

ZERO SPINDLE COMPONENTS TO CHECK PARTS HELD ON OUTSIDE DIAMETERS OR MALE THREADS

ZERO SPINDLES:

- * AD-012 "M" = 2.187"
- * AD-013 "M" = 2.937"
- * AD-014 "M" = 3.875"
- * AD-015 "M" = 5.250"
- * WITH CENTRALIZING COLLAR
- * WITH SPINDLE LOCK
- * SPINDLE CAN BE MOTORIZED

ODC COLLET CHUCK

- * WIDE GRIP LENGTH
- * INTERCHANGEABLE COLLETS
- * PART STOPS AVAILABLE

CHUCKS

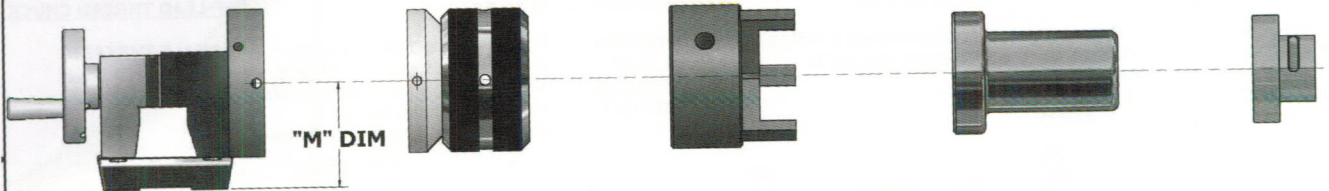
- * 3 JAW CHUCKS STANDARD
- * 4 JAW CHUCKS FOR THIN PARTS
- * 3.5" TO 8.0" SCROLL CHUCK
- * INTERNAL / EXTERNAL JAWS
- * FULL CIRCLE WELDED JAWS

COLLET CHUCKS

- * PRECISION 5C
- * PRECISION 1C
- * PART STOPS

OFF-LEAD THREAD ARBOR

- * MALE THREADS
- * METRIC AND INCH



OUTSIDE DIAMETERS EFFECTED	.50 TO 5.0 INCHES	.125 TO 10.0 INCHES	.016 TO 1.062 INCHES	.250 TO 6.0 " THREADS
MAX PART TOLERANCE	NONE	NONE	REF. COLLET SPECS	PER THREAD SPECS
ACCURACY	.0003" TIR	.0001" TIR	.0001" TIR	.0001" TIR
METHOD OF ACTUATION	ROTATE NUT TO SECURE	CHUCK KEY	DRAW BAR	HANDLE & DRAW BAR

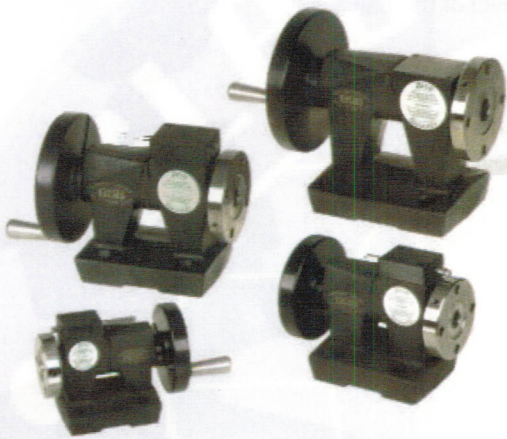
ALL GAGING SYSTEMS CAN ACCOMODATE:

- * A SERIES OF POT CHUCKS FOR DIFFERENT PARTS USING ONE SPINDLE
- * ADDITION OF A THREAD CHECKING ATTACHMENT
- * SPECIFIC PART STOPS
- * ETCHED INDEX DIALS
- * ZERO SPINDLE CAN BE VERTICAL MOUNTED TO EASE PART LOADING
- * ADDITIONAL COMPONENTS AVAILABLE: MAGNETIC, AIR CHUCKS, ETC..

DESIGN		GLASTONBURY SOUTHERN GAGE 800-251-4243 GSGage.com	
DRAWN		TITLE	ZERO SPINDLE O.D. COMPONENTS
QA		DATE	5-26-2005
FIG		DWG NO	DDG
APPROVED		SCALE	SHEET 1 OF 1

The GSG Zero spindle offers various methods of holding a part on the outside feature during rotation. The charts show the 4 major methods: Collet, 3-4 Jaw Chuck, and external off Lead Lock. These methods can be combined with various measurement methods and provide the user with a robust and repeatable way of inspecting ovality, run-out, diameter and true position of round parts.

A COMPLETE INSPECTION SYSTEM FOR INSPECTING CONCENTRICITY, SQUARENESS, ROUNDNESS AND DIAMETER.



THE ZERO SPINDLE SYSTEM FEATURES:

- Precision spindles to less than .000025" T.I.R.
- Precision arbors for internal locating plain, threaded and spline diameters.
- Precision chucks for internal and external location plain and threaded diameters.
- Precision magnetic and tapped hole face plates.
- Everything you need to build you own Zero Spindle inspection fixtures.

Accurate

To less than .000025"

Rugged

Sturdy enough for the production floor, needs no pampering.

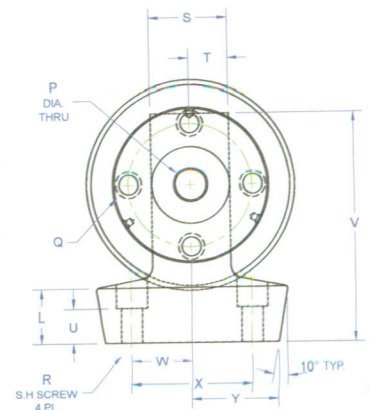
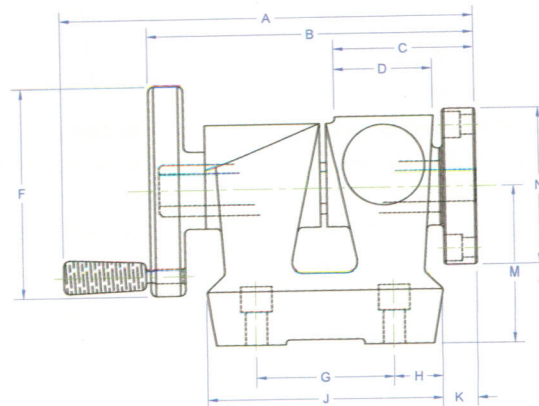
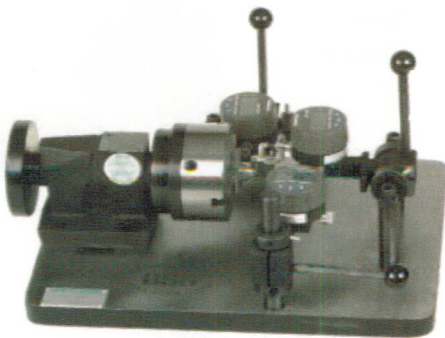
Versatile

Combine with arbors, chucks, face plates, lead locks and specially designed fixtures.

Economical

Laboratory accuracy on the shop floor.

Model No.	A	B	C	D	F	G	H	J	K	L	M	N
AD-012	6.567	5.005	2.099	1.375	3.25	2.250	.562	3.375	.599	.750	2.187	2.250 2.2498
AD-013	7.879	6.317	2.739	1.875	4.00	2.625	.937	4.500	.724	1.000	2.937	3.0000 2.9998
AD-014	9.723	7.723	3.333	2.375	5.50	3.562	1.031	5.625	.786	1.125	3.875	3.7500 3.7498
AD-015	10.942	8.942	3.864	2.875	6.50	4.375	1.187	6.750	.786	1.250	5.250	4.5000 4.4998
P	Q	R dia. scr.	S	T	U	V	W	X	Y	Z	WEIGHT	
.375	(3) 1/4" SOC. HD. SCR. ON 1.687 BC	5/16"	1.125	.562	.437	3.312	.906	1.812	1.250	2.500	4-1/2"#	
.593	(4) 5/16" SOC. HD. SCR. ON 2.375 BC	3/8"	1.500	.750	.625	4.312	1.156	2.312	1.562	3.125	9-3/4"#	
.781	(4) 3/8" SOC. HD. SCR. ON 2.875 BC	3/8"	1.875	.937	.812	5.375	1.375	2.750	1.812	3.625	18#	
1.000	(4) 3/8" SOC. HD. SCR. ON 3.625 BC	1/2"	2.250	1.125	.812	6.875	1.750	3.500	2.250	4.500	29-1/2"#	



GSG can design and build a turn key system to measure your parts. As an option we can build a gage fixture to your

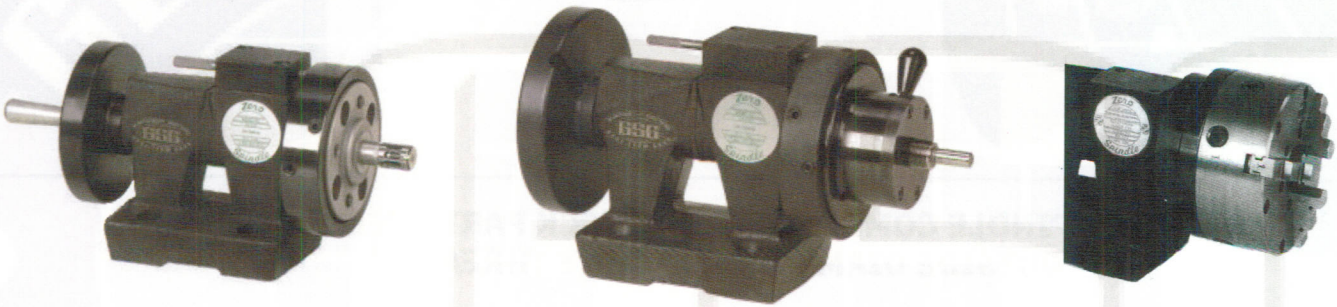


ZERO SPINDLE ID INSPECTION

Willrich Precision
For Sales / Repair
Call 1-866-945-5742

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The GSG Zero spindle offers various methods of holding a part on the inside feature during rotation. The charts show the 4 major methods: Collet, push arbor, 3-4 Jaw Chuck, and internal off Lead Lock. These methods can be combined with various measurement methods and provide the user with a robust and repeatable way of inspecting ovality, run-out, diameter and true position of round parts.



ZERO SPINDLE COMPONENTS TO CHECK PARTS HELD ON INSIDE DIAMETERS OR FEMALE THREADS

ZERO SPINDLES:

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TORK-LOK ARBORS

- * WITH EXPANDABLE COLLETS
- * SPLINE CUT COLLETS

PUSH ARBORS

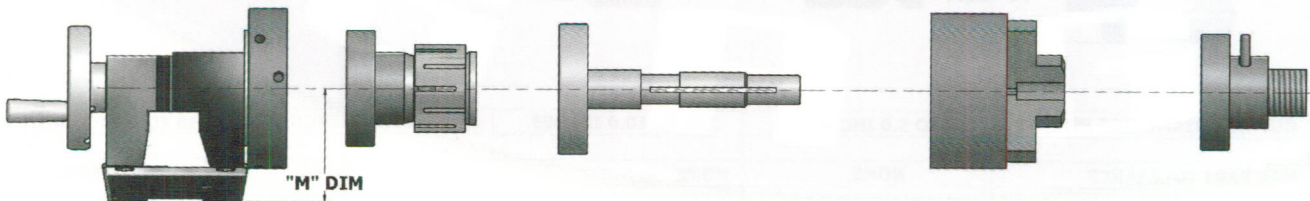
- * DIAPHRAGM
- * DUAL FLEX
- * THREAD CUT
- * SPLINE CUT

CHUCKS

- * 3 JAW OR 4 JAW CHUCKS
- * 3.5 TO 8.0 " SCROLL CHUCK
- * INTERNAL / EXTERNAL JAWS
- * SPLIT THREAD RINGS
- * FULL CIRCLE WELDED JAWS

OFF-LEAD THREAD CHUCK

- * FEMALE THREADS
- * METRIC AND INCH



INSIDE DIAMETERS AVAILABLE	.50 TO 5.0 INCHES	.25 TO 3.00 INCH	1.0 TO 12.0 USING WELDED JAWS	.18 TO 8.0 INCH THREADS
MAX PART TOLERANCE	.015 "	.003 TO .004 "	NONE	PER THREAD SPEC
ACCURACY	.0005 " TIR	.0001 " TIR	.0001 " TIR	.0001 " TIR
MODE OF ACTUATION	HANDLE AND DRAW BAR	NONE	CHUCK KEY	ACTUATING HANDLE

ALL GAGING SYSTEMS CAN ACCOMODATE:

- * A SERIES OF POT CHUCKS FOR DIFFERENT PARTS USING ONE SPINDLE
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- * SPECIFIC PART STOPS
- * ETCHED INDEX DIALS
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DRAWN		GLASTONBURY SOUTHERN GAGE 800-251-4243 GSGage.com	
CHECKED		TITLE	ZERO SPINDLE COMPONENTS
QA		SIZE	C
RFG		DWG NO	5-26-2005 DDG
APPROVED		SCALE	
			SHEET 1 OF 1