



Key

- d_1 internal diameter
- d_2 external diameter
- d_3 protrusion tangential external diameter
- d_4 protrusion tangential internal diameter
- h_1 material thickness (excluding protrusions)
- h_2 height over protrusions (including protrusions)
- h_3 height of protrusions

Figure 1 — Dimensions of direct tension indicator (example with six protrusions)

Figure 1 shows a schematic representation of the protrusions (other forms including curved may be used).

For coated direct tension indicators, the dimensions apply prior to coating.

Direct tension indicators may have indentations or other features on the outside diameter that correspond to and are aligned with feeler gauge entry spaces to indicate where feeler gauges shall be inserted.

Table 2 — Dimensions of direct tension indicators

Dimensions in millimetres

Nominal size <i>d</i> (nominal thread diameter of associated bolt)	Internal diameter		External diameter		Material thickness (excluding protrusions)	Height over protrusions (including protrusions)	Height of protrusions	Protrusion tangential external diameter	Protrusion tangential internal diameter
	<i>d</i> ₁		<i>d</i> ₂		<i>h</i> ₁	<i>h</i> ₂	<i>h</i> ₃	<i>d</i> ₃	<i>d</i> ₄
	min.	max.	min.	max.	min.	max.	min.	max.	min.
M12	12,75	12,85	26,0	32,5	2,5	5,5	0,8	20,0	13,85
M16	16,75	16,85	35,0	36,8	3,0	6,0	0,8	25,0	17,85
M20	20,95	21,05	41,0	46,0	3,5	6,5	0,8	29,0	22,05
M22	23,05	23,15	46,5	50,6	4,0	7,0	0,8	33,0	24,15
M24	25,15	25,25	50,0	55,2	4,0	7,0	0,8	38,0	26,25
M27	28,30	28,40	54,0	62,1	4,0	7,0	0,8	43,0	29,40
M30	31,45	31,55	59,0	69,0	4,0	7,0	0,8	46,5	32,55
M36	37,75	37,85	78,0	83,0	4,0	7,5	0,8	56,0	38,85

3.3 Specifications and reference standards for direct tension indicators

The specifications and reference standards are given in Table 3.