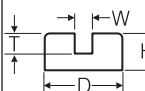
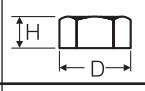
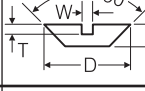
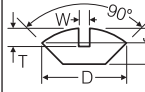
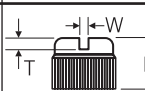
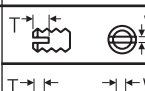
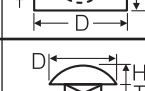
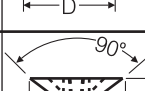


# Metric Screws Head Dimensions

| Head Type                  | Dim                                                                                 | Screw Size |      |      |      |         |         |       |       |           |       |       |       |
|----------------------------|-------------------------------------------------------------------------------------|------------|------|------|------|---------|---------|-------|-------|-----------|-------|-------|-------|
|                            |                                                                                     | M2         | M2.5 | M3   | M3.5 | M4      | M5      | M6    | M8    | M10       | M12   | M16   | M20   |
| PAN                        |    | D          | 3.80 | 5.00 | 6.00 | 7.00    | 8.00    | 10.00 | 12.00 | 16.00     | 20.00 |       |       |
|                            | H                                                                                   | 1.30       | 1.50 | 1.80 | 2.10 | 2.40    | 3.00    | 3.60  | 4.80  | 6.00      |       |       |       |
|                            | T                                                                                   | 0.60       | 0.75 | 0.80 | 0.95 | 1.15    | 1.35    | 1.70  | 2.20  | 2.70      |       |       |       |
|                            | W                                                                                   | 0.60       | 0.70 | 0.80 | 1.10 | 1.30    | 1.40    | 1.70  | 2.10  | 2.60      |       |       |       |
| CHEESE                     |    | D          | 3.80 | 4.50 | 5.50 | 6.00    | 7.00    | 8.50  | 10.00 | 13.00     | 16.00 |       |       |
|                            | H                                                                                   | 1.30       | 1.60 | 2.00 | 2.40 | 2.60    | 3.30    | 3.90  | 5.00  | 6.00      |       |       |       |
|                            | T                                                                                   | 0.90       | 1.00 | 1.30 | 1.40 | 1.60    | 2.00    | 2.30  | 2.80  | 3.20      |       |       |       |
|                            | W                                                                                   | 0.70       | 0.80 | 1.00 | 1.10 | 1.20    | 1.50    | 1.90  | 2.30  | 2.80      |       |       |       |
| HEXAGON                    |    | A/F        | 3.20 | 4.00 | 5.50 | 6.00    | 7.00    | 8.00  | 10.00 | 13.00     | 17.00 | 19.00 | 24.00 |
|                            | D                                                                                   | 3.70       | 4.62 | 6.40 | 7.20 | 8.10    | 9.20    | 11.50 | 15.00 | 19.60     | 21.90 | 27.70 | 34.50 |
|                            | H                                                                                   | 1.15       | 1.30 | 2.00 | 2.40 | 2.80    | 3.50    | 4.00  | 5.50  | 7.00      | 8.00  | 10.00 | 13.00 |
|                            | T                                                                                   |            |      |      |      |         |         |       |       |           |       |       |       |
| COUNTERSUNK                |    | D          | 3.80 | 4.70 | 5.60 | 6.5-8.2 | 7.5-9.4 | 9.20  | 11.00 | 15.4-17.3 | 18.00 |       |       |
|                            | H                                                                                   | 1.20       | 1.50 | 1.65 | 2.30 | 2.70    | 2.50    | 3.00  | 4.00  | 5.00      |       |       |       |
|                            | T                                                                                   | 0.50       | 0.60 | 0.70 | 1.20 | 1.30    | 1.20    | 1.50  | 1.80  | 2.30      |       |       |       |
|                            | W                                                                                   | 0.50       | 0.60 | 0.80 | 1.20 | 1.50    | 1.20    | 1.60  | 2.00  | 2.50      |       |       |       |
| RAISED COUNTERSUNK         |    | D          | 4.00 | 4.70 | 5.60 | 6.50    | 8.0-9.4 | 9.20  | 11.00 | 14.50     | 18.00 |       |       |
|                            | H                                                                                   | 1.70       | 1.85 | 2.25 | 2.65 | 3.00    | 3.75    | 4.50  | 6.00  | 7.50      |       |       |       |
|                            | J                                                                                   | 0.50       | 0.60 | 0.75 | 0.90 | 1.00    | 1.25    | 1.50  | 2.00  | 2.50      |       |       |       |
|                            | T                                                                                   | 1.00       | 1.20 | 1.45 | 1.70 | 1.90    | 2.30    | 2.80  | 3.70  | 4.60      |       |       |       |
| THUMB                      |    | D          |      |      | 8.10 | 8.80    | 9.70    | 10.50 | 12.50 |           |       |       |       |
|                            | H                                                                                   |            |      | 5.50 | 6.40 | 7.10    | 8.10    | 8.30  |       |           |       |       |       |
|                            | T                                                                                   |            |      | 1.10 | 1.30 | 1.50    | 1.70    | 2.20  |       |           |       |       |       |
|                            | W                                                                                   |            |      | 1.00 | 1.10 | 1.20    | 1.40    | 1.80  |       |           |       |       |       |
| GRUB                       |   | T          |      | 1.05 | 1.21 |         |         |       |       |           | 3.61  |       |       |
|                            | W                                                                                   |            |      | 0.60 | 0.70 |         |         |       |       |           | 2.31  |       |       |
|                            | C                                                                                   |            |      |      |      | 2.00    | 3.30    | 4.10  | 5.20  | 6.60      |       |       |       |
|                            | T                                                                                   |            |      |      |      | 0.76    | 1.30    | 1.50  | 2.40  | 2.80      |       |       |       |
| HEXAGON SOCKET             |  | A/F        |      |      |      |         |         | 5.00  | 6.00  |           |       |       |       |
|                            | D                                                                                   |            |      |      |      |         |         | 10.22 | 13.27 |           |       |       |       |
|                            | H                                                                                   |            |      |      |      |         |         | 6.00  | 8.00  |           |       |       |       |
|                            | T                                                                                   |            |      |      |      |         |         | 3.00  | 4.00  |           |       |       |       |
| CUP SQUARE                 |  | A/F        |      |      |      |         | 5.48    | 6.48  | 8.58  |           |       |       |       |
|                            | D                                                                                   |            |      |      |      |         | 13.55   | 16.55 | 20.65 |           |       |       |       |
|                            | H                                                                                   |            |      |      |      |         | 3.30    | 3.88  | 4.88  |           |       |       |       |
|                            | T                                                                                   |            |      |      |      |         | 4.10    | 4.60  | 5.60  |           |       |       |       |
| CROSS RECESSED PAN         |  | D          |      | 5.60 |      | 8.00    | 9.50    | 12.00 |       |           |       |       |       |
|                            | H                                                                                   |            | 2.40 |      |      | 3.10    | 3.70    | 4.60  |       |           |       |       |       |
| CROSS RECESSED COUNTERSUNK |  | D          |      | 5.50 |      | 8.40    | 9.30    | 11.30 |       |           |       |       |       |
|                            | H                                                                                   |            | 1.65 |      |      | 2.70    | 2.70    | 3.30  |       |           |       |       |       |

All dimensions shown are maximum

## Metric Screws Test Data

N/A = Test data not available

1N = 0.101 Kg  
1Nm = 8.851lbf-in

Above information is for guidance only and should not be used to establish specifications or as the basis of a design

| Thread Size | Suggested Max. Tightening Torque Nm | Failure Torque Nm | Tensile |           | Double Shear |           |
|-------------|-------------------------------------|-------------------|---------|-----------|--------------|-----------|
|             |                                     |                   | Yield N | Failure N | Yield N      | Failure N |
| M2          | N/A                                 | N/A               | 7.12    | N/A       | 89           | 116       |
| M2.5        | N/A                                 | N/A               | 8.9     | N/A       | 156          | 169       |
| M3          | 0.22                                | 0.32              | 22      | N/A       | 294          | 329       |
| M3.5        | 0.30                                | 0.43              | 53      | N/A       | 378          | 405       |
| M4          | 0.36                                | 0.45              | 214     | N/A       | 600          | 636       |
| M5          | 0.74                                | 0.93              | 271     | N/A       | 1081         | 1134      |
| M6          | 1.46                                | 1.83              | 845     | 912       | 1806         | 1877      |
| M8          | 2.71                                | 3.39              | 1677    | 1744      | 2980         | 3034      |
| M10         | 4.25                                | 5.31              | 2749    | N/A       | 5026         | 5280      |