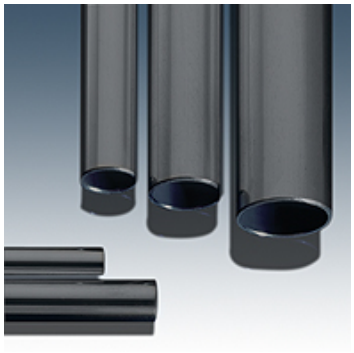
# PR (M)

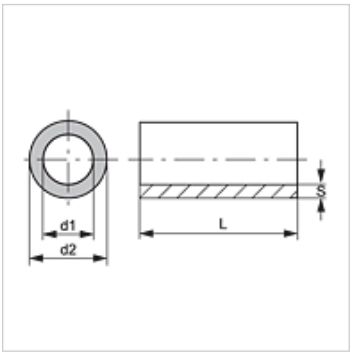
Metric precision steel pipe, EN 10305-4, E235+N

HANSA-FLEX

## Properties

| | |
|---|---|
| **Design** | Precision steel pipe, metric |
| **Standard** | DIN EN 10305-4 |
| **Material** | Steel ST 37.4 NBK (1.0255) |
| **Surface** | phosphate treated and oiled |
| **Pipe length** | 6 m |






## Note

The pressure figures are based on straight pipes.
The appropriate wall thickness needs to be calculated for pipes with bends as stipulated in DIN EN 13480-4.

## Additional information

Calculation as in DIN 2413 (draft)
Specific load I: static (up to 100 °C)
Specific load III: dynamic (up to 200 °C) stress range = P bar
Strength parameter: K 235 [N/mm2]
Safety coefficient: S 1.5
Fatigue strength: σSch/D 225 [N/mm2]
Tolerance: DIN 10305-4

## Item

| Identification | Ø d2 (mm) | AD tolerance +/- (mm) | Ø d1 (mm) | ID tolerance +/- (mm) | S (mm) | Specific load I (bar) | Specific load III (bar) |
|---|---|---|---|---|---|---|---|
| **PR 60-8** | 60,0 | - | 44,0 | - | 8,00 | - | - |
| **PR 18-4** | 18,0 | 0,08 | 10,0 | 0,15 | 4,00 | - | - |
| **PR 04-0.5** | 4,0 | 0,08 | 3,0 | 0,15 | 0,50 | 210 | 189 |
| **PR 04-0.75** | 4,0 | 0,08 | 2,5 | 0,15 | 0,75 | 405 | 345 |
| **PR 04-1** | 4,0 | 0,08 | 2,0 | 0,15 | 1,00 | 602 | 484 |
| **PR 05-0.75** | 5,0 | 0,08 | 3,5 | 0,15 | 0,75 | 325 | 282 |
| **PR 05-1** | 5,0 | 0,08 | 3,0 | 0,15 | 1,00 | 482 | 400 |
| **PR 06-0.75** | 6,0 | 0,08 | 4,5 | 0,12 | 0,75 | 286 | 251 |
| **PR 06-1** | 6,0 | 0,08 | 4,0 | 0,12 | 1,00 | 416 | 352 |
| **PR 06-1.5** | 6,0 | 0,08 | 3,0 | 0,15 | 1,50 | 663 | 524 |
| **PR 06-2** | 6,0 | 0,08 | 2,0 | 0,15 | 2,00 | 924 | 683 |
| **PR 06-2.25** | 6,0 | 0,08 | 1,5 | 0,15 | 2,25 | 1053 | 755 |
| **PR 08-1** | 8,0 | 0,08 | 6,0 | 0,10 | 1,00 | 320 | 278 |
| **PR 08-1.5** | 8,0 | 0,08 | 5,0 | 0,10 | 1,50 | 516 | 424 |
| **PR 08-2** | 8,0 | 0,08 | 4,0 | 0,15 | 2,00 | 693 | 543 |
| **PR 08-2.5** | 8,0 | 0,08 | 3,0 | 0,15 | 2,50 | 888 | 663 |
| **PR 10-1** | 10,0 | 0,08 | 8,0 | 0,08 | 1,00 | 263 | 232 |
| **PR 10-1.5** | 10,0 | 0,08 | 7,0 | 0,12 | 1,50 | 407 | 345 |
| **PR 10-2** | 10,0 | 0,08 | 6,0 | 0,15 | 2,00 | 554 | 451 |
| **PR 10-2.5** | 10,0 | 0,08 | 5,0 | 0,15 | 2,50 | 711 | 555 |
| **PR 10-3** | 10,0 | 0,08 | 4,0 | 0,15 | 3,00 | 867 | 650 |
| **PR 10-4** | 10,0 | 0,08 | 2,0 | 0,15 | 4,00 | 1178 | 820 |
| **PR 12-1** | 12,0 | 0,08 | 10,0 | 0,08 | 1,00 | 219 | 196 |
| **PR 12-1.5** | 12,0 | 0,08 | 9,0 | 0,10 | 1,50 | 344 | 297 |
| **PR 12-2** | 12,0 | 0,08 | 8,0 | 0,12 | 2,00 | 469 | 391 |
| **PR 12-2.5** | 12,0 | 0,08 | 7,0 | 0,15 | 2,50 | 592 | 477 |
| **PR 12-3** | 12,0 | 0,08 | 6,0 | 0,15 | 3,00 | 723 | 562 |
| **PR 12-4** | 12,0 | 0,08 | 4,0 | 0,15 | 4,00 | 984 | 717 |
| **PR 14-1** | 14,0 | 0,08 | 12,0 | 0,08 | 1,00 | 187 | 169 |
| **PR 14-1.5** | 14,0 | 0,08 | 11,0 | 0,08 | 1,50 | 299 | 262 |
| **PR 14-2** | 14,0 | 0,08 | 10,0 | 0,10 | 2,00 | 407 | 345 |
| **PR 14-2.5** | 14,0 | 0,08 | 9,0 | 0,12 | 2,50 | 514 | 423 |
| **PR 14-3** | 14,0 | 0,08 | 8,0 | 0,15 | 3,00 | 619 | 495 |
| **PR 14-3.5** | 14,0 | 0,08 | 7,0 | 0,15 | 3,50 | 731 | 568 |
| **PR 15-1** | 15,0 | 0,08 | 13,0 | 0,08 | 1,00 | 175 | 159 |

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# PR (M)

Metric precision steel pipe, EN 10305-4, E235+N

HANSA-FLEX

| Item | | | | | | | |
|---|---|---|---|---|---|---|---|
| Identification | Ø d2 (mm) | AD tolerance +/- (mm) | Ø d1 (mm) | ID tolerance +/- (mm) | S (mm) | Specific load I (bar) | Specific load III (bar) |
| **PR 15-1.5** | 15,0 | 0,08 | 12,0 | 0,08 | 1,50 | 279 | 246 |
| **PR 15-2** | 15,0 | 0,08 | 11,0 | 0,10 | 2,00 | 380 | 324 |
| **PR 15-2.5** | 15,0 | 0,08 | 10,0 | 0,12 | 2,50 | 480 | 398 |
| **PR 15-3** | 15,0 | 0,08 | 9,0 | 0,15 | 3,00 | 578 | 467 |
| **PR 16-1** | 16,0 | 0,08 | 14,0 | 0,08 | 1,00 | 164 | 149 |
| **PR 16-1.5** | 16,0 | 0,08 | 13,0 | 0,08 | 1,50 | 262 | 231 |
| **PR 16-2** | 16,0 | 0,08 | 12,0 | 0,15 | 2,00 | 346 | 298 |
| **PR 16-2.5** | 16,0 | 0,08 | 11,0 | 0,12 | 2,50 | 450 | 377 |
| **PR 16-3** | 16,0 | 0,08 | 10,0 | 0,15 | 3,00 | 542 | 442 |
| **PR 16-4** | 16,0 | 0,08 | 8,0 | 0,15 | 4,00 | 738 | 572 |
| **PR 17-2** | 17,0 | 0,08 | 13,0 | 0,15 | 2,00 | 325 | 281 |
| **PR 18-1** | 18,0 | 0,08 | 16,0 | 0,08 | 1,00 | 146 | 133 |
| **PR 18-1.5** | 18,0 | 0,08 | 15,0 | 0,08 | 1,50 | 233 | 207 |
| **PR 18-2** | 18,0 | 0,08 | 14,0 | 0,08 | 2,00 | 320 | 278 |
| **PR 18-2.5** | 18,0 | 0,08 | 13,0 | 0,15 | 2,50 | 395 | 335 |
| **PR 18-3** | 18,0 | 0,08 | 12,0 | 0,15 | 3,00 | 482 | 400 |
| **PR 20-1.5** | 20,0 | 0,08 | 17,0 | 0,08 | 1,50 | 209 | 188 |
| **PR 20-2** | 20,0 | 0,08 | 16,0 | 0,08 | 2,00 | 288 | 252 |
| **PR 20-2.5** | 20,0 | 0,08 | 15,0 | 0,15 | 2,50 | 355 | 305 |
| **PR 20-3** | 20,0 | 0,08 | 14,0 | 0,15 | 3,00 | 433 | 364 |
| **PR 20-3.5** | 20,0 | 0,08 | 13,0 | 0,15 | 3,50 | 512 | 421 |
| **PR 20-4** | 20,0 | 0,08 | 12,0 | 0,15 | 4,00 | 590 | 475 |
| **PR 22-1** | 22,0 | 0,08 | 20,0 | 0,08 | 1,00 | 119 | 109 |
| **PR 22-1.5** | 22,0 | 0,08 | 19,0 | 0,08 | 1,50 | 190 | 172 |
| **PR 22-2** | 22,0 | 0,08 | 18,0 | 0,08 | 2,00 | 262 | 231 |
| **PR 22-2.5** | 22,0 | 0,08 | 17,0 | 0,08 | 2,50 | 333 | 288 |
| **PR 22-3** | 22,0 | 0,08 | 16,0 | 0,15 | 3,00 | 394 | 335 |
| **PR 25-1** | 25,0 | 0,08 | 23,0 | 0,08 | 1,00 | 105 | 97 |
| **PR 25-1.5** | 25,0 | 0,08 | 20,0 | 0,08 | 1,50 | 167 | 152 |
| **PR 25-2** | 25,0 | 0,08 | 21,0 | 0,08 | 2,00 | 230 | 205 |
| **PR 25-2.5** | 25,0 | 0,08 | 20,0 | 0,08 | 2,50 | 293 | 256 |
| **PR 25-3** | 25,0 | 0,08 | 19,0 | 0,15 | 3,00 | 347 | 299 |
| **PR 25-3.5** | 25,0 | 0,08 | 18,0 | 0,15 | 3,50 | 409 | 347 |
| **PR 25-4** | 25,0 | 0,08 | 17,0 | 0,15 | 4,00 | 472 | 393 |
| **PR 25-4.5** | 25,0 | 0,08 | 16,0 | 0,15 | 4,50 | 535 | 437 |
| **PR 25-5** | 25,0 | 0,08 | 15,0 | 0,15 | 5,00 | 597 | 480 |
| **PR 28-1** | 28,0 | 0,08 | 26,0 | 0,08 | 1,00 | 93 | 87 |
| **PR 28-1.5** | 28,0 | 0,08 | 25,0 | 0,08 | 1,50 | 149 | 136 |
| **PR 28-2** | 28,0 | 0,08 | 24,0 | 0,08 | 2,00 | 205 | 184 |
| **PR 28-2.5** | 28,0 | 0,08 | 23,0 | 0,08 | 2,50 | 261 | 231 |
| **PR 28-3** | 28,0 | 0,08 | 20,0 | 0,15 | 3,00 | 309 | 270 |
| **PR 28-3.5** | 28,0 | - | 21,0 | - | 3,50 | - | - |
| **PR 28-4** | 28,0 | 0,08 | 20,0 | 0,15 | 4,00 | 421 | 355 |
| **PR 28-4.5** | 28,0 | 0,08 | 19,0 | 0,15 | 4,50 | 477 | 396 |
| **PR 28-5** | 28,0 | 0,08 | 18,0 | 0,15 | 5,00 | 533 | 436 |
| **PR 30-1.5** | 30,0 | 0,08 | 27,0 | 0,08 | 1,50 | 139 | 128 |
| **PR 30-2** | 30,0 | 0,08 | 26,0 | 0,08 | 2,00 | 192 | 173 |
| **PR 30-2.5** | 30,0 | 0,08 | 25,0 | 0,08 | 2,50 | 244 | 217 |
| **PR 30-3** | 30,0 | 0,08 | 24,0 | 0,15 | 3,00 | 289 | 253 |
| **PR 30-4** | 30,0 | 0,08 | 20,0 | 0,15 | 4,00 | 393 | 334 |
| **PR 30-5** | 30,0 | 0,08 | 20,0 | 0,15 | 5,00 | 498 | 411 |
| **PR 30-6** | 30,0 | 0,15 | 18,0 | 0,15 | 6,00 | 595 | 478 |
| **PR 32-1.5** | 32,0 | 0,08 | 29,0 | 0,08 | 1,50 | 131 | 120 |
| **PR 32-2.5** | 32,0 | - | 27,0 | - | 2,50 | - | - |
| **PR 32-4** | 32,0 | - | 24,0 | - | 4,00 | - | - |
| **PR 35-2** | 35,0 | 0,15 | 31,0 | 0,15 | 2,00 | 152 | 138 |
| **PR 35-2.5** | 35,0 | 0,15 | 30,0 | 0,15 | 2,50 | 196 | 177 |
| **PR 35-3** | 35,0 | 0,15 | 29,0 | 0,15 | 3,00 | 241 | 214 |
| **PR 35-4** | 35,0 | 0,15 | 27,0 | 0,15 | 4,00 | 331 | 286 |
| **PR 35-5** | 35,0 | 0,15 | 25,0 | 0,15 | 5,00 | 420 | 355 |
| **PR 35-6** | 35,0 | 0,15 | 23,0 | 0,15 | 6,00 | 510 | 420 |
| **PR 38-2.5** | 38,0 | 0,15 | 33,0 | 0,15 | 2,50 | 181 | 163 |
| **PR 38-3** | 38,0 | 0,15 | 32,0 | 0,15 | 3,00 | 222 | 198 |

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# PR (M)

Metric precision steel pipe, EN 10305-4, E235+N

HANSA-FLEX

| Item | | | | | | | |
|---|---|---|---|---|---|---|---|
| Identification | Ø d2 (mm) | AD tolerance +/- (mm) | Ø d1 (mm) | ID tolerance +/- (mm) | S (mm) | Specific load I (bar) | Specific load III (bar) |
| **PR 38-4** | 38,0 | 0,15 | 30,0 | 0,15 | 4,00 | 305 | 266 |
| **PR 38-5** | 38,0 | 0,15 | 28,0 | 0,15 | 5,00 | 387 | 330 |
| **PR 38-6** | 38,0 | 0,15 | 26,0 | 0,15 | 6,00 | 469 | 391 |
| **PR 38-7** | 38,0 | 0,15 | 24,0 | 0,15 | 7,00 | 552 | 449 |
| **PR 40-6** | 40,0 | - | 28,0 | - | 6,00 | - | - |
| **PR 42-2** | 42,0 | 0,20 | 38,0 | 0,20 | 2,00 | 119 | 109 |
| **PR 42-3** | 42,0 | 0,20 | 36,0 | 0,20 | 3,00 | 193 | 174 |
| **PR 42-4** | 42,0 | 0,20 | 34,0 | 0,20 | 4,00 | 268 | 236 |
| **PR 42-5** | 42,0 | 0,20 | 32,0 | 0,20 | 5,00 | 343 | 296 |
| **PR 45-5** | 45,0 | 0,20 | 35,0 | 0,20 | 5,00 | 320 | 278 |
| **PR 50-4** | 50,0 | 0,20 | 42,0 | 0,20 | 4,00 | 225 | 201 |
| **PR 50-5** | 50,0 | 0,20 | 40,0 | 0,20 | 5,00 | 288 | 252 |
| **PR 50-6** | 50,0 | 0,20 | 38,0 | 0,20 | 6,00 | 350 | 302 |
| **PR 60-3** | 60,0 | 0,25 | 54,0 | 0,25 | 3,00 | 130 | 119 |
| **PR 60-4** | 60,0 | 0,25 | 52,0 | 0,25 | 4,00 | 182 | 165 |
| **PR 60-6** | 60,0 | - | 48,0 | - | 6,00 | - | - |
| **PR 60-10** | 60,0 | 0,25 | 40,0 | 0,25 | 10,00 | 496 | 410 |
| **PR 65-8** | 65,0 | 0,30 | 49,0 | 0,30 | 8,00 | 356 | 306 |
| **PR 80-10** | 80,0 | 0,35 | 60,0 | 0,35 | 10,00 | 364 | 312 |

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