

1200 Series Condenser Tube Expanders



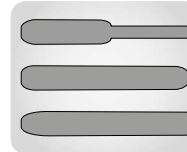
BASIC INFO

Tools for expanding tubes in condensers, chillers, heat exchangers, fin fan coolers, feedwater heaters and surface condensers. As a standard expanders are supplied with STC collar. Available in regular and long reaches (some diameters, up to 5m) and as the 5-rolls version for rolling thin walls. Many different shaped rolls are available.

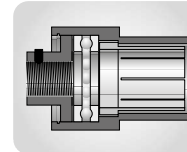
WORKING RANGE

| TUBE ID | TUBE OD | TUBE SHEET |
|-----------------|----------------|-----------------|
| 8,48 - 36,32 MM | 12,7 - 38,1 MM | See table below |
| 0,334 - 1,430" | 1/2" to 1-1/2" | |

OPTIONAL SPARES AND ACCESSORIES



ROLLS ON REQUEST
→ PAGE 10



THRUST COLLARS
→ PAGE 9



ROLLING MOTORS
→ CHAPTER PAGE 40

TUBE SHEET THICKNESS

| ROLLS | REACH | TUBE SHEET THICKNESS | |
|----------------|-------|----------------------|-----------------|
| | | [INCH] | [MM] |
| 1 1/2" 38,1 | STD | 1 1/2 - 6" | 38,1 - 152,4 mm |
| | A | 1 1/2 - 8" | 38,1 - 203,2 mm |
| | B | 1 1/2 - 10" | 38,1 - 254,0 mm |
| | C | 1 1/2 - 12" | 38,1 - 304,8 mm |
| 2 1/4" 57,1 | STD | 2 1/4 - 6 3/4" | 57,1 - 171,4 mm |
| | A | 2 1/4 - 8 3/4" | 57,1 - 222,2 mm |
| | B | 2 1/4 - 10 3/4" | 57,1 - 273,0 mm |
| | C | 2 1/4 - 12 3/4" | 57,1 - 323,8 mm |

NOTE!

Please note that expanders are equipped with "UNIVERSAL NOSE PIECE" which shorten the expansion reach by 3/4". In order to receive full expansion reach, expander has to be equipped with "SHORT NOSE PIECE".

| TUBE OD | | TUBE GAUGE | | TUBE ID | | EXPANSION RANGE | | | | TUBE SHEET THICKNESS | | | | MANDREL | MANDREL SQUARE | | PNEUMATIC MOTOR * | ELECTRIC MOTOR * | |
|---------|------|------------|--------|---------|--------|-----------------|-------|-------|-------|----------------------|----------------|------------------|----------------|--------------|----------------|------|-------------------|------------------|-------------------------------|
| | | | | | | | | | | 1/2" TO 6" | | 2-1/4" TO 6-3/4" | | | | | | | |
| [INCH] | [MM] | [BWG] | [INCH] | [MM] | [INCH] | [MM] | MIN | MAX | MIN | MAX | TOOL NO. | ROLL NO. | TOOL NO. | ROLL NO. | [INCH] | [MM] | | | |
| 3/8 | 9,5 | 22-24 | 0,027 | 0,71 | 0,314 | 8,00 | 0,307 | 0,358 | 7,80 | 9,10 | 1195 | 795 | - | - | M-1195 | 3/8 | 9,5 | K20-500 | TES300 S1500 or TESMini2 HT0 |
| | | | 0,083 | 2,11 | 0,334 | 8,48 | 0,324 | 0,374 | 8,23 | 9,50 | 1197 | 797 | - | - | 1197 | 3/8 | 9,5 | | |
| 1/2 | 12,7 | 14 | 0,072 | 1,83 | 0,356 | 9,04 | 0,348 | 0,398 | 8,84 | 10,11 | 1199 | R-1 | - | - | 1199 | 3/8 | 9,5 | K20-1800 | |
| | | | 0,065 | 1,65 | 0,370 | 9,40 | 0,36 | 0,41 | 9,14 | 10,41 | 1201 | R-1 | - | - | M-51 | 3/8 | 9,5 | | |
| | | | 0,058 | 1,47 | 0,384 | 9,75 | 0,374 | 0,424 | 9,50 | 10,77 | 1203 | R-2 | - | - | M-51 | 3/8 | 9,5 | | |
| | | | 0,049 | 1,24 | 0,402 | 10,21 | 0,392 | 0,447 | 9,96 | 11,35 | 1205 | R-3 | - | - | M-52 | 3/8 | 9,5 | | |
| | | | 0,035 | 0,89 | 0,430 | 10,92 | 0,406 | 0,461 | 10,31 | 11,71 | 1205[S] | R-3 | - | - | M-53 | 3/8 | 9,5 | | |
| | | | 0,109 | 2,77 | 0,407 | 10,34 | 0,392 | 0,447 | 9,96 | 11,35 | 1205 | R-3 | - | - | M-52 | 3/8 | 9,5 | | |
| 5/8 | 15,8 | 12 | 0,095 | 2,41 | 0,435 | 11,05 | 0,425 | 0,480 | 10,80 | 12,19 | 1207 | R-4 | - | - | M-53 | 3/8 | 9,5 | K50-600 | TES3000 G1450 or TESMini2 ES2 |
| | | | 0,083 | 2,11 | 0,459 | 11,66 | 0,449 | 0,509 | 11,40 | 12,93 | 1209 | R-4 | 1210 | R-4-A | M-54 | 3/8 | 9,5 | | |
| | | | 0,072 | 1,83 | 0,481 | 12,22 | 0,471 | 0,536 | 11,96 | 13,61 | 1211 | R-5 | 1212 | R-5A | M-55 | 3/8 | 9,5 | | |
| | | | 0,065 | 1,65 | 0,495 | 12,57 | 0,485 | 0,550 | 12,32 | 13,97 | 1213 | R-6 | 1214 | R-6A | M-55 | 3/8 | 9,5 | | |
| | | | 0,058 | 1,47 | 0,509 | 12,93 | 0,499 | 0,564 | 12,67 | 14,33 | 1215 | R-6 | 1216 | R-6A | M-56 | 3/8 | 9,5 | | |
| | | | 0,049 | 1,24 | 0,527 | 13,39 | 0,517 | 0,572 | 13,13 | 14,53 | 1217 | R-7 | 1218 | R-7A | M-57 | 3/8 | 9,5 | | |
| | | | 0,042 | 1,07 | 0,541 | 13,74 | 0,522 | 0,582 | 13,26 | 14,78 | 1219 | R-7 | 1220 | R-7A | M-56 | 3/8 | 9,5 | | |
| | | | 0,035 | 0,89 | 0,555 | 14,10 | 0,536 | 0,596 | 13,61 | 15,14 | 1219[S] | R-7 | 1220[S] | R-7A | M-58 | 3/8 | 9,5 | | |
| | | | 0,032 | 0,81 | 0,561 | 14,25 | 0,536 | 0,596 | 13,61 | 15,14 | 1219[S] | R-7 | 1220[S] | R-7A | M-58 | 3/8 | 9,5 | | |
| | | | 0,028 | 0,71 | 0,569 | 14,45 | 0,536 | 0,596 | 13,61 | 15,14 | 1219[S] | R-7 | 1220[S] | R-7A | M-58 | 3/8 | 9,5 | | |

| TUBE OD | | TUBE GAUGE | | | TUBE ID | | EXPANSION RANGE | | | | TUBE SHEET THICKNESS | | | | MANDREL | MANDREL SQUARE | | PNEUMATIC MOTOR * | ELECTRIC MOTOR * | | | | |
|---------|------|------------|-------|------|---------|-------|-----------------|-------|-------|--------|----------------------|------------------|------------------|---------------|-------------|----------------|-------------|-------------------|--------------------------------|----------|-------------------------------|----------|----------|
| | | | | | | | | | | | 1/2" TO 6" | | 2-1/4" TO 6-3/4" | | | | | | | | | | |
| | | | | | | | [INCH] | [MM] | [BVG] | [INCH] | [MM] | [INCH] | [MM] | MIN | | MAX | MIN | | | MAX | TOOL NO. | ROLL NO. | TOOL NO. |
| | | | | | | | | | | | 38,1 TO 152,4 MM | 57,1 TO 171,4 MM | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 3/4 | 19 | 10 | 0,134 | 3,40 | 0,482 | 12,24 | 0,471 | 0,536 | 11,96 | 13,61 | 1211 | R-5 | 1212 | R-5-A | M-55 | 3/8 | 9,5 | K60-900 | TES3000 + G1000 TESMini2 + ES2 | | | | |
| | | 11 | 0,120 | 3,05 | 0,510 | 12,95 | 0,499 | 0,564 | 12,67 | 14,33 | 1215 | R-6 | 1216 | R-6-A | M-56 | 3/8 | 9,5 | | | | | | |
| | | 12 | 0,109 | 2,77 | 0,532 | 13,51 | 0,522 | 0,582 | 13,26 | 14,78 | 1219 | R-7 | 1220 | R-7-A | M-56 | 3/8 | 9,5 | | | | | | |
| | | | | 13 | 0,095 | 2,41 | 0,560 | 14,22 | 0,55 | 0,615 | 13,97 | 15,62 | 1221 | R-8 | 1222 | R-8-A | M-58 | 3/8 | 9,5 | K50-400 | TES3000 G1450 or TESMini2 ES2 | | |
| | | | | 14 | 0,083 | 2,11 | 0,584 | 14,83 | 0,574 | 0,639 | 14,58 | 16,23 | 1223 | R-9 | 1224 | R-9-A | M-58 | 3/8 | 9,5 | | | | |
| | | | | 15 | 0,072 | 1,83 | 0,606 | 15,39 | 0,596 | 0,661 | 15,14 | 16,79 | 1225 | R-10 | 1226 | R-10-A | M-58 | 3/8 | 9,5 | | | | |
| | | | | 16 | 0,065 | 1,65 | 0,620 | 15,75 | 0,605 | 0,685 | 15,37 | 17,40 | 1227 | R-10 | 1228 | R-10-A | M-59 | 3/8 | 9,5 | K50-600 | TES3000 G1000 or TESMini2 DUO | | |
| | | | | 17 | 0,058 | 1,47 | 0,634 | 16,10 | 0,619 | 0,699 | 15,72 | 17,75 | 1229 | R-11 | 1230 | R-11-A | M-59 | 3/8 | 9,5 | | | | |
| | | | | 18 | 0,049 | 1,24 | 0,652 | 16,56 | 0,619 | 0,699 | 15,72 | 17,75 | 1229 | R-11 | 1230 | R-11-A | M-59 | 3/8 | 9,5 | | | | |
| | | | | 19 | 0,042 | 1,07 | 0,666 | 16,92 | 0,642 | 0,722 | 16,31 | 18,34 | 1231 | R-12 | 1232 | R-12-A | M-59 | 3/8 | 9,5 | K60-900 | TES3000 G1000 or TESMini2 DUO | | |
| | | | | 20 | 0,035 | 0,89 | 0,680 | 17,27 | 0,642 | 0,722 | 16,31 | 18,34 | 1231 | R-12 | 1232 | R-12-A | M-59 | 3/8 | 9,5 | | | | |
| | | | | 21 | 0,032 | 0,81 | 0,686 | 17,42 | 0,642 | 0,722 | 16,31 | 18,34 | 1231 | R-12 | 1232 | R-12-A | M-59 | 3/8 | 9,5 | | | | |
| | | 22 | 0,028 | 0,71 | 0,694 | 17,63 | 0,642 | 0,722 | 16,31 | 18,34 | 1231 | R-12 | 1232 | R-12-A | M-59 | 3/8 | 9,5 | | | | | | |
| 7/8 | 22,2 | 10 | 0,134 | 3,40 | 0,607 | 15,42 | 0,596 | 0,661 | 15,14 | 16,79 | 1225 | R-10 | 1226 | R-10-A | M-58 | 3/8 | 9,5 | K50-400 | TES3000 G1000 or TESMini2 ES2 | | | | |
| | | 11 | 0,120 | 3,05 | 0,635 | 16,13 | 0,619 | 0,699 | 15,72 | 17,75 | 1229 | R-11 | 1230 | R-11-A | M-59 | 3/8 | 9,5 | | | | | | |
| | | 12 | 0,109 | 2,77 | 0,657 | 16,69 | 0,642 | 0,722 | 16,31 | 18,34 | 1231 | R-12 | 1232 | R-12-A | M-59 | 3/8 | 9,5 | | | | | | |
| | | | | 13 | 0,095 | 2,41 | 0,685 | 17,40 | 0,67 | 0,750 | 17,02 | 19,05 | 1233 | R-13 | 1234 | R-13-A | M-60 | 3/8 | 9,5 | K50-600 | TES3000 G1000 or TESMini2 ES2 | | |
| | | | | 14 | 0,083 | 2,11 | 0,709 | 18,01 | 0,685 | 0,774 | 17,40 | 19,66 | 1235 | R-14 | 1236 | R-14-A | M-61 | 3/8 | 9,5 | | | | |
| | | | | 15 | 0,072 | 1,83 | 0,731 | 18,57 | 0,712 | 0,801 | 18,08 | 20,35 | 1237 | R-15 | 1238 | R-15-A | M-61 | 3/8 | 9,5 | | | | |
| | | | | 16 | 0,065 | 1,65 | 0,745 | 18,92 | 0,726 | 0,815 | 18,44 | 20,70 | 1239 | R-15 | 1240 | R-15-A | M-62 | 3/8 | 9,5 | K50-1250 | TES3000 + G1450 TESMini2 ES2 | | |
| | | | | 17 | 0,058 | 1,47 | 0,759 | 19,28 | 0,740 | 0,829 | 18,80 | 21,06 | 1243 | R-16 | 1244 | R-16-A | M-62 | 3/8 | 9,5 | | | | |
| | | 18 | 0,049 | 1,24 | 0,777 | 19,74 | 0,740 | 0,829 | 18,80 | 21,06 | 1243 | R-16 | 1244 | R-16-A | M-62 | 3/8 | 9,5 | | | | | | |
| 1 | 25,4 | 8 | 0,165 | 4,19 | 0,670 | 17,02 | 0,655 | 0,735 | 16,64 | 18,67 | 1241 | R-13 | 1242 | R-13-A | M-59 | 3/8 | 9,5 | K60-400 | TES3000 G1000 or TESMini2 ES2 | | | | |
| | | 9 | 0,148 | 3,76 | 0,704 | 17,88 | 0,685 | 0,774 | 17,40 | 19,66 | 1235 | R-14 | 1236 | R-14-A | M-61 | 3/8 | 9,5 | | | | | | |
| | | 10 | 0,134 | 3,40 | 0,732 | 18,59 | 0,712 | 0,801 | 18,08 | 20,35 | 1237 | R-15 | 1238 | R-15-A | M-61 | 3/8 | 9,5 | | | | | | |
| | | | | 11 | 0,120 | 3,05 | 0,760 | 19,30 | 0,740 | 0,829 | 18,80 | 21,06 | 1243 | R-16 | 1244 | R-16-A | M-62 | 3/8 | 9,5 | K50-400 | TES3000 G1000 or TESMini2 ES2 | | |
| | | | | 12 | 0,109 | 2,77 | 0,782 | 19,86 | 0,763 | 0,852 | 19,38 | 21,64 | 1245 | R-17 | 1246 | R-17-A | M-62 | 3/8 | 9,5 | | | | |
| | | | | 13 | 0,095 | 2,41 | 0,810 | 20,57 | 0,791 | 0,880 | 20,09 | 22,35 | 1247 | R-18 | 1248 | R-18-A | M-62 | 3/8 | 9,5 | | | | |
| | | | | 14 | 0,083 | 2,11 | 0,834 | 21,18 | 0,810 | 0,909 | 20,57 | 23,09 | 1249 | R-18 | 1250 | R-18-A | M-63 | 3/8 | 9,5 | K50-600 | TES3000 G1000 or TESMini2 ES2 | | |
| | | | | 15 | 0,072 | 1,83 | 0,856 | 21,74 | 0,837 | 0,936 | 21,26 | 23,77 | 1251 | R-19 | 1252 | R-19-A | M-63 | 3/8 | 9,5 | | | | |
| | | | | 16 | 0,065 | 1,65 | 0,870 | 22,10 | 0,837 | 0,936 | 21,26 | 23,77 | 1251 | R-19 | 1252 | R-19-A | M-63 | 3/8 | 9,5 | | | | |
| | | | | 17 | 0,058 | 1,47 | 0,884 | 22,45 | 0,865 | 0,964 | 21,97 | 24,49 | 1255 | R-21 | 1256 | R-21-A | M-63 | 3/8 | 9,5 | K50-600 | TES3000 G1000 or TESMini2 ES2 | | |
| | | | | 18 | 0,049 | 1,24 | 0,902 | 22,91 | 0,865 | 0,964 | 21,97 | 24,49 | 1255 | R-21 | 1256 | R-21-A | M-63 | 3/8 | 9,5 | | | | |
| | | | | 19 | 0,042 | 1,07 | 0,916 | 23,27 | 0,865 | 0,964 | 21,97 | 24,49 | 1255 | R-21 | 1256 | R-21-A | M-63 | 3/8 | 9,5 | | | | |
| | | 20 | 0,035 | 0,89 | 0,930 | 23,62 | 0,865 | 0,964 | 21,97 | 24,49 | 1255 | R-21 | 1256 | R-21-A | M-63 | 3/8 | 9,5 | | | | | | |
| 1-1/8 | 28,5 | 8 | 0,165 | 4,19 | 0,795 | 20,19 | 0,776 | 0,875 | 19,71 | 22,23 | 1253 | R-20 | 1254 | R-20-A | M-63 | 3/8 | 9,5 | K60-400 | TES3000 G1000 or TESMini2 DU1 | | | | |
| | | 9 | 0,148 | 3,76 | 0,829 | 21,06 | 0,810 | 0,909 | 20,57 | 23,09 | 1249 | R-18 | 1250 | R-18-A | M-63 | 3/8 | 9,5 | | | | | | |
| | | 10 | 0,134 | 3,40 | 0,857 | 21,77 | 0,837 | 0,936 | 21,26 | 23,77 | 1251 | R-19 | 1252 | R-19-A | M-63 | 3/8 | 9,5 | | | | | | |
| | | | | 11 | 0,120 | 3,05 | 0,885 | 22,48 | 0,865 | 0,964 | 21,97 | 24,49 | 1255 | R-21 | 1256 | R-21-A | M-63 | 3/8 | 9,5 | K60-400 | TES3000 G1000 or TESMini2 DU1 | | |
| | | | | 12 | 0,109 | 2,77 | 0,907 | 23,04 | 0,883 | 0,982 | 22,43 | 24,94 | 1257 | R-21 | 1258 | R-21-A | M-64 | 1/2 | 12,7 | | | | |
| | | | | 13 | 0,095 | 2,41 | 0,935 | 23,75 | 0,916 | 1,015 | 23,27 | 25,78 | 1259 | R-22 | 1260 | R-22-A | M-64 | 1/2 | 12,7 | | | | |
| | | | | 14 | 0,083 | 2,11 | 0,959 | 24,36 | 0,935 | 1,044 | 23,75 | 26,52 | 1261 | R-23 | 1262 | R-23-A | M-65 | 1/2 | 12,7 | | | | |
| | | | | 15 | 0,072 | 1,83 | 0,981 | 24,92 | 0,962 | 1,071 | 24,43 | 27,20 | 1263 | R-24 | 1264 | R-24-A | M-65 | 1/2 | 12,7 | | | | |
| | | | | 16 | 0,065 | 1,65 | 0,995 | 25,27 | 0,962 | 1,071 | 24,43 | 27,20 | 1263 | R-24 | 1264 | R-24-A | M-65 | 1/2 | 12,7 | | | | |
| | | 17 | 0,058 | 1,47 | 1,009 | 25,63 | 0,990 | 1,099 | 25,15 | 27,91 | 1267 | R-26 | 1268 | R-26-A | M-66 | 1/2 | 12,7 | | | | | | |
| | | 18 | 0,049 | 1,24 | 1,027 | 26,09 | 0,990 | 1,099 | 25,15 | 27,91 | 1267 | R-26 | 1268 | R-26-A | M-66 | 1/2 | 12,7 | | | | | | |

| TUBE OD | | TUBE GAUGE | | TUBE ID | | EXPANSION RANGE | | | | TUBE SHEET THICKNESS | | | | MANDREL | MANDREL SQUARE | | PNEUMATIC MOTOR * | ELECTRIC MOTOR * | |
|---------|-------|------------|--------|---------|--------|-----------------|-------|-------|-------------|----------------------|-------------|------------------|-------------|---------------|----------------|---------|------------------------------|------------------|-------------------------------|
| | | | | | | [INCH] | | [MM] | | 1/2" TO 6" | | 2-1/4" TO 6-3/4" | | | [INCH] | | | | [MM] |
| [INCH] | [MM] | [BWG] | [INCH] | [MM] | [INCH] | [MM] | MIN | MAX | MIN | MAX | TOOL NO. | ROLL NO. | TOOL NO. | ROLL NO. | | | | | |
| 1-1/4 | 31,7 | 8 | 0,165 | 4,19 | 0,92 | 23,37 | 0,901 | 1,010 | 22,89 | 25,65 | 1265 | R-25 | 1266 | R-25-A | M-65 | 1/2 | 12,7 | K60-400 | TES3000 G1000 or TESMini2 DU1 |
| | | 9 | 0,148 | 3,76 | 0,954 | 24,23 | 0,935 | 1,044 | 23,75 | 26,52 | 1261 | R-23 | 1262 | R-23-A | M-65 | 1/2 | 12,7 | | |
| | | 10 | 0,134 | 3,40 | 0,982 | 24,94 | 0,962 | 1,071 | 24,43 | 27,20 | 1263 | R-24 | 1264 | R-24-A | M-65 | 1/2 | 12,7 | | |
| | | 11 | 0,120 | 3,05 | 1,010 | 25,65 | 0,990 | 1,099 | 25,15 | 27,91 | 1267 | R-26 | 1268 | R-26-A | M-66 | 1/2 | 12,7 | | |
| | | 12 | 0,109 | 2,77 | 1,032 | 26,21 | 1,013 | 1,122 | 25,73 | 28,50 | 1269 | R-27 | 1270 | R-27-A | M-66 | 1/2 | 12,7 | | |
| | | 13 | 0,095 | 2,41 | 1,060 | 26,92 | 1,041 | 1,150 | 26,44 | 29,21 | 1271 | R-28 | 1272 | R-28-A | M-67 | 1/2 | 12,7 | | |
| | | 14 | 0,083 | 2,11 | 1,084 | 27,53 | 1,060 | 1,169 | 26,92 | 29,69 | 1273 | R-29 | 1274 | R-29-A | M-67 | 1/2 | 12,7 | | |
| | | 15 | 0,072 | 1,83 | 1,106 | 28,09 | 1,087 | 1,196 | 27,61 | 30,38 | 1275 | R-30 | 1276 | R-30-A | M-67 | 1/2 | 12,7 | | |
| | | 16 | 0,065 | 1,65 | 1,12 | 28,45 | 1,087 | 1,196 | 27,61 | 30,38 | 1275 | R-30 | 1276 | R-30-A | M-67 | 1/2 | 12,7 | | |
| 17 | 0,058 | 1,47 | 1,134 | 28,80 | 1,115 | 1,224 | 28,32 | 31,09 | 1279 | R-30 | 1280 | R-30-A | M-68 | 1/2 | 12,7 | | | | |
| 18 | 0,049 | 1,24 | 1,152 | 29,26 | 1,115 | 1,224 | 28,32 | 31,09 | 1279 | R-30 | 1280 | R-30-A | M-68 | 1/2 | 12,7 | | | | |
| 1-3/8 | 34,9 | 8 | 0,165 | 4,19 | 1,045 | 26,54 | 1,026 | 1,135 | 26,06 | 28,83 | 1277 | R-31 | 1278 | R-31-A | M-67 | 1/2 | 12,7 | K60-250 | TES3000 G400 or TESMini2 DU1 |
| | | 9 | 0,148 | 3,76 | 1,079 | 27,41 | 1,060 | 1,169 | 26,92 | 29,69 | 1273 | R-29 | 1274 | R-29-A | M-67 | 1/2 | 12,7 | | |
| | | 10 | 0,134 | 3,40 | 1,107 | 28,12 | 1,087 | 1,196 | 27,61 | 30,38 | 1275 | R-30 | 1276 | R-30-A | M-67 | 1/2 | 12,7 | | |
| | | 11 | 0,120 | 3,05 | 1,135 | 28,83 | 1,115 | 1,224 | 28,32 | 31,09 | 1279 | R-30 | 1280 | R-30-A | M-68 | 1/2 | 12,7 | | |
| | | 12 | 0,109 | 2,77 | 1,157 | 29,39 | 1,133 | 1,242 | 28,78 | 31,55 | 1281 | R-32 | 1282 | R-32-A | M-68 | 1/2 | 12,7 | | |
| | | 13 | 0,095 | 2,41 | 1,185 | 30,10 | 1,160 | 1,275 | 29,46 | 32,39 | 1283 | R-33 | 1284 | R-33-A | M-69 | 1/2 | 12,7 | | |
| | | 14 | 0,083 | 2,11 | 1,209 | 30,71 | 1,179 | 1,294 | 29,95 | 32,87 | 1285 | R-34 | 1286 | R-34-A | M-70 | 1/2 | 12,7 | | |
| 15 | 0,072 | 1,83 | 1,231 | 31,27 | 1,206 | 1,321 | 30,63 | 33,55 | 1287 | R-35 | 1288 | R-35-A | M-70 | 1/2 | 12,7 | K60-400 | TES3000 G400 or TESMini2 DU1 | | |
| 16 | 0,065 | 1,65 | 1,245 | 31,62 | 1,206 | 1,321 | 30,63 | 33,55 | 1287 | R-35 | 1288 | R-35-A | M-70 | 1/2 | 12,7 | | | | |
| 8 | 0,165 | 4,19 | 1,170 | 29,72 | 1,145 | 1,260 | 29,08 | 32,00 | 1289 | R-34 | 1290 | R-34-A | M-69 | 1/2 | 12,7 | | | | |
| 1-1/2 | 38,1 | 9 | 0,148 | 3,76 | 1,204 | 30,58 | 1,145 | 1,294 | 29,08 | 32,87 | 1285 | R-34 | 1286 | R-34-A | M-70 | 1/2 | 12,7 | K60-250 | TES3000 G400 or TESMini2 DU1 |
| | | 10 | 0,134 | 3,40 | 1,232 | 31,29 | 1,206 | 1,321 | 30,63 | 33,55 | 1287 | R-35 | 1288 | R-35-A | M-70 | 1/2 | 12,7 | | |
| | | 11 | 0,120 | 3,05 | 1,260 | 32,00 | 1,235 | 1,350 | 31,37 | 34,29 | 1291 | R-36 | 1292 | R-36-A | M-70 | 1/2 | 12,7 | | |
| | | 12 | 0,109 | 2,77 | 1,282 | 32,56 | 1,257 | 1,372 | 31,93 | 34,85 | 1293 | R-37 | 1294 | R-37-A | M-70 | 1/2 | 12,7 | | |
| | | 13 | 0,095 | 2,41 | 1,310 | 33,27 | 1,285 | 1,400 | 32,64 | 35,56 | 1295 | R-37 | 1296 | R-37-A | M-71 | 1/2 | 12,7 | | |
| | | 14 | 0,083 | 2,11 | 1,334 | 33,88 | 1,285 | 1,400 | 32,64 | 35,56 | 1295 | R-37 | 1296 | R-37-A | M-71 | 1/2 | 12,7 | | |
| | | 15 | 0,072 | 1,83 | 1,356 | 34,44 | 1,331 | 1,446 | 33,81 | 36,73 | 1297 | R-38 | 1298 | R-38-A | M-71 | 1/2 | 12,7 | | |
| | | 16 | 0,065 | 1,65 | 1,370 | 34,80 | 1,331 | 1,446 | 33,81 | 36,73 | 1297 | R-38 | 1298 | R-38-A | M-71 | 1/2 | 12,7 | | |
| | | 17 | 0,058 | 1,47 | 1,384 | 35,15 | 1,331 | 1,472 | 33,81 | 37,39 | 1299 | R-38 | 1300 | R-38-A | M-72 | 1/2 | 12,7 | | |
| | | 18 | 0,049 | 1,24 | 1,402 | 35,61 | 1,331 | 1,472 | 33,81 | 37,39 | 1299 | R-38 | 1300 | R-38-A | M-72 | 1/2 | 12,7 | | |
| | | 19 | 0,042 | 1,07 | 1,416 | 35,97 | 1,331 | 1,472 | 33,81 | 37,39 | 1299 | R-38 | 1300 | R-38-A | M-72 | 1/2 | 12,7 | | |
| | | 20 | 0,035 | 0,89 | 1,430 | 36,32 | 1,331 | 1,472 | 33,81 | 37,39 | 1299 | R-38 | 1300 | R-38-A | M-72 | 1/2 | 12,7 | | |

* Motor recommendation applies only to most popular cases with a standard percentage of the wall reduction. The recommendation can be different for thicker tube sheet, harder and exotic metal tube and a higher percentage of wall reduction.