

Course-Thread Series: This series, UNC/UNRC, is the one most commonly used in the production of bolts, screws, nuts and other general engineering applications. It is also for threading into lower tensile strength materials such as cast iron, mild steel and other materials (brass, aluminum, magnesium and plastics) to obtain the optimum resistance to stripping of the internal thread. It is applicable for rapid assembly or disassembly, or if corrosion or slight damage is possible.

Table 4a. Coarse-Thread Series, UNC and UNRC — Basic Dimensions

Basic	Major	D, Dia.	Inches	Thds./Inch.	Pitch, D ₂	Base	Minor Diameter		Lead	Angle λ at Basic P.D.	Area of Minor Dia. at P.D.	Tensile Stress	Sq. In.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
							Ext. Thds., d ₂ (Ref.)	Int. Thds., D ₁																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1 (0.073)	2 (0.086)	3 (0.099)	4 (0.112)	5 (0.125)	6 (0.138)	8 (0.164)	10 (0.190)	12 (0.216)	14 (0.242)	16 (0.268)	18 (0.294)	20 (0.320)	22 (0.346)	24 (0.372)	26 (0.398)	28 (0.424)	30 (0.450)	32 (0.476)	34 (0.502)	36 (0.528)	38 (0.554)	40 (0.580)	42 (0.606)	44 (0.632)	46 (0.658)	48 (0.684)	50 (0.710)	52 (0.736)	54 (0.762)	56 (0.788)	58 (0.814)	60 (0.840)	62 (0.866)	64 (0.892)	66 (0.918)	68 (0.944)	70 (0.970)	72 (0.996)	74 (1.022)	76 (1.048)	78 (1.074)	80 (1.100)	82 (1.126)	84 (1.152)	86 (1.178)	88 (1.204)	90 (1.230)	92 (1.256)	94 (1.282)	96 (1.308)	98 (1.334)	100 (1.360)	102 (1.386)	104 (1.412)	106 (1.438)	108 (1.464)	110 (1.490)	112 (1.516)	114 (1.542)	116 (1.568)	118 (1.594)	120 (1.620)	122 (1.646)	124 (1.672)	126 (1.698)	128 (1.724)	130 (1.750)	132 (1.776)	134 (1.802)	136 (1.828)	138 (1.854)	140 (1.880)	142 (1.906)	144 (1.932)	146 (1.958)	148 (1.984)	150 (2.010)	152 (2.036)	154 (2.062)	156 (2.088)	158 (2.114)	160 (2.140)	162 (2.166)	164 (2.192)	166 (2.218)	168 (2.244)	170 (2.270)	172 (2.296)	174 (2.322)	176 (2.348)	178 (2.374)	180 (2.400)	182 (2.426)	184 (2.452)	186 (2.478)	188 (2.504)	190 (2.530)	192 (2.556)	194 (2.582)	196 (2.608)	198 (2.634)	200 (2.660)	202 (2.686)	204 (2.712)	206 (2.738)	208 (2.764)	210 (2.790)	212 (2.816)	214 (2.842)	216 (2.868)	218 (2.894)	220 (2.920)	222 (2.946)	224 (2.972)	226 (2.998)	228 (3.024)	230 (3.050)	232 (3.076)	234 (3.102)	236 (3.128)	238 (3.154)	240 (3.180)	242 (3.206)	244 (3.232)	246 (3.258)	248 (3.284)	250 (3.310)	252 (3.336)	254 (3.362)	256 (3.388)	258 (3.414)	260 (3.440)	262 (3.466)	264 (3.492)	266 (3.518)	268 (3.544)	270 (3.570)	272 (3.596)	274 (3.622)	276 (3.648)	278 (3.674)	280 (3.700)	282 (3.726)	284 (3.752)	286 (3.778)	288 (3.804)	290 (3.830)	292 (3.856)	294 (3.882)	296 (3.908)	298 (3.934)	300 (3.960)	302 (3.986)	304 (4.012)	306 (4.038)	308 (4.064)	310 (4.090)	312 (4.116)	314 (4.142)	316 (4.168)	318 (4.194)	320 (4.220)	322 (4.246)	324 (4.272)	326 (4.298)	328 (4.324)	330 (4.350)	332 (4.376)	334 (4.402)	336 (4.428)	338 (4.454)	340 (4.480)	342 (4.506)	344 (4.532)	346 (4.558)	348 (4.584)	350 (4.610)	352 (4.636)	354 (4.662)	356 (4.688)	358 (4.714)	360 (4.740)	362 (4.766)	364 (4.792)	366 (4.818)	368 (4.844)	370 (4.870)	372 (4.896)	374 (4.922)	376 (4.948)	378 (4.974)	380 (5.000)	382 (5.026)	384 (5.052)	386 (5.078)	388 (5.104)	390 (5.130)	392 (5.156)	394 (5.182)	396 (5.208)	398 (5.234)	400 (5.260)	402 (5.286)	404 (5.312)	406 (5.338)	408 (5.364)	410 (5.390)	412 (5.416)	414 (5.442)	416 (5.468)	418 (5.494)	420 (5.520)	422 (5.546)	424 (5.572)	426 (5.598)	428 (5.624)	430 (5.650)	432 (5.676)	434 (5.702)	436 (5.728)	438 (5.754)	440 (5.780)	442 (5.806)	444 (5.832)	446 (5.858)	448 (5.884)	450 (5.910)	452 (5.936)	454 (5.962)	456 (5.988)	458 (6.014)	460 (6.040)	462 (6.066)	464 (6.092)	466 (6.118)	468 (6.144)	470 (6.170)	472 (6.196)	474 (6.222)	476 (6.248)	478 (6.274)	480 (6.300)	482 (6.326)	484 (6.352)	486 (6.378)	488 (6.404)	490 (6.430)	492 (6.456)	494 (6.482)	496 (6.508)	498 (6.534)	500 (6.560)	502 (6.586)	504 (6.612)	506 (6.638)	508 (6.664)	510 (6.690)	512 (6.716)	514 (6.742)	516 (6.768)	518 (6.794)	520 (6.820)	522 (6.846)	524 (6.872)	526 (6.898)	528 (6.924)	530 (6.950)	532 (6.976)	534 (7.002)	536 (7.028)	538 (7.054)	540 (7.080)	542 (7.106)	544 (7.132)	546 (7.158)	548 (7.184)	550 (7.210)	552 (7.236)	554 (7.262)	556 (7.288)	558 (7.314)	560 (7.340)	562 (7.366)	564 (7.392)	566 (7.418)	568 (7.444)	570 (7.470)	572 (7.496)	574 (7.522)	576 (7.548)	578 (7.574)	580 (7.600)	582 (7.626)	584 (7.652)	586 (7.678)	588 (7.704)	590 (7.730)	592 (7.756)	594 (7.782)	596 (7.808)	598 (7.834)	600 (7.860)	602 (7.886)	604 (7.912)	606 (7.938)	608 (7.964)	610 (7.990)	612 (8.016)	614 (8.042)	616 (8.068)	618 (8.094)	620 (8.120)	622 (8.146)	624 (8.172)	626 (8.198)	628 (8.224)	630 (8.250)	632 (8.276)	634 (8.302)	636 (8.328)	638 (8.354)	640 (8.380)	642 (8.406)	644 (8.432)	646 (8.458)	648 (8.484)	650 (8.510)	652 (8.536)	654 (8.562)	656 (8.588)	658 (8.614)	660 (8.640)	662 (8.666)	664 (8.692)	666 (8.718)	668 (8.744)	670 (8.770)	672 (8.796)	674 (8.822)	676 (8.848)	678 (8.874)	680 (8.900)	682 (8.926)	684 (8.952)	686 (8.978)	688 (9.004)	690 (9.030)	692 (9.056)	694 (9.082)	696 (9.108)	698 (9.134)	700 (9.160)	702 (9.186)	704 (9.212)	706 (9.238)	708 (9.264)	710 (9.290)	712 (9.316)	714 (9.342)	716 (9.368)	718 (9.394)	720 (9.420)	722 (9.446)	724 (9.472)	726 (9.498)	728 (9.524)	730 (9.550)	732 (9.576)	734 (9.602)	736 (9.628)	738 (9.654)	740 (9.680)	742 (9.706)	744 (9.732)	746 (9.758)	748 (9.784)	750 (9.810)	752 (9.836)	754 (9.862)	756 (9.888)	758 (9.914)	760 (9.940)	762 (9.966)	764 (9.992)	766 (10.018)	768 (10.044)	770 (10.070)	772 (10.096)	774 (10.122)	776 (10.148)	778 (10.174)	780 (10.200)	782 (10.226)	784 (10.252)	786 (10.278)	788 (10.304)	790 (10.330)	792 (10.356)	794 (10.382)	796 (10.408)	798 (10.434)	800 (10.460)	802 (10.486)	804 (10.512)	806 (10.538)	808 (10.564)	810 (10.590)	812 (10.616)	814 (10.642)	816 (10.668)	818 (10.694)	820 (10.720)	822 (10.746)	824 (10.772)	826 (10.798)	828 (10.824)	830 (10.850)	832 (10.876)	834 (10.902)	836 (10.928)	838 (10.954)	840 (10.980)	842 (11.006)	844 (11.032)	846 (11.058)	848 (11.084)	850 (11.110)	852 (11.136)	854 (11.162)	856 (11.188)	858 (11.214)	860 (11.240)	862 (11.266)	864 (11.292)	866 (11.318)	868 (11.344)	870 (11.370)	872 (11.396)	874 (11.422)	876 (11.448)	878 (11.474)	880 (11.500)	882 (11.526)	884 (11.552)	886 (11.578)	888 (11.604)	890 (11.630)	892 (11.656)	894 (11.682)	896 (11.708)	898 (11.734)	900 (11.760)	902 (11.786)	904 (11.812)	906 (11.838)	908 (11.864)	910 (11.890)	912 (11.916)	914 (11.942)	916 (11.968)	918 (11.994)	920 (12.020)	922 (12.046)	924 (12.072)	926 (12.098)	928 (12.124)	930 (12.150)	932 (12.176)	934 (12.202)	936 (12.228)	938 (12.254)	940 (12.280)	942 (12.306)	944 (12.332)	946 (12.358)	948 (12.384)	950 (12.410)	952 (12.436)	954 (12.462)	956 (12.488)	958 (12.514)	960 (12.540)	962 (12.566)	964 (12.592)	966 (12.618)	968 (12.644)	970 (12.670)	972 (12.696)	974 (12.722)	976 (12.748)	978 (12.774)	980 (12.800)	982 (12.826)	984 (12.852)	986 (12.878)	988 (12.904)	990 (12.930)	992 (12.956)	994 (12.982)	996 (13.008)	998 (13.034)	1000 (13.060)	1002 (13.086)	1004 (13.112)	1006 (13.138)	1008 (13.164)	1010 (13.190)	1012 (13.216)	1014 (13.242)	1016 (13.268)	1018 (13.294)	1020 (13.320)	1022 (13.346)	1024 (13.372)	1026 (13.398)	1028 (13.424)	1030 (13.450)	1032 (13.476)	1034 (13.502)	1036 (13.528)	1038 (13.554)	1040 (13.580)	1042 (13.606)	1044 (13.632)	1046 (13.658)	1048 (13.684)	1050 (13.710)	1052 (13.736)	1054 (13.762)	1056 (13.788)	1058 (13.814)	1060 (13.840)	1062 (13.866)	1064 (13.892)	1066 (13.918)	1068 (13.944)	1070 (13.970)	1072 (14.000)	1074 (14.030)	1076 (14.060)	1078 (14.090)	1080 (14.120)	1082 (14.150)	1084 (14.180)	1086 (14.210)	1088 (14.240)	1090 (14.270)	1092 (14.300)	1094 (14.330)	1096 (14.360)	1098 (14.390)	1100 (14.420)	1102 (14.450)	1104 (14.480)	1106 (14.510)	1108 (14.540)	1110 (14.570)	1112 (14.600)	1114 (14.630)	1116 (14.660)	1118 (14.690)	1120 (14.720)	1122 (14.750)	1124 (14.780)	1126 (14.810)	1128 (14.840)	1130 (14.870)	1132 (14.900)	1134 (14.930)	1136 (14.960)	1138 (14.990)	1140 (15.020)	1142 (15.050)	1144 (15.080)	1146 (15.110)	1148 (15.140)	1150 (15.170)	1152 (15.200)	1154 (15.230)	1156 (15.260)	1158 (15.290)	1160 (15.320)	1162 (15.350)	1164 (15.380)	1166 (15.410)	1168 (15.440)	1170 (15.470)	1172 (15.500)	1174 (15.530)	1176 (15.560)	1178 (15.590)	1180 (15.620)	1182 (15.650)	1184 (15.680)	1186 (15.710)	1188 (15.740)	1190 (15.770)	1192 (15.800)	1194 (15.830)	1196 (15.860)	1198 (15.890)	1200 (15.920)	1202 (15.950)	1204 (15.980)	1206 (16.010)	1208 (16.040)	1210 (16.070)	1212 (16.100)	1214 (16.130)	1216 (16.160)	1218 (16.190)	1220 (16.220)	1222 (16.250)	1224 (16.280)	1226 (16.310)	1228 (16.340)	1230 (16.370)	1232 (16.400)	1234 (16.430)	1236 (16.460)	1238 (16.490)	1240 (16.520)	1242 (16.550)	1244 (16.580)	1246 (16.610)	1248 (16.640)	1250 (16.670)	1252 (16.700)	1254 (16.730)	1256 (16.760)	1258 (16.790)	1260 (16.820)	1262 (16.850)	1264 (16.880)	1266 (16.910)	1268 (16.940)	1270 (16.970)	1272 (17.000)	1274 (17.030)	1276 (17.060)	1278 (17.090)	1280 (17.120)	1282 (17.150)	1284 (17.180)	1286 (17.210)	1288 (17.240)	1290 (17.270)	1292 (17.300)	1294 (17.330)	1296 (17.360)	1298 (17.390)	1300 (17.420)	1302 (17.450)	1304 (17.480)	1306 (17.510)	1308 (17.540)	1310 (17.570)	1312 (17.600)	1314 (17.630)	1316 (17.660)	1318 (17.690)	1320 (17.720)	1322 (17.750)	1324 (17.780)	1326 (17.810)	1328 (17.840)	1330 (17.870)	1332 (17.900)	1334 (17.930)	1336 (17.960)	1338 (17.990)	1340 (18.020)	1342 (18.050)	1344 (18.080)	1346 (18.110)	1348 (18.140)	1350 (18.170)	1352 (18.200)	1354 (18.230)	1356 (18.260)	1358 (18.290)	1360 (18.320)	1362 (18.350)	1364 (18.380)	1366 (18.410)	1368 (18.440)	1370 (18.470)	1372 (18.500)	1374 (18.530)	1376 (18.560)	1378 (18.590)	1380 (18.620)	1382 (18.650)	1384 (18.680)	1386 (18.710)	1388 (18.740)	1390 (18.770)	1392 (18.800)	1394 (18.830)	1396 (18.860)	1398 (18.890)	1400 (18.920)	1402 (18.950)	1404 (18.980)	1406 (19.010)	1408 (19.040)	1410 (19.070)	1412 (19.100)	1414 (19.130)	1416 (19.160)	1418 (19.190)	1420 (19.220)	1422 (19.250)	1424 (19.280)	1426 (19.310)	1428 (19.340)	1430 (19.370)	1432 (19.400)	1434 (19.430)	1436 (19.460)	1438 (19.490)	1440 (19.520)	1442 (19.550)	1444 (19.580)	1446 (19.610)	1448 (19.640)	1450 (19.670)	1452 (19.700)	1454 (19.730)	1456 (19.760)	1458 (19.790)	1460 (19.820)	1462 (19.850)	1464 (19.880)	1466 (19.910)	1468 (19.940)	1470 (19.970)	1472 (20.000)	1474 (20.030)	1476 (20.060)	1478 (20.090)	1480 (20.120)	1482 (20.150)	1484 (20.180)	1486 (20.210)	1488 (20.240)	1490 (20.270)	1492 (20.300)	1494 (20.330)	1496 (20.360)	1498 (20.390)	1500 (20.420)	1502 (20.450)	1504 (20.480)	1506 (20.510)	1508 (20.540)	1510 (20.570)	1512 (20.600)	1514 (20.630)	1516 (20.660)	1518 (20.690)	1520 (20.720)	1522 (20.750)	1524 (20.780)	1526 (20.810)	1528 (20.840)	1530 (20.870)	1532 (20.900)	1534 (20.930)	1536 (20.960)	1538 (20.990)	1540 (21.020)	1542 (21.050)	1544 (21.080)	1546 (21.110)	1548 (21.140)	1550 (21.170)	1552 (21.200)	1554 (21.230)	1556 (21.260)	1558 (21.290)	1560 (21.320)	1562 (21.350)	1564 (21.380)	1566 (21.410)	1568 (21.440)	1570 (21.470)	1572 (21.500)	1574 (21.530)	1576 (21.560)	1578 (21.590)	1580 (21.620)	1582 (21.650)	1584 (21.680)	1586 (21.710)	1588 (21.740)	1590 (21.770)	1592 (21.800)	1594 (21.830)	1596 (21.860)	1598 (21.890)	1600 (21.920)	1602 (21.950)	1604 (21.980)	1606 (22.010)	1608 (22.040)	1610 (22.070)	1612 (22.100)	1614 (22.130)	1616 (22.160)	1618 (22.190)	1620 (22.220)	1622 (22.250)	1624 (22.280)	1626 (22.310)	1628 (22.340)	1630 (22.370)	1632 (22.400)	1634 (22.430)

Effective Diameter.

See formula, pages 1502 and 1510.

Design form for UNR threads. (See figure on page 1733.)

Basic minor diameter.

Secondary sizes.

Thread Series: This series, UNF/UNRF, is suitable for the production of bolts, nuts and for other applications where the Coarse series is not applicable. Extraneous threads of this series have greater tensile stress area than comparable sizes of the Fine series. The Fine series is suitable when the resistance to stripping of both external