

ASTM E 747/ASTM E 1742 Penetrameters/ IQI



Each indicator consists of a series of six parallel wires of different diameters 25 or 50 or 50mm height, mounted between two thin sheets of transparent, flexible PVC.

Lead characters identify ASTM. It follows a number that identify type of material and a letter that define the range of wires diameters.

The other number (6/11/16/21) identify the number of wire of greatest diameters of this set.

WIRE. PENETRAMETER				RECORD NO. :	
Material number no. : 1				Set identification letters: A	
				NO. :	
Wire No.	Unit: in (mm)				
	Standard size	Tolerance(mm)	Actual size	Actual error	
1	0.0032 (0.08)	±0.0001 (±0.0025)	0.0031 (0.0775)	-0.0001 (-0.0025)	
2	0.0040 (0.10)	±0.0001 (±0.0025)	0.0041 (0.102)	+0.0001 (+0.0020)	
3	0.0050 (0.13)	±0.0001 (±0.005)	0.0049 (0.126)	-0.0001 (-0.0040)	
4	0.0063 (0.16)	±0.0002 (±0.005)	0.0061 (0.157)	-0.0002 (-0.0030)	
5	0.0080 (0.20)	±0.0002 (±0.005)	0.0082 (0.205)	+0.0002 (0.0050)	
6	0.010 (0.25)	±0.0002 (±0.005)	0.0098 (0.245)	-0.0002 (-0.0050)	
Length			2.01	(51)	
Material number no. : 1				Set identification letters: B	
				NO. :	
Wire No.	Wire Diameter in (mm)				
	Standard size	Tolerance(mm)	Actual size	Actual error	
1	0.010 (0.25)	±0.0002 (±0.005)	0.0099 (0.252)	-0.0001 (+0.002)	
2	0.013 (0.33)	±0.0004 (±0.01)	0.0130 (0.332)	0 (+0.002)	
3	0.016 (0.40)	±0.0004 (±0.01)	0.0159 (0.405)	-0.0001 (-0.005)	
4	0.020 (0.51)	±0.0004 (±0.02)	0.0198 (0.503)	-0.0002 (-0.007)	
5	0.025 (0.64)	±0.0008 (±0.02)	0.0254 (0.205)	+0.0004 (0.007)	
6	0.032 (0.81)	±0.0008 (±0.02)	0.0320 (0.813)	0 (-0.003)	
Length			2.01	(51)	
Material grade number no. : 1				Set identification letters: C	
				NO. :	
Wire No.	Wire Diameter in (mm)				
	Standard size	Tolerance(mm)	Actual size	Actual error	
1	0.032 (0.81)	±0.0008 (±0.02)	0.0315 (0.80)	-0.0005 (-0.01)	
2	0.040 (1.02)	±0.0008 (±0.02)	0.0393 (1.0)	-0.0007 (-0.02)	
3	0.050 (1.27)	±0.0008 (±0.02)	0.0508 (1.29)	+0.0008 (+0.02)	
4	0.063 (1.60)	±0.0008 (±0.02)	0.0623 (1.59)	-0.0007 (-0.01)	
5	0.080 (2.03)	±0.0012 (±0.03)	0.0812 (2.06)	+0.0012 (+0.03)	
6	0.100 (2.50)	±0.0012 (±0.03)	0.0989 (2.48)	-0.0011 (-0.02)	
Length			2	(50.8)	

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Material grade number no. :1			Set indentification letters: D	
			NO. :	
Wire No.	Wire Diameter in (mm)			
	Standard size	Tolerance (mm)	Actual size	Actual error
1	0.010 (2.5)	$\pm 0.0001 (\pm 0.0025)$	0.0999 (2.497)	-0.0001 (-0.0025)
2	0.126 (3.20)	$\pm 0.0001 (\pm 0.0025)$	0.1261 (3.203)	+0.0001 (+0.0025)
3	0.160 (4.06)	$\pm 0.0001 (\pm 0.005)$	0.1599 (4.055)	-0.0001 (-0.005)
4	0.200 (5.10)	$\pm 0.0002 (\pm 0.005)$	0.1998 (5.095)	-0.0001 (-0.005)
5	0.250 (6.40)	$\pm 0.0002 (\pm 0.005)$	0.2502 (6.405)	+0.0002 (+0.005)
6	0.32 (8.0)	$\pm 0.0002 (\pm 0.005)$	0.3201 (8.003)	+0.0001 (+0.003)
Length	2 (50.8)			
<p>Note</p> <ol style="list-style-type: none"> 1. the minimum distance between the axis of wires is not less than 3 times the wire diameter and not more than 0.2in (5mm) 2. the minimum length is 1 in (25.4mm) 				