

SPECIFICATIONS

1. TEXT

Tube OD		Tube ID Range	Reach	Part No.
Inches	(mm)			
1/2	(12.7)	.370-.450	6-Inch	29100-4506
			12-Inch	29100-4512
5/8	(15.9)	.450-.530	6-Inch	29100-5306
			12-Inch	29100-5312
5/8-3/4	(15.9-19.1)	.530-.610	6-Inch	29100-6106
			12-Inch	29100-6112
3/4	(19.1)	.610-.735	6-Inch	29100-7306
			12-Inch	29100-7312
7/8	(22.2)	.735-.860	6-Inch	29100-8606
			12-Inch	29100-8612
1	(25.4)	.860-.985	6-Inch	29100-9806
			12-Inch	29100-9812
1 1/4	(31.8)	.985-1.110	6-Inch	29100-1106
			12-Inch	29100-1112



□ 29100-XX06
29100-XX12

HOLE MICROMETER



Features

- Three ball contact points
- Adjustable collar for depth setting and centering
- Easy to calibrate with ring provided
- Quick measurement for multiple tubes



OPERATING INSTRUCTIONS & SERVICE MANUAL

Rev: A, 9/17/2015

TO REDUCE THE RISK OF INJURY AND EQUIPMENT DAMAGE
USER MUST READ AND UNDERSTAND OPERATOR'S MANUAL.

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Assembly

Required Tools: 5/64 & 3/32 Hex Key, #1 Phillips Driver, Loctite.

Phase 1

1. Slide the rear bushing (13) into the housing (19) with the smaller O.D. going in first.
2. Slide the spring (12) into the housing so that it fits into the rear bushing.
3. Place the washer (11) and indicator block (18) directly after the spring.

Phase 2

4. Screw the knob (14) onto the mandrel extension (17) using loctite.
5. Insert the mandrel extension into the housing from the rear bushing side while inserting the mandrel from the opposite side.
6. Screw the mandrel (4) to the mandrel extension with loctite.
7. Now slide the two washers (9) over the mandrel followed by the third washer (8)

Phase 3

8. Insert the three contact points (3) into the pilot (2).
9. Tightly screw the cap (1) in place with loctite.
10. Screw the extension tube (5) to the pilot with loctite.
11. Slide the stop (6) onto the extension tube and hold in place with the thumb screw (21).

Phase 4

12. Slide the bushing (20) on over the mandrel.
13. Connect phase three and four together by sliding the extension tube over the mandrel.
14. Use the set screw (7) to hold the extension tube (5) in place.

Phase 5

15. Place the scale on the housing and fasten with screws (15).
16. Start one thread on the indicator block (18) with set screw (10).
17. Now pull back the knob (14) and slide the gauge over the contact points (3) and release.
18. Now align the indicator block so that it matches the calibration tool and tighten the set screw (10).

Calibration Procedures

1. Using the provided 5/64 Hex Key, loosen set screw #10
2. Pull back the knob and slide the master ring gauge over the contact points.
3. While holding the master gauge centrally to the contact points, release the knob.
4. Adjust the indicator block (18) so the hole micrometer indicator matches the inner diameter of the master gauge.
5. Tighten set screw #11

OPERATING INSTRUCTIONS

1. Verify that the hole micrometer is calibrated properly against the master gauge.
2. Set measuring depth by adjusting the location of depth stop.
3. Pull back the knob so the contact points release allowing the pilot to enter the tube.
4. Keep the hole micrometer centralized while releasing the hand knob.
5. Take measurement reading from display window on top of gauge.

Maintenance

1. Ensure that the unit is kept clean after each use.
2. Avoid having dust and oil going into the pilot when the balls are retracted.



Parts List

Assembly

NON-SIMILAR HOLE GAGE PARTS				
RANGE	ASSEMBLY NO.	CAP	PILOT	SCALE
.370 - .450	29100-4506	29000-4521	29000-4522	29100-4544
.450 - .530	29100-5306	29000-5321	29000-5322	29100-5344
.530 - .610	29100-6106	29000-6121	29000-6122	29100-6144
.610 - .735	29100-7306	29000-7321	29000-7322	29100-7344
.735 - .860	29100-8606	29000-8621	29000-8622	29100-8644
.860 - .985	29100-9806	29000-9821	29000-9822	29100-9844
.985 - 1.110	29100-1106	29000-1121	29000-1122	29100-1144

*** 29000-XX12, 12" REACH HOLE GAGE PARTS			
RANGE	ASSEMBLY NO.	EXTENSION TUBE	MANDREL
.370 - .450	29100-4512	29000-4555	29000-4554
.450 - .530	29100-5312	29000-4555	29000-4554
.530 - .610	29100-6112	29000-4555	29000-4554
.610 - .735	29100-7312	29000-7355	29100-7354
.735 - .860	29100-8612	29000-7355	29100-7354
.860 - .985	29100-9812	29000-7355	29100-7354
.985 - 1.110	29100-1112	29000-7355	29100-7354

<p>THOMAS C. WILSON, INC. LONG ISLAND CITY, N.Y.</p>	<p>HOLE GAGE 1/2 TO 5/8 OD MODELS</p>	<p>DWG. NO. 29100-XX06</p>	<p>REV. SHEET <input type="checkbox"/> OF <input type="checkbox"/> 3</p>
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*** SEE TABLE FOR 12" REACH PART NUMBERS

DRAWN BY: TS
CHECKED BY: []
ONLY PARTS LIST DIMENSIONS
± .002" / IN. SCALE
± .0025" / IN. SCALE
63R/H

PARTS LIST			
ITEM	PART NO.	DESCRIPTION	QTY
1	SEE TABLE	CAP	1
2	SEE TABLE	PILOT	1
3	SEE TABLE	BALL	1
4	29000-4524	MANDREL***	4
5	29000-4525	EXTENSION TUBE***	1
6	29000-4527	STOP	1
7	28219-0000	SET SCREW	1
8	29000-4530	WASHER	1
9	29000-4529	WASHER	2
10	40060-0000	SET SCREW	1
MATERIAL: All dimensions are in inches. Tolerances unless otherwise specified.			
TOOL: STOCK			
FITTURE: HEAT TREAT: ± .005 Flatness: ± .002" / IN. ONLY PARTS LIST DIMENSIONS			
JIG: ROCKWELL: ± .01 Perpendicularity: ± .005			
GAGE: FINISH: ± 1/2" Angles: ± 1/2" Surface Finish: 63R/H			

