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Cylindrical Set Masters Universal Setting Masters

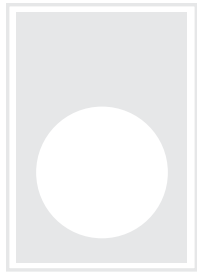


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catalog, gaging solutions
by application and industry!

SERIES 801 MASTER DISCS STEEL AND CHROME

Notable Features

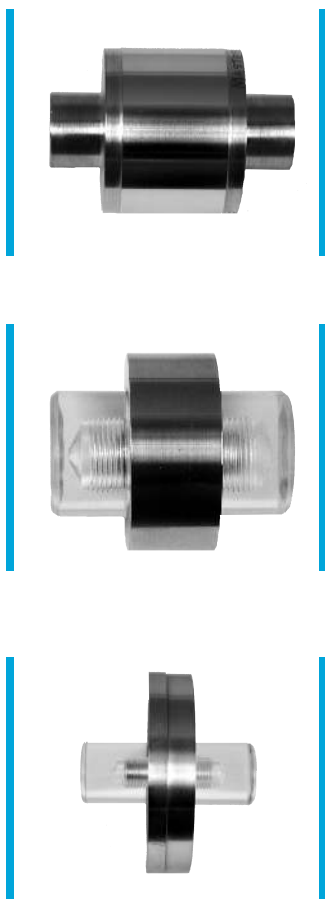
- All gage master setting discs regardless of class are lapped to size and polished. Roundness and taper of all gages will not exceed 50% of the applicable gage maker's size tolerance and are non-accumulative.
- All inch master discs will be furnished with black insulators and metric sizes yellow insulators. Red and green available on request.

Dyer setting discs are available in steel or chrome and in three styles.

When ordering master discs, please specify:

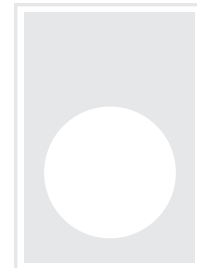
1. Exact size
2. Style in steel or chrome
3. Class

If you require chrome, please specify when ordering. Add 30% to standard price.



Style #3 Steel Order No.	Size Range Above To	Class	Tolerance Inches	Style #3 Steel Order No.	Size Range Above To	Class	Tolerance Inches
801-301	0.150"-0.230" 3.81mm-5.84mm	XX	0.00002"	801-318	7.0101"-7.510" 178.05mm-190.75mm	XX	0.00008"
		X	0.00004"			X	0.00016"
		Y	0.00007"			Y	0.00024"
801-302	0.2301"-0.365" 5.84mm-9.27mm	XX	0.00002"	801-319	7.5101"-8.010" 190.75mm-203.45mm	XX	0.00008"
		X	0.00004"			X	0.00016"
		Y	0.00007"			Y	0.00024"
801-303	0.3651"-0.510" 9.27mm-12.95mm	XX	0.00002"	801-320	8.0101"-8.510" 203.45mm-216.15mm	XX	0.00008"
		X	0.00004"			X	0.00016"
		Y	0.00007"			Y	0.00024"
801-304	0.5101"-0.825" 12.95mm-20.96mm	XX	0.00002"	801-321	8.5101"-9.010" 216.15mm-228.85mm	XX	0.00008"
		X	0.00004"			X	0.00016"
		Y	0.00007"			Y	0.00024"
801-305	0.8251"-1.135" 20.96mm-28.83mm	XX	0.00003"	801-322	9.0101"-9.510" 228.85mm-241.55mm	XX	0.00010"
		X	0.00006"			X	0.00020"
		Y	0.00009"			Y	0.00030"
801-306	1.1351"-1.510" 28.83mm-38.35mm	XX	0.00003"	801-323	9.5101"-10.010" 241.55mm-254.25mm	XX	0.00010"
		X	0.00006"			X	0.00020"
		Y	0.00009"			Y	0.00030"
801-307	1.5101"-2.010" 38.35mm-51.05mm	XX	0.00004"	801-324	10.0101"-10.510" 254.25mm-266.95mm	XX	0.00010"
		X	0.00008"			X	0.00020"
		Y	0.00012"			Y	0.00030"
801-308	2.0101"-2.510" 51.05mm-63.75mm	XX	0.00004"	801-325	10.5101"-11.010" 266.95mm-279.65mm	XX	0.00010"
		X	0.00008"			X	0.00020"
		Y	0.00012"			Y	0.00030"
801-309	2.5101"-3.010" 63.75mm-76.45mm	XX	0.00005"	801-326	11.0101"-11.510" 279.65mm-292.35mm	XX	0.00010"
		X	0.00010"			X	0.00020"
		Y	0.00015"			Y	0.00030"
801-310	3.0101"-3.510" 76.45mm-89.15mm	XX	0.00005"	801-327	11.5101"-12.010" 292.35mm-305.05mm	XX	0.00010"
		X	0.00010"			X	0.00020"
		Y	0.00015"			Y	0.00030"
801-311	3.5101"-4.010" 89.15mm-101.85mm	XX	0.00005"	801-328	12.0101"-12.510" 305.05mm-317.75mm	XX	0.00015"
		X	0.00010"			X	0.00030"
		Y	0.00015"			Y	0.00045"
801-312	4.0101"-4.510" 101.85mm-114.55mm	XX	0.00005"	801-329	12.5101"-13.010" 317.75mm-330.45mm	XX	0.00015"
		X	0.00010"			X	0.00030"
		Y	0.00015"			Y	0.00045"
801-313	4.5101"-5.010" 114.55mm-127.25mm	XX	0.000065"	801-330	13.0101"-13.510" 330.45mm-343.15mm	XX	0.00015"
		X	0.00013"			X	0.00030"
		Y	0.00019"			Y	0.00045"
801-314	5.0101"-5.510" 127.25mm-139.95mm	XX	0.000065"	801-331	13.5101"-14.010" 343.15mm-355.85mm	XX	0.00015"
		X	0.00013"			X	0.00030"
		Y	0.00019"			Y	0.00045"
801-315	5.5101"-6.010" 139.95mm-152.65mm	XX	0.000065"	801-332	14.0101"-14.510" 355.85mm-368.55mm	XX	0.00015"
		X	0.00013"			X	0.00030"
		Y	0.00019"			Y	0.00045"
801-316	6.0100"-6.510" 152.65mm-165.35mm	XX	0.000065"	801-333	14.5101"-14.750" 368.55mm-31.25mm	XX	0.00015"
		X	0.00013"			X	0.00030"
		Y	0.00019"			Y	0.00045"
801-317	6.5101"-7.010" 165.35mm-178.05mm	XX	0.00008"	800-102	Certificate of calibration (Long form)		
		X	0.00016"				
		Y	0.00024"				

SERIES 800 RING GAGES STEEL & CHROME



- All ring gages regardless of class are lapped to size and polished.
- Non-gaging areas are black oxidized and ring faces are surface ground.
- Gage blanks meet all requirements of B47.1-1988.
- Ring gages are manufactured in accordance with ANSI Specification B89.1.6-1984.
- Roundness and taper of all gages will not exceed 50% of the applicable gage-maker's size tolerance and are non-accumulative.
- Traceable certification and calibration available. Contact Dyer office.

Dyer ring gages are available in three tolerances:

MASTER—Bilateral (split) tolerance

GO—Unilateral (minus) tolerance (largest size)

NO GO—Unilateral (plus) tolerance (smallest size)

When ordering ring gages—please specify:

1. Exact size
2. Class
3. Tolerance (Master, Go, or No Go)



Above 1.510"



Below 1.510"

We recommend master ring gages for setting Dyer inside diameter gages.

Steel Order No.	Size Range Above To	Class	Tolerance Inches	Steel	Chrome	Steel Order No.	Size Range Above-To	Class	Tolerance Inches	Steel	Chrome
800-100	0.025"—0.040" 0.635mm—1.02mm	XX	0.00002			800-015	4.760"—5.510" 120.90mm—139.95mm	XX	0.000065		
		X	0.00004	X	N/A			X	X		
		Y	0.00007					Y	0.00019	X	X
		Z	0.00010					Z	0.00025		
800-001	0.040"—0.070" 1.02mm—1.78mm	XX	0.00002			800-016	5.510"—6.260" 139.95mm—159.00mm	XX	0.000065		
		X	0.00004	X	N/A			X	0.00013	X	X
		Y	0.00007					Y	0.00019	X	X
		Z	0.00010					Z	0.00025		
800-002	0.070"—0.150" 1.78mm—3.81mm	XX	0.00002			800-017	6.260"—7.010" 159.00mm—178.05mm	XX	0.00008		
		X	0.00004	X	N/A			X	0.00016	X	X
		Y	0.00007					Y	0.00024	X	X
		Z	0.00010					Z	0.00032		
800-003	0.150"—0.230" 3.81mm—5.84mm	XX	0.00002			800-018	7.010"—7.760" 178.05mm—197.10mm	XX	0.00008		
		X	0.00004	X	X			X	0.00016	X	X
		Y	0.00007					Y	0.00024	X	X
		Z	0.00010					Z	0.00032		
800-004	0.230"—0.365" 5.84mm—9.27mm	XX	0.00002			800-019	7.760"—8.510" 197.10mm—216.15mm	XX	0.00008		
		X	0.00004	X	X			X	0.00016	X	X
		Y	0.00007					Y	0.00024	X	X
		Z	0.00010					Z	0.00032		
800-005	0.365"—0.510" 9.27mm—12.95mm	XX	0.00002			800-020	8.510"—9.260" 216.15mm—235.20mm	XX	0.00008		
		X	0.00004	X	X			X	0.00016	X	X
		Y	0.00007					Y	0.00024	X	X
		Z	0.00010					Z	0.00032		
800-006	0.510"—0.825" 12.95mm—20.96mm	XX	0.00002			800-021	9.260"—10.010" 235.20mm—254.25mm	XX	0.00010		
		X	0.00004	X	X			X	0.00020	X	X
		Y	0.00007					Y	0.00030	X	X
		Z	0.00010					Z	0.00040		
800-007	0.825"—1.135" 20.96mm—28.83mm	XX	0.00003			800-022	10.010"—10.760" 254.25mm—273.30mm	XX	0.00010		
		X	0.00006	X	X			X	0.00020	X	X
		Y	0.00007					Y	0.00030	X	X
		Z	0.00012					Z	0.00040		
800-008	1.135"—1.510" 28.83mm—38.35mm	XX	0.00003			800-023	10.760"—11.510" 273.30mm—292.35mm	XX	0.00010		
		X	0.00006	X	X			X	0.00020	X	X
		Y	0.00007					Y	0.00030	X	X
		Z	0.00012					Z	0.00040		
800-009	1.510"—2.010" 38.35mm—51.05mm	XX	0.00004			800-024	11.510"—12.260" 292.35mm—311.40mm	XX	0.00010		
		X	0.00008	X	X			X	0.00020	X	X
		Y	0.00012					Y	0.00030	X	X
		Z	0.00016					Z	0.00040		
800-010	2.010"—2.510" 51.05mm—63.75mm	XX	0.00004			800-025	12.260"—13.010" 311.40mm—330.45mm	XX	0.00015		
		X	0.00008	X	X			X	0.0003	X	••
		Y	0.00012					Y	0.00045	X	••
		Z	0.00016					Z	0.0006		
800-011	2.510"—3.010" 63.75mm—76.45mm	XX	0.00005			800-026	13.010"—13.760" 330.45mm—349.50mm	XX	0.00015		
		X	0.00010	X	X			X	0.0003	X	••
		Y	0.00015					Y	0.00045	X	••
		Z	0.00020					Z	0.0006		
800-012	3.010"—3.510" 76.45mm—89.15mm	XX	0.00005			800-027	13.760"—14.510" 349.50mm—368.55mm	XX	0.00015		
		X	0.00010	X	X			X	0.0003	X	••
		Y	0.00015					Y	0.00045	X	••
		Z	0.00020					Z	0.0006		
800-013	3.510"—4.010" 89.15mm—101.85mm	XX	0.00005			800-028	14.510"—15.260" 368.55mm—387.60mm	XX	0.0002		
		X	0.00010	X	X			X	0.0004	X	••
		Y	0.00015					Y	0.0006	X	••
		Z	0.00020					Z	0.0008		
800-014	4.010"—4.760" 101.85mm—120.90mm	XX	0.00005			800-029	15.260"—16.010" 387.60mm—406.65mm	XX	0.0002		
		X	0.00010	X	X			X	0.0004	X	••
		Y	0.00015					Y	0.0006	X	••
		Z	0.00020					Z	0.0008		
800-102	Certificate of calibration (Long form)										

UNIVERSAL BORE GAGE SET MASTERS LARGE & SMALL DIAMETERS

Adjustable Range, Setting Masters For Internal Diameter Gages

Repeatable Mastering of Large Diameter Internal Gages

Precise mastering of large diameters can be a challenge, particularly when Master Setting Rings are not available or too expensive. It is important that ID gages are repeatably set when using a setting master. Both the gage setup and the part measuring need to be Gage R & R capable.

Notable Features

- A ratchet type clamping handle results in a reproducible clamping force of the gage blocks in the setting master.
- No operator influence during the gage mastering setup, “hands-off mastering”.
- The Setting Master special jaws (designed for each gage type) means repeatable, large diameter gage setups.
- Rectangular gage blocks, ringed together, are held in precise position within the setting master’s size range slot. Gage blocks are not included.
- Fast range changes and setup times lower costs.
- Large, adjustable range results in cost justifiable gaging and maximum value.
- One basic unit with different jaw setting components allows this master to be used with many internal gages.

Each Set Master System includes:

- Individual gage “setup” stand/fixture that can master a gage series in the horizontal or vertical axis position.
- One (1) set of adjustable locating jaws that hold the gage’s centering base in position mastering.
- One (1) pair of carbide parallel anvils, lapped to precision grade gage block standards.



Model 410-010 Set Master with 222 Series Precision Bore Gage in a vertical measuring axis mastering setup.



Model 440-202 Set Master with 440 Series Twin Cross® Bore Gage in a horizontal axis mastering setup.



290-200 Setting Anvils next to Adjustable Setting Master

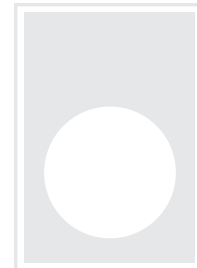


290-200 Complete Master Setup with 290-015 pitch diameter gage being set

Adjustable Setting Master

Range		Ordering Number by Gage Series			
Inch	mm	Series 220, 222, 223, 225, 270	Series 440, 441	Series 290 20° Angle	Series 290 30° Angle
0-6.30	0-160	410-005		290-200	290-300
0-11.40	0-290	410-007	440-201	290-201	290-301
0-20.00	0-510	410-010	440-202	290-202	290-302
0-31.50	0-800	410-015	440-203		
0-39.40	0-1000	Inq.			

415 SERIES ELECTRONIC AUTOMATIC ADJUSTABLE SETTING MASTERS



Notable Features

- Automatic positioning feature is designed to set a wide variety of bore, groove, and OD gages. Even indicators and 3-point gages can be mastered
- A Heidenhain high precision optical scale is utilized to ensure highest accuracies
- Safe and simple operation: A zero setting for any instrument can be made by just typing a desired value into unit. CNC motorized movement makes this possible.
- No need to purchase master rings or gage blocks
- Wide range of adapters are offered to aid in setting many different types of devices
- Ceramic reference pads come standard with the unit
- Electronic LCD display
- Stores up to 100 preset positions to set your most common gages
- Remote PC control is possible
- Store data via USB port
- Special customized models are available. Please contact Dyer Engineering for your specific needs.



Model 415-005

Adjustable Setting Master

Internal Application Range	External Application Range	Accuracy	Resolution	Order No.
0.040"-20.0 (1-500mm)	1.57"-20.7" (40-525mm)	0.0000 60" + (L 1/300) 1.5μ + L(mm)/300	0.0000 20" (0.0005mm)	415-005
0.040"-39.3 (1-1000mm)	1.57"-41.0" (40-1040mm)	0.0000 60" + (L 1/300) 1.5μ + L(mm)/300	0.0000 20" (0.0005mm)	415-010
0.040"-59.1 (1-1500mm)	1.57"-60.7" (40-1540mm)	0.0000 60" + (L 1/300) 1.5μ + L(mm)/300	0.0000 20" (0.0005mm)	415-015
0.040"-78.8 (1-2000mm)	1.57"-80.3" (40-2040mm)	0.0001 20" + (L 1/500) 3.0μ + L(mm)/500	0.0000 20" (0.0005mm)	415-020



Adapters to set large bores



Adapters for small bores



Adapter set up for groove gages



Adapter set up for indicators



Adapter set up for 3-point gages

SHOW DYER YOUR APPLICATION. WE WILL HELP YOU SELECT THE RIGHT GAGE.

Dyer's Specialized Quality Repair Center

We repair most makes and models:

- All Dyer gages
 - Intertest, Oditest, Quicktest
- Dial and test indicators
- Dial thickness gages
- Dial bore gages
- Dial calipers
- Electronic repair on all Dyer products

We repair most manufacturers' models:

- Chicago Dial
- Dorsey
- Dyer
- Fowler
- Mahr-Federal
- Mitutoyo
- SPI

Quality Standards

Our quality standards include three (3) quality inspections. It is our policy to put a repaired gage in equal to new condition. We completely disassemble all gages, ultrasonically clean them, inspect all moving parts, and replace all worn parts. The gage is then reassembled and calibrated on equipment directly traceable to NIST standards. Your gage is now processed through three separate quality inspections. Each gage is checked for calibration, mechanical movement, and smoothness. Our customer's satisfaction is guaranteed on all repaired gages.

ISO 17025

Certificate of Calibration for each gage available upon request.

Service Information

Dyer stocks a parts inventory exceeding \$100,000. Normal repair is two weeks or less. First in, first out. We offer a 24-48 hour Red Line repair service. It is our policy to proceed with a repair if it does not exceed 65% of replacement costs.

Specials and Modifications

For a moderate price, our skilled technicians can modify many of our standard stock gages. We will alter arms, contact points, probes, etc. to fit your specific needs. Many of our gaging systems are made of modular components enabling us to quickly create a special gage to meet your requirements. Prompt, one- or two-day service is available on many Dyer specially modified gages.



240/440 gage assemblies and special application gages

Custom modifications and general gage repairs

Send gages for repair to: Attn: Repair Department • The Dyer Company • 1500 McGovernville Road • Lancaster PA 17601

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