The Sunnen “PG” Bore Gaging System is a unique mechanical gaging system that makes I.D. gaging simple, reliable, and economical. Eliminates buying and maintaining costly master rings and air gage probes. Both gage and setting fixture are built for everyday use making them ideal for “in-process” inspection. Available in .001 mm or .0025 mm (.00005” or .0001”) reading scales.

**PG-700E Small Bore Precision Gage**

Diameter Range: 2.29 mm-9.63 mm (.090”-.379”)*

Direct reading scale with , 13 mm (.005”) range divided into increments of ,001 mm (.00005”). Order PG-700EM for metric applications.

Weight: 9.3 kg (20.5 lbs.)

Dimensions (without fingers): 267 mm x 197 mm x 165mm (10.5” H x 7.75” W x 6.5” D)

*Covered with complete set of gaging fingers. Individual finger sets can be ordered for specific sizes. Order individual finger sets from the complete list at right.

**PG-710E Small Bore Precision Gage**

Identical to PG-700 except direct reading scale is .24 mm (.010”) wide and divided into increments of .0025 mm (.0001”). Order PG-710EM for metric applications.

**Gaging Fingers for PG-700 or PG-710 Precision Gage**

To order individual finger pairs, consult the table below for size ranges and part numbers.

Each pair of gaging fingers is stamped with its size range and comes nested in an impact-resistant box. Available for sale only.

<table>
<thead>
<tr>
<th>Diameter Range</th>
<th>Gaging Depth*</th>
<th>Accessory Fingers</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>inches</td>
<td>mm</td>
</tr>
<tr>
<td>2,29-2,51</td>
<td>.090-.099</td>
<td>7,14</td>
</tr>
<tr>
<td>2,51-2,77</td>
<td>.099-.109</td>
<td>7,14</td>
</tr>
<tr>
<td>2,77-3,05</td>
<td>.109-.120</td>
<td>7,14</td>
</tr>
<tr>
<td>3,05-3,35</td>
<td>.120-.132</td>
<td>12,70</td>
</tr>
<tr>
<td>3,35-3,68</td>
<td>.132-.145</td>
<td>12,70</td>
</tr>
<tr>
<td>3,68-4,04</td>
<td>.145-.159</td>
<td>15,87</td>
</tr>
<tr>
<td>4,04-4,42</td>
<td>.159-.174</td>
<td>15,87</td>
</tr>
<tr>
<td>4,42-4,83</td>
<td>.174-.190</td>
<td>19,05</td>
</tr>
<tr>
<td>4,83-5,26</td>
<td>.190-.207</td>
<td>19,05</td>
</tr>
<tr>
<td>5,26-5,72</td>
<td>.207-.225</td>
<td>22,22</td>
</tr>
<tr>
<td>5,72-6,20</td>
<td>.225-.244</td>
<td>22,22</td>
</tr>
<tr>
<td>6,20-6,71</td>
<td>.244-.264</td>
<td>25,40</td>
</tr>
<tr>
<td>6,71-7,24</td>
<td>.264-.285</td>
<td>25,40</td>
</tr>
<tr>
<td>7,24-7,80</td>
<td>.285-.307</td>
<td>31,75</td>
</tr>
<tr>
<td>7,80-8,38</td>
<td>.307-.330</td>
<td>31,75</td>
</tr>
<tr>
<td>8,38-9,00</td>
<td>.330-.354</td>
<td>38,10</td>
</tr>
<tr>
<td>9,00-9,63</td>
<td>.354-.379</td>
<td>38,10</td>
</tr>
</tbody>
</table>

**COMPLETE SET** of all Gaging Finger Pairs. Each finger set comes in an individual plastic case.

Weight: 9 kg (20 lbs.)

*Individual Gaging Finger Shipping Weight: .2 kg (.5 lb.)

**Blind Hole Gaging Fingers for PG-700/PG-710 Gages**

Special Blind Hole Gaging Fingers are available on special order basis. These fingers are non-adjustable and can only be used for a specific diameter size. These altered blind hole fingers can measure to within 1,02 mm (.040”) of the bottom of the blind end of the bore. Recommend customer use a ring gage to set size on the gage.

**How to order blind hole gaging fingers:**

PG-____-____-____-HMOX The first ____ is the four-digit number of the standard gaging fingers for the diameter needed to be measured. The second ____ is the finished diameter of the bore to be measured, either in English or Metric units.

Examples: 2.89 mm diameter. Order: PG-1109-2.890-HMOX .2092” diameter. Order: PG-1202-2092-HMOX

Available 4 weeks after receipt of order.
**PG-800E Precision Bore Gage**

**Diameter Range:** 9.4 mm – 38.1 mm (0.370” – 1.500”)

Direct reading scale with .13 mm (.005”) range divided into increments of .001 mm (.00005”). Overall size range is divided into two subranges 9.4 mm-19.05 mm (.370”- .750”) and 19.05 mm-38.1 mm (.750”-1.500”). Replaceable carbide gage points which can be rotated for long life. Size range can be increased to 74.3 mm (2.9”) by ordering PG-250 Extension Finger Set.

Order PG-800EM for metric applications.

Dimensions: 267 x 197 x 213 mm (10-1/2” H x 7-3/4” W x 8-3/8” D)

Gaging Depth:
- Small Side - 24.6 mm (.968”)
- Large Side - 42.06 mm (1.656”)
- With PG-250 - 41.27 mm (1.625”)

Weight: 9.2 kg (20.25 lbs.)

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**PG-810E Precision Bore Gage**

Identical to PG-800 except direct reading scale is .24 mm (.010”) wide and divided into increments of .0025 mm (.0001”). Order PG-810EM for metric applications.

**PG-250E Extension Finger Set**

Used with the PG-800 and PG-810 Precision Bore Gages. Extends the PG-800/PG-810 measuring range from 38.1 mm (1.500”) to over 74.3 mm (2.900”) diameter. Consists of two pairs of carbide extension points which mount onto the fingers of the PG-800/PG-810. Mounting screws are permanently attached to extension points to avoid their loss. FOR SALE OR LEASE

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**PG-400E Setting Fixture**

**Diameter Range:** 2.29 mm – 38.3 mm (0.090” – 1.500”)

This Setting Fixture is used to set the PGE-3000, PG-800, PG-810, PG-700 and PG-710 Precision Bore Gages. Dimensional accuracy is guaranteed to be within ± .0006 mm (.000025”) of nominal reading over the entire range of the instrument. Comes in a carrying case with a master calibrating ring traceable to the Bureau of Standards.

Order PG-400EM for metric applications.

Weight: 3 kg (6.75 lbs.) (with carrying case and accessories)

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**PG-500E Setting Fixture**

(Not pictured similar to PG-400)

Similar to PG-400, except for higher range. Used to set PG-800 or PG-810 Precision Bore Gage when equipped with PG-250 Extension Fingers. Comes in a carrying case with a master calibrating ring traceable to the Bureau of Standards. Includes PG-2090 Auxiliary Faceplate.

Order PG-500EM for metric applications.

Weight: 4.3 kg (9.5 lbs.) (with carrying case and accessories)

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**PGE-500 Setting Fixture**

Identical to PG-500E Setting Fixture. Use to set PGE-3000 Precision Bore Gage when equipped with PGE-250 Extension Fingers. Includes PGE-3167 Auxiliary Faceplate.

Order PGE-500EM for metric applications.

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**PG-810-Z08X Precision Bore Gage**

Available for purchase only. PG-810-Z08X is similar to the PG-810 Precision Bore Gage.

- **Diameter Range:** 76.2 mm – 114.3 mm (3.0” – 4.5”)
- **Dimensions:** 267 x 197 x 222 mm (10-1/2” H x 7-3/4” W x 8-3/4” D)

Order PGE-810M-Z08X for metric applications.

Weight: 9.54 kg (21 lbs.)

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**GAGE LEASING PROGRAM**

Sunnen PG-700, PG-800 Series Gages, Setting Fixtures, and PG-250 Extension Fingers are also available on a unique lease plan. Leasing the Sunnen bore gaging system includes maintenance and updating by Sunnen. Contact KS & C Industries 1-800-247-7098 for complete leasing information.

**Note:** This program is not available outside of the United States.
PG-500-U100X Setting Fixture for PG-810-Z08X
(Similar to PG-500 Setting Gage.)

**Diameter Range:** 73,40 mm – 109,47 mm (2.890”– 4.310”)

Used to set 76.2 mm-109.47 mm (3.0”-4.310”) diameter range on PG-810-Z08X.

Also used with PG-800 Series Gage with PG-250 Extension Fingers and PG-2090-AM1X Auxiliary Face Plate to set diameters 73,4 mm-76,2 mm (2.890”-3.0”). Setting size on PG-810-Z08X from 109,47 mm-114,3 mm (4.310”-4.5”) must be done utilizing ring gages or gage blocks. Order PG-500M-U100X for metric applications.

Shipping Weight: 7.7 kg (17 lb.)

PG-810-Z08X and PG-500-U100X available from stock (limited quantity available). PG-2090-AM1X available three weeks after receipt of order.

PG-845 Tilting Gage Stand
A recommended accessory for the PG-810-Z08X Precision Gage. Lets the gage faceplate support the majority of the part weight. Used also with PGE-3000, PG-800/PG-810. Attaches to MB-2370 Gage Mounting Bracket.

Weight: 2.1 kg (4.5 lbs.)

PG-2130 Flexible Hex Wrench
Use to dampen vibration when centralizing PG-400 on the PG-700/710 Precision Gage.

PG-2110 Clip-On Auxiliary Faceplate
For PG-700/710 Precision Gage.

Additional PG Gage Faceplates.

PG-4 Auxiliary Faceplate for PG-700/PG-710. A flat plate with ten holes designed to slip over the gaging fingers of a PG-700/PG-710. Reduces the opening size of the PG-2110 faceplate making it easier to measure thin walled parts. Hole sizes on PG-4 vary from 2.77 mm-8.71 mm (.109”-.343”).

PG-10A Auxiliary Faceplate set for PG-800/PG-810 Precision Gage. Consists of one PG-5 and PG-6 Faceplate similar to PG-4. PG-5 hole size 18.3 mm (.720”), 20.8 mm (.820”), and 23.4 mm (.920”). PG-6 hole size 9.7 mm (.380”), 10.9 mm (.430”), 12.2 mm (.480”), 13.5 mm (.530”), 14.7 mm (.580”), 16.0 mm (.630”), and 17.3 mm (.680”).

PG-25 Magnifying Glass
With spring clip. Made of 2.5x ground optical glass with a spring clip for mounting on PG-700 or PG-800 precision gage.

Gage Mounting Brackets
Recommended when any Sunnen Precision Bore Gage is used on a Sunnen Honing Machine. Mounting brackets reduce lost motion and fatigue and reduce runoff of honing oil.

Available for either right or left side mounting. All models adjustable for easiest access to gage.

To order, specify from chart.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-1325</td>
<td>For Right Side of MB-1290,</td>
</tr>
<tr>
<td></td>
<td>MBB-1290, MBB-1600,</td>
</tr>
<tr>
<td></td>
<td>MBB-1650, or MBB-1660.</td>
</tr>
<tr>
<td></td>
<td>Weight: 4.5 kg (10 lbs.)</td>
</tr>
<tr>
<td>MB-2370</td>
<td>For Left or Right Side of</td>
</tr>
<tr>
<td></td>
<td>MBB-1650 or MBB-1660;</td>
</tr>
<tr>
<td></td>
<td>Left Side of MBB-1670, MBB-1680,</td>
</tr>
<tr>
<td></td>
<td>MBB-1690, MBB-1800, MBC-1801,</td>
</tr>
<tr>
<td></td>
<td>MBC-1802, MBC-1803, MBC-1804,</td>
</tr>
<tr>
<td></td>
<td>MBC-1805. Weight: 5.5 kg (12 lbs.)</td>
</tr>
<tr>
<td>MB-1250</td>
<td>For Left Side of MB-1290,</td>
</tr>
<tr>
<td></td>
<td>MBB-1290, MBB-1600.</td>
</tr>
<tr>
<td></td>
<td>Weight: 4.5 kg (10 lbs.)</td>
</tr>
<tr>
<td>EC-7170</td>
<td>For Right Side of EC-3500 and ML models.</td>
</tr>
</tbody>
</table>

Blind Hole Gaging Points for PG-800 and PG-250

**PG-702A**
Blind Hole
Point Set
Consists of Three Points and Screws 18.8 mm-38.1 mm (.740”-.1500”). Also used on non-centralizer gaging fingers on PG-250 Extension Finger Set.

**PG-702A**
Blind Hole
Point Set
Consists of Three Points and Screws 18.8 mm-38.1 mm (.740”-.1500”). Also used on non-centralizer gaging fingers on PG-250 Extension Finger Set.

**PG-704A**
Blind Hole Point Set
Consists of Three Points and Screws 9.4 mm-18.8 mm (.370”-.740”) diameter gaging fingers.

**PG-LR6X**
Blind Hole Point Set
For PG-250 Extension Finger Set
38.1 mm-74.3 mm (1.5”-2.9”)

**Note:** Blind hole point sets measure to within 0.25 mm (.010”) of the bottom of the blind hole.

**PG-LR6X** available four weeks after receipt of order.
Dial Bore Gages
GR-3000 Dial Bore Gage Accessories

Diameter Range:
1.37 mm – 304.8 mm
.054” – 12.0”

FAST • EASY • ACCURATE-gages and setting fixtures.

All Sunnen Dial Bore Gages read out in .002 mm (or .0001”)* and feature all-carbide gaging points, wear-proof ball crank, and adjustable centralizers. Each gage comes packed in its own sturdy box with all tools and wrenches required for setup and adjustment.

*(.010 mm [.0005’’] reading gages are also available. Contact Customer Service for price and availability.)

Dial Bore Gages
GR-3000 Dial Bore Gage Accessories

Diameter Range: 1.37 mm – 13.6 mm (.054” – .535”)

Assembly consists of a .002 mm reading indicator, probe retractor and probe retainer bushing in a reinforced nylon insulating shroud.

Gage Probes and Transfer Pins

Probes and pins must be ordered separately. Diameter ranges, gaging depths and part numbers are listed below.

<table>
<thead>
<tr>
<th>Diameter Range mm</th>
<th>Probe No.</th>
<th>Transfer Pin No.</th>
<th>Max. Gaging Depth mm</th>
<th>Overall Length in</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.37 - 1.55</td>
<td>G-1055</td>
<td>G-2037</td>
<td>11</td>
<td>167</td>
</tr>
<tr>
<td>1.50 - 1.75</td>
<td>G-1070</td>
<td>G-2059</td>
<td>16</td>
<td>174</td>
</tr>
<tr>
<td>1.80 - 2.20</td>
<td>G-1080</td>
<td>G-2070</td>
<td>16</td>
<td>174</td>
</tr>
<tr>
<td>2.05 - 2.45</td>
<td>G-1090</td>
<td>G-2089</td>
<td>16</td>
<td>174</td>
</tr>
<tr>
<td>2.25 - 2.75</td>
<td>G-1100</td>
<td>G-2090</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>2.50 - 3.00</td>
<td>G-1110</td>
<td>G-2100</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>2.75 - 3.25</td>
<td>G-1120</td>
<td>G-2110</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>3.00 - 3.50</td>
<td>G-1130</td>
<td>G-2120</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>3.25 - 3.75</td>
<td>G-1140</td>
<td>G-2130</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>3.50 - 4.00</td>
<td>G-1150</td>
<td>G-2140</td>
<td>21</td>
<td>179</td>
</tr>
<tr>
<td>3.75 - 4.25</td>
<td>G-1160</td>
<td>G-2150</td>
<td>21</td>
<td>179</td>
</tr>
</tbody>
</table>

*Note: Probe and transfer pin storage case G-3005A is also available for GRM/GR-3000 gages.

Model CF-1126 Setting Fixture, shown with GR-2121 Gage.

Model CF-602 Setting Fixture with CF-540 size setting adapter for use as shown with GR-3000 Gage.

Model CF-502 Setting Fixture, shown with GR-6121 Gage.

Model CF-401 Setting Fixture, shown with GR-9121 Gage.

1-800-325-3670
Dial Bore Gages
GR-3000 Dial Bore Gage Accessories

Probe Extension*
Available for probes 8.2 mm (.323") or larger. Probe extensions are 63.5 mm (2.5") long, and up to three can be assembled together. Part Number: KZ1X-3500.

Blind Hole Probes and Transfer Pins
Order standard probe and transfer pin number and add -KZ0X to number. Example: G-1200-KZ0X.

NOTE: G-1055 probe and G-2037 transfer pin not available in blind hole configuration. Available 4 weeks after receipt of order.

Carbide Inserted Gage Probes and Transfer Pins
For applications where gage points are exposed to extreme wear conditions such as heavy production, rough workpieces or abrasive materials. Not available in sizes smaller than 4.2 mm (.165").

Order standard probe and transfer pin number and add -KY5X to number. Example: G-1240-KY5X.

Available 2-4 weeks after receipt of order.

Probe Kits
Probe kits to cover the more popular diameters are available as listed below. Both kits are supplied in a hinged, nested box.

G-3025 Probe Kit
Consists of 15 probes and 2 transfer pins. Covers a continuous diameter range from 4.2 mm-13.6 mm (.165"-.535").

*Standard CF-502 Setting Fixture nest does not work with these accessories. Alternative methods of setting size must be used. Available 4 weeks after receipt of order.

Right Angle Attachment*
Available for special conditions where it is difficult to read the gage or the total gage height causes a problem.

Part Number: KZ1X-90.

**Diameter Range**

<table>
<thead>
<tr>
<th>Probe No.</th>
<th>Diameter Range</th>
<th>Transfer Pin No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-1180</td>
<td>4.20/.48</td>
<td>.165/.189</td>
</tr>
<tr>
<td>G-1200</td>
<td>4.70/.53</td>
<td>.185/.209</td>
</tr>
<tr>
<td>G-1220</td>
<td>5.20/.60</td>
<td>.205/.228</td>
</tr>
<tr>
<td>G-1240</td>
<td>5.70/.63</td>
<td>.224/.248</td>
</tr>
<tr>
<td>G-1260</td>
<td>6.20/.68</td>
<td>.244/.268</td>
</tr>
<tr>
<td>G-1280</td>
<td>6.70/.73</td>
<td>.264/.287</td>
</tr>
<tr>
<td>G-1300</td>
<td>7.20/.78</td>
<td>.283/.307</td>
</tr>
<tr>
<td>G-1320</td>
<td>7.70/.83</td>
<td>.303/.327</td>
</tr>
<tr>
<td>G-1340</td>
<td>8.20/.88</td>
<td>.323/.346</td>
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<tr>
<td>G-1360</td>
<td>8.70/.93</td>
<td>.343/.366</td>
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<tr>
<td>G-1380</td>
<td>9.20/.98</td>
<td>.362/.386</td>
</tr>
<tr>
<td>G-1400</td>
<td>9.40/10.60</td>
<td>.370/.417</td>
</tr>
<tr>
<td>G-1440</td>
<td>10.40/11.60</td>
<td>.409/.457</td>
</tr>
<tr>
<td>G-1480</td>
<td>11.40/12.60</td>
<td>.449/.496</td>
</tr>
<tr>
<td>G-1520</td>
<td>12.40/13.60</td>
<td>.488/.535</td>
</tr>
</tbody>
</table>

G-3050 Probe Kit
Consists of 6 probes and 2 matching transfer pins which cover a 4.2 mm-13.6 mm (.165"-.535") diameter range on even 1/16" increments.

<table>
<thead>
<tr>
<th>Probe No.</th>
<th>Diameter Range</th>
<th>Transfer Pin No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-1180</td>
<td>4.20/.48</td>
<td>.165/.189</td>
</tr>
<tr>
<td>G-1260</td>
<td>6.20/.68</td>
<td>.244/.268</td>
</tr>
<tr>
<td>G-1320</td>
<td>7.70/.83</td>
<td>.303/.327</td>
</tr>
<tr>
<td>G-1380</td>
<td>9.20/.98</td>
<td>.362/.386</td>
</tr>
<tr>
<td>G-1440</td>
<td>10.40/11.60</td>
<td>.409/.457</td>
</tr>
<tr>
<td>G-1520</td>
<td>12.40/13.60</td>
<td>.488/.535</td>
</tr>
</tbody>
</table>

Right Angle Attachment

Available for special conditions where it is difficult to read the gage or the total gage height causes a problem.

Part Number: KZ1X-90.

For use with 3000, 4000, 6000, and 9000 Series Dial Bore Gages.

CF-502M (metric) 1.37 mm-50.8 mm
CF-502 (inch) .054"-.2.00"

For use with 3000, 4000, 6000, and 9000 Series Dial Bore Gages.

CF-502M comes with 0-51 mm micrometer head marked in .002 mm increments with precision lapped carbide anvils. Includes a ring gage checking standard and three interchangeable nests. (Use of CF-502M/CF-502 with 3000 series gage requires the purchase of CF-540 Size Setting Adapter.) Setting Master has a rugged, stress-relieved cast-iron base and may be used without removing it from its protective case.

Shipping Weight: 1 kg (2 lbs.)

Setting Fixtures
- **CF-502M** Metric & CF-502:
  - CF-502M: 12.6 mm-19.1 mm
  - CF-502: .495"-.750"

- **CF-550A**: .495"-.750"
- **CF-560A**: .740"-.1.19"
- **CF-570A**: 1.18"-.2.00"

- **CF-137**: Micrometer Adjusting Wrench
- **CF-138**: Spindle Lock Knob
- **CF-544A**: Magnifier
- **CF-576A**: Calibration Ring

G-502 Shipping Weight: 4.5 kg (10 lbs.)

Replacement Gage Nests For CF-502M Metric & CF502:

<table>
<thead>
<tr>
<th>Diameter Range</th>
<th>CF-502M</th>
<th>CF-502</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6 mm-19.1 mm</td>
<td>1180</td>
<td>1180</td>
</tr>
<tr>
<td>18.8 mm-30.2 mm</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>30.0 mm-50.0 mm</td>
<td>1380</td>
<td>1380</td>
</tr>
</tbody>
</table>

*G-502 Size Setting Adapter*
Centers gage probes between parallel reference surfaces on CF-502 Setting Fixture. Serves as an "extra pair of hands" to help in nulling the gage on both the horizontal and vertical axis. Assures fast, accurate setup of the gage.

Shipping Weight: 1 kg (2 lbs.)
Dial Bore Gages

GAM/GA-4000 Series Gages

**Diameter Range:**

12.6 mm – 19.0 mm (.495” – .750”)

Non-retractable gage with .002 mm metric or (.0001") reading indicator. Capable of measuring to within 5.0 mm (.200") of the bottom of a blind hole. Indicators reading in .010 mm or .0005" are available on special order.

### Replacement Parts For GAM/GA-4000 Series Gages:

- **G-275MA**: Quick Setting Wrench (Metric reading)
- **G-275A**: Quick Setting Wrench (Inch reading)
- **G-285A**: Indicating Ball Removal Tool
- **G-289A**: Indicating Finger Clamp
- **PBR-505A**: Indicating Ball (.00001" Diameter Carbide)
- **G-222A**: Centralizer Points (Package of 2)
- **G-261MA**: #1 Point Assembly (Metric) 12.6 mm-14.7 mm diameter
- **G-261A**: #1 Point Assembly (Inch) .495"-.580" diameter
- **G-262MA**: #2 Point Assembly (Metric) 14.7 mm-16.9 mm diameter
- **G-262A**: #2 Point Assembly (Inch) .580"-.665" diameter
- **G-263MA**: #3 Point Assembly (Metric) 16.9 mm-19.0 mm diameter
- **G-263A**: #3 Point Assembly (Inch) .665"-.750" diameter
- **G-249A**: Nuts for Point Assembly (Package of 3)
- **G-249MA**: Metric Nuts for Point Assembly (Package of 3)

Special Length Dial Bore Gages are available on a special order basis. GAM/GA-4000 Indicator cannot be peaked at lengths longer than 175 mm (7") therefore gage accuracy is compromised.

To order special length dial bore gages, specify as follows: GAM/GA-4_1X. The _ is the desired gaging length multiplied by 2 (in inches). Available 4 weeks after receipt of order.

### Diameter Range:

- **Metric Inches mm mm (in)**
- **Shipping Weight kg lbs**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAM-4051</td>
<td>.495&quot;-5.194&quot;</td>
<td>14.0 mm</td>
<td>.7 kg 1.5 lbs</td>
</tr>
<tr>
<td>GAM-4101</td>
<td>.504&quot;-6.000&quot;</td>
<td>16.0 mm</td>
<td>.7 kg 1.5 lbs</td>
</tr>
<tr>
<td>GAM-4141</td>
<td>.513&quot;-7.000&quot;</td>
<td>18.0 mm</td>
<td>.7 kg 1.5 lbs</td>
</tr>
</tbody>
</table>

GRM/GR-6000 Series Gages

**Diameter Range:**

18.8 mm – 30.2 mm (.740” – 1.190”)

Retractable gage with .002 mm metric or (.0001") reading indicator. Capable of measuring to within 6.8 mm (.270") of the bottom of a blind hole. Indicators reading in .010 mm or .0005" are available on special order.

### Replacement Parts For GRM/GR-6000 Series Gages:

- **G-375MA**: Quick Setting Wrench (Metric reading)
- **G-375A**: Quick Setting Wrench (Inch reading)
- **G-385A**: Indicating Ball Removal Tool
- **G-389A**: Indicating Finger Clamp
- **PBR-506A**: Indicating Ball (.00001" Diameter Carbide)
- **G-327A**: Centralizer Points (Package of 2)
- **G-361MA**: #1 Point Assembly (Metric) 18.8 mm-22.6 mm diameter
- **G-361A**: #1 Point Assembly (Inch) .740"-.890" diameter
- **G-362MA**: #2 Point Assembly (Metric) 22.6 mm-26.4 mm diameter
- **G-362A**: #2 Point Assembly (Inch) .890"-1.04" diameter
- **G-363MA**: #3 Point Assembly (Metric) 26.4 mm-30.2 mm diameter
- **G-363A**: #3 Point Assembly (Inch) 1.04"-1.19" diameter
- **G-349A**: Nuts for Point Assembly (Package of 3)
- **G-349MA**: Metric Nuts for Point Assembly (Package of 3)

Special Length Dial Bore Gages are available on a special order basis. GR/GRM-6000 Indicator cannot be peaked at lengths longer than 305 mm (12") therefore gage accuracy is compromised.

To order special length dial bore gages, specify as follows: GR/GRM-6_1X. The _ is the desired gaging length multiplied by 2 (in inches). Available 4 weeks after receipt of order.

### Diameter Range:

- **Metric Inches mm mm (in)**
- **Shipping Weight kg lbs**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRM-6071</td>
<td>.740&quot;-7.875&quot;</td>
<td>20.0 mm</td>
<td>1 kg 2 lbs</td>
</tr>
<tr>
<td>GRM-6121</td>
<td>.750&quot;-8.000&quot;</td>
<td>25.0 mm</td>
<td>1 kg 2 lbs</td>
</tr>
<tr>
<td>GRM-6241</td>
<td>.760&quot;-8.250&quot;</td>
<td>30.0 mm</td>
<td>1 kg 2 lbs</td>
</tr>
</tbody>
</table>

**CF-502 Setting Fixture**

Metric version CF-502M has a 0 to 51 mm Micrometer head marked in .002 mm increments. Supplied in a sturdy, nested box.

**CF-502 for .544" to 2.000" diameters** is equipped with a large micrometer head with range of 0" to 2" marked in .0001" increments.

Shown with GR-6121 Gage.
Dial Bore Gages

GRM/GR-9000 Series Gages

**Diameter Range:**
30.0 mm – 50.8 mm (1.18” – 2.0”)

Retractable gage with .002 mm metric or (.001”) reading indicator. Capable of measuring to within 8.5 mm (.335”) of the bottom of a blind hole. Indicators reading in .010 mm or .0005” are available on special order.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRM-9071</td>
<td>88 mm 3/4”</td>
<td>237 mm 9/16”?</td>
<td>1.8 kg 4 lbs</td>
</tr>
<tr>
<td>GRM-9121</td>
<td>150 mm 6”</td>
<td>300 mm 11/16”</td>
<td>1.8 kg 4 lbs</td>
</tr>
<tr>
<td>GRM-9241</td>
<td>300 mm 12”</td>
<td>452 mm 17/16”</td>
<td>1.8 kg 4 lbs</td>
</tr>
</tbody>
</table>

Replacement Parts For GRM/GR-9000 Series Gages:

- G-475MA: Quick Setting Wrench (Metric reading)
- G-475A: Quick Setting Wrench (Inch reading)
- G-485A: Indicating Ball Removal Tool
- G-489A: Indicating Finger Clamp
- PBR-503A: Indicating Ball (1/8” Diameter Carbide)
- G-427A: Centralizer Points (Package of 2)
- G-461MA: #1 Point Assembly (metric) 30.0 mm-35.2 mm diameter
- G-461A: #1 Point Assembly (inch) 1.18”-1.385” diameter
- G-462MA: #2 Point Assembly (metric) 35.2 mm-40.4 mm diameter
- G-462A: #2 Point Assembly (inch) 1.385”-1.59” diameter
- G-463MA: #3 Point Assembly (metric) 40.4 mm-45.6 mm diameter
- G-463A: #3 Point Assembly (inch) 1.59”-1.795” diameter
- G-464MA: #4 Point Assembly (metric) 45.6 mm-50.8 mm diameter
- G-464A: #4 Point Assembly (inch) 1.795”-2.0” diameter
- G-449A: Nuts for Point Assembly (Package of 4)
- G-449MA: Nuts for Point Assembly (Metric) (Package of 4)

Special Length Dial Bore Gages are available on a special order basis. GRM/GR-9000 Indicator cannot be peaked at lengths longer than 635 mm (25”) therefore gage accuracy is compromised.

To order special length dial bore gages, specify as follows: G_-2_1X. The second _ is the desired gaging length multiplied by 2 (in inches).

Note: Sunnen 2000 Series Dial Bore Gages can be extended to 304.8 mm (12”) by adding oversize centralizer points and additional gage point extensions.

For gaging diameters in the range of 152.4 mm-304.8 mm (6”-12”) order:

2000 Series Gages assembled with G-822A Gage extension set cannot be used with CF-1126 setting fixture when set for diameters above 203.2 mm (8”). Alternative methods of setting gage must be used.

G-822C: Centralizer Point Only.

GAM/GA-2000 Series Gages (Non-Retractable)

**Diameter Range:**
50 mm – 150 mm (2.0” – 6.0”)

Non-retractable gage with .002 mm metric or (.001”) reading indicator. Capable of measuring to within 13 mm (.500”) of the bottom of a blind hole. Indicators reading in .010 mm or .0005” available on special order.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAM-2031</td>
<td>75 mm 3”</td>
<td>203 mm 8”</td>
<td>2.7 kg 6 lbs</td>
</tr>
<tr>
<td>GAM-2061</td>
<td>150 mm 6”</td>
<td>280 mm 11”</td>
<td>2.7 kg 6 lbs</td>
</tr>
<tr>
<td>GAM-2121</td>
<td>300 mm 12”</td>
<td>432 mm 17”</td>
<td>2.7 kg 6 lbs</td>
</tr>
<tr>
<td>GAM-2241*</td>
<td>600 mm 24”</td>
<td>737 mm 29”</td>
<td>2.7 kg 6 lbs</td>
</tr>
</tbody>
</table>

*Available 2 weeks after receipt of order.

Extension sleeves are available for converting GAM/GA-2000 Series Gages to different lengths. The following extension sleeves are available:
- GA-203: Accessory Extension Sleeves 75 mm (3”)
- GA-206: Accessory Extension Sleeves 150 mm (6”)
- GA-212: Accessory Extension Sleeves 300 mm (12”)
- GA-224: Accessory Extension Sleeves 600 mm (24”)

Retractable gage with .002 mm metric or (.001”) reading indicator. Capable of measuring to within 13 mm (.500”) of the bottom of a blind hole. Indicators reading in .010 mm or .0005” available on special order.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRM-2061</td>
<td>150 mm 6”</td>
<td>280 mm 11”</td>
<td>2.7 kg 6 lbs</td>
</tr>
<tr>
<td>GRM-2121</td>
<td>300 mm 12”</td>
<td>432 mm 17”</td>
<td>2.7 kg 6 lbs</td>
</tr>
<tr>
<td>GRM-2241*</td>
<td>600 mm 24”</td>
<td>737 mm 29”</td>
<td>2.7 kg 6 lbs</td>
</tr>
</tbody>
</table>

*Furnished with metal case for accessories only.

Replacement Parts For 2000 Series Gages:

- PBR-503A: Indicating Ball (1/8” Diameter Carbide)
- G-522A: Centralizer Points (Package of 2)
- G-522MA: Nut (Package of 6, metric)
- G-532A: Nut (Package of 8)
- G-640A: Indicating Ball Removal Tool
- G-610A: #1 Point Assembly 50.8 mm-60.3 mm (2.0”-2.375”)
- G-611A: #2 Point Assembly 60.3 mm-69.8 mm (2.375”-2.750”)
- G-612A: #3 Point Assembly 69.8 mm-79.4 mm (2.750”-3.125”)
- G-613A: #4 Point Assembly 79.4 mm-88.9 mm (3.125”-3.500”)
- G-614A: #5 Point Assembly 88.9 mm-98.4 mm (3.500”-3.750”)
- G-615A: #6 Point Assembly 98.4 mm-107.9 mm (3.750”-4.250”)
- G-616A: #7 Point Extension
- G-634A: #8 Point Extension
- G-645A: Gage Point Assembly Ball Removal Tool
- G-638A: Gage Point Assembly Wrench

Special Length Dial Bore Gages are available on a special order basis. 2000 Series Gages cannot be peaked at lengths longer than 1650 mm (65”) therefore gage accuracy is compromised. To order special length dial bore gages, specify as follows: G_-2_1X. The second _ is the desired gaging length (in inches). Available 4 weeks after receipt of order.
Setting Fixtures CF-1126M (metric) CF-1126 (inch)

Diameter Range: 51 mm – 203 mm (2.0” – 8.0”)


Shipping Weight: 9.5 kg (21 lbs.)

Includes .002 mm (.0001”) micrometer head with precision lapped carbide anvils. Comes with a ring gage checking standard and precision setting standards in 25.4 mm (1”) increments. Setting Master has a rugged, stress-relieved, cast iron base. May be used without removing from its protective case.

Setting Fixtures are shipped complete with setting standards to cover 50 mm-152.4 mm (2”-6”) range. A setting standard is not required to measure in the 178 mm-203 mm (7”-8”) range. When measuring in the 152 mm-178 mm (6”-7”) range order:

CF-360A 152-178 mm (metric)  CF-260A 6”-7” (inch)

CF-1126 Replacement Setting Standards:

CF-320A* 50-75 mm  CF-340A* 100-125 mm
CF-330A* 75-100 mm  CF-350A* 125-150 mm
CF-360A 152-178 mm

*Included with CF-1126M

CF-1126 Replacement Setting Standards:

CF-220A* 2”-3”  CF-240A* 4”-5”
CF-230A* 3”-4”  CF-250A* 5”-6”
CF-260A 6”-7”

*Included with CF-1126

CF-544A Magnifier  CF-215A Calibrating Ring
CF-137A Spanner Wrench

E Series Electronic Dial Bore Gages

Features
- 16 Models + Special Lengths. All 3000, 4000, 6000, 2000 Series Available - Add "E" Suffix on Part Number
- Metric/Inch Conversion .001 mm or .0001” Divisions
- Display Swivels 330° for any Gaging Position
- SPC Capability
- Preset, zero set, +/- direction and Go/No Go functions.
- Communicates with Computers.

Accessories/Repair Parts

LU2X1 Connecting Cable  2 Meter Length
G799A Replacement Indicator and Bushing

Gage Point Selection Table

<table>
<thead>
<tr>
<th>Use Gage Point Number</th>
<th>For Diameter Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in</td>
</tr>
<tr>
<td>1</td>
<td>2.000 - 2.375</td>
</tr>
<tr>
<td>2</td>
<td>2.375 - 2.750</td>
</tr>
<tr>
<td>3</td>
<td>2.750 - 3.125</td>
</tr>
<tr>
<td>4</td>
<td>3.125 - 3.500</td>
</tr>
<tr>
<td>5</td>
<td>3.500 - 3.875</td>
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<tr>
<td>6</td>
<td>3.875 - 4.250</td>
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<td>7 + 2</td>
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<td>7 + 5</td>
<td>5.375 - 5.750</td>
</tr>
<tr>
<td>7 + 6</td>
<td>5.750 - 6.125</td>
</tr>
</tbody>
</table>

Replace Indicators for Sunnen Dial Bore Gages

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Qty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>– – –</td>
<td>Ref.</td>
<td>Dial Indicator Assembly includes</td>
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<tr>
<td>G595A</td>
<td>1</td>
<td>Indicator (.0005 in. Reading)</td>
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<tr>
<td>G595MA</td>
<td>1</td>
<td>Indicator (.01 mm Reading)</td>
</tr>
<tr>
<td>G795A</td>
<td>1</td>
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<td>G795MA</td>
<td>1</td>
<td>Indicator (.002 mm Reading)</td>
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<td>G599A</td>
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<td>Screw</td>
</tr>
<tr>
<td>G597A</td>
<td>1</td>
<td>Nut</td>
</tr>
<tr>
<td>G59515A</td>
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<td>Bezel and Crystal Assembly - Flat Style Lens</td>
</tr>
<tr>
<td>G59513A</td>
<td>1</td>
<td>Bezel Clamp and Screw - Flat Style Lens</td>
</tr>
<tr>
<td>G595-5A</td>
<td>1</td>
<td>Bezel and Crystal Assembly - Round Style Lens</td>
</tr>
<tr>
<td>G595-3A</td>
<td>1</td>
<td>Bezel Clamp and Screw - Round Style Lens</td>
</tr>
<tr>
<td>G795-1</td>
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<td>Bezel and Crystal Assembly - Flat Style Lens with Blue Bezel</td>
</tr>
<tr>
<td>G795-2</td>
<td>1</td>
<td>Bezel Clamp and Screw - Flat Style Lens with Blue Bezel</td>
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</tbody>
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