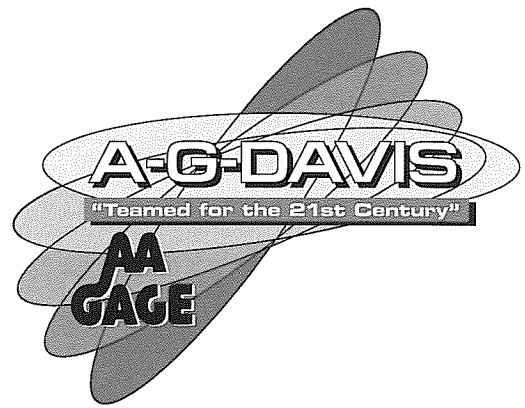


# Omni Gages



***Omni gages can check:***

- Inside Diameter
- Outside Diameter
- Width
- Spacing
- Length
- Center-Distance
- Pitch Diameter
- Root Diameter

- Dimensions between balls
- Dimensions over rolls
- Concentricity
- Squareness
- Taper
- Parallelism
- Ovality

***Omni gages can be applied to:***

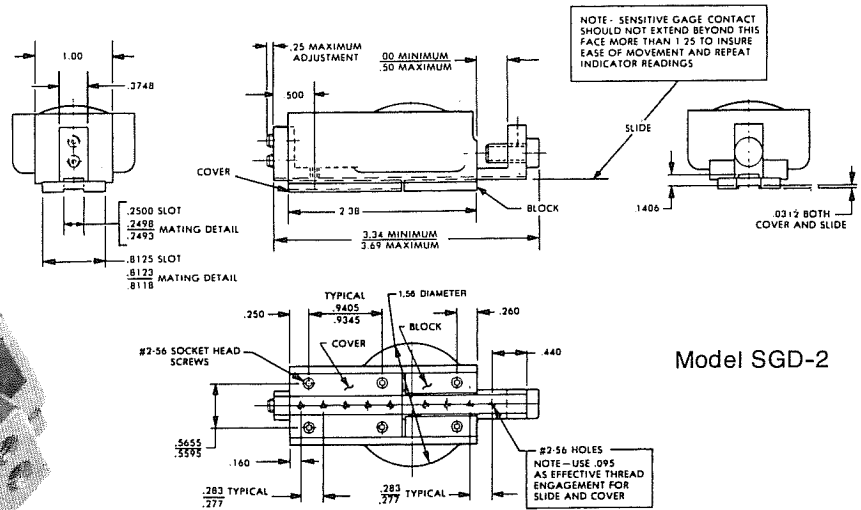
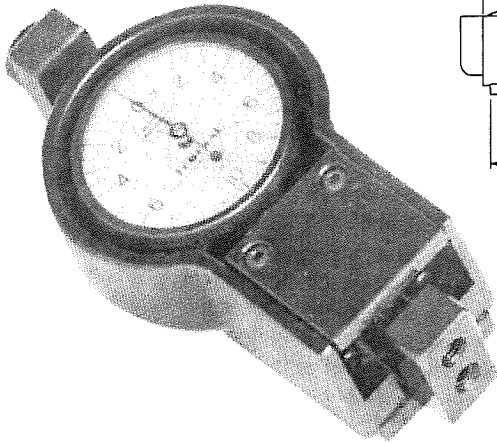
- Grooves
- Bores
- Flats
- Slots
- Serrations
- Splines
- Shoulders
- Dovetails

- Shafts
- Rods
- Rounds
- Threads
- Recesses
- Gears

A.G.Davis standards available AutoCAD templates

# A.G. DAVIS PLAIN TRACK OMNI-GAGE—Dimensions

FEATURES SGD-2  
Full scale Tracing Templates  
available on request.



Model SGD-2

The Plain Track Omni-Gage is available in one model—SGD-2.

1. Adjustment screw provides carefully controlled zero setting anywhere within the range of any Indicator supplied with the Omni-Gage. Once set, stays set.
2. Adjustment screw lets you limit overtravel to protect the Indicator and set its operating range to one revolution or less, if desired.
3. Cover plate and slides have series of #2-56 tapped holes, offering a wide choice of contact positions to suit varying size requirements.
4. Slide and cover plate are precision lapped for smooth slide action and excellent wear life. Long bearing length assures accurate motion over full range of slide travel. Relieved slide and excellent finish of bearing surfaces minimize friction.
5. The Plain Track Omni-Gage can be used with miniature size Indicators, only. It is normally furnished with Federal Miracle Movement Indicator whose tough hardened gears withstand the severe shop conditions for which the gage is designed. You have a choice of .001", .0005", .0001" or .010 MM graduations. The Indicator is furnished with a flat back.
6. Positive, no-shift clamp secures position of Indicator without interfering with smooth, precise spindle movement.
7. Long range slide travel permits up to .500" retraction for Model SGD-2 (miniature) and has adjustment screw to set desired retraction.

8. Cast steel housing is rigid, but light in weight. Other body components are oil hardened steel, finished in black oxide to prevent rusting.
9. Long length spring provides uniform gaging pressure throughout entire range of slide travel.

To reverse gaging action of Plain Track models, it is only necessary to interchange positions of the cover plate and rail blocks. It requires only a few moments; only one size wrench is needed.

## SPECIFICATIONS

SGD-2 only

Maximum slide travel .....	.500"
Zero adjustment range .....	.400"
Approximate weight .....	.10 oz.
Repeat accuracy .....	to within 1/4 div.
Nominal capacity .....	.0" to 3 1/2"

## INDICATOR SELECTOR GUIDE

MIN GRAD VALUE	TOTAL RANGE	DIAL	MODEL
.0001"	.010"	0-2-0	A-1 / 2Q
.0001"	.025"	0-5-0	A2I
.0005"	.050"	0-10-0	A3Q
.001"	.100"	0-20-0	A6Q
.010 mm	2.50 mm	0-50-0	N6I

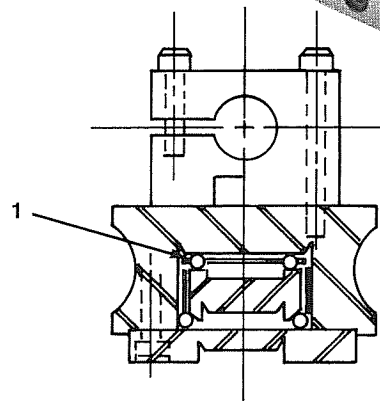
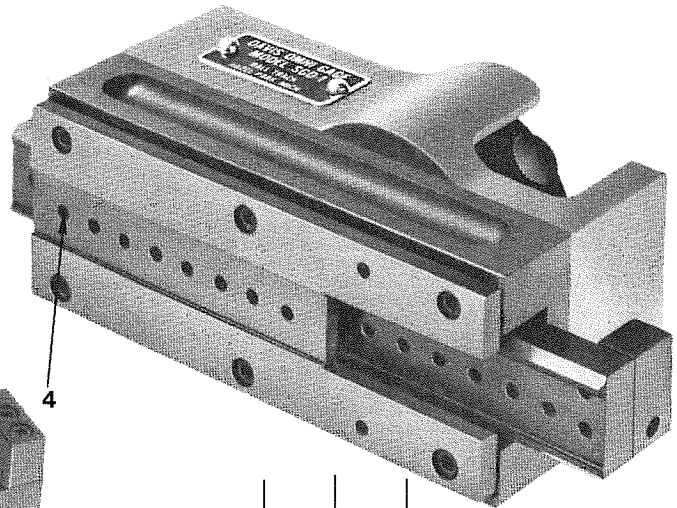
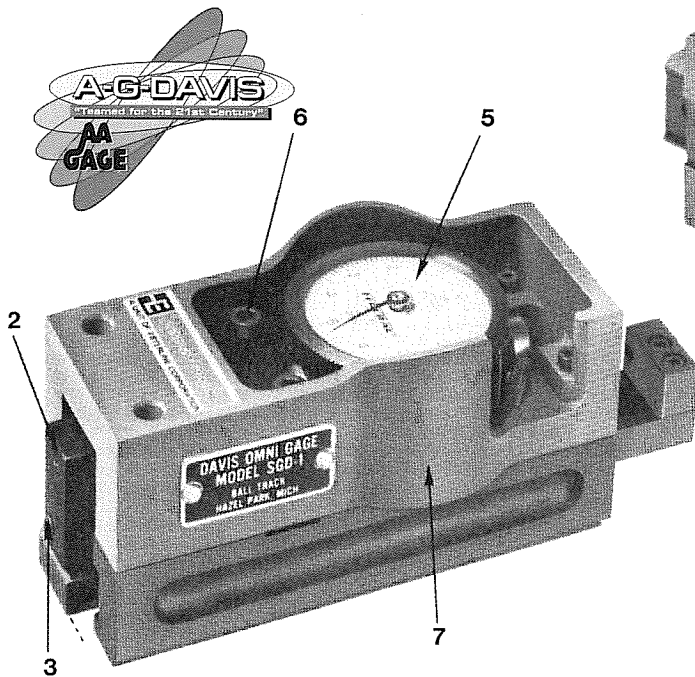
## HOW TO ORDER

Example: A SGD-2 Omni-Gage with an A6I Indicator is identified as SGD-2-A6I



# A.G. DAVIS *BALL TRACK* OMNI-GAGE

FEATURES SGD-1, SGD-3, SGD-13, SGD-19, SGD-25, AND SGD-32  
 Full scale Tracing Templates and Full Scale  
 AutoCAD Templates available on request.



1. This new Omni-Gage actually employs four individual ball tracks to maintain precise motion without vertical or horizontal deviation. The captive hardened steel balls and track provide smooth, low friction gaging action and long bearing length to assure straight line travel over a range of .750" with repeat capability to within .000030".

The ball track assembly is pre-lubricated and protected against dirt. Hard, prolonged shop usage will not cause loss of accuracy, nor will relubrication be required. The movable and fixed plates do not touch, but maintain extremely close clearance to prevent entrance of foreign particles.

2. Adjustment screw provides carefully controlled zero setting anywhere within the range of any Indicator supplied with the Omni-Gage. Once set, stays set.

3. Adjustment screw lets you limit overtravel to protect the Indicator and set its operating range to one revolution or less, if desired.

4. Cover plate and slides have series of #4-40 tapped holes, offering a wide choice of contact position to suit varying size requirements.

5. The Ball Track Omni-Gage can be used with AGD Group 1 or Group 2 Indicators, depending upon gage model. It is normally furnished with Federal Miracle

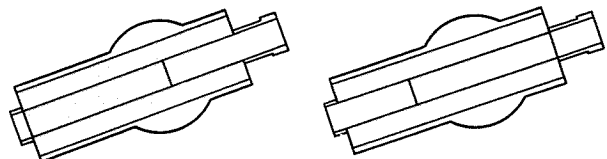
Movement Indicator whose tough hardened gears withstand the severe shop conditions for which the gage is designed. You have a choice of .001", .0005", .00025" or .0001" graduations. The Indicator is furnished with a flat back.

6. Positive, no-shift clamp secures position of Indicator without interfering with smooth, precise spindle movement

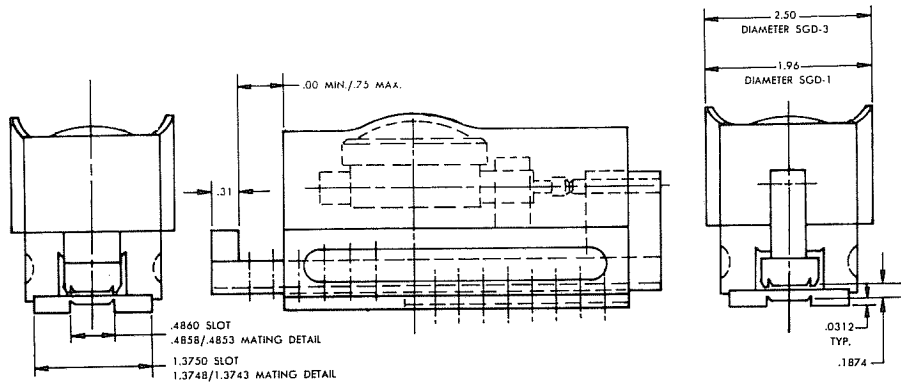
7. Housing is strong, but light in weight. Other body components are oil hardened steel, finished in black oxide to prevent rusting.

8. Long length spring provides uniform gaging pressure throughout entire range of slide travel.

To reverse gaging action of Ball Track models, it is only necessary to reverse the position of the cover plate. It requires only a few moments; only one size wrench is needed.

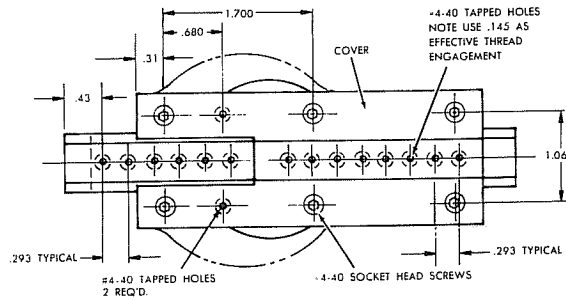
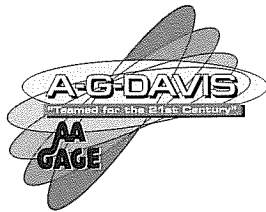


# A.G. DAVIS BALL TRACK OMNI-GAGE—Dimensions



Model SGD-1 and SGD-3

All dimensions shown for SGD-1 apply also to SGD-3



SHOWN HERE ARE POSITIONS COVER FOR OUTWARD OR INWARD GAGING

## INDICATOR SELECTOR GUIDE

B-SIZE	(AGD-1)	MODEL SGD-1	C-SIZE	(AGD-2)	MODEL SGD-3
Model Number	Grad.	Total Range	Model Number	Grad.	Range
B2I	.0001"	.025"	C1K	.0001"	.020"
B2Q	.00025	"	C2I	"	.025
B3K	"	.050	C2Q	.00025	"
B3Q	.0005	"	C3K	"	.050
B3W	.001	"	C3Q	.0005	"
B5M	.0005	.075	C3W	.001	"
B6K	"	.100	C5M	.0005	.075
B7I	"	.125	C6K	"	.100
B7O	.001	"	C6Q	.001	"
B8I	"	.250	C7I	.0005	.125
O1I	.002MM	.500MM	C7O	.001	"
O3I	.005MM	1.25MM	C8I	"	.250
O6I	.010MM	2.50MM	P1I	.002MM	.500MM
O8I	.025MM	6.25MM	P3I	.005MM	1.25MM
			P6I	.010MM	2.50MM
			P8I	.025MM	6.25MM
			P6IS	.010MM	25MM

## SPECIFICATIONS

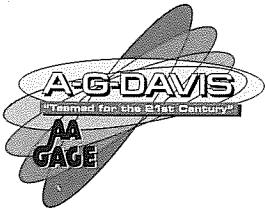
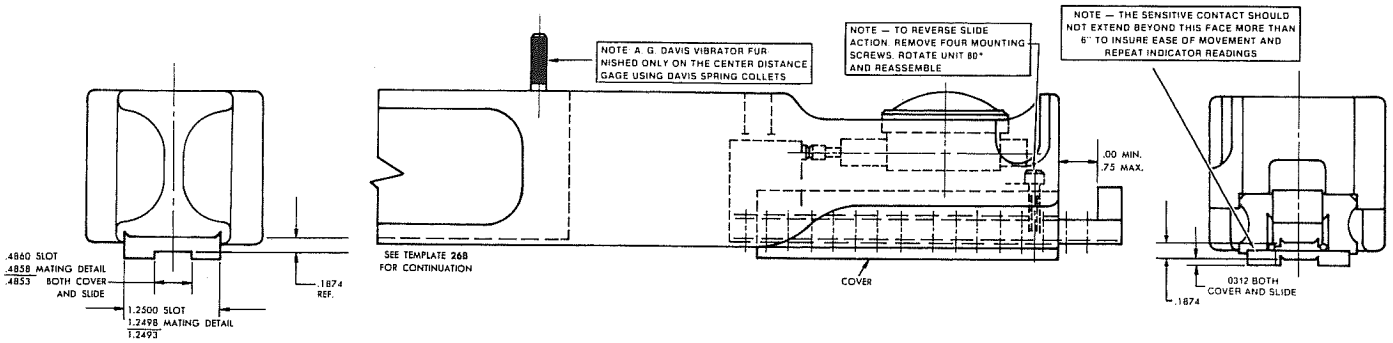
SGD-1/SGD-3

- Maximum slide travel ..... .750"
- Zero adjustment range ..... .750"
- Approximate weight ..... up to 6½ lbs.
- Repeat accuracy ..... to within 1/5 div.
- Nominal capacity ..... .0" to 5"

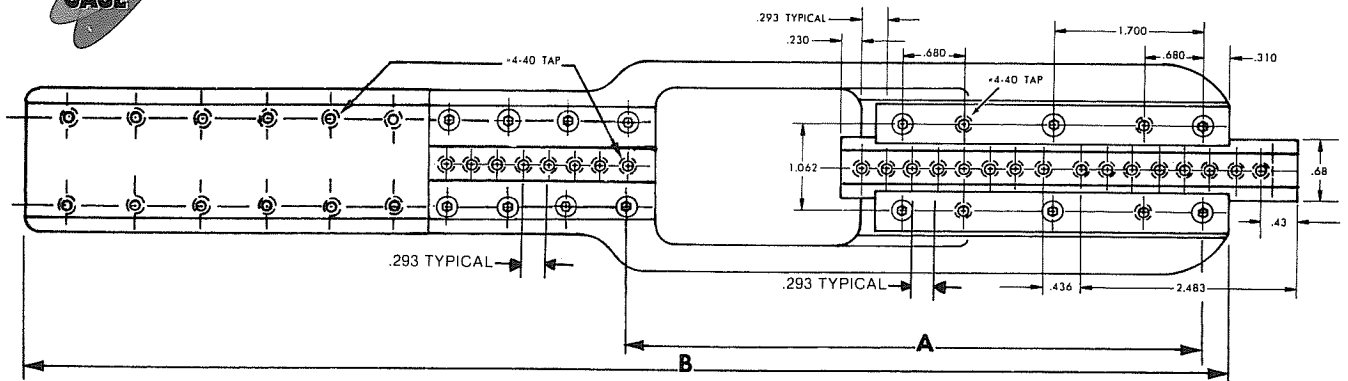
## HOW TO ORDER

1. Select basic model to suit size needs.
2. Select Indicator to suit tolerance needs.
3. Use Indicator model as suffix to basic model number.  
*Example:* A SGD-1 Omni-Gage with an B2I Indicator is identified as SGD-1-B2I
4. For contacts, send print of part and specify Model of Ball Track Omni-Gage to be used. A.G. Davis will advise price of furnishing special contacts (page 7) to meet your requirements.
5. Dial / Electronic Indicator Capability.

# A.G. DAVIS BALL TRACK OMNI-GAGE—Dimensions



Model No.	A	B
SGD-13	6.500	13.25
SGD-19	12.750	19.50
SGD-25	19.000	25.75
SGD-32	25.250	32.00



## INDICATOR SELECTOR GUIDE

BASIC MODEL	INDICATOR SIZE	NOMINAL CAPACITY*
SGD-13	AGD Group 1	4½" to 13"
SGD-19	AGD Group 1	13" to 19"
SGD-25	AGD Group 1	19" to 25"
SGD-32	AGD Group 1	25" to 32"

\*Actual capacity will vary slightly from nominal depending on design of contact. Can be exceeded under certain conditions. Contact A. G. Davis.

## SPECIFICATIONS

Maximum slide travel.....750"  
 Zero adjustment range.....600"  
 Approximate weight.....up to 6½ lbs.  
 Repeat accuracy.....to within 1/5 dial div.

## HOW TO ORDER

1. Select basic model to suit size needs.
2. Select Indicator to suit tolerance needs.
3. Use Indicator model as suffix to basic model number.



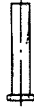
*Example:* A SGD-19 Omni-Gage with an B7I Indicator is identified as SGD-19-B7I

4. For contacts, send print of part and specify Model of Ball Track Omni-Gage to be used. A.G. Davis will advise price of furnishing special contacts (page 7) to meet your requirements.
5. Dial / Electronic Indicator Capability.



## a wide choice of contacts to meet most needs

The contacts shown are designed to meet most gaging requirements. A.G. Davis stocks these contacts for your convenience. They can be ordered with the Ball Track Omni-Gage, or separately as needs change. They can also be furnished with suitable detail and dimensions to suit Plain Track models, prices on request.

PART NUMBER		
C-971-8	C-971-9	C-971-2
		
OPTIONAL CONTACTS UPON REQUEST		

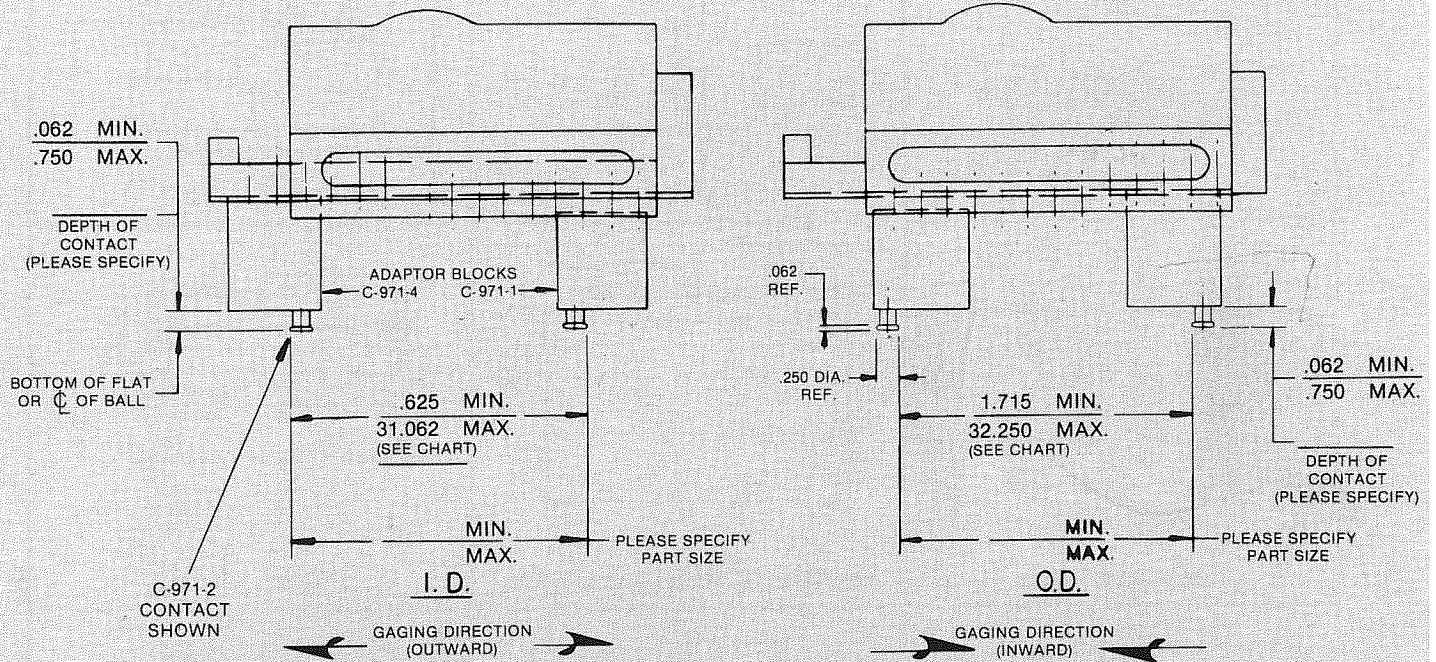


CHART FOR I.D. SIZES			CHART FOR O.D. SIZES		
MODEL NO.	MIN. DIA.	MAX. DIA.	MODEL NO.	MIN. DIA.	MAX. DIA.
SGD - 1	.625	3.125	SGD - 1	1.715	4.250
SGD - 3	.625	3.125	SGD - 3	1.715	4.250
SGD - 13	2.250	12.312	SGD - 13	3.437	13.500
SGD - 19	8.500	18.562	SGD - 19	9.687	19.750
SGD - 25	14.750	24.812	SGD - 25	15.937	26.000
SGD - 32	21.000	31.062	SGD - 32	22.187	32.250

### HOW TO ORDER:

1. Select basic model to suit size needs.
2. Select indicator to suit tolerance needs.
3. Specify contact part number.
4. Specify contact depth.
5. Specify gaging direction (I.D. or O.D.).
6. Specify gage diameter.

Example: SGD-1-B2I-C-971-2-.25-O.D.-2.995

## *suggested contact designs to meet special needs*

The versatility of the A.G. Davis Omni-Gage is suggested by the wide variety of contact designs which can be used with it. The following are representative. A.G. Davis has had long experience in designing all types of contacts for this type of gage and will be glad to quote on any designs you need.

