No guarantee can be given in respect of this translation
In all cases the latest German-language version of the standard shall be taken as authoritative

# Hexagon Bolts
## without Hexagon Nut – with Hexagon Nut
## Type g

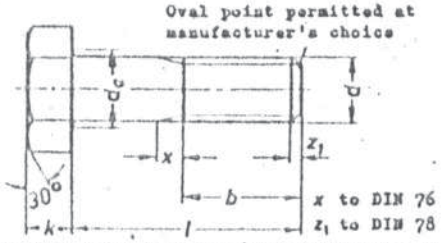
DIN 601

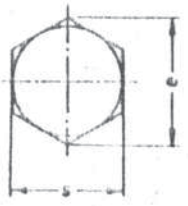
Sechskantschrauben ohne Sechskantmutter – mit Sechskantmutter, Ausführung g

For connection with ISO Recommendations, see Explanations

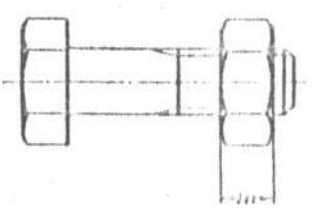
Dimensions in mm

without hexagon nut




with hexagon nut according to DIN 555[1])



Designation of a hexagon bolt with thread d = M 10, length $l$ = 70 mm, without nut:

Hexagon bolt M 10 × 70 DIN 601

Designation of a hexagon bolt with thread d = M 10, length $l$ = 70 mm, with hexagon nut (mu):

Hexagon bolt M 10 × 70 Mu DIN 601

| $d$ | M 5 | M 6 | M 8 | M 10 | M 12 | M 16 | M 20 | M 24 | (M 27) | M 30 | (M 33) | M 36 | (M 39) | M 42 | (M 45) | M 48 | (M 52) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2) | 16 | 18 | 22 | 26 | 30 | 38 | 46 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | – |
| $b$ 3) | – | – | 28 | 32 | 36 | 44 | 52 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 116 |
| 4) | – | – | – | – | – | 57 | 65 | 73 | 79 | 85 | 91 | 97 | 103 | 109 | 115 | 121 | 129 |
| $d_a$ max. | 6 | 7,2 | 10,2 | 12,2 | 15,2 | 19,2 | 24,4 | 28,4 | 32,4 | 35,4 | 38,4 | 42,4 | 45,4 | 48,6 | 52,6 | 56,6 | 63 |
| $e$ min. | 8,63 | 10,89 | 14,20 | 18,72 | 20,88 | 26,17 | 32,95 | 39,55 | 45,20 | 50,85 | 55,37 | 60,79 | 66,44 | 72,09 | 77,74 | 83,39 | 89,04 |
| $k$ | 3,5 | 4 | 5,5 | 7 | 8 | 10 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 26 | 28 | 30 | 33 |
| $m$ | 4 | 5 | 6,5 | 8 | 10 | 13 | 16 | 19 | 22 | 24 | 26 | 29 | 31 | 34 | 36 | 38 | 42 |
| $s$ | 8 | 10 | 13 | 17 | 19 | 24 | 30 | 36 | 41 | 46 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| $l$ [4]) | Weight with nut (7,85 kg/dm³) kg/1000 pieces ≈ | | | | | | | | | | | | | | | | |
| 16 | 4,48 | 7,43 | 15,9 | 32,1 | | | | | | | | | | | | | |
| 20 | 5,98 | 8,12 | 17,1 | 34,1 | 48,9 | | | | | | | | | | | | |
| 25 | 6,60 | 8,97 | 18,7 | 36,6 | 52,5 | | | | | | | | | | | | |
| 30 | 7,37 | 10,1 | 20,7 | 39,1 | 56,1 | 107 | 186 | | | | | | | | | | |
| 35 | 8,04 | 11,2 | 22,7 | 42,2 | 59,7 | 114 | 196 | | | | | | | | | | |
| 40 | 8,81 | 12,3 | 24,7 | 45,3 | 64,1 | 121 | 207 | 347 | | | | | | | | | |
| 45 | 9,58 | 13,4 | 26,7 | 48,4 | 68,5 | 128 | 217 | 362 | | | | | | | | | |
| 50 | 10,3 | 14,5 | 28,7 | 51,5 | 72,9 | 136 | 227 | 377 | | | | | | | | | |
| 55 | | 15,6 | 30,7 | 54,6 | 77,3 | 144 | 238 | 392 | | | | | | | | | |
| 60 | | 16,7 | 32,7 | 57,7 | 81,7 | 152 | 251 | 407 | 570 | | | | | | | | |
| 65 | | 17,8 | 34,7 | 60,8 | 86,1 | 160 | 264 | 422 | 589 | | | | | | | | |
| 70 | | 18,9 | 36,7 | 63,9 | 90,5 | 168 | 277 | 440 | 608 | | | | | | | | |
| 75 | | 20,0 | 38,7 | 67,0 | 95,0 | 176 | 290 | 458 | 630 | | | | | | | | |
| 80 | | 21,1 | 40,7 | 70,1 | 100 | 182 | 303 | 474 | 653 | 853 | 1080 | | | | | | |
| 90 | | | 44,7 | 76,3 | 109 | 198 | 329 | 511 | 698 | 908 | 1150 | | | | | | |
| 100 | | | 48,7 | 82,5 | 118 | 214 | 355 | 547 | 743 | 963 | 1220 | 1520 | 1870 | | | | |
| 110 | | | | 88,7 | 127 | 230 | 381 | | | | | | | | | | |
| 120 | | | | 94,9 | 136 | 246 | 407 | 618 | 833 | 1070 | 1350 | 1680 | 2060 | 2450 | | | |
| 130 | | | | 101 | 145 | 262 | 433 | | | | | | | | | | |
| 140 | | | | 107 | 154 | 278 | 459 | 689 | 923 | 1180 | 1480 | 1840 | 2250 | 2670 | 3160 | | |
| 150 | | | | 113 | 163 | 294 | 485 | 725 | 968 | 1230 | 1550 | 1920 | 2340 | 2760 | 3250 | 3810 | |
| 160 | | | | 119 | 172 | 310 | 501 | 760 | 1010 | 1290 | 1620 | 2000 | 2430 | 2850 | 3400 | 4000 | |
| 170 | | | | 125 | 181 | 326 | 527 | | | | | | | | | | |
| 180 | | | | 131 | 190 | 342 | 553 | 831 | 1100 | 1400 | 1750 | 2160 | 2620 | 3110 | 3650 | 4330 | 5130 |
| 190 | | | | 137 | 199 | 358 | 579 | | | | | | | | | | |
| 200 | | | | 143 | 208 | 374 | 605 | 902 | 1190 | 1510 | 1890 | 2320 | 2810 | 3330 | 3900 | 4580 | 5430 |
| Weight of nut kg/1000 pieces ≈ | 1,11 | 2,32 | 4,82 | 10,9 | 15,9 | 30,8 | 60,3 | 103 | 154 | 216 | 271 | 369 | 472 | 610 | 750 | 924 | 1130 |

Bolts without nuts up to M 24 in lengths above the stepped line are to be ordered according to DIN 558.

Bracketed sizes should be avoided wherever possible.

Normally these bolts are manufactured in the sizes characterized by the specified weights. Sizes where the weights are quoted in bold type are generally kept as normal stock because of their frequency of use.

[1]) to [6]) see page 2

Continued on page 2
Explanations on page 2

Nachdruck, auch auszugsweise, nur mit Genehmigung des DIN Deutsches Institut für Normung e. V., Berlin 30, gestattet.

Übersetzung Fachredaktion Übersetzungsdienst Henry G. Freeman, Düsseldorf

Alleinverkauf der Normen durch Beuth Verlag GmbH, Berlin 30 und Köln 1
12.70

Technical conditions of delivery according to DIN 267

Strength category (material): 3.6 or 4.6 (at manufacturer's choice) according to DIN 267 Sheet 3

Type: g according to DIN 267 Sheet 2
If surface protection is required, the designation must be augmented according to DIN 267 Sheet 9.

If, in an exceptional case, one of the types B, S or Sk permitted by DIN 962 is specified, this shall be indicated at the time of ordering. For examples of designation, see DIN 962.

[1]) When the bolts are packaged in counted quantities the nuts are supplied loose.

[2]) For lengths up to 120 mm

[3]) For lengths of 130 to 200 mm

[4]) For lengths above 200 mm

[5]) Lengths above 200 mm should be graduated in steps of 20 mm.

[6]) For lengths above the stepped line $b \approx l - a$ as according to DIN 76

Explanations

This Standard agrees essentially with the following ISO Recommendations issued by the International Organization for Standardization (ISO):

ISO/R 272-1968

Hexagon bolts and nuts, widths across flats, heights of heads, thicknesses of nuts, metric series
Boulons et écrous hexagonaux, surplats, hauteurs de tête, hauteurs d'écrous, série métrique

ISO/R 733-1968

Hexagon bolts and nuts, metric series
Tolerances on widths across flats, widths across corners

Boulons à tête hexagonale et écrous hexagonaux, série métrique
Tolérances des surplats, surangles

ISO/R 855-1968

Bolts and screws, radii under the head for general purpose bolts and screws, metric series
Vis et boulons, rayon d'arrondi sous tête de vis et boulons pour application générale, série métrique

ISO/R 888-1968

Nominal lengths for bolts, screws and studs
Thread lengths for general purpose bolts

Longueurs de tige nominales des vis, boulons et goujons
Longueurs filetées des boulons d'application générale