easy option.

## STANDARD RANGES & PART NUMBERS

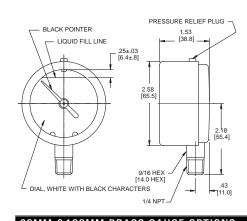
| ТҮРЕ                  | 63MM BRASS   | 100MM BRASS  |
|-----------------------|--------------|--------------|
| Size                  | 63mm         | 100mm        |
| Case Material         | Forged Brass | Forged Brass |
| Internals             | Copper Alloy | Copper Alloy |
| Mounting / Case Style | LM           | LM           |
| Connection            | 1/4 NPT      | ½ NPT        |
| Scale Standard        | psi          | psi          |
| O to 30" Hg VAC       | W9005PE      | W9405PE      |
| 30" Hg VAC to 30 psi  | W9012PE      | W9412PE      |
| 30" Hg VAC to 60 psi  | W9014PE      | W9414PE      |
| 30" Hg VAC to 100 psi | W9016PE      | W9416PE      |
| 30" Hg VAC to 200 psi | W9020PE      | W9420PE      |
| O to 15 psi           | W9040PE      | W9440PE      |
| O to 30 psi           | W9042PE      | W9442PE      |
| O to 60 psi           | W9046PE      | W9446PE      |
| 0 to 100 psi          | W9048PE      | W9448PE      |
| 0 to 160 psi          | W9052PE      | W9452PE      |
| 0 to 200 psi          | W9054PE      | W9454PE      |
| 0 to 300 psi          | W9058PE      | W9458PE      |
| 0 to 400 psi          | W9060PE      | W9460PE      |
| 0 to 600 psi          | W9064PE      | W9464PE      |
| 0 to 1,000 psi        | W9072PE      | W9472PE      |
| 0 to 1,500 psi        | W9074PE      | W9474PE      |
| 0 to 2,000 psi        | W9076PE      | W9476PE      |
| 0 to 3,000 psi        | W9078PE      | W9478PE      |
| 0 to 5,000 psi        | W9082PE      | W9482PE      |
| 0 to 10,000 psi       | W9090PE      | W9490PE      |



## **SPECIFICATIONS**

ACCURACY 63mm:  $\pm 1.6\%$  of range across full scale 100mm: ASME Grade 1A -  $\pm 1\%$  of range across full scale CASE SIZES 63mm: diameter (2.5") 100mm: diameter (4.0") CASE MATERIAL **Forged Brass** CASE STYLES LM – Lower Mount TUBE & SOCKET Copper alloy MOVEMENT Brass CONNECTION 63mm: 1/4 NPT 100mm: 1/2 NPT RANGES 0-30" Hg vacuum; compound ranges 30" Hg vacuum to 200 psi; and 15-10,000 psi **DIAL STANDARD** Single Scale psi **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW Acrylic RING 63mm: Gold Plated ABS 100mm: Chrome Plated Steel **FILL MEDIUM Glycerine Standard** VENT Rubber plug with snip-off feature WEIGHT 63mm 3.0 lb. 100mm 4.0 lb.

#### **63MM BRASS**



|                         |                | FILL PLUG |
|-------------------------|----------------|-----------|
|                         | .30±.13        | 2.00      |
|                         |                |           |
|                         | 3.94           |           |
|                         | [100.0]        |           |
|                         |                | 3.38      |
| 7/8 [22]                | ACROSS FLATS   |           |
|                         |                |           |
| └── DIAL, WHITE WITH BL | AUN UNARAUTERS |           |

**100MM BRASS** 

ALL DIMENSIONS ARE NOMINAL

| 63MM &100MM BRASS GAUGE OPTIONS |                     |                 |                               |  |
|---------------------------------|---------------------|-----------------|-------------------------------|--|
| OPTION                          | ТҮРЕ                | SUFFIX          | AVAILABLE ON MODELS           |  |
|                                 | Dry (no fill)       | Delete Suffix P |                               |  |
| Fill Medium                     | Glycerine           | Standard        |                               |  |
|                                 | Silicone (SL)       | I               |                               |  |
|                                 | Bar only            | L1              |                               |  |
|                                 | kg/cm² only         | L2              |                               |  |
|                                 | kPa only            | L3              | Consult factory for minimums  |  |
| Catalog Dials                   | MPa only            | L4              |                               |  |
| Catalog Dials                   | psi & BAR           | W1              |                               |  |
|                                 | psi & kg/cm²        | W2              |                               |  |
|                                 | psi & kPa           | W3              |                               |  |
|                                 | psi & MPa           | W4              |                               |  |
| Custom Dials                    | Logo or Custom Face | М               | Consult factory for minimums. |  |



# **Precision Service**

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#### 800-876-0036 847-356-0566

# (Subject to available inventory) **100MM STAINLESS STEEL GAUGE**

- Liquid Filled or Dry
  - Field Fillable
  - Ranges to 10,000 psi
  - Heavy Duty Stainless Steel

Marsh Instruments Stainless Steel Gauges are built for extended life, and designed for harsh and corrosive environments. These stainless steel gauges feature top fill plugs and are field fillable. Pressure ranges are available to 10,000 psi. Marsh Liquid Filled Gauges offer significant cushioning and dampening which reduces pointer flutter and internal gauge damage.

Typical applications include refineries, chemical plants, offshore platforms, oil rigs, marine applications, general industrial application and OEM processes.

## **STANDARD RANGES & PART NUMBERS**

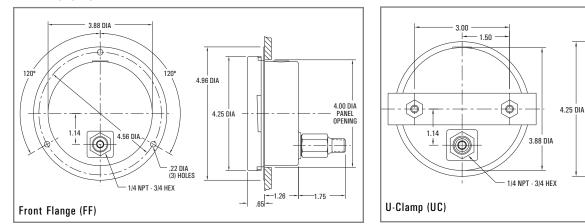
| ТҮРЕ                  | 100MM STAINLESS STEEL GA | UGES                |
|-----------------------|--------------------------|---------------------|
| Size                  | 100mm                    | 100mm               |
| Case Material         | Stainless Steel          | Stainless Steel     |
| Internals             | 316 Stainless Steel      | 316 Stainless Steel |
| Mounting / Case Style | UC                       | FF                  |
| Connection            | <sup>1</sup> ⁄4 NPT      | 1/4 NPT             |
| Scale Standard        | psi/kPa                  | psi/kPa             |
| 0 to 30 psi           | H10842                   | H10842R             |
| 0 to 60 psi           | H10846                   | H10846R             |
| 0 to 100 psi          | H10848                   | H10848R             |
| 0 to 160 psi          | H10852                   | H10852R             |
| 0 to 200 psi          | H10854                   | H10854R             |
| 0 to 300 psi          | H10858                   | H10858R             |
| 0 to 400 psi          | H10860                   | H10860R             |
| 0 to 600 psi          | H10864                   | H10864R             |
| 0 to 1,000 psi        | H10872                   | H10872R             |
| 0 to 1,500 psi        | H10874                   | H10874R             |
| 0 to 2,000 psi        | H10876                   | H10876R             |
| 0 to 3,000 psi        | H10878                   | H10878R             |
| 0 to 5,000 psi        | H10882                   | H10882R             |
| 0 to 10,000 psi       | H10890                   | H10890R             |

**100MM STAINLESS STEEL GAUGE OPTIONS OPTION** ТҮРЕ SUFFIX AVAILABLE ON MODELS Dry (no fill) Standard Fill Medium Glycerine (GL) Add suffix P All ranges Silicone (SL) Add suffix PI

## **SPECIFICATIONS**

| ACCURACY                             |
|--------------------------------------|
| ASME Grade $1A - \pm 1.0\%$ of range |
| across full scale                    |
| CASE SIZES                           |
| 100mm diameter (4")                  |
| CASE MATERIAL                        |
| 304 Stainless Steel                  |
| CASE STYLES                          |
| UC – U-Clamp Mount                   |
| FF – Front Flange Mount              |
| TUBE & SOCKET                        |
| 316 Stainless Steel                  |
| MOVEMENT Stainless Steel             |
| CONNECTION                           |
| ¼" NPT lower or                      |
| lowerback connection                 |
| RANGES                               |
| 30 to 10,000 psi                     |
| DIAL STANDARD                        |
| Dual scale psi and kPa               |
| DIAL COLOR                           |
| Black markings on white              |
| POINTER                              |
| Aluminum, black painted              |
| WINDOW Acrylic                       |
| FILL MEDIUM See options              |
| VENT                                 |
| Rubber plug with snip-off feature    |
| WEIGHT                               |
| Filled 2.0 lb.                       |
| Dry 1.6 lb.                          |
|                                      |

## DIMENSIONS



ALL DIMENSIONS ARE NOMINAL

72 MAX PANEL

1.75

1.26

65

4.00 DIA PANEL OPENING



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# **Precision Service**

# **QUALITY SERIES 100MM STAINLESS STEEL** INTERNAL GAUGE

- Liquid Filled or Dry Field Fillable
- Adjustable Micrometer Pointer
- Ranges to 15,000 psi
- Safety Glass Window

Marsh Stainless Steel gauges are built for extended life and are designed for harsh and corrosive environments. They feature a top fill plug, polished bayonet ring and are field fillable. Liquid filled gauges offer significant cushioning and dampening plus extend the life of a gauge.

Typical applications include Oil patch, Refineries, Oil Rigs, Control Panels, Offshore Platforms, Marine and General Industrial.

• NACE: MR0175

Gauges met NACE standards for material and hardness

|                       | ( Neш ! )                       |                 | ( New ! )       |
|-----------------------|---------------------------------|-----------------|-----------------|
| STANDARD RANGES &     | PART NUMBER                     | IS              |                 |
| ТҮРЕ                  | QUALITY SER                     | IES 100MM S     | S INTERNAL      |
| Size                  | 100mm                           | 100mm           | NACE 100mm      |
| Case Material         | Stainless Steel                 | Stainless Steel | Stainless Steel |
| Internals             | 316 SS                          | 316 SS          | 316 SS          |
| Mounting / Case Style | LM                              | LM              | LM              |
| Connection            | <sup>1</sup> ⁄ <sub>4</sub> NPT | ½ NPT           | ½ NPT           |
| Scale Standard        | psi/kPa                         | psi/kPa         | psi/kPa         |
| 0 to 30" Hg Vacuum    | H20705                          | H20905          |                 |
| 0 to 15 psi           | H20740                          | H20940          | HN20940         |
| O to 30 psi           | H20742                          | H20942          | HN20942         |
| 0 to 60 psi           | H20746                          | H20946          | HN20946         |
| 0 to 100 psi          | H20748                          | H20948          | HN20948         |
| 0 to 160 psi          | H20752                          | H20952          | HN20952         |
| 0 to 200 psi          | H20754                          | H20954          | HN20954         |
| 0 to 300 psi          | H20758                          | H20958          | HN20958         |
| 0 to 400 psi          | H20760                          | H20960          | HN20960         |
| 0 to 600 psi          | H20764                          | H20964          | HN20964         |
| 0 to 1,000 psi        | H20772                          | H20972          | HN20972         |
| 0 to 1,500 psi        | H20774                          | H20974          | HN20974         |
| 0 to 2,000 psi        | H20776                          | H20976          | HN20976         |
| 0 to 3,000 psi        | H20778                          | H20978          | HN20978         |
| 0 to 5,000 psi        | H20782                          | H20982          | HN20982         |
| 0 to 10,000 psi       | H20790                          | H20990          | HN20990         |
| 0 to 15,000 psi       | H20792                          | H20992          | HN20992         |
| 0 to 20,000 psi       | H20794                          | H20994          | HN20994         |



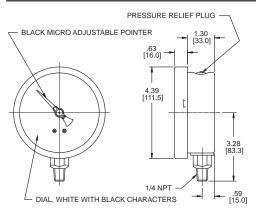
## **SPECIFICATIONS**

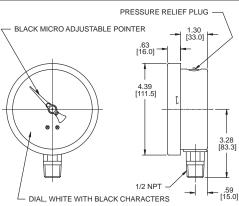
ACCURACY ASME Grade 1A  $- \pm 1.0\%$  of range across full scale CASE SIZES 100mm diameter (4") CASE MATERIAL 304 Stainless Steel **CASE STYLES** LM - Lower Mount **TUBE & SOCKET** 316 Stainless Steel Welded to Case **MOVEMENT Stainless Steel** CONNECTION ¼ NPT (H207xx), ½ NPT (H209xx) RANGES Vacuum to 20,000 psi **DIAL STANDARD** Dual scale psi and kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted, micro-adjustable WINDOW Safety Glass (Tempered) FILL MEDIUM See options VENT Rubber plug with snip-off feature WEIGHT Filled 2.0 lb. Dry 1.3 lb.

MARS

NACE 100mm







H207XX

## To order filled, see filling chart below.

| QUALITY SERIES 100MM STAINLESS STEEL INTERNAL GAUGE OPTIONS |                |               |                     |  |
|---|----------------|---------------|---------------------|--|
| OPTION  | ТҮРЕ           | SUFFIX        | AVAILABLE ON MODELS |  |
|   | Dry (no fill)  | Standard      |                     |  |
| Fill Medium   | Glycerine (GL) | Add suffix P  |                     |  |
|   | Silicone (SL)  | Add suffix PI |                     |  |
|   | psi only       | E             |                     |  |
|   | Bar only       | L1            |                     |  |
|   | kg/cm² only    | L2            | All ranges          |  |
| Catalog Dials   | kPa only       | L3            |                     |  |
|   | MPa only       | L4            |                     |  |
|   | psi & BAR      | W1            |                     |  |
|   | psi & kg/cm²   | W2            | ]                   |  |
|   | psi & MPa      | W4            |                     |  |

ALL DIMENSIONS ARE NOMINAL

# **Precision Service**



## **SPECIFICATIONS**

ACCURACY ASME Grade  $1A - \pm 1.0\%$  of range across full scale CASE SIZES 100mm diameter (4") CASE MATERIAL 304 Stainless Steel CASE STYLES LM - Lower Mount **TUBE & SOCKET** Copper alloy MOVEMENT Stainless Steel CONNECTION 1/4 and 1/2 NPT lower mount RANGES Vacuum to 10,000 psi **DIAL STANDARD** Single scale psi **DIAL COLOR** Black markings on white POINTER Aluminum, black painted, micro-adjustable WINDOW Safety Glass FILL MEDIUM See options VENT Rubber plug with snip-off feature WEIGHT 2.0 lb. Filled Dry 1.3 lb.

## 800-876-0036 847-356-0566

# QUALITY SERIES 100MM COPPER Alloy Internal Gauge

- Liquid Filled or Dry
- Removable polished bayonet ring
- Ranges to 10,000 psi
- Safety Glass Window

Stainless steel case with copper alloy internals. Ideal for heavy duty service in industrial and commercial environments. Features robust design with removable polished bayonet ring and adjustable pointer. Field fillable.

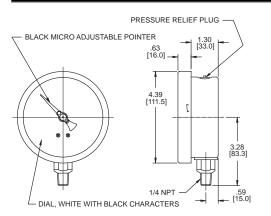
Typical applications include industrial machinery, oil field equipment and controls, wellheads, pipeline and general industrial.



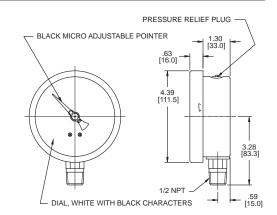
## **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ                  | QUALITY SERIES 100MM<br>COPPER ALLOY INTERNAL |                     |  |
|-----------------------|---|---------------------|--|
| Size                  | 100mm   | 100mm               |  |
| Case Material         | Stainless Steel                               | Stainless Steel     |  |
| Internals             | Copper Alloy                                  | Copper Alloy        |  |
| Mounting / Case Style | LM  | LM                  |  |
| Connection            | <sup>1</sup> ⁄ <sub>4</sub> NPT               | ½ NPT               |  |
| Scale Standard        | psi   | psi                 |  |
| O to 30" Hg Vacuum    | H20305  | H20505              |  |
| O to 15 psi           | H20340  | H20540              |  |
| O to 30 psi           | H20342  | H20542              |  |
| 0 to 60 psi           | H20346  | H20546              |  |
| 0 to 100 psi          | H20348  | H20548              |  |
| 0 to 160 psi          | H20352  | H20552              |  |
| 0 to 200 psi          | H20354  | H20554              |  |
| 0 to 300 psi          | H20358  | H20558              |  |
| 0 to 400 psi          | H20360  | H20560              |  |
| 0 to 600 psi          | H20364  | H20564              |  |
| 0 to 1,000 psi        | H20372  | H20572              |  |
| 0 to 1,500 psi        | H20374  | H20574              |  |
| 0 to 2,000 psi        | H20376  | H20576              |  |
| 0 to 3,000 psi        | H20378  | H20578              |  |
| 0 to 5,000 psi        | H20382  | H20582              |  |
| 0 to 10,000 psi       | H20390  | H20590              |  |
|                       | ALL D   | IMENSIONS ARE NOMIN |  |

### H203XX



H205XX



To order filled, see filling chart below.

MARSH

| QUALITY SERIES 100MM COPPER ALLOY INTERNAL GAUGE OPTIONS |                |               |                     |  |
|--|----------------|---------------|---------------------|--|
| OPTION   | ТҮРЕ           | SUFFIX        | AVAILABLE ON MODELS |  |
|  | Dry (no fill)  | Standard      |                     |  |
| Fill Medium  | Glycerine (GL) | Add suffix P  |                     |  |
|  | Silicone (SL)  | Add suffix PI |                     |  |
|  | bar only       | L1            |                     |  |
|  | kg/cm² only    | L2            |                     |  |
|  | kPa only       | L3            | All ranges          |  |
| Catalog Diala  | MPa only       | L4            |                     |  |
| Catalog Dials  | psi & BAR      | W1            |                     |  |
|  | psi & kg/cm²   | W2            |                     |  |
|  | psi & kPa      | W3            |                     |  |
|  | psi & MPa      | W4            |                     |  |

**STANDARD RANGES & PART NUMBERS** 

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# **Precision Service**

MARSH

**SPECIFICATIONS** 

# 'HW' 160MM Stainless steel Gauge

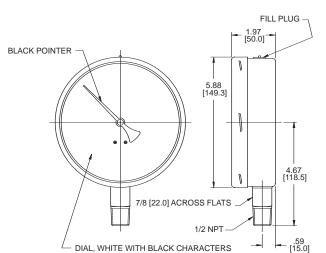
- Liquid Filled or Dry Field Fillable
- Socket Welded to the Case
- Ranges to 20,000 psi
- Heavy Duty All Stainless Steel

Marsh Instruments Stainless Steel Gauges are built for extended life, and designed for harsh and corrosive environments. These stainless steel gauges feature top fill plugs and are field fillable. Pressure ranges are available to 20,000psi. Marsh Liquid Filled Gauges offer significant cushioning and dampening which reduces pointer flutter and internal gauge damage.

Typical applications include refineries, chemical plants, offshore platforms, oil rigs, marine applications, general industrial application and OEM processes.

| ТҮРЕ                  | 'HW' 160MM SS GAUGES |
|-----------------------|----------------------|
| Size                  | 160mm                |
| Case Material         | 304 Stainless Steel  |
| Internals             | 316 Stainless Steel  |
| Mounting / Case Style | LM                   |
| Connection            | ½ NPT                |
| Scale Standard        | psi/kPa              |
| 0 to 15 psi           |                      |
| 0 to 30 psi           | HW30942              |
| 0 to 60 psi           | HW30946              |
| 0 to 100 psi          | HW30948              |
| 0 to 160 psi          | HW30952              |
| 0 to 200 psi          | HW30954              |
| 0 to 300 psi          | HW30958              |
| 0 to 400 psi          | HW30960              |
| 0 to 600 psi          | HW30964              |
| 0 to 1,000 psi        | HW30972              |
| 0 to 1,500 psi        | HW30974              |
| 0 to 2,000 psi        | HW30976              |
| 0 to 3,000 psi        | HW30978              |
| 0 to 5,000 psi        | HW30982              |
| 0 to 10,000 psi       | HW30990              |
| 0 to 20,000 psi       | HW30994              |

NOTE: Items are available on special order. However, minimums and lead times apply. Consult factory. NOTE: To order filled, consult filling chart below.



ALL DIMENSIONS ARE NOMINAL

| OI LUII IUATIUNU  |
|---|
| ACCURACY<br>ASME Grade 1A $- \pm 1.0\%$ of range<br>across full scale |
| CASE SIZES<br>160mm diameter (6")                                     |
| CASE MATERIAL<br>304 Stainless Steel                                  |
| CASE STYLES<br>LM – Lower Mount                                       |
| TUBE & SOCKET<br>316 Stainless steel welded to<br>the case            |
| MOVEMENT<br>Stainless Steel   |
| CONNECTION<br>½ NPT   |
| RANGES<br>15 to 20,000 psi  |
| DIAL STANDARD<br>Dual scale psi and kPa                               |
| DIAL COLOR<br>Black markings on white                                 |
| POINTER<br>Aluminum, black painted                                    |
| WINDOW<br>Safety glass  |
| FILL MEDIUM<br>See options  |
| VENT<br>Rubber plug with snip-off feature                             |
| WEIGHT  |

WEIGHT Filled 4.0 lb.

Dry 3.4 lb.

MARSH" —

| 'HW' 160MM STAINLESS STEEL GAUGE OPTIONS |                |               |                     |  |  |  |  |
|--|----------------|---------------|---------------------|--|--|--|--|
| OPTION                                   | ТҮРЕ           | SUFFIX        | AVAILABLE ON MODELS |  |  |  |  |
|  | Dry (no fill)  | Standard      |                     |  |  |  |  |
| Fill Medium                              | Glycerine (GL) | Add suffix P  |                     |  |  |  |  |
|  | Silicone (SL)  | Add suffix PI |                     |  |  |  |  |
|  | psi only       | E             |                     |  |  |  |  |
|  | BAR only       | L1            | All                 |  |  |  |  |
|  | kg/cm² only    | L2            | All ranges          |  |  |  |  |
| Catalog Dials                            | kPa only       | L3            |                     |  |  |  |  |
| Galainy Diais                            | MPa only       | L4            |                     |  |  |  |  |
|  | psi & BAR      | W1            |                     |  |  |  |  |
|  | psi & kg/cm²   | W2            | -                   |  |  |  |  |
|  | psi & MPa      | W4            |                     |  |  |  |  |

# Precision Service

www.mmcontrol.com/marsh.php 800-876-0036 847-356-0566

## 100MM ELITE STAINLESS STEEL GAUGE • All Stainless Steel

- All Stanliess 3
  Field Fillable
- Ranges to 10,000 psi
- Liquid Filled or Dry
- Solid Front Design Safecase

Marsh Instruments all stainless steel gauges are built for extended life, and designed for harsh and corrosive environments. These stainless steel gauges feature top fill plugs and are field fillable. Marsh Liquid Filled Gauges offer significant cushioning and dampening which reduces pointer flutter and internal gauge damage.

Typical applications include refineries, chemical plants, offshore platforms, oil rigs, marine applications, general industrial application and OEM processes.

## **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ                | 100MM ELITE STAINLESS STEEL GAUGES |
|---------------------|------------------------------------|
| Size                | 100mm                              |
| Case Material       | 304 Stainless Steel                |
| Internals           | 316 Stainless Steel                |
| Mounting/Case Style | LM                                 |
| Connection          | ½ NPT                              |
| Scale Standard      | psi/kPa                            |
| O to 30" Hg VAC     | W9605                              |
| 0 to 30 psi         | W9642                              |
| 0 to 60 psi         | W9646                              |
| 0 to 100 psi        | W9648                              |
| 0 to 200 psi        | W9654                              |
| 0 to 300 psi        | W9658                              |
| 0 to 600 psi        | W9664                              |
| 0 to 1,000 psi      | W9672                              |
| 0 to 1,500 psi      | W9674                              |
| 0 to 2,000 psi      | W9676                              |
| 0 to 3,000 psi      | W9678                              |
| 0 to 5,000 psi      | W9682                              |
| 0 to 10,000 psi     | W9690                              |

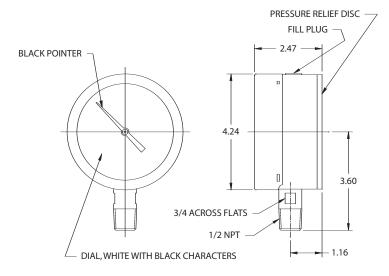
NOTE: To order filled, consult filling chart below.

MARSH

| 100MM ELITE STAINLESS STEEL GAUGE OPTIONS |                |               |                     |  |  |  |
|---|----------------|---------------|---------------------|--|--|--|
| OPTION                                    | ТҮРЕ           | SUFFIX        | AVAILABLE ON MODELS |  |  |  |
|   | Dry (no fill)  | Standard      | All ranges          |  |  |  |
| Fill Medium                               | Glycerine (GL) | Add suffix P  | All ranges          |  |  |  |
|   | Silicone (SL)  | Add suffix PI | All ranges          |  |  |  |

ALL DIMENSIONS ARE NOMINAL

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## **SPECIFICATIONS**

|                       | ade 1A – ±1.0% of range                     |
|-----------------------|---|
| across fu             | ll scale                                    |
| CASE SIZ              | ES  |
| 100mm d               | iameter (4″)                                |
| CASE MA               | ATERIAL                                     |
| 304 Stain             | lless Steel                                 |
| CASE STY              | /LE   |
|                       | t & blow-out back                           |
|                       | construction                                |
| LM - Low              |   |
| TUBE & S<br>316 Stain |   |
|                       |   |
| MOVEM                 |   |
| Stainless             |   |
|                       | LIION                                       |
| ½ NPT                 |   |
| RANGES                | 000   |
| 30 to 10,             | 000 psi<br>30" VAC Hg                       |
|                       | 0   |
| DIAL STA              | e psi and kPa                               |
|                       | •   |
| DIAL CC               | rkings on white                             |
|                       |   |
| POINTER               | , black painted                             |
|                       | •   |
| WINDO'<br>Safety gla  |   |
|                       |   |
| FILL MED              |   |
| See Optio             | 119   |
|                       | annanaatina dianka                          |
|                       | umpensating diaphragm                       |
|                       | 2.0.16                                      |
|                       |   |
| VENT                  | ompensating diaphragm<br>3.0 lb.<br>2.4 lb. |

## 800-876-0036 847-356-0566

# **Precision Service**

## QUALITY GAUGE

- Dial Sizes: 3½" and 4½"
- 3 Case Styles
- Recalibrator Standard on 31/2"; Adjustable pointer standard on 41/2"
- Ranges to 20,000 psi

Marsh Quality Gauges feature the exclusive recalibrator and the accuracy is within  $\pm 1\%$  in the middle half of span. These gauges provide continuous service at an economical price.

Typical applications include air compressors, reciprocating pumps, boilers, engines, hydraulic presses and countless other industrial and OEM applications.

## STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | QUALITY GAUGES |          |                |               |               |          |       |
|-----------------------|----------------|----------|----------------|---------------|---------------|----------|-------|
|                       |                | With Red | alibrator      | With          | Adjustable Po | ointer   |       |
| Size                  |                | 3        | ½"             |               |               | 4½"      |       |
| Pressure Element      |                | 1,000 PS | SI and below / | Copper Alloy, | above 1,000   | PSI / SS |       |
| Case Material         |                | St       | eel            |               |               | Steel    |       |
| Mounting              | LM             | LM       | LBM            | LBM           | LM            | LM       | LBM   |
| Connection            | ¼ NPT          | ¼ NPT    | 1/4 NPT        | ¼ NPT         | ¼ NPT         | ½ NPT    | ¼ NPT |
| Case Style            | Р              | G        | G              | F             | Р             | Р        | F     |
| Scale Standard        | psi            | psi      | psi            | psi           | psi           | psi      | psi   |
| O to 30" Hg VAC       | H0205          | H1205    | H1805          | H2005         | H4205         | H4805    | H6005 |
| 30" Hg VAC to 30 psi  | H0212          | H1212    | H1812          | H2012         | H4212         | H4812    | H6012 |
| 30" Hg VAC to 60 psi  | H0214          | H1214    | H1814          | H2014         | H4214         | H4814    | H6014 |
| 30" Hg VAC to 150 psi | H0218          | H1218    | H1818          | H2018         | H4218         | H4818    | H6018 |
| 30" Hg VAC to 300 psi | H0224          | H1224    | H1824          | H2024         | H4224         | H4824    | H6024 |
| O to 15 psi           | H0240          |          |                |               |               |          |       |
| 0 to 30 psi           | H0242          | H1242    | H1842          | H2042         | H4242         | H4842    | H6042 |
| 0 to 60 psi           | H0246          | H1246    | H1846          | H2046         | H4246         | H4846    | H6046 |
| 0 to 100 psi          | H0248          | H1248    | H1848          | H2048         | H4248         | H4848    | H6048 |
| 0 to 160 psi          | H0252          | H1252    | H1852          | H2052         | H4252         | H4852    | H6052 |
| 0 to 200 psi          | H0254          | H1254    | H1854          | H2054         | H4254         | H4854    | H6054 |
| 0 to 300 psi          | H0258          | H1258    | H1858          | H2058         | H4258         | H4858    | H6058 |
| 0 to 400 psi          | H0260          | H1260    | H1860          | H2060         | H4260         | H4860    | H6060 |
| 0 to 600 psi          | H0264          | H1264    | H1864          | H2064         | H4264         | H4864    | H6064 |
| 0 to 1,000 psi        | H0272          | H1272    | H1872          | H2072         | H4272         | H4872    | H6072 |
| 0 to 1,500 psi        | H0274          | H1274    | H1874          | H2074         |               | H4874    |       |
| 0 to 2,000 psi        | H0276          | H1276    | H1876          | H2076         |               | H4876    |       |
| 0 to 3,000 psi        | H0278          | H1278    | H1878          | H2078         |               | H4878    |       |
| 0 to 4,000 psi        | H0280          | H1280    | H1880          | H2080         |               |          |       |
| 0 to 5,000 psi        | H0282          | H1282    | H1882          | H2082         |               | H4882    |       |
| 0 to 6,000 psi        | H0284          | H1284    | H1884          | H2084         |               |          |       |
| 0 to 10,000 psi       | H0290          | H1290    | H1890          | H2090         |               | H4890    |       |
| 0 to 15,000 psi       | H0292          | H1292    | H1892          | H2092         |               |          |       |
| 0 to 20,000 psi       | H0294          | H1294    | H1894          | H2094         |               |          |       |



Items are available on special order. However, minimums and lead times apply. Consult factory.



## **SPECIFICATIONS**

ACCURACY ASME Grade A  $-\pm 2/1/2\%$  ( $\pm 1\%$  of range in middle half of scale) CASE SIZES 3½" and 4½" diameter 6" diameter (see options) CASE MATERIAL Steel, black painted CASE STYLE F - Front Flanged, Lower Back Mount with U-Clamp; 4½" has Hinged Ring (LBM) G – Back Flanged case P – Plain Case, Lower Mount TUBE 0 - 1,000 PSI: Copper alloy 1,500 PSI - 20,000 PSI: Stainless Steel SOCKET Copper alloy MOVEMENT Stainless Steel RECALIBRATOR Standard 31/2" only, 41/2" has adjustable pointer CONNECTION ¼ or ½ NPT RANGES 0 to 30" Hg VAC; Compound 30" Hg VAC to 300 psi; 15 to 20,000 psi **DIAL STANDARD** Single scale psi **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW Instrument Glass WEIGHT 3½" 2.0 lb.



41/2"

3.0 lb.

# Precision Service

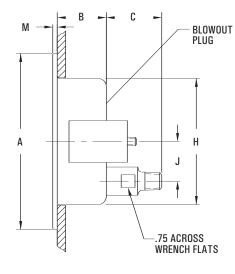
| QUALITY GAU                        | GES                             |                     |     |                    |
|------------------------------------|---------------------------------|---------------------|-----|--------------------|
| Dial Divisions                     | Quality Gauge<br>2/1/2% of Span |                     |     |                    |
| Ranges                             |                                 | Figure<br>Intervals |     | nor<br>dua-<br>ons |
| Vacuum                             |                                 | 3                   | 0   | .2                 |
| COMPOUND                           |                                 |                     |     |                    |
| 30" Hg VAC<br>to 15 psi            | 5                               | 3                   | 0.5 | 0.2                |
| 30" Hg VAC<br>to 30 psi            | 10                              | 5                   | 1   | 0.5                |
| 30" Hg VAC<br>to 60 psi            | 10                              | 10                  | 1   | 0.5                |
| 30" Hg VAC<br>to 150 psi           | 30                              | 30                  | 2   | 1                  |
| 30" Hg VAC<br>to 300 psi           | 30                              | 30                  | 5   | 2                  |
| PRESSURE                           |                                 |                     |     |                    |
| 0 to 15 psi                        | 1                               |                     | 0.1 |                    |
| O to 30 psi                        | 5                               |                     | 0.2 |                    |
| 0 to 60 psi                        | ļ                               | 5                   | 0.5 |                    |
| 0 to 100 psi                       |                                 | 0                   | 1   |                    |
| O to 160 psi                       | 20                              |                     | 2   |                    |
| 0 to 200 psi                       | 20                              |                     | 2   |                    |
| 0 to 300 psi                       | 50                              |                     | 2   |                    |
| 0 to 400 psi                       | 50                              |                     | 2   |                    |
| 0 to 600 psi                       | -                               | 0                   |     | 5                  |
| HIGH PRESSUR                       |                                 |                     |     |                    |
| 0 to 1,000 psi                     | 100                             |                     | 10  |                    |
| 0 to 1,500 psi                     | 300                             |                     | 20  |                    |
| 0 to 2,000 psi                     |                                 | 00                  |     | 20                 |
| 0 to 3,000 psi                     |                                 | 00                  |     | 20                 |
| 0 to 4,000 psi<br>0 to 5,000 psi   |                                 | )0<br>)0            |     | i0<br>i0           |
| 0 to 5,000 psi<br>0 to 6,000 psi   |                                 | 100<br>10           |     |                    |
| 0 to 6,000 psi<br>0 to 10,000 psi  |                                 |                     |     | 00<br>00           |
| 0 to 10,000 psi<br>0 to 15,000 psi |                                 | 100<br>100          |     | 00                 |
| 0 to 15,000 psi<br>0 to 20,000 psi |                                 | 100                 |     | 00                 |
| 0 $10$ 20,000 psi                  | <u>ک</u> , د                    | 000                 | _ Z | 00                 |

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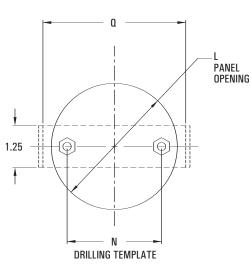
| QUALITY GAUGE OPTIONS |                          |        |                                  |  |  |  |  |
|-----------------------|--------------------------|--------|----------------------------------|--|--|--|--|
| OPTION                | ТҮРЕ                     | SUFFIX | AVAILABLE ON MODELS              |  |  |  |  |
| Restrictors           | Add restrictor           | Н      | All ranges                       |  |  |  |  |
|                       | bar only                 | L1     |                                  |  |  |  |  |
|                       | kg/cm² only              | L2     |                                  |  |  |  |  |
|                       | kPa only                 | L3     |                                  |  |  |  |  |
| Catalog Dials         | MPa only                 | L4     | See Marsh Price List for minimum |  |  |  |  |
|                       | psi & bar                | W1     |                                  |  |  |  |  |
|                       | psi & kg/cm²             | W2     |                                  |  |  |  |  |
|                       | psi & kPa                | W3     |                                  |  |  |  |  |
|                       | psi & MPa                | W4     |                                  |  |  |  |  |
| Custom Dials          | Logo or Custom Face      | М      | All models - consult factory     |  |  |  |  |
| Window                | Acrylic (AY)             | F2     | 3½" - 4½"                        |  |  |  |  |
| WIIILOW               | Safety Glass (SG)        | F3     | 3½" - 4½"                        |  |  |  |  |
| Increased Accuracy    | Grade 1A: ±1% full scale | В      | All models                       |  |  |  |  |
| Cases                 | Aluminum Back Flange     | J      | 4½"– 6" consult factory          |  |  |  |  |
| Lases                 | Steel Hinged Ring Case   | J      | 6" consult factory               |  |  |  |  |

## **CASE PATTERNS & DIMENSIONS**

IBRSH

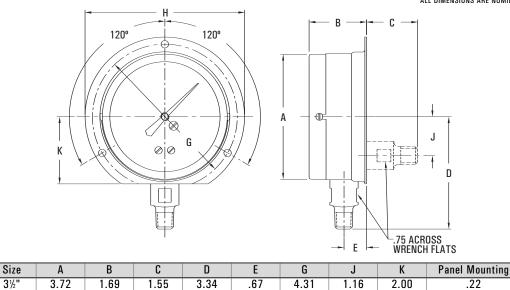


ALL DIMENSIONS ARE NOMINAL



| Size        | A    | В    | C    | Н    | J    | L    | М   | Ν    | ۵    |
|-------------|------|------|------|------|------|------|-----|------|------|
| <b>3</b> ½" | 4.86 | 1.66 | 1.55 | 3.75 | 1.16 | 3.75 | .11 | 2.81 | 4.25 |
| <b>4</b> ½" | 6.31 | 1.39 | 2.15 | 4.81 | 1.27 | 4.88 | .11 | 3.88 | 5.31 |

ALL DIMENSIONS ARE NOMINAL



## TEST GAUGE /- 0.5%

- Adjustable Micrometer Knife-Edge Pointer with Mirror Dial
- Stainless Steel Movement
- Dial Size: 4½"
- Ranges to 10,000 psi

The Marsh Test Gauge is designed with a black painted steel housing and the choice of copper alloy or 316 stainless steel tube and socket to meet the demanding service needs of various test gauge applications. Accuracy is  $\pm 0.5\%$  of full span. A highly polished integral mirror is positioned between the two graduation arcs on the dial face The knife-edge pointer is reflective so that, when the pointer and its reflection are in alignment, parallax is virtually eliminated and a true dial reading is assured.

Typical applications include test stands, aviation ground support, petroleum, chemical, utilities, industrial vessels and panel builders.

## STANDARD RANGES & PART NUMBERS

| ТҮРЕ                 | TEST GAL | JGES         |         |       |         |          |       |
|----------------------|----------|--------------|---------|-------|---------|----------|-------|
| Size                 | 4½"      |              |         | 4½"   |         |          |       |
| Internals            |          | Copper Alloy |         |       | Stainle | ss Steel |       |
| Case Material        | Steel    | Steel        | Steel   | Steel | Steel   | Steel    | Steel |
| Mounting             | LM       | LM           | LBM     | LM    | LM      | LBM      | LBM   |
| Case Style           | Р        | Р            | F       | Р     | Р       | F        | F     |
| Connection           | 1/4 NPT  | ½ NPT        | 1/4 NPT | ¼ NPT | ½ NPT   | 1/4 NPT  | ½ NPT |
| Scale Standard       |          | psi          |         |       | р       | si       |       |
| O to 30" Hg VAC      | D0205    | D0605        | D1205   | D5205 | D5605   | D6105    | D6405 |
| 30" Hg VAC to 15 psi | D0210    | D0610        | D1210   | D5210 | D5610   | D6110    | D6410 |
| 30" Hg VAC to 30 psi | D0212    | D0612        | D1212   | D5212 | D5612   | D6112    | D6412 |
| 30" Hg VAC to 60 psi | D0214    | D0614        | D1214   | D5214 | D5614   | D6114    | D6414 |
| O to 15 psi          | D0240    | D0640        | D1240   | D5240 | D5640   | D6140    | D6440 |
| O to 30 psi          | D0242    | D0642        | D1242   | D5242 | D5642   | D6142    | D6442 |
| O to 60 psi          | D0246    | D0646        | D1246   | D5246 | D5646   | D6146    | D6446 |
| O to 100 psi         | D0248    | D0648        | D1248   | D5248 | D5648   | D6148    | D6448 |
| 0 to 160 psi         | D0252    | D0652        | D1252   | D5252 | D5652   | D6152    | D6452 |
| 0 to 200 psi         | D0254    | D0654        | D1254   | D5254 | D5654   | D6154    | D6454 |
| 0 to 300 psi         | D0258    | D0658        | D1258   | D5258 | D5658   | D6158    | D6458 |
| 0 to 400 psi         | D0260    | D0660        | D1260   | D5260 | D5660   | D6160    | D6460 |
| 0 to 600 psi         | D0264    | D0664        | D1264   | D5264 | D5664   | D6164    | D6464 |
| 0 to 1,000 psi       |          |              |         | D5272 | D5672   | D6172    | D6472 |
| 0 to 1,500 psi       |          |              |         | D5274 | D5674   | D6174    | D6474 |
| 0 to 2,000 psi       |          |              |         | D5276 | D5676   | D6176    | D6476 |
| 0 to 3,000 psi       |          |              |         | D5278 | D5678   | D6178    | D6478 |
| 0 to 5,000 psi       |          |              |         | D5282 | D5682   | D6182    | D6482 |
| 0 to 10,000 psi      |          |              |         | D5290 | D5690   | D6190    | D6490 |

# **Precision Service**



## **SPECIFICATIONS**

ACCURACY ASME Grade  $2A - \pm 0.5\%$  of range across full scale CASE SIZE 4½" diameter **CASE MATERIAL** Steel, Black Painted CASE STYLE F - Front Flanged with U-clamp and hinged ring (LBM) P – Plain Case Lower Mount (LM) **TUBE & SOCKET** Copper alloy or 316 Stainless Steel MOVEMENT **Stainless Steel** CONNECTION <u>¼ or</u> ½ NPT **BANGES** O to 30" Hg VAC; Compound 30" Hg to 60 psi; 15 to 10,000 psi **DIAL STANDARD** single scale psi **DIAL COLOR** Black markings on white with mirror dial to avoid parallax POINTER Aluminum, black painted, micro-adjustable, knife-edge WINDOW Instrument Glass PRESSURE RELIEF Blowout plug WEIGHT 3.0 lb.



# **Precision Service**

| Dial Divisions           | Test Gauge<br>0.50% of Span |                     |     |                    |  |
|--------------------------|-----------------------------|---------------------|-----|--------------------|--|
| Ranges                   |                             | Figure<br>Intervals |     | nor<br>dua-<br>ins |  |
| Vacuum                   | 2                           | 2                   | 0   | .1                 |  |
| COMPOUND                 |                             |                     |     |                    |  |
| 30" Hg VAC<br>to 15 psi  | 5                           | 3                   | 0.2 | 0.1                |  |
| 30" Hg VAC<br>to 30 psi  | 10                          | 5                   | 0.5 | 0.1                |  |
| 30" Hg VAC<br>to 60 psi  | 10                          | 10 5                |     | 0.2                |  |
| 30" Hg VAC<br>to 150 psi | 30 10                       |                     | 2   | 0.5                |  |
| 30" Hg VAC<br>to 300 psi | 30                          | 30                  | 5   | 1                  |  |
| PRESSURE                 |                             |                     |     |                    |  |
| O to 15 psi              | 1                           | l                   | 0.  | 05                 |  |
| 0 to 30 psi              | 2                           | 2                   | 0.1 |                    |  |
| 0 to 60 psi              | Ę                           | j                   | 0.2 |                    |  |
| 0 to 100 psi             | 1                           | 0                   | 0.5 |                    |  |
| O to 160 psi             | 1                           | 0                   | 0.5 |                    |  |
| 0 to 200 psi             | 2                           | 0                   | 1   |                    |  |
| 0 to 300 psi             | 5                           | 0                   | 1   |                    |  |
| 0 to 400 psi             | 5                           | 0                   |     | 2                  |  |
| 0 to 600 psi             | 5                           | 0                   |     | 2                  |  |
|                          | HIGH PRESSURE               |                     |     |                    |  |
| 0 to 1,000 psi           | 10                          |                     |     | 5                  |  |
| 0 to 1,500 psi           | 100                         |                     |     | 5                  |  |
| 0 to 2,000 psi           | 200                         |                     | -   | 0                  |  |
| 0 to 3,000 psi           | 500                         |                     | -   | 0                  |  |
| 0 to 4,000 psi           | 50                          |                     |     | 0                  |  |
| 0 to 5,000 psi           | 50                          |                     |     | 0                  |  |
| 0 to 10,000 psi          | 1,0                         | 00                  | 5   | 0                  |  |

**TEST GAUGE OPTIONS** OPTION TYPE SUFFIX **AVAILABLE ON MODELS** Restrictors Add restrictor Н All ranges **Catalog Dials** See Marsh Price List for minimum bar only L1 kg/cm² only L2 kPa only L3 MPa only L4 psi & bar W1 psi & kg/cm<sup>2</sup> W2 psi & kPa W3 psi & MPa W4 **Custom Dials** Logo or Custom Face М All models - consult factory Window 4½" Acrylic (AY) F2

F3

J1

J2

J3

4%"

**Consult Factory** 

800-876-0036

847-356-0566

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www.mmcontrol.com/marsh.php

Safety Glass (SG)

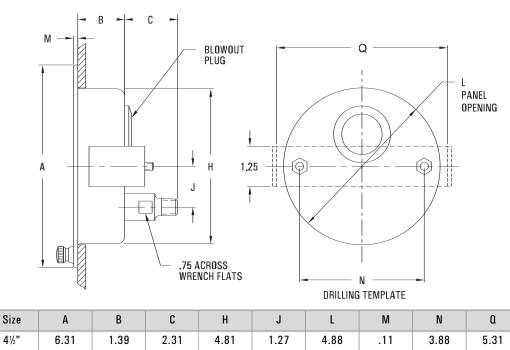
4½" Polypropylene (TR)

4½" Aluminum Back Flange

4½" Aluminum Front Flange

| CASE | PATTERNS | &  | DIMENSIONS |
|------|----------|----|------------|
| ONOL | TATIENNO | u. | DIMENSION  |

Cases



ALL DIMENSIONS ARE NOMINAL

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# **Precision Service**

# MASTER TEST GAUGE (Series 'D')

- Knife-Edge Pointer with Mirror Dial
- External Dial Adjustment
- Dial Size: 6"
- Ranges to 10,000 psi

Marsh Master Test Gauges are used in precision laboratory applications and industrial environments where precise accuracy is demanded. For pressure readings to 10,000 psi, Marsh Master Test Gauges offer dependable, consistent accuracy within  $\pm 0.25\%$  of span, meeting all requirements of ASME Grade 3A specifications. The pressure relieving blowout plug provides the increased safety required for potentially dangerous applications.

Typical applications include lab's, universities, automotive testing, government test facilities and pharmaceutical.

| ГҮРЕ                  | MASTER TEST     | GAUGES |
|-----------------------|-----------------|--------|
| Size                  | 6" (160mm)      |        |
| Case Material         | Stainless Steel |        |
| Internals             | Copper Alloy    |        |
| Mounting / Case Style | LM              | LM     |
| Connection            | 14 NPT          | ½ NPT  |
| Scale Standard        | psi             | psi    |
| O to 30" Hg VAC       | D31405          |        |
| 30" Hg VAC to 15 psi  | D31410          |        |
| 30" Hg VAC to 30 psi  | D31412          |        |
| 30" Hg VAC to 60 psi  | D31414          |        |
| O to 15 psi           | D31440          |        |
| 0 to 30 psi           | D31442          |        |
| 0 to 60 psi           | D31446          |        |
| 0 to 100 psi          | D31448          |        |
| 0 to 160 psi          | D31452          |        |
| 0 to 200 psi          | D31454          |        |
| 0 to 300 psi          | D31458          |        |
| 0 to 400 psi          | D31460          |        |
| 0 to 600 psi          | D31464          |        |
| 0 to 1,000 psi        |                 | D31472 |
| 0 to 1,500 psi        |                 | D31474 |
| 0 to 2,000 psi        |                 | D31476 |
| 0 to 3,000 psi        |                 | D31478 |
| 0 to 5,000 psi        |                 | D31482 |
| 0 to 10,000 psi       |                 | D31490 |



## **SPECIFICATIONS**

ACCURACY ASME Grade 3A -  $\pm 0.25\%$  of range across full scale CASE SIZE 6" (160mm) diameter CASE MATERIAL 304 Stainless Steel CASE STYLE LM-Lower Mount TUBE & SOCKET Copper alloy MOVEMENT **Stainless Steel** CONNECTION ¼" NPT through 600 psi ½" NPT 1000 psi & above RANGES 0 to 30" Hg VAC; Compound 30" Hg to 60 psi; 15 to 10,000 psi **DIAL STANDARD** Single scale psi **DIAL COLOR** Black markings on white with mirror dial to avoid parallax **POINTER** Aluminum, black painted, knife-edge WINDOW **Instrument Glass** PRESSURE RELIEF Blowout plug WEIGHT 5.0 lb.

ALL DIMENSIONS ARE NOMINAL

MARSHI — 🕬

# TWISTED BLACK POINTER

| MASTER TEST GA | MASTER TEST GAUGE OPTIONS |        |                     |  |  |  |  |  |  |  |
|----------------|---------------------------|--------|---------------------|--|--|--|--|--|--|--|
| OPTION         | ТҮРЕ                      | SUFFIX | AVAILABLE ON MODELS |  |  |  |  |  |  |  |
|                | bar only                  | L1     |                     |  |  |  |  |  |  |  |
|                | kg/cm² only               | L2     |                     |  |  |  |  |  |  |  |
|                | kPa only                  | L3     |                     |  |  |  |  |  |  |  |
| Catalan Diala  | MPa only                  | L4     |                     |  |  |  |  |  |  |  |
| Catalog Dials  | psi & bar                 | W1     | -                   |  |  |  |  |  |  |  |
|                | psi & kg/cm²              | W2     | Consult Eastery     |  |  |  |  |  |  |  |
|                | psi & kPa                 | W3     | Consult Factory     |  |  |  |  |  |  |  |
|                | psi & MPa                 | W4     |                     |  |  |  |  |  |  |  |
| Custom Dials   | Logo or Custom Face       | М      |                     |  |  |  |  |  |  |  |
| Window         | Acrylic (AY)              | F2     |                     |  |  |  |  |  |  |  |
| WIIIUUW        | Safety Glass (SG)         | F3     |                     |  |  |  |  |  |  |  |
| Tube & Socket  | Stainless Steel           |        |                     |  |  |  |  |  |  |  |

# Precision Service

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## **INSPECTOR'S TEST GAUGE**

- 3" Dial
- Vacuum to 1,000 psi Range
- Recalibrator on Dial Face
- ASME Grade 2A Accuracy

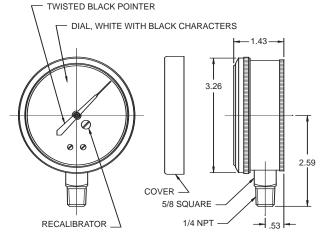
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Marsh Inspector's Test Gauges are specifically designed for use by steam boiler, air brake and pressure system inspectors. The rugged 3" Inspector's Test Gauge features a nickel-plated case and an accuracy of  $\pm 0.5\%$  of span. The bushed Mastergauge movement with Recalibrator is standard for these gauges. Mating parts are of dissimilar metals to prevent seizing. Bearing sleeves are of bronze, and the sector is brass.

Typical applications include steam boiler, air brakes, pressure system inspectors, and for use on other testing applications.

## STANDARD RANGES & PART NUMBERS

| ТҮР          | ΡE                  | INSPECTOR'S TEST GAUGES |
|--------------|---------------------|-------------------------|
| , Size       | )                   | 3"                      |
| of span Cas  | e Material          | Nickel Plated Brass     |
| Inte         | rnals               | Copper Alloy            |
| Μοι          | unting / Case Style | LM                      |
| Con          | nection             | ¼ NPT                   |
| Sca          | le Standard         | psi/kPa                 |
| O to         | o 30" Hg VAC        | D1505                   |
| ed ring O to | o 15 psi            | D1540                   |
| O to         | o 30 psi            | D1542                   |
| O to         | o 60 psi            | D1546                   |
| O to         | o 100 psi           | D1548                   |
| O to         | ) 160 psi           | D1552                   |
| O to         | o 200 psi           | D1554                   |
| O to         | o 300 psi           | D1558                   |
| O to         | o 600 psi           | D1564                   |
|              | o 1,000 psi         | D1572                   |



INSPECTOR'S TEST GAUGE OPTIONS OPTION ΤΥΡΕ SUFFIX **AVAILABLE ON MODELS** Restrictors Add restrictor Н All ranges Ε psi only bar only L1 L2 kg/cm<sup>2</sup> only kPa only L3 **Catalog Dials** See Marsh Price List for minimum MPa only L4 psi & bar W1 psi & kg/cm<sup>2</sup> W2 W4 psi & MPa М **Custom Dials** Logo or Custom Face All models - consult factory

#### ASME Grade 2A – ±0.5° across full scale

SPECIFICA ACCURACY

CASE SIZES 3" diameter CASE MATERIA Brass, Nickel Pl CASE STYLE Lower Mount w TUBE & SOCKE Copper alloy MOVEMENT Brass RECALIBRATO Standard CONNECTION 1/4 NPT RANGES 0 to 30" Hg VAC; 15 to 1,000 psi **DIAL STANDARD** Dual Scale psi/kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted, knife-edge WINDOW **Beveled** glass **PROTECTIVE COVER** Opaque plastic lens cover WEIGHT 2.0 lb.

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# Process Gauges

# PROCESS GAUGE

- 4½" and 6" Dials
- 4 Safecase Designs
- Pressure Ranges Vacuum to 20,000 psi
- Dry or Liquid Filled
- Micrometer Pointer

Marsh Process Gauges are the industry standard in performance. With over 125 years of proven experience, Marsh offers the most complete line of process instrumentation in the industry. An extensive list of designs and options makes the Marsh line of Process Gauges the intelligent and practical choice in process instrumentation. All case styles feature safecase solid-front construction.

Typical applications include chemical and petroleum chemical processes, compressors, power plants and oil platforms.

## STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | PROCESS GA | AUGES  |          |       |               |          |  |
|-----------------------|------------|--------|----------|-------|---------------|----------|--|
| Size                  |            | 4      | 1/2"     |       | 4             | 6"       |  |
| Case Material         |            | Polypr | opylene  |       | Polypropylene |          |  |
| Internals             |            | Coppe  | er Alloy |       | Stainles      | ss Steel |  |
| Mounting              | LM         | LBM    | LM       | LBM   | LM            | LBM      |  |
| Case Style            | Т          | Т      | T        | Т     | Т             | Т        |  |
| Connection            | 1/4 NPT    | ¼ NPT  | 1/2 NPT  | ½ NPT | ¼ NPT         | ¼ NPT    |  |
| Scale Standard        | psi        | psi    | psi      | psi   | psi           | psi      |  |
| O to 30" Hg VAC       | P0105      | P0205  | P0505    | P0605 | P5105         | P5205    |  |
| 30" Hg VAC to 15 psi  | P0110      | P0210  | P0510    | P0610 | P5110         | P5210    |  |
| 30" Hg VAC to 30 psi  | P0112      | P0212  | P0512    | P0612 | P5112         | P5212    |  |
| 30" Hg VAC to 60 psi  | P0114      | P0214  |          | P0614 | P5114         | P5214    |  |
| 30" Hg VAC to 100 psi | P0116      | P0216  | P0516    | P0616 | P5116         | P5216    |  |
| 30" Hg VAC to 200 psi | P0120      | P0220  | P0520    | P0620 | P5120         | P5220    |  |
| 30" Hg VAC to 300 psi | P0124      | P0224  | P0524    | P0624 | P5124         | P5224    |  |
| O to 15 psi           | P0140      | P0240  | P0540    | P0640 | P5140         | P5240    |  |
| 0 to 30 psi           | P0142      | P0242  | P0542    | P0642 | P5142         | P5242    |  |
| 0 to 60 psi           | P0146      | P0246  | P0546    | P0646 | P5146         | P5246    |  |
| 0 to 100 psi          | P0148      | P0248  | P0548    | P0648 | P5148         | P5248    |  |
| 0 to 160 psi          | P0152      | P0252  | P0552    | P0652 | P5152         | P5252    |  |
| 0 to 200 psi          | P0154      | P0254  | P0554    | P0654 | P5154         | P5254    |  |
| 0 to 300 psi          | P0158      | P0258  | P0558    | P0658 | P5158         | P5258    |  |
| 0 to 400 psi          | P0160      | P0260  | P0560    | P0660 | P5160         | P5260    |  |
| 0 to 600 psi          | P0164      | P0264  | P0564    | P0664 | P5164         | P5264    |  |
| 0 to 1,000 psi        | P0168      | P0268  | P0568    | P0668 | P5168         | P5268    |  |
| 0 to 1,500 psi        |            |        | P0574    |       | P5174         | P5274    |  |
| 0 to 2,000 psi        |            |        | P0576    |       | P5176         | P5276    |  |
| 0 to 3,000 psi        |            |        | P0578    |       | P5178         | P5278    |  |
| 0 to 5,000 psi        |            |        | P0582    |       | P5182         | P5282    |  |
| 0 to 10,000 psi       |            |        | P0590    |       | P5190         | P5290    |  |
| 0 to 15,000 psi       |            |        |          |       | P5192         | P5292    |  |
| 0 to 20,000 psi       |            |        |          |       | P5194         | P5294    |  |

Add "P" Suffix to P/N for Liquid Filling with Glycerine, add "P1" for Silicone.

NOTE: Lower back mount gauges are not fillable

NOTE:

Items are available on special order. However, minimums and lead times apply. Consult factory.



## **SPECIFICATIONS**

ACCURACY ASME Grade  $2A - \pm 0.5\%$  of full scale CASE SIZES 4½" and 6" diameter CASE MATERIAL Safecase polypropylene (turret style only) & safecase aluminum CASE STYLE 4½": G - Back flanged case (aluminum) H - Front flange hinged ring (aluminum) T – Turret (polypropylene) 6": G - Back flanged case TUBE & SOCKET Copper alloy or 316 stainless steel MOVEMENT Stainless Steel CONNECTION 1/4 or 1/2 NPT LM -Lower Mount LBM – Lower Back Mount RANGES 0 to 30" Hg VAC; Compound 30" Hg VAC to 300 psi; 15 to 20,000 psi **DIAL STANDARD** Single Scale psi **DIAL COLOR** Black markings on white POINTER Aluminum, black painted, micro-adjustable WINDOW Acrylic FILL MEDIUM Dry or filled. Note: ALL 41/2" lower mount Process Gauges are fieldfillable. Optional factory filled glycerine or silicone SAFECASE Safecase construction standard on all Process Gauges VENT Internal compensating diaphragm WEIGHT Aluminum 5.0 lb. Dry 3.0 lb. Dry Polypropylene Aluminum 6.0 lb. Filled Polypropylene 4.0 lb. Filled



# Process Gauges

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| ТҮРЕ                  | PROCESS G | AUGES - S | TANDARD R | ANGES & P | ART NUMBE | RS      |         |        |                 |             |
|-----------------------|-----------|-----------|-----------|-----------|-----------|---------|---------|--------|-----------------|-------------|
| Size                  | 4         | ½"        |           |           | 43        | 2"      |         |        | 4               | <u>/</u> 2" |
| Case Material         | Polypro   | opylene   |           |           | Alum      | iinum   |         |        | Aluminum        |             |
| Internals             | Stainle   | ss Steel  |           |           | Coppe     | r Alloy |         |        | Stainless Steel |             |
| Mounting              | LM        | LBM       | LM        | LM        | LBM       | LBM     | LBM     | LBM    | LM              | LM          |
| Case Style            | Т         | Т         | G         | G         | G         | G       | Н       | Н      | G               | G           |
| Connection            | ½ NPT     | ½ NPT     | 1/4 NPT   | ½ NPT     | ¼ NPT     | ½ NPT   | 1/4 NPT | ½ NPT  | 14 NPT          | ½ NPT       |
| Scale Standard        | psi       | psi       | psi       | psi       | psi       | psi     | psi     | psi    | psi             | psi         |
| O to 30" Hg VAC       | P5605     | P5705     | P10005    | P10505    | P11005    | P11505  | P16005  | P16505 | P14005          | P14505      |
| 30" Hg VAC to 15 psi  | P5610     | P5710     | P10010    | P10510    | P11010    | P11510  | P16010  | P16510 | P14010          | P14510      |
| 30" Hg VAC to 30 psi  | P5612     | P5712     | P10012    | P10512    | P11012    | P11512  | P16012  | P16512 | P14012          | P14512      |
| 30" Hg VAC to 60 psi  | P5614     | P5714     | P10014    | P10514    | P11014    | P11514  | P16014  | P16514 | P14014          | P14514      |
| 30" Hg VAC to 100 psi | P5616     | P5716     | P10016    | P10516    | P11016    | P11516  | P16016  | P16516 | P14016          | P14516      |
| 30" Hg VAC to 200 psi | P5620     | P5720     | P10020    | P10520    | P11020    | P11520  | P16020  | P16520 |                 |             |
| 30" Hg VAC to 300 psi | P5624     | P5724     | P10024    | P10524    | P11024    | P11524  | P16024  | P16524 |                 |             |
| O to 15 psi           | P5640     | P5740     | P10040    | P10540    | P11040    | P11540  | P16040  | P16540 | P14040          | P14540      |
| O to 30 psi           | P5642     | P5742     | P10042    | P10542    | P11042    | P11542  | P16042  | P16542 | P14042          | P14542      |
| O to 60 psi           | P5646     | P5746     | P10046    | P10546    | P11046    | P11546  | P16046  | P16546 | P14046          | P14546      |
| 0 to 100 psi          | P5648     | P5748     | P10048    | P10548    | P11048    | P11548  | P16048  | P16548 | P14048          | P14548      |
| 0 to 160 psi          | P5652     | P5752     | P10052    | P10552    | P11052    | P11552  | P16052  | P16552 | P14052          | P14552      |
| 0 to 200 psi          | P5654     | P5754     | P10054    | P10554    | P11054    | P11554  | P16054  | P16554 | P14054          | P14554      |
| 0 to 300 psi          | P5658     | P5758     | P10058    | P10558    | P11058    | P11558  | P16058  | P16558 | P14058          | P14558      |
| 0 to 400 psi          | P5660     | P5760     | P10060    | P10560    | P11060    | P11560  | P16060  | P16560 | P14060          | P14560      |
| 0 to 600 psi          | P5664     | P5764     | P10064    | P10564    | P11064    | P11564  | P16064  | P16564 | P14064          | P14564      |
| 0 to 1,000 psi        | P5668     | P5768     | P10068    | P10568    | P11068    | P11568  | P16068  | P16568 | P14068          | P14568      |
| 0 to 1,500 psi        | P5674     | P5774     |           |           |           |         |         |        |                 | P14574      |
| 0 to 2,000 psi        | P5676     | P5776     |           |           |           |         |         |        |                 | P14576      |
| 0 to 3,000 psi        | P5678     | P5778     |           |           |           |         |         |        |                 | P14578      |
| 0 to 5,000 psi        | P5682     | P5782     |           |           |           |         |         |        |                 | P14582      |
| 0 to 10,000 psi       | P5690     | P5790     |           |           |           |         |         |        |                 | P14590      |
| 0 to 15,000 psi       | P5692     | P5792     |           |           |           |         |         |        |                 | P14592      |
| 0 to 20,000 psi       | P5694     | P5794     |           |           |           |         |         |        |                 | P14594      |

| Size                  |        | 4        | 2"       |        | 6"           |        |        |        |                 | 6"     |        |        |  |
|-----------------------|--------|----------|----------|--------|--------------|--------|--------|--------|-----------------|--------|--------|--------|--|
| Case Material         |        | Alum     | iinum    |        | Aluminum     |        |        |        | Aluminum        |        |        |        |  |
| Internals             |        | Stainles | ss Steel |        | Copper Alloy |        |        |        | Stainless Steel |        |        |        |  |
| Mounting              | LBM    | LBM      | LBM      | LBM    | LM           | LM     | LBM    | LBM    | LM              | LM     | LBM    | LBM    |  |
| Case Style            | G      | G        | Н        | Н      | G            | G      | G      | G      | G               | G      | G      | G      |  |
| Connection            | ¼ NPT  | ½ NPT    | ¼ NPT    | ½ NPT  | ¼ NPT        | ½ NPT  | ¼ NPT  | ½ NPT  | ¼ NPT           | ½ NPT  | ¼ NPT  | ½ NPT  |  |
| Scale Standard        | psi    | psi      | psi      | psi    | psi          | psi    | psi    | psi    | psi             | psi    | psi    | psi    |  |
| O to 30" Hg VAC       | P15005 | P15505   | P18005   | P18505 | P20005       | P20505 | P21005 | P21505 | P24005          | P24505 | P25005 | P25505 |  |
| 30" Hg VAC to 15 psi  | P15010 | P15510   | P18010   | P18510 | P20010       | P20510 | P21010 | P21510 | P24010          |        | P25010 | P25510 |  |
| 30" Hg VAC to 30 psi  | P15012 | P15512   | P18012   | P18512 | P20012       | P20512 | P21012 | P21512 | P24012          | P24512 | P25012 | P25512 |  |
| 30" Hg VAC to 60 psi  | P15014 | P15514   | P18014   | P18514 | P20014       | P20514 | P21014 | P21514 | P24014          | P24514 | P25014 | P25514 |  |
| 30" Hg VAC to 100 psi | P15016 | P15516   | P18016   | P18516 | P20016       | P20516 | P21016 | P21516 | P24016          | P24516 | P25016 | P25516 |  |
| 30" Hg VAC to 200 psi | P15020 | P15520   | P18020   | P18520 |              |        |        |        |                 |        |        |        |  |
| 30" Hg VAC to 300 psi | P15024 | P15524   | P18024   | P18524 |              |        |        |        |                 |        |        |        |  |
| O to 15 psi           | P15040 | P15540   | P18040   | P18540 | P20040       | P20540 | P21040 | P21540 | P24040          | P24540 | P25040 | P25540 |  |
| 0 to 30 psi           | P15042 | P15542   | P18042   | P18542 | P20042       | P20542 | P21042 | P21542 | P24042          | P24542 | P25042 | P25542 |  |
| 0 to 60 psi           | P15046 | P15546   | P18046   | P18546 | P20046       | P20546 | P21046 | P21546 | P24046          | P24546 | P25046 | P25546 |  |
| 0 to 100 psi          | P15048 | P15548   | P18048   | P18548 | P20048       | P20548 | P21048 | P21548 | P24048          | P24548 | P25048 | P25548 |  |
| 0 to 160 psi          | P15052 | P15552   | P18052   | P18552 | P20052       | P20552 | P21052 | P21552 | P24052          | P24552 | P25052 | P25552 |  |
| 0 to 200 psi          | P15054 | P15554   | P18054   | P18554 | P20054       | P20554 | P21054 | P21554 | P24054          | P24554 | P25054 | P25554 |  |
| 0 to 300 psi          | P15058 | P15558   | P18058   | P18558 | P20058       | P20558 | P21058 | P21558 | P24058          | P24558 | P25058 | P25558 |  |
| 0 to 400 psi          | P15060 | P15560   | P18060   | P18560 | P20060       | P20560 | P21060 | P21560 | P24060          | P24560 | P25060 | P25560 |  |
| 0 to 600 psi          | P15064 | P15564   | P18064   | P18564 | P20064       | P20564 | P21064 | P21564 | P24064          | P24564 | P25064 | P25564 |  |
| 0 to 1,000 psi        | P15068 | P15568   | P18068   | P18568 | P20068       | P20568 | P21068 | P21568 | P24068          | P24568 | P25068 | P25568 |  |
| 0 to 1,500 psi        | P15074 | P15574   | P18074   | P18574 |              |        |        |        | P24074          | P24574 | P25074 | P25574 |  |
| 0 to 2,000 psi        | P15076 | P15576   | P18076   | P18576 |              |        |        |        | P24076          | P24576 | P25076 | P25576 |  |
| 0 to 3,000 psi        | P15078 | P15578   | P18078   | P18578 |              |        |        |        | P24078          | P24578 | P25078 | P25578 |  |
| 0 to 5,000 psi        | P15082 | P15582   | P18082   | P18582 |              |        |        |        | P24082          | P24582 | P25082 | P25582 |  |
| 0 to 10,000 psi       | P15090 | P15590   | P18090   | P18590 |              |        |        |        | P24090          | P24590 | P25090 | P25590 |  |
| 0 to 15,000 psi       | P15092 | P15592   | P18092   | P18592 |              |        |        |        | P24092          | P24592 | P25092 | P25592 |  |
| 0 to 20,000 psi       | P15094 | P15594   | P18094   | P18594 |              |        |        |        | P24094          | P24594 | P25094 | P25594 |  |



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# Process Gauges



TURRET CASE "T"

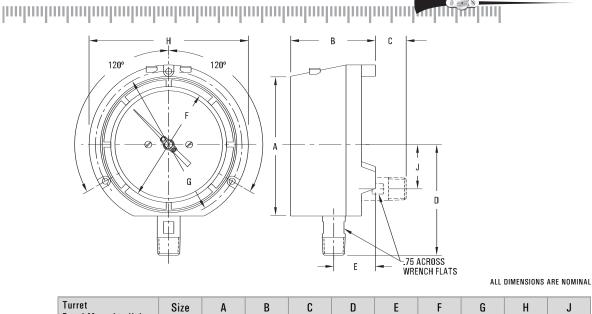
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ALL DIMENSIONS ARE NOMINAL

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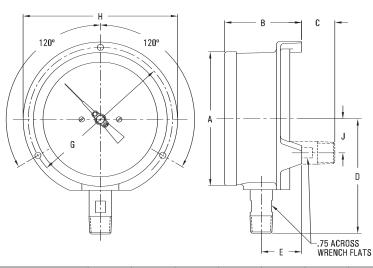
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BACK FLANGE CASE "G"



FRONT FLANGE CASE "H"



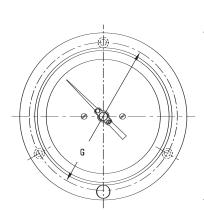
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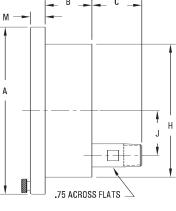
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4½"

Panel Mounting Holes 0.22

|              | Size | Α    | В    | C    | D    | E    | G    | Н    | J    | 23  |
|--------------|------|------|------|------|------|------|------|------|------|-----|
| Back Flanged | 4½"  | 4.94 | 2.88 | 1.19 | 4.28 | 1.50 | 5.38 | 5.78 | 1.27 | .23 |
|              | 6"   | 6.63 | 2.88 | 1.19 | 4.97 | 1.50 | 7.00 | 7.50 | 1.27 | .28 |





|   | I           |      |      |      |      |      | ALL DIMENSIO | NS ARE NOMINAL |
|---|-------------|------|------|------|------|------|--------------|----------------|
| Front Flanged Panel<br>Mounting Holes<br>0.23 | Size        | Α    | В    | C    | G    | Н    | J            | М              |
|   | <b>4</b> ½" | 6.08 | 1.70 | 1.88 | 5.38 | 4.88 | 1.27         | 0.54           |

MA

# Process Gauges



| Dial Divisions           | Process Gauge<br>Series "P"<br>0.5% of Span |      |                           |     |  |
|--------------------------|---|------|---------------------------|-----|--|
| Ranges                   | Fig<br>Inter                                | vals | Minor<br>Gradua-<br>tions |     |  |
| Vacuum                   | 3   | }    | 0                         | .2  |  |
| COMPOUND                 |   |      |                           |     |  |
| 30" Hg VAC<br>to 15 psi  | 5   | 3    | 0.5                       | 0.2 |  |
| 30" Hg VAC<br>to 30 psi  | 10  | 5    | 1                         | 0.5 |  |
| 30" Hg VAC<br>to 60 psi  | 10  | 10   | 1                         | 0.5 |  |
| 30" Hg VAC<br>to 150 psi | 30  | 30   | 2                         | 1   |  |
| 30" Hg VAC<br>to 300 psi | 30  | 30   | 5                         | 2   |  |
| PRESSURE                 |   |      |                           |     |  |
| O to 15 psi              | 1   |      | 0                         | .1  |  |
| 0 to 30 psi              | 5   | i    | 0                         | .2  |  |
| O to 60 psi              | 5   |      | 0.5                       |     |  |
| 0 to 100 psi             | 1   | 0    | 1                         |     |  |
| 0 to 160 psi             | 2   | 0    | 1                         |     |  |
| 0 to 200 psi             | 2   | 0    | 2                         |     |  |
| 0 to 300 psi             | 5   | -    | 2                         |     |  |
| 0 to 400 psi             | 5   | 0    |                           | 2   |  |
| 0 to 600 psi             | 5   | 0    |                           | 5   |  |
| HIGH PRESSURE            |   |      |                           |     |  |
| 0 to 1,000 psi           | 10  |      | -                         | 0   |  |
| 0 to 1,500 psi           | 30  |      | -                         | 0   |  |
| 0 to 2,000 psi           | 20  |      |                           | 0   |  |
| 0 to 3,000 psi           | 50  |      |                           | 0   |  |
| 0 to 4,000 psi           | 50  |      |                           | 0   |  |
| 0 to 5,000 psi           | 50  |      |                           | 0   |  |
| 0 to 10,000 psi          | 1,0   |      | -                         | 00  |  |
| 0 to 15,000 psi          | 3,0   |      |                           | 00  |  |
| 0 to 20,000 psi          | 2,0   | UU   | 2                         | 00  |  |

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| PROCESS GAUGE            | OPTIONS                                   |   |  |
|--------------------------|---|---|--|
| OPTION                   | ТҮРЕ                                      | SUFFIX  | AVAILABLE ON MODELS                      |
| Restrictors              | Add restrictor                            | Н   | All ranges                               |
| <b>F</b> 'H <b>NA</b> H' | Glycerine (GL)                            | Р   | 4½" Lower Mount only (all ranges)        |
| Fill Medium              | Silicone (SL)                             | PI  | 4½" Lower Mount only (all ranges)        |
|                          | bar only                                  | L1  |  |
|                          | kg/cm² only                               | L2  |  |
|                          | kPa only                                  | L3  |  |
|                          | MPa only                                  | L4  | Soo Marsh Price List for minimum         |
| Catalog Dials            | psi & bar                                 | W1  |  |
|                          | psi & kg/cm²                              | W2  |  |
|                          | psi & kPa                                 | W3  |  |
|                          | psi & MPa                                 | W4  |  |
|                          | Instrument Glass (GS)                     | F1  | 4½" & 6"                                 |
| Window                   | Safety Glass (SG)                         | HAll rangesP4½" Lower Mount only (all rangePI4½" Lower Mount only (all rangeL14½" Lower Mount only (all rangeL2See Marsh Price List for minimuW1See Marsh Price List for minimuW2W3W3See Marsh Price List for minimuS)F1F34½" & 6"F34½" & 6"J14½"or LBM)JJ4½" (Adjustable pointer only)   | 4½" & 6"                                 |
|                          | Polycarbonate                             | F4  |  |
|                          | Phenolic Turret (PH)                      | J1  | 4½"                                      |
| Cases                    | 4½" Steel Case (LM or LBM)                | J   | 4½" (Adjustable pointer only)            |
| Cases                    | 6" Hinged Ring Steel Case<br>with U-Clamp | estrictor H All ranges<br>rine (GL) P 4½" Lower Mount only<br>ne (SL) PI 4½" Lower Mount only<br>nly L1<br>a <sup>2</sup> only L2<br>nly L3<br>only L4<br>bar W1<br>kg/cm <sup>2</sup> W2<br>kPa W3<br>MPa W4<br>ment Glass (GS) F1 4½" & 6"<br>y Glass (SG) F3 4½" & 6"<br>y Glass (SG) F3 4½" & 6"<br>arbonate F4<br>tice I Case (LM or LBM) J 4½" (Adjustable pointer<br>nged Ring Steel Case J 6" (Adjustable pointer | 6" (Adjustable pointer only)             |
| Custom Dials             | Logo or Custom Face                       | М   | Consult factory for colors and minimums. |

NOTE: 4½" Lower back mount, 6" Lower mount and 6" Lower back are not fillable (only available dry).



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# **DIAPHRAGM GAUGES**

• Dial Sizes: 2½", 3½", 4½"

- Four Case Styles
- Accuracy: ASME B40.1 2/1/2%

Marsh Instruments Low Pressure Diaphragm Gauges are universally known for their dependable performance and accuracy. Incorporating a unique design feature, the diaphragm element in this gauge allows accurate low pressure readings in a variety of applications. Featuring a bronze diaphragm element, the gauge is capable of ASME Grade A-1% accuracy for ranges above 30" of water. Ranges are available in vacuum and pressure in inches of water, ounces per square inch and millimeters of mercury.

Typical applications include HVAC systems and low pressure gas burner systems.

## STANDARD RANGES & PART NUMBERS

| ТҮРЕ   | DIAPHR  | DIAPHRAGM GAUGES |        |             |        |        |        |              |         |
|--|---------|------------------|--------|-------------|--------|--------|--------|--------------|---------|
| Size   |         |                  |        | <b>2</b> ½" |        |        |        | 3½"          | 4½"     |
| Case Material                                    |         |                  |        | Steel       |        |        |        | Steel        |         |
| Internal   |         |                  | (      | copper Allo | у      |        |        | Copper Alloy |         |
| Mounting/Case                                    | LM      | LM               | U      | U           | CB     | CB     | FF     | LM           | LM      |
| Connection                                       | 1/4 NPT | 1% NPT           | ¼ NPT  | 1% NPT      | ¼ NPT  | 1% NPT | ¼ NPT  | 14 NPT       | 1/4 NPT |
| 0 to 10" H <sub>2</sub> 0                        | G22675  | G22711           | G11181 | G11248      | G22747 | G27110 | G11578 | G24608       | G25756  |
| 0 to 15" H <sub>2</sub> 0                        | G24500  | G24503           | G11246 | G11313      | G26504 | G30237 | G11642 | G24631       | G25981  |
| 0 to 30" H <sub>2</sub> 0                        | G22704  | G22740           | G11189 | G11256      | G22776 | G11652 | G11586 | G24625       | G25749  |
| 0 to 60" H <sub>2</sub> 0                        | G22705  | G22741           | G11208 | G11314      | G22777 | G11671 | G11605 | G24626       | G25844  |
| 0 to 100" H <sub>2</sub> 0                       | G22687  | G22723           | G11217 | G11284      | G22759 | G11675 | G11609 | G24613       | G25982  |
| 0 to 160" H <sub>2</sub> 0                       | G22695  | G22731           | G11232 | G11299      | G22767 | G11695 | G11628 | G24617       | G25980  |
| 0 to 200" H <sub>2</sub> 0                       | G22696  | G22732           | G11233 | G11300      | G22768 | G11696 | G33412 | G24618       | G26021  |
| 0 to 300" H <sub>2</sub> 0                       | G22697  | G22733           | G11236 | G11303      | G22769 | G11699 | G33413 | G24619       | G25755  |
| O to 3 psi                                       | G22685  | G22721           | G11215 | G11282      | G22757 | G11678 | G11612 | G24612       | G33414  |
| 0 to 5 psi                                       | G22702  | G22738           | G10623 | G11310      | G22774 | G22810 | G10619 | G24624       | G26018  |
| O to 10 psi                                      | G22699  | G22735           | G11239 | G11306      | G22771 | G11702 | G11635 | G24621       | G25754  |
| 0 to 10 oz/in <sup>2</sup>                       | G22677  | G22713           | G11186 | G11253      | G22749 | G11649 | G11583 | G24609       | G33415  |
| O to 15 oz/in <sup>2</sup>                       | G22680  | G22716           | G11194 | G11261      | G22752 | G11657 | G11591 | G24610       | G25753  |
| 0 to 30 oz/in <sup>2</sup>                       | G24501  | G33404           | G11206 | G11273      | G24504 | G11669 | G11603 | G24632       | G25750  |
| 0 to 60 oz/in <sup>2</sup>                       | G22684  | G22720           | G11213 | G11280      | G22756 | G11676 | G11610 | G24611       | G25757  |
| 0 to 100 oz/in²                                  | G22691  | G22727           | G11226 | G11293      | G22763 | G33411 | G11622 | G24615       | G26025  |
| 0 to 160 oz/in²                                  | G26062  | G33405           | G11237 | G11304      | G33410 | G11700 | G11633 | G26894       | G33416  |
| 8.75 oz/in <sup>2</sup> and 15" H <sub>2</sub> O | G22706  | G22742           | G11185 | G11252      | G22778 | G11648 | G11582 | G24627       | G33417  |
| 20 oz/in <sup>2</sup> and 35" H <sub>2</sub> O   | G22709  | G22745           | G11200 | G11267      | G22781 | G11663 | G11597 | G24629       | G25748  |
| 32 oz/in <sup>2</sup> and 55" H <sub>2</sub> O   | G22707  | G22743           | G11195 | G11262      | G22779 | G11658 | G11592 | G24628       | G25984  |
| 58 oz/in <sup>2</sup> and 100" H <sub>2</sub> O  | G22710  | G22746           | G11214 | G11281      | G22782 | G22947 | G11611 | G24630       | G33418  |
| 0 to 15" H <sub>2</sub> 0 VAC                    | G22912  | G33406           | G11873 | G11906      | G22942 | G12104 | G12071 | G24708       | G26023  |
| 0 to 30" H <sub>2</sub> 0 VAC                    | G22914  | G29804           | G11876 | G11909      | G22944 | G12107 | G12074 | G24709       | G26020  |
| 0 to 60" H <sub>2</sub> 0 VAC                    | G22918  | G33407           | G11884 | G11917      | G22948 | G12115 | G12082 | G24710       | G26016  |
| 0 to 100" H <sub>2</sub> 0 VAC                   | G24502  | G26962           | G11885 | G11918      | G22949 | G12116 | G12083 | G24716       | G26019  |
| 0 to 200" H <sub>2</sub> 0 VAC                   | G22921  | G33409           | G11892 | G11925      | G22951 | G12123 | G12090 | G24711       | G33420  |

NOTE:

Items are available on special order. However, minimums and lead times apply. Consult factory.



## SPECIFICATIONS

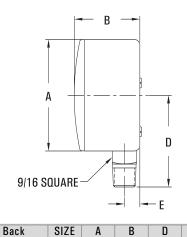
ACCURACY For ranges 30" H<sub>2</sub>O & above: ASME Grade A =  $\pm 2/1/2\%$  ( $\pm 1\%$ of range across middle half of scale). For ranges below 30" H20:  $\pm 3/1/3\%$  ( $\pm 1\%$  of range across middle half of scale) CASE SIZES 2½", 3½", 4½" diameter CASE MATERIAL Steel, black painted CASE STYLE CB – Center Back Mount FF - Three-holed Front Flanged Mount LM – Lower Mount UC – U-Clamp Mount DIAPHRAGM & SOCKET Phosphor bronze diaphragm soft-soldered to brass socket MOVEMENT Brass sector and pinion CONNECTION % & ¼ NPT **DIAI STANDARD** Dual Scale with kPa Triple Scale: oz/in<sup>2</sup>, in H<sub>2</sub>O, & kPa **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW 21/2" & 31/2": Acrylic twist-in Clearlok 41/2": flat acrylic with steel friction ring RESTRICTOR 0.013" standard. No restrictor on 0 to 10" H<sub>2</sub>O range WEIGHT 2½" 3½" 0.5 lb. 0.7 lb. 41/2" 1.0 lb.

# Diaphragm



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| DIAPHRAGM GAUGE OPTIONS |   |  |  |  |  |  |
|-------------------------|---|--|--|--|--|--|
| OPTION                  | ТҮРЕ  | AVAILABLE ON MODELS                      |  |  |  |  |
| Window                  | Acrylic (knurled edge)                          | all models                               |  |  |  |  |
| Restrictors             | 0.008 Restrictor                                | all models                               |  |  |  |  |
|                         | 0.016 Restrictor                                |  |  |  |  |  |
|                         | 0.018 Restrictor                                |  |  |  |  |  |
|                         | 0.025 Restrictor                                |  |  |  |  |  |
| Ring                    | Press ring, chrome                              | 2½" to 3½" Panel Mount                   |  |  |  |  |
| Ring / Window           | Glass & Black Steel Ring                        | 2½" to 3½" all models                    |  |  |  |  |
| Cases                   | Stainless Steel                                 | 2½"- Lower Mount or Panel Mount          |  |  |  |  |
|                         | Brass   | 2½"- Lower Mount or Centerback           |  |  |  |  |
|                         | Chrome plated                                   | Lower Mount or Centerback                |  |  |  |  |
| 3½" Case                | Center Back (CB)                                | 3½"                                      |  |  |  |  |
|                         | U-Clamp (UC)                                    | 3½"                                      |  |  |  |  |
| Connections             | Hose Barb (%" OD & ¼" OD)                       | All models (10 pc. minimum)              |  |  |  |  |
| Compound Ranges         | Vacuum & Pressure<br>with front zero adjustment | All models (10 pc. minimum)              |  |  |  |  |
| Custom Dials            | Logo or custom face                             | Consult factory for colors and minimums. |  |  |  |  |



2.63

3.69

|   | (;   <del>_</del> _ | -     |
|---|---------------------|-------|
|   | <b>→</b> B →        |       |
|   |                     |       |
| Α | +++##               |       |
|   | 3 9/16 S            | QUARE |

Size

21/2"

3½"

А

В

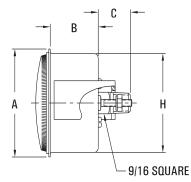
2.63 1.50

3.69 1.59

С

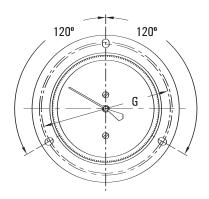
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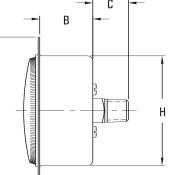
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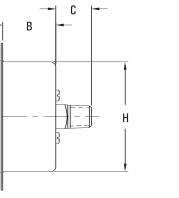
ALL DIMENSIONS ARE NOMINAL

| U-Clamp | Size        | Α    | В    | C   | H    |
|---------|-------------|------|------|-----|------|
|         | 2½"         | 2.81 | 1.25 | .84 | 2.59 |
|         | <b>3</b> ½" | 3.98 | 1.69 | .84 | 3.66 |





Center Back





Α

Ε

.38

.38

.81

2.19

2.72

1.50

1.59

4.78 1.47 3.38

38

Flanged

2½"

3½"

4½"

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### VACUUM CLEANER TEST GAUGE

- Includes 2½" dial size gauge
- Dual Scale: in. H<sub>2</sub>O & kPa vacuum
- Complete with rubber plug to fit vacuum cleaner intake opening

| ТҮРЕ                       | 82K      |
|----------------------------|----------|
| Range                      | Part No. |
| 0 to 60" H <sub>2</sub> 0  | G32426   |
| 0 to 100" H <sub>2</sub> 0 | G24505   |
| 0 to 160" H <sub>2</sub> 0 | G25759   |
| 0 to 200" H <sub>2</sub> 0 | G26098   |

## **GAS PRESSURE TEST SET**

- Includes 2½" dial size gauge
- Provided in grey polyethylene case with 3 ft. of rubber tubing

| ТҮРЕ                         |                            |              | 84K      |
|------------------------------|----------------------------|--------------|----------|
| Range                        |                            |              | Part No. |
| 0 to 15" H <sub>2</sub> 0    |                            | 0 to 4.0 kPa | G28145   |
| 0 to 8.75 oz/in <sup>2</sup> | 0 to 15" H <sub>2</sub> 0  | 0 to 4.0 kPa | G33421   |
| O to 20 oz/in²               | 0 to 30" H <sub>2</sub> 0  | 0 to 8.6 kPa | G24507   |
| O to 58 oz/in²               | 0 to 100" H <sub>2</sub> 0 | 0 to 25 kPa  | G27038   |

| Ranges  | Figure Intervals | Minor Graduations |
|---|------------------|-------------------|
| 0 to 10" H <sub>2</sub> 0   | 1                | 0.1               |
| 0 to 15" H <sub>2</sub> 0   | 3                | 0.2               |
| 0 to 30" H <sub>2</sub> 0   | 5                | 0.5               |
| 0 to 60" H <sub>2</sub> 0   | 10               | 1                 |
| 0 to 100" H <sub>2</sub> 0  | 10               | 1                 |
| 0 to 160" H <sub>2</sub> 0  | 20               | 2                 |
| 0 to 200" H <sub>2</sub> 0  | 20               | 2                 |
| 0 to 300" H <sub>2</sub> 0  | 50               | 5                 |
| O to 3 psi  | 0.5              | 0.05              |
| O to 5 psi  | 1                | 0.1               |
| 0 to 10 psi   | 1                | 0.1               |
| 0 to 10 psi oz/in2  | 1                | 0.1               |
| 0 to 15 psi oz/in2  | 3                | 0.2               |
| 0 to 30 psi oz/in2  | 5                | 0.5               |
| 0 to 60 psi oz/in2  | 10               | 1                 |
| 0 to 100 psi oz/in2   | 10               | 1                 |
| 0 to 160 psi oz/in2   | 20               | 2                 |
| $8.75 \text{ oz/in2}$ and $15^{\prime\prime} \text{ H}_2\text{O}$ | 1/3              | 0.2/0.2           |
| 20 oz/in2 and 35" $\rm H_{2}O$                                    | 4/5              | 0.5/1             |
| 32 oz/in2 and 55" $\rm H_{2}O$                                    | 4/10             | 1/1               |
| 58 oz/in2 and 100" $\rm H_2O$                                     | 10/20            | 1/2               |
| 0 to 15" H <sub>2</sub> 0 VAC                                     | 3                | 0.2               |
| 0 to 30" H <sub>2</sub> 0 VAC                                     | 5                | 0.5               |
| 0 to 60" H <sub>2</sub> 0 VAC                                     | 10               | 1                 |
| 0 to 100" H <sub>2</sub> 0 VAC                                    | 10               | 1                 |
| 0 to 160" H <sub>2</sub> 0 VAC                                    | 20               | 2                 |
| 0 to 200" H <sub>2</sub> 0 VAC                                    | 20               | 2                 |





| SPECIAL MEDICAL GAUGES<br>Consult Factory<br>800-727-5646   |    |
|---|----|
|   |    |
| and and the second s | 39 |

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HVAC/R

ACCURACY

### GAS TEST GAUGE

- Hex or Bell Type mounting
- 15 to100 Psi pressure ranges
- Steel case and brass internals

Use to pressure test all new gas installations for leaks and passing inspection codes. After installing Gas Test Gauge, the system is pressurized with air. Any leakage will be indicated by a pressure drop on the gauge. Typical applications include testing of gas and other pressure media.

#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ           | GAS TEST GAUGES |          |  |
|----------------|-----------------|----------|--|
| Size           | 2"              |          |  |
| Case Material  | Steel           |          |  |
| Internals      | Copper Alloy    |          |  |
| Connection     | 3⁄4" FPT        |          |  |
| Scale Standard | psi             |          |  |
| Mounting style | Bell Type       | Hex Type |  |
| O to 15 psi    | G33522          | G33526   |  |
| 0 to 30 psi    | G33523          | G33527   |  |
| 0 to 60 psi    | G33524          | G33528   |  |
| 0 to 100 psi   | G33525          | G33529   |  |



| ASME Grade $\pm 3/2/3\%(\pm 2\%)$ of range across middle half of scale)                              |
|--|
| CASE SIZES<br>2" diameter  |
| CASE MATERIAL<br>Steel, black painted  |
| MOUNTING STYLE<br>Reducing Bell or Hex Style   |
| HOUSING MATERIAL<br>Reducing Bell: Iron, black painted<br>Hex Body: Steel, Zinc Dichromate<br>Plated |
| TUBE & SOCKET<br>Copper alloy  |
| MOVEMENT<br>Brass  |
| CONNECTION<br>¾" FPT   |
| RANGES<br>15 to 100 psi  |
| DIAL STANDARD<br>Single Scale psi  |
| DIAL COLOR<br>Black markings on white  |
| POINTER<br>Aluminum, black painted   |
| WINDOW<br>Polycarbonate  |
| WEIGHT 0.5 lb.   |

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### SERVICEMAN'S TEST GAUGE

• Recalibrator and Restrictor Standard

- Heavy Duty Brass Case
- Clam Shell Packaging Optional

Marsh Instruments Deluxe Serviceman's Test Gauge is designed to assure the modern serviceman the best possible gauge for testing refrigeration equipment. Corresponding, easy-to-read temperature scales are printed in red on the inner arcs of the dial face.

Typical applications include testing, servicing and recharging AC and R systems.

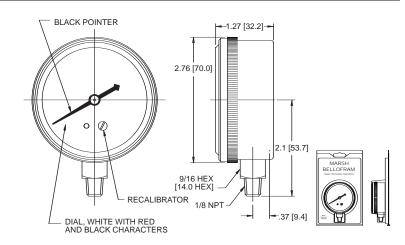
#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ                     | SERVICEMAN'S TEST GAUGES |                            |             |  |  |
|--------------------------|--------------------------|----------------------------|-------------|--|--|
| Size                     | 2½"                      | 2½"                        |             |  |  |
| Case Material            | Brass                    |                            |             |  |  |
| Internals                | Copper Alloy             |                            |             |  |  |
| Mounting/Case Style      | LM                       |                            |             |  |  |
| Connection               | 1/8 NPT                  |                            |             |  |  |
| Scale Standard           | psi & temperature (°F)   | psi & temperature (°F)     |             |  |  |
| 30" X 350 psi            | W0070                    | W0070 R-12, 22, 502 Carton |             |  |  |
| 30" X 350 psi            | W0070Q                   | R-12, 22, 502              | Clam Shell  |  |  |
| 0 to 500 psi             | W0072                    | R-12, 22, 502              | Carton      |  |  |
| 0 to 500 psi             | W0072Q                   | R-12, 22, 502              | Clam Shell  |  |  |
| Set of (2) W0070 & W0072 | W0074                    | R-12, 22, 502              | Carton Only |  |  |
| 30" X 350 psi            | W8070                    | R-134a, 404A, 507          | Carton      |  |  |
| 30" X 350 psi            | W8070Q                   | R-134a, 404A, 507          | Clam Shell  |  |  |
| 0 to 500 psi             | W8072                    | R-134a, 404A, 507          | Carton      |  |  |
| 0 to 500 psi             | W80720                   | R-134a, 404A, 507          | Clam Shell  |  |  |
| 30″ x 500 psi            | W8115                    | R-22, 407C, 410A           | Carton      |  |  |
| 30" x 500 psi            | W8115Q                   | R-22, 407C, 410A           | Clam Shell  |  |  |
| 0 to 800 psi             | W8127                    | R-22, 407C, 410A           | Carton      |  |  |
| 0 to 800 psi             | W81270                   | R-22, 407C, 410A           | Clam Shell  |  |  |



#### SPECIFICATIONS

ACCURACY ASME Grade B  $\pm 3/2/3\%$  ( $\pm 2\%$  of range across middle half of scale) CASE SIZE 2½" diameter CASE MATERIAL Polished brass CASE STYLE LM - Lower Mount **TUBE & SOCKET Copper Alloy** MOVEMENT Brass with recalibrator CONNECTION 1/8 NPT with Restrictor Standard RANGES 0-500 psi, 30" Hq VAC to 120 psi retarded to 350 psi **DIAL STANDARD** psi with corresponding temperature scales **DIAL COLOR** Black markings on white with red or blue temperature scales **POINTER** Aluminum, black painted WINDOW **Beveled** glass RECALIBRATOR Standard WEIGHT 5 lb.





# HVAC/R Gauges



### MANIFOLD GAUGE

- Recalibrator and Restrictor Standard
- Color Coded Cases, "Reds" & "Blues"
- Overpressure Protection to 350 psi

These gauges are designed for the pressure measurement of refrigeration systems. All dials are furnished with corresponding temperature scales for the various refrigerants. Dials feature R-12, R-22, and R-502. Standard connections are  $\frac{1}{8}$  NPT lower mount with your choice of red or blue case.

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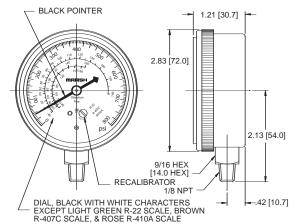
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Marsh Manifold Gauges are used in refrigeration applications for testing, servicing, and recharging AC and R Systems.

#### STANDARD RANGES & PART NUMBERS

| NS                  | ТҮРЕ                | MANIFOLD G     | AUGES              |           |            |               |
|---------------------|---------------------|----------------|--------------------|-----------|------------|---------------|
|                     | Size                | 2½"            |                    |           |            |               |
| 2/3% (2% of         | Case Material       | Steel          |                    |           |            |               |
| alf of scale)       | Internals           | Copper Alloy   |                    |           |            |               |
| eter                | Mounting/Case Style | LM             |                    |           |            |               |
| r blue              | Connection          | 1/8 NPT        |                    |           |            |               |
|                     | Scale Standard      | psi & temperat | ure (°F)           |           |            |               |
|                     | 30" X 350 psi       | W0011          | R-12, 22, 502      | Blue Case | Carton     |               |
|                     | 30" X 350 psi       | W0011Q         | R-12, 22, 502      | Blue Case | Clam Shell | 1             |
| r                   | 0 to 500 psi        | W0023          | R-12, 22, 502      | Red Case  | Carton     |               |
|                     | 0 to 500 psi        | W0023Q         | R-12, 22, 502      | Red Case  | Clam Shell |               |
| Standard            | 30" X 350 psi       | W8011          | R-134a, 404A & 507 | Blue Case | Carton     |               |
| 2 to 100 mol        | 30" X 350 psi       | W8011Q         | R-134a, 404A & 507 | Blue Case | Clam Shell |               |
| C to 120 psi        | 0 to 500 psi        | W8023          | R-134a, 404A & 507 | Red Case  | Carton     |               |
|                     | 0 to 500 psi        | W8023Q         | R-134a, 404A & 507 | Red Case  | Clam Shell | -             |
| temperature         | 30" X 500 psi       | W8015          | R-22, 407C & 410A  | Blue Case | Carton     | -             |
|                     | 30" X 500 psi       | W8015Q         | R-22, 407C & 410A  | Blue Case | Clam Shell | -             |
|                     | 0 to 800 psi        | W8027          | R-22, 407C & 410A  | Red Case  | Carton     | -             |
| te with red<br>ales | 0 to 800 psi        | W8027Q         | R-22, 407C & 410A  | Red Case  | Clam Shell | 1             |
| aits                | 30" X 350 psi       | J7622PQ-001    | R-12, 22, 502      | S/S Case  | Clam Shell | Liquid Filleo |
| ed                  | 0 to 500 psi        | J7662PQ-001    | R-12, 22, 502      | S/S Case  | Clam Shell | Liquid Filleo |
|                     | 30" X 350 psi       | J7622PQ-002    | R-134a, 404A & 507 | S/S Case  | Clam Shell | Liquid Filled |
| ic                  | 0 to 500 psi        | J7662PQ-002    | R-134a, 404A & 507 | S/S Case  | Clam Shell | Liquid Filled |



BELLOFRAM

#### SPECIFICATIONS

ACCURACY ASME Grade  $B - \pm 3/2$ range across middle ha CASE SIZE: 2½" diame CASE MATERIAL Steel or plastic, red or **TUBE & SOCKET** Copper alloy MOVEMENT Brass with recalibrato CONNECTION % NPT with Restrictor RANGES 0 500 psi, 30" Hg VA retarded to 350 psi **DIAL STANDARD** psi with corresponding scales **DIAL COLOR** Black markings on whi or blue temperature sc POINTER Aluminum, black paint WINDOW Impact resistant plasti RECALIBRATOR Standard

WEIGHT 0.5 lb



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#### 800-876-0036 847-356-0566

# HVAC/R Gauges

### **REFRIGERATION AMMONIA GAUGE**

- Range 30" Hg to 150 psi or 300 psi
- Case Sizes: 63mm and 3½"
- ASME Grade B

Marsh Ammonia Gauges include a restrictor that protects the gauge against sudden shock or pulsating pressure. The inner dial arc shows pressure, outer arc shows the corresponding temperature scale. Marsh Refrigeration Ammonia Gauges are available in a stainless steel case.

Marsh Instruments Refrigeration Ammonia Gauges are designed for use on ammonia compressors and other ammonia refrigeration equipment.

#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | REFRIGERATION AMMONIA GAUGES |                    |
|-----------------------|------------------------------|--------------------|
| Size                  | 63mm                         | 3½"                |
| Case Material         | Stainless Steel              | Stainless Steel    |
| Internals             | Stainless Steel              | Stainless Steel    |
| Mounting / Case Style | LM                           | LM                 |
| Scale Standard        | psi & Ammonia (°F)           | psi & Ammonia (°F) |
| Connection            | ¼ NPT                        | ¼ NPT              |
| 30" Hg VAC to 150 psi | W0104                        | W0112              |
| 30" Hg VAC to 150 psi | W0104Q                       |                    |
| 30" Hg VAC to 300 psi | W0108                        | W0116              |
| 30" Hg VAC to 300 psi | W0108Q                       |                    |
|                       |                              |                    |

NOTE: Items are available on special order. However, minimums and lead times apply. Consult factory.

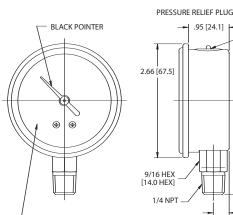
| REFRIGERATION AMMONIA GAUGE OPTIONS |                     |        |   |
|-------------------------------------|---------------------|--------|---|
| OPTION                              | ТҮРЕ                | SUFFIX |   |
| Fill Medium                         | Glycerine (GL)      | Р      | All Models                              |
|                                     | Silicone (SL)       | PI     | All Models                              |
| Custom Dials                        | Logo or Custom face | М      | Consult factory for colors and minimums |

#### SPECIFICATIONS

ACCURACY ASME Grade B -  $\pm 3/2/3\%$  ( $\pm 2\%$  of range across middle half of scale) CASE SIZES 63mm and 3½" diameter CASE MATERIAL 304 Stainless steel CASE STYLE LM - Lower Mount TUBE & SOCKET Stainless steel **MOVEMENT Brass CONNECTION** ¼ NPT RANGES Compound 30" Hg Vac to 150 psi or 30" Hg Vac to 300 psi **DIAL STANDARD** Single scale psi with corresponding Ammonia temperature scales **DIAL COLOR** Black markings on white POINTER Aluminum, black painted WINDOW Polycarbonate **RESTRICTORS Standard** PACKAGING Optional clam shell packed gauges are on 4½" X 6%" cards, prepunched for pegboard hanging WEIGHT 63 mm 0.5 lb. 31/2" 1.0 lb. PRESSURE RELIEF PLUG -

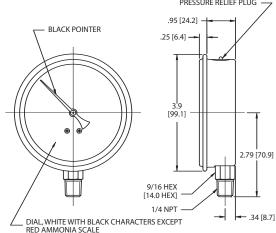


#### ALL DIMENSIONS ARE NOMINAL









Marsh Instruments Refrigeration Gauges are designed specifically for use on refrigeration systems.

**REFRIGERATION GAUGE** 

**STANDARD RANGES & PART NUMBERS** 

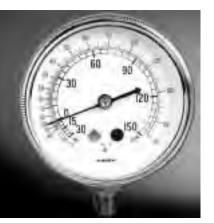
• Adjustable Pointer Standard

• Color Coded Dial

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Marsh Refrigeration Gauges are sturdily constructed and tested to give long, continuous, accurate service. In addition to the standard pressure or compound scale, dials also show the corresponding temperature scales for R-12, R-22, and R-502, in the various combinations shown in the chart below. Dial markings are sharp, clear and easy to read.



HVAC/R Gauges

#### SP

| SPECIFICATIONS   | ТҮРЕ                  | REFRIGERATION GAUGES                               |                                       |  |  |
|--|-----------------------|--|---------------------------------------|--|--|
| ACCURACY<br>ASME Grade B - ±3/2/3% (2% of                              | Size                  | 21/2"  | 3½"                                   |  |  |
| range across middle half of scale)                                     | Case Material         | Steel  |                                       |  |  |
| CASE SIZES   | Internals             | Copper Alloy                                       |                                       |  |  |
| 2½" and 3½" diameter   | Mounting/Case Style   | LM   | LM                                    |  |  |
| CASE MATERIAL  | Connection            | ⅓ NPT  | 1/4 NPT                               |  |  |
| Steel, black painted   | Scale Standard        | psi and temperature (°F)                           | ·                                     |  |  |
| CASE STYLE LM - Lower Mount  |                       |  |                                       |  |  |
| TUBE & SOCKET Copper alloy   | R-12                  | W0002  | W0020                                 |  |  |
| MOVEMENT Brass   | 30" Hg VAC 150 psi    |  | W0030                                 |  |  |
| CONNECTION   | 0 to 300 psi          | W0016  | W0034                                 |  |  |
| ⅓ or ¼ NPT   | R-22                  |  |                                       |  |  |
| RANGES   | 30" Hg VAC to 150 psi |  | W0032                                 |  |  |
| Compound 30" Hg Vac to 150 psi,<br>30" Hg Vac to 300 psi, 0 to 300 psi | R-12 & R-22           |  |                                       |  |  |
| DIALSTANDARD   | 30" Hg VAC 150 psi    | W0004  |                                       |  |  |
| psi with corresponding temperature<br>scales                           | 30" Hg VAC 300 psi    | W0012  |                                       |  |  |
| DIAL COLOR   | 0 to 300 psi          | W0018  |                                       |  |  |
| Black markings on white with red temperature scales                    | NOTE: Items a         | re available on special order. However, minimums a | nd lead times apply. Consult factory. |  |  |



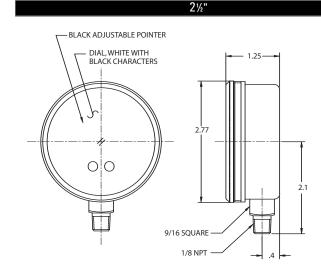
Aluminum, black painted, adjustable

WINDOW Acrylic Clearlok

**RESTRICTORS Standard** 

**OPTIONS Consult factory** 

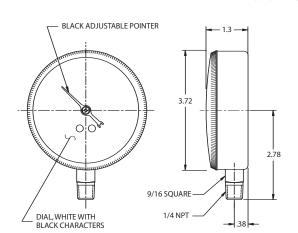
WEIGHT 0.5 lb



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ALL DIMENSIONS ARE NOMINAL



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### CONTRACTOR'S GAUGE

- 41/2" Dial
- Polished Stainless Steel Case
- Adjustable Pointer
- 1% Accuracy

Marsh Instruments Contractor's HVAC Service Gauge is a newly redesigned gauge with a long-life movement to meet the needs of contractors in air conditioning, heating, plumbing and refrigeration. This rugged and reliable gauge is economically priced and offers many features normally found on more expensive gauges such as adjustable pointer, acrylic lens and polished stainless steel case.

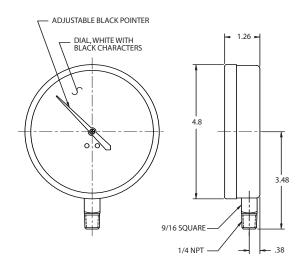
Marsh Instruments Contractor's Gauges are designed for use on plumbing and HVAC equipment.

#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | CONTRACTOR'S GAUGES      |
|-----------------------|--------------------------|
| Size                  | 4½"                      |
| Case Material         | Polished Stainless Steel |
| Internals             | Copper Alloy             |
| Mounting / Case Style | LM                       |
| Connection            | ¼ NPT                    |
| Scale Standard        | psi                      |
| 30" Hg VAC to 30 psi  | W0480                    |
| 30" Hg VAC to 160 psi | W0487                    |
| O to 30 psi           | W0481                    |
| O to 60 psi           | W0483                    |
| 0 to 100 psi          | W0484                    |
| O to 160 psi          | W0486                    |
| 0 to 200 psi          | W0488                    |
| 0 to 300 psi          | W0490                    |
| 0 to 600 psi          | W0492                    |

#### CONTRACTOR'S GAUGE OPTIONS

|                           |                       |        | POINTER             |                   |
|---------------------------|-----------------------|--------|---------------------|-------------------|
| OPTION                    | ТҮРЕ                  | SUFFIX | AVAILABLE ON MODELS | Aluminum, black p |
| Restrictors               | Push Fit .008 or .018 | Н      | all models          | WINDOW            |
| Catalog dials             | psi and kPa           | W3     | all models          | Acrylic           |
| All other dials - consult | factory for lead time |        | 25 Piece minimum    | WEIGHT 1.0 lb     |





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#### **SPECIFICATIONS**

| ACCURACY<br>ASME Grade A $- \pm 2/1/2\%$ (1% of                 |
|---|
| range across middle half of scale)<br>CASE SIZE<br>4½" diameter |
| CASE MATERIAL<br>Polished stainless steel                       |
| CASESTYLE<br>LM – Lower Mount                                   |
| TUBE & SOCKET<br>Copper alloy                                   |
| MOVEMENT<br>Brass sector and pinion                             |
| CONNECTION<br>¼ NPT   |
| RANGES<br>Compound 30" Hg Vac to160 psi;<br>30 to 600 psi       |
| DIAL STANDARD<br>Single scale psi                               |
| DIAL COLOR<br>Black markings on white                           |
| POINTER<br>Aluminum, black painted                              |
| WINDOW<br>Acrylic   |
| WEIGHT 1.0 lb   |



#### 800-876-0036 847-356-0566

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# HEATING SYSTEM GAUGE

- Adjustable Set Hand
- Ranges to 300 psi and 690 Feet of Water
- 31/2" and 41/2" Dials

Marsh Instruments Heating System Gauges are available in 31/2" and 41/2" dial sizes in the most popular ranges. An adjustable red altitude pointer is standard on feet-of-water gauges. This feature allows the user to indicate the head of water to be maintained in the system.

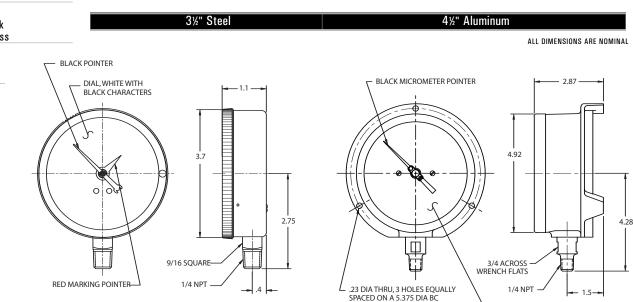
Marsh Instruments Heating System Gauges provide accurate psi and feet-of-water measurements in elevated tanks, reservoirs, standpipes, and similar applications where reliability and dependability are crucial in heating system equipment.

#### **STANDARD RANGES & PART NUMBERS**

| ТҮРЕ  | HEATING SYSTEM HVAC/R                | GAUGES                               |
|---|--------------------------------------|--------------------------------------|
| Size  | 3½"                                  | 4½"                                  |
| Case Material                                 | Steel                                | Aluminum                             |
| Internals                                     | Copper Alloy                         | Copper Alloy                         |
| Mounting / Case Style                         | LM                                   | LM                                   |
| Connection                                    | ¼ NPT                                | ¼ NPT                                |
| Scale Standards                               | psi, ft. H <sub>2</sub> O and metric | psi, ft. H <sub>2</sub> O and metric |
| 0 to 15 psi and 0 to 30 ft H <sub>2</sub> 0   |                                      | W0456                                |
| 0 to 30 psi and 0 to 70 ft H <sub>2</sub> 0   | W0450                                | W0457                                |
| O to 100 psi and O to 230 ft $H_2O$           | W0451                                | W0458                                |
| O to 150 psi and O to 345 ft $H_2O$           |                                      | W0459                                |
| O to 160 psi and O to 370 ft $H_2O$           | W0452                                |                                      |
| O to 200 psi and O to 460 ft $H_2O$           | W0453                                | W0460                                |
| 0 to 300 psi and 0 to 690 ft H <sub>2</sub> 0 | W0454                                | W0461                                |

NOTE: Items are available on special order. However, minimums and lead times apply. Consult factory.

| HEATING SYSTEM GAUGE OPTIONS |                     |        |   |
|------------------------------|---------------------|--------|---|
| OPTION                       | ТҮРЕ                | SUFFIX | AVAILABLE ON MODELS                     |
| Restrictors                  | Special Restrictor  | Н      | All models                              |
| Custom Dials                 | Logo or Custom face | М      | Consult factory for colors and minimums |



DIAL, WHITE WITH H BLACK CHARACTERS



HVAC/R Gauges

#### **SPECIFICATIONS**

 $3\frac{1}{2}$ " ASME Grade B -  $\pm 3\frac{2}{3}$ " (2% of range across middle half of

 $4\frac{1}{2}$ " ASME Grade A -  $\pm 2\frac{1}{2}$ % (1% of range across middle half of

ACCURACY

scale)

| scale)   |              |
|--|--------------|
| CASE SIZE $3\%$ and $4$  | ↓½" diameter |
| CASE MATERIAL<br>3½": Steel, black pair<br>4½": Aluminum back<br>black painted |              |
| CASE STYLE LM - Lo   | wer Mount    |
| TUBE & SOCKET Co   | pper alloy   |
| MOVEMENT<br>3½": Brass<br>4½": Stainless steel                                 |              |
| CONNECTION ¼ N   | РТ           |
| RANGES<br>Dual Scale 15 to 300<br>to 690 ft. H <sub>2</sub> 0                  | psi and 300  |
| DIAL STANDARD<br>psi, ft. H <sub>2</sub> O and metr                            | ic           |
|  |              |

#### DIAL COLOR

Black markings on white

#### POINTER

Aluminum, black painted with red set hand

#### WINDOW

3½": Acrylic Clearlok 4½": Instrument Glass

#### WEIGHT

2.0 lb. 3½" 41/2" 2.0 lb. Distributed By: M&M Control Service, Inc. www.mmcontrol.com/marsh.php

# soo-876-0036 847-356-0566 Special Applications

**SPECIFICATIONS** 

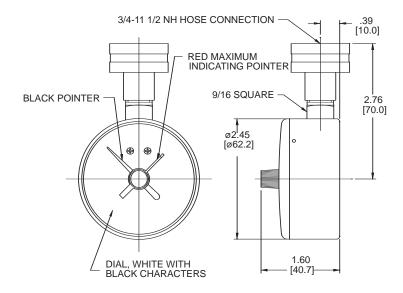
### WATER TEST GAUGE

- Connects Directly to Standard Water Faucet or Hose
- Measures Commercial & Residential Water Pressure
- Dual Scale Dial

Marsh Water Test Gauge is designed to connect directly to a standard ¾" water faucet or hose. The maxi pointer included on the Water Test Gauge allows you to monitor a peak operating or surge pressure point. Typical applications include measuring residential and commercial water pressure, also selection and adjustment of valves, regulators, and other controls.

#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ                | WATER TEST GAUGES         |                   |  |
|---------------------|---------------------------|-------------------|--|
| Size                | 2½"                       | 2½"               |  |
| Internals           | Copper Alloy              |                   |  |
| Case Materials      | Steel                     |                   |  |
| Mounting/Case Style | Top mount                 |                   |  |
| Connection          | ¾"·11½" NH female hosebib |                   |  |
| Scale Standard      | psi/kPa                   |                   |  |
| Window              | Acrylic                   | Acrylic w/maxhand |  |
| Part Number         | G24545                    | G24545-001        |  |



ACCURACY ASME Grade B -  $\pm 3/2/3\%$  ( $\pm 2\%$  of range across middle half of scale) CASE SIZES 2½" diameter **CASE MATERIAL** Steel, black painted CASE STYLE Top mount **TUBE & SOCKET** Copper alloy MOVEMENT Brass CONNECTION ¾" - 11½" NH Female hosebib RANGES 0 to 300 psi **DIAL STANDARD** Dual scale psi and kPa DIAL COLOR Black markings on white POINTER Aluminum, black painted WINDOW Acrylic with or without red maximum indicating pointer **OPTIONS** Other ranges are available **Consult factory** WEIGHT 0.5 lb

ALL DIMENSIONS ARE NOMINAL





# Special Applications



#### SPECIFICATIONS

| OI LOITIOATIONO                        | _ |
|--|---|
| ACCURACY                               |   |
| ASME Grade A $- \pm 2/1/2\%$ ( $\pm 1$ | % |
| of range across middle half of         |   |
| scale)                                 |   |
| CASE SIZES                             |   |
| 3½" diameter                           |   |
| CASE MATERIAL                          |   |
| Steel, chrome plated                   |   |
| CASE STYLE                             |   |
| LBM – Lower Back Mount                 |   |
| TUBE & SOCKET                          |   |
| Copper alloy                           |   |
| MOVEMENT                               |   |
| Stainless Steel with recalibrate       | r |
| CONNECTION                             |   |
| ¼ NPT                                  |   |
| RANGES                                 |   |
| 30 to 1,000 psi                        |   |
| DIAL STANDARD                          |   |
| Single scale psi                       |   |
| DIAL COLOR                             |   |
| Black markings on white                |   |
| POINTER                                |   |
| Aluminum, black painted                |   |
| WINDOW                                 |   |
| Glass lens, chrome plated brass        | 3 |
| ring with weather-tight seal           |   |
| RESTRICTOR                             |   |
| Standard                               |   |
| WEIGHT 1.0 lb                          |   |

### PAPER MACHINE GAUGE

• Hinged Ring Chrome Plated Steel Case

www.mmcontrol.com/marsh.php

- Protective Weather Tight Seal
- Restrictor is Standard

Marsh Instruments Chrome Plated Paper Machine Gauges are available in nine ranges and fit existing panel cutouts. The heavy-duty case features a front flanged/ hinged ring design which allows easy access to the recalibrator and a weephole that prevents condensation buildup. A restrictor is standard. The Marsh Paper Machine Gauge is available in 3½" size only. Each gauge has a weather-tight seal to protect against dust and atmospheric contaminates. Marsh Instruments Paper Machine gauges are specifically designed to meet the demands of the pulp and paper industry.

800-876-0036

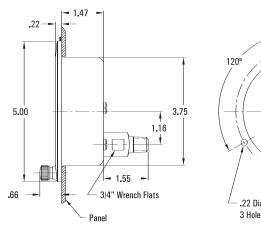
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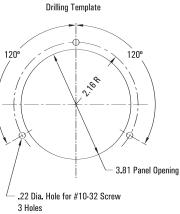
#### STANDARD RANGES & PART NUMBERS

| ТҮРЕ                  | PAPER MACHINE GAUGES |
|-----------------------|----------------------|
| Size                  | 3½"                  |
| Case Material         | Steel, Chrome Plated |
| Internals             | Copper Alloy         |
| Mounting / Case Style | LBM                  |
| Connection            | ¼ NPT                |
| Scale Standard        | psi                  |
| 0 to 30 psi           | W6042                |
| 0 to 60 psi           | W6046                |
| 0 to 100 psi          | W6048                |
| 0 to 160 psi          | W6052                |
| 0 to 200 psi          | W6054                |
| 0 to 300 psi          | W6058                |
| 0 to 400 psi          | W6060                |
| 0 to 600 psi          | W6064                |
| 0 to 1,000 psi        | W6072                |

|               |                     | OUEEU/ |   |
|---------------|---------------------|--------|---|
| OPTION        | ТҮРЕ                | SUFFIX | AVAILABLE ON MODELS                     |
| Restrictor    | Special Restrictor  | Н      |   |
|               | No restrictor       | H1     |   |
| Catalog Dials | bar only            | L1     | See Marsh Price List for minimum        |
|               | kg/cm² only         | L2     |   |
|               | kPa only            | L3     |   |
|               | MPa only            | L4     |   |
|               | psi & bar           | W1     |   |
|               | psi & kg/cm²        | W2     |   |
|               | psi & kPa           | W3     |   |
|               | psi & MPa           | W4     |   |
| Custom Dials  | Logo or custom face | M      | Consult factory for colors and minimums |

#### PAPER MACHINE GAUGE DIMENSIONS





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# Parts & Accessories

| PART#   | DESCRIPTION   |  |
|---|---|--|
|   | GAUGE COCK AND SIPHONS  |  |
| 111025  | 4" F x 4"F Brass Gauge Cock (T-Handle #123)   |  |
| 111028  | 4" M union x 4" F Brass Gauge Cock (Lever Handle #125)                                  |  |
| 111029  | %"M x %"M Steel Straight Siphon (600psi @ 400°F)  |  |
| 111030  | ¼"M x ¼"M Brass Straight Siphon (250psi @ 400°F)  |  |
| 111031  | ¼"M x ¼"M Steel Angle Type Siphon (600psi @ 400°F)                                      |  |
| 111032  | ¼"M x ¼"M Brass Angle Type Siphon (250psi @ 400°F)                                      |  |
| CLEARI  | OK (ACRYLIC) CONVEX WINDOW INTERNAL THREAD<br>"G" Series Fig. 83 Diaphragm Gauges       |  |
| 124602  | 2½" for 83K & 83KC  |  |
| 127985  | 2½" for 83KB & 83KD   |  |
| 125448-001  | 3½" for all models (knurled edge)   |  |
| CLEARLOK  | ( (ACRYLIC) WINDOWS (INTERNAL THREAD) "J" SERIES  |  |
| W15CL   | 1½" for LM or CB  |  |
| W20CL   | 2" for LM or CB   |  |
| W20CLUC   | 2" for U-Clamp or Front Flange  |  |
| W25CL   | 2½" for LM or CB  |  |
| W25CLUC   | 2½" for U-Clamp or Front Flange   |  |
| W35CL   | 3½" for LM or CB  |  |
| W35CLUC   | 3½" for U-Clamp or Front Flange   |  |
| 100116-008  | RESTRICTOR SCREWS<br>%" & ¼" NPT Threaded Brass 8-40<br>AIR (.008)                      |  |
| 100116-013  | WATER (.013)  |  |
| 100116-016  | OIL (.016)  |  |
|   | RESTRICTOR SCREWS<br>LARGE DIAL (D, E, H, & P)<br>¼" & ½" NPT Threaded Brass M5 X 0.8   |  |
| RES008BRLD  | AIR (.008)  |  |
| RES013BRLD  | WATER (.013)  |  |
| RES016BRLD  | OIL (.016)  |  |
|   | RESTRICTOR SCREWS<br>LARGE DIAL (D, E, H, & P)<br>¼" & ½" NPT Threaded 316 SST M5 X 0.8 |  |
| RES018SSLD  | All Apps. (.018)  |  |
|   | RESTRICTOR SCREWS GENERAL SERVICE (J)   |  |
| 150139-013  | Air (.013)  |  |
| 150139-013  | "Standard" (.018)   |  |
| 150139-018  | Water (.025)  |  |
| 150139-040  | Oil (.040)  |  |
| RESTRICTOR SCREWS<br>SEVERE SERVICE SERIES (J & X)<br>½", ¼" & ½" NPT Push-In Brass |   |  |
| RES018PB  | "Standard" (.018)   |  |
| RES013PB  | AIR (.013)  |  |
| RES025PB  | WATER (.025)  |  |
| RES040PB  | OIL (.040)  |  |
| RESTRICTOR SCREWS<br>SEVERE SERVICE SERIES J & X<br>½", ¼" & ½" Push-In 316 SST     |   |  |
| RES018PBSS  |   |  |

RES018PBSS "Standard" (.018)

| PART#  | DESCRIPTION                  |  |  |
|--|------------------------------|--|--|
| FRONT FLANGE (3-HOLE) CASE & WINDOW ASS'Y FOR BACK |                              |  |  |
|  | INECT (CB) "J" Series Gauge  |  |  |
| CS25FF   | 2½" Front Flange Case        |  |  |
| W25CLUC  | 2½" Window Assembly          |  |  |
| CS35FF   | 3½" Front Flange Case        |  |  |
| W35CLUC  | 3½" Window Assembly          |  |  |
| WJJCLUC  | 5/2 Wildow Assembly          |  |  |
| LIC  | DUID FILL CONVERSION KIT     |  |  |
| 127656   | Silicone, 1000 cc, 1 quart   |  |  |
| 133426   | Glycerine, 1 quart           |  |  |
|  |                              |  |  |
| HAND   | I JACK & DUPLEX HAND JACK    |  |  |
| 110983   | Duplex Hand Jack/Driver Set  |  |  |
| 110985   | Hand Jack (Pointer Remover)  |  |  |
|  |                              |  |  |
| ADJI   | ADJUSTABLE (SLOTTED) POINTER |  |  |
| PTR20ADJ-B   | Adjustable Pointer - 2"      |  |  |
| PTR25ADJ-B   | Adjustable Pointer - 2½"     |  |  |
| PTR35ADJ-B   | Adjustable Pointer - 3½"     |  |  |
| PTR45ADJ-B   | Adjustable Pointer - 4½"     |  |  |
|  |                              |  |  |
| MICROMETER POINTER, LARGE DIAL SERIES              |                              |  |  |
| PTRP45   | 4½" Dial (D, H & P)          |  |  |
| PTRP60   | 6" Dial (D, H & P)           |  |  |

| PART#                            | DESCRIPTION                                     |  |
|----------------------------------|---|--|
| SEVERE SERVICE GAUGE ACCESSORIES |   |  |
| 127794                           | Adapter ring, 63mm to 2½"                       |  |
| Flange63                         | Front Flange for 63mm: C Case                   |  |
| 133279                           | Front Flange for 63mm: CB or UC case (no holes) |  |
| Flange100                        | Front Flange for 100mm: C Case                  |  |
| CERTIFICATION FORMS              |   |  |
| 134476                           | Material Certification                          |  |
| 134477                           | Certificate of Conformance                      |  |
| 134478                           | Certificate of Compliance                       |  |
| 134479                           | Certificate of Origin                           |  |
| 134480                           | Certificate of Calibration                      |  |
| 134481                           | Certificate of Accuracy                         |  |

| PART# | DESCRIPTION  | MEDIA             | MAX PRESSURES |
|-------|--------------|-------------------|---------------|
|       | INDUSTRIA    | L PRESSURE SNUBB  | ERS           |
| S20BD | ¼ NPT, Brass | Heavy Oil         | 5,000 psi     |
| S20BE | ¼ NPT, Brass | Water & Light Oil | 5,000 psi     |
| S20BG | ¼ NPT, Brass | Air & Gases       | 5,000 psi     |
| S20SD | ¼ NPT, 303SS | Heavy Oil         | 15,000 psi    |
| S20SE | ¼ NPT, 303SS | Water & Light Oil | 15,000 psi    |
| S20SG | ¼ NPT, 303SS | Air & Gases       | 15,000 psi    |
| S40BD | ½ NPT, Brass | Heavy Oil         | 5,000 psi     |
| S40BE | ½ NPT, Brass | Water & Light Oil | 5,000 psi     |
| S40BG | ½ NPT, Brass | Air & Gases       | 5,000 psi     |
| S40SD | ½ NPT, 303SS | Heavy Oil         | 15,000 psi    |
| S40SE | ½ NPT, 303SS | Water & Light Oil | 15,000 psi    |
| S40SG | ½ NPT, 303SS | Air & Gases       | 15,000 psi    |



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Thermowells



### THERMOWELLS

- In-Stock Thermowells for fast delivery
- Brass, 304 Stainless Steel or 316 Stainless Steel
- Tapered or Straight Shank
- 0.260/0.385 Standard Bore Sizes
- Threaded for easy connection

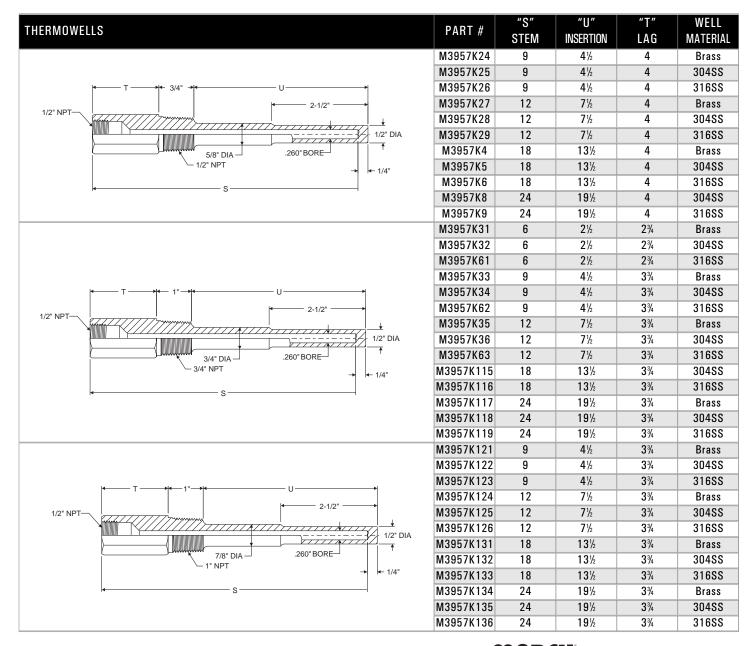
| THERMOWELLS  | PART #   | "S"<br>STEM | "U"       | WELL<br>MATERIAL |
|--|----------|-------------|-----------|------------------|
| P 10/2   | M3957K67 | 2½          | INSERTION | Brass            |
| thread   | M3957K68 | 2½          | 11%       | 304SS            |
| And the Construction of the  | M3957K69 | 2½          | 1½        | 316SS            |
| I APPENDE - I APPENDE  |          |             |           | 01000            |
|  | M3957K64 | 4           | 2½        | Brass            |
|  | M3957K65 | 4           | 2½        | 304SS            |
|  | M3957K66 | 4           | 2½        | 316SS            |
|  | M3957K37 | 6           | 4½        | Brass            |
|  | M3957K38 | 6           | 4½        | 304SS            |
|  | M3957K51 | 6           | 4½        | 316SS            |
|  | M3957K39 | 9           | 7½        | Brass            |
| $\begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \end{array} \qquad \qquad \bullet \\ \bullet \\ \bullet \\ \bullet \end{array} \qquad \qquad \bullet \\ \bullet \\$ | M3957K41 | 9           | 7½        | 304SS            |
|  | M3957K52 | 9           | 7½        | 316SS            |
| • • • • • • • • • • • • • • • • • • •  | M3957K42 | 12          | 10½       | Brass            |
|  | M3957K43 | 12          | 10½       | 304SS            |
| ↓ 1/2" NPT 5/8" DIA  | M3957K53 | 12          | 10½       | 316SS            |
| <b>←</b> S   | M3957K71 | 18          | 16½       | Brass            |
|  | M3957K72 | 18          | 16½       | 304SS            |
|  | M3957K73 | 18          | 16½       | 316SS            |
|  | M3957K75 | 24          | 22½       | 304SS            |
|  | M3957K76 | 24          | 22½       | 316SS            |
|  | M3957K77 | 2½          | 1%        | Brass            |
|  | M3957K78 | 2½          | 1%        | 304SS            |
| 1/2" NPT   | M3957K79 | 2½          | 1%        | 316SS            |
| 1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA<br>1/2" DIA   |          |             |           |                  |
|  | M3957K11 | 4           | 2½        | Brass            |
|  | M3957K21 | 4           | 2½        | 304SS            |
|  | M3957K54 | 4           | 2½        | 316SS            |
|  | M3957K12 | 6           | 4½        | Brass            |
|  | M3957K22 | 6           | 4½        | 304SS            |
|  | M3957K55 | 6           | 4½        | 316SS            |
|  | M3957K13 | 9           | 7 1/2     | Brass            |
|  | M3957K23 | 9           | 7½        | 304SS            |
| ← 1-3/4" →<br>→ 3/4"  ← U →<br> ← 2-1/2" →   | M3957K56 | 9           | 7½        | 316SS            |
| 1/2" NPT   | M3957K44 | 12          | 10½       | Brass            |
| 1/2" DIA   | M3957K45 | 12          | 10½       | 304SS            |
| 3/4" NPT 3/4" DIA .260" BORE 1/4"  | M3957K57 | 12          | 10½       | 316SS            |
|  | M3957K84 | 18          | 16½       | Brass            |
| kS→  | M3957K85 | 18          | 16½       | 304SS            |
|  | M3957K86 | 18          | 16½       | 316SS            |
|  | M3957K87 | 24          | 22½       | Brass            |
|  | M3957K88 | 24          | 22½       | 304SS            |
|  |          |             |           |                  |

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| THERMOWELLS                             | PART #   | "S"<br>STEM | "U"<br>INSERTION | WELL<br>MATERIAL |
|---|----------|-------------|------------------|------------------|
|   | M3957K46 | 4           | 21/2             | Brass            |
|   | M3957K47 | 4           | 21/2             | 304SS            |
|   | M3957K58 | 4           | 21/2             | 316SS            |
|   | M3957K48 | 6           | 4½               | Brass            |
|   | M3957K49 | 6           | 4½               | 304SS            |
| H− 1-3/4" →H                            | M3957K59 | 6           | 4½               | 316SS            |
| → 3/4" ← ← 2-1/2" →                     | M3957K91 | 9           | 7½               | Brass            |
| 1/2" NPT                                | M3957K92 | 9           | 7½               | 304SS            |
|   | M3957K93 | 9           | 7½               | 316SS            |
|   | M3957K94 | 12          | 10½              | Brass            |
| ✓ S → S → S → S → S → S → S → S → S → S | M3957K95 | 12          | 10½              | 304SS            |
|   | M3957K96 | 12          | 10½              | 316SS            |
|   | M3957K14 | 18          | 16½              | Brass            |
|   | M3957K15 | 18          | 16½              | 304SS            |
|   | M3957K16 | 18          | 16½              | 316SS            |
| ALL DIMENSIONS ARE NOMINAL              | M3957K18 | 24          | 22½              | 304SS            |
|   | M3957K19 | 24          | 22½              | 316SS            |





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| THERMOWELLS   | PART #                 | "S"<br>STEM | "U"<br>INSERTION              | WELL<br>MATERIAL |
|---|------------------------|-------------|-------------------------------|------------------|
|   | M3957K137              | 4           | 2 <sup>1</sup> / <sub>2</sub> | Brass            |
|   | M3957K138              | 4           | 21/2                          | 30455            |
|   | M3957K139              | 4           | 21/2                          | 316SS            |
|   | M3957K141              | 6           | 41/2                          | Brass            |
| <-3/4"→   | M3957K142              | 6           | 41/2                          | 304SS            |
|   | M3957K143              | 6           | 41/2                          | 316SS            |
| •<br>•<br>• 5/8" DIA  | M3957K144              | 9           | 7½                            | Brass            |
|   | M3957K145              | 9           | 7½                            | 304SS            |
| └── 7/8" DIA →  | M3957K146              | 9           | 71/2                          | 316SS            |
| 3/4" NPT  | M3957K140              | 12          | 10½                           | Brass            |
| kS>   | M3957K147<br>M3957K148 | 12          | 10½                           | 304SS            |
|   | M3957K148              | 12          | 10½                           | 316SS            |
|   | M3957K149<br>M3957K162 | 4           | 21/2                          | Brass            |
|   | M3957K162              | 4           | 21/2                          | 304SS            |
|   | M3957K164              | 4           | 2 /2                          | 316SS            |
| ← 1-3/4" →<br>← 3/4" →  | M3957K165              | 6           | 41/2                          | Brass            |
| 1/2" NPT  |                        |             | 4 1/2                         |                  |
|   | M3957K166              | 6           |                               | 304SS            |
|   | M3957K167              |             | 4½                            | 316SS            |
|   | M3957K168              | 9           | 7½                            | Brass            |
| └── 1-1/16" DIA → ← 1/4"  | M3957K169              | 9           | 7½                            | 304SS            |
| └── 1" NPT  | M3957K171              | 9           | 7½                            | 316SS            |
| kS  | M3957K172              | 12          | 10½                           | Brass            |
|   | M3957K173              | 12          | 10½                           | 304SS            |
|   | M3957K174              | 12          | 10½                           | 316SS            |
|   | M3957K221              | 4           | 21/2                          | Brass            |
| $ \begin{array}{c c} \bullet & \bullet \\ \bullet & \bullet \\ \bullet & \bullet \\ \end{array} $             | M3957K222              | 4           | 2½                            | 304SS            |
| 1/2" NPT  | M3957K223              | 4           | 2½                            | 316SS            |
|   | M3957K231              | 6           | 4½                            | Brass            |
|   | M3957K232              | 6           | 4½                            | 304SS            |
|   | M3957K233              | 6           | 4½                            | 316SS            |
| <   | M3957K241              | 9           | 7½                            | Brass            |
|   | M3957K242              | 9           | 7½                            | 304SS            |
|   | M3957K243              | 9           | 7½                            | 316SS            |
|   | M3957K261              | 4           | 21/2                          | Brass            |
| I - 1-9/4"  | M3957K262              | 4           | 2½                            | 304SS            |
| $ \begin{array}{c c} \bullet & 1-3/4^{n} \longrightarrow \bullet \\ \hline & 1^{n} & \bullet \\ \end{array} $ | M3957K263              | 4           | 2½                            | 316SS            |
| 1/2" NPT  | M3957K271              | 6           | 4½                            | Brass            |
| 5/8" DIA  | M3957K272              | 6           | 4½                            | 304SS            |
| 3/4" NPT 3/4" DIA .385" BORE 1/4"   | M3957K273              | 6           | 4½                            | 316SS            |
| (1) 単   | M3957K281              | 9           | 7½                            | Brass            |
| k   | M3957K282              | 9           | 7½                            | 304SS            |
|   | M3957K283              | 9           | 7½                            | 316SS            |

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# Pressure Indicator

# DIGITAL PRESSURE INDICATOR

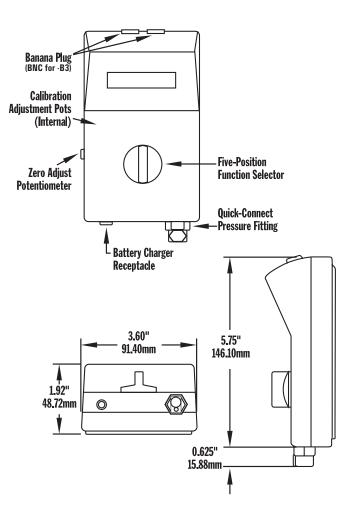
- Converts Pressure Input to LCD Digital Readout
- High Accuracy in Lightweight, Portable Package
- State of the Art Semi-Conductor

The Marsh Instruments Digital Pressure Indicator is portable, lightweight, hand-held testing and calibrating instrument indicates pressure to 50 psig at accuracy levels of  $\pm 0.50\%$  of reading  $\pm 1$  count. A state of the art semiconductor-type pressure transducer converts pressure input to analog voltage, which is displayed on a  $3\frac{1}{2}$  digit LCD readout. Internal 9-volt rechargeable battery powers the indicator, and a zero adjust potentiometer standardizes the transducer bridge at zero pressure for higher accuracy.

Marsh Instruments Handheld Digital Pressure Indicator and Calibrator is ideal for calibrating DP cells, I/P's and P/I's. The indicator tests installed instruments and transmitters, verifies operation and settings of valves and switches, detects system leaks, and is used for other testing or maintenance applications.

|               | DIGITAL PRESSURE INDICATOR |
|---------------|----------------------------|
| RANGE         | PART NUMBER                |
| -14.7 to 50p  | 4-DPP-20050-BBC            |
| -14.7 to 60p  | 4-DP-20060-B3              |
| -14.7 to 200p | 4-DPP-20200-BBC            |

NOTE: Connection: 5/16" quick connect tube fitting Elec. Range: 0-200 MA





#### **SPECIFICATIONS**

PNEUMATIC RANGE Range:-14.7 to 200 psig; with corresponding inches of water column and inches of mercury WETTED MATERIAL Brass fitting, silicone wafer diaphragm, suitable for instrument air (clean & dry) or any clean, nonconductive fluid PRESSURE FITTING  $\frac{1}{16}$ " quick-connect tube fitting standard, with mating nickel plated brass locking quick-connector. 8" plastic hose with ferruleless 1/4" OD has to coupling insert with shutoff valve DISPLAY  $3\frac{1}{2}$ " digit LCD,  $\frac{1}{2}$ " high black numerals on light background, with polarity and low battery indicators ACCURACY  $\pm 0.5\%$  of reading  $\pm 1$  count, must be zeroed at barometric pressure TEMPERATURE Calibration range: 50°-90°F. Operating range: 30°-130°F. Effect of temperature outside calibration range is ±0.01% per degree F POWER Internal: 9-volt transistor battery, Ni-Cad chargeable. External: 12volt adapter will power unit or charge battery in approx. 14 hours. Approximate operation is 8-10 hours per charge CASE SIZE 3.60" wide x 5<sup>3</sup>/<sub>4</sub>" long x 1.92"high, **ABS** plastic **INCLUDES** Carrying case, battery charger, 8" plastic hose, quick connect fitting, and technical manual

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Reference



# SELECTION AND USE OF A PRESSURE GAUGE

When selecting a pressure gauge, it is important to consider the following factors to insure safety and accuracy:

- Pressure range
- Temperature range
- Conditions affecting wear of the system
- Case venting
- Pressure fluid composition
- Pressure fluid temperature
- Ambient conditions
- Method of mounting
- Required accuracy

PRESSURE RANGE: A range of 2 times the operating pressure is recommended for safety and extended gauge life. The operating pressure should be limited to the middle 75% of range.

**TEMPERATURE RANGE**: Ambient temperature for General Service ("J") is -40° to 160°F. Ambient temperature for Severe Service ("J" & "X"), for Dry Gauges is -40° to 160°F and for Liquid Filled is 0° to 140°F.

SHOCK, VIBRATION, PULSATION, OR CORROSIVE ATMOSPHERE CONDITIONS: Liquid Filled Gauges have a fill material to lubricate the movement and reduce friction and wear. When used with a restrictor these gauges absorb vibration and dampen pressure shock and spikes. Liquid filling also prevents moisture or a corrosive atmosphere from affecting the gauge internals.

CASE VENTING: Process (Series "P") and Elite (Series "W") have a internal diaphragm which compensates for atmospheric changes that could affect the calibration of the filled gauge. Severe Service (Series "J" & "X") and 100mm (Series "HW") liquid filled gauges have an elastomeric vent fill plug tip which can be easily cut to permit case venting.

**PRESSURE FLUID COMPOSITION:** Since the sensing element of a pressure gauge may be exposed directly to the measured medium, consider the characteristics of this medium. It may be corrosive, it may solidify at various temperatures, or it may contain solids that will leave deposits inside the sensing element. For pressure fluids that will not solidify under normal conditions or leave deposits, a Bourdon Tube Gauge is acceptable Diaphragm Chemical Seals should be considered when gauge wetted parts are not compatible with the measured media. A chemical compatibility chart follows this section to aid in the selection of the proper sensing element or diaphragm seal material.

**PRESSURE FLUID TEMPERATURE:** Steam and other hot media may raise the temperature of the gauge components above safe working limits of the sealed joints. In these cases it is recommended that a syphon, cooling tower or chemical seal be used in conjunction with the pressure gauge Diaphragm Seals and remote capillary can also be considered for use with gauges or transducers which are subjected to very low or high ambient temperature.

**AMBIENT CONDITIONS:** The normal ambient temperature range for Marsh Instruments gauges is -40° to 160°F (-40° to +71°C) for Dry Gauges,  $-4^{\circ}$  to 140°F (-20° to 60°C) for Glycerine filled gauges, and -40° to 140°F (-40° to 60°C) for Silicone filled gauges. The error caused by temperature changes is  $\pm 0.3\%$  per 18°F rise or fall, respectively. The reference temperature is 70°F (20°C). The correction is for the temperature of the gauge mounting using a diaphragm seal and capillary line is one alternative for applications involving extreme ambient temperature.

Moisture and weather effects must also be considered. Liquid Filled Gauges prevent condensation build up. For outdoor use, stainless steel, brass, or plastic cased gauges are recommended.

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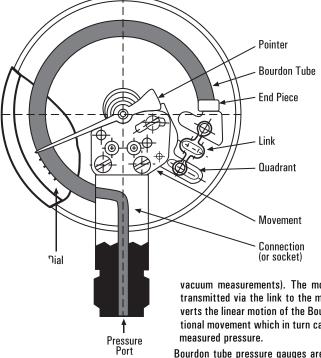


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# Reference

### PRESSURE GAUGE OPERATING PRINCIPLE



Bourdon tube pressure gauges are widely used in all branches of industry. The construction is simple yet rugged, and operation does not require any additional power source. The Bourdon tube element is directly exposed to the medium being measured and is normal made of copper alloy (brass) or stainless steel as the application demands.

The Bourdon tube measuring element is made of a thin walled tube that is

either bent into a semicircle (C-Shape tube) or spirally wound (coiled safety tube). When pressure is applied to the measuring system through the pressure port, the pressure causes the Bourdon tube to straighten itself, thus causing the end piece to move upward (or downward for

vacuum measurements). The movement of the end piece is transmitted via the link to the movement. The movement converts the linear motion of the Bourdon tube end piece to a rotational movement which in turn causes the pointer to indicate the

Bourdon tube pressure gauges are designed for the measurement of pressure and vacuum and are generally suitable for all clean and non-clogging liquid and gaseous media.

Various types of Bourdon tubes are used. C-shape Bourdon tubes are typically used for ranges to 1,000 psi. Higher ranges use coiled Bourdon tubes for safety.

Bourdon tube pressure gauges are available to measure full vacuums, compound and pressure ranges from 0-10 psi to 0-20,000 psi with an accuracy from  $\pm 0.25\%$  to  $\pm 3/2/3\%$  of span (ASME Grade 3A to Grade B).

# HOW THE DIAPHRAGM GAUGE WORKS

Diaphragm gauges are sensitive instruments used in low pressure applications not exceeding 10 psi. The diaphragm capsule is an elastic metal sensing element comprised of two thin wall diaphragms whose sides are soldered together to make the capsule.

Whenever air or gas enters the intake port (gauge connection), it travels into the diaphragm capsule. As vacuum or pressure is applied to the diaphragm capsule, the walls of the capsule expand and contract in response to the change in pressure. This change is then transferred to a rotating rod and arm that rest on the outside of the capsule. The rotating rod is connected to a geared movement through a linkage system. Connected to a shaft, this system then drives the pointer over a dial marked in appropriate pressure or vacuum units.









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# Reference

#### CHEMICAL COMPATIBILITY TABLE

The media being measured must be compatible with the wetted parts of the pressure instrument. To use the chart below, locate the media whose pressure is to be measured and select a suitable material from those available. This is a simplified chart and assumes the media temperature is 200°F except for media with a "\*" which must be below 100°F, Throttling devices and/or a liquid-filled instrument are recommended in applications with pulsation or vibration. These recommendations are only a guide, as service life is dependent on temperature, concentrations, catalysts that may be added, or other conditions beyond our control. Consult factory for specific applications and for any services not listed.

|                                    |                 | Pres<br>nstru<br>Mat | ımen  | t                 |  | I               | Pres<br>nstru<br>Mat |       | t                 |                                |                 | Pres<br>nstru<br>Mat | ımen     | nt                |
|------------------------------------|-----------------|----------------------|-------|-------------------|--|-----------------|----------------------|-------|-------------------|--------------------------------|-----------------|----------------------|----------|-------------------|
| Media Application                  | Brass or Bronze | 316 SS               | Monel | Diaphragm Seals** | Media Application                        | Brass or Bronze | 316 SS               | Monel | Diaphragm Seals** | Media Application              | Brass or Bronze | 316 SS               | Monel    | Diaphragm Seals** |
| Acetone*2                          | •               | •                    | •     |                   | Ethyl Oxide >99%                         | •               | •                    | •     |                   | Palmitic Acid > 99%*2          |                 | •                    |          |                   |
| Acetic Acid <40%                   |                 | •                    |       |                   | Ferric Chloride $<$ 40%                  |                 |                      |       | •                 | Paraffin                       | •               |                      |          |                   |
| Acetic Anhydride                   |                 |                      |       | •                 | Ferric Sulfate $< 10\%$                  |                 | •                    |       |                   | Phosphoric Acid <80%*2         |                 | •                    |          |                   |
| Acetylene (Dry)                    |                 | •                    |       |                   | Ferrous Chloride $< 30\%$                |                 |                      |       | •                 | Photographic Solutions         |                 | •                    |          |                   |
| Acrolein 100%                      |                 |                      |       | •                 | Ferrous Sulfate $< 50\%$                 |                 |                      |       | •                 | Pickling Solutions             |                 | •                    |          |                   |
| Air                                | •               | •                    | •     |                   | Flurine Gas (Dry)                        |                 | •                    | •     |                   | Picric Acid 10%                |                 | •                    |          | <u> </u>          |
| Alcohol, Ethyl                     | •               | •                    | •     |                   | Formaldehyde $< 95\%$                    |                 | •                    | •     |                   | Propane (Dry)                  |                 | •                    | •        |                   |
| Aluminum Chloride.10%              |                 |                      |       | •                 | Formic Acid*2                            |                 |                      |       | •                 | Potassium Chloride             | Cor             | nsult                | Fact     | tory              |
| Aluminum Sulfate 10-50%            |                 | •                    |       |                   | Freons                                   |                 | •                    |       |                   | Potassium Cyanide              |                 | •                    |          |                   |
| Ammonia Gas                        |                 | •                    |       |                   | Furfural < 10%                           |                 |                      |       | •                 | Potassium Permanganate         |                 | •                    |          |                   |
| Ammonium Chloride $< 40\%$         |                 |                      |       | •                 | Gallic Acid                              |                 | •                    |       |                   | Sea Water (Flowing)            |                 |                      | •        | <u> </u>          |
| Ammonium Nitrate $< 50\%$          |                 | •                    |       |                   | Gas (for lighting)                       | •               |                      |       |                   | Silver Nitrate < 70%           |                 |                      |          | •                 |
| Ammonium Sulfate $< 60\%$          |                 |                      |       | •                 | Gasoline                                 |                 | •                    |       |                   | Sodium Bicarbonate $< 20\%$    |                 | •                    | •        |                   |
| Aniline >99%                       |                 | •                    |       |                   | Glucose                                  |                 |                      | •     |                   | Sodium Bisulfate < 30%         |                 |                      |          | •                 |
| Argon                              | •               | •                    | •     |                   | Glycerine >99%                           | •               | •                    | •     |                   | Sodium Carbonate $< 40\%$      | Cor             | nsult                | Fact     | torv              |
| Beer                               |                 | •                    |       |                   | Hydrobromic Acid                         |                 |                      |       | •                 | Sodium Chromate $< 60\%$       | •               | •                    | •        |                   |
| Benzidine > 99%                    |                 |                      |       | •                 | Hydrochloric Acid                        |                 |                      |       | •                 | Sodium Cyanide                 | Cor             | nsult                | Fact     | torv              |
| Benzene < 50%                      |                 | •                    | •     |                   | Hydrofluoric Acid                        |                 |                      |       | •                 | Sodium Hydroxide               |                 | •                    | •        | ,                 |
| Benzoic Acid < 70%                 |                 | •                    |       |                   | Hydroflusilic Acid                       |                 |                      |       | •                 | Sodium Hypochlorite < 25%      |                 |                      |          | •                 |
| Benzol                             | •               |                      |       |                   | Hydrogen 2                               | •               | •                    |       |                   | Sodium Phosphate, Tri $< 60\%$ |                 | •                    | •        |                   |
| Bordeaus Mixture                   | •               |                      |       |                   | Hydrogen Peroxide < 50%                  |                 | •                    |       |                   | Sodium Silicate < 50%          |                 | •                    | •        |                   |
| Boric Acid <25%                    |                 | •                    |       |                   | Kerosene                                 | •               | •                    | •     |                   | Sodium Sulfide < 50%           | Cor             | nsult                |          | torv              |
| Bromine (Dry)                      |                 |                      |       | •                 | Lacquers                                 | •               |                      |       |                   | Stannous Chloride < 10%        | 001             | •                    | 1 40     |                   |
| Butane                             | •               | •                    | •     | -                 | Lactic Acid <70%*2                       |                 | •                    |       |                   | Steam (Use siphon)             | •               | •                    | •        |                   |
| Butanol                            | •               | -                    | -     |                   | Lysol                                    |                 | •                    |       |                   | Stearic Acid                   |                 | •                    | •        |                   |
| Butyric Acid < 25%                 |                 | •                    |       |                   | Magnesium Chloride <40%                  |                 | -                    |       | •                 | Sulfur Dioxide (Dry) >99%      | _               | -                    | -        | •                 |
| Calcium Chloride < 80%             |                 | -                    |       | •                 | Magnesium Sulfate                        |                 | •                    |       |                   | Sulfur Trioxide (Dry) > 99%    |                 |                      |          | •                 |
| Calcium Hydroxide < 50%            |                 |                      |       | •                 | Mercuric Chloride <60%                   |                 | •                    |       |                   | Sulfurous Acid                 | _               |                      |          | •                 |
| Carbon Dioxide                     | •               | •                    | •     | -                 | Mercury >99%                             |                 |                      |       | •                 | Tannic Acid < 80%              | •               | •                    | •        |                   |
| Carbon Monoxide >99%               | •               | •                    | •     |                   | Methyl Chloride                          | C               | nsult                | Fact  |                   | Tanning Liquors                |                 | nsult                |          | tory              |
| Chlorine (Dry)                     |                 | <u> </u>             |       | •                 | Methyl Salicylate                        |                 | nsult                |       |                   | Tartaric Acid < 50%            | 001             | •                    | rac<br>● |                   |
| Chlorine (Moist)*2                 |                 |                      |       | •                 | Milk                                     | 001             | •                    | 1 86  | UIY               | Tin Chloride (ous) < 10%       |                 | •                    | Ļ        |                   |
| Chloroform (Dry)                   | _               | •                    | •     |                   | Naphtha >99%                             | •               | •                    | •     |                   | Toluene >99%                   | •               | •                    | •        |                   |
|                                    |                 | -                    | -     |                   | •  | -               |                      | •     |                   | Turpentine >98%                |                 | •                    | •        |                   |
| Chromic Acid<br>Citric Acid 10-50% |                 | •                    |       | •                 | Naphthalene >99%<br>Nickel Chloride >99% |                 | •                    |       | •                 | Vegetable Oils                 | •               | •                    | -        |                   |
|                                    |                 |                      |       |                   |  |                 | 6                    |       | -                 | -                              |                 |                      |          |                   |
| Corn Oil                           |                 | •                    |       |                   | Nitric Acid < 95%*2                      | -               | •                    | -     |                   | Vinegar Water                  | -               | •                    | -        | <u> </u>          |
| Cottonseed Oil                     |                 | •                    |       |                   | Nitrogen                                 | •               | •                    | •     |                   | Water                          | •               | •                    | •        |                   |
| Creosote (Crude)                   |                 | •                    | 6     |                   | Nitrous Oxide                            | _               | isult                | Fact  | ory               | Whiskey                        |                 | •                    |          | -                 |
| Crude Oil (Sour) (Use NACE)        |                 | •                    | •     |                   | Oleic Acid                               | •               | •                    |       |                   | Zinc Chloride < 35%*2          |                 |                      |          | •                 |
| Crude Oil (Sweet)                  |                 | •                    | •     |                   | Oxalic Acid*2                            |                 |                      |       | •                 | Zinc Sulphate <40%             |                 |                      |          | •                 |
| Ethyl Acetate                      | •               | •                    | •     |                   | Oxygen (Gas)1                            | •               | •                    | •     |                   |                                |                 |                      |          |                   |

1. Bronze and 316 Stainless Steel are acceptable for oxygen service, provided the instrument has been-cleaned for service and is free from oil.

2. Over 1000 psi - entire system must be 316 Stainless Steel.

\*Media temperature must be below 100°F

\*\*Any standard bourdon tube or material may be used in conjunction with a diaphragm seal the gauge selection should be taken into consideration the corrosive environment in which it is to operate.



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# Reference

| ACCURACY TABLE<br>GAUGE PRODUCT | PAGE # | ACCURACY | 1½"(40MM) | 2 (50MM) | <b>2</b> <sup>1</sup> /2"" | 63MM | 3½" | 100MM | <b>4</b> ½" | 6″       |
|---------------------------------|--------|----------|-----------|----------|----------------------------|------|-----|-------|-------------|----------|
| GENERAL SERVICE                 |        |          |           |          |                            |      |     |       |             |          |
| GG Gauges                       | 9      | В        | •         | •        |                            |      |     |       |             | T        |
| General Service Gauges          | 10     | В        | •         | •        | ٠                          |      | •   |       | •           | +        |
| SEVERE SERVICE                  |        | !        |           |          |                            | -    |     |       |             |          |
| 40/50mm Severe Service          | 14     | В        | •         | •        |                            |      |     |       |             | $\top$   |
| 63mm Severe Service             | 15     | В        |           |          |                            | •    |     |       |             | +        |
| 100mm Severe Service            | 17     | A        |           |          |                            |      |     | •     |             | +        |
| 63mm Brass                      | 19     | A        |           |          |                            | •    |     |       |             | +        |
| 100mm Brass                     | 19     | 1A       |           |          |                            |      |     | •     |             | 1        |
| PRECISION SERVICE               | 1      | 1        |           |          |                            |      |     | · · · |             |          |
| Elite Stainless Steel           | 24     | 1A       |           |          |                            |      |     | •     |             | T        |
| 100mm Stainless Steel           | 20     | 1A       |           |          |                            |      |     | •     |             | +        |
| Quality Series 100mm            | 21     | 1A       |           |          |                            |      |     | •     |             | -        |
| "HW" Stainless Steel            | 23     | 1A       |           |          |                            |      |     | •     |             | +        |
| Quality                         | 25     | A        |           |          |                            |      | •   |       | •           | 1        |
| Test                            | 27     | 2A       |           |          |                            |      |     |       | •           | +        |
| Master Test                     | 29     | 3A       |           |          |                            |      |     |       |             | +        |
| Inspector's Test                | 30     | 2A       |           |          |                            |      | 3.0 |       |             |          |
| PROCESS                         |        |          |           |          |                            |      |     |       |             |          |
| Process                         | 31     | 2A       |           |          |                            |      |     |       | •           |          |
| DIAPHRAGM GAUGE                 |        | 1        |           |          |                            |      |     | 1 1   |             |          |
| Low Pressure                    | 35     | A        |           |          | •                          |      | •   |       | •           | T        |
| HVAC/R                          | 1      | 1        |           |          |                            |      |     | 1 1   |             |          |
| Contractor's HVAC               | 43     | Α        |           |          |                            |      |     |       | •           | <b>—</b> |
| Heating (Ft. H <sub>2</sub> O)  | 44     | A & B    |           |          |                            |      | •   |       | •           | +        |
| Refrigeration Ammonia           | 41     | В        |           |          |                            | •    | •   |       |             | +        |
| Refrigeration                   | 42     | В        |           |          | •                          |      | •   |       |             | +        |
| Serviceman                      | 39     | В        |           |          | •                          |      |     |       |             | +        |
| Manifold                        | 40     | В        |           |          | •                          |      |     |       |             | +        |
| SPECIAL APPLICATION             |        |          |           |          |                            |      |     |       |             |          |
| Water Test                      | 45     | В        |           |          | •                          |      |     |       |             | T        |
| Paper Machine                   | 46     | A        |           |          |                            |      | •   |       |             | +        |
| X-mas Tree Gauge                | 47     | 1A       |           |          |                            |      |     |       | •           |          |

| ASME B40.1 GRA | \DE     | ACCURACY                      |
|----------------|---------|-------------------------------|
| 3A             | ±0.25%  | Full Scale                    |
| 2A             | ±0.50%  | Full Scale                    |
| 1A             | ±1.0%   | Full Scale                    |
| A              | ±2/1/2% | ±1% over middle half of scale |
| В              | ±3/2/3% | ±2% over middle half of scale |

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To use this chart: 1. Find the column with the units you want to convert from 2. Move down that column until you find the "1" 3. Staying in the same row, move horizontally to the column with the units you are converting to 4. Multiply the number in that box by the amount you are changing from to get the converted value

Reference

| PRESSURE           | UNITS CROS | PRESSURE UNITS CROSS REFERENCE CHART | CE CHART |         |         |                    |          |                |         |        |          |           |        |          |
|--------------------|------------|--------------------------------------|----------|---------|---------|--------------------|----------|----------------|---------|--------|----------|-----------|--------|----------|
| psi                | atms.      | "H20                                 | mmH20    | cmH20   | oz./in² | Kg/cm <sup>2</sup> | "Hg      | mmHg<br>(Torr) | cm Hg   | mbar   | bar      | Pa (N/m²) | kPa    | MPa      |
| 1                  | 0.0681     | 27.71                                | 703.8    | 70.38   | 16      | 0.0704             | 2.036    | 51.715         | 5.17    | 68.95  | 0.0689   | 6895      | 6.895  | 0.0069   |
| 14.7               | _          | 407.2                                | 10,343   | 1,034.3 | 235.1   | 1.033              | 29.92    | 760            | 76      | 1013   | 1.013    | 101,325   | 101.3  | 0.1013   |
| 0.0361             | 0.00246    | 1                                    | 25.4     | 2.54    | 0.5775  | 0.00254            | 0.0795   | 1.866          | 0.187   | 2.488  | 0.00249  | 248.8     | 0.249  | 0.00025  |
| 0.001421           | 0.000097   | 0.0394                               | _        | 0.1     | 0.0227  | 0.001              | 0.00289  | 0.0735         | 0.00735 | 0.098  | 0.000098 | 9.8       | 0.0098 | 0.00001  |
| 0.01421            | 0.000967   | 0.3937                               | 10       | _       | 0.227   | 0.001              | 0.0289   | 0.735          | 0.0735  | 0.98   | 0.00098  | 86        | 0.098  | 0.0001   |
| 0.0625             | 0.00425    | 1.732                                | 43.986   | 4.40    | _       | 0.0044             | 0.1273   | 3.232          | 0.323   | 4.31   | 0.00431  | 431       | 0.431  | 0.00043  |
| 14.22              | 0.968      | 394.1                                | 100,010  | 1,001   | 227.6   | 1                  | 28.96    | 735.6          | 73.56   | 980.7  | 0.981    | 98,067    | 98.07  | 0.0981   |
| 0.4912             | 0.03342    | 13.61                                | 345.7    | 34.57   | 7.858   | 0.0345             | 1        | 25.4           | 2.54    | 33.86  | 0.0339   | 3386      | 3.386  | 0.00339  |
| 0.01934            | 0.001316   | 0.536                                | 13.61    | 1.361   | 0.310   | 0.00136            | 0.0394   | 1              | 0.1     | 1.333  | 0.001333 | 133.3     | 0.1333 | 0.000133 |
| 0.1934             | 0.01316    | 5.358                                | 136.1    | 13.61   | 3.10    | 0.0136             | 0.394    | 10             | 1       | 13.33  | 0.01333  | 1333      | 1.333  | 0.00133  |
| 0.0145             | 0.000987   | 0.4012                               | 10.21    | 1.021   | 0.2321  | 0.00102            | 0.0295   | 0.75           | 0.075   | _      | 0.001    | 100       | 0.1    | 0.0001   |
| 14.504             | 0.987      | 401.9                                | 10,210   | 1021    | 232.1   | 1.02               | 29.53    | 750            | 75      | 1000   | 1        | 100,000   | 100    | 0.1      |
| 0.000145           | 0.00001    | 0.00402                              | 0.102    | 0.0102  | 0.00232 | 0.00001            | 0.000295 | 0.0075         | 0.00075 | 0.01   | 0.00001  | 1         | 0.001  | 0.000001 |
| 0.14504            | 0.00987    | 401.9                                | 102.07   | 10.207  | 2.321   | 0.0102             | 0.295    | 7.05           | 0.75    | 10     | 0.01     | 1,000     | 1      | 0.001    |
| 145.04             | 9.869      | 4019                                 | 102,074  | 10,207  | 2321    | 10.22.036          | 295.3    | 7500           | 750     | 10,000 | 10       | 1,000,000 | 1,000  | -        |
| To use this chart. | ort.       |                                      |          |         |         |                    |          |                |         |        |          |           |        |          |

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|---|-----------|---|-----------------------|----------------------|------------|
|   |           |   |                       |                      |            |
| 6 | PART N    | UMBER PREFIX GUIDE  |                       | ABBRE                | IATION     |
|   | Marsh Ins | strument part numbers begin with a letter prefix which helps              | identify the product  |                      |            |
|   | PREFIX    | PRODUCT TYPE  | SEE PAGES             | p or psi             | Pounds     |
|   | D         | Test Gauges   | 29                    | kPa                  | kilopasc   |
|   | D         | Inspector's Test Gauges   | 32                    | Case                 | The cas    |
|   | G         | Diaphragm Gauges  | 37                    | oz/in <sup>2</sup>   | Ounces     |
|   | G         | Water Test Gauges   | 47                    |                      |            |
|   | Н         | Quality Gauges  | 27                    | H <sub>2</sub> 0     | Inches o   |
|   | Н         | 100mm Stainless Steel (L.F.)  | 22                    | ft. H <sub>2</sub> 0 | Feet of    |
|   | HW        | 100mm Welded Socket   | 23                    | La                   | Inches o   |
|   | J         | General Service Gauges  | 12                    | Hg                   | inches o   |
|   | J         | 63mm Severe Service Gauges (L.F.)   | 17                    | VAC                  | Range is   |
|   | L         | Bimetal Thermometers  | 54                    |                      | Compound   |
|   | Р         | Process Gauges  | 33                    |                      | qnated as: |
|   | W         | 100mm Elite Gauges (L.F.)   | 26                    | vacuum               | to 100psi  |
|   | w         | HVAC/R (Heating System, Contractor's,<br>Refrigeration Ammonia, Manifold) | 40-46                 | Р                    | plain ca   |
|   | W         | Paper Machine   | 48                    | F                    | front fla  |
|   | Х         | 100mm Severe Service Gauges (L.F.)  | 19                    | R                    | 3 holed    |
|   | Y         | Tridicators, Industrial Thermometers                                      | 59, 57                |                      |            |
|   | М         | 40mm & 50mm Severe Service  | 16                    | G                    | back fla   |
|   | GG        | Marshalltown Value Series   | 9                     | Н                    | hinged r   |
| 6 | PART N    | UMBER SUFFIX GUIDE  |                       | UC                   | U-clamp    |
| - | Marsh Ins | struments nart numbers end with a letter suffix to denote a specie        | al feature or ontions |                      |            |

Marsh Instruments part numbers end with a letter suffix to denote a special feature or options. ΠΕΘΟΡΙΟΤΙΟ CLIEELV ODTION

| SUFFIX | OPTION                                  | DESCRIPTION                       |
|--------|---|-----------------------------------|
|        |   | Friction-Black (FB)               |
| Δ      | Ping Ontions                            | Press-Black (PB)                  |
| A      | Ring Options                            | Press-Chrome (PC)                 |
|        |   | Friction Chrome (FC)              |
|        |   | ASME Grade 2A 0.5% (H%F);         |
| В      | Accuracy                                | ASME Grade 1A, 1.0% (1%F);        |
|        |   | ASME Grade A 2-1-2% (1%H)         |
| C      | two piece stem on severe service        | 63mm Severe Service C             |
| D      | Oxygen Cleaned                          |                                   |
| E      | Single Scale psi only Dial              |                                   |
|        |   | Safety Glass (SG)                 |
| F      | Window Options                          | Acrylic (AY)                      |
| 1      |   | Instrument Glass (GS)             |
|        |   | Polycarbonate (PC)                |
| G      | Weatherproof case                       |                                   |
| Н      | Restrictors                             |                                   |
|        | Fill Options                            | Silicone (SL)                     |
|        |   | Glycerine (GL)                    |
|        |   | Phenolic (PH); Brass (BR)         |
| J      | Case Options                            | Chrome (CR); Stainless Steel (SS) |
|        |   | Polypropylene Turret (TR)         |
|        |   | L1 -Bar Only                      |
|        | M . C D' I                              | L2-kg/cm <sup>2</sup> Only        |
| L      | Metric Dial                             | L3-kPa Only                       |
|        |   | L4-MPa only                       |
|        | Custom Name on Dial or Service          |                                   |
| М      | Printing                                |                                   |
| Р      | Liquid Filled product                   |                                   |
| R      | Front Flange                            |                                   |
|        |   | W1 -psi & Bar                     |
|        |   | W2-psi & kg/cm <sup>2</sup>       |
| W      | Dual Scale                              | W3-psi & kPa                      |
|        |   | W4-psi & MPa                      |
|        |   | Adjustable Pointers (AD)          |
| Z      | Pointers                                | Max. Hand Assembly (MX)           |
| NO     | E: Not all options are available on all |                                   |
| 110    |   |                                   |

| ABBRE                | VIATIONS AND TERMS USED   |
|----------------------|---|
| p or psi             | Pounds per square inch  |
| kPa                  | kilopascals   |
| Case                 | The case style  |
| oz/in²               | Ounces per square inch  |
| H <sub>2</sub> 0     | Inches of water   |
| ft. H <sub>2</sub> 0 | Feet of water   |
| Hg                   | Inches of mercury   |
| VAC                  | Range is in vacuum  |
| are desi             | Compound Ranges, where the gauge measures both vacuum and pressure gnated as: 30" Hg VAC to 100p = measures from 30 inches of mercury to 100psi pressure. |
| Р                    | plain case (no flange or clamps)  |
| F                    | front flange case (with U-clamp)  |
| R                    | 3 holed front flange (no clamp)   |
| G                    | back flange case  |
| Н                    | hinged ring case (front flange case with U-clamp and removable cover)   |
| UC                   | U-clamp case  |
| CONNE(<br>connect    | CTION : The process connection ½", ½", ½" – NPT diameter of ion (National Pipe Thread Standard)   |
| LM                   | lower mount   |
| LBM                  | lower back mount  |
| CB                   | center back mount   |
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