

**DIN 933** similar to ISO 4017

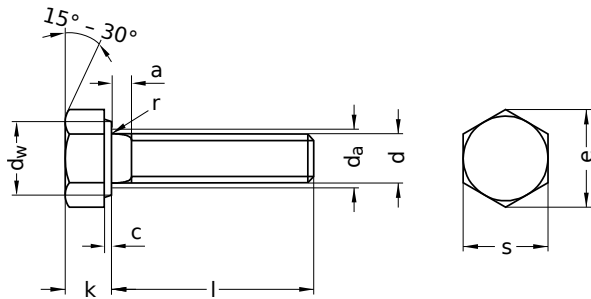
## Hexagon head bolts

Hexagon head | external hex | fully threaded

Steel 10.9 | zinc-plated | Cr(VI)-free | Metric thread

Further information: DIN-standard has been withdrawn | changed spanner widths for M10, M12, M14 and M22 | screws can be paired with a 6h tolerance-compliant female thread

There is a separation into product classes A and B, with the data sheet showing the largest range of values. For more information, see the technical details of the selected article.



| Diameter<br>(d) | a     |      | c    |      | d <sub>a</sub> | d <sub>w</sub> | e            | k    |       | r     | s    |      | Pitch<br>(P) | Tool<br>size |       |
|-----------------|-------|------|------|------|----------------|----------------|--------------|------|-------|-------|------|------|--------------|--------------|-------|
|                 | max.  | min. | max. | min. | max.           | min.           | nominal size | min. | max.  | min.  | max. | min. |              |              | max.  |
| M6              | 3.00  | 0.15 | 0.5  | 0.6  | 6.8            | 8.7            | 10.89        | 4.0  | 3.76  | 4.24  | 0.25 | 10   | 9.64         | 1.00         | SW 10 |
| M8              | 3.75  | 0.15 | 0.6  | 0.6  | 9.2            | 11.4           | 14.20        | 5.3  | 5.06  | 5.54  | 0.40 | 13   | 12.57        | 1.25         | SW 13 |
| M10             | 4.50  | 0.15 | 0.6  | 0.6  | 11.2           | 15.4           | 18.72        | 6.4  | 6.11  | 6.69  | 0.40 | 17   | 16.57        | 1.50         | SW 17 |
| M12             | 5.25  | 0.15 | 0.6  | 0.6  | 13.7           | 17.2           | 20.88        | 7.5  | 7.21  | 7.79  | 0.60 | 19   | 18.48        | 1.75         | SW 19 |
| M14             | 6.00  | 0.15 | 0.6  | 0.6  | 15.7           | 20.1           | 23.91        | 8.8  | 8.51  | 9.09  | 0.60 | 22   | 21.16        | 2.00         | SW 22 |
| M16             | 6.00  | 0.20 | 0.8  | 0.8  | 17.7           | 22.0           | 26.17        | 10.0 | 9.71  | 10.29 | 0.60 | 24   | 23.16        | 2.00         | SW 24 |
| M20             | 7.50  | 0.20 | 0.8  | 0.8  | 22.4           | 27.7           | 32.95        | 12.5 | 12.15 | 12.85 | 0.80 | 30   | 29.16        | 2.50         | SW 30 |
| M24             | 9.00  | 0.20 | 0.8  | 0.8  | 26.4           | 33.2           | 39.55        | 15.0 | 14.65 | 15.35 | 0.80 | 36   | 35.00        | 3.00         | SW 36 |
| M30             | 10.50 | 0.20 | 0.8  | 0.8  | 33.4           | 42.7           | 50.85        | 18.7 | 18.28 | 19.12 | 1.00 | 46   | 45.00        | 3.50         | SW 46 |
| M36             | 12.00 | 0.20 | 0.8  | 0.8  | 39.4           | 51.1           | 60.79        | 22.5 | 22.08 | 22.92 | 1.00 | 55   | 53.80        | 4.00         | SW 55 |
| M39             | 12.00 | 0.30 | 1.0  | 1.0  | 42.2           | 55.9           | 66.44        | 25.0 | 24.56 | 25.42 | 1.00 | 60   | 58.80        | 4.00         | SW 60 |

| nominal size | Length (l) |       |
|--------------|------------|-------|
|              | min.       | max.  |
| 12           | 11.65      | 12.35 |
| 14           | 13.65      | 14.35 |
| 16           | 15.65      | 16.35 |
| 20           | 19.58      | 20.42 |
| 25           | 23.95      | 26.05 |
| 30           | 28.95      | 31.05 |
| 35           | 33.75      | 36.25 |
| 40           | 38.75      | 41.25 |

| nominal size | Length (l) |       |
|--------------|------------|-------|
|              | min.       | max.  |
| 45           | 43.75      | 46.25 |
| 50           | 48.75      | 51.25 |
| 55           | 53.50      | 56.50 |
| 60           | 58.50      | 61.50 |
| 65           | 63.50      | 66.50 |
| 70           | 68.50      | 71.50 |
| 75           | 73.50      | 76.50 |
| 80           | 78.50      | 81.50 |

| nominal size | Length (l) |        |
|--------------|------------|--------|
|              | min.       | max.   |
| 90           | 88.25      | 91.75  |
| 100          | 98.25      | 101.75 |
| 120          | 118.25     | 121.75 |
| 130          | 128.00     | 132.00 |
| 140          | 138.00     | 142.00 |
| 160          | 158.00     | 162.00 |
| 170          | 168.00     | 172.00 |

All technical data refer to the measure mm



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Steel 10.9 | zinc-plated | Cr(VI)-free | Metric thread

| Diameter<br>(d) | Length (l) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |   |
|-----------------|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|---|
|                 | 12         | 14 | 16 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 90 | 100 | 120 | 130 | 140 | 160 | 170 |   |
| M6              | ●          | ●  |    |    | ●  |    | ●  | ●  |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |   |
| M8              |            |    | ●  | ●  | ●  | ●  | ●  | ●  | ●  |    | ●  |    |    |    |    |    |    |     |     |     |     |     |     |   |
| M10             |            |    |    | ●  | ●  | ●  | ●  | ●  |    |    |    | ●  |    |    |    |    |    |     |     |     |     |     |     |   |
| M12             |            |    |    |    | ●  | ●  | ●  | ●  | ●  | ●  |    | ●  |    | ●  |    | ●  | ●  |     |     |     |     | ●   |     |   |
| M14             |            |    |    |    |    |    |    |    | ●  | ●  |    |    |    |    |    |    |    |     |     |     |     |     |     |   |
| M16             |            |    |    |    |    | ●  | ●  | ●  | ●  | ●  | ●  | ●  | ●  |    |    |    | ●  | ●   |     |     |     |     |     |   |
| M20             |            |    |    |    |    |    |    | ●  | ●  | ●  | ●  | ●  | ●  |    | ●  | ●  |    | ●   |     |     |     |     | ●   | ● |
| M24             |            |    |    |    |    |    |    |    |    |    |    | ●  |    |    |    |    |    |     | ●   |     |     |     |     |   |
| M30             |            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     | ●   |     |     |   |
| M36             |            |    |    |    |    |    |    |    |    |    |    |    |    |    | ●  |    |    |     |     |     |     |     |     |   |
| M39             |            |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     | ●   |     |   |

● Combinations available in the eShop | Other sizes on request

All technical data refer to the measure mm

