PT-101 Metric

Instructions for Using the PT-101 Pipe Diameter Go/No-Go Pipe Tape for 20 – 630-mm Pipe Sizes

⚠ WARNING

- **Read and understand all instructions before attempting to use this Go/No-Go pipe diameter tape.**
- **Wear safety glasses, hardhat, foot protection, and hearing protection when working with cut or roll grooving tools.**

Failure to follow all instructions could cause improper product assembly, resulting in serious personal injury and property damage.

If you need additional copies of these instructions, or if you have questions concerning the correct use of this pipe diameter tape, contact Victaulic, Telephone: 1-800-PICK VIC, e-mail: pickvic@victaulic.com.

THE PT-101 IS NOT A REPLACEMENT FOR A ROUTINELY CALIBRATED DIAMETER MEASURING INSTRUMENT AND PROPER INSPECTION PROCEDURES. THIS PIPE DIAMETER TAPE SHOULD BE USED ONLY AS AN AID FOR CHECKING PIPE AND GROOVE DIAMETERS. A MEASURING INSTRUMENT THAT IS ROUTINELY CALIBRATED TO TRACEABLE STANDARDS IS RECOMMENDED FOR MOST ACCURATELY VERIFYING PIPE AND GROOVE DIMENSIONS.

APPLICATIONS

NOTICE

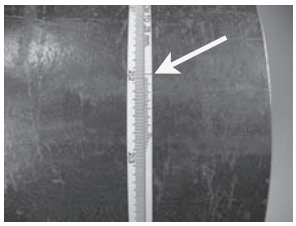
- **The PT-101 contains groove diameter Go/No-Go markings on one side for use with 20 – 630-mm pipe sizes. In addition, the PT-101 contains markings in 0.25-mm increments on the opposite side.**
- **The Go/No-Go side can be used to check cut-grooved or roll-grooved pipe groove diameters for conformance to Victaulic standard (original), Machining for Rubber Lining (MRL), and Advanced Groove System (AGS) groove diameter specifications.**
- **The Go/No-Go side MUST NOT be used to check copper tubing and cast or ductile iron pipe (up to 508.0 mm). The opposite side of the pipe diameter tape, marked in 0.25-mm increments, can be used to measure grooves in these cases.**
- **In addition, use the side of the pipe diameter tape, marked in 0.25-mm increments, for checking pipe outside diameters and roll groove flare diameters for conformance to Victaulic specifications.**
- **This pipe diameter tape MUST NOT be used to measure EndSeal® "ES" grooves. The tape is too wide to seat fully in "ES" grooves.**

INSTRUCTIONS

⚠ WARNING

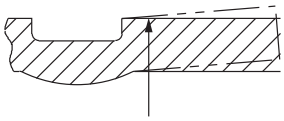
- **Verify that the outside diameter of the pipe is within Victaulic specifications.**
- **After grooving pipe, make sure all diameters are measured in accordance with Victaulic specifications.**

Installation and pressurization of grooved pipe that does not conform to Victaulic specifications could cause joint failure, resulting in serious personal injury and/or property damage.



CHECK PIPE OUTSIDE DIAMETER:

Remove all loose dirt, scale, and paint from the pipe surface. With the side of the tape marked in 0.25-mm increments facing up, wrap the tape around the pipe, and overlap the two ends, as shown. Make sure the tape is not twisted. Compare the reading to the applicable Victaulic pipe specification to determine if the outside diameter is within specification.



Check Pipe Outside Diameter Here After Grooving

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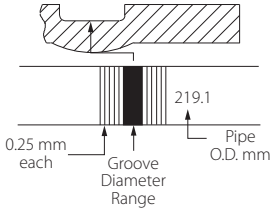
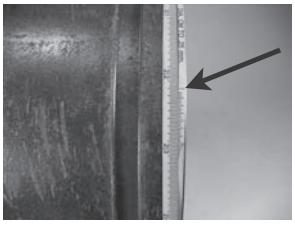
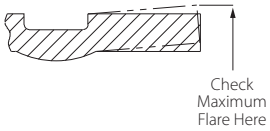
INSTRUCTIONS (Continued)



CHECK GROOVE DIAMETER: Remove all loose dirt, scale, and paint from the groove and gasket sealing surface. With the Go/No-Go side of the tape facing up, wrap the tape around the pipe, and overlap the two ends, as shown. Make sure the tape is not twisted and that it seats in the base of the groove. Firmly pull on each end of the overlapped tape. Determine if the origin arrow is within the "Groove Diameter Range" band for the applicable pipe size. The origin arrow must be within this band for conformance to Victaulic specifications. The graduations on both sides of the groove diameter band are in 0.25-mm increments and can be used as a guide for adjusting the groove diameter setting on the grooving tool.

When using the side of the tape marked in 0.25-mm increments to check the groove diameter, compare the reading to the applicable Victaulic pipe specification to determine if the pipe is within specification.





CHECK MAXIMUM FLARE DIAMETER (FOR ROLL-GROOVED PIPE ONLY);

With the side of the tape marked in 0.25-mm increments facing up, wrap the tape around the pipe end or edge of the pipe bevel, and overlap the two ends, as shown. Make sure the tape is not twisted. Compare the reading to the applicable Victaulic pipe flare specification to determine if the flare is within Victaulic specifications.

Victaulic Grooved Pipe Diameter Specifications for Steel and Stainless Steel Pipe

The groove diameters listed below correspond to the PT-101 Go/No-Go side of the tape. Refer to section 25 in the Victaulic G-100 General Catalog for additional sizes and types of pipe.

1	2		3		4	1	2		3		4
	Dimensions – millimeters						Dimensions – millimeters				
Pipe Size mm	Pipe Outside Dia.		Groove Dia. "C"		Max. Allow. Flare Dia.	Pipe Size mm	Pipe Outside Dia.		Groove Dia. "C"		Max. Allow. Flare Dia.
	Max.	Min.	Max.	Min.			Max.	Min.	Max.	Min.	
26.9	26.9	26.4	23.8	23.4	29.2	318.5	320.1	317.7	313.0	312.2	322.8
33.7	33.7	33.1	30.2	29.9	36.3	323.9	325.5	323.1	318.3	317.5	328.2
42.4	42.6	41.8	39.0	38.6	45.0	355.6	357.2	354.8	350.0	349.3	359.7
48.3	48.7	47.8	45.1	44.7	51.1	377.0	379.4	376.2	371.1	370.4	381.0
60.3	60.9	59.7	57.2	56.8	63.0	406.4	408.0	405.6	400.8	400.1	410.5
73.0	73.8	72.3	69.1	68.6	75.7	426.0	428.4	425.2	419.5	418.6	430.0
76.1	77.0	75.4	72.3	71.8	78.7	457.0	458.8	456.4	451.6	450.9	461.3
88.9	89.8	88.1	84.9	84.5	91.4	480.0	482.4	479.2	473.1	472.2	484.1
108.0	109.0	107.2	103.7	103.2	110.5	508.0	509.6	507.2	502.4	501.7	512.1
114.3	115.4	113.5	110.1	109.6	116.8	530.0	532.4	529.2	522.5	521.6	534.2
133.0	134.7	132.6	129.1	128.6	135.9	559.0	560.4	558.0	550.1	549.3	563.9
139.7	141.1	138.9	135.5	135.0	142.2	610.0	611.2	608.8	600.9	600.1	614.7
159.0	160.4	158.0	153.2	152.5	161.3	630.0	632.4	629.2	621.3	620.4	635.0
165.1	166.7	164.3	160.8	160.2	167.6	355.6	358.0	354.8	342.9	341.8	361.4
168.3	169.9	167.5	164.0	163.4	170.9	406.4	408.8	405.6	393.7	392.6	412.2
216.3	217.9	215.5	211.6	211.0	220.7	457.0	459.6	456.4	444.5	443.4	463.0
219.1	220.7	218.3	214.4	213.8	223.5	508.0	510.4	507.2	495.3	494.2	513.8
267.4	269.0	266.6	262.6	262.0	271.8	559.0	561.2	558.0	546.1	544.9	564.6
273.0	274.7	272.3	268.3	267.6	277.4	610.0	612.0	608.8	596.9	595.8	615.4

NOTE: Shaded rows identify Advanced Groove System (AGS) sizes and dimensions.

COLUMN 1: Millimeter sizes per ISO 4200 and/or JIS G3452 and Republic of China Steel Pipe Standards

COLUMN 2: Pipe Outside Diameter – The average pipe outside diameter must not vary from the specifications listed in the table above. Maximum allowable pipe ovality should not vary by more than 1%. Greater variations between the major and minor diameters will result in difficult coupling assembly. The maximum allowable tolerance from square-cut pipe ends is 0.8 mm for 26.9 – 88.9-mm sizes; 1.1 mm for 108.0 – 168.3-mm sizes; and 1.5 mm for 216.3-mm and larger sizes. This dimension is measured from the true square line. Any internal and external weld beads or seams must be ground flush to the pipe surface for a distance sufficient to clear the grooving rolls. The inside diameter of the pipe end must be cleaned to remove coarse scale, dirt, and other foreign material that might interfere with or damage grooving rolls.

COLUMN 3: "C" Dimension – The "C" Dimension is the proper diameter at the base of the groove. This dimension must be within the diameter's tolerance and concentric with the OD for proper coupling fit. The groove must be of uniform depth for the entire pipe circumference.

COLUMN 4: Maximum Allowable Pipe-End Flare (for roll-grooved pipe only) – This dimension is measured at the extreme pipe-end diameter of square-cut or beveled-end grooved pipe.