

**SISTEMA DE ROSCAS MÉTRICAS DE PASO GRUESO - SISTEMA ISO**  
**Norma DIN 13 - 1973**

| Diámetro nominal en mm |          |          | Paso<br>P<br>mm | Diámetro menor<br>de la rosca interna mm |
|------------------------|----------|----------|-----------------|--|
| 1ª serie               | 2ª serie | 3ª serie |                 |  |
| 1                      |          |          | 0.25            | 0.729                                    |
|                        | 1.1      |          | 0.25            | 0.829                                    |
| 1.2                    |          |          | 0.25            | 0.929                                    |
|                        | 1.4      |          | 0.3             | 1.075                                    |
| 1.6                    |          |          | 0.35            | 1.221                                    |
|                        | 1.8      |          | 0.35            | 1.421                                    |
| 2                      |          |          | 0.4             | 1.567                                    |
|                        | 2.2      |          | 0.45            | 1.713                                    |
| 2.5                    |          |          | 0.45            | 2.013                                    |
| 3                      |          |          | 0.5             | 2.459                                    |
|                        | 3.5      |          | 0.6             | 2.850                                    |
| 4                      |          |          | 0.7             | 3.242                                    |
|                        | 4.5      |          | 0.75            | 3.688                                    |
| 5                      |          |          | 0.8             | 4.134                                    |
| 6                      |          |          | 1               | 4.917                                    |
|                        |          | 7        | 1               | 5.917                                    |
| 8                      |          |          | 1.25            | 6.647                                    |
|                        |          | 9        | 1.25            | 7.647                                    |
| 10                     |          |          | 1.5             | 8.376                                    |
|                        |          | 11       | 1.5             | 9.376                                    |
| 12                     |          |          | 1.75            | 10.106                                   |
|                        | 14       |          | 2               | 11.835                                   |
| 16                     |          |          | 2               | 13.835                                   |
|                        | 18       |          | 2.5             | 15.294                                   |
| 20                     |          |          | 2.5             | 17.294                                   |
|                        | 22       |          | 2.5             | 19.294                                   |
| 24                     |          |          | 3               | 20.752                                   |
|                        | 27       |          | 3               | 23.752                                   |
| 30                     |          |          | 3.5             | 26.211                                   |
|                        | 33       |          | 3.5             | 29.211                                   |
| 36                     |          |          | 4               | 31.670                                   |
|                        | 39       |          | 4               | 34.670                                   |
| 42                     |          |          | 4.5             | 37.129                                   |
|                        | 45       |          | 4.5             | 40.129                                   |
| 48                     |          |          | 5               | 42.587                                   |
|                        | 52       |          | 5               | 46.587                                   |
| 56                     |          |          | 5.5             | 50.046                                   |
|                        | 60       |          | 5.5             | 54.046                                   |
| 64                     |          |          | 6               | 57.505                                   |
|                        | 68       |          | 6               | 61.505                                   |

**SISTEMA DE ROSCAS UNIFICADO**  
**ANSI B1.1 - 1974**

| Tamaño nominal<br>ASA | Diámetro exterior |            | Roscas por pulgada |      |           | Diámetro menor de la rosca interna |            |          |            |               |            |
|-----------------------|-------------------|------------|--------------------|------|-----------|------------------------------------|------------|----------|------------|---------------|------------|
|                       | Pulgadas          | Milímetros | Ordinaria          | Fina | Extrafina | Ordinaria UNC                      |            | Fina UNF |            | Extrafina UNC |            |
|                       |                   |            | UNC                | UNF  | UNEF      | Pulgadas                           | Milímetros | Pulgadas | Milímetros | Pulgadas      | Milímetros |
| 0                     | 0.0600            | 1.52       |                    | 80   |           |                                    |            | 0.0447   | 1.14       |               |            |
| 1                     | 0.0730            | 1.85       | 64                 | 72   |           | 0.0538                             | 1.37       | 0.0560   | 1.42       |               |            |
| 2                     | 0.0860            | 2.18       | 56                 | 64   |           | 0.0641                             | 1.63       | 0.0668   | 1.70       |               |            |
| 3                     | 0.0990            | 2.51       | 48                 | 56   |           | 0.0734                             | 1.86       | 0.0771   | 1.96       |               |            |
| 4                     | 0.1120            | 2.84       | 40                 | 48   |           | 0.0813                             | 2.07       | 0.0864   | 2.19       |               |            |
| 5                     | 0.1250            | 3.18       | 40                 | 44   |           | 0.0943                             | 2.40       | 0.0971   | 2.47       |               |            |
| 6                     | 0.1380            | 3.51       | 32                 | 40   |           | 0.0997                             | 2.53       | 0.1073   | 2.73       |               |            |
| 8                     | 0.1640            | 4.17       | 32                 | 36   |           | 0.1257                             | 3.19       | 0.1299   | 3.30       |               |            |
| 10                    | 0.1900            | 4.83       | 24                 | 32   |           | 0.1389                             | 3.53       | 0.1517   | 3.85       |               |            |
| 12                    | 0.2160            | 5.49       | 24                 | 28   | 32        | 0.1649                             | 4.19       | 0.1722   | 4.37       | 0.1777        | 4.51       |
| 1/4                   | 0.2500            | 6.35       | 20                 | 28   | 32        | 0.1887                             | 4.79       | 0.2062   | 5.24       | 0.2117        | 5.38       |
| 5/16                  | 0.3125            | 7.94       | 18                 | 24   | 32        | 0.2443                             | 6.21       | 0.2614   | 6.64       | 0.2742        | 6.96       |
| 3/8                   | 0.3750            | 9.53       | 16                 | 24   | 32        | 0.2983                             | 7.58       | 0.3239   | 8.23       | 0.3367        | 8.55       |
| 7/16                  | 0.4375            | 11.11      | 14                 | 20   | 28        | 0.3499                             | 8.89       | 0.3762   | 9.56       | 0.3937        | 10.00      |
| 1/2                   | 0.5000            | 12.70      | 13                 | 20   | 28        | 0.4056                             | 10.30      | 0.4387   | 11.14      | 0.4562        | 11.59      |
| 9/16                  | 0.5625            | 14.29      | 12                 | 18   | 24        | 0.4603                             | 11.69      | 0.4943   | 12.56      | 0.5114        | 12.99      |
| 5/8                   | 0.6250            | 15.88      | 11                 | 18   | 24        | 0.5135                             | 13.04      | 0.5568   | 14.14      | 0.5739        | 14.58      |
| 11/16                 | 0.6875            | 17.46      |                    |      | 24        |                                    |            |          |            | 0.6364        | 16.16      |
| 3/4                   | 0.7500            | 19.05      | 10                 | 16   | 20        | 0.6273                             | 15.93      | 0.6733   | 17.10      | 0.6887        | 17.49      |
| 13/16                 | 0.8125            | 20.64      |                    |      | 20        |                                    |            |          |            | 0.7512        | 19.08      |
| 7/8                   | 0.8750            | 22.23      | 9                  | 14   | 20        | 0.7387                             | 18.76      | 0.7874   | 20.00      | 0.8137        | 20.67      |
| 15/16                 | 0.9375            | 23.81      |                    |      | 20        |                                    |            |          |            | 0.8762        | 22.26      |
| 1                     | 1.0000            | 25.40      | 8                  | 12   | 20        | 0.8466                             | 21.50      | 0.8978   | 22.80      | 0.9387        | 23.84      |
| 1 1/16                | 1.0625            | 26.99      |                    |      | 18        |                                    |            |          |            | 0.9943        | 25.26      |
| 1 1/8                 | 1.1250            | 28.58      | 7                  | 12   | 18        | 0.9497                             | 24.12      | 1.0228   | 25.98      | 1.0568        | 26.84      |
| 1 3/16                | 1.1875            | 30.16      |                    |      | 18        |                                    |            |          |            | 1.1193        | 28.43      |
| 1 1/4                 | 1.2500            | 31.75      | 7                  | 12   | 18        | 1.0747                             | 27.30      | 1.1478   | 29.15      | 1.1818        | 30.02      |
| 1 5/16                | 1.3125            | 33.34      |                    |      | 18        |                                    |            |          |            | 1.2443        | 31.61      |
| 1 3/8                 | 1.3750            | 34.93      | 6                  | 12   | 18        | 1.1705                             | 29.73      | 1.2728   | 32.33      | 1.3068        | 33.19      |
| 1 7/16                | 1.4375            | 36.51      |                    |      | 18        |                                    |            |          |            | 1.3693        | 34.78      |
| 1 1/2                 | 1.5000            | 38.10      | 6                  | 12   | 18        | 1.2955                             | 32.91      | 1.3978   | 35.50      | 1.4318        | 36.37      |
| 1 9/16                | 1.5625            | 39.69      |                    |      | 18        |                                    |            |          |            | 1.4943        | 37.96      |
| 1 5/8                 | 1.6250            | 41.28      |                    |      | 18        |                                    |            |          |            | 1.5568        | 39.54      |
| 1 11/16               | 1.6875            | 42.86      |                    |      | 18        |                                    |            |          |            | 1.6193        | 41.13      |
| 1 3/4                 | 1.7500            | 44.45      | 5                  |      | 16        | 1.5046                             | 38.22      |          |            | 1.6733        | 42.50      |
| 2                     | 2.0000            | 50.80      | 4 1/2              |      | 16        | 1.7274                             | 43.88      |          |            | 1.9233        | 48.85      |
| 2 1/4                 | 2.2500            | 57.15      | 4 1/2              |      |           | 1.9774                             | 50.23      |          |            |               |            |
| 2 1/2                 | 2.5000            | 63.50      | 4                  |      |           | 2.1933                             | 55.71      |          |            |               |            |
| 2 3/4                 | 2.7500            | 69.85      | 4                  |      |           | 2.4433                             | 62.06      |          |            |               |            |
| 3                     | 3.0000            | 76.20      | 4                  |      |           | 2.6933                             | 68.41      |          |            |               |            |
| 3 1/4                 | 3.2500            | 82.55      | 4                  |      |           | 2.9433                             | 74.76      |          |            |               |            |
| 3 1/2                 | 3.5000            | 88.90      | 4                  |      |           | 3.1933                             | 81.11      |          |            |               |            |
| 3 3/4                 | 3.7500            | 95.25      | 4                  |      |           | 3.4433                             | 87.46      |          |            |               |            |
| 4                     | 4.0000            | 101.60     | 4                  |      |           | 3.6933                             | 93.81      |          |            |               |            |