THE SUNNEN SYSTEM . . .

It’s complete
The idea of a dial bore gage has always been good. And now, Sunnen® has put together a complete Dial Bore Gaging System that does a lot of good things the gage could never do alone. From setup to readout this system helps you gage inside diameters to within tenths (metric versions 0,002mm) with less fuss and more confidence than ever before. Five .0001" reading Gages and two master Setting Fixtures cover all bores from .054"-8" (1,37 mm-203 mm). The G-822A Gage extension kit allows measurement of bores from 6”-12” (152,4 mm-304.8 mm). Consult your Sunnen field engineer for details.

It’s easy
The system does it. Each piece, each feature works together to make bore gaging faster and easier than ever before. The unique Size-Setting Fixture that you can dial to exact size in seconds. The Quick-Set Wrench that takes the fussiness out of adjusting gage points and presets the Gage to within .001” (0,025 mm) of final calibration. The Retractable Gage Head and Adjustable Centralizer for easy “in and out” even with interrupted bores.

It’s reliable
A new Shock-Shield protects the indicator against drift and movement caused by heat and rough handling. All gaging points are inexpensive, easily replaced carbide balls. A patented, wear-free ball crank insures repeatability over a long, long life. And a master calibrating ring is provided with Sunnen Setting Fixtures so you can quickly check the system out right on the job.

It’s Sunnen
Sunnen builds, services and stands behind this gaging system. You can count on the same accuracy and reliability you’ve always found in Sunnen honing machines, gages and other bore-sizing products.

HOW THE SUNNEN SYSTEM WORKS
Fast, foolproof setup without ring gages,micrometers or jo blocks.

1. Preset Gage to within .001” (0,025 mm) of size with Quick-Set Wrench. This one tool adjusts gaging points and locks them.

2. Put the Gage in the Setting Fixture. Nest holds it upright and secure during calibration.

3. Dial the size desired on the Setting Fixture.

4. Rock the Gage for minimum reading.

5. Zero the Gage . . . AND GO!

(Some methods may vary depending on size range of gage.)
Sunnen features make this the Dial Bore Gage you trust

Shock-Shield protects dial from hand heat and jarring to help assure reliable readings.


Gage head slips easily in and out of interrupted holes.

Adjustable centralizers for proper centralization over entire diameter range. One twist adjusts gaging tension so head goes smoothly in and out of any size hole.

All standard Sunnen Dial Bore Gages are TENTH READING (Metric models read in 0.002 mm increments.) Special order gages available with .0005" (0.010 mm) readouts.

Dial can be indexed 90° for easy reading from any angle.

Patented wear-proof ball crank assures repeatability over a long, long life.

Carbide gaging points are both long-wearing and replaceable.

Accurate centralizing action assured under all conditions.

Position of the gage centralizer points can be adjusted to minimize interference or shock when traveling over cross holes or grooves in the bore being measured. Unique centralizer design insures accurate centering action even with gage tilted off the bore axis. Maintains accurate readings when gaging in close quarters. Centralizer points can be indexed easily as they wear … greatly extending their useful life.

Exclusive ball crank pivot eliminates wear as a factor in gaging accuracy.

Spring-loaded pivot pin actually “wears in” as gage is used. Repeatability stays factory new even with extended use under tough production shop conditions.

Note: Models GR-3000 and GRM-3000 for small bores from .054" (1.37 mm) to .535" (13.59 mm) operate on a probe and transfer pin design rather than the centralizer design described above.
The Gages

Standard Sunnen Dial Bore Gages read out in tenths (metric versions 0,002 mm). Models are also available that read out in five-tenths (metric version 0,010 mm). All models (except GR-3000 and GRM-3000) 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. Note: For the Sunnen Digital Dial Bore Gage, Just add “E” to the suffix of the gage part number (i.e. GR-2245E).

<table>
<thead>
<tr>
<th>Diameter Range</th>
<th>Max. Gaging Depth</th>
<th>Overall Length</th>
<th>Model Number</th>
<th>Shipping Weight</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>inches mm</td>
<td>inches mm</td>
<td>inches mm</td>
<td>.0001&quot; Reading Indicators</td>
<td>.0002 mm Reading Indicators</td>
<td>.0005&quot; Reading Indicators</td>
</tr>
<tr>
<td>.054 to .535</td>
<td>1.37 to 13.59</td>
<td>.43 to 1.81</td>
<td>Depends on probe used</td>
<td>GR-3000 (See chart at right)</td>
<td>GRM-3000 (See chart at right)</td>
</tr>
<tr>
<td>.495 to .750</td>
<td>12.6 to 19.0</td>
<td>2.5 to 7</td>
<td>62 9.3125 178</td>
<td>GA-4051 GAM-4051</td>
<td>GA-4055† GAM-4055†</td>
</tr>
<tr>
<td>.740 to 1.190</td>
<td>18.8 to 30.2</td>
<td>3.5 to 12</td>
<td>88 9.1875 235</td>
<td>GR-6071 GRM-6071</td>
<td>GR-6075† GRM-6075†</td>
</tr>
<tr>
<td>1.180 to 2.000</td>
<td>30.0 to 50.8</td>
<td>3.5 to 12</td>
<td>88 9.25 237</td>
<td>GR-9071 GRM-9071</td>
<td>GR-9075† GRM-9075†</td>
</tr>
<tr>
<td>2.000 to 6.000</td>
<td>50.0 to 150.0</td>
<td>3.5 to 12</td>
<td>88 9.25 237</td>
<td>GR-9071 GRM-9071</td>
<td>GR-9075† GRM-9075†</td>
</tr>
<tr>
<td>2.000 to 6.000</td>
<td>50.0 to 150.0</td>
<td>6.0 to 24</td>
<td>150 11.75 300</td>
<td>GA-2061 GAM-2061</td>
<td>GA-2065† GAM-2065†</td>
</tr>
</tbody>
</table>

Note: Contact your Sunnen representative for information on: special gaging depth gages, carbide inserted gaging probes and transfer pins, blind hole probes and transfer pin and accessories.
Sunnen offers a Dial Bore Gage for checking a wide range of extra small bores. It can be set on any .00001" increment from .535" diameter all the way down to .054" (13.59 mm to 1.37 mm). Size is set with the standard Sunnen CF-502 Setting Fixture used with .5" to 2" (12.7 mm to 50.8 mm) dial bore gages. This small-bore gage gives you all the features and benefits that have made Sunnen Dial Bore Gages so popular in shops of all kinds... worldwide.

**GR-3000 Series Gage Probes and Transfer Pins**
Probes and pins must be ordered separately.
(See Charts in this brochure.)

**Special Orders**
Transfer pins, blind hole probes, probe extensions and a right angle attachment can be purchased on special order. Call Sunnen in St. Louis for Bulletins and ordering information.

**Carbide Inserted 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 .165" (4.2 mm). Order standard probe and transfer pin number and add -KY5X to number. Example: G-1240-KY5X.
Available 2-4 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.

**Probe Extension**
Available for probes .323" (8.2 mm) or larger. Probe extensions are 2-1/2" (63.5 mm) 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-1240-KZ0X.
Note: G-1055 probe and G-2037 transfer pin not available in blind hole configuration.
Available 4 weeks after receipt of order.

---

*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.*
Sunnen’s unique Setting Fixtures multiply the usefulness of the Dial Bore Gages many times over. Two models combine to cover a continuous range of .054" to 8" in .0001" increments (1.37 mm to 150 mm in 0.002 mm increments). Both models feature a heavy stress-relieved cast iron base, lapped carbide micrometer anvils, and built-in magnifier for fast, accurate setup. Each Setting Fixture comes with its own master calibrating ring.

For 2.000" to 8.000" diameters — Model CF-1126 combines a large micrometer head and four lapped setting standards covering continuous range from 2" to 8" in .0001" increments. Metric version CF-1126M has a range of 50 to 203 mm marked in 0.002 mm increments. May be used without taking it out of protective metal box.

For .054" to 2.000" diameters — Model CF-502 is equipped with a large micrometer head with range of 0" to 2" marked in .0001" increments. Metric version CF-502M has a 0 to 51 mm micrometer head marked in 0.002 mm increments. Supplied in a sturdy, nested box.
### Probe Kit G-3050

Consists of 6 probes and 2 matching transfer pins which cover a .165” to .535” (4.2 mm to 13.6 mm) diameter range on even 1/16” (1.58 mm) increments.

### GR-3000 Probe Kits

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

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

#### Probe Kit G-3050
Consists of 6 probes and 2 matching transfer pins which cover a .165” to .535” (4.2 mm to 13.6 mm) diameter range on even 1/16” (1.58 mm) increments.
Our global manufacturing, distribution, and sales and service network allows us to deliver quality Sunnen solutions worldwide.

And our state-of-the-art Technical Services Centers allow our technical experts to develop innovative solutions to customer application challenges. The Centers also provide answers for customer questions and training for Sunnen representatives around the world.

Sunnen reserves the right to change or revise specifications and product design in connection with any feature of our products contained herein. Such changes do not entitle the buyer to corresponding changes, improvements, additions, or replacements for equipment, supplies or accessories previously sold. Information contained herein is considered to be accurate based on available information at the time of printing. Should any discrepancy of information arise, Sunnen recommends that user verify the discrepancy with Sunnen before proceeding.

Sunnen and the Sunnen logo are registered trademarks of Sunnen Products Company.

©2012 Sunnen Products Company Printed in USA X-SP-8003K 04/12- POD