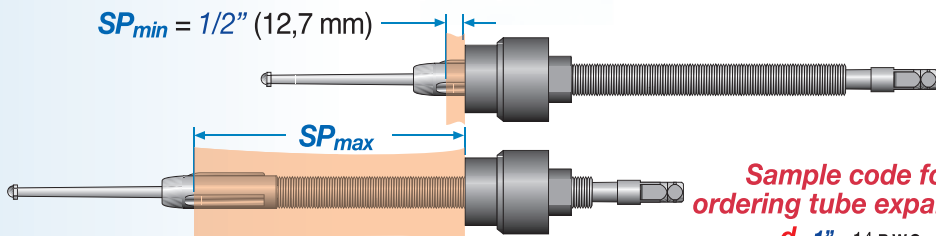
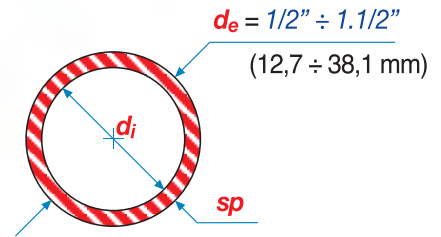
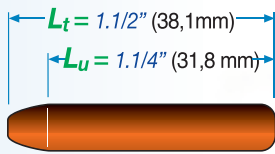


Tube expanders with adjustable reach For thick tube-sheets

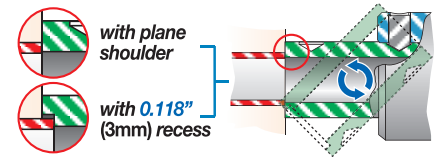
MG/1200 With 1.1/2" short rolls



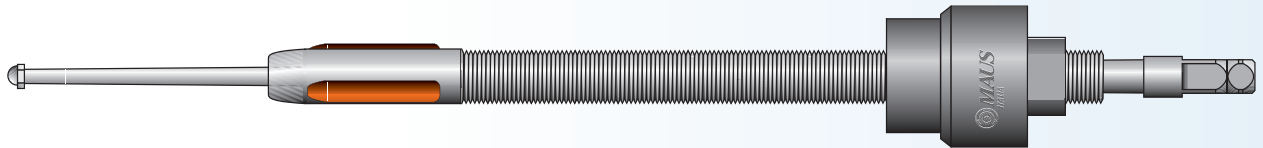
Sample code for ordering tube expanders
de 1" - 14 B.W.G.

New reversible thrust collar design

- Standard reach **STD SP_{max} = 5" (127,0 mm)** ↔ **MG-1249**
- Extra reach **B SP_{max} = 9" (228,6 mm)** ↔ **MG-1249-B**
- Extra reach **C SP_{max} = 11" (279,4 mm)** ↔ **MG-1249-C**



| de inches mm | Tube | | | | Expansion | | Tube expander | Rolls | Mandrel | inches mm | |
|------------------------------|-------------|--------|-------|--------|------------------|---------------|----------------------|-------------------|----------------|--------------|---------------|
| | B.W.G. | inches | mm | inches | mm | inches | mm | Cod. | Cod. | | Cod. |
| 1/2" (12,7) | 14 | 0.083 | 2,10 | 0.334 | 8,4 | 0.324 ÷ 0.374 | 8,2 ÷ 9,5 | MG-1197 | MR-797 | MM-1197 | 3/8" (9,5) |
| | 15 | 0.072 | 1,82 | 0.356 | 9,0 | 0.348 ÷ 0.398 | 8,8 ÷ 10,1 | MG-1199 | MR-1 | MM-1199 | |
| | 16 | 0.065 | 1,65 | 0.370 | 9,4 | 0.360 ÷ 0.410 | 9,1 ÷ 10,4 | MG-1201 | MR-1 | MM-51 | |
| | 17 | 0.058 | 1,47 | 0.384 | 9,7 | 0.374 ÷ 0.424 | 9,5 ÷ 10,7 | MG-1203 | MR-2 | MM-52 | |
| | 18 | 0.049 | 1,24 | 0.402 | 10,2 | 0.392 ÷ 0.447 | 9,9 ÷ 11,3 | MG-1205 | MR-3 | MM-53 | |
| | 20 | 0.035 | 0,88 | 0.430 | 10,9 | 0.420 ÷ 0.480 | 10,7 ÷ 12,1 | MG-1207 | MR-4 | MM-53 | |
| 5/8" (15,8) | 12 | 0.109 | 2,76 | 0.407 | 10,3 | 0.392 ÷ 0.447 | 9,9 ÷ 11,3 | MG-1205 | MR-3 | MM-52 | 3/8" (9,5) |
| | 13 | 0.095 | 2,41 | 0.435 | 11,0 | 0.425 ÷ 0.480 | 10,8 ÷ 12,1 | MG-1207 | MR-4 | MM-53 | |
| | 14 | 0.083 | 2,10 | 0.459 | 11,6 | 0.449 ÷ 0.509 | 11,4 ÷ 12,9 | MG-1209 | MR-4 | MM-54 | |
| | 15 | 0.072 | 1,82 | 0.481 | 12,2 | 0.471 ÷ 0.536 | 11,9 ÷ 13,6 | MG-1211 | MR-5 | MM-55 | |
| | 16 | 0.065 | 1,65 | 0.495 | 12,5 | 0.485 ÷ 0.550 | 12,3 ÷ 13,9 | MG-1213 | MR-6 | MM-55 | |
| | 17 | 0.058 | 1,47 | 0.509 | 12,9 | 0.499 ÷ 0.564 | 12,6 ÷ 14,3 | MG-1215 | MR-6 | MM-56 | |
| | 18 | 0.049 | 1,24 | 0.527 | 13,3 | 0.517 ÷ 0.572 | 13,1 ÷ 14,5 | MG-1217 | MR-7 | MM-57 | |
| | 19 | 0.042 | 1,06 | 0.541 | 13,7 | 0.522 ÷ 0.582 | 13,2 ÷ 14,5 | MG-1219 | MR-7 | MM-56 | |
| | 20 | 0.035 | 0,88 | 0.555 | 14,1 | | | | | | |
| | 21 | 0.032 | 0,81 | 0.561 | 14,2 | 0.536 ÷ 0.596 | 13,6 ÷ 15,1 | MG-1219-SP | MR-7 | MM-58 | |
| 22 | 0.028 | 0,71 | 0.569 | 14,4 | | | | | | | |

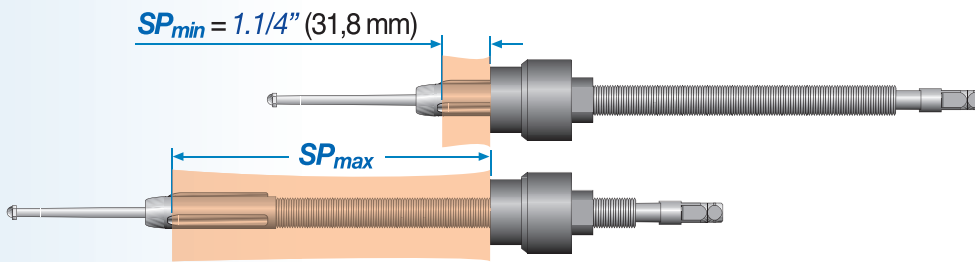
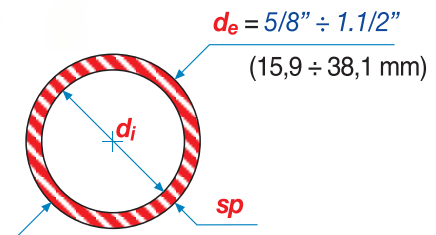
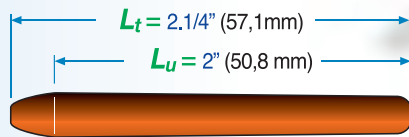


| <i>d_e</i> inches mm | Tube | | | | Expansion | | Tube expander | Rolls | Mandrel | inches mm | |
|--------------------------------------|--------|--------------------------------|-------|--------------------------------|-----------|---------------|---------------|----------------|---------|--------------|---------------|
| | B.W.G. | <i>s_p</i> inches | mm | <i>d_i</i> inches | mm | inches | mm | Cod. | Cod. | | Cod. |
| 3/4" (19,0) | 10 | 0.134 | 3,40 | 0.482 | 12,2 | 0.471 ÷ 0.536 | 11,9 ÷ 13,6 | MG-1211 | MR-5 | MM-55 | 3/8" (9,5) |
| | 11 | 0.120 | 3,04 | 0.510 | 12,9 | 0.499 ÷ 0.564 | 12,6 ÷ 14,3 | MG-1215 | MR-6 | MM-56 | |
| | 12 | 0.109 | 2,76 | 0.532 | 13,5 | 0.422 ÷ 0.582 | 13,2 ÷ 14,7 | MG-1219 | MR-7 | MM-56 | |
| | 13 | 0.095 | 2,41 | 0.560 | 14,2 | 0.550 ÷ 0.615 | 13,9 ÷ 15,6 | MG-1221 | MR-8 | MM-58 | |
| | 14 | 0.083 | 2,10 | 0.584 | 14,8 | 0.574 ÷ 0.639 | 14,5 ÷ 16,2 | MG-1223 | MR-9 | | |
| | 15 | 0.072 | 1,82 | 0.606 | 15,3 | 0.596 ÷ 0.661 | 15,1 ÷ 16,7 | MG-1225 | MR-10 | MM-59 | |
| | 16 | 0.065 | 1,65 | 0.620 | 15,7 | 0.605 ÷ 0.685 | 15,3 ÷ 17,4 | MG-1227 | MR-10 | | |
| | 17 | 0.058 | 1,47 | 0.634 | 16,1 | 0.619 ÷ 0.699 | 15,7 ÷ 17,7 | MG-1229 | MR-11 | MM-59 | |
| | 18 | 0.049 | 1,24 | 0.652 | 16,5 | | | | | | |
| | 19 | 0.042 | 1,06 | 0.666 | 16,9 | 0.642 ÷ 0.722 | 16,3 ÷ 18,3 | MG-1231 | MR-12 | MM-59 | |
| | 20 | 0.035 | 0,88 | 0.680 | 17,2 | | | | | | |
| | 21 | 0.032 | 0,81 | 0.686 | 17,4 | | | | | | |
| 22 | 0.028 | 0,71 | 0.694 | 17,6 | | | | | | | |
| 7/8" (22,2) | 10 | 0.134 | 3,40 | 0.607 | 15,4 | 0.596 ÷ 0.661 | 15,1 ÷ 16,7 | MG-1225 | MR-10 | MM-58 | 3/8" (9,5) |
| | 11 | 0.120 | 3,04 | 0.635 | 16,1 | 0.619 ÷ 0.699 | 15,7 ÷ 17,7 | MG-1229 | MR-11 | MM-59 | |
| | 12 | 0.109 | 2,76 | 0.657 | 16,6 | 0.642 ÷ 0.722 | 16,3 ÷ 18,3 | MG-1231 | MR-12 | MM-59 | |
| | 13 | 0.095 | 2,41 | 0.685 | 17,4 | 0.670 ÷ 0.750 | 17,0 ÷ 19,0 | MG-1233 | MR-13 | MM-60 | |
| | 14 | 0.083 | 2,10 | 0.709 | 18,0 | 0.685 ÷ 0.774 | 17,4 ÷ 19,6 | MG-1235 | MR-14 | MM-61 | |
| | 15 | 0.072 | 1,82 | 0.731 | 18,5 | 0.712 ÷ 0.801 | 18,0 ÷ 20,3 | MG-1237 | MR-15 | MM-62 | |
| | 16 | 0.065 | 1,65 | 0.745 | 18,9 | 0.726 ÷ 0.815 | 18,4 ÷ 20,7 | MG-1239 | MR-15 | | |
| | 17 | 0.058 | 1,47 | 0.759 | 19,2 | 0.740 ÷ 0.829 | 18,8 ÷ 21,0 | MG-1243 | MR-16 | MM-62 | |
| | 18 | 0.049 | 1,24 | 0.777 | 19,7 | | | | | | |
| 1" (25,4) | 8 | 0.165 | 4,19 | 0.670 | 17,0 | 0.665 ÷ 0.735 | 16,8 ÷ 18,6 | MG-1241 | MR-13 | MM-59 | 3/8" (9,5) |
| | 9 | 0.148 | 3,75 | 0.704 | 17,8 | 0.685 ÷ 0.774 | 17,4 ÷ 19,6 | MG-1235 | MR-14 | MM-61 | |
| | 10 | 0.134 | 3,40 | 0.732 | 18,5 | 0.712 ÷ 0.801 | 18,0 ÷ 20,3 | MG-1237 | MR-15 | MM-61 | |
| | 11 | 0.120 | 3,04 | 0.760 | 19,3 | 0.740 ÷ 0.829 | 18,8 ÷ 21,0 | MG-1243 | MR-16 | MM-62 | |
| | 12 | 0.109 | 2,76 | 0.782 | 19,8 | 0.763 ÷ 0.852 | 19,3 ÷ 21,6 | MG-1245 | MR-17 | | |
| | 13 | 0.095 | 2,41 | 0.810 | 20,5 | 0.791 ÷ 0.880 | 20,0 ÷ 22,3 | MG-1247 | MR-18 | MM-63 | |
| | 14 | 0.083 | 2,10 | 0.834 | 21,1 | 0.810 ÷ 0.909 | 20,5 ÷ 23,0 | MG-1249 | MR-18 | | |
| | 15 | 0.072 | 1,82 | 0.856 | 21,7 | 0.837 ÷ 0.936 | 21,2 ÷ 23,7 | MG-1251 | MR-19 | MM-63 | |
| | 16 | 0.065 | 1,65 | 0.870 | 22,1 | | | | | | |
| | 17 | 0.058 | 1,47 | 0.884 | 22,4 | 0.865 ÷ 0.964 | 21,9 ÷ 24,4 | MG-1255 | MR-21 | MM-63 | |
| | 18 | 0.049 | 1,24 | 0.902 | 22,9 | | | | | | |
| | 19 | 0.042 | 1,06 | 0.916 | 23,2 | | | | | | |
| 20 | 0.035 | 0,88 | 0.930 | 23,6 | | | | | | | |

| de inches mm | Tube | | | | Expansion | | Tube expander | Rolls | Mandrel | inches mm | |
|---------------------------|-------------------------|-----------|-------|-----------|------------------|---------------|----------------------|----------------|----------------|------------------|----------------|
| | B.W.G. | sp | | di | | inches | mm | Cod. | Cod. | | Cod. |
| 1.1/8" (28,5) | 8 | 0.165 | 4,19 | 0.795 | 20,1 | 0.776 ÷ 0.875 | 19,7 ÷ 22,2 | MG-1253 | MR-20 | MM-63 | 3/8" (9,5) |
| | 9 | 0.148 | 3,75 | 0.829 | 21,0 | 0.810 ÷ 0.909 | 20,5 ÷ 23,0 | MG-1249 | MR-18 | | |
| | 10 | 0.134 | 3,40 | 0.857 | 21,7 | 0.837 ÷ 0.936 | 21,2 ÷ 23,7 | MG-1251 | MR-19 | | |
| | 11 | 0.120 | 3,04 | 0.885 | 22,4 | 0.865 ÷ 0.964 | 21,9 ÷ 24,4 | MG-1255 | MR-21 | MM-64 | |
| | 12 | 0.109 | 2,76 | 0.907 | 23,0 | 0.883 ÷ 0.982 | 22,4 ÷ 24,9 | MG-1257 | MR-21 | | |
| | 13 | 0.095 | 2,41 | 0.935 | 23,7 | 0.916 ÷ 1.015 | 23,2 ÷ 25,7 | MG-1259 | MR-22 | MM-65 | 1/2" (12,7) |
| | 14 | 0.083 | 2,10 | 0.959 | 24,3 | 0.935 ÷ 1.044 | 23,7 ÷ 26,4 | MG-1261 | MR-23 | | |
| | 15 | 0.072 | 1,82 | 0.981 | 24,9 | 0.962 ÷ 1.071 | 24,4 ÷ 27,2 | MG-1263 | MR-24 | MM-66 | |
| | 16 | 0.065 | 1,65 | 0.995 | 25,2 | | | | | | |
| | 17 | 0.058 | 1,47 | 1.009 | 25,6 | 0.990 ÷ 1.099 | 25,1 ÷ 27,9 | MG-1267 | MR-26 | | |
| 18 | 0.049 | 1,24 | 1.027 | 26,0 | | | | | | | |
| 1.1/4" (31,8) | 8 | 0.165 | 4,19 | 0.920 | 23,3 | 0.901 ÷ 1.010 | 22,8 ÷ 25,6 | MG-1265 | MR-25 | MM-65 | 1/2" (12,7) |
| | 9 | 0.148 | 3,75 | 0.954 | 24,2 | 0.935 ÷ 1.044 | 23,7 ÷ 26,5 | MG-1261 | MR-23 | | |
| | 10 | 0.134 | 3,40 | 0.982 | 24,9 | 0.962 ÷ 1.071 | 24,4 ÷ 27,2 | MG-1263 | MR-24 | | |
| | 11 | 0.120 | 3,04 | 1.010 | 25,6 | 0.990 ÷ 1.099 | 25,1 ÷ 27,9 | MG-1267 | MR-26 | MM-66 | |
| | 12 | 0.109 | 2,76 | 1.032 | 26,2 | 1.013 ÷ 1.122 | 25,7 ÷ 28,5 | MG-1269 | MR-27 | | |
| | 13 | 0.095 | 2,41 | 1.060 | 26,9 | 1.041 ÷ 1.150 | 26,4 ÷ 29,2 | MG-1271 | MR-28 | MM-67 | |
| | 14 | 0.083 | 2,10 | 1.084 | 27,5 | 1.060 ÷ 1.169 | 26,9 ÷ 29,6 | MG-1273 | MR-29 | | |
| | 15 | 0.072 | 1,82 | 1.106 | 28,0 | 1.087 ÷ 1.196 | 27,6 ÷ 30,3 | MG-1275 | MR-30 | MM-67 | |
| | 16 | 0.065 | 1,65 | 1.120 | 28,4 | | | | | | |
| | 17 | 0.058 | 1,47 | 1.134 | 28,8 | 1.115 ÷ 1.224 | 28,3 ÷ 31,0 | MG-1279 | MR-30 | MM-68 | |
| 18 | 0.049 | 1,24 | 1.152 | 29,2 | | | | | | | |
| 1.3/8" (34,9) | 8 | 0.165 | 4,19 | 1.045 | 26,5 | 1.026 ÷ 1.135 | 26,0 ÷ 28,8 | MG-1277 | MR-31 | MM-67 | 1/2" (12,7) |
| | 9 | 0.148 | 3,75 | 1.079 | 27,4 | 1.060 ÷ 1.169 | 26,9 ÷ 29,6 | MG-1273 | MR-29 | | |
| | 10 | 0.134 | 3,40 | 1.107 | 28,1 | 1.087 ÷ 1.196 | 27,6 ÷ 30,3 | MG-1275 | MR-30 | | |
| | 11 | 0.120 | 3,04 | 1.135 | 28,8 | 1.115 ÷ 1.224 | 28,3 ÷ 31,0 | MG-1279 | MR-30 | MM-68 | |
| | 12 | 0.109 | 2,76 | 1.157 | 29,3 | 1.133 ÷ 1.242 | 28,7 ÷ 31,5 | MG-1281 | MR-32 | | |
| | 13 | 0.095 | 2,41 | 1.185 | 30,1 | 1.160 ÷ 1.275 | 29,4 ÷ 32,3 | MG-1283 | MR-33 | MM-69 | |
| | 14 | 0.083 | 2,10 | 1.209 | 30,7 | 1.179 ÷ 1.294 | 29,9 ÷ 32,8 | MG-1285 | MR-34 | | |
| | 15 | 0.072 | 1,82 | 1.231 | 31,2 | 1.206 ÷ 1.321 | 30,6 ÷ 33,5 | MG-1287 | MR-35 | MM-70 | |
| | 16 | 0.065 | 1,65 | 1.245 | 31,6 | | | | | | |
| | 1.1/2" (38,1) | 8 | 0.165 | 4,19 | 1.170 | 29,7 | 1.145 ÷ 1.260 | 29,0 ÷ 32,0 | MG-1289 | MR-34 | MM-69 |
| 9 | | 0.148 | 3,75 | 1.204 | 30,5 | 1.179 ÷ 1.294 | 29,9 ÷ 32,8 | MG-1285 | MR-34 | | |
| 10 | | 0.134 | 3,40 | 1.232 | 31,2 | 1.206 ÷ 1.321 | 30,6 ÷ 35,5 | MG-1287 | MR-35 | | |
| 11 | | 0.120 | 3,04 | 1.260 | 32,0 | 1.235 ÷ 1.350 | 31,3 ÷ 34,2 | MG-1291 | MR-36 | MM-70 | |
| 12 | | 0.109 | 2,76 | 1.282 | 32,5 | 1.257 ÷ 1.372 | 31,9 ÷ 34,8 | MG-1293 | MR-37 | | |
| 13 | | 0.095 | 2,41 | 1.310 | 33,2 | 1.285 ÷ 1.400 | 32,6 ÷ 35,5 | MG-1295 | MR-37 | MM-71 | |
| 14 | | 0.083 | 2,11 | 1.334 | 33,9 | | | | | | |
| 15 | | 0.072 | 1,82 | 1.356 | 34,4 | 1.331 ÷ 1.446 | 33,8 ÷ 36,7 | MG-1297 | MR-38 | MM-72 | |
| 16 | | 0.065 | 1,65 | 1.370 | 34,8 | | | | | | |
| 17 | | 0.058 | 1,47 | 1.384 | 35,1 | | | | | | |
| 18 | 0.049 | 1,24 | 1.402 | 35,6 | 1.331 ÷ 1.472 | 33,8 ÷ 37,3 | MG-1299 | MR-38 | | | |
| 19 | 0.042 | 1,06 | 1.416 | 35,9 | | | | | | | |
| 20 | 0.035 | 0,88 | 1.430 | 36,3 | | | | | | | |

Tube expanders with adjustable reach For thick tube-sheets

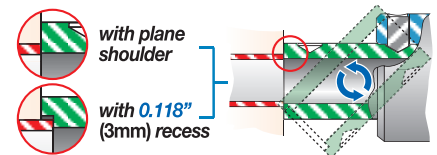
MG/1200 With 2.1/4" long rolls



Sample code for ordering tube expanders
 $d_e 1'' - 14\text{ B.W.G.}$

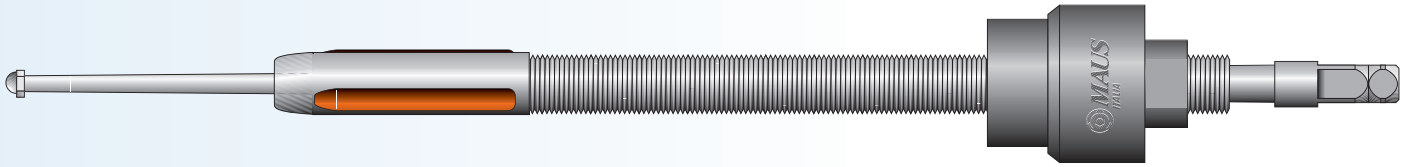
New reversible thrust collar design

- Standard reach $STD\ SP_{max} = 5.3/4'' (146,0\text{ mm})$ ↔ **MG/1250**
- Extra reach
- B** $SP_{max} = 9.3/4'' (247,6\text{ mm})$ ↔ **MG/1250-B**
 - C** $SP_{max} = 11.3/4'' (298,4\text{ mm})$ ↔ **MG/1250-C**




| d_e inches mm | Tube | | sp | | d_i | | Expansion | | Tube expander | Rolls | Mandrel | $\frac{\square}{\square}$ inches mm |
|-----------------------|--------|--------|------|--------|-------|---------------|-------------|-------------------|---------------|-------|---------------|---|
| | B.W.G. | inches | mm | inches | mm | inches | mm | Cod. | Cod. | Cod. | | |
| 5/8" (15,8) | 14 | 0.083 | 2,10 | 0.459 | 11,6 | 0.449 ÷ 0.509 | 11,4 ÷ 12,9 | MG-1210 | MR-4-A | MM-54 | 3/8" (9,5) | |
| | 15 | 0.072 | 1,82 | 0.481 | 12,2 | 0.471 ÷ 0.536 | 11,9 ÷ 13,6 | MG-1212 | MR-5-A | MM-55 | | |
| | 16 | 0.065 | 1,65 | 0.495 | 12,5 | 0.485 ÷ 0.550 | 12,3 ÷ 13,9 | MG-1214 | MR-6-A | MM-55 | | |
| | 17 | 0.058 | 1,47 | 0.509 | 12,9 | 0.499 ÷ 0.564 | 12,6 ÷ 14,3 | MG-1216 | MR-6-A | MM-56 | | |
| | 18 | 0.049 | 1,24 | 0.527 | 13,3 | 0.517 ÷ 0.572 | 13,1 ÷ 14,5 | MG-1218 | MR-7-A | MM-57 | | |
| | 19 | 0.042 | 1,06 | 0.541 | 13,7 | 0.522 ÷ 0.582 | 13,2 ÷ 14,7 | MG-1220 | MR-7-A | MM-56 | | |
| | 20 | 0.035 | 0,88 | 0.555 | 14,1 | | | | | | | |
| | 21 | 0.032 | 0,81 | 0.561 | 14,2 | 0.536 ÷ 0.596 | 13,6 ÷ 15,1 | MG-1220-SP | MR-7-A | MM-58 | | |
| | 22 | 0.028 | 0,71 | 0.569 | 14,4 | | | | | | | |

MG/1200 With 2.1/4" long rolls



| d_e inches mm | Tube | | | | Expansion | | Tube expander | Rolls | Mandrel | \varnothing inches mm | |
|-----------------------|--------|--------------|-------|-----------------|-----------|---------------|---------------|----------------|---------|-------------------------------|---------------|
| | B.W.G. | sp inches | mm | d_i inches | mm | inches | mm | Cod. | Cod. | | Cod. |
| 3/4" (19,0) | 10 | 0.134 | 3,40 | 0.482 | 12,2 | 0.471 ÷ 0.536 | 11,9 ÷ 13,6 | MG-1212 | MR-5-A | MM-55 | 3/8" (9,5) |
| | 11 | 0.120 | 3,04 | 0.510 | 12,9 | 0.499 ÷ 0.564 | 12,6 ÷ 14,3 | MG-1216 | MR-6-A | MM-56 | |
| | 12 | 0.109 | 2,76 | 0.532 | 13,5 | 0.522 ÷ 0.582 | 13,2 ÷ 14,7 | MG-1220 | MR-7-A | MM-56 | |
| | 13 | 0.095 | 2,41 | 0.560 | 14,2 | 0.550 ÷ 0.615 | 13,9 ÷ 15,6 | MG-1222 | MR-8-A | MM-58 | |
| | 14 | 0.083 | 2,10 | 0.584 | 14,8 | 0.574 ÷ 0.639 | 14,5 ÷ 16,2 | MG-1224 | MR-9-A | | |
| | 15 | 0.072 | 1,82 | 0.606 | 15,3 | 0.596 ÷ 0.661 | 15,1 ÷ 16,7 | MG-1226 | MR-10-A | MM-59 | |
| | 16 | 0.065 | 1,65 | 0.620 | 15,7 | 0.605 ÷ 0.685 | 15,3 ÷ 17,4 | MG-1228 | MR-10-A | | |
| | 17 | 0.058 | 1,47 | 0.634 | 16,1 | 0.619 ÷ 0.699 | 15,7 ÷ 17,7 | MG-1230 | MR-11-A | MM-59 | |
| | 18 | 0.049 | 1,24 | 0.652 | 16,5 | | | | | | |
| | 19 | 0.042 | 1,06 | 0.666 | 16,9 | 0.642 ÷ 0.722 | 16,3 ÷ 18,3 | MG-1232 | MR-12-A | MM-59 | |
| | 20 | 0.035 | 0,88 | 0.680 | 17,2 | | | | | | |
| | 21 | 0.032 | 0,81 | 0.686 | 17,4 | | | | | | |
| 22 | 0.028 | 0,71 | 0.694 | 17,6 | | | | | | | |
| 7/8" (22,2) | 10 | 0.134 | 3,40 | 0.607 | 15,4 | 0.596 ÷ 0.661 | 15,1 ÷ 16,7 | MG-1226 | MR-10-A | MM-58 | 3/8" (9,5) |
| | 11 | 0.120 | 3,04 | 0.635 | 16,1 | 0.619 ÷ 0.699 | 15,7 ÷ 17,7 | MG-1230 | MR-11-A | MM-59 | |
| | 12 | 0.109 | 2,76 | 0.657 | 16,6 | 0.642 ÷ 0.722 | 16,3 ÷ 18,3 | MG-1232 | MR-12-A | MM-60 | |
| | 13 | 0.095 | 2,41 | 0.685 | 17,4 | 0.670 ÷ 0.750 | 17,0 ÷ 19,0 | MG-1234 | MR-13-A | MM-61 | |
| | 14 | 0.083 | 2,10 | 0.709 | 18,0 | 0.685 ÷ 0.774 | 17,4 ÷ 19,6 | MG-1236 | MR-14-A | MM-62 | |
| | 15 | 0.072 | 1,82 | 0.731 | 18,5 | 0.712 ÷ 0.801 | 18,0 ÷ 20,3 | MG-1238 | MR-15-A | | |
| | 16 | 0.065 | 1,65 | 0.745 | 18,9 | 0.726 ÷ 0.815 | 18,4 ÷ 20,7 | MG-1240 | MR-15-A | MM-62 | |
| | 17 | 0.058 | 1,47 | 0.759 | 19,2 | 0.740 ÷ 0.829 | 18,8 ÷ 21,0 | MG-1244 | MR-16-A | | |
| 18 | 0.049 | 1,24 | 0.777 | 19,7 | | | | | | | |
| 1" (25,4) | 8 | 0.165 | 4,19 | 0.670 | 17,0 | 0.665 ÷ 0.735 | 16,8 ÷ 18,6 | MG-1242 | MR-13-A | MM-59 | 3/8" (9,5) |
| | 9 | 0.148 | 3,75 | 0.704 | 17,8 | 0.685 ÷ 0.774 | 17,4 ÷ 19,6 | MG-1236 | MR-14-A | MM-61 | |
| | 10 | 0.134 | 3,40 | 0.732 | 18,5 | 0.712 ÷ 0.801 | 18,0 ÷ 20,3 | MG-1238 | MR-15-A | | |
| | 11 | 0.120 | 3,04 | 0.760 | 19,3 | 0.740 ÷ 0.829 | 18,8 ÷ 21,0 | MG-1244 | MR-16-A | MM-62 | |
| | 12 | 0.109 | 2,76 | 0.782 | 19,8 | 0.763 ÷ 0.852 | 19,3 ÷ 21,6 | MG-1246 | MR-17-A | | |
| | 13 | 0.095 | 2,41 | 0.810 | 20,5 | 0.791 ÷ 0.880 | 20,0 ÷ 22,3 | MG-1248 | MR-18-A | MM-63 | |
| | 14 | 0.083 | 2,10 | 0.834 | 21,1 | 0.810 ÷ 0.909 | 20,5 ÷ 23,0 | MG-1250 | MR-18-A | | |
| | 15 | 0.072 | 1,82 | 0.856 | 21,7 | 0.837 ÷ 0.936 | 21,2 ÷ 23,7 | MG-1252 | MR-19-A | MM-63 | |
| | 16 | 0.065 | 1,65 | 0.870 | 22,1 | | | | | | |
| | 17 | 0.058 | 1,47 | 0.884 | 22,4 | 0.865 ÷ 0.964 | 21,9 ÷ 24,4 | MG-1256 | MR-21-A | MM-63 | |
| | 18 | 0.049 | 1,24 | 0.902 | 22,9 | | | | | | |
| | 19 | 0.042 | 1,06 | 0.916 | 23,2 | | | | | | |
| 20 | 0.035 | 0,88 | 0.930 | 23,6 | | | | | | | |

| de <small>inches mm</small> | Tube | | | | | Expansion | | Tube expander | Rolls | Mandrel |  <small>inches mm</small> |
|---|--------------------------------|---------------------------------------|-------|---------------------------------------|-------|-----------------------|-------------------|----------------------|----------------|----------------|---|
| | B.W.G. | sp <small>inches mm</small> | | dj <small>inches mm</small> | | <small>inches</small> | <small>mm</small> | Cod. | Cod. | Cod. | |
| 1.1/8" (28,5) | 8 | 0.165 | 4,19 | 0.795 | 20,1 | 0.776 ÷ 0.875 | 19,7 ÷ 22,2 | MG-1254 | MR-20-A | MM-63 | 3/8" (9,5) |
| | 9 | 0.148 | 3,75 | 0.829 | 21,0 | 0.810 ÷ 0.909 | 20,5 ÷ 23,0 | MG-1250 | MR-18-A | | |
| | 10 | 0.134 | 3,40 | 0.857 | 21,7 | 0.837 ÷ 0.936 | 21,2 ÷ 23,7 | MG-1252 | MR-19-A | | |
| | 11 | 0.120 | 3,04 | 0.885 | 22,4 | 0.865 ÷ 0.964 | 21,9 ÷ 24,4 | MG-1256 | MR-21-A | MM-64 | |
| | 12 | 0.109 | 2,76 | 0.907 | 23,0 | 0.883 ÷ 0.982 | 22,4 ÷ 24,9 | MG-1258 | MR-21-A | | |
| | 13 | 0.095 | 2,41 | 0.935 | 23,7 | 0.916 ÷ 1.015 | 23,2 ÷ 25,7 | MG-1260 | MR-22-A | MM-65 | 1/2" (12,7) |
| | 14 | 0.083 | 2,10 | 0.959 | 24,3 | 0.935 ÷ 1.044 | 23,7 ÷ 26,4 | MG-1262 | MR-23-A | | |
| | 15 | 0.072 | 1,82 | 0.981 | 24,9 | 0.962 ÷ 1.071 | 24,4 ÷ 27,2 | MG-1264 | MR-24-A | MM-65 | |
| | 16 | 0.065 | 1,65 | 0.995 | 25,2 | | | | | | |
| | 17 | 0.058 | 1,47 | 1.009 | 25,6 | 0.990 ÷ 1.099 | 25,1 ÷ 27,9 | MG-1268 | MR-26-A | MM-66 | |
| 18 | 0.049 | 1,24 | 1.027 | 26,0 | | | | | | | |
| 1.1/4" (31,8) | 8 | 0.165 | 4,19 | 0.920 | 23,3 | 0.901 ÷ 1.010 | 22,8 ÷ 25,6 | MG-1266 | MR-25-A | MM-65 | 1/2" (12,7) |
| | 9 | 0.148 | 3,75 | 0.954 | 24,2 | 0.935 ÷ 1.044 | 23,7 ÷ 26,5 | MG-1262 | MR-23-A | | |
| | 10 | 0.134 | 3,40 | 0.982 | 24,8 | 0.962 ÷ 1.071 | 24,4 ÷ 27,2 | MG-1264 | MR-24-A | | |
| | 11 | 0.120 | 3,04 | 1.010 | 25,6 | 0.990 ÷ 1.099 | 25,1 ÷ 27,9 | MG-1268 | MR-26-A | MM-66 | |
| | 12 | 0.109 | 2,76 | 1.032 | 26,2 | 1.013 ÷ 1.122 | 25,7 ÷ 28,5 | MG-1270 | MR-27-A | | |
| | 13 | 0.095 | 2,41 | 1.060 | 26,9 | 1.041 ÷ 1.150 | 26,4 ÷ 29,2 | MG-1272 | MR-28-A | MM-67 | |
| | 14 | 0.083 | 2,10 | 1.084 | 27,5 | 1.060 ÷ 1.169 | 26,9 ÷ 29,6 | MG-1274 | MR-29-A | | |
| | 15 | 0.072 | 1,82 | 1.106 | 28,0 | 1.087 ÷ 1.196 | 27,6 ÷ 30,3 | MG-1276 | MR-30-A | MM-67 | |
| | 16 | 0.065 | 1,65 | 1.120 | 28,4 | | | | | | |
| | 17 | 0.058 | 1,47 | 1.134 | 28,8 | 1.115 ÷ 1.224 | 28,3 ÷ 31,0 | MG-1280 | MR-30-A | MM-68 | |
| 18 | 0.049 | 1,24 | 1.152 | 29,2 | | | | | | | |
| 1.3/8" (34,9) | 8 | 0.165 | 4,19 | 1.045 | 26,5 | 1.026 ÷ 1.135 | 26,0 ÷ 28,8 | MG-1278 | MR-31-A | MM-67 | 1/2" (12,7) |
| | 9 | 0.148 | 3,75 | 1.079 | 27,4 | 1.060 ÷ 1.169 | 26,9 ÷ 29,6 | MG-1274 | MR-29-A | | |
| | 10 | 0.134 | 3,40 | 1.107 | 28,1 | 1.087 ÷ 1.196 | 27,6 ÷ 30,3 | MG-1276 | MR-30-A | | |
| | 11 | 0.120 | 3,04 | 1.135 | 28,8 | 1.115 ÷ 1.224 | 28,3 ÷ 31,0 | MG-1280 | MR-30-A | MM-68 | |
| | 12 | 0.109 | 2,76 | 1.157 | 29,3 | 1.133 ÷ 1.242 | 28,7 ÷ 31,5 | MG-1282 | MR-32-A | | |
| | 13 | 0.095 | 2,41 | 1.185 | 30,1 | 1.160 ÷ 1.275 | 29,4 ÷ 32,3 | MG-1284 | MR-33-A | MM-69 | |
| | 14 | 0.083 | 2,10 | 1.209 | 30,7 | 1.179 ÷ 1.294 | 29,9 ÷ 32,8 | MG-1286 | MR-34-A | | |
| | 15 | 0.072 | 1,82 | 1.231 | 31,2 | 1.206 ÷ 1.321 | 30,6 ÷ 33,5 | MG-1288 | MR-35-A | MM-70 | |
| | 16 | 0.065 | 1,65 | 1.245 | 31,6 | | | | | | |
| | 1.1/2" (38,1) | 8 | 0.165 | 4,19 | 1.170 | 29,7 | 1.145 ÷ 1.260 | 29,0 ÷ 32,0 | MG-1290 | MR-34-A | MM-69 |
| 9 | | 0.148 | 3,75 | 1.204 | 30,5 | 1.179 ÷ 1.294 | 29,9 ÷ 32,8 | MG-1286 | MR-34-A | | |
| 10 | | 0.134 | 3,40 | 1.232 | 31,2 | 1.206 ÷ 1.321 | 30,6 ÷ 35,5 | MG-1288 | MR-35-A | | |
| 11 | | 0.120 | 3,04 | 1.260 | 32,0 | 1.235 ÷ 1.350 | 31,3 ÷ 34,2 | MG-1292 | MR-36-A | MM-70 | |
| 12 | | 0.109 | 2,76 | 1.282 | 32,5 | 1.257 ÷ 1.372 | 31,9 ÷ 34,8 | MG-1294 | MR-37-A | | |
| 13 | | 0.095 | 2,41 | 1.310 | 33,2 | 1.285 ÷ 1.400 | 32,6 ÷ 35,5 | MG-1296 | MR-37-A | MM-71 | |
| 14 | | 0.083 | 2,11 | 1.334 | 33,9 | | | | | | |
| 15 | | 0.072 | 1,82 | 1.356 | 34,4 | 1.331 ÷ 1.446 | 33,8 ÷ 36,7 | MG-1298 | MR-38-A | | |
| 16 | | 0.065 | 1,65 | 1.370 | 34,8 | | | | | | |
| 17 | | 0.058 | 1,47 | 1.384 | 35,1 | 1.331 ÷ 1.472 | 33,8 ÷ 37,3 | MG-1300 | MR-38-A | MM-72 | |
| 18 | 0.049 | 1,24 | 1.402 | 35,6 | | | | | | | |
| 19 | 0.042 | 1,06 | 1.416 | 35,9 | | | | | | | |
| 20 | 0.035 | 0,88 | 1.430 | 36,3 | | | | | | | |