



OPERATING AND MAINTENANCE INSTRUCTIONS FOR SERIES 8762 TUBE HOLE GAUGE

Refer to illustration on Sheet 2 for parts data.

The Elliott Tube Hole Gauge is a precision measuring tool. The all metal construction makes it durable for years of quality use in all applications. The Elliott Tube Hole Gauge has been preset at the factory for accurate measuring.

TO MEASURE THE TUBE ID:

1. Set the Centering Slide to allow the (3) contact balls to enter the tube ID to the desired depth.
2. Withdraw the mandrel by pulling back the Rack Knob by the dial case.
3. Insert the tube gauge shaft into the tube ID until the Centering Slide seats against the tube end.
4. Allow the Mandrel to pull itself back into position. (**Caution! DO NOT release the Rack Knob and allow the mandrel to "snap back!" This type of mandrel movement could cause the contact balls to loosen from the body or upset the dial calibration!**)
5. Read the measurement on the dial where it lines up with the scribe mark on the dial case.

CALIBRATING THE TUBE HOLE GAUGE:

Provided in the Elliott Tube Hole Gauge kit is a Setting Ring, Screw Driver, and Wrench. Indicated on the Setting Ring is the proper calibration diameter for the gauge.

1. Move the Centering Slide up the Tube Hole Gauge shaft just behind the (3) contact balls.
2. Withdraw the Mandrel by pulling back on the Rack Knob by the dial case.
3. Place the Setting Ring over the (3) contact balls and against the Centering Slide.
4. Allow the Mandrel to pull itself back into position, being careful not to force the mandrel forward or to allow it to "snap back."

On the Dial Case, toward the front of the Tube Hole Gauge, is a scribe mark. If the dial does not read the correct setting, as indicated on the Setting Ring, follow these (4) simple calibration steps:

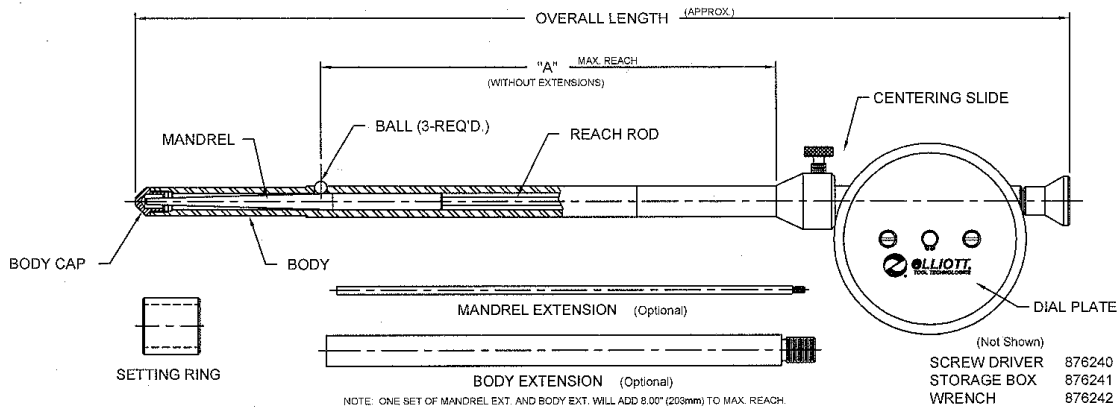
1. With the Setting Ring still in place, loosen (but do not remove) the two screws on the face of the Tube Gauge dial.
2. Adjust the dial to the correct reading by rotating the dial either clockwise or counterclockwise until the proper setting on the dial aligns with the dial case scribe mark.
3. While holding the dial in this position, tighten the two screws, making sure the setting does not change.
4. The screw holes in the dial plate will allow approximately .003" adjustment at calibration. Should more adjustment be required than can be made using this method, the Tube Hole Gauge must be returned to Elliott Tool Technologies for reconditioning and/or calibration.

INSTALLING EXTENSIONS:

The reach of the Elliott Tube Hole Gauge can easily be increased by installing the optional Mandrel and Body Extensions. To install the extensions, follow these (8) steps:

1. Move the Centering Slide to the front (toward the contact balls) of the Tube Hole Gauge.
2. Locate the wrench flats on the Tube Hole Gauge Body. Using the wrench provided in the kit, loosen the body from the Rack Tube. Thread the Body out of the Rack Tube. (**Caution! Only withdraw the Body enough to expose the wrench flats on the Reach Rod! Withdrawing the Body too far could allow the contact balls to fall into the Body ID!**)
3. Using the wrench provided, loosen the Reach Rod by turning it counterclockwise (as you're looking into the open end of the Rack Tube). Thread the Reach Rod out of the Rack inside the Rack Tube, separating the unit.
4. Thread the Mandrel Extension to the exposed end of the Reach Rod. Finger-tighten until flush with the shoulder on the Reach Rod. (**Caution! DO NOT over-tighten as threads could be damaged!**)
5. Thread the Body Extension to the Body and finger-tighten until flush with the shoulder on the Body. (**DO NOT over-tighten!**)
6. To re-assemble the Tube Hole Gauge, extend the Mandrel Extension until the wrench flats on the extension are exposed. Thread the Mandrel Extension into the Rack located inside the Rack Tube. Use the wrench **ONLY** to ensure the Mandrel Extension is threaded all the way to the shoulder of the Rack. (**DO NOT over-tighten!**)
7. Slide the Body Extension over the Mandrel Extension and thread onto the Rack Tube until flush to the shoulder of the Rack Tube. (**DO NOT over-tighten!**)
8. Follow the same steps in **Calibrating the Tube Hole Gauge** to check for gauge accuracy after assembly.

TUBE GAUGE



Tube Data						Tube Gauge Dimensional Data			
Tube Size		Tube Gauge I. D. Range				"A" Reach		O.A.L.	
		Inch		MM					
Inch	MM	Min.	Max.	Min.	Max.	Inch	MM	Inch	MM
3/8	9.5	.290	.350	7.4	8.9	4.00	102	14.31	363.5
1/2	12	.350	.450	8.9	11.4			15.00	381
5/8	16	.440	.560	11.2	14.2			15.50	394
3/4	19	.550	.715	14	18.2	8.00	203	16.50	419
7/8	22	.675	.840	17.1	21.3				
1	25	.800	.965	20.3	24.5				
1-1/4	32	.950	1.170	24.1	29.7				
1-3/8	35	1.085	1.295	27.5	32.9				
1-1/2	38	1.240	1.450	31.5	36.8				
2	51	1.700	1.910	43.2	48.5				

		Tube Gauge Assembly & Parts Data							Accessories		
Size		(See Note 1)	Assembly	Body	Mandrel	Body Cap	Reach Rod	Ball (3-Req'd)	Setting Ring	Mandrel Extension	Body Extension
Inch	MM										
3/8	9.5		876200-375	876206-375	876205-375	876230-375	876208-500	109BAS	8252-3/8	876210-500	876211-375
1/2	12		876200-500	876206-500	876205-500	876230-500	876208-500	109CAS	8252-1/2	876210-500	876211-500
5/8	16		876200-625	876206-625	876205-625	876230-625	876208-500	109DAS	8252-5/8	876210-500	876211-625
3/4	19		876200-750	876206-750	876205-750	876230-750	876208-500	109EAS	8252-3/4	876210-500	876211-750
7/8	22		876200-875	876206-875	876205-750	876230-875	876208-500	109GAS	8252-7/8	876210-500	876211-750
1	25		876200-1000	876206-1000	876205-750	876230-1000	876208-500	109JAS	8252-1	876210-500	876211-750
1-1/4	32		876200-1250	876206-1250	876205-1250	876230-1250	876208-500	109MAS	8252-1-1/4	876210-500	876211-750
1-3/8	35		876200-1375	876206-1375	876205-1375	876230-1375	876208-500	109NAS	8252-1-3/8	876210-500	876211-750
1-1/2	38		876200-1500	876206-1500	876205-1500	876230-1500	876208-1500	109YAS	8252-1-1/2	876210-1500	876211-1500
2	51		876200-2000	876206-2000	876205-2000	876230-2000	876208-2000	109YAS	8252-2	876210-2000	876211-2000

NOTES

- TUBE GAUGE ASSEMBLY CONSISTS OF (1) EACH OF GAUGE, SETTING RING, SCREWDRIVER, WRENCH AND STORAGE BOX.
- TO SPECIFY A METRIC GAUGE, SUBSTITUTE METRIC NUMBER IN () IN SIZE COLUMN FOR THE DASH NO. IN ASSEMBLY PART NO. (ie. 876200-12MM, 876200-16MM, ETC.).
- IN ORDER TO MEASURE THE TUBE SHEET HOLE OF A GIVEN TUBE SIZE, IT IS NECESSARY TO ORDER THE NEXT LARGER GAUGE. IN MOST CASES A TUBE GAUGE ORDERED FOR A SPECIFIC TUBE SIZE CAN BE USED TO MEASURE TUBE SHEET HOLES OF THE NEXT SIZE SMALLER TUBES.
- IF GAUGE CANNOT BE CALIBRATED WITH THE SETTING RING, OR REPAIRS CANNOT BE COMPLETED WITH PARTS SHOWN ABOVE, IT IS RECOMMENDED THAT THE GAUGE BE RETURNED TO THE FACTORY FOR REPAIRS.