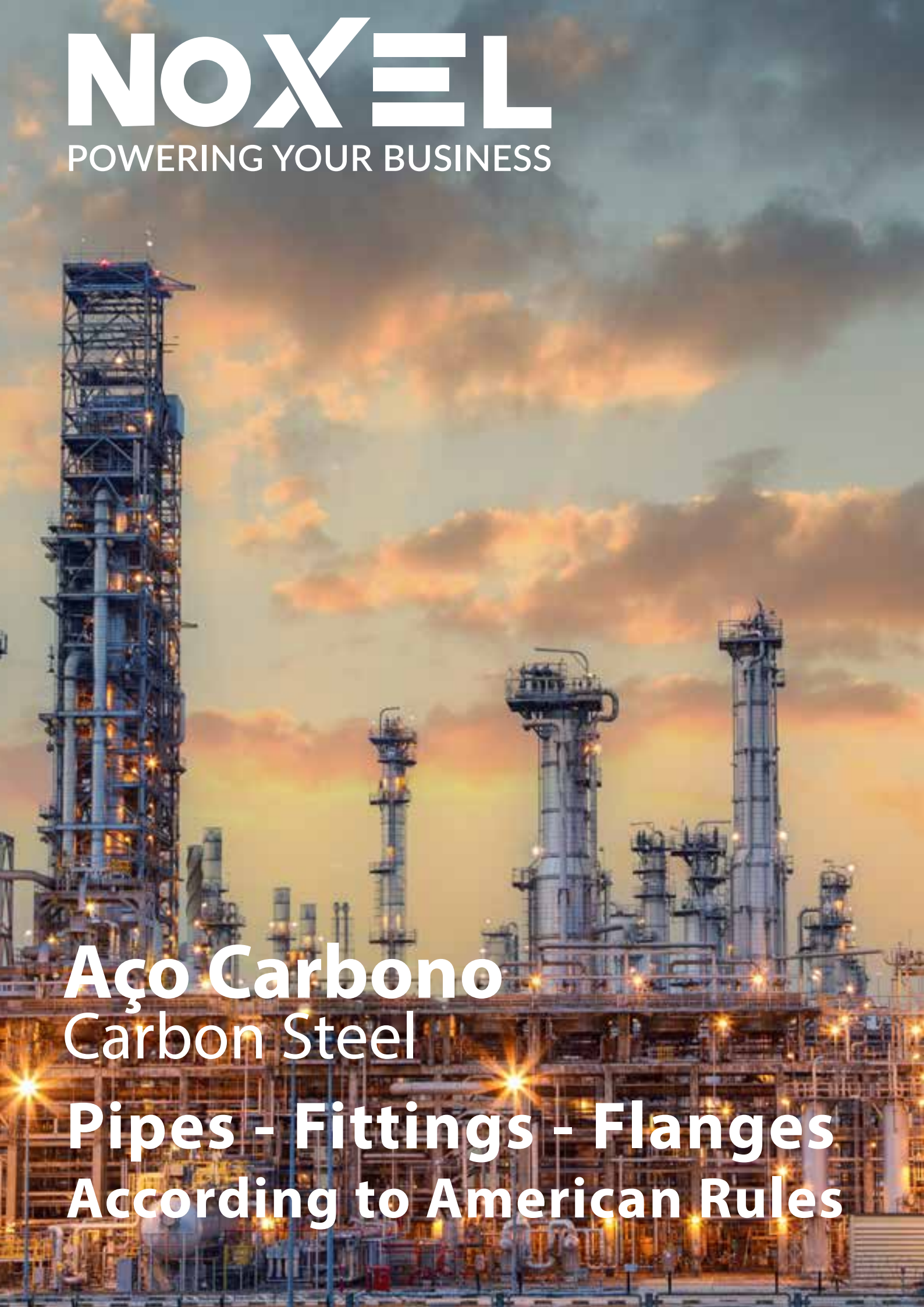


A large industrial refinery or petrochemical plant is shown at sunset. The sky is filled with orange and yellow clouds. Several tall distillation columns and complex piping systems are visible, illuminated by the warm light of the setting sun. The foreground shows more industrial structures and pipes, with some lights reflecting on the ground.

# NOXEL

POWERING YOUR BUSINESS

**Aço Carbono**  
**Carbon Steel**

**Pipes - Fittings - Flanges**  
**According to American Rules**

# Aço Carbono

## Pipes - Fittings - Flanges According to American Rules

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## DIMENSÕES EM MM DOS TUBOS DE AÇO SEGUNDO ANSI B36.10 E B36.19

### PIPE SCHEDULE METRIC

| Nominal pipe size mm/inch | OD mm  | 5S             | 10S            | 10             | 20              | 30              | STD            | 40S             | 40              | 60              | XS             | 80S            | 80              | 100             | 120             | 140             | 160             | XXS             |
|---------------------------|--------|----------------|----------------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 5/8                       | 10.3   |                | 1.24<br>0.28   |                |                 |                 | 1.73<br>0.37   | 1.73<br>0.36    | 1.73<br>0.37    |                 | 2.41<br>0.47   | 2.41<br>0.48   | 2.41<br>0.47    |                 |                 |                 |                 |                 |
| 8                         | 13.7   |                | 1.65<br>0.51   |                |                 |                 | 2.24<br>0.63   | 2.24<br>0.64    | 2.24<br>0.63    |                 | 3.02<br>0.80   | 3.02<br>0.82   | 3.02<br>0.80    |                 |                 |                 |                 |                 |
| 10                        | 17.1   |                | 1.65<br>0.64   |                |                 |                 | 2.31<br>0.84   | 2.31<br>0.86    | 2.31<br>0.84    |                 | 3.20<br>1.10   | 3.20<br>1.12   | 3.20<br>1.10    |                 |                 |                 |                 |                 |
| 15                        | 21.3   | 1.65<br>0.82   | 2.11<br>1.01   |                |                 |                 | 2.77<br>1.27   | 2.77<br>1.30    | 2.77<br>1.27    |                 | 3.73<br>1.62   | 3.73<br>1.65   | 3.73<br>1.62    |                 |                 |                 | 4.76<br>1.95    | 7.47<br>2.55    |
| 20                        | 26.7   | 1.65<br>1.04   | 2.11<br>1.31   |                |                 |                 | 2.87<br>1.69   | 2.87<br>1.71    | 2.87<br>1.69    |                 | 3.91<br>2.20   | 3.91<br>2.24   | 3.91<br>2.20    |                 |                 |                 | 5.56<br>2.90    | 7.82<br>3.64    |
| 25                        | 33.4   | 1.65<br>1.30   | 2.77<br>2.10   |                |                 |                 | 3.38<br>2.50   | 3.38<br>2.55    | 3.38<br>2.50    |                 | 4.55<br>3.24   | 4.55<br>3.20   | 4.55<br>3.24    |                 |                 |                 | 6.35<br>4.24    | 9.09<br>5.45    |
| 32                        | 42.2   | 1.65<br>1.68   | 2.77<br>2.76   |                |                 |                 | 3.56<br>3.39   | 3.56<br>3.46    | 3.56<br>3.39    |                 | 4.85<br>4.47   | 4.85<br>4.56   | 4.85<br>4.47    |                 |                 |                 | 6.35<br>5.91    | 9.70<br>7.77    |
| 40                        | 48.3   | 1.65<br>1.95   | 2.77<br>3.10   |                |                 |                 | 3.68<br>4.05   | 3.68<br>4.13    | 3.68<br>4.05    |                 | 5.08<br>5.41   | 5.08<br>5.51   | 5.08<br>5.41    |                 |                 |                 | 7.14<br>7.25    | 10.15<br>9.56   |
| 50                        | 60.3   | 1.65<br>2.44   | 2.77<br>4.01   |                |                 |                 | 3.91<br>5.44   | 3.91<br>5.54    | 3.91<br>5.44    |                 | 5.54<br>7.48   | 5.54<br>7.63   | 5.54<br>7.48    |                 |                 |                 | 8.74<br>11.11   | 11.07<br>13.44  |
| 65                        | 73.0   | 2.11<br>3.77   | 3.06<br>5.36   |                |                 |                 | 5.16<br>8.63   | 5.16<br>8.81    | 5.16<br>8.63    |                 | 7.01<br>11.41  | 7.01<br>11.64  | 7.01<br>11.41   |                 |                 |                 | 9.53<br>14.92   | 14.02<br>20.39  |
| 80                        | 88.9   | 2.11<br>4.60   | 3.06<br>6.59   |                |                 |                 | 5.49<br>11.29  | 5.49<br>11.52   | 5.49<br>11.29   |                 | 7.62<br>15.27  | 7.62<br>15.59  | 7.62<br>15.27   |                 |                 |                 | 11.13<br>21.35  | 15.24<br>27.68  |
| 90                        | 101.6  | 2.11<br>5.29   | 3.06<br>7.56   |                |                 |                 | 5.74<br>13.57  | 5.74<br>13.84   | 5.74<br>13.57   |                 | 8.00<br>18.53  | 8.00<br>19.01  | 8.00<br>18.63   |                 |                 |                 | -               | -               |
| 100                       | 114.3  | 2.11<br>5.96   | 3.06<br>8.52   |                |                 |                 | 6.02<br>16.07  | 6.02<br>16.40   | 6.02<br>16.07   |                 | 8.56<br>22.32  | 8.56<br>22.77  | 8.56<br>22.32   |                 | 11.13<br>29.32  |                 | 13.49<br>33.54  | 17.12<br>41.03  |
| 125                       | 141.3  | 2.77<br>9.67   | 3.40<br>11.82  |                |                 |                 | 6.55<br>21.77  | 6.55<br>22.20   | 6.55<br>21.77   |                 | 9.50<br>30.97  | 9.50<br>31.59  | 9.50<br>30.97   |                 | 13.70<br>40.28  |                 | 16.89<br>49.11  | 19.06<br>57.43  |
| 150                       | 168.3  | 2.77<br>11.55  | 3.40<br>14.13  |                |                 |                 | 7.11<br>28.26  | 7.11<br>28.83   | 7.11<br>28.26   |                 | 10.97<br>42.56 | 10.97<br>43.42 | 10.97<br>42.56  |                 | 14.27<br>54.20  |                 | 18.26<br>67.56  | 21.95<br>79.22  |
| 200                       | 219.1  | 2.77<br>15.00  | 3.76<br>20.37  |                | 6.35<br>33.31   | 7.04<br>36.81   | 8.18<br>42.55  | 8.18<br>43.39   | 8.18<br>42.55   | 10.31<br>53.08  | 12.70<br>64.64 | 12.70<br>65.95 | 12.70<br>64.64  | 15.09<br>75.92  | 18.26<br>90.44  | 20.62<br>100.92 | 23.01<br>111.27 | 22.23<br>107.92 |
| 250                       | 273.1  | 3.40<br>23.06  | 4.19<br>26.34  |                | 6.35<br>41.77   | 7.60<br>51.03   | 9.27<br>60.31  | 9.27<br>61.52   | 9.27<br>60.31   | 12.70<br>61.55  | 12.70<br>61.55 | 12.70<br>63.19 | 15.09<br>95.01  | 18.26<br>114.75 | 21.44<br>100.05 | 25.40<br>155.15 | 28.58<br>172.53 | 25.40<br>155.15 |
| 300                       | 323.9  | 3.96<br>31.89  | 4.57<br>36.73  |                | 6.35<br>49.73   | 8.38<br>65.20   | 9.53<br>73.88  | 9.52<br>75.32   | 10.31<br>79.73  | 14.27<br>108.96 | 12.70<br>97.46 | 12.70<br>99.43 | 17.48<br>132.08 | 21.44<br>159.91 | 25.40<br>186.75 | 28.58<br>208.14 | 33.32<br>238.76 | 25.40<br>186.97 |
| 350                       | 355.6  | 3.96<br>35.06  | 4.78<br>42.14  | 6.35<br>54.69  | 7.00<br>67.90   | 9.53<br>81.33   | 9.53<br>81.33  | 11.13<br>94.55  | 15.09<br>126.71 | 12.70<br>107.39 |                |                | 19.05<br>158.10 | 23.93<br>194.96 | 27.79<br>224.65 | 31.75<br>253.56 | 35.71<br>281.70 |                 |
| 400                       | 406.4  | 4.19<br>42.41  | 4.78<br>48.25  | 6.35<br>62.64  | 7.16<br>77.83   | 9.53<br>93.27   | 9.53<br>93.27  | 12.70<br>123.30 | 16.66<br>160.12 | 12.70<br>123.30 |                |                | 21.44<br>203.53 | 25.19<br>245.56 | 30.95<br>286.64 | 36.53<br>333.19 | 40.49<br>365.35 |                 |
| 450                       | 457.2  | 4.19<br>47.77  | 4.78<br>54.36  | 6.35<br>70.57  | 7.92<br>87.71   | 9.53<br>122.38  | 9.53<br>105.16 | 14.27<br>155.80 | 19.05<br>205.74 | 12.70<br>139.15 |                |                | 23.68<br>254.55 | 29.36<br>309.62 | 34.93<br>363.56 | 39.67<br>408.26 | 45.24<br>459.37 |                 |
| 500                       | 508.0  | 4.78<br>50.40  | 5.54<br>70.00  | 6.35<br>70.55  | 9.53<br>117.15  | 12.70<br>155.12 | 9.53<br>117.15 | 15.09<br>163.42 | 20.62<br>247.83 | 12.70<br>155.12 |                |                | 26.19<br>311.17 | 32.54<br>281.63 | 38.10<br>411.49 | 44.45<br>508.11 | 50.01<br>564.81 |                 |
| 550                       | 558.8  | 4.78<br>66.57  | 5.54<br>77.06  | 6.35<br>86.54  | 9.53<br>129.13  | 12.70<br>171.09 | 9.53<br>129.13 | -               | 22.23<br>294.25 | 12.70<br>171.09 |                |                | 28.58<br>373.83 | 34.93<br>451.42 | 41.28<br>527.02 | 47.63<br>600.63 | 53.96<br>672.26 |                 |
| 600                       | 609.6  | 5.54<br>84.16  | 6.35<br>96.37  | 6.35<br>94.53  | 9.53<br>141.12  | 14.27<br>209.64 | 9.53<br>141.12 | 17.48<br>255.41 | 24.61<br>355.26 | 12.70<br>187.06 |                |                | 30.96<br>442.06 | 38.89<br>547.71 | 46.02<br>640.03 | 52.37<br>720.15 | 59.54<br>808.22 |                 |
| 650                       | 660.4  |                |                | 7.92<br>127.36 | 12.70<br>202.72 | -               | 9.53<br>152.87 | -               | -               | 12.70<br>202.72 |                |                |                 |                 |                 |                 |                 |                 |
| 700                       | 711.2  |                |                | 7.92<br>137.32 | 12.70<br>218.69 | 15.88<br>271.21 | 9.53<br>164.85 | -               | -               | 12.70<br>218.69 |                |                |                 |                 |                 |                 |                 |                 |
| 750                       | 762.0  | 6.35<br>150.72 | 7.92<br>150.06 | 7.92<br>147.26 | 12.70<br>204.67 | 15.88<br>292.18 | 9.53<br>176.84 | -               | -               | 12.70<br>234.67 |                |                |                 |                 |                 |                 |                 |                 |
| 800                       | 812.8  |                |                | 7.92<br>157.24 | 12.70<br>250.64 | 15.88<br>312.15 | 9.53<br>188.82 | 17.48<br>342.91 | -               | 12.70<br>250.64 |                |                |                 |                 |                 |                 |                 |                 |
| 850                       | 863.6  |                |                | 7.92<br>167.20 | 12.70<br>266.61 | 15.88<br>332.12 | 9.53<br>200.31 | 17.48<br>364.90 | -               | 12.70<br>266.61 |                |                |                 |                 |                 |                 |                 |                 |
| 900                       | 914.4  |                |                | 7.92<br>178.96 | 12.70<br>282.27 | 15.00<br>351.70 | 9.50<br>212.56 | 19.06<br>420.40 | -               | 12.70<br>282.27 |                |                |                 |                 |                 |                 |                 |                 |
| 950                       | 965.2  |                |                |                |                 |                 | 9.53<br>224.54 | -               | -               | 12.70<br>298.24 |                |                |                 |                 |                 |                 |                 |                 |
| 1000                      | 1016.0 |                |                |                |                 |                 | 9.53<br>296.63 | -               | -               | 12.70<br>314.22 |                |                |                 |                 |                 |                 |                 |                 |
| 1050                      | 1066.8 |                |                |                |                 |                 | 9.53<br>248.52 | -               | -               | 12.70<br>330.19 |                |                |                 |                 |                 |                 |                 |                 |
| 1100                      | 1117.6 |                |                |                |                 |                 | 9.53<br>260.50 | -               | -               | 12.70<br>346.16 |                |                |                 |                 |                 |                 |                 |                 |
| 1150                      | 1168.4 |                |                |                |                 |                 | 9.50<br>272.25 | -               | -               | 12.70<br>361.82 |                |                |                 |                 |                 |                 |                 |                 |
| 1200                      | 1219.2 |                |                |                |                 |                 | 9.53<br>284.24 | -               | -               | 12.70<br>377.79 |                |                |                 |                 |                 |                 |                 |                 |

Os números em negro indicam as dimensões em mm  
Os números em vermelho indicam o peso - Kg/m

Numbers in black mean the dimensions in mm  
The numbers in red mean the weight - kg / m

**Tubos de aço com costura ERW HFW SAW API 5L Gr. B PSL1**  
Welded black line pipe

**Lista 2200**


| NPS | OD mm | Espessura Thickness | Kg/m Weight | Art. Nº   |
|-----|-------|---------------------|-------------|-----------|
| 6"  | 168,3 | 4,5                 | 18,10       | 2A13 7397 |
| 8"  | 219,1 | 6,4                 | 33,57       | 2A13 7414 |
| 10" | 273,0 | 6,4                 | 41,76       | 2A13 7425 |
| 12" | 323,8 | 6,4                 | 49,71       | 2A13 7439 |
| 14" | 355,6 | 6,4                 | 54,68       | 2A13 7451 |
| 14" | 355,6 | 7,9                 | 67,91       | 2A13 7452 |
| 16" | 406,4 | 7,9                 | 77,83       | 2A13 7463 |
| 18" | 457,2 | 7,9                 | 87,71       | 2A13 7475 |
| 20" | 508,0 | 7,9                 | 98,54       | 2A13 7483 |
| 20" | 508,0 | 9,5                 | 117,15      | 2A13 7484 |
| 24" | 610,0 | 7,9                 | 117,46      | 2A13 7495 |
| 24" | 610,0 | 9,5                 | 141,12      | 2A13 7496 |
| 28" | 711,0 | 7,9                 | 137,42      | 2A13 7502 |
| 28" | 711,0 | 9,5                 | 164,65      | 2A13 7503 |
| 32" | 812,8 | 9,5                 | 188,49      | 2A13 7504 |
| 36" | 914,4 | 9,5                 | 212,33      | 2A13 7505 |

Tubos com comprimentos de cerca de 12m. NPS 6" a 24" com soldadura longitudinal, NPS 28" e superior com costura helicoidal. Pipe NPS 6" until 24" longitudinally welded, 28" and up spiral welded, length circa 12m. Estes tubos podem ser ranhurados para juntas Victaulic. We can supply this pipes with roled grooves for Victaulic couplings. Nota: Para tubos soldados longitudinalmente segundo normas DIN ver pag A8. For longitudinal welded acc to DIN see pag. A8.

**Tubos de aço sem costura galvanizados API 5L/B - A106/B - A53 (tripla certificação)**  
Seamless galvanized steel pipe

**Lista 2216**


| NPS           | OD mm  | Espessura Thickness | Kg Weight | Art. Nº    |
|---------------|--------|---------------------|-----------|------------|
| 1/2" Sch 80   | 21,34  | 3,73                | 1,62      | 2A00 9172G |
| 3/4" Sch 80   | 26,67  | 3,91                | 2,20      | 2A00 9193G |
| 1" Sch 80     | 33,40  | 4,55                | 3,24      | 2A00 9220G |
| 1 1/4" Sch 80 | 42,16  | 4,85                | 4,47      | 2A00 9245G |
| 1 1/2" Sch 40 | 48,26  | 3,68                | 3,05      | 2A00 9260G |
| 1 1/2" Sch 80 | 48,26  | 5,08                | 4,05      | 2A00 9262G |
| 2" Sch 40     | 60,32  | 3,91                | 5,44      | 2A00 9286G |
| 3" Sch 40     | 88,90  | 5,49                | 11,29     | 2A00 9338G |
| 4" Sch 40     | 114,30 | 6,02                | 16,70     | 2A00 9364G |

Tubos fornecidos em comprimento de cerca de 6 m. Pipe length circa 6 m.

Estes tubos podem ser fornecidos roscados NPT ou BSP ou ainda ranhurados para juntas Victaulic. This pipe can be delivered threaded NPT or BSP or with grooves for Victaulic couplings.

**Tubos de aço sem costura ASTM106 - API 5L/B revestido com 3 camadas, polietileno, segundo DIN 30670 N-n**  
Seamless steel pipe 3-layer, polyethylene coated according to DIN 30670 N-n

**Lista 2218**


NPS 1/2" a 3" revestido PE amarelo  
NPS 1/2" until 3" PE yellow coated

| NPS           | OD mm | Espessura Thickness | Kg Weight | Art. Nº    |
|---------------|-------|---------------------|-----------|------------|
| 1/2" Sch 40   | 21,34 | 2,77                | 1,50      | 2A20 9170  |
| 3/4" Sch 40   | 26,67 | 2,87                | 1,90      | 2A20 9191  |
| 1" Sch 40     | 33,40 | 3,38                | 2,70      | 2A20 9218  |
| 1 1/4" Sch 40 | 42,16 | 3,56                | 3,65      | 2A20 9243  |
| 1 1/2" Sch 40 | 48,26 | 3,68                | 4,25      | 2A20 9260  |
| 2" Sch 40     | 60,32 | 3,91                | 5,80      | 2A20 9286  |
| 2 1/2" Sch 40 | 73,02 | 5,16                | 8,93      | 2A20 9309  |
| * 3" Sch 40   | 88,90 | 5,49                | 11,90     | 2A20 9338A |

Tubos fornecidos em comprimentos de cerca de 6 m, excepto NPS 3" cujo comprimento é de 8 a 12m. Length circa 6 m, exception for NPS 3" length 8 until 12m.



NPS 3" a 10" revestido com PE preto  
NPS 3" until 10" PE black coated

| NPS         | OD mm  | Espessura Thickness | Kg Weight | Art. Nº    |
|-------------|--------|---------------------|-----------|------------|
| 3" Sch 40   | 88,90  | 5,49                | 11,90     | 2A20 9338P |
| 4" Sch 40   | 114,30 | 6,62                | 16,75     | 2A20 9364  |
| 6" Sch 40   | 168,30 | 8,11                | 29,26     | 2A20 9399  |
| 8" Sch 20   | 219,10 | 6,35                | 34,61     | 2A20 9415  |
| * 8" Sch 20 | 219,10 | 6,35                | 34,61     | 2A20 9420  |
| 8" Sch 40   | 219,10 | 8,18                | 42,55     | 2A20 9423  |
| 10" Sch 20  | 273,00 | 6,35                | 44,00     | 2A20 9426  |
| 10" Sch 60  | 273,00 | 12,70               | 86,00     | 2A20 9428  |

\* Tubos API 5L/B com costura longitudinal, em comprimentos de cerca de 12 m. Longitudinal welded pipes length circa 12m. Podemos fornecer outros tubos de maior diametro ou com outras espessuras, bem como com outro tipo de revestimento e ainda com protecção interior.

\* Não garantimos continuidade em stock. We do not guarantee continuity in stock.

**Espessura do revestimento em polietileno**

De acordo com a edição de DIN 30670 de 1991, o valor da espessura mínima a observar para o tipo (n) é a seguinte:

**PE coating thicknesses**

According to the 1991 edition of DIN 30670, the following minimum values apply to type (n) coating thicknesses:

Para Mangas Rectráteis ou Fita de Protecção ver pag. E64.

| Nominal Pipe size | Espessura mínima em mm Minimum thickness in mm |
|-------------------|------------------------------------------------|
| ≤ 4"              | 1,8                                            |
| > 4" ≤ 10"        | 2,0                                            |
| > 10" < 20"       | 2,2                                            |
| ≥ 20"             | 2,5                                            |



Tubos com outros revestimentos  
Other coated pipes

**Tubos de aço sem costura A106/B - API 5L/B - A53 (Tripla certificação)**  
Seamless steel pipe

Lista 2214



| NPS            | OD mm  | Espessura Thickness | Kg/m Weight | Art. Nº   |
|----------------|--------|---------------------|-------------|-----------|
| 1/8" Sch 80    | 10,29  | 2,41                | 0,46        | 2A00 9125 |
| 1/4" Sch 40    | 13,72  | 2,23                | 0,63        | 2A00 9136 |
| 1/4" Sch 80    | 13,72  | 3,02                | 0,80        | 2A00 9137 |
| 3/8" Sch 40    | 17,14  | 2,31                | 0,85        | 2A00 9152 |
| 3/8" Sch 80    | 17,14  | 3,20                | 1,10        | 2A00 9154 |
| 1/2" Sch 40    | 21,34  | 2,77                | 1,29        | 2A00 9170 |
| 1/2" Sch 80    | 21,34  | 3,73                | 1,62        | 2A00 9172 |
| 1/2" Sch 160   | 21,34  | 4,78                | 1,95        | 2A00 9173 |
| *1/2" XXS      | 21,34  | 7,47                | 2,55        | 2A00 9174 |
| 3/4" Sch 40    | 26,67  | 2,87                | 1,69        | 2A00 9191 |
| 3/4" Sch 80    | 26,67  | 3,91                | 2,20        | 2A00 9193 |
| 3/4" Sch 160   | 26,67  | 5,56                | 2,90        | 2A00 9194 |
| *3/4" XXS      | 26,67  | 7,82                | 3,64        | 2A00 9195 |
|                |        |                     |             |           |
| 1" Sch 40      | 33,40  | 3,38                | 2,50        | 2A00 9218 |
| 1" Sch 80      | 33,40  | 4,55                | 3,24        | 2A00 9220 |
| 1" Sch 160     | 33,40  | 6,35                | 4,24        | 2A00 9221 |
| *1" XXS        | 33,40  | 9,09                | 5,45        | 2A00 9222 |
| 1 1/4" Sch 40  | 42,16  | 3,56                | 3,39        | 2A00 9243 |
| 1 1/4" Sch 80  | 42,16  | 4,85                | 4,47        | 2A00 9245 |
| 1 1/4" Sch 160 | 42,16  | 6,35                | 5,61        | 2A00 9246 |
|                |        |                     |             |           |
| 1 1/2" Sch 40  | 48,26  | 3,68                | 4,05        | 2A00 9260 |
| 1 1/2" Sch 80  | 48,26  | 5,08                | 5,41        | 2A00 9262 |
| 1 1/2" Sch 160 | 48,26  | 7,14                | 7,25        | 2A00 9263 |
| *1 1/2" XXS    | 48,26  | 10,15               | 9,56        | 2A00 9264 |
| 2" Sch 40      | 60,32  | 3,91                | 5,44        | 2A00 9286 |
| 2" Sch 80      | 60,32  | 5,54                | 7,48        | 2A00 9289 |
| 2" Sch 160     | 60,32  | 8,74                | 11,11       | 2A00 9291 |
|                |        |                     |             |           |
| 2 1/2" Sch 40  | 73,00  | 5,16                | 8,63        | 2A00 9309 |
| 2 1/2" Sch 80  | 73,00  | 7,01                | 11,41       | 2A00 9310 |
| 3" Sch 40      | 88,90  | 5,49                | 11,29       | 2A00 9338 |
| 3" Sch 80      | 88,90  | 7,62                | 15,27       | 2A00 9339 |
| 3" Sch 160     | 88,90  | 11,13               | 21,35       | 2A00 9340 |
| 3 1/2" Sch 40  | 101,60 | 5,74                | 13,57       | 2A00 9348 |
| 3 1/2" Sch 80  | 101,60 | 8,08                | 18,63       | 2A00 9349 |
| 4" Sch 40      | 114,30 | 6,02                | 16,07       | 2A00 9364 |
| 4" Sch 80      | 114,30 | 8,56                | 22,32       | 2A00 9365 |
| 4" Sch 160     | 114,30 | 13,49               | 33,54       | 2A00 9367 |
| 5" Sch 40      | 141,30 | 6,55                | 21,77       | 2A00 9380 |
| 5" Sch 80      | 141,30 | 9,52                | 30,97       | 2A00 9381 |
|                |        |                     |             |           |
| 6" Sch 40      | 168,30 | 7,11                | 28,26       | 2A00 9399 |
| 6" Sch 80      | 168,30 | 10,97               | 42,56       | 2A00 9400 |
| 6" Sch 120     | 168,30 | 14,27               | 54,20       | 2A00 9401 |
| 6" Sch 160     | 168,30 | 18,26               | 67,55       | 2A00 9402 |
| 8" Sch 20      | 219,08 | 6,35                | 33,31       | 2A00 9414 |
| 8" Sch 40      | 219,08 | 8,18                | 42,55       | 2A00 9415 |
| 8" Sch 80      | 219,08 | 12,70               | 64,64       | 2A00 9416 |
| 8" Sch 120     | 219,08 | 18,24               | 90,30       | 2A00 9417 |
| 10" Sch 20     | 273,05 | 6,35                | 41,77       | 2A00 9425 |
| 10" Sch 40     | 273,05 | 9,27                | 60,31       | 2A00 9427 |
| 10" Sch 60     | 273,05 | 12,70               | 81,55       | 2A00 9428 |
| 12" Sch 20     | 323,85 | 6,35                | 50,48       | 2A00 9439 |
| 12" STD        | 323,85 | 9,53                | 73,88       | 2A00 9441 |
| 12" XS         | 323,85 | 12,70               | 97,46       | 2A00 9442 |
|                |        |                     |             |           |
| 14" Sch 20     | 355,60 | 7,92                | 67,94       | 2A00 9452 |
| 14" STD        | 355,60 | 9,53                | 81,33       | 2A00 9453 |
| 14" XS         | 355,60 | 12,70               | 107,39      | 2A00 9454 |
| 16" Sch 20     | 406,40 | 7,92                | 77,86       | 2A00 9463 |
| 16" Sch 30     | 406,40 | 9,53                | 93,27       | 2A00 9465 |
| 16" Sch 40     | 406,40 | 12,70               | 123,30      | 2A00 9466 |
|                |        |                     |             |           |
| 18" STD        | 457,20 | 9,53                | 105,14      | 2A00 9476 |
| 18" Sch 30     | 457,20 | 11,13               | 124,32      | 2A00 9477 |
| 20" STD        | 508,00 | 9,53                | 116,78      | 2A00 9484 |
| 20" Sch 30     | 508,00 | 12,7                | 155,13      | 2A00 9485 |
| 24" STD        | 609,60 | 9,53                | 143,00      | 2A00 9496 |

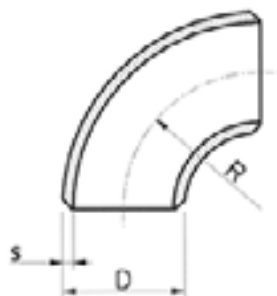
Comprimento: até NPS 2 1/2" cerca de 6m, NPS 3" e acima cerca de 8 a 12,5m.  
Length up to NPS 2 1/2" about 6m, NPS 3" and up about 8 until 12.5 m.

Podemos fornecer tubos com maior diâmetro e outras espessuras.  
We can provide tubes with larger diameter and other thicknesses.

Podemos fornecer os tubos NPS 1/4" a 4" roscados NPT ou ranhurados para juntas Victaulic até NPS 16".  
Pipes from NPS 1/4" up to 4" can be delivery NPT threaded or with grooves for Victaulic couplings up to 16" NPS.

\* Podemos fornecer estes tubos no prazo de uma semana.  
\* We can supply these pipes within a week.

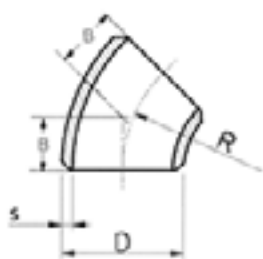
**Curvas 90° raio longo sem costura ANSI B16.9, ASTM A234WPB**  
 Elbows 90° LR

**Lista 2300**


| NPS            | D<br>mm | s     | R      | Kg/ Pc<br>Weight | Art. Nº   |
|----------------|---------|-------|--------|------------------|-----------|
| 1/2" STD       | 21,34   | 2,77  | 38,1   | 0,078            | 2D35 0170 |
| 1/2" XS        | 21,34   | 3,73  | 38,1   | 0,099            | 2D35 0172 |
| 3/4" STD       | 26,67   | 2,87  | 28,6   | 0,110            | 2D35 0191 |
| 3/4" XS        | 26,67   | 3,91  | 28,6   | 0,120            | 2D35 0193 |
| 3/4" Sch 160   | 26,67   | 5,54  | 28,6   | 0,230            | 2D35 0194 |
| 1" STD         | 33,40   | 3,38  | 38,0   | 0,160            | 2D35 0218 |
| 1" XS          | 33,40   | 4,55  | 38,0   | 0,220            | 2D35 0220 |
| 1" Sch 160     | 33,40   | 6,35  | 38,0   | 0,255            | 2D35 0221 |
| 1" XXS         | 33,40   | 9,09  | 38,0   | 0,340            | 2D35 0222 |
| 1 1/4" STD     | 42,16   | 3,56  | 47,6   | 0,260            | 2D35 0243 |
| 1 1/4" XS      | 42,16   | 4,85  | 47,6   | 0,400            | 2D35 0245 |
| 1 1/4" Sch 160 | 42,16   | 6,35  | 47,6   | 0,427            | 2D35 0246 |
| 1 1/2" STD     | 48,26   | 3,68  | 57,15  | 0,400            | 2D35 0260 |
| 1 1/2" XS      | 48,26   | 5,08  | 57,15  | 0,510            | 2D35 0262 |
| 1 1/2" Sch 160 | 48,26   | 7,14  | 57,15  | 0,650            | 2D35 0263 |
| 2" STD         | 60,32   | 3,91  | 76,2   | 0,710            | 2D35 0286 |
| 2" XS          | 60,32   | 5,54  | 76,2   | 0,910            | 2D35 0289 |
| 2" Sch 160     | 60,32   | 8,71  | 76,2   | 1,330            | 2D35 0291 |
| 2" XXS         | 60,32   | 11,07 | 76,2   | 1,800            | 2D35 0292 |
| 2 1/2" STD     | 73,00   | 5,16  | 95,24  | 1,370            | 2D35 0309 |
| 2 1/2" XS      | 73,00   | 7,01  | 95,24  | 1,810            | 2D35 0310 |
| 3" STD         | 88,90   | 5,49  | 114,3  | 2,180            | 2D35 0338 |
| 3" XS          | 88,90   | 7,62  | 114,3  | 2,980            | 2D35 0339 |
| 3" Sch 160     | 88,90   | 11,12 | 114,3  | 4,000            | 2D35 0340 |
| 3 1/2" STD     | 101,60  | 5,74  | 133,35 | 2,870            | 2D35 0348 |
| 4" STD         | 114,30  | 6,02  | 152,4  | 4,170            | 2D35 0364 |
| 4" XS          | 114,30  | 8,56  | 152,4  | 6,200            | 2D35 0365 |
| 4" Sch 160     | 114,30  | 13,49 | 152,4  | 8,100            | 2D35 0367 |
| 5" STD         | 141,30  | 6,55  | 190,5  | 6,800            | 2D35 0380 |
| 5" XS          | 141,30  | 9,52  | 190,5  | 8,550            | 2D35 0381 |
| 6" STD         | 168,30  | 7,11  | 228,6  | 10,200           | 2D35 0399 |
| 6" XS          | 168,30  | 10,97 | 228,6  | 16,350           | 2D35 0400 |
| 8" Sch 20      | 219,08  | 6,35  | 304,8  | 16,000           | 2D35 0414 |
| 8" STD         | 219,08  | 8,18  | 304,8  | 20,300           | 2D35 0415 |
| 8" XS          | 219,08  | 12,70 | 304,8  | 30,000           | 2D35 0416 |
| 10" Sch 20     | 273,05  | 6,35  | 381,0  | 25,000           | 2D35 0425 |
| 10" STD        | 273,05  | 9,27  | 381,0  | 37,000           | 2D35 0427 |
| 10" XS         | 273,05  | 12,70 | 381,0  | 57,110           | 2D35 0428 |
| 12" Sch 20     | 323,85  | 6,35  | 457,2  | 27,200           | 2D35 0439 |
| 12" STD        | 323,85  | 9,53  | 457,2  | 55,800           | 2D34 0441 |
| 12" XS         | 323,85  | 12,70 | 457,2  | 71,200           | 2D35 0442 |
| 14" Sch 10     | 355,60  | 6,35  | 533,4  | 45,000           | 2D35 0449 |
| 14" STD        | 355,60  | 9,53  | 533,4  | 71,500           | 2D35 0453 |
| 14" XS         | 355,60  | 12,70 | 533,4  | 92,000           | 2D35 0454 |
| 16" Sch 10     | 406,40  | 6,35  | 609,6  | 62,200           | 2D35 0461 |
| 16" Sch 20     | 406,40  | 7,92  | 609,6  | 79,500           | 2D35 0463 |
| 16" STD        | 406,40  | 9,52  | 609,6  | 94,000           | 2D35 0465 |
| 16" XS         | 406,40  | 12,70 | 609,6  | 120,000          | 2D35 0466 |
| 18" Sch 10     | 457,20  | 6,35  | 685,8  | 55,300           | 2D35 0474 |
| 18" STD        | 457,20  | 9,53  | 685,8  | 119,000          | 2D35 0476 |
| 20" Sch 10     | 508,00  | 6,35  | 762,0  | 96,000           | 2D35 0482 |
| 20" STD        | 508,00  | 9,53  | 762,0  | 147,000          | 2D35 0484 |
| 20" XS         | 508,00  | 12,70 | 762,0  | 190,000          | 2D35 0486 |
| 24" Sch10      | 609,60  | 6,35  | 914,4  | 136,000          | 2D35 0495 |
| 24" STD        | 609,60  | 9,53  | 914,4  | 212,000          | 2D35 0496 |
| 24" XS         | 609,60  | 12,70 | 914,4  | 275,000          | 2D35 0497 |
| 28" STD        | 711,00  | 9,53  | 990,6  | 308,000          | 2D45 0503 |
| 32" STD        | 812,80  | 9,53  | 1219,2 | 386,000          | 2D45 0504 |
| 36" STD        | 914,40  | 9,53  | 1371,6 | 472,000          | 2D45 0505 |

**Curvas 45° raio longo sem costura ANSI B16.9, ASTM A234 WPB**  
Elbows 45° LR ANSI B16.28 ASTM A234 WPB

Lista 2071



| NPS          | D<br>mm | s<br>mm | R<br>mm | B<br>mm | Kg/Pc<br>Weight | Art. N°   |
|--------------|---------|---------|---------|---------|-----------------|-----------|
| 3/4 STD      | 26,67   | 2,87    | 28,4    | 11,2    | 0,040           | 2D45 0191 |
| 1" STD       | 33,40   | 3,38    | 38,1    | 22,4    | 0,077           | 2D45 0218 |
| 1" XS        | 33,40   | 4,55    | 38,1    | 22,4    | 0,160           | 2D45 0220 |
| * 1" XXS     | 33,40   | 9,09    | 38,1    | 22,4    | 0,170           | 2D45 0222 |
| 1 1/4 STD    | 42,16   | 3,56    | 47,8    | 25,4    | 0,120           | 2D45 0243 |
| 1 1/4 XS     | 42,16   | 4,85    | 47,8    | 25,4    | 0,200           | 2D45 0245 |
| 1 1/2 STD    | 48,26   | 3,68    | 57,2    | 28,4    | 0,180           | 2D45 0260 |
| 1 1/2 XS     | 48,26   | 5,08    | 57,2    | 28,4    | 0,280           | 2D45 0262 |
| 2" STD       | 60,32   | 3,91    | 76,2    | 35,1    | 0,326           | 2D45 0286 |
| 2" XS        | 60,32   | 5,54    | 76,2    | 35,1    | 0,470           | 2D45 0289 |
| * 2" Sch 160 | 60,32   | 8,71    | 76,2    | 35,1    | 0,800           | 2D45 0291 |
| 2 1/2 STD    | 73,00   | 5,16    | 95,2    | 44,4    | 0,640           | 2D45 0309 |
| 2 1/2 XS     | 73,00   | 7,01    | 95,2    | 44,4    | 0,850           | 2D45 0310 |
| 3" STD       | 88,90   | 5,49    | 114,3   | 50,8    | 1,020           | 2D45 0338 |
| 3" XS        | 88,90   | 7,62    | 114,3   | 50,8    | 1,370           | 2D45 0339 |
| * 3" XXS     | 88,90   | 15,24   | 114,3   | 50,8    | 2,600           | XD45 0341 |
| * 3 1/2 STD  | 101,60  | 5,74    | 133,4   | 57,2    | 1,435           | 2D45 0348 |
| 4" STD       | 114,30  | 6,02    | 152,4   | 63,5    | 1,950           | 2D45 0364 |
| 4" XS        | 114,30  | 8,56    | 152,4   | 63,5    | 2,700           | 2D45 0365 |
| * 5" STD     | 141,30  | 6,55    | 190,5   | 79,2    | 3,250           | 2D45 0380 |
| 6" STD       | 168,30  | 4,78    | 228,6   | 95,2    | 3,400           | 2D45 0398 |
| 6" STD       | 168,30  | 7,11    | 228,6   | 95,2    | 5,000           | 2D45 0399 |
| 6" XS        | 168,30  | 10,97   | 228,6   | 95,2    | 7,670           | 2D45 0400 |
| 8" Sch 20    | 219,10  | 6,35    | 304,8   | 127,0   | 7,900           | 2D45 0414 |
| 8" STD       | 219,10  | 8,18    | 304,8   | 127,0   | 10,150          | 2D45 0415 |
| 8" XS        | 219,10  | 12,70   | 304,8   | 127,0   | 14,95           | 2D45 0416 |
| 10" Sch 20   | 273,00  | 6,35    | 381,0   | 158,8   | 12,80           | 2D45 0425 |
| 10" STD      | 273,00  | 9,27    | 381,0   | 158,8   | 18,500          | 2D45 0427 |
| 10" XS       | 273,00  | 12,70   | 381,0   | 158,8   | 24,500          | 2D45 0428 |
| 12" STD      | 323,80  | 9,52    | 457,2   | 190,5   | 27,00           | 2D45 0441 |
| 14" STD      | 355,60  | 9,52    | 457,2   | 190,5   | 34,500          | XD45 0453 |

\* Não garantimos a continuidade em stock  
we not guarantee continuity in stock

**Curvas 180° raio longo sem costura ANSI B16.9 ASTM A234 WPB**  
Elbows 180° LR ASTM A234 WPB

Lista

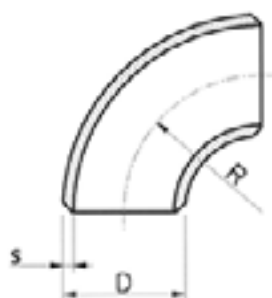


| NPS        | D<br>mm | s<br>mm | R     | H     | Kg/Pc<br>Weight | Art. N°   |
|------------|---------|---------|-------|-------|-----------------|-----------|
| 1" STD     | 33,40   | 3,38    | 38,0  | 55,6  | 0,200           | 2D25 0218 |
| 1" XS      | 33,40   | 4,55    | 38,0  | 55,6  | 0,338           | 2D25 0220 |
| 1 1/4" STD | 42,16   | 3,56    | 47,6  | 69,8  | 0,330           | 2D25 0221 |
| 1 1/2" STD | 48,26   | 3,68    | 57,15 | 82,6  | 0,736           | 2D25 0260 |
| 1 1/2" XS  | 48,26   | 5,08    | 57,15 | 82,6  | 1,200           | 2D25 0262 |
| 2" STD     | 60,32   | 3,91    | 76,2  | 106,4 | 1,250           | 2D25 0286 |
| 2" XS      | 60,32   | 5,54    | 76,2  | 106,4 | 1,782           | 2D25 0289 |
| 2 1/2" STD | 73,00   | 5,16    | 95,24 | 131,8 | 2,570           | 2D25 0309 |
| 2 1/2" XS  | 73,00   | 7,01    | 95,24 | 131,8 | 3,400           | 2D25 0310 |
| 3" STD     | 88,90   | 5,49    | 114,3 | 158,8 | 4,080           | 2D25 0338 |
| 3" XS      | 88,90   | 7,62    | 114,3 | 158,8 | 5,480           | 2D25 0339 |
| 4" STD     | 114,30  | 6,02    | 152,4 | 209,6 | 7,800           | 2D25 0364 |
| 4" XS      | 114,30  | 8,56    | 152,4 | 209,6 | 10,800          | 2D25 0365 |
| 5" STD     | 141,30  | 6,55    | 190,5 | 261,9 | 13,000          | 2D25 0380 |
| 5" XS      | 141,30  | 9,52    | 190,5 | 261,9 | 17,700          | 2D25 0381 |
| 6" STD     | 168,30  | 7,11    | 228,6 | 312,7 | 20,800          | 2D25 0399 |
| 6" XS      | 168,30  | 10,97   | 228,6 | 312,7 | 30,800          | 2D25 0400 |

### Curvas 90° raio curto ANSI B16.28 ASTM A234 WPB

Elbows 90° SR ANSI B16.28 ASTM A234 WPB

Lista 2300

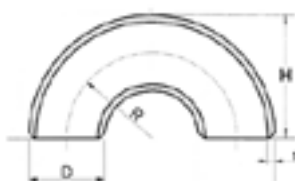


| NPS        | D<br>mm | s<br>mm | R<br>mm | Kg/Pc<br>Weight | Art. N°   |
|------------|---------|---------|---------|-----------------|-----------|
| 1 1/2" STD | 48,3    | 3,68    | 38,1    | 0,24            | 2D65 0260 |
| 1 1/2" XS  | 48,3    | 5,08    | 38,1    | 0,30            | 2D65 0262 |
| 2" STD     | 60,3    | 3,91    | 50,8    | 0,43            | 2D65 0286 |
| 2" XS      | 60,3    | 5,54    | 50,8    | 0,60            | 2D65 0289 |
| 2 1/2" STD | 73,0    | 5,16    | 63,5    | 0,82            | 2D65 0309 |
| 3" STD     | 88,9    | 5,49    | 76,2    | 1,36            | 2D65 0338 |
| 3" XS      | 88,9    | 7,62    | 76,2    | 1,83            | 2D65 0339 |
| 4" STD     | 114,3   | 6,02    | 101,6   | 2,56            | 2D65 0364 |
| 4" XS      | 114,3   | 8,56    | 101,6   | 3,58            | 2D65 0365 |
| 5" STD     | 141,3   | 6,55    | 127,0   | 4,32            | 2D65 0380 |
| 5" XS      | 141,3   | 9,53    | 127,0   | 6,09            | 2D65 0381 |
| 6" STD     | 168,3   | 7,11    | 152,4   | 6,63            | 2D65 0399 |
| 6" XS      | 168,3   | 10,97   | 152,4   | 10,50           | 2D65 0400 |
| 8" STD     | 219,1   | 8,18    | 203,2   | 13,00           | 2D65 0415 |
| 8" XS      | 219,1   | 12,70   | 203,2   | 20,30           | 2D65 0416 |
| 10" STD    | 273,0   | 9,27    | 254,0   | 25,20           | 2D65 0427 |
| 10" XS     | 273,0   | 12,70   | 254,0   | 31,15           | 2D65 0428 |
| 12" STD    | 323,8   | 9,52    | 304,8   | 35,00           | 2D65 0441 |
| 12" XS     | 323,8   | 12,70   | 304,8   | 49,03           | 2D65 0442 |
| 14" XS     | 355,6   | 12,70   | 355,6   | 63,11           | 2D65 0454 |
| 16" XS     | 406,4   | 12,70   | 406,4   | 82,63           | 2D65 0466 |
| 18" STD    | 457,0   | 9,52    | 457,2   | 79,45           | 2D65 0476 |
| 20" STD    | 508,0   | 9,52    | 508,0   | 87,0            | 2D65 0486 |
| 24" STD    | 610,0   | 9,52    | 600,0   | 142,10          | 2D65 0496 |

### Curvas 180° raio curto sem costura ANSI B16.28 ASTM A234 WPB

Elbows 180° short radius ASTM A234 WPB

Lista



| NPS        | D<br>mm | s<br>mm | R<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. N°   |
|------------|---------|---------|---------|---------|-----------------|-----------|
| 2" STD     | 60,3    | 3,91    | 50,8    | 81,0    | 0,83            | 2D55 0286 |
| 2" XS      | 60,3    | 5,54    | 50,8    | 81,0    | 1,20            | 2D55 0289 |
| 2 1/2" STD | 73,0    | 5,16    | 63,5    | 100,1   | 1,64            | 2D55 0309 |
| 3" STD     | 88,9    | 5,49    | 76,2    | 120,7   | 2,72            | 2D55 0338 |
| 3" XS      | 88,9    | 7,62    | 76,2    | 120,7   | 3,66            | 2D55 0339 |
| 4" STD     | 114,3   | 6,02    | 101,6   | 158,8   | 5,12            | 2D55 0364 |
| 4" XS      | 114,3   | 8,56    | 101,6   | 158,8   | 7,16            | 2D55 0365 |
| 5" STD     | 141,3   | 6,55    | 127,0   | 196,9   | 8,64            | 2D55 0380 |
| 5" XS      | 141,3   | 9,53    | 127,0   | 196,9   | 12,18           | 2D55 0381 |
| 6" STD     | 168,3   | 7,11    | 152,4   | 236,5   | 13,26           | 2D55 0399 |
| 6" XS      | 168,3   | 10,97   | 152,4   | 236,5   | 21,00           | 2D55 0400 |

### Acessórios especiais

Podemos fornecer acessórios especiais, de acordo com o projecto do cliente, em todas as qualidades de aço carbono, liga ou inoxidável desde Ø 60,3 a Ø 1626 (2" a 64").

#### Special fittings

We can supply all types of fitting according to special drawings made from all steel qualities, carbon, low alloy or stainless from NPS 2" until 64".



**Reduções concêntricas ANSI B16.9 ASTM A234 WPB**  
Concentric redution ASTM B16.9 ASTM A234 WPB

Lista 3202



| NPS                 | d1 x d2<br>mm   | S1 x S2<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|---------------------|-----------------|---------------|---------|-----------------|-----------|
| 3/4" x 1/2" STD     | 26,67 x 21,34   | 2,87 / 2,77   | 38,1    | 0,07            | 2D85 0654 |
| 1" x 3/4" STD       | 33,40 x 26,67   | 3,38 / 2,87   | 50,8    | 0,12            | 2D85 0660 |
| 1" x 1/2" STD       | 33,40 x 21,34   | 3,38 / 2,77   | 50,8    | 0,13            | 2D85 0664 |
| 1 1/4" x 1" STD     | 42,16 x 33,40   | 3,56 / 3,38   | 50,8    | 0,17            | 2D85 0670 |
| 1 1/2" x 1 1/4" STD | 48,26 x 42,16   | 3,68 / 3,56   | 63,5    | 0,26            | 2D85 0679 |
| 1 1/2" x 1" STD     | 48,26 x 33,40   | 3,68 / 3,38   | 63,5    | 0,26            | 2D85 0683 |
| 1 1/2" x 1" XS      | 48,26 x 33,40   | 5,08 / 4,55   | 63,5    | 0,35            | 2D85 0684 |
| 1 1/2" x 3/4" STD   | 48,26 x 26,67   | 3,68 / 2,87   | 63,5    | 0,26            | 2D85 0687 |
| 1 1/2" x 1/2" STD   | 48,26 x 21,34   | 3,68 / 2,77   | 63,5    | 0,26            | 2D85 0689 |
| 1 1/2" x 1/2" XS    | 48,26 x 21,34   | 5,08 / 3,73   | 63,5    | 0,35            | 2D85 0690 |
| 2" x 1 1/2" STD     | 60,32 x 48,26   | 3,91 / 3,68   | 76,4    | 0,41            | 2D85 0693 |
| 2" x 1 1/2" XS      | 60,32 x 48,26   | 5,54 / 5,08   | 76,4    | 0,57            | 2D85 0694 |
| 2" x 1 1/4" STD     | 60,32 x 42,16   | 3,91 / 3,56   | 76,4    | 0,41            | 2D85 0697 |
| 2" x 1" STD         | 60,32 x 33,40   | 3,91 / 3,38   | 76,4    | 0,41            | 2D85 0701 |
| 2" x 1" XS          | 60,32 x 33,40   | 5,54 / 4,55   | 76,4    | 0,57            | 2D85 0702 |
| 2" x 3/4" STD       | 60,32 x 26,67   | 3,91 / 3,38   | 76,4    | 0,41            | 2D85 0705 |
| 2" x 3/4" XS        | 60,32 x 26,67   | 5,54 / 3,91   | 76,4    | 0,57            | 2D85 0706 |
| 2 1/2" x 2" STD     | 73,00 x 60,32   | 5,16 / 3,91   | 88,9    | 0,77            | 2D85 0714 |
| 2 1/2" x 1 1/2" STD | 73,00 x 48,26   | 5,16 / 3,68   | 88,9    | 0,77            | 2D85 0718 |
| 2 1/2" x 1 1/4" STD | 73,00 x 42,16   | 5,16 / 3,56   | 88,9    | 0,77            | 2D85 0722 |
| 3" X 2 1/2" STD     | 88,90 x 73,00   | 5,49 / 5,16   | 88,9    | 0,99            | 2D85 0733 |
| 3" X 2 1/2" XS      | 88,90 x 73,00   | 7,62 / 5,16   | 88,9    | 1,39            | 2D85 0734 |
| 3" X 2" STD         | 88,90 x 60,32   | 5,49 / 3,91   | 88,9    | 0,99            | 2D85 0737 |
| 3" X 2" XS          | 88,90 x 60,32   | 7,62 / 5,54   | 88,9    | 1,36            | 2D85 0738 |
| 3" x 1 1/2" STD     | 88,90 x 48,26   | 5,49 / 3,68   | 88,9    | 0,99            | 2D85 0742 |
| 3" x 1 1/2" XS      | 88,90 x 48,26   | 7,62 / 5,08   | 88,9    | 1,36            | 2D85 0743 |
| 4" x 3" STD         | 114,3 x 88,90   | 6,02 / 5,49   | 101,6   | 1,55            | 2D85 0769 |
| 4" x 3" XS          | 114,3 x 88,90   | 8,52 / 7,62   | 101,6   | 2,27            | 2D85 0770 |
| 4" x 2 1/2" STD     | 114,3 x 73,00   | 6,02 / 5,16   | 101,6   | 1,63            | 2D85 0774 |
| 4" x 2 1/2" XS      | 114,3 x 73,00   | 8,52 / 7,01   | 101,6   | 2,27            | 2D85 0775 |
| 4" x 2" STD         | 114,30 x 60,32  | 6,02 / 3,91   | 101,6   | 1,63            | 2D85 0778 |
| 4" x 2" XS          | 114,30 x 60,32  | 8,52 / 5,54   | 101,6   | 2,26            | 2D85 0779 |
| 5" x 4" STD         | 141,30 x 114,30 | 6,55 / 6,02   | 127,0   | 2,80            | 2D85 0793 |
| 5" x 3" STD         | 141,30 x 88,90  | 6,55 / 5,49   | 127,0   | 2,80            | 2D85 0798 |
| 6" x 5" STD         | 168,30 x 141,30 | 7,11 / 6,55   | 139,7   | 3,90            | 2D85 0818 |
| 6" x 5" XS          | 168,30 x 141,30 | 10,97 / 9,53  | 139,7   | 5,95            | 2D85 0819 |
| 6" x 4" STD         | 168,30 x 114,30 | 7,11 / 6,02   | 139,7   | 3,90            | 2D85 0823 |
| 6" x 4" XS          | 168,30 x 114,30 | 10,97 / 8,56  | 139,7   | 5,95            | 2C85 0824 |
| 6" x 3" STD         | 168,30 x 88,90  | 7,11 / 5,49   | 139,7   | 3,90            | 2D85 0828 |
| 6" x 3" XS          | 168,30 x 88,90  | 10,97 / 7,62  | 139,7   | 5,95            | 2D85 0829 |
| 8" x 6" STD         | 219,08 x 168,30 | 8,11 / 7,11   | 152,4   | 6,50            | 2D85 0845 |
| 8" x 5" STD         | 219,08 x 141,30 | 8,11 / 6,55   | 152,4   | 6,50            | 2D85 0852 |
| 8" x 4" STD         | 219,08 x 114,30 | 8,11 / 6,02   | 152,4   | 6,50            | 2D85 0859 |
| 10" x 8" STD        | 273,05 x 219,08 | 9,27 / 8,18   | 177,8   | 10,70           | 2D85 0874 |
| 10" x 8" XS         | 273,05 x 219,08 | 12,07 / 12,07 | 177,8   | 14,50           | 2D85 0875 |
| 10" x 6" STD        | 273,05 x 168,30 | 9,27 / 7,11   | 177,8   | 10,70           | 2D85 0880 |
| 12" x 10" STD       | 323,85 x 273,05 | 9,53 / 9,27   | 203,2   | 15,00           | 2D85 0893 |
| 12" x 8" STD        | 323,85 x 219,08 | 9,53 / 8,18   | 203,2   | 15,00           | 2D85 0898 |
| 12" x 6" STD        | 323,85 x 168,30 | 9,53 / 7,11   | 203,2   | 26,90           | 2D85 0902 |
| 14" x 12" STD       | 355,60 x 323,85 | 9,53 / 9,53   | 330,2   | 26,90           | 2D85 0907 |
| 14" x 10" STD       | 355,60 x 273,05 | 9,53 / 9,27   | 330,2   | 26,90           | 2D85 0912 |
| 14" x 8" STD        | 355,60 x 219,08 | 9,53 / 8,18   | 330,2   | 26,90           | 2D85 0917 |
| 16" x 12" STD       | 406,40 x 323,85 | 9,53 / 9,53   | 355,6   | 33,00           | 2D85 0931 |
| 16" x 10" STD       | 406,40 x 273,05 | 9,52 / 9,27   | 355,6   | 33,00           | 2D85 0935 |
| 18" x 16" STD       | 457,20 x 406,40 | 9,52 / 9,52   | 381,0   | 40,00           | 2D85 0945 |
| 20" x 16" STD       | 508,00 x 406,40 | 9,53 / 9,53   | 508,0   | 59,00           | 2D85 0952 |
| 20" x 12" STD       | 508,00 x 323,85 | 9,53 / 9,53   | 508,0   | 59,00           | 2D85 0960 |

**Reduções excêntricas ANSI B16.9 ASTM A234 WPB**

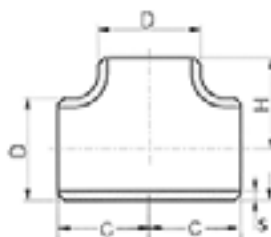
Eccentric reduction ANSI B16.9 ASTM A234 WPB

**Lista 2302**


| NPS<br>mm           | d1 x d2<br>mm   | S1 x S2<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|---------------------|-----------------|---------------|---------|-----------------|-----------|
| 3/4" x 1/2" STD     | 26,67 x 21,34   | 2,87 / 2,77   | 38,1    | 0,07            | 2D95 0654 |
| 3/4" x 1/2" XS      | 26,67 x 21,34   | 3,91 / 2,77   | 38,1    | 0,10            | 2D95 0655 |
| 1" x 3/4" STD       | 33,40 x 26,47   | 3,38 / 2,87   | 50,8    | 0,13            | 2D95 0660 |
| 1" x 3/4" XS        | 33,40 x 22,47   | 4,55 / 3,91   | 50,8    | 0,16            | 2D95 0661 |
| 1" x 1/2" STD       | 33,40 x 21,34   | 3,38 / 2,77   | 50,8    | 0,13            | 2D95 0664 |
| 1" x 1/2" XS        | 33,40 x 21,34   | 4,55 / 3,73   | 50,8    | 0,16            | 2D95 0665 |
| 1 1/4" x 1" STD     | 42,16 x 33,40   | 3,56 / 3,38   | 50,8    | 0,17            | 2D95 0670 |
| 1 1/4" x 1" XS      | 42,16 x 33,40   | 4,85 / 4,55   | 50,8    | 0,24            | 2D95 0671 |
| 1 1/2" x 1 1/4" STD | 48,26 x 42,16   | 3,68 / 3,56   | 63,5    | 0,26            | 2D95 0679 |
| 1 1/2" x 1 1/4" XS  | 48,26 x 42,16   | 5,08 / 4,55   | 63,5    | 0,34            | 2D95 0680 |
| 1 1/2" x 1" STD     | 48,26 x 33,40   | 3,68 / 3,38   | 63,5    | 0,26            | 2D95 0683 |
| 1 1/2" x 1" XS      | 48,26 x 33,40   | 5,08 / 4,55   | 63,5    | 0,35            | 2D95 0684 |
| 1 1/2" x 3/4" STD   | 48,26 x 26,47   | 3,68 / 2,87   | 63,5    | 0,26            | 2D95 0687 |
| 2" x 1 1/2" STD     | 60,32 x 48,26   | 3,91 / 3,68   | 76,1    | 0,41            | 2D95 0693 |
| 2" x 1 1/2" XS      | 60,32 x 48,26   | 5,54 / 5,08   | 76,1    | 0,57            | 2D95 0694 |
| 2" x 1 1/4" STD     | 60,32 x 48,16   | 3,91 / 3,56   | 76,1    | 0,41            | 2D95 0697 |
| 2" x 1" STD         | 60,32 x 33,40   | 3,91 / 3,38   | 76,1    | 0,41            | 2D95 0701 |
| 2" x 1" XS          | 60,32 x 33,40   | 5,54 / 4,55   | 76,1    | 0,57            | 2D95 0702 |
| 2 1/2" x 2" STD     | 73,00 x 60,32   | 5,16 / 3,91   | 88,9    | 0,77            | 2D95 0714 |
| 2 1/2" x 2" XS      | 73,00 x 60,32   | 7,01 / 5,54   | 88,9    | 1,01            | 2D95 0715 |
| 2 1/2" x 1 1/2" XS  | 73,00 x 48,26   | 5,16 / 3,68   | 88,9    | 0,77            | 2D95 0718 |
| 3" x 2 1/2" STD     | 88,90 x 73,00   | 5,49 / 5,16   | 88,9    | 1,00            | 2D95 0733 |
| 3" x 2 1/2" XS      | 88,90 x 73,00   | 7,62 / 7,01   | 88,9    | 1,36            | 2D95 0734 |
| 3" x 2" STD         | 88,90 x 60,32   | 5,49 / 3,91   | 88,9    | 1,00            | 2D95 0737 |
| 3" x 2" XS          | 88,90 x 60,32   | 7,62 / 5,54   | 88,9    | 1,36            | 2D95 0738 |
| 3" x 1 1/2" STD     | 88,90 x 48,26   | 5,49 / 3,68   | 88,9    | 1,00            | 2D95 0742 |
| 3" x 1 1/2" XS      | 88,90 x 48,26   | 7,62 / 5,08   | 88,9    | 1,36            | 2D95 0743 |
| 4" x 3" STD         | 114,30 x 88,90  | 6,02 / 5,49   | 101,6   | 1,60            | 2D95 0769 |
| 4" x 3" XS          | 114,30 x 88,90  | 8,56 / 7,62   | 101,6   | 2,27            | 2D95 0770 |
| 4" x 2 1/2" STD     | 114,30 x 73,00  | 6,02 / 5,16   | 101,6   | 1,60            | 2D95 0774 |
| 4" x 2" STD         | 114,30 x 60,32  | 6,02 / 3,91   | 101,6   | 1,60            | 2D95 0778 |
| 5" x 4" STD         | 141,30 x 114,30 | 6,55 / 6,02   | 127,0   | 2,80            | 2D95 0793 |
| 5" x 3" STD         | 141,30 x 88,90  | 6,55 / 5,49   | 127,0   | 2,80            | 2D95 0798 |
| 6" x 4" STD         | 168,30 x 114,30 | 7,11 / 6,02   | 139,7   | 3,90            | 2D95 0823 |
| 6" x 4" XS          | 168,30 x 114,30 | 10,97 / 8,56  | 139,7   | 5,95            | 2D95 0824 |
| 6" x 3" STD         | 168,30 x 88,90  | 7,11 / 5,49   | 139,7   | 3,95            | 2D95 0828 |
| 6" x 3" XS          | 168,30 x 88,90  | 10,97 / 7,62  | 139,7   | 5,95            | 2D95 0829 |
| 6" x 2 1/2" STD     | 168,30 x 73,00  | 7,11 / 5,16   | 139,7   | 3,90            | 2D95 0833 |
| 8" x 6" STD         | 219,08 x 168,30 | 8,11 / 7,11   | 152,4   | 6,50            | 2D95 0845 |
| 8" x 6" XS          | 219,08 x 168,30 | 12,07 / 10,97 | 152,4   | 9,86            | 2D95 0846 |
| 8" x 5" STD         | 219,08 x 141,30 | 8,11 / 6,55   | 152,4   | 6,50            | 2D95 0852 |
| 8" x 4" STD         | 219,08 x 114,30 | 8,11 / 6,02   | 152,4   | 6,50            | 2D95 0859 |
| 8" x 4" XS          | 219,08 x 114,30 | 12,07 / 8,56  | 152,4   | 9,86            | 2D95 0860 |
| 10" x 8" STD        | 273,05 x 219,08 | 9,27 / 8,18   | 177,8   | 10,70           | 2D95 0874 |
| 10" x 6" STD        | 273,05 x 168,30 | 9,27 / 7,11   | 177,8   | 10,70           | 2D95 0880 |
| 12" x 10" STD       | 323,85 x 273,05 | 9,53 / 9,27   | 203,7   | 15,00           | 2D95 0893 |
| 12" x 8" STD        | 323,85 x 219,08 | 9,53 / 8,18   | 203,7   | 15,00           | 2D95 0898 |
| 12" x 6" STD        | 323,85 x 168,30 | 9,53 / 7,11   | 203,7   | 15,00           | 2D95 0902 |
| 14" x 10" STD       | 355,60 x 273,05 | 9,53 / 9,27   | 330,7   | 26,90           | 2D95 0912 |
| 16" x 12" STD       | 406,40 x 323,85 | 9,53 / 9,53   | 355,6   | 33,00           | 2D95 0931 |
| 16" x 10" STD       | 406,40 x 273,05 | 9,53 / 9,27   | 355,6   | 33,00           | 2D95 0935 |
| 20" x 16" STD       | 508,00 x 406,40 | 9,53 / 9,53   | 508,0   | 59,00           | 2D95 0952 |

**Tê ANSI B16.9 ASTM A234 WPB**  
Equal tee

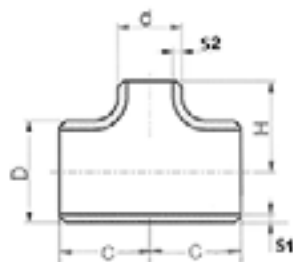
Lista 2304



| NPS            | D<br>mm | s<br>mm | C<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|----------------|---------|---------|---------|---------|-----------------|-----------|
| 1/2" STD       | 21,34   | 2,77    | 25,4    | 25,4    | 0,200           | 2E05 0170 |
| 3/4" STD       | 26,67   | 2,87    | 28,4    | 28,4    | 0,200           | 2E05 0191 |
| 3/4" XS        | 26,67   | 3,91    | 28,4    | 28,4    | 0,250           | 2E05 0193 |
| 1" STD         | 33,40   | 3,38    | 38,1    | 38,1    | 0,290           | 2E05 0218 |
| 1" XS          | 33,40   | 4,55    | 38,1    | 38,1    | 0,380           | 2E05 0220 |
| 1" Sch 160     | 33,40   | 6,35    | 38,1    | 38,1    | 0,450           | 2E05 0221 |
| 1 1/4" STD     | 42,16   | 3,56    | 47,8    | 47,8    | 0,610           | 2E05 0243 |
| 1 1/2" STD     | 48,26   | 3,68    | 57,2    | 57,2    | 0,900           | 2E05 0260 |
| 1 1/2" XS      | 48,26   | 5,08    | 57,2    | 57,2    | 1,100           | 2E05 0262 |
| 1 1/2" Sch 160 | 48,26   | 7,14    | 57,2    | 57,2    | 1,400           | 2E05 0263 |
| 2" STD         | 60,32   | 3,91    | 63,5    | 63,5    | 1,400           | 2E05 0286 |
| 2" XS          | 60,32   | 5,54    | 63,5    | 63,5    | 1,700           | 2E05 0289 |
| 2" Sch 160     | 60,32   | 8,71    | 63,5    | 63,5    | 2,000           | 2E05 0291 |
| 2 1/2" STD     | 73,00   | 5,16    | 76,7    | 76,2    | 2,400           | 2E05 0309 |
| 3" STD         | 88,90   | 5,49    | 85,9    | 85,9    | 3,400           | 2E05 0338 |
| 3" XS          | 88,90   | 7,62    | 85,9    | 85,9    | 4,300           | 2E05 0339 |
| 4" STD         | 114,30  | 6,02    | 104,6   | 104,6   | 5,700           | 2E05 0364 |
| 4" XS          | 114,30  | 8,56    | 104,6   | 104,6   | 7,400           | 2E05 0365 |
| 5" STD         | 141,30  | 6,55    | 124,0   | 124,0   | 9,000           | 2E05 0380 |
| 6" STD         | 168,30  | 7,11    | 142,7   | 142,7   | 13,00           | 2E05 0399 |
| 6" XS          | 168,30  | 10,97   | 142,7   | 142,7   | 21,00           | 2E05 0400 |
| 8" Sch 20      | 219,08  | 6,35    | 177,8   | 177,8   | 25,00           | 2E05 0414 |
| 8" STD         | 219,08  | 8,18    | 177,8   | 177,8   | 25,00           | 2E05 0415 |
| 8" XS          | 219,08  | 12,7    | 177,8   | 177,8   | 37,00           | 2E05 0416 |
| 10" Sch 20     | 273,05  | 6,35    | 215,9   | 215,9   | 34,70           | 2E05 0425 |
| 10" STD        | 273,05  | 9,27    | 215,9   | 215,9   | 42,00           | 2E05 0427 |
| 10" XS         | 273,05  | 12,7    | 215,9   | 215,9   | 58,57           | 2E05 0428 |
| 12" STD        | 323,85  | 9,52    | 254,0   | 254,0   | 59,90           | 2E05 0441 |
| 12" XS         | 323,85  | 12,7    | 254,0   | 254,0   | 75,70           | 2E05 0442 |
| 14" STD        | 355,60  | 9,53    | 279,4   | 279,4   | 72,10           | 2E05 0453 |
| 16" STD        | 406,40  | 9,53    | 304,8   | 304,8   | 99,30           | 2E05 0465 |
| 18" STD        | 457,20  | 9,53    | 342,9   | 342,9   | 135,00          | 2E05 0476 |
| 20" STD        | 508,00  | 9,53    | 381,0   | 381,0   | 168,00          | 2E05 0487 |
| 24" STD        | 609,60  | 9,53    | 431,8   | 431,8   | 240,00          | 2E05 0509 |

**Tês de redução ANSI B16.9 ASTM A234 WPB**  
Reduction tee

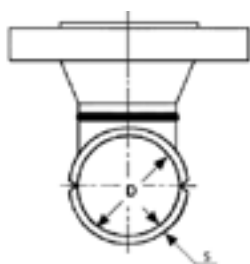
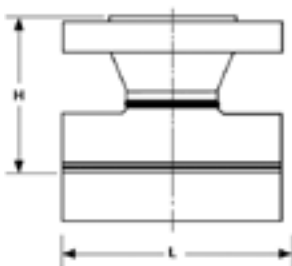
Lista 2075



| NPS               | D x d<br>mm     | s1 / s2<br>mm | C<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|-------------------|-----------------|---------------|---------|---------|-----------------|-----------|
| 3/4" x 1/2" STD   | 26,67 x 21,34   | 2,87 / 2,77   | 28,58   | 28,58   | 0,154           | 2E15 0654 |
| 1" x 3/4" STD     | 33,40 x 26,67   | 3,38 / 2,87   | 38,1    | 38,1    | 0,295           | 2E15 0660 |
| 1" x 1/2" STD     | 33,40 x 21,34   | 3,38 / 2,77   | 38,1    | 38,1    | 0,290           | 2E15 0664 |
| 1 1/2" x 1" STD   | 48,3 x 33,40    | 3,56 / 3,38   | 57,2    | 57,2    | 0,762           | 2E15 0683 |
| 1 1/2" x 1" XS    | 48,3 x 33,40    | 5,08 / 4,55   | 57,2    | 57,2    | 0,948           | 2E15 0684 |
| 1 1/2" x 3/4" STD | 48,3 x 26,67    | 3,58 / 2,87   | 57,2    | 57,2    | 0,730           | 2E15 0687 |
| 1 1/2" x 3/4" XS  | 48,3 x 26,67    | 5,08 / 3,91   | 57,2    | 57,2    | 0,921           | 2E15 0688 |
| 2" x 1 1/2" STD   | 60,32 x 48,26   | 3,91 / 3,68   | 63,5    | 60,5    | 1,210           | 2E15 0693 |
| 2" x 1 1/2" XS    | 60,32 x 48,26   | 5,54 / 5,08   | 63,5    | 60,5    | 1,540           | 2E15 0694 |
| 2" x 1" STD       | 60,32 x 33,40   | 3,91 / 3,38   | 63,5    | 50,8    | 1,120           | 2E15 0701 |
| 2" x 1" XS        | 60,32 x 33,40   | 5,54 / 4,55   | 63,5    | 50,8    | 1,440           | 2E15 0702 |
| 3" x 2" STD       | 88,9 x 60,32    | 5,49 / 3,91   | 85,9    | 76,2    | 2,950           | 2E15 0737 |
| 3" x 2" XS        | 88,9 x 60,32    | 7,62 / 5,54   | 85,9    | 76,2    | 3,790           | 2E15 0738 |
| 3" x 1 1/2" STD   | 88,9 x 48,26    | 5,49 / 3,68   | 85,9    | 79,2    | 2,920           | 2E15 0742 |
| 4" x 3" STD       | 114,30 x 88,90  | 6,02 / 5,49   | 104,6   | 98,6    | 5,170           | 2E15 0769 |
| 4" x 2" STD       | 114,30 x 60,32  | 6,02 / 3,91   | 104,6   | 88,9    | 4,990           | 2E15 0778 |
| 4" x 2" XS        | 114,30 x 60,32  | 8,56 / 5,54   | 104,6   | 88,9    | 6,55            | 2E15 0779 |
| 5" x 4" STD       | 141,30 x 114,30 | 6,55 / 6,02   | 124,0   | 117,3   | 8,21            | 2E15 0793 |
| 5" x 3" STD       | 141,30 x 88,90  | 6,55 / 5,49   | 124,0   | 111,3   | 7,98            | 2E15 0798 |
| 6" x 4" STD       | 168,30 x 114,30 | 7,11 / 6,02   | 142,7   | 130,2   | 11,90           | 2E15 0823 |
| 6" x 3" STD       | 168,30 x 88,90  | 7,11 / 5,49   | 142,7   | 124,0   | 11,70           | 2E15 0828 |
| 8" x 6" STD       | 219,08 x 168,30 | 8,18 / 7,11   | 177,8   | 168,1   | 22,10           | 2E15 0845 |
| 8" x 4" STD       | 219,08 x 114,30 | 8,18 / 6,02   | 177,8   | 155,6   | 21,70           | 2E15 0859 |
| 10" x 8" STD      | 273,05 x 219,08 | 9,27 / 8,18   | 215,9   | 203,2   | 40,00           | 2E15 0874 |
| 10" x 6" STD      | 273,05 x 168,30 | 9,27 / 7,11   | 215,9   | 193,5   | 40,50           | 2E15 0880 |
| 10" x 4" STD      | 273,05 x 114,30 | 9,27 / 6,02   | 215,9   | 184,2   | 36,80           | 2E15 0887 |
| 12" x 10" STD     | 323,85 x 273,05 | 9,53 / 9,27   | 254,0   | 241,3   | 63,00           | 2E15 0893 |
| 14" x 12" STD     | 355,60 x 323,85 | 9,53 / 9,27   | 279,4   | 269,7   | 107,00          | 2E15 0907 |
| 16" x 12" STD     | 406,40 x 323,85 | 9,53 / 9,53   | 304,8   | 295,1   | 119,00          | 2E15 0931 |
| 20" x 12" STD     | 508,0 x 323,85  | 9,53 / 9,53   | 381,0   | 346,0   | 163,00          | 2E15 0960 |
| 20" x 16" XS      | 508,0 x 406,4   | 12,70 / 12,70 | 381,0   | 356,0   | 200,00          | 2E15 0953 |

**Split tees ANSI/ ASME B31-1, 3, 4 e 8**

Split tee according to ANSI/ASME B31-1, 3, 4 and 8 - Equal size and reduced Tees

**Lista 2075**


| NPS      | D      |        | S      |       | L       |        | 150LB - H - 300LB |       |        |       | Art. N° |
|----------|--------|--------|--------|-------|---------|--------|-------------------|-------|--------|-------|---------|
|          | inch   | mm     | inch   | mm    | inch    | mm     | inch              | mm    | inch   | mm    |         |
| 2 x 2"   | 2,46"  | 62,48  | 0,203" | 5,15  | 6"      | 152,4  | 5,31"             | 134,9 | 5,56"  | 141,2 |         |
| 3 x 3"   | 3,62"  | 91,95  | 0,438" | 11,13 | 7"      | 171,8  | 6,37"             | 161,8 | 6,75"  | 171,5 |         |
| 4 x 4"   | 4,65"  | 118,11 | 0,375" | 9,53  | 10,75"  | 273,0  | 6,16"             | 156,5 | 6,53"  | 165,9 |         |
| 4 x 3"   | 4,65"  | 118,11 | 0,375" | 9,53  | 8,25"   | 209,6  | 5,92"             | 150,4 | 6,29"  | 159,8 |         |
| 6 x 6"   | 6,78"  | 172,21 | 0,373" | 9,53  | 14,00"  | 355,6  | 7,84"             | 199,1 | 8,22"  | 208,8 |         |
| 6 x 4"   | 6,78"  | 172,21 | 0,375" | 9,53  | 10,75"  | 273,1  | 7,28"             | 184,9 | 7,65"  | 194,3 |         |
| 8 x 8"   | 8,81"  | 223,77 | 0,373" | 9,53  | 16,50"  | 419,1  | 9,42"             | 239,3 | 9,80"  | 248,9 |         |
| 8 x 6"   | 8,81"  | 223,77 | 0,375" | 9,53  | 14,00"  | 355,0  | 8,66"             | 220,0 | 9,24"  | 234,7 |         |
| 8 x 4"   | 8,81"  | 223,77 | 0,375" | 9,53  | 10,75"  | 273,1  | 8,29"             | 213,1 | 8,67"  | 220,2 |         |
| 10 x 10" | 10,84" | 275,34 | 0,500" | 12,70 | 20,00"  | 508,0  | 10,73"            | 272,5 | 11,36" | 288,5 |         |
| 10 x 8"  | 10,84" | 275,34 | 0,500" | 12,70 | 16,50"  | 419,1  | 10,79"            | 274,1 | 11,17" | 283,7 |         |
| 10 x 6"  | 10,84" | 275,35 | 0,500" | 12,70 | 16,50"  | 419,1  | 10,04"            | 255,0 | 10,42" | 264,7 |         |
| 12 x 12" | 12,87" | 326,89 | 0,625" | 15,88 | 22,00"  | 558,8  | 12,44"            | 316,0 | 13,06" | 331,7 |         |
| 12 x 8"  | 12,87" | 326,89 | 0,625" | 15,88 | 16,50"  | 419,1  | 12,06"            | 306,3 | 12,44" | 316,0 |         |
| 12 x 6"  | 12,87" | 326,89 | 0,625" | 15,88 | 14,00"  | 355,6  | 11,19"            | 283,0 | 11,56" | 293,6 |         |
| 14 x 14" | 14,12" | 358,65 | 0,625" | 15,88 | 26,00"  | 660,4  | 13,44"            | 341,4 | 14,06" | 357,1 |         |
| 14 x 12" | 14,12" | 358,65 | 0,625" | 15,88 | 22,00"  | 558,8  | 13,32"            | 338,3 | 13,95" | 354,3 |         |
| 14 x 6"  | 14,12" | 358,65 | 0,625" | 15,88 | 12,875" | 428,63 | 12,06"            | 306,3 | 12,44" | 316,0 |         |
| 16 x 16" | 16,12" | 409,45 | 0,750" | 19,05 | 30,00"  | 762,0  | 14,56"            | 369,8 | 15,31" | 388,9 |         |
| 16 x 10" | 16,12" | 409,45 | 0,750" | 19,05 | 20,00"  | 508,0  | 13,68"            | 347,5 | 14,31" | 363,5 |         |
| 16 x 6"  | 16,12" | 409,45 | 0,750" | 19,05 | 14,00"  | 355,6  | 12,12"            | 307,8 | 12,78" | 324,6 |         |
| 18 x 18" | 18,12" | 460,25 | 0,875" | 22,23 | 33,00"  | 838,2  | 15,51"            | 394,0 | 16,50" | 419,1 |         |
| 18 x 10" | 18,12" | 460,25 | 0,875" | 22,23 | 20,00"  | 508,0  | 14,81"            | 376,2 | 15,44" | 392,2 |         |
| 18 x 8"  | 18,12" | 460,25 | 0,875" | 22,23 | 16,375" | 415,9  | 14,14"            | 359,2 | 14,64" | 371,9 |         |
| 20 x 20" | 20,12" | 511,05 | 1,000" | 25,40 | 36,00"  | 914,4  | 16,82"            | 427,2 | 18,04" | 458,2 |         |
| 20 x 10" | 18,12" | 511,05 | 1,000" | 25,40 | 17,875" | 454,0  | 16,06"            | 407,9 | 16,68" | 423,7 |         |
| 20 x 6"  | 18,12" | 511,05 | 1,000" | 25,40 | 14,00"  | 355,6  | 19,62"            | 371,3 | 15,81" | 401,6 |         |
| 24 x 24" | 24,12" | 612,65 | 1,250" | 31,75 | 43,00"  | 1092,2 | 19,58"            | 497,3 | 21,00" | 533,4 |         |
| 24 x 12" | 24,12" | 612,65 | 1,250" | 31,75 | 21,375" | 542,9  | 18,37"            | 466,6 | 19,01" | 482,9 |         |
| 24 x 8"  | 24,12" | 612,65 | 1,250" | 31,75 | 16,50"  | 419,1  | 18,26"            | 463,8 | 18,76" | 476,5 |         |
| 30 x 30" | 30,12" | 765,05 | 1,375" | 31,75 | 56,00"  | 1422,4 | 22,63"            | 574,8 | 24,00" | 609,6 |         |

Podemos fornecer os "Split Tees" sem a flange e na qualidade pretendida.

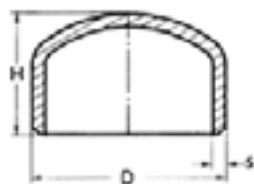
O comprimento "L" é variável conforme o diâmetro da redução, bem como a altura "H".

Nos "Split Tees" de redução, embora estejam indicadas as dimensões mais usuais, podemos fornecer qualquer outra.

We can supply the split tees without flange on the required quality.

The shown split tees are the more common required, but we have the possibilities to supply other sizes.

**Tampo ANSI B16.9 ASTM A234 WPB**  
 Caps

**Lista 2304**


| NPS        | D<br>mm | s<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. N°   |
|------------|---------|---------|---------|-----------------|-----------|
| 1" STD     | 33,4    | 3,38    | 38,1    | 0,100           | 2E25 0218 |
| 1" XS      | 33,4    | 4,55    | 38,1    | 0,130           | 2E25 0219 |
| 1 1/4" STD | 42,2    | 3,56    | 38,1    | 0,180           | 2E25 0243 |
| 1 1/2" STD | 48,3    | 3,68    | 38,1    | 0,180           | 2E25 0260 |
| 1 1/2" XS  | 48,3    | 5,08    | 38,1    | 0,220           | 2E25 0262 |
| 2" STD     | 60,3    | 3,91    | 38,1    | 0,230           | 2E25 0286 |
| 2" XS      | 60,3    | 5,54    | 38,1    | 0,300           | 2E25 0289 |
| 2 1/2" STD | 73,0    | 5,16    | 38,1    | 0,370           | 2E25 0309 |
| 2 1/2" XS  | 73,0    | 7,01    | 38,1    | 0,460           | 2E25 0310 |
| 3" STD     | 88,9    | 5,54    | 50,8    | 0,640           | 2E25 0338 |
| 3" XS      | 88,9    | 7,62    | 50,2    | 0,840           | 2E25 0339 |
| 4" STD     | 114,3   | 6,02    | 63,5    | 1,160           | 2E25 0364 |
| 4" XS      | 114,3   | 8,56    | 63,5    | 1,550           | 2E25 0365 |
| 5" STD     | 141,3   | 6,55    | 76,2    | 1,910           | 2E25 0380 |
| 6" STD     | 168,3   | 7,11    | 88,9    | 2,910           | 2E25 0399 |
| 6" XS      | 168,3   | 10,97   | 88,9    | 4,190           | 2E25 0400 |
| 8" STD     | 219,1   | 8,18    | 101,6   | 5,130           | 2E25 0415 |
| 8" XS      | 219,1   | 12,70   | 101,6   | 7,400           | 2E25 0416 |
| 10" STD    | 273,0   | 9,27    | 127,0   | 9,080           | 2E25 0427 |
| 10" XS     | 273,0   | 12,70   | 127,0   | 11,90           | 2E25 0428 |
| 12" STD    | 323,8   | 9,53    | 152,4   | 13,40           | 2E25 0441 |
| 12" XS     | 323,8   | 12,70   | 152,4   | 17,30           | 2E25 0442 |
| 14" STD    | 355,6   | 9,53    | 165,1   | 16,00           | 2E25 0453 |
| 16" STD    | 406,4   | 9,53    | 177,8   | 20,10           | 2E25 0465 |
| 18" STD    | 457,0   | 9,53    | 203,2   | 25,90           | 2E25 0476 |
| 20" STD    | 508,0   | 9,53    | 228,6   | 32,50           | 2E25 0484 |
| 24" STD    | 610,0   | 9,53    | 266,7   | 46,30           | 2E25 0496 |
| 28" STD    | 711,0   | 9,53    | 266,7   | 56,00           | 2E25 0503 |
| 32" STD    | 812,8   | 9,53    | 266,7   | 68,00           | 2E25 0504 |
| 36" STD    | 914,4   | 9,53    | 266,7   | 79,50           | 2E25 0505 |

**Joelho 90° roscado ANSI B 1-20-1 NPT**

Threaded elbow 90°

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,160           | 2G32 9070 |       | 1/4"    | 0,300           | 2I12 9070 |
| 3/8"    | 0,320           | 2G32 9071 |       | 3/8"    | 0,400           | 2I12 9071 |
| 1/2"    | 0,440           | 2G32 9072 |       | 1/2"    | 0,675           | 2I12 9072 |
| 3/4"    | 0,680           | 2G32 9073 |       | 3/4"    | 1,125           | 2I12 9073 |
| 1"      | 0,990           | 2G32 9074 |       | 1"      | 1,585           | 2I12 9074 |
| 1 1/4"  | 1,250           | 2G32 9075 |       | 1 1/4"  | 2,600           | 2I12 9075 |
| 1 1/2"  | 2,430           | 2G32 9076 |       | 1 1/2"  | 4,100           | 2I12 9076 |
| 2"      | 3,300           | 2G32 9077 |       | 2"      | 7,125           | 2I12 9077 |
| 2 1/2"  | 5,350           | 2G32 9078 |       |         |                 |           |
| 3"      | 8,530           | 2G32 9079 |       |         |                 |           |
| 4"      | 17,000          | 2G32 9080 |       |         |                 |           |

**Joelho 45° roscado ANSI B 1-20-1 NPT**

Threaded elbow 45°

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°    |
| 3/8"    | 0,280           | 2G42 9071 |       | 3/8"    | 0,350           | 2G42 90716 |
| 1/2"    | 0,305           | 2G42 9072 |       | 1/2"    | 0,600           | 2G42 90726 |
| 3/4"    | 0,540           | 2G42 9073 |       | 3/4"    | 0,1000          | 2G42 90736 |
| 1"      | 0,840           | 2G42 9074 |       | 1"      | 1,360           | 2G42 90746 |
| 1 1/4"  | 1,020           | 2G42 9075 |       | 1 1/4"  | 2,090           | 2G42 90756 |
| 1 1/2"  | 1,800           | 2G42 9076 |       | 1 1/2"  | 3,600           | 2G42 90766 |
| 2"      | 3,000           | 2G42 9077 |       | 2"      | 7,700           | 2G42 90776 |
| 2 1/2"  | 4,700           | 2G42 9078 |       |         |                 |            |

**Tê roscado ANSI B 1-20-1 NPT**

Threaded equal tee

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,230           | 2G52 9070 |       |         |                 |           |
| 3/8"    | 0,320           | 2G52 9071 |       |         |                 |           |
| 1/2"    | 0,520           | 2G52 9072 |       | 1/2"    | 0,960           | 2I22 9072 |
| 3/4"    | 0,840           | 2G52 9073 |       | 3/4"    | 1,500           | 2I22 9073 |
| 1"      | 1,260           | 2G52 9074 |       | 1"      | 2,050           | 2I22 9074 |
| 1 1/4"  | 1,635           | 2G52 9075 |       | 1 1/4"  | 3,300           | 2I22 9075 |
| 1 1/2"  | 2,805           | 2G52 9076 |       | 1 1/2"  | 5,300           | 2I22 9076 |
| 2"      | 4,000           | 2G52 9077 |       | 2"      | 9,300           | 2I22 9077 |
| 2 1/2"  | 6,900           | 2G52 9078 |       |         |                 |           |
| 3"      | 10,500          | 2G52 9079 |       |         |                 |           |
| 4"      | 19,500          | 2G52 9080 |       |         |                 |           |

**Tê de redução roscado ANSI B 1-20-1 NPT**

Reducer tee

Lista 2360



| 3000 Lb       |                 |           |
|---------------|-----------------|-----------|
| NPS           | Kg/Pc<br>Weight | Art. N°   |
| 1/2" x 1/4"   | 0,550           | 2E12 9623 |
| 3/4" x 1/4"   | 0,850           | 2E12 9626 |
| 3/4" x 1/2"   | 0,850           | 2E12 9624 |
| 1" x 3/4"     | 1,270           | 2E12 9628 |
| 1" x 1/2"     | 1,280           | 2E12 9629 |
| 1 1/4" x 3/4" | 1,700           | 2E12 9633 |
| 1 1/2" x 1"   | 2,850           | 2E12 9636 |
| 1 1/2" x 3/4" | 2,900           | 2E12 9637 |
| 2" x 1/2"     | 4,200           | 2E12 9643 |
| 2" x 1"       | 4,180           | 2E12 9641 |
| 2" x 1 1/4"   | 4,150           | 2E12 9640 |
| 2" x 1 1/2"   | 4,150           | 2E12 9639 |

Também podemos fornecer estes acessórios para baixa temperatura segundo ASTM A350.  
We can also supply this fittings for low temperature in according to ASTM A350.

**Joelho 90° M/F ANSI B 1-20-1 NPT**  
 90° Street elbow

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°    |
| 1/4"    | 0,140           | 2H42 9070 |       | 1/4"    | 0,325           | 2H42 90706 |
| 3/8"    | 0,180           | 2H42 9071 |       | 3/8"    | 0,440           | 2H42 90716 |
| 1/2"    | 0,250           | 2H42 9072 |       | 1/2"    | 0,780           | 2H42 90726 |
| 3/4"    | 0,420           | 2H42 9073 |       | 3/4"    | 1,285           | 2H42 90736 |
| 1"      | 0,650           | 2H42 9074 |       | 1"      | 1,905           | 2H42 90746 |
| 1 1/4"  | 0,940           | 2H42 9075 |       | 1 1/4"  | 3,090           | 2H42 90756 |
| 1 1/2"  | 1,420           | 2H42 9076 |       | 1 1/2"  | 4,770           | 2H42 90766 |
| 2"      | 2,170           | 2H42 9077 |       |         |                 |            |

**União roscada ANSI B 1-20-1 NPT**  
 Threaded coupling

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,070           | 2G82 9070 |       |         |                 |           |
| 3/8"    | 0,090           | 2G82 9071 |       |         |                 |           |
| 1/2"    | 0,140           | 2G82 9072 |       | 1/2"    | 0,315           | 2I32 9072 |
| 3/4"    | 0,220           | 2G82 9073 |       | 3/4"    | 0,450           | 2I32 9073 |
| 1"      | 0,420           | 2G82 9074 |       | 1"      | 0,900           | 2I32 9074 |
| 1 1/4"  | 0,850           | 2G82 9075 |       | 1 1/4"  | 1,100           | 2I32 9075 |
| 1 1/2"  | 1,065           | 2G82 9076 |       | 1 1/2"  | 1,850           | 2I32 9076 |
| 2"      | 1,600           | 2G82 9077 |       | 2"      | 2,800           | 2I32 9077 |
| 2 1/2"  | 2,500           | 2G82 9078 |       |         |                 |           |
| 3"      | 3,700           | 2G82 9079 |       |         |                 |           |
| 4"      | 6,500           | 2G82 9080 |       |         |                 |           |

**Meia união roscada ANSI B 1-20-1 NPT**  
 Threaded half coupling

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,04            | 2G92 9070 |       | 1/4"    | 0,055           | 2I42 9070 |
| 3/8"    | 0,05            | 2G92 9071 |       | 3/8"    | 0,090           | 2I42 9071 |
| 1/2"    | 0,08            | 2G92 9072 |       | 1/2"    | 0,160           | 2I42 9072 |
| 3/4"    | 0,110           | 2G92 9073 |       | 3/4"    | 0,220           | 2I42 9073 |
| 1"      | 0,210           | 2G92 9074 |       | 1"      | 0,445           | 2I42 9074 |
| 1 1/4"  | 0,420           | 2G92 9075 |       | 1 1/4"  | 0,520           | 2I42 9075 |
| 1 1/2"  | 0,520           | 2G92 9076 |       | 1 1/2"  | 0,950           | 2I42 9076 |
| 2"      | 0,820           | 2G92 9077 |       | 2"      | 1,400           | 2I42 9077 |
| 2 1/2"  | 1,250           | 2G92 9078 |       |         |                 |           |
| 3"      | 1,835           | 2G92 9079 |       |         |                 |           |
| 4"      | 3,400           | 2G92 9080 |       |         |                 |           |

**União de redução roscada ANSI B 1-20-1 NPT**  
 Reducing coupling

Lista 2360



| 3000 Lb         |                 |           |       | 6000 Lb       |                 |           |
|-----------------|-----------------|-----------|-------|---------------|-----------------|-----------|
| NPS             | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS           | Kg/Pc<br>Weight | Art. N°   |
| 3/8" x 1/4"     | 0,070           | 2H12 9621 |       | 3/8" x 1/4"   | 0,200           | 2I52 9621 |
| 1/2" x 3/8"     | 0,150           | 2H12 9622 |       | 1/2" x 3/8"   | 0,340           | 2I52 9622 |
| 1/2" x 1/4"     | 0,190           | 2H12 9623 |       | 1/2" x 1/4"   | 0,375           | 2I52 9623 |
| 3/4" x 1/2"     | 0,235           | 2H12 9624 |       | 3/4" x 1/2"   | 0,470           | 2I52 9624 |
| 3/4" x 1/4"     | 0,285           | 2H12 9626 |       | 3/4" x 1/4"   | 0,520           | 2I52 9626 |
| 1" x 3/4"       | 0,500           | 2H12 9628 |       | 1" x 3/4"     | 0,970           | 2I52 9628 |
| 1" x 1/2"       | 0,540           | 2H12 9629 |       | 1" x 1/2"     | 1,110           | 2I52 9629 |
| 1 1/4" x 1"     | 0,830           | 2H12 9632 |       | 1" x 1/4"     | 1,150           | 2I52 9631 |
| 1 1/2" x 1 1/4" | 1,130           | 2H12 9634 |       | 1 1/4" x 1"   | 1,150           | 2I52 9632 |
| 1 1/2" x 1"     | 1,180           | 2H12 9636 |       | 1 1/2" x 1"   | 2,135           | 2I52 9636 |
| 1 1/2" x 3/4"   | 1,170           | 2H12 9637 |       | 1 1/2" x 3/4" | 2,170           | 2I52 9637 |
| 1 1/2" x 1/2"   | 1,185           | 2H12 9638 |       | 1 1/2" x 1/2" | 2,200           | 2I52 9638 |
| 2" x 1 1/2"     | 1,610           | 2H12 9639 |       | 2" x 1 1/2"   | 3,140           | 2I52 9639 |
| 2" x 1"         | 1,925           | 2H12 9641 |       | 2" x 1"       | 3,455           | 2I52 9641 |
| 2 1/2" x 2"     | 2,765           | 2H12 9644 |       |               |                 |           |
| 3" x 2"         | 4,800           | 2H12 9646 |       |               |                 |           |
| 4" x 3"         | 8,230           | 2H12 9647 |       |               |                 |           |
| 4" x 2"         | 9,620           | 2H12 9648 |       |               |                 |           |

**Casquilho sextavado M/M roscado ANSI B 1-20-1 NPT**  
Hexagonal nipple

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°    |
| 1/4"    | 0,030           | 2H02 9070 |       |         |                 |            |
| 3/8"    | 0,055           | 2H02 9071 |       |         |                 |            |
| 1/2"    | 0,080           | 2H02 9072 |       | 1/2"    | 0,150           | 2H02 90726 |
| 3/4"    | 0,145           | 2H02 9073 |       | 3/4"    | 0,210           | 2H02 90736 |
| 1"      | 0,170           | 2H02 9074 |       | 1"      | 0,350           | 2H02 90746 |
| 1 1/4"  | 0,280           | 2H02 9075 |       | 1 1/4"  | 0,490           | 2H02 90756 |
| 1 1/2"  | 0,340           | 2H02 9076 |       | 1 1/2"  | 0,550           | 2H02 90766 |
| 2"      | 0,550           | 2H02 9077 |       | 2"      | 0,950           | 2H02 90776 |
| 2 1/2"  | 1,300           | 2H02 9078 |       |         |                 |            |
| 3"      | 1,660           | 2H02 9079 |       |         |                 |            |
| 4"      | 4,400           | 2H02 9080 |       |         |                 |            |

**Casquilho sextavado de redução M/M roscado ANSI B 1-20-1 NPT**  
Reducing hexagonal nipple

Lista 2360



| 3000 Lb       |                 |           |       | 6000 Lb       |                 |            |
|---------------|-----------------|-----------|-------|---------------|-----------------|------------|
| NPS           | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS           | Kg/Pc<br>Weight | Art. N°    |
| 3/8" x 1/4"   | 0,050           | 2H22 9621 |       |               |                 |            |
| 1/2" x 3/8"   | 0,080           | 2H22 9622 |       |               |                 |            |
| 1/2" x 1/4"   | 0,080           | 2H22 9623 |       |               |                 |            |
| 3/4" x 1/2"   | 0,100           | 2H22 9624 |       | 3/4" x 1/2"   | 0,210           | 2H22 96246 |
| 3/4" x 1/4"   | 0,105           | 2H22 9626 |       | 3/4" x 1/4"   | 0,200           | 2H22 96266 |
| 1" x 3/4"     | 0,170           | 2H22 9628 |       | 1" x 3/4"     | 0,350           | 2H22 96286 |
| 1" x 1/2"     | 0,170           | 2H22 9629 |       | 1" x 1/2"     | 0,345           | 2H22 96296 |
| 1 1/4" x 1"   | 0,280           | 2H22 9632 |       | 1" x 1/4"     | 0,340           | 2H22 96316 |
| 1 1/4" x 3/4" | 0,280           | 2H22 9633 |       | 1 1/4" x 1"   | 0,480           | 2H22 96326 |
| 1 1/2" x 1"   | 0,340           | 2H22 9636 |       | 1 1/2" x 1"   | 0,550           | 2H22 96366 |
| 1 1/2" x 3/4" | 0,340           | 2H22 9637 |       | 1 1/2" x 3/4" | 0,540           | 2H22 96376 |
| 1 1/2" x 1/2" | 0,340           | 2H22 9638 |       | 1 1/2" x 1/2" | 0,540           | 2H22 96386 |
| 2" x 1 1/2"   | 0,550           | 2H22 9639 |       | 2" x 1 1/2"   | 0,950           | 2H22 96396 |
| 2" x 1"       | 0,550           | 2H22 9641 |       | 2" x 1"       | 0,940           | 2H22 96416 |
| 2 1/2" x 2"   | 1,450           | 2H22 9644 |       |               |                 |            |
| 3" x 2"       | 1,600           | 2H22 9646 |       |               |                 |            |
| 4" x 3"       | 4,400           | 2H22 9647 |       |               |                 |            |
| 4" x 2"       | 4,350           | 2H22 9648 |       |               |                 |            |

**Porca de redução M/ F roscado ANSI B 1-20-1 NPT**  
Reducing M/F

Lista 2360



| 3000 Lb - 6000 Lb |                 |           |       |               |                 |           |
|-------------------|-----------------|-----------|-------|---------------|-----------------|-----------|
| NPS               | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS           | Kg/Pc<br>Weight | Art. N°   |
| 3/8" x 1/4"       | 0,030           | 2H82 9621 |       | 1 1/4" x 1"   | 0,215           | 2H82 9632 |
| 1/2" x 3/8"       | 0,040           | 2H82 9622 |       | 1 1/2" x 1"   | 0,380           | 2H82 9636 |
| 1/2" x 1/4"       | 0,055           | 2H82 9623 |       | 1 1/2" x 3/4" | 0,465           | 2H82 9637 |
| 3/4" x 1/2"       | 0,085           | 2H82 9624 |       | 1 1/2" x 1/2" | 0,505           | 2H82 9638 |
| 3/4" x 3/8"       | 0,090           | 2H82 9625 |       | 2" x 1 1/2"   | 0,470           | 2H82 9639 |
| 3/4" x 1/4"       | 0,120           | 2H82 9626 |       | 2" x 1"       | 0,815           | 2H82 9641 |
| 3/4" x 1/8"       | 0,120           | 2H82 9627 |       |               |                 |           |
| 1" x 3/4"         | 0,105           | 2H82 9628 |       |               |                 |           |
| 1" x 1/2"         | 0,150           | 2H82 9629 |       |               |                 |           |
| 1" x 1/4"         | 0,190           | 2H82 9631 |       |               |                 |           |

Os Acessórios segundo ASME B16-11 são roscados segundo ANSI B1-20-1 e para vedarem necessitam sempre que se aplique na rosca uma pasta ou fita vedante, adequada ao fluido.  
Os Acessórios que garantem a vedação sem aporte de qualquer vedante, as rosas são executadas segundo NPTF (National Pipe Thread Fuel), de acordo com ANSI B1-20-3.

The Fittings acc ASME B16-11 are threaded acc ANSI B1-20-1 and are assembled with some form of sealant to assure a leak free joint.  
The NPTF thread ( Nacional Pipe Thread Fuel) acc ANSI B1 20.3 are designed to have interference at the roots and crests of the thread on both major and minor diameters. The thread deformation caused by the interference fit and the wrench tightening is designed to make a dry mechanical seal.

**Cruzeta roscada ANSI B 1-20-1 NPT**  
 Threaded cross

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. Nº   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. Nº    |
| 1/4"    | 0,210           | 2G72 9070 |       |         |                 |            |
| 3/8"    | 0,400           | 2G72 9071 |       |         |                 |            |
| 1/2"    | 0,625           | 2G72 9072 |       | 1/2"    | 1,120           | 2G72 90726 |
| 3/4"    | 0,990           | 2G72 9073 |       | 3/4"    | 1,900           | 2G72 90736 |
| 1"      | 1,630           | 2G72 9074 |       | 1"      | 2,900           | 2G72 90746 |
| 1 1/4"  | 1,970           | 2G72 9075 |       | 1 1/4"  | 4,200           | 2G72 90756 |
| 1 1/2"  | 3,700           | 2G72 9076 |       | 1 1/2"  | 6,350           | 2G72 90766 |
| 2"      | 5,000           | 2G72 9077 |       | 2"      | 9,800           | 2G72 90776 |
| 2 1/2"  | 8,380           | 2G72 9078 |       |         |                 |            |
| 3"      | 14,630          | 2G72 9079 |       |         |                 |            |
| 4"      | 21,800          | 2G72 9080 |       |         |                 |            |

**Tampão macho sextavado roscado ANSI B 1-20-1 NPT**  
 Hexagonal head plug

Lista 2360



| 3000 Lb - 6000 Lb |                 |           |
|-------------------|-----------------|-----------|
| NPS               | Kg/Pc<br>Weight | Art. Nº   |
| 1/4"              | 0,025           | 2G62 9070 |
| 3/8"              | 0,047           | 2G62 9071 |
| 1/2"              | 0,070           | 2G62 9072 |
| 3/4"              | 0,140           | 2G62 9073 |
| 1"                | 0,210           | 2G62 9074 |
| 1 1/4"            | 0,510           | 2G62 9075 |
| 1 1/2"            | 0,640           | 2G62 9076 |
| 2"                | 1,060           | 2G62 9077 |
| 2 1/2"            | 1,780           | 2G62 9078 |
| 3"                | 2,750           | 2G62 9079 |
| 4"                | 6,200           | 2G62 9080 |

**Tampo F roscado ANSI B 1-20-1 NPT**  
 Female cap

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. Nº   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. Nº    |
| 1/4"    | 0,050           | 2H32 9070 |       |         |                 |            |
| 3/8"    | 0,080           | 2H32 9071 |       |         |                 |            |
| 1/2"    | 0,125           | 2H32 9072 |       | 1/2"    | 0,150           | 2H32 90726 |
| 3/4"    | 0,210           | 2H32 9073 |       | 3/4"    | 0,230           | 2H32 90736 |
| 1"      | 0,280           | 2H32 9074 |       | 1"      | 0,490           | 2H32 90746 |
| 1 1/4"  | 0,600           | 2H32 9075 |       | 1 1/4"  | 0,680           | 2H32 90756 |
| 1 1/2"  | 0,725           | 2H32 9076 |       | 1 1/2"  | 1,200           | 2H32 90766 |
| 2"      | 1,300           | 2H32 9077 |       | 2"      | 1,750           | 2H32 90776 |
| 2 1/2"  | 2,310           | 2H32 9078 |       |         |                 |            |
| 3"      | 3,300           | 2H32 9079 |       |         |                 |            |
| 4"      | 6,420           | 2H32 9080 |       |         |                 |            |

Também podemos fornecer estes acessórios para baixa temperatura segundo ASTM A350.  
 We can also supply this fittings for low temperature in according to ASTM A350.

**Junção F/ F MSS-SP83 roscado ANSI B 1-20-1 NPT**  
Union F/ F

Lista 2360



| 3000 Lb |              |           |       | 6000 Lb |              |           |
|---------|--------------|-----------|-------|---------|--------------|-----------|
| NPS     | Kg/Pc Weight | Art. N°   | €/ pc | NPS     | Kg/Pc Weight | Art. N°   |
| 1/4"    | 0,330        | 2H52 9070 |       | 1/4"    | 0,480        | 2I62 9071 |
| 3/8"    | 0,420        | 2H52 9071 |       | 3/8"    | 0,660        | 2I62 9071 |
| 1/2"    | 0,540        | 2H52 9072 |       | 1/2"    | 1,450        | 2I62 9072 |
| 3/4"    | 0,660        | 2H52 9073 |       | 3/4"    | 1,790        | 2I62 9073 |
| 1"      | 0,830        | 2H52 9074 |       | 1"      | 2,830        | 2I62 9074 |
| 1 1/4"  | 1,220        | 2H52 9075 |       | 1 1/4"  | 2,400        | 2I62 9075 |
| 1 1/2"  | 1,960        | 2H52 9076 |       | 1 1/2"  | 3,900        | 2I62 9076 |
| 2"      | 3,620        | 2H52 9077 |       | 2"      | 6,500        | 2I62 9077 |
| 2 1/2"  | 6,710        | 2H52 9078 |       |         |              |           |
| 3"      | 8,850        | 2H52 9079 |       |         |              |           |
| 4"      | 12,000       | 2H52 9080 |       |         |              |           |

**Junção M/ F MSS-SP83 roscado ANSI B 1-20-1 NPT**  
Union M/ F

Lista 2360



| 3000 Lb |              |           |
|---------|--------------|-----------|
| NPS     | Kg/Pc Weight | Art. N°   |
| 1/4"    | 0,540        | 2H62 9070 |
| 3/8"    | 0,730        | 2H62 9071 |
| 1/2"    | 1,700        | 2H62 9072 |
| 3/4"    | 2,010        | 2H62 9073 |
| 1"      | 2,780        | 2H62 9074 |
| 1 1/4"  | 3,480        | 2H62 9075 |
| 1 1/2"  | 4,900        | 2H62 9076 |
| 2"      | 8,480        | 2H62 9077 |

**Entrada MSS-SP79 roscado ANSI B 1-20-1 NPT**  
Weld couplet

Lista 2360



| 3000 Lb / 6000 Lb |              |           |       |
|-------------------|--------------|-----------|-------|
| NPS               | Kg/Pc Weight | Art. N°   | €/ pc |
| 1/4"              | 0,085        | 2H72 9070 |       |
| 3/8"              | 0,110        | 2H72 9071 |       |
| 1/2"              | 0,140        | 2H72 9072 |       |
| 3/4"              | 0,200        | 2H72 9073 |       |
| 1"                | 0,340        | 2H72 9074 |       |
| 1 1/4"            | 0,550        | 2H72 9075 |       |
| 1 1/2"            | 0,600        | 2H72 9076 |       |
| 2"                | 0,770        | 2H72 9077 |       |

Contrariamente ao que se afirma correntemente, de que as roscas NPT fazem a vedação nos filetes, isto não se verifica na realidade, nem a norma assim o indica.

Para garantir a estanquidade há necessidade de se usar na rosca uma pasta ou fita de PTFE ou outra apropriada.

Só as roscas de NPTF garantem a estanquidade sem necessidade de utilização de outros produtos.

Para mais esclarecimento quer ver página D54

Contrary to current beliefs, that the NPT threads to form the seal, on the threads in fact this is not true neither the norm so indicates.

To guaranty the tightness on NPT threads is necessary to use on the threads of paste or a other suitable.

Only the NPTF threads can guaranty tightness without the use of other products.

For further information see page D54

**Nippolet ASME B31.3 ASTM A105N roscado ANSI B 1-20-1 NPT**
**Lista 2370**


| 3000 Lb         |                     |                 |           |
|-----------------|---------------------|-----------------|-----------|
| Saída<br>Outlet | Coletor<br>Run pipe | Kg/Pc<br>Weight | Art. Nº   |
| 1/2" XS         | 1 1/2" a 6"         | 0,200           | 2J62 9530 |
| 1/2" XS         | 8" a 36"            | 0,200           | 2J62 9532 |
| 3/4" XS         | 1 1/2" a 3"         | 0,340           | 2J62 9537 |
| 3/4" XS         | 6" a 12"            | 0,340           | 2J62 9538 |
| 1" XS           | 1 1/2" a 2"         | 0,550           | 2J62 9543 |
| 1" XS           | 3" a 5"             | 0,550           | 2J62 9550 |
| 1 1/2" XS       | 3 1/2" a 4"         | 0,800           | 2J62 9556 |
| 1 1/2" XS       | 6" a 12"            | 0,800           | 2J62 9558 |

Os Nippolets 3000 LB têm a espessura XS e os de 6000 LB tem a espessura Sch 160.  
 The Nippolets 3000 LB have the XS thickness of 6000 LB has a thickness Sch160.

**Thredolets ASME B31.3 ASTM A105N roscado ANSI B 1-20-1 NPT**
**Lista 2370**


| 3000 Lb         |                     |                 |           |
|-----------------|---------------------|-----------------|-----------|
| Saída<br>Outlet | Coletor<br>Run pipe | Kg/Pc<br>Weight | Art. Nº   |
| 1/4"            | 3/4" a 1"           | 0,070           | 2J72 9525 |
| 1/4"            | 1 1/4" a 2 1/2"     | 0,070           | 2J72 9526 |
| 3/8"            | 3/4" a 1"           | 0,095           | 2J72 9527 |
| 3/8"            | 1 1/4" a 2 1/2"     | 0,095           | 2J72 9528 |
| 1/2"            | 1 1/4" a 1 1/2"     | 0,110           | 2J72 9530 |
| 1/2"            | 3" a 8"             | 0,110           | 2J72 9531 |
| 3/4"            | 1 1/4" a 1 1/2"     | 0,190           | 2J72 9534 |
| 3/4"            | 2" a 2 1/2"         | 0,190           | 2J72 9535 |
| 3/4"            | 3" a 5"             | 0,160           | 2J72 9537 |
| 3/4"            | 6" a 12"            | 0,160           | 2J72 9538 |
| 1"              | 3" a 3 1/2"         | 0,380           | 2J72 9542 |
| 1"              | 6" a 10"            | 0,380           | 2J72 9546 |
| 1 1/4"          | 4" a 5"             | 0,450           | 2J72 9552 |
| 1 1/2"          | 3"                  | 0,660           | 2J72 9556 |
| 1 1/2"          | 8" a 12"            | 0,660           | 2J72 9558 |
| 2"              | 6"                  | 0,950           | 2J72 9566 |
| 2"              | 8" a 10"            | 0,950           | 2J72 9568 |

**Peso (kg) para casquilhos de comprimento standard API5L/B ou A106/B, roscados ASME B1.20 NPT**

Weight (kg) for nipples standard lengths API5L/B or A106/B, threaded ends ASME B1.20.1 NPT

**Lista 2360**


| NPS    | OD<br>mm | L= 50 mm |         | L= 75 mm |         | L= 100 mm |         | L= 150 mm |         | L= 200 mm |         |
|--------|----------|----------|---------|----------|---------|-----------|---------|-----------|---------|-----------|---------|
|        |          | Sch 80   | Sch 160 | Sch 80   | Sch 160 | Sch 80    | Sch 160 | Sch 80    | Sch 160 | Sch 80    | Sch 160 |
| 1/4"   | 13,72    | 0,040    |         | 0,060    |         | 0,080     |         | 0,120     |         | 0,160     |         |
| 3/8"   | 17,15    | 0,055    |         | 0,082    |         | 0,110     |         | 0,165     |         | 0,220     |         |
| 1/2"   | 21,34    | 0,081    | 0,100   | 0,121    | 0,146   | 0,162     | 0,192   | 0,243     | 0,292   | 0,324     | 0,390   |
| 3/4"   | 26,77    | 0,109    | 0,140   | 0,164    | 0,216   | 0,219     | 0,289   | 0,328     | 0,433   | 0,438     | 0,578   |
| 1"     | 33,40    | 0,161    | 0,210   | 0,242    | 0,317   | 0,323     | 0,423   | 0,484     | 0,634   | 0,646     | 0,846   |
| 1 1/4" | 42,16    |          |         | 0,334    | 0,42    | 0,446     | 0,560   | 0,669     | 0,840   | 0,892     | 1,120   |
| 1 1/2" | 48,26    |          |         | 0,405    | 0,542   | 0,540     | 0,723   | 0,810     | 1,084   | 1,080     | 1,446   |
| 2"     | 60,33    |          |         | 0,560    | 0,833   | 0,747     | 1,110   | 1,120     | 1,665   | 1,494     | 2,220   |
| 2 1/2" | 73,03    |          |         |          |         | 1,140     | 1,490   | 1,710     | 2,235   | 2,280     | 2,980   |
| 3"     | 88,90    |          |         |          |         | 1,525     | 2,130   | 2,287     | 3,195   | 3,050     | 4,260   |
| 4"     | 114,30   |          |         |          |         | 2,229     | 3,351   | 3,343     | 5,026   | 4,458     | 6,702   |

Podemos produzir estes casquilhos a partir de tubo do nosso stock, preto ou galvanizado, com o comprimento desejado. Roscado num ou nos dois extremos ou ainda sem rosca ou chanfrado para soldar.

We can supply this nipples from pipes of our stock, black or galvanised, to the desired length. Threaded one or on both ends, or without thread or beveled for welding.

Também podemos fornecer estes acessórios para baixa temperatura segundo ASTM A350.

We can also supply this fittings for low temperature in according to ASTM A350.

**Casquilho de redução BS3799/MSS SP95 - ASTM106B roscada ANSI B 1-20-1 NPT**

Swedge nipples

Lista 2360



| 3000 Lb - Sch 40 (STD) |     |                 |           |
|------------------------|-----|-----------------|-----------|
| Dimensão<br>Size       | L   | Kg/Pc<br>Weight | Art. Nº   |
| 3/8" x 1/4"            | 76  | 0,055           | 2J22 9621 |
| 1/2" x 3/8"            | 89  | 0,080           | 2J22 9622 |
| 1/2" x 1/4"            | 89  | 0,075           | 2J22 9623 |
| 3/4" x 1/2"            | 95  | 0,140           | 2J22 9624 |
| 1" x 3/4"              | 102 | 0,235           | 2J22 9628 |
| 1" x 1/2"              | 102 | 0,215           | 2J22 9629 |
| 1 1/4" x 1"            | 102 | 0,390           | 2J22 9632 |
| 1 1/2" x 1"            | 114 | 0,530           | 2J22 9636 |
| 1 1/2" x 3/4"          | 114 | 0,540           | 2J22 9637 |
| 1 1/2" x 1/2"          | 114 | 0,480           | 2J22 9638 |
| 2" x 1 1/2"            | 165 | 0,820           | 2J22 9639 |
| 2" x 1"                | 165 | 0,780           | 2J22 9641 |
| 2 1/2" x 2"            | 178 | 1,230           | 2J22 9644 |
| 3" x 2"                | 203 | 2,080           | 2J22 9646 |
| 4" x 3"                | 230 | 4,520           | 2J22 9647 |
| 4" x 2"                | 230 | 4,350           | 2J22 9648 |

Para as dimensões de 1/4" a 4" podemos fornecer estes casquilhos de redução com as espessuras STD ou XS.  
For NPS 1/4" until 4" we can supply this reduction nipples with STD or XS thickness.

Para as dimensões de 3/4" a 4" podemos fornecer estes casquilhos com a espessura STD - XS ou Sch 160.  
For NPS 3/4" until 4" we can supply this reduction nipples with thickness STD or Sch 160.

Swedge nipples

**Casquilho de redução BS3799/MSS SP95 - ASTM106B roscada ANSI B 1-20-1 NPT**

Lista 2360



| 3000 Lb / 6000 Lb - Sch 80 (XS) |     |                 |            |       | 6000 Lb - Sch 160 |     |                 |            |
|---------------------------------|-----|-----------------|------------|-------|-------------------|-----|-----------------|------------|
| Dimensão<br>Size                | L   | Kg/Pc<br>Weight | Art. Nº    | €/ pc | Dimensão<br>Size  | L   | Kg/Pc<br>Weight | Art. Nº    |
| 3/8" x 1/4"                     | 76  | 0,070           | 2J22 9621A |       | 3/8" x 1/4"       |     |                 | 2J22 9621B |
| 1/2" x 3/8"                     | 89  | 0,140           | 2J22 9622A |       | 1/2" x 3/8"       | 89  | 0,170           | 2J22 9622B |
| 1/2" x 1/4"                     | 89  | 0,130           | 2J22 9623A |       | 1/2" x 1/4"       | 89  | 0,160           | 2J22 9623B |
| 3/4" x 1/2"                     | 95  | 0,190           | 2J22 9624A |       | 3/4" x 1/2"       | 95  | 0,250           | 2J22 9624B |
| 1" x 3/4"                       | 102 | 0,350           | 2J22 9628A |       | 1" x 3/4"         | 102 | 0,390           | 2J22 9628B |
| 1" x 1/2"                       | 102 | 0,330           | 2J22 9629A |       | 1" x 1/2"         | 102 | 0,360           | 2J22 9629B |
| 1 1/4" x 1"                     | 102 | 0,520           | 2J22 9632A |       | 1 1/4" x 1"       | 102 | 0,630           | 2J22 9632B |
| 1 1/2" x 1"                     | 114 | 0,600           | 2J22 9636A |       | 1 1/2" x 1"       | 114 | 0,800           | 2J22 9636B |
| 1 1/2" x 3/4"                   | 114 | 0,580           | 2J22 9637A |       | 1 1/2" x 3/4"     | 114 | 0,790           | 2J22 9637B |
| 1 1/2" x 1/2"                   | 114 | 0,560           | 2J22 9638A |       | 1 1/2" x 1/2"     | 114 | 0,780           | 2J22 9638B |
| 2" x 1 1/2"                     | 165 | 1,150           | 2J22 9639A |       | 2" x 1 1/2"       | 165 | 1,750           | 2J22 9639B |
| 2" x 1"                         | 165 | 1,100           | 2J22 9641A |       | 2" x 1"           | 165 | 1,700           | 2J22 9641B |
| 2 1/2" x 2"                     | 178 | 1,900           | 2J22 9644A |       | 2 1/2" x 2"       | 178 | 2,590           | 2J22 9644B |
| 3" x 2"                         | 203 | 3,000           | 2J22 9646A |       | 3" x 2"           | 203 | 4,250           | 2J22 9646B |
| 4" x 3"                         | 230 | 5,050           | 2J22 9647A |       | 4" x 3"           | 230 | 7,640           | 2J22 9647B |
| 4" x 2"                         | 230 | 5,000           | 2J22 9648A |       | 4" x 2"           | 230 | 7,250           | 2J22 9648B |

**Códigos usados nas listas de material para casquilhos incluindo os de redução APISL/B ou ASTM A106/B**

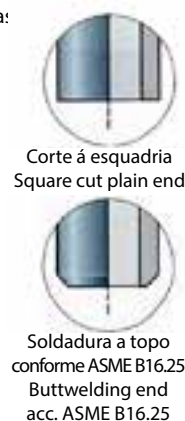
Code used for material lists for nipples and for swedge nipples (reduced nipples)



|                                                    |                                             |
|----------------------------------------------------|---------------------------------------------|
| P.B.E. - Plain both ends                           | Com corte à esquadria 2 extremidades lisas: |
| P.L.E. - Plain large ends                          | Com corte à esquadria maior diâmetro        |
| P.S.E. - Plain small end                           | Corte à esquadria, menor diâmetro           |
| B.B.E. - Beveled both ends                         | As duas extremidades chanfradas             |
| B.L.E. - Beveled large end                         | Maior diâmetro chanfrado                    |
| B.S.E. - Beveled small end                         | Menor diâmetro chanfrado                    |
| T.B.E. - Threaded both ends                        | As duas extremidades roscadas               |
| T.L.E. - Threaded larg end                         | Maior diâmetro roscado                      |
| T.O.E. - Threaded one ends                         | Um extremo roscado                          |
| T.S.E. - Threaded small end                        | Menor diâmetro roscado                      |
| B.O.E. - Beveled one end (for barrel nipples only) | Uma extremidade chanfrada                   |

Two codes may be used on the same item, for example: Swedge Nipple 3" x 2" BLE/ TSE.

A dimensão "L" pode variar segundo o fabricante, não está definida na norma ASME B16.11.  
Length "L" are not listed as ASME B 16.11. 1996 may vary according to manufacturer.



**Joelho 90° ASME B16.11 - 2005**  
 Elbow 90°

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,100           | 2G32 9137 |       | 1/4"    | 0,165           | 2I12 9137 |
| 3/8"    | 0,115           | 2G32 9153 |       | 3/8"    | 0,300           | 2I12 9153 |
| 1/2"    | 0,235           | 2G32 9170 |       | 1/2"    | 0,430           | 2I12 9170 |
| 3/4"    | 0,340           | 2G32 9191 |       | 3/4"    | 0,670           | 2I12 9191 |
| 1"      | 0,510           | 2G32 9218 |       | 1"      | 1,100           | 2I12 9216 |
| 1 1/4"  | 0,750           | 2G32 9243 |       | 1 1/4"  | 1,600           | 2I12 9243 |
| 1 1/2"  | 1,030           | 2G32 9259 |       | 1 1/2"  | 2,700           | 2I12 9259 |
| 2"      | 1,650           | 2G32 9286 |       |         |                 |           |
| 2 1/2"  | 2,800           | 2G32 9309 |       |         |                 |           |
| 3"      | 4,800           | 2G32 9338 |       |         |                 |           |
| 4"      | 14,500          | 2G32 9364 |       |         |                 |           |

**Joelho 45° ASME B16.11 - 2005**  
 Elbow 45°

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,080           | 2G42 9137 |       | 1/4"    | 0,120           | 2I82 9137 |
| 3/8"    | 0,100           | 2G42 9153 |       | 3/8"    | 0,290           | 2I82 9153 |
| 1/2"    | 0,192           | 2G42 9170 |       | 1/2"    | 0,400           | 2I82 9170 |
| 3/4"    | 0,250           | 2G42 9191 |       | 3/4"    | 0,650           | 2I82 9191 |
| 1"      | 0,380           | 2G42 9218 |       | 1"      | 0,960           | 2I82 9218 |
| 1 1/4"  | 0,580           | 2G42 9243 |       | 1 1/4"  | 1,300           | 2I82 9243 |
| 1 1/2"  | 0,830           | 2G42 9259 |       | 1 1/2"  | 2,200           | 2I82 9259 |
| 2"      | 1,300           | 2G42 9286 |       | 2"      | 3,100           | 2I82 9286 |
| 2 1/2"  | 2,500           | 2G42 9309 |       |         |                 |           |
| 3"      | 4,150           | 2G42 9338 |       |         |                 |           |
| 4"      | 12,500          | 2G42 9364 |       |         |                 |           |

**Tê ASME B16.11 - 2005**  
 Equal tee

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°   |
| 1/4"    | 0,160           | 2G52 9137 |       | 1/4"    | 0,210           | 2I22 9137 |
| 3/8"    | 0,190           | 2G52 9153 |       | 3/8"    | 0,480           | 2I22 9153 |
| 1/2"    | 0,310           | 2G52 9170 |       | 1/2"    | 0,620           | 2I22 9170 |
| 3/4"    | 0,400           | 2G52 9191 |       | 3/4"    | 0,910           | 2I22 9191 |
| 1"      | 0,700           | 2G52 9218 |       | 1"      | 1,510           | 2I22 9216 |
| 1 1/4"  | 0,910           | 2G52 9243 |       | 1 1/4"  | 2,030           | 2I22 9243 |
| 1 1/2"  | 1,280           | 2G52 9259 |       | 1 1/2"  | 3,560           | 2I22 9259 |
| 2"      | 2,100           | 2G52 9286 |       | 2"      | 4,100           | 2I22 9286 |
| 2 1/2"  | 3,720           | 2G52 9309 |       |         |                 |           |
| 3"      | 5,250           | 2G52 9338 |       |         |                 |           |
| 4"      | 18,500          | 2G52 9364 |       |         |                 |           |

**Tê de redução ASME B16.11 - 2005**  
 Reducer tee

Lista 2360



| 3000 Lb       |                 |           |       | 6000 Lb         |                 |             |
|---------------|-----------------|-----------|-------|-----------------|-----------------|-------------|
| NPS           | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS             | Kg/Pc<br>Weight | Art. N°     |
| 1/2" x 1/4"   | 0,315           | 2E12 9651 |       | 1/2" x 1/4"     | 0,560           | 2E12 96516  |
| 3/4" x 1/2"   | 0,420           | 2E12 9654 |       | 3/4" x 1/2"     | 1,150           | 2E12 96546  |
| 3/4" x 1/4"   | 0,420           | 2E12 9657 |       | 3/4" x 1/4"     | 1,150           | 2E12 96576  |
| 1" x 3/4"     | 0,700           | 2E12 9660 |       | 1" x 3/4"       | 1,600           | 2E12 96606  |
| 1" x 1/2"     | 0,710           | 2E12 9664 |       | 1" x 1/2"       | 1,610           | 2E12 96646  |
| 1" x 1/4"     | 0,720           | 2E12 9667 |       |                 |                 |             |
| 1 1/2" x 1"   | 1,500           | 2E12 9683 |       | 1 1/2" x 1 1/4" | 3,560           | 2E12 963446 |
| 1 1/2" x 3/4" | 1,500           | 2E12 9687 |       | 1 1/2" x 1"     | 3,565           | 2E12 96366  |
|               |                 |           |       | 1 1/2" x 3/4"   | 3,570           | 2E12 96376  |

**Redução M/F ASME B16.11 - 2005**  
Union M/F

Lista 2360



| 3000 Lb         |                 |           |       | 6000 Lb       |                 |            |
|-----------------|-----------------|-----------|-------|---------------|-----------------|------------|
| NPS             | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS           | Kg/Pc<br>Weight | Art. N°    |
| 1/2" x 3/8"     | 0,180           | 2H82 9650 |       | 1/2" x 3/8"   | 0,205           | 2H82 96506 |
| 1/2" x 1/4"     | 0,190           | 2H82 9651 |       | 1/2" x 1/4"   | 0,205           | 2H82 96516 |
| 3/4" x 1/2"     | 0,195           | 2H82 9654 |       | 3/4" x 1/2"   | 0,300           | 2H82 96546 |
| 3/4" x 1/4"     | 0,198           | 2H82 9657 |       | 3/4" x 1/4"   | 0,300           | 2H82 96576 |
| 1" x 3/4"       | 0,315           | 2H82 9660 |       | 1" x 3/4"     | 0,470           | 2H82 96606 |
| 1" x 1/2"       | 0,320           | 2H82 9664 |       | 1" x 1/2"     | 0,470           | 2H82 96646 |
| 1" x 1/4"       | 0,322           | 2H82 9667 |       | 1" x 1/4"     | 0,470           | 2H82 96676 |
| 1 1/4" x 1"     | 0,435           | 2H82 9670 |       | 1 1/4" x 1"   | 0,600           | 2H82 96706 |
| 1 1/4" x 3/4"   | 0,438           | 2H82 9674 |       | 1 1/2" x 1"   | 1,050           | 2H82 96836 |
| 1 1/2" x 1 1/4" | 0,560           | 2H82 9679 |       | 1 1/2" x 3/4" | 1,050           | 2H82 96876 |
| 1 1/2" x 1"     | 0,565           | 2H82 9683 |       | 1 1/2" x 1/2" | 1,050           | 2H82 96896 |
| 1 1/2" x 3/4"   | 0,568           | 2H82 9687 |       | 2" x 1 1/2"   | 1,600           | 2H82 96936 |
| 1 1/2" x 1/2"   | 0,570           | 2H82 9689 |       | 2" x 1"       | 1,600           | 2H82 97016 |
| 2" x 1"         | 0,960           | 2H82 9701 |       | 2 1/2" x 2"   | 2,300           | 2H82 97146 |
| 3 x 2 1/2"      | 2,000           | 2H82 9733 |       | 3" x 2"       | 2,650           | 2H82 97376 |

**Entrada MSS-SP79**  
Weld bosses

Lista 2360



| 3000 Lb - 6000 Lb |                 |           |
|-------------------|-----------------|-----------|
| NPS               | Kg/Pc<br>Weight | Art. N°   |
| 1/4"              | 0,085           | 2H72 9137 |
| 3/8"              | 0,115           | 2H72 9153 |
| 1/2"              | 0,145           | 2H72 9170 |
| 3/4"              | 0,200           | 2H72 9191 |
| 1"                | 0,340           | 2H72 9218 |
| 1 1/4"            | 0,550           | 2H72 9243 |
| 1 1/2"            | 0,600           | 2H72 9259 |
| 2"                | 0,770           | 2H72 9286 |

**Tampo F ASME B16.11 - 2005**  
Female cap

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. N°    |
| 1/4"    | 0,060           | 2H32 9137 |       |         |                 |            |
| 3/8"    | 0,080           | 2H32 9153 |       |         |                 |            |
| 1/2"    | 0,120           | 2H32 9170 |       | 1/2"    | 0,250           | 2H32 91706 |
| 3/4"    | 0,160           | 2H32 9191 |       | 3/4"    | 0,280           | 2H32 91916 |
| 1"      | 0,250           | 2H32 9218 |       | 1"      | 0,550           | 2H32 92186 |
| 1 1/4"  | 0,370           | 2H32 9243 |       | 1 1/4"  | 0,800           | 2H32 92436 |
| 1 1/2"  | 0,600           | 2H32 1259 |       | 1 1/2"  | 1,100           | 2H32 12596 |
| 2"      | 0,990           | 2H32 9286 |       | 2"      | 1,550           | 2H32 92866 |
| 2 1/2"  | 1,430           | 2H32 9309 |       | 2 1/2"  | 2,570           | 2H32 93096 |
| 3"      | 2,310           | 2H32 9338 |       | 3"      | 3,530           | 2H32 93386 |
| 4"      | 4,200           | 2H32 9364 |       | 4"      | 6,300           | 2H32 93646 |

**União de redução ASME B16.11 - 2005**  
Reducing coupling

Lista 2360



| 3000 Lb       |                 |           |       | 6000 Lb       |                 |           |
|---------------|-----------------|-----------|-------|---------------|-----------------|-----------|
| NPS           | Kg/Pc<br>Weight | Art. N°   | €/ pc | NPS           | Kg/Pc<br>Weight | Art. N°   |
| 3/8" x 1/4"   | 0,110           | 2H12 9649 |       | 3/8" x 1/4"   | 0,240           | 2I52 9649 |
| 1/2" x 3/8"   | 0,170           | 2H12 9650 |       | 1/2" x 3/8"   | 0,350           | 2I52 9650 |
| 1/2" x 1/4"   | 0,173           | 2H12 9651 |       | 1/2" x 1/4"   | 0,360           | 2I52 9651 |
| 3/4" x 1/2"   | 0,270           | 2H12 9654 |       | 3/4" x 1/2"   | 0,480           | 2I52 9654 |
| 3/4" x 3/8"   | 0,270           | 2H12 9656 |       | 3/4" x 3/8"   | 0,480           | 2I52 9656 |
| 3/4" x 1/4"   | 0,280           | 2H12 9657 |       | 3/4" x 1/4"   | 0,490           | 2I52 9657 |
| 1" x 3/4"     | 0,400           | 2H12 9660 |       | 1" x 3/4"     | 0,860           | 2I52 9660 |
| 1" x 1/2"     | 0,410           | 2H12 9664 |       | 1" x 1/2"     | 0,860           | 2I52 9664 |
| 1 1/2" x 1"   | 0,800           | 2H12 9683 |       | 1 1/2" x 1"   | 1,620           | 2I52 9683 |
| 1 1/2" x 3/4" | 0,805           | 2H12 9687 |       | 1 1/2" x 3/4" | 1,630           | 2I52 9687 |
| 1 1/2" x 1/2" | 0,810           | 2H12 9689 |       | 1 1/2" x 1/2" | 1,640           | 2I52 9689 |
| 2" x 1 1/2"   | 1,250           | 2H12 9693 |       | 2" x 1 1/2"   | 2,690           | 2I52 9693 |

**União ASME B16.11 - 2005**  
 Coupling

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. Nº   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. Nº   |
| 1/4"    | 0,070           | 2G82 9137 |       | 1/4"    | 0,110           | 2I32 9137 |
| 3/8"    | 0,090           | 2G82 9153 |       | 3/8"    | 0,210           | 2I32 9153 |
| 1/2"    | 0,140           | 2G82 9170 |       | 1/2"    | 0,290           | 2I32 9170 |
| 3/4"    | 0,200           | 2G82 9191 |       | 3/4"    | 0,400           | 2I32 9191 |
| 1"      | 0,340           | 2G82 9218 |       | 1"      | 0,720           | 2I32 9218 |
| 1 1/4"  | 0,490           | 2G82 9243 |       | 1 1/4"  | 0,950           | 2I32 9243 |
| 1 1/2"  | 0,660           | 2G82 9259 |       | 1 1/2"  | 1,350           | 2I32 9259 |
| 2"      | 1,040           | 2G82 9286 |       | 2"      | 2,240           | 2I32 9286 |
| 2 1/2"  | 1,700           | 2G82 9309 |       |         |                 |           |
| 3"      | 2,150           | 2G82 9338 |       |         |                 |           |
| 4"      | 3,610           | 2G82 9364 |       |         |                 |           |

**Meia união ASME B16.11 - 2005**  
 Half coupling

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |           |
|---------|-----------------|-----------|-------|---------|-----------------|-----------|
| NPS     | Kg/Pc<br>Weight | Art. Nº   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. Nº   |
| 1/4"    | 0,070           | 2G92 9137 |       | 1/4"    | 0,140           | 1I42 9137 |
| 3/8"    | 0,100           | 2G92 9153 |       | 3/8"    | 0,230           | 1I42 9153 |
| 1/2"    | 0,160           | 2G92 9170 |       | 1/2"    | 0,350           | 1I42 9170 |
| 3/4"    | 0,205           | 2G92 9191 |       | 3/4"    | 0,450           | 1I42 9191 |
| 1"      | 0,380           | 2G92 9218 |       | 1"      | 0,800           | 1I42 9218 |
| 1 1/4"  | 0,630           | 2G92 9243 |       | 1 1/4"  | 1,080           | 1I42 9243 |
| 1 1/2"  | 0,800           | 2G92 9259 |       | 1 1/2"  | 1,050           | 1I42 9259 |
| 2"      | 1,240           | 2G92 9286 |       | 2"      | 2,550           | 1I42 9286 |
| 2 1/2"  | 1,900           | 2G92 9309 |       |         |                 |           |
| 3"      | 2,450           | 2G92 9338 |       |         |                 |           |
| 4"      | 4,160           | 2G92 9364 |       |         |                 |           |

**Cruzeta ASME B16.11 - 2005**  
 Cross

Lista 2360



| 3000 Lb |                 |           |       | 6000 Lb |                 |            |
|---------|-----------------|-----------|-------|---------|-----------------|------------|
| NPS     | Kg/Pc<br>Weight | Art. Nº   | €/ pc | NPS     | Kg/Pc<br>Weight | Art. Nº    |
| 1/4"    | 0,190           | 2G72 9137 |       | 1/4"    | 0,260           | 2G72 91376 |
| 3/8"    | 0,270           | 2G72 9153 |       | 3/8"    | 0,550           | 2G72 91536 |
| 1/2"    | 0,390           | 2G72 9170 |       | 1/2"    | 0,770           | 2G72 91706 |
| 3/4"    | 0,560           | 2G72 9191 |       | 3/4"    | 1,280           | 2G72 91916 |
| 1"      | 0,800           | 2G72 9218 |       | 1"      | 1,790           | 2G72 92186 |
| 1 1/4"  | 1,250           | 2G72 9243 |       | 1 1/4"  | 2,600           | 2G72 92436 |
| 1 1/2"  | 1,600           | 2G72 9259 |       | 1 1/2"  | 4,450           | 2G72 92596 |
| 2"      | 2,640           | 2G72 9286 |       | 2"      | 5,950           | 2G72 92866 |
| 2 1/2"  | 5,100           | 2G72 9309 |       |         |                 |            |
| 3"      | 8,050           | 2G72 9338 |       |         |                 |            |
| 4"      | 23,000          | 2G72 9364 |       |         |                 |            |

Também podemos fornecer estes acessórios para baixa temperatura segundo ASTM A350.  
 We can also supply this fittings for low temperature in according to ASTM A350.

**Junção F/F MSS - SP83**  
Female union

Lista 2360



| 3000 Lb |              |           |       | 6000 Lb |              |           |
|---------|--------------|-----------|-------|---------|--------------|-----------|
| NPS     | Kg/Pc Weight | Art. N°   | €/ pc | NPS     | Kg/Pc Weight | Art. N°   |
| 1/4"    | 0,300        | 2H52 9137 |       | 1/4"    | 0,350        | 2I62 9137 |
| 3/8"    | 0,390        | 2H52 9153 |       | 3/8"    | 0,550        | 2I62 9153 |
| 1/2"    | 0,520        | 2H52 9170 |       | 1/2"    | 1,430        | 2I62 9170 |
| 3/4"    | 0,700        | 2H52 9191 |       | 3/4"    | 1,870        | 2I62 9191 |
| 1"      | 1,100        | 2H52 9218 |       | 1"      | 2,240        | 2I62 9218 |
| 1 1/4"  | 1,360        | 2H52 9243 |       | 1 1/4"  | 2,870        | 2I62 9243 |
| 1 1/2"  | 1,940        | 2H52 9259 |       | 1 1/2"  | 4,100        | 2I62 9259 |
| 2"      | 2,870        | 2H52 9286 |       | 2"      | 7,150        | 2I62 9286 |
| 2 1/2"  | 6,600        | 2H52 9309 |       |         |              |           |
| 3"      | 8,200        | 2H52 9338 |       |         |              |           |
| 4"      | 13,000       | 2H52 9364 |       |         |              |           |

**Junção M/F MSS - SP83**  
Union M/F F-SW/ M threaded

Lista 2360



| 3000 Lb |              |           |
|---------|--------------|-----------|
| NPS     | Kg/Pc Weight | Art. N°   |
| 1/4"    | 0,540        | 2H92 9137 |
| 3/8"    | 0,730        | 2H92 9153 |
| 1/2"    | 1,700        | 2H92 9170 |
| 3/4"    | 2,000        | 2H92 9191 |
| 1"      | 2,780        | 2H92 9218 |
| 1 1/4"  | 3,480        | 2H92 9243 |
| 1 1/2"  | 4,900        | 2H92 9259 |
| 2"      | 8,480        | 2H92 9286 |

**Socolets 3000 Lb**

Lista 2370



| Saída Outlet | Coletor Run pipe | Kg/Pc Weight | Art. N°   |
|--------------|------------------|--------------|-----------|
| 1/2" XS      | 2" a 2 1/2"      | 0,130        | 2J42 9529 |
| 1/2" XS      | 3" a 8"          | 0,130        | 2J42 9531 |
| 3/4" XS      | 3" a 5"          | 0,240        | 2J42 9534 |
| 3/4" XS      | 6" a 12"         | 0,240        | 2J42 9538 |
| 1" XS        | 3" a 3 1/2"      | 0,370        | 2J42 9546 |
| 1" XS        | 6" a 10"         | 0,370        | 2J42 9550 |
| 1 1/2" XS    | 3"               | 0,650        | 2J42 9556 |
| 1 1/2" XS    | 8" a 12"         | 0,650        | 2J42 9558 |
| 1 1/2" XS    | 26" a 36"        | 0,650        | 2J42 9560 |

**Nippolets lisas ASME B31.3 ASTM A105N, 3000Lb**

Lista 2370



| Saída Outlet | Tubo principal Run pipe | Kg/Pc Weight | Art. N°   |
|--------------|-------------------------|--------------|-----------|
| 1/2" XS      | 1 1/4" a 1 1/2"         | 0,250        | 2J52 9530 |
| 1/2" XS      | 3" a 8"                 | 0,250        | 2J52 9532 |
| 3/4" XS      | 2" a 2 1/2"             | 0,400        | 2J52 9537 |
| 3/4" XS      | 6" a 12"                | 0,400        | 2J52 9538 |
| 1" XS        | 3" a 3 1/2"             | 0,650        | 2J52 9546 |
| 1" XS        | 6" a 10"                | 0,650        | 2J52 9550 |
| 1 1/2" XS    | 3"                      | 0,950        | 2J52 9556 |
| 1 1/2" XS    | 8" a 12"                | 0,950        | 2J52 9568 |

**Weldolets ASME B31.3 - 3000Lb**
**Lista 2370**

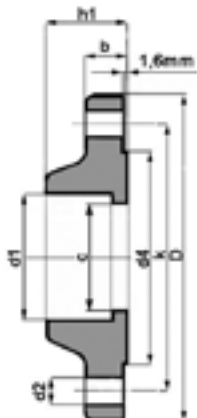

| Saída<br>Outlet | Coletor<br>Run pipe | Kg/Pc<br>Weight | Art. Nº   |
|-----------------|---------------------|-----------------|-----------|
| 1/2" XS         | 2" a 2 1/2"         | 0,080           | 2J32 9529 |
| 1/2" XS         | 3" a 8"             | 0,080           | 2J32 9531 |
| 3/4" STD        | 2" a 2 1/2"         | 0,110           | 2J32 9534 |
| 3/4" XS         | 3" a 5"             | 0,110           | 2J32 9537 |
| 3/4" XS         | 6" a 12"            | 0,110           | 2J32 9538 |
| 1" STD          | 1 1/2"              | 0,230           | 2J32 9540 |
| 1" XS           | 3" a 3 1/2"         | 0,230           | 2J32 9546 |
| 1" XS           | 6" a 10"            | 0,230           | 2J32 9550 |
| 1 1/4" XS       | 4" a 5"             | 0,360           | 2J32 9552 |
| 1 1/2" STD      | 3 1/2" a 4"         | 0,360           | 2J32 9553 |
| 1 1/2" XS       | 5" a 6"             | 0,360           | 2J32 9556 |
| 1 1/2" XS       | 8" a 12"            | 0,360           | 2J32 9558 |
| 2" XS           | 6"                  | 0,800           | 2J32 9566 |
| 2" XS           | 8" a 10"            | 0,800           | 2J32 9567 |
| 3" STD          | 6"                  | 1,810           | 2J32 9571 |
| 3" XS           | 6"                  | 1,810           | 2J32 9572 |
| 3" XS           | 8"                  | 1,810           | 2J32 9574 |
| 3" STD          | 8"                  | 1,810           | 2J32 9575 |
| 3" XS           | 10"                 | 1,810           | 2J32 9576 |
| 3" STD          | 12" a 14"           | 1,810           | 2J32 9581 |
| 4" XS           | 4"                  | 3,000           | 2J32 9584 |
| 4" STD          | 6"                  | 3,000           | 2J32 9585 |
| 4" XS           | 6"                  | 3,000           | 2J32 9586 |
| 4" XS           | 8"                  | 3,000           | 2J32 9588 |
| 4" STD          | 12" a 14"           | 3,000           | 2J32 9591 |
| 6" STD          | 6"                  | 6,500           | 2J32 9592 |
| 6" XS           | 6"                  | 6,500           | 2J32 9593 |
| 6" STD          | 8"                  | 6,500           | 2J32 9594 |
| 6" XS           | 8"                  | 6,500           | 2J32 9595 |
| 6" STD          | 10"                 | 6,500           | 2J32 9596 |
| 6" XS           | 10"                 | 6,500           | 2J32 9597 |
| 6" STD          | 12" a 14"           | 6,500           | 2J32 9598 |
| 6" XS           | 12" a 14"           | 6,500           | 2J32 9599 |
| 6" STD          | 16"                 | 6,500           | 2J32 9600 |
| 8" STD          | 8"                  | 12,000          | 2J32 9601 |
| 8" XS           | 8"                  | 12,000          | 2J32 9602 |
| 8" STD          | 10"                 | 12,000          | 2J32 9603 |
| 8" STD          | 12"                 | 12,000          | 2J32 9604 |
| 8" STD          | 16"                 | 12,000          | 2J32 9605 |
| 10" STD         | 10"                 | 20,000          | 2J32 9606 |
| 10" STD         | 14"                 | 20,000          | 2J32 9609 |
| 10" STD         | 20"                 | 20,000          | 2J32 9610 |
| 12" STD         | 12"                 | 27,000          | 2J32 9611 |
| 12" STD         | 16"                 | 27,000          | 2J32 9612 |
| 12" STD         | 20"                 | 27,000          | 2J32 9613 |
| 14" STD         | 14"                 | 30,000          | 2J32 9614 |
| 14" STD         | 20"                 | 30,000          | 2J32 9615 |
| 16" STD         | 16"                 | 36,000          | 2J32 9616 |
| 16" STD         | 20"                 | 36,000          | 2J32 9617 |

Podemos fornecer os socolets ou weldolets para soldar a colectores de outros diâmetros.

We can supply this socolets and weldolets to be welded to other run pipe size.

**Flanges SOCKET WELD ANSI B16.11 150 LB ASTM A105N**  
SOCKET WELDING flanges

Lista 2380



| NPS    | D     | K     | d1    | c     | d4    | d2<br>Furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|-------|-------|-------|-----------------|------|------|-----------------|-----------|
| 1/2"   | 88,9  | 60,5  | 22,4  | 15,7  | 34,9  | 4 x 15,7        | 15,7 | 11,2 | 0,42            | 2B62 9172 |
| 3/4"   | 98,6  | 69,9  | 27,7  | 20,8  | 42,9  | 4 x 15,7        | 15,7 | 12,7 | 0,59            | 2B62 9193 |
| 1"     | 108,0 | 79,2  | 34,5  | 26,7  | 50,8  | 4 x 15,7        | 17,5 | 14,2 | 0,81            | 2B62 9220 |
| 1 1/4" | 117,3 | 88,9  | 43,2  | 35,1  | 63,5  | 4 x 15,7        | 20,6 | 15,7 | 1,70            | 2B62 9245 |
| 1 1/2" | 127,0 | 98,6  | 49,5  | 40,9  | 73,20 | 4 x 15,7        | 22,4 | 17,5 | 1,36            | 2B62 9262 |
| 2"     | 152,4 | 120,7 | 62,0  | 52,6  | 91,9  | 4 x 19,1        | 25,4 | 19,1 | 2,10            | 2B62 9289 |
| 2 1/2" | 177,8 | 139,7 | 74,7  | 62,7  | 104,8 | 4 x 19,1        | 28,6 | 22,3 | 3,70            | 2B62 9309 |
| 3"     | 190,5 | 152,4 | 90,7  | 78,0  | 127,0 | 4 x 19,1        | 30,2 | 23,8 | 4,20            | 2B62 9338 |
| 4"     | 228,6 | 190,5 | 116,1 | 102,4 | 157,2 | 8 x 19,1        | 33,2 | 23,8 | 5,90            | 2B62 9364 |

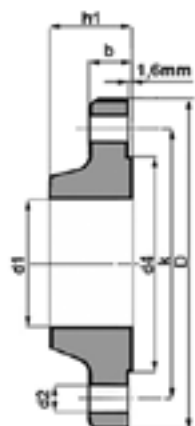
**Flanges SOCKET WELD ANSI B16.5 300 LB ASTM A105N**  
SOCKET WELDING flanges

Lista 2382

| NPS    | D     | K     | d1    | c     | d4    | d2<br>Nº furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|-------|-------|-------|--------------------|------|------|-----------------|-----------|
| 1/2"   | 95,3  | 66,7  | 22,4  | 15,7  | 35,1  | 4 x 15,7           | 22,4 | 14,2 | 0,66            | 2B72 9172 |
| 3/4"   | 117,3 | 82,6  | 27,7  | 20,8  | 42,9  | 4 x 19,1           | 25,4 | 15,7 | 1,15            | 2B72 9191 |
| 1"     | 124,0 | 88,9  | 34,5  | 26,7  | 50,8  | 4 x 19,1           | 26,9 | 17,5 | 1,40            | 2B72 9220 |
| 1 1/4" | 133,4 | 98,6  | 43,2  | 35,1  | 63,5  | 4 x 19,1           | 26,9 | 19,1 | 1,75            | 2B72 9245 |
| 1 1/2" | 155,4 | 114,3 | 49,5  | 40,9  | 73,2  | 4 x 22,4           | 30,2 | 20,6 | 2,55            | 2B72 9262 |
| 2"     | 165,1 | 127,0 | 62,0  | 52,6  | 91,9  | 8 x 19,1           | 33,3 | 22,4 | 2,93            | 2B72 9289 |
| 2 2/1" | 190,5 | 149,2 | 74,7  | 62,7  | 104,8 | 8 x 22,4           | 38,1 | 25,4 | 4,60            | 2B72 9309 |
| 3"     | 209,5 | 168,3 | 90,7  | 78,0  | 127,0 | 8 x 22,4           | 42,9 | 28,6 | 6,30            | 2B72 9338 |
| 4"     | 254,0 | 200,0 | 116,1 | 102,4 | 157,2 | 8 x 22,4           | 47,6 | 31,8 | 10,2            | 2B72 9364 |

**Flanges SLIP ON ANSI B16.5 150 LB ASTM A105N**  
SLIP ON flanges

Lista 2380



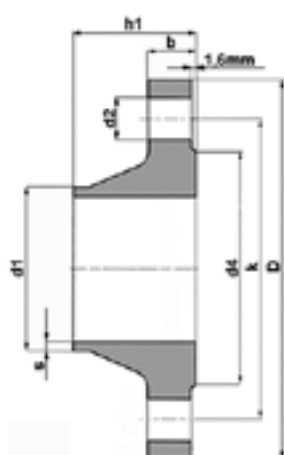
| NPS    | D     | K     | d1    | d4    | d2<br>Nº furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|-------|-------|--------------------|------|------|-----------------|-----------|
| 1/2"   | 88,9  | 60,5  | 22,4  | 35,1  | 4 x 15,7           | 15,7 | 11,2 | 0,39            | 2B82 9170 |
| 3/4"   | 98,6  | 69,9  | 27,7  | 42,9  | 4 x 15,7           | 15,7 | 12,7 | 0,56            | 2B82 9191 |
| 1"     | 108,0 | 79,2  | 34,5  | 50,8  | 4 x 15,7           | 17,5 | 14,2 | 0,78            | 2B82 9218 |
| 1 1/4" | 117,3 | 88,9  | 43,2  | 63,5  | 4 x 15,7           | 20,6 | 15,7 | 1,03            | 2B82 9243 |
| 1 1/2" | 127,0 | 98,6  | 49,5  | 73,2  | 4 x 15,7           | 22,4 | 17,5 | 1,32            | 2B82 9259 |
| 2"     | 152,4 | 120,7 | 62,0  | 91,9  | 4 x 19,1           | 25,4 | 19,1 | 2,06            | 2B82 9286 |
| 2 1/2" | 177,8 | 139,7 | 74,7  | 104,6 | 4 x 19,1           | 28,4 | 22,4 | 3,28            | 2B82 9309 |
| 3"     | 190,5 | 152,4 | 90,7  | 127,0 | 4 x 19,1           | 30,2 | 23,9 | 3,85            | 2B82 9338 |
| 4"     | 228,6 | 190,5 | 116,1 | 157,2 | 8 x 19,1           | 33,3 | 23,9 | 5,30            | 2B82 9364 |
| 5"     | 254,0 | 215,9 | 143,8 | 185,7 | 8 x 22,4           | 36,6 | 23,9 | 6,07            | 2B82 9380 |
| 6"     | 279,4 | 241,3 | 170,7 | 215,9 | 8 x 22,4           | 39,6 | 25,4 | 7,45            | 2B82 9399 |
| 8"     | 342,9 | 298,5 | 221,5 | 269,7 | 8 x 22,4           | 44,5 | 28,4 | 12,10           | 2B82 9415 |
| 10"    | 406,4 | 362,0 | 276,4 | 323,9 | 12 x 25,4          | 49,3 | 30,2 | 16,50           | 2B82 9427 |
| 12"    | 428,6 | 431,8 | 327,2 | 381,0 | 12 x 25,4          | 55,6 | 31,8 | 26,20           | 2B82 9441 |
| 14"    | 533,4 | 476,3 | 359,2 | 412,8 | 12 x 28,4          | 57,2 | 35,1 | 34,60           | 2B82 9453 |
| 16"    | 596,9 | 539,8 | 410,5 | 469,9 | 16 x 28,4          | 63,5 | 36,6 | 44,80           | 2B82 9465 |
| 18"    | 635,0 | 577,9 | 461,8 | 533,4 | 16 x 31,8          | 68,3 | 39,6 | 48,90           | 2B82 9476 |
| 20"    | 698,5 | 635,0 | 513,1 | 584,2 | 20 x 31,8          | 73,2 | 42,9 | 61,90           | 2B82 9484 |
| 24"    | 812,8 | 749,3 | 616,0 | 692,2 | 20 x 35,1          | 82,6 | 47,8 | 86,90           | 2B82 9496 |

**Flanges SLIP ON ANSI B16.11 300 LB ASTM A105N**  
SLIP ON flanges

Lista 2382

| NPS    | D     | K     | d1    | d4    | d2<br>Nº furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|-------|-------|--------------------|------|------|-----------------|-----------|
| 1/2"   | 95,3  | 66,5  | 22,4  | 35,1  | 4 x 15,7           | 22,4 | 14,2 | 0,64            | 2B92 9170 |
| 3/4"   | 117,3 | 82,6  | 27,7  | 42,9  | 4 x 19,1           | 25,4 | 15,7 | 1,12            | 2B92 9191 |
| 1"     | 123,9 | 88,9  | 34,5  | 50,8  | 4 x 19,1           | 26,9 | 17,5 | 1,36            | 2B92 9218 |
| 1 1/4" | 133,4 | 98,6  | 43,2  | 63,5  | 4 x 19,1           | 26,9 | 19,1 | 1,68            | 2B92 9243 |
| 1 1/2" | 155,4 | 114,3 | 49,5  | 73,2  | 4 x 22,4           | 30,2 | 20,6 | 2,49            | 2B92 9259 |
| 2"     | 165,1 | 127,0 | 62,0  | 91,9  | 8 x 19,1           | 33,3 | 22,4 | 2,87            | 2B92 9286 |
| 2 1/2" | 190,5 | 149,4 | 74,7  | 104,6 | 8 x 22,4           | 38,1 | 25,4 | 4,32            | 2B92 9309 |
| 3"     | 209,6 | 168,1 | 90,7  | 127,0 | 8 x 22,4           | 42,9 | 28,4 | 5,85            | 2B92 9338 |
| 4"     | 254,0 | 200,2 | 116,1 | 157,2 | 8 x 22,4           | 47,8 | 31,8 | 9,61            | 2B92 9338 |
| 5"     | 279,4 | 235,0 | 143,8 | 185,7 | 8 x 22,4           | 50,8 | 35,1 | 12,30           | 2B92 9364 |
| 6"     | 317,5 | 269,7 | 170,7 | 215,9 | 12 x 22,4          | 52,3 | 36,6 | 15,60           | 2B92 9399 |
| 8"     | 381,0 | 330,2 | 221,5 | 269,7 | 12 x 22,4          | 62,0 | 41,1 | 22,40           | 2B92 9415 |
| 10"    | 444,5 | 387,4 | 276,4 | 323,9 | 16 x 28,4          | 66,5 | 47,8 | 34,10           | 2B92 9427 |
| 12"    | 520,7 | 450,9 | 327,2 | 381,0 | 16 x 31,8          | 73,2 | 50,8 | 49,80           | 2B92 9441 |
| 14"    | 584,2 | 514,4 | 359,2 | 412,8 | 20 x 31,8          | 76,2 | 53,8 | 69,90           | 2B92 9453 |
| 16"    | 647,7 | 571,5 | 410,5 | 469,9 | 20 x 35,1          | 82,6 | 57,2 | 88,10           | 2B92 9465 |

**Flanges WELDING NECK ANSI B16.5, 150 LB, ASTM A105N**  
 WELDING NECK flanges

**Lista 2380**


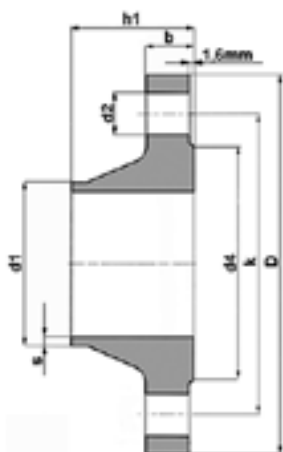
| NPS    | Sch | Pipe OD | Esp. Tick | D     | k     | s     | d4    | d2<br>Nº furos x Ø | h1    | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-----|---------|-----------|-------|-------|-------|-------|--------------------|-------|------|-----------------|-----------|
| 1/2"   | 40  | 21,34   | 2,77      | 88,9  | 60,5  | 2,77  | 35,1  | 4 x 15,7           | 47,8  | 11,2 | 0,71            | 2C32 9170 |
| 1/2"   | 80  | 21,34   | 3,73      | 88,9  | 60,5  | 3,73  | 35,1  | 4 x 15,7           | 47,8  | 11,2 | 0,72            | 2C32 9172 |
| 3/4"   | 40  | 26,67   | 2,87      | 98,6  | 69,9  | 2,87  | 42,9  | 4 x 15,7           | 52,3  | 12,7 | 0,81            | 2C32 9191 |
| 3/4"   | 80  | 26,67   | 3,91      | 98,6  | 69,9  | 3,91  | 42,9  | 4 x 15,7           | 52,3  | 12,7 | 0,81            | 2C32 9193 |
| 3/4"   | 160 | 26,67   | 5,54      | 98,6  | 69,9  | 5,54  | 42,9  | 4 x 15,7           | 52,3  | 12,7 | 0,82            | 2C32 9194 |
| 1"     | 40  | 33,40   | 3,38      | 108,0 | 79,2  | 3,38  | 50,8  | 4 x 15,7           | 55,6  | 14,2 | 1,05            | 2C32 9218 |
| 1"     | 80  | 33,40   | 4,55      | 108,0 | 79,2  | 4,55  | 50,8  | 4 x 15,7           | 55,6  | 14,2 | 1,06            | 2C32 9220 |
| 1"     | 160 | 33,40   | 6,35      | 108,0 | 79,2  | 6,35  | 50,8  | 4 x 15,7           | 55,6  | 14,2 | 1,07            | 2C32 9221 |
| 1"     | XXS | 33,40   | 9,09      | 108,0 | 79,2  | 6,35  | 50,8  | 4 x 15,7           | 55,6  | 14,2 | 1,20            | 2C32 9222 |
| 1 1/4" | 40  | 42,16   | 3,56      | 117,3 | 88,9  | 3,56  | 63,5  | 4 x 15,7           | 57,2  | 15,7 | 1,58            | 2C32 9243 |
| 1 1/2" | 40  | 48,26   | 3,68      | 127,0 | 98,6  | 3,68  | 73,2  | 4 x 15,7           | 62,0  | 17,5 | 1,87            | 2C32 9260 |
| 1 1/2" | 80  | 48,26   | 5,05      | 127,0 | 98,6  | 5,05  | 73,2  | 4 x 15,7           | 62,0  | 17,5 | 1,89            | 2C32 9262 |
| 1 1/2" | XXS | 48,26   | 10,16     | 127,0 | 98,6  | 10,16 | 73,2  | 4 x 15,7           | 62,0  | 17,5 | 2,00            | 2C32 9264 |
| 2"     | 40  | 48,26   | 3,91      | 152,4 | 120,7 | 3,91  | 91,9  | 4 x 19,1           | 63,5  | 19,1 | 2,75            | 2C32 9286 |
| 2"     | 80  | 60,33   | 5,54      | 152,4 | 120,7 | 5,54  | 91,9  | 4 x 19,1           | 63,5  | 19,1 | 2,79            | 2C32 9289 |
| 2"     | 160 | 60,33   | 8,71      | 152,4 | 120,7 | 8,71  | 91,9  | 4 x 19,1           | 63,5  | 19,1 | 2,80            | 2C32 9291 |
| 2"     | XXS | 60,30   | 11,07     | 152,4 | 120,7 | 11,07 | 91,9  | 4 x 19,1           | 63,5  | 19,1 | 3,00            | 2C32 9292 |
| 2 1/2" | 40  | 60,33   | 5,16      | 177,8 | 139,7 | 5,16  | 104,6 | 4 x 19,1           | 69,9  | 22,4 | 4,45            | 2C32 9309 |
| 2 1/2" | XS  | 73,03   | 7,01      | 177,8 | 139,7 | 7,01  | 104,6 | 4 x 19,1           | 69,9  | 22,4 | 4,45            | 2C32 9310 |
| 2 1/2" | XXS | 73,03   | 14,02     | 177,8 | 139,7 | 14,02 | 104,6 | 4 x 19,1           | 69,9  | 22,4 | 4,80            | 2C32 9311 |
| 3"     | 40  | 73,03   | 5,49      | 190,5 | 152,4 | 5,49  | 127,0 | 4 x 19,1           | 69,9  | 23,9 | 5,25            | 2C32 9338 |
| 3"     | 80  | 88,90   | 7,62      | 190,5 | 152,4 | 7,62  | 127,0 | 4 x 19,1           | 69,9  | 23,9 | 5,28            | 2C32 9339 |
| 3"     | XXS | 88,90   | 15,24     | 190,5 | 152,4 | 15,24 | 127,0 | 4 x 19,1           | 69,9  | 23,9 | 5,90            | 2C32 9341 |
| 4"     | 40  | 88,90   | 6,02      | 228,6 | 190,5 | 6,02  | 157,2 | 8 x 19,1           | 76,2  | 23,9 | 7,56            | 2C32 9364 |
| 4"     | 80  | 114,30  | 8,56      | 228,6 | 190,5 | 8,56  | 157,2 | 8 x 19,1           | 76,2  | 23,9 | 7,59            | 2C32 9365 |
| 4"     | XXS | 114,30  | 17,12     | 228,6 | 190,5 | 17,12 | 157,2 | 8 x 19,1           | 76,2  | 23,9 | 8,50            | 2C32 9367 |
| 5"     | 40  | 141,30  | 6,35      | 254,0 | 215,9 | 6,55  | 185,7 | 8 x 22,4           | 88,9  | 23,9 | 8,56            | 2C32 9380 |
| 6"     | 40  | 141,30  | 7,11      | 279,4 | 241,3 | 7,11  | 215,9 | 8 x 22,4           | 88,9  | 25,4 | 11,10           | 2C32 9399 |
| 6"     | 80  | 168,28  | 10,97     | 279,4 | 241,3 | 10,97 | 215,9 | 8 x 22,4           | 88,9  | 25,4 | 11,15           | 2C32 9400 |
| 6"     | 120 | 168,28  | 14,27     | 279,4 | 241,3 | 14,27 | 215,9 | 8 x 22,4           | 88,9  | 25,4 | 11,20           | 2C32 9401 |
| 6"     | XXS | 168,28  | 21,95     | 279,4 | 241,3 | 14,27 | 215,9 | 8 x 22,4           | 88,9  | 25,4 | 14,40           | 2C32 9402 |
| 8"     | 20  | 168,28  | 6,35      | 342,9 | 298,5 | 6,35  | 269,7 | 8 x 22,4           | 101,6 | 28,4 | 18,45           | 2C32 9414 |
| 8"     | 40  | 219,08  | 8,18      | 342,9 | 298,5 | 8,18  | 269,7 | 8 x 22,4           | 101,6 | 28,4 | 18,49           | 2C32 9415 |
| 8"     | XS  | 219,08  | 12,7      | 342,9 | 298,5 | 12,70 | 269,7 | 8 x 22,4           | 101,6 | 28,4 | 18,50           | 2C32 9416 |
| 10"    | 20  | 273,05  | 6,35      | 406,4 | 362,0 | 6,35  | 323,9 | 12 x 25,4          | 101,6 | 30,2 | 24,00           | 2C32 9425 |
| 10"    | 40  | 273,05  | 6,35      | 406,4 | 362,0 | 9,27  | 323,9 | 12 x 25,4          | 101,6 | 30,2 | 24,00           | 2C32 9427 |
| 12"    | STD | 323,85  | 9,27      | 482,6 | 431,8 | 9,53  | 381,0 | 12 x 25,4          | 114,3 | 31,8 | 36,50           | 2C32 9441 |
| 14"    | STD | 355,60  | 9,53      | 533,4 | 476,3 | 9,53  | 412,8 | 12 x 28,4          | 127,0 | 35,1 | 48,40           | 2C32 9453 |
| 16"    | STD | 406,40  | 9,53      | 596,9 | 539,8 | 9,53  | 469,9 | 16 x 28,4          | 127,0 | 36,6 | 60,60           | 2C32 9465 |
| 18"    | STD | 457,20  | 9,52      | 635,0 | 577,9 | 9,53  | 533,4 | 16 x 31,8          | 139,7 | 39,6 | 68,30           | 2C32 9476 |
| 20"    | STD | 508,00  | 9,53      | 698,5 | 635,0 | 9,53  | 584,2 | 20 x 31,8          | 144,5 | 42,9 | 84,50           | 2C32 9484 |
| 24"    | 40  | 609,60  | 17,45     | 812,8 | 749,3 | 17,45 | 696,2 | 20 x 35,1          | 152,4 | 47,8 | 115,00          | 2C32 9498 |

Para flanges de maiores dimensões, consulte-nos.  
 For bigger sizes flanges, please ask.

**Flanges WELDING NECK ANSI B16.5, 300 LB, ASTM A105N**  
WELDING NECK flanges

Lista 2382

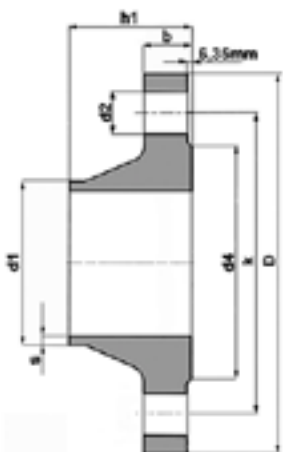
| NPS    | Sch | Pipe OD | Esp. Tick | D     | k     | s     | d4    | d2<br>NºfurosxØ | h1    | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-----|---------|-----------|-------|-------|-------|-------|-----------------|-------|------|-----------------|-----------|
| 1/2"   | 80  | 21,34   | 3,73      | 95,2  | 66,5  | 3,73  | 35,0  | 4 x 15,7        | 52,3  | 14,2 | 0,75            | 2C42 9172 |
| 1/2"   | XXS | 21,34   | 7,47      | 95,2  | 66,5  | 7,47  | 35,0  | 4 x 15,7        | 52,3  | 14,2 | 0,76            | 2C42 9174 |
| 3/4"   | 80  | 26,67   | 3,91      | 117,3 | 82,6  | 3,91  | 42,9  | 4 x 19,1        | 57,2  | 15,7 | 1,26            | 2C42 9193 |
| 3/4"   | XXS | 26,67   | 7,82      | 117,3 | 82,6  | 7,82  | 42,9  | 4 x 19,1        | 57,2  | 15,7 | 1,27            | 2C42 9195 |
| 1"     | 40  | 33,40   | 3,38      | 124,0 | 88,9  | 3,38  | 50,8  | 4 x 19,1        | 62,0  | 17,5 | 1,52            | 2C42 9218 |
| 1"     | 80  | 33,40   | 4,55      | 124,0 | 88,9  | 4,55  | 50,8  | 4 x 19,1        | 62,0  | 17,5 | 1,52            | 2C42 9220 |
| 1"     | XXS | 33,40   | 9,09      | 124,0 | 88,9  | 9,09  | 50,8  | 4 x 19,1        | 62,0  | 17,5 | 1,53            | 2C42 9222 |
| 1 1/4" | 40  | 42,16   | 3,56      | 133,4 | 98,6  | 3,56  | 63,5  | 4 x 19,1        | 65,0  | 19,1 | 2,03            | 2C42 9243 |
| 1 1/4" | XXS | 42,16   | 9,70      | 133,4 | 98,6  | 9,70  | 63,5  | 4 x 19,1        | 65,0  | 19,1 | 2,03            | 2C42 9247 |
| 1 1/2" | 40  | 48,26   | 3,68      | 155,4 | 114,3 | 3,68  | 73,2  | 4 x 22,4        | 68,3  | 20,6 | 2,89            | 2C42 9260 |
| 1 1/2" | 80  | 48,26   | 5,08      | 155,4 | 114,3 | 5,08  | 73,2  | 4 x 22,4        | 68,3  | 20,6 | 2,89            | 2C42 9262 |
| 2"     | 40  | 60,33   | 3,91      | 165,1 | 127,0 | 3,91  | 91,9  | 8 x 19,1        | 69,9  | 22,4 | 3,40            | 2C42 9286 |
| 2"     | 80  | 60,33   | 5,54      | 165,1 | 127,0 | 5,54  | 91,9  | 8 x 19,1        | 69,9  | 22,4 | 3,40            | 2C42 9289 |
| 2"     | 160 | 60,33   | 8,71      | 165,1 | 127,0 | 8,71  | 91,9  | 8 x 19,1        | 69,9  | 22,4 | 3,48            | 2C42 9291 |
| 2"     | XXS | 60,33   | 11,07     | 165,1 | 127,0 | 11,07 | 91,9  | 8 x 19,1        | 69,9  | 22,4 | 3,48            | 2C42 9292 |
| 2 1/2" | STD | 73,03   | 5,16      | 190,5 | 149,4 | 5,16  | 104,6 | 8 x 22,4        | 76,2  | 22,4 | 5,40            | 2C42 9209 |
| 2 1/2" | 80  | 73,03   | 7,01      | 190,5 | 149,4 | 7,01  | 104,6 | 8 x 22,4        | 76,2  | 25,4 | 5,50            | 2C42 9310 |
| 3"     | 40  | 88,90   | 5,49      | 209,6 | 168,1 | 5,49  | 127,0 | 8 x 22,4        | 79,2  | 28,4 | 6,93            | 2C42 9338 |
| 3"     | 80  | 88,90   | 7,62      | 209,6 | 168,1 | 7,62  | 127,0 | 8 x 22,4        | 79,2  | 28,4 | 7,00            | 2C42 9339 |
| 3"     | XXS | 88,90   | 15,24     | 209,6 | 168,1 | 15,24 | 127,0 | 8 x 22,4        | 79,2  | 28,4 | 7,10            | 2C42 9341 |
| 4"     | 40  | 114,30  | 6,02      | 254,0 | 200,2 | 6,02  | 157,2 | 8 x 22,4        | 85,9  | 31,8 | 11,30           | 2C42 9364 |
| 4"     | 80  | 114,30  | 8,56      | 254,0 | 200,2 | 8,56  | 157,2 | 8 x 22,4        | 85,9  | 31,8 | 11,90           | 2C42 9365 |
| 4"     | XXS | 114,30  | 17,12     | 254,0 | 200,2 | 17,12 | 157,2 | 8 x 22,4        | 85,9  | 31,8 | 12,28           | 2C42 9367 |
| 5"     | XS  | 141,30  | 9,53      | 279,4 | 235,0 | 9,54  | 185,7 | 8 x 22,4        | 98,4  | 34,9 | 16,00           | 2C42 9381 |
| 6"     | 40  | 168,30  | 7,11      | 317,5 | 269,7 | 7,11  | 215,9 | 12 x 22,4       | 98,6  | 36,6 | 20,00           | 2C42 9399 |
| 6"     | 80  | 168,30  | 10,97     | 317,5 | 269,7 | 10,97 | 215,9 | 12 x 22,4       | 98,6  | 36,6 | 20,10           | 2C42 9400 |
| 6"     | 120 | 168,30  | 14,27     | 317,5 | 269,7 | 14,27 | 215,9 | 12 x 22,4       | 98,4  | 36,6 | 20,30           | 2C42 9401 |
| 6"     | XXS | 168,30  | 21,95     | 317,5 | 269,7 | 21,95 | 215,9 | 12 x 22,4       | 98,4  | 36,6 | 20,40           | 2C42 9402 |
| 8"     | 40  | 219,08  | 8,18      | 381,0 | 330,2 | 8,18  | 269,7 | 12 x 25,4       | 111,3 | 41,1 | 31,00           | 2C42 9415 |
| 8"     | XS  | 219,08  | 12,70     | 381,0 | 330,2 | 12,70 | 269,7 | 12 x 25,4       | 111,3 | 41,1 | 31,10           | 2C42 9416 |
| 10"    | 40  | 273,05  | 9,27      | 444,5 | 387,4 | 9,27  | 323,9 | 16 x 28,4       | 117,3 | 47,8 | 42,70           | 2C42 9427 |
| 10"    | XS  | 273,05  | 12,7      | 444,5 | 387,4 | 12,7  | 323,9 | 16 x 28,4       | 117,3 | 47,8 | 42,7            | 2C42 9428 |
| 12"    | STD | 323,85  | 10,31     | 520,7 | 450,9 | 10,31 | 381,0 | 16 x 31,8       | 130,0 | 50,8 | 61,80           | 2C42 9441 |
| 14"    | STD | 355,60  | 9,53      | 584,2 | 514,4 | 9,53  | 412,8 | 20 x 31,8       | 142,7 | 53,8 | 85,80           | 2C42 9454 |
| 16"    | STD | 406,40  | 9,53      | 647,7 | 571,5 | 9,53  | 469,9 | 20 x 35,1       | 146,1 | 57,2 | 106,00          | 2C42 9466 |
| 18"    | XS  | 457,20  | 12,70     | 711,2 | 628,7 | 12,70 | 533,4 | 24 x 35,1       | 158,8 | 60,5 | 131,00          | 2C42 9477 |
| 20"    | STD | 508,00  | 12,70     | 774,7 | 685,8 | 12,70 | 584,2 | 24 x 35,1       | 162,1 | 63,5 | 158,00          | 2C42 9484 |
| 20"    | XS  | 508,00  | 12,70     | 774,7 | 685,8 | 12,70 | 584,2 | 24 x 35,1       | 162,1 | 63,5 | 158,00          | 2C42 9486 |
| 24"    | STD | 609,60  | 9,53      | 914,4 | 812,8 | 9,53  | 692,2 | 24 x 41,7       | 168,1 | 69,8 | 230,00          | 2C42 9496 |



**Flanges WELDING NECK ANSI B16.5, 600 LB, ASTM A105N**  
WELDING NECK flanges

Lista 2382

| NPS    | Sch | Pipe OD        | Esp. Tick | D     | k     | s     | d4        | d2<br>NºfurosxØ | h1    | b      | Kg/Pc<br>Weight | Art. N°   |
|--------|-----|----------------|-----------|-------|-------|-------|-----------|-----------------|-------|--------|-----------------|-----------|
| 1 1/2" | XS  | 48,26 x 5,08   | 155,4     | 114,3 | 5,08  | 73,2  | 4 x 22,4  | 69,9            | 22,4  | 3,49   |                 | 2C52 9262 |
| 1 1/2" | 160 | 48,26 x 7,14   | 155,4     | 114,3 | 7,14  | 73,2  | 4 x 22,4  | 69,9            | 22,4  | 3,50   |                 | 2C52 9263 |
| 2"     | XS  | 60,33 x 5,54   | 165,1     | 127,0 | 5,54  | 91,9  | 8 x 19,1  | 73,2            | 25,4  | 4,30   |                 | 2C52 9289 |
| 2"     | 160 | 60,33 x 8,71   | 165,1     | 127,0 | 8,71  | 91,9  | 8 x 19,1  | 73,2            | 25,4  | 4,36   |                 | 2C52 9291 |
| 3"     | XS  | 88,90 x 7,62   | 209,6     | 168,1 | 7,62  | 127,0 | 8 x 22,4  | 82,6            | 31,8  | 8,53   |                 | 2C52 9339 |
| 3"     | 160 | 88,90 x 11,13  | 209,6     | 168,1 | 11,13 | 127,0 | 8 x 22,4  | 82,6            | 31,8  | 8,60   |                 | 2C52 9340 |
| 4"     | XS  | 114,30 x 8,56  | 273,1     | 215,9 | 8,56  | 157,2 | 8 x 25,4  | 101,6           | 38,1  | 17,40  |                 | 2C52 9365 |
| 6"     | XS  | 168,30 x 10,97 | 355,6     | 292,1 | 10,97 | 215,9 | 12 x 28,4 | 117,3           | 47,8  | 34,90  |                 | 2C52 9400 |
| 6"     | 160 | 168,30 x 18,24 | 355,6     | 292,1 | 18,24 | 215,9 | 12 x 28,4 | 117,3           | 47,8  | 35,00  |                 | 2C52 9402 |
| 8"     | XS  | 219,06 x 12,7  | 419,1     | 349,3 | 12,7  | 269,9 | 12 x 31,8 | 133,4           | 55,6  | 53,90  |                 | 2C52 9416 |
| 8"     | 120 | 219,06 x 18,3  | 419,1     | 349,3 | 18,3  | 269,9 | 12 x 31,8 | 133,4           | 55,6  | 54,00  |                 | 2C52 9417 |
| 10"    | XS  | 273,05 x 12,7  | 508,0     | 431,8 | 12,7  | 323,8 | 16 x 35,1 | 152,4           | 63,5  | 86,50  |                 | 2C52 9428 |
| 12"    | XS  | 323,85 x 12,7  | 558,8     | 489,0 | 12,7  | 381,0 | 20 x 35,1 | 155,4           | 66,5  | 103,00 |                 | 2C52 9442 |
| 14"    | XS  | 355,60 x 12,7  | 603,3     | 527,1 | 12,7  | 412,8 | 20 x 38,1 | 165,1           | 69,9  | 122,00 |                 | 2C52 9454 |
| 16"    | XS  | 406,4 x 12,7   | 685,8     | 603,3 | 12,7  | 464,9 | 20 x 41,1 | 177,8           | 76,2  | 170,00 |                 | 2C52 9466 |
| 18"    | XS  | 457,2 x 12,7   | 743,0     | 654,1 | 12,7  | 533,4 | 20 x 44,5 | 184,2           | 82,6  | 204,00 |                 | 2C52 9477 |
| 20"    | XS  | 508,0 x 12,7   | 812,8     | 723,9 | 12,7  | 584,2 | 24 x 44,5 | 190,5           | 89,9  | 254,00 |                 | 2C52 9486 |
| 24"    | XS  | 609,6 x 12,7   | 939,8     | 838,2 | 12,7  | 692,2 | 24 x 50,8 | 203,2           | 101,6 | 358,00 |                 | 2C52 9497 |

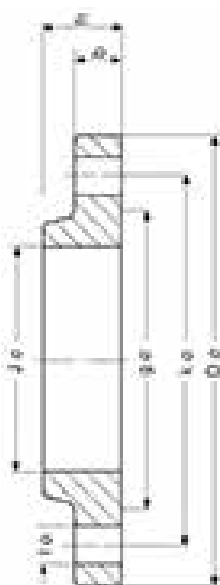


Podemos toronar, nas nossas oficinas estas flanges para outras espessuras.

We can machine in house this flanges for other schedules.

Podemos fornecer flanges 150Lb até 2500Lb em todas as dimensões inclusive RTJ.

We can supply flanges 150Lb to 2500Lb all sizes include RTJ.


**Flanges "Lap Joint" 150 lb ANSI B16.5 -A105N**  
 Lap Joint flanges 150 lb ANSI B16.5 -A105N

**Lista**

| DN     | D     | J     | b    | Flange |      |       |       | Furo x Ø  | Kg Weight | Art. N°   |
|--------|-------|-------|------|--------|------|-------|-------|-----------|-----------|-----------|
|        |       |       |      | h      | r    | m     | k     |           |           |           |
| 1/2"   | 88,9  | 22,9  | 11,2 | 15,7   | 3,0  | 30,2  | 60,5  | 4 x 15,7  | 0,38      | 2B829170L |
| 3/4"   | 98,6  | 28,2  | 12,7 | 15,7   | 3,0  | 38,1  | 69,9  | 4 x 15,7  | 0,55      | 2B829191L |
| 1"     | 108,0 | 35,1  | 14,2 | 17,5   | 3,0  | 49,3  | 79,2  | 4 x 15,7  | 0,76      | 2B829218L |
| 1,1/4" | 117,3 | 43,7  | 15,7 | 20,6   | 4,8  | 58,7  | 88,9  | 4 x 15,7  | 1,01      | 2B829243L |
| 1,1/2" | 127,0 | 50,0  | 17,5 | 22,4   | 6,4  | 65,0  | 98,6  | 4 x 15,7  | 1,30      | 2B829259L |
| 2"     | 152,4 | 62,5  | 19,1 | 25,4   | 7,9  | 77,7  | 120,7 | 4 x 19,1  | 2,03      | 2B829286L |
| 2,1/2" | 177,8 | 75,4  | 22,4 | 28,4   | 7,9  | 90,4  | 139,7 | 4 x 19,1  | 3,25      | 2B829309L |
| 3"     | 190,5 | 91,4  | 23,9 | 30,2   | 9,7  | 108,0 | 152,4 | 4 x 19,1  | 3,81      | 2B829338L |
| 4"     | 228,6 | 116,8 | 23,9 | 33,3   | 11,2 | 134,9 | 190,5 | 8 x 19,1  | 5,25      | 2B829364L |
| 5"     | 254,0 | 144,5 | 23,9 | 36,6   | 11,2 | 163,5 | 215,9 | 8 x 22,4  | 6,02      | 2B829380L |
| 6"     | 279,4 | 171,5 | 25,4 | 39,6   | 12,7 | 192,0 | 241,3 | 8 x 22,4  | 7,40      | 2B829399L |
| 8"     | 342,9 | 222,3 | 28,4 | 44,5   | 12,7 | 246,1 | 298,5 | 8 x 22,4  | 12,10     | 2B829415L |
| 10"    | 406,4 | 277,4 | 30,2 | 49,3   | 12,7 | 304,8 | 362,0 | 12 x 25,4 | 16,4      | 2B829427L |
| 12"    | 482,6 | 328,2 | 31,8 | 55,6   | 12,7 | 365,3 | 431,8 | 12 x 25,4 | 26,1      | 2B829441L |
| 14"    | 533,4 | 360,2 | 35,1 | 79,2   | 12,7 | 400,1 | 476,3 | 12 x 28,4 | 34,5      | 2B829453L |
| 16"    | 596,9 | 411,2 | 36,6 | 87,4   | 12,7 | 457,2 | 539,8 | 16 x 28,4 | 44,6      | 2B829465L |
| 18"    | 635,0 | 462,3 | 39,6 | 96,8   | 12,7 | 505,0 | 577,9 | 16 x 31,8 | 48,7      | 2B829476L |
| 20"    | 692,5 | 514,4 | 42,9 | 103,1  | 12,7 | 558,8 | 635,0 | 20x 31,8  | 61,6      | 2B829484L |
| 24"    | 812,8 | 616,0 | 47,8 | 111,3  | 12,7 | 663,4 | 749,3 | 20x 35,1  | 86,6      | 2B829496L |

**Flanges "Lap Joint" 300 Lb ANSI B16.5 -A105N**  
 Forged Lap Joint flanges 300 lb ANSI B16.5 -A105N

**Lista**

| DN     | D     | J     | b     | Flange |      |       |       | Furo x Ø  | Kg Weight | Art. N°   |
|--------|-------|-------|-------|--------|------|-------|-------|-----------|-----------|-----------|
|        |       |       |       | h      | r    | m     | k     |           |           |           |
| 1/2"   | 95,2  | 22,9  | 14,2  | 22,4   | 3,0  | 38,1  | 66,6  | 4 x 15,7  | 0,62      | 2B929170L |
| 3/4"   | 117,3 | 28,2  | 15,7  | 25,4   | 3,0  | 47,8  | 82,6  | 4 x 19,1  | 1,10      | 2B929191L |
| 1"     | 124,0 | 35,1  | 17,5  | 26,9   | 3,0  | 53,8  | 88,9  | 4 x 19,1  | 1,35      | 2B929218L |
| 1,1/4" | 133,4 | 43,7  | 19,1  | 26,9   | 4,8  | 63,5  | 98,6  | 4 x 19,1  | 1,65      | 2B929243L |
| 1,1/2" | 155,4 | 50,0  | 20,5  | 30,2   | 6,4  | 69,9  | 114,6 | 4 x 22,4  | 2,44      | 2B929259L |
| 2"     | 165,1 | 62,5  | 22,4  | 33,3   | 7,9  | 84,1  | 127,0 | 8 x 19,1  | 2,83      | 2B929286L |
| 2,1/2" | 190,5 | 75,4  | 25,4  | 38,1   | 7,9  | 100,1 | 149,4 | 8 x 22,4  | 4,25      | 2B929309L |
| 3"     | 209,6 | 91,4  | 28,4  | 42,9   | 9,7  | 117,3 | 168,1 | 8 x 22,4  | 5,78      | 2B929338L |
| 4"     | 254,0 | 116,8 | 31,8  | 47,8   | 11,2 | 146,1 | 200,2 | 8 x 22,4  | 9,55      | 2B929364L |
| 5"     | 279,4 | 144,5 | 35,1  | 50,8   | 11,2 | 177,8 | 235,0 | 8 x 22,4  | 12,20     | 2B929380L |
| 6"     | 317,5 | 171,5 | 36,6  | 52,3   | 12,7 | 206,2 | 269,7 | 12 x 22,4 | 15,50     | 2B929399L |
| 8"     | 381,0 | 222,3 | 41,21 | 62,0   | 12,7 | 260,4 | 330,2 | 12 x 25,4 | 24,10     | 2B929415L |
| 10"    | 444,5 | 277,4 | 47,8  | 95,3   | 12,7 | 320,5 | 387,4 | 16 x 28,4 | 34,40     | 2B929427L |
| 12"    | 520,7 | 328,2 | 50,8  | 101,6  | 12,7 | 374,7 | 450,9 | 16 x 31,8 | 50,40     | 2B929441L |
| 14"    | 584,2 | 360,2 | 53,8  | 111,3  | 12,7 | 425,5 | 514,3 | 20 x 31,8 | 70,90     | 2B929453L |
| 16"    | 647,7 | 411,2 | 57,2  | 120,7  | 12,7 | 482,6 | 571,5 | 20x 35,1  | 89,50     | 2B929465L |
| 18"    | 711,2 | 462,3 | 60,5  | 130,0  | 12,7 | 533,4 | 628,7 | 24 x 35,1 | 111,00    | 2B929476L |
| 20"    | 774,7 | 514,4 | 63,5  | 139,7  | 12,7 | 587,2 | 685,8 | 24x 35,1  | 137,00    | 2B929484L |
| 24"    | 914,4 | 616,0 | 69,9  | 152,4  | 12,7 | 701,5 | 812,8 | 24x 41,1  | 204,00    | 2B929496L |

**Flanges "Lap Joint" 400 Lb ANSI B16.5 -A105N**  
 Lap Joint flanges 400 lb ANSI B16.5 -A105N

**Lista**

| DN                   | D     | J     | b    | Flange |      |       |       | Furo x Ø  | Kg Weight | Art. N° |
|----------------------|-------|-------|------|--------|------|-------|-------|-----------|-----------|---------|
|                      |       |       |      | h      | r    | m     | k     |           |           |         |
| 1/2" - 3" use 600 Lb |       |       |      |        |      |       |       |           |           |         |
| 4"                   | 254,0 | 116,8 | 35,1 | 50,8   | 11,2 | 146,1 | 200,2 | 8 x 25,4  | 10,9      |         |
| 5"                   | 279,4 | 144,5 | 38,1 | 53,8   | 11,2 | 177,8 | 235,0 | 8 x 25,4  | 13,7      |         |
| 6"                   | 317,5 | 171,5 | 41,1 | 57,2   | 12,7 | 206,2 | 269,7 | 12 x 25,4 | 18,0      |         |
| 8"                   | 381,0 | 222,3 | 47,8 | 68,3   | 12,7 | 260,4 | 330,2 | 12 x 28,4 | 28,3      |         |
| 10"                  | 444,5 | 277,4 | 53,8 | 101,6  | 12,7 | 320,5 | 387,4 | 16 x 31,8 | 38,8      |         |
| 12"                  | 520,7 | 328,2 | 57,2 | 108,0  | 12,7 | 374,7 | 450,9 | 16 x 35,1 | 56,6      |         |
| 14"                  | 584,2 | 360,2 | 60,5 | 117,3  | 12,7 | 425,5 | 514,4 | 20 x 35,1 | 78,6      |         |
| 16"                  | 647,7 | 411,2 | 63,5 | 127,00 | 12,7 | 482,6 | 571,5 | 20x 38,1  | 100,00    |         |
| 18"                  | 711,2 | 462,3 | 66,5 | 136,7  | 12,7 | 533,4 | 628,7 | 24 x 38,1 | 122,00    |         |
| 20"                  | 774,7 | 514,4 | 69,9 | 146,1  | 12,7 | 587,2 | 685,8 | 24x 41,1  | 145,00    |         |
| 24"                  | 914,4 | 616,0 | 76,2 | 158,8  | 12,7 | 701,5 | 812,8 | 24x 47,8  | 217,00    |         |

Podemos fornecer flanges "Lap Joint" até 2500Lb em qualquer qualidade  
 We can supply "Lap Joint" flanges up to 2500 Lb and from other quality

## Flanges forjadas

Forged Flanges

### Flanges "Lap Joint" 600 lb ANSI B16.5 -A105N

Lap Joint flanges 600 lb ANSI B16.5 -A105N

Lista

| DN     | D     | J     | b     | Flange<br>h | r    | m     | k     | Furo x Ø | Kg<br>Weight | Art. Nº |
|--------|-------|-------|-------|-------------|------|-------|-------|----------|--------------|---------|
| 1/2"   | 95,3  | 22,9  | 14,2  | 22,4        | 3,0  | 38,1  | 66,5  | 4x15,7   | 0,72         |         |
| 3/4"   | 117,3 | 28,2  | 15,7  | 25,4        | 3,0  | 47,8  | 82,6  | 4x19,1   | 1,25         |         |
| 1"     | 124,0 | 35,1  | 17,5  | 26,9        | 3,0  | 53,8  | 88,9  | 4x19,1   | 1,50         |         |
| 1,1/4" | 133,4 | 43,7  | 20,6  | 28,4        | 4,8  | 63,5  | 98,6  | 4x19,1   | 2,00         |         |
| 1,1/2" | 155,4 | 50,0  | 22,4  | 31,8        | 6,4  | 69,9  | 114,3 | 4x22,4   | 2,92         |         |
| 2"     | 165,1 | 62,5  | 25,4  | 36,6        | 7,9  | 84,1  | 127,0 | 8x19,1   | 3,55         |         |
| 2,1/2" | 190,5 | 75,4  | 28,4  | 41,1        | 7,9  | 100,1 | 149,4 | 8x22,4   | 5,23         |         |
| 3"     | 209,6 | 91,4  | 31,8  | 46,0        | 9,7  | 117,3 | 168,1 | 8x22,4   | 6,95         |         |
| 4"     | 273,1 | 116,8 | 38,1  | 53,8        | 11,2 | 152,4 | 215,9 | 8x25,4   | 14,40        |         |
| 5"     | 330,2 | 144,5 | 44,5  | 60,5        | 11,2 | 189,0 | 266,7 | 8x28,4   | 24,30        |         |
| 6"     | 355,6 | 171,5 | 47,8  | 66,5        | 12,7 | 222,3 | 292,1 | 12x28,4  | 28,50        |         |
| 8"     | 419,1 | 222,3 | 55,6  | 76,2        | 12,7 | 273,1 | 349,3 | 12x31,8  | 43,10        |         |
| 10"    | 508,0 | 277,4 | 63,5  | 111,3       | 12,7 | 342,9 | 431,8 | 16x35,1  | 70,50        |         |
| 12"    | 558,8 | 328,2 | 66,5  | 117,3       | 12,7 | 400,1 | 489,0 | 20x35,1  | 86,10        |         |
| 14"    | 603,3 | 360,2 | 69,9  | 127,0       | 12,7 | 431,8 | 527,1 | 20x38,1  | 100,00       |         |
| 16"    | 685,8 | 411,2 | 76,2  | 139,7       | 12,7 | 495,3 | 603,3 | 20x41,1  | 145,00       |         |
| 18"    | 743,0 | 462,3 | 82,6  | 152,4       | 12,7 | 546,1 | 654,1 | 20x44,5  | 177,00       |         |
| 20"    | 812,8 | 514,4 | 88,9  | 165,1       | 12,7 | 609,6 | 723,9 | 24x44,05 | 225,00       |         |
| 24"    | 939,8 | 616,0 | 101,6 | 184,2       | 12,7 | 717,6 | 838,2 | 24x50,8  | 318,00       |         |

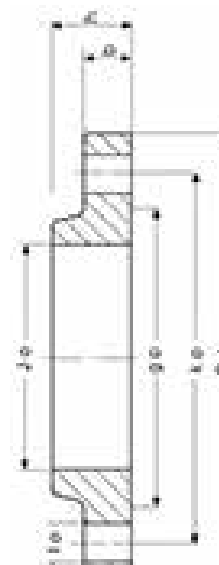


### Flanges "Lap Joint" 900 lb ANSI B16.5 -A105N

Lap Joint flanges 900 lb ANSI B16.5 -A105N

Lista

| DN                        | D      | J     | b     | Flange<br>h | r    | m     | k     | Furo x Ø | Kg<br>Weight | Art. Nº |
|---------------------------|--------|-------|-------|-------------|------|-------|-------|----------|--------------|---------|
| 1/2" - 2 1/2" use 1500 Lb |        |       |       |             |      |       |       |          |              |         |
| 3"                        | 241,3  | 91,4  | 38,1  | 53,8        | 9,7  | 127   | 190,5 | 8x25,4   | 11,3         |         |
| 4"                        | 292,1  | 116,8 | 44,5  | 69,9        | 11,2 | 158,8 | 235,0 | 8x31,8   | 19,2         |         |
| 5"                        | 349,3  | 144,5 | 50,8  | 79,2        | 11,2 | 190,5 | 279,4 | 8x35,1   | 31,2         |         |
| 6"                        | 381,0  | 171,5 | 55,6  | 85,9        | 12,7 | 235,5 | 317,5 | 12x31,8  | 40,5         |         |
| 8"                        | 469,9  | 222,2 | 63,5  | 114,3       | 12,7 | 298,5 | 393,7 | 12x38,1  | 71,5         |         |
| 10"                       | 546,1  | 277,4 | 69,9  | 127,0       | 12,7 | 368,3 | 469,9 | 16x38,1  | 104,0        |         |
| 12"                       | 609,6  | 328,2 | 79,2  | 142,7       | 12,7 | 419,1 | 533,4 | 20x38,1  | 139,0        |         |
| 14"                       | 641,3  | 360,2 | 85,9  | 155,4       | 12,7 | 450,9 | 558,8 | 20x41,1  | 161,0        |         |
| 16"                       | 704,9  | 411,2 | 89,9  | 165,1       | 12,7 | 508,0 | 616,0 | 20x44,5  | 194,0        |         |
| 18"                       | 787,4  | 462,3 | 101,6 | 190,5       | 12,7 | 565,2 | 685,8 | 20x50,8  | 267,0        |         |
| 20"                       | 857,3  | 514,4 | 108,0 | 209,6       | 12,7 | 622,3 | 749,3 | 20x53,8  | 334,0        |         |
| 24"                       | 1041,4 | 616,0 | 139,7 | 266,7       | 12,7 | 749,3 | 901,7 | 20x66,5  | 618,0        |         |



### Flanges "Lap Joint" 1500 lb ANSI B16.5 -A105N

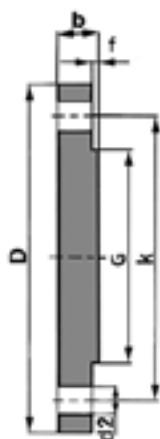
Lap Joint flanges 1500 lb ANSI B16.5 -A105N

Lista

| DN     | D      | J     | b     | Flange<br>h | r    | m     | k     | Furo x Ø | Kg<br>Weight | Art. Nº |
|--------|--------|-------|-------|-------------|------|-------|-------|----------|--------------|---------|
| 1/2"   | 120,7  | 22,9  | 22,4  | 31,8        | 3,0  | 38,1  | 82,6  | 4x22,4   | 4,71         |         |
| 3/4"   | 130,0  | 28,2  | 25,4  | 35,1        | 3,0  | 44,5  | 88,9  | 4x22,4   | 2,30         |         |
| 1"     | 149,4  | 35,1  | 28,4  | 41,1        | 3,0  | 52,3  | 101,6 | 4x25,4   | 3,40         |         |
| 1,1/4" | 158,8  | 43,7  | 28,4  | 41,1        | 4,8  | 63,5  | 111,3 | 4x25,4   | 3,85         |         |
| 1,1/2" | 177,8  | 50,0  | 31,8  | 44,5        | 6,4  | 69,9  | 124,0 | 4x28,4   | 5,28         |         |
| 2"     | 215,9  | 62,5  | 38,1  | 57,2        | 7,9  | 104,6 | 165,1 | 8x25,4   | 9,78         |         |
| 2,1/2" | 244,3  | 75,4  | 41,1  | 63,5        | 7,9  | 124,0 | 190,5 | 8x28,4   | 13,60        |         |
| 3"     | 266,7  | 91,4  | 47,8  | 73,2        | 9,7  | 133,4 | 203,2 | 8x31,8   | 17,80        |         |
| 4"     | 311,2  | 116,8 | 53,8  | 90,4        | 11,2 | 162,1 | 241,3 | 8x35,1   | 27,50        |         |
| 5"     | 374,7  | 144,5 | 73,2  | 104,6       | 11,2 | 196,9 | 292,1 | 8x41,1   | 51,50        |         |
| 6"     | 393,7  | 171,5 | 82,6  | 119,1       | 12,7 | 228,6 | 317,5 | 12x38,1  | 62,00        |         |
| 8"     | 482,6  | 222,3 | 91,9  | 142,7       | 12,7 | 292,1 | 393,7 | 12x44,5  | 105,00       |         |
| 10"    | 584,2  | 277,4 | 108,0 | 177,8       | 12,7 | 368,3 | 482,6 | 12x50,8  | 179,00       |         |
| 12"    | 673,1  | 328,2 | 124,0 | 218,9       | 12,7 | 450,9 | 571,5 | 16x53,8  | 269,00       |         |
| 14"    | 749,3  | 360,2 | 133,4 | 241,3       | 12,7 | 495,3 | 635,0 | 16x60,5  | 365,00       |         |
| 16"    | 825,5  | 411,2 | 146,1 | 260,4       | 12,7 | 552,5 | 704,9 | 16x66,5  | 459,00       |         |
| 18"    | 914,4  | 462,3 | 162,1 | 276,4       | 12,7 | 596,9 | 774,7 | 16x73,2  | 598,00       |         |
| 20"    | 984,3  | 514,4 | 177,8 | 292,1       | 12,7 | 641,4 | 831,9 | 16x79,2  | 712,00       |         |
| 24"    | 1168,4 | 616,0 | 203,2 | 330,2       | 12,7 | 762,0 | 990,6 | 16x91,9  | 1090,00      |         |

Podemos fornecer flanges "Lap Joint" até 2500Lb em qualquer qualidade  
We can supply "Lap Joint" flanges up to 2500 Lb and from other quality

**Flanges cegas ASME B16.5, 150 LB, ASTM A105N**  
 Blind flanges

**Lista 2380**


| NPS    | D     | b     | k      | d4     | d2<br>Nº furos x Ø | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|--------|--------|--------------------|-----------------|-----------|
| 1/2"   | 88,9  | 11,20 | 60,30  | 35,10  | 4 x 15,7           | 0,42            | 2C02 9170 |
| 3/4"   | 98,6  | 12,70 | 69,90  | 42,90  | 4 x 15,7           | 0,61            | 2C02 9191 |
| 1"     | 108,0 | 14,20 | 79,20  | 50,80  | 4 x 15,7           | 0,90            | 2C02 9218 |
| 1 1/4" | 117,3 | 15,70 | 88,90  | 63,50  | 4 x 15,7           | 1,30            | 2C02 9243 |
| 1 1/2" | 127,0 | 17,50 | 98,60  | 73,20  | 4 x 15,7           | 1,60            | 2C02 9259 |
| 2"     | 152,0 | 19,10 | 120,70 | 91,90  | 4 x 19,1           | 2,60            | 2C02 9286 |
| 2 1/2" | 177,8 | 22,40 | 139,70 | 104,60 | 4 x 19,1           | 3,94            | 2C02 9309 |
| 3"     | 190,5 | 23,90 | 152,40 | 127,00 | 4 x 19,1           | 5,10            | 2C02 9338 |
| 4"     | 228,6 | 23,90 | 190,50 | 157,20 | 8 x 19,1           | 7,50            | 2C02 9364 |
| 5"     | 254,0 | 23,90 | 185,70 | 185,70 | 8 x 22,4           | 8,63            | 2C02 9380 |
| 6"     | 279,4 | 25,40 | 241,30 | 215,90 | 8 x 22,4           | 11,80           | 2C02 9399 |
| 8"     | 342,9 | 28,40 | 298,50 | 269,70 | 8 x 22,4           | 19,60           | 2C02 9415 |
| 10"    | 406,4 | 30,20 | 362,00 | 323,80 | 12 x 25,4          | 28,80           | 2C02 9427 |
| 12"    | 482,6 | 31,80 | 431,80 | 381,00 | 12 x 25,4          | 43,20           | 2C02 9441 |
| 14"    | 533,4 | 35,10 | 476,80 | 412,80 | 12 x 28,4          | 58,10           | 2C02 9453 |
| 16"    | 596,9 | 36,60 | 539,80 | 469,90 | 16 x 28,4          | 76,00           | 2C02 9465 |
| 18"    | 635,0 | 39,60 | 577,90 | 533,40 | 16 x 31,8          | 93,70           | 2C02 9476 |
| 20"    | 698,5 | 42,90 | 635,00 | 584,20 | 20 x 31,8          | 122,00          | 2C02 9484 |
| 24"    | 812,8 | 47,87 | 749,30 | 692,20 | 20 x 35,1          | 185,00          | 2C02 9496 |

**Flanges cegas ASME B16.5, 300 LB, ASTM A105N**  
 Blind flanges

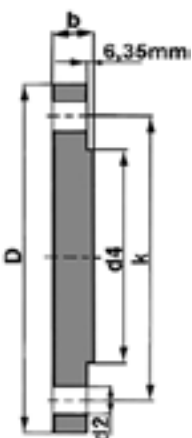
**Lista 2382**

| NPS    | D     | b    | k     | d4    | d2<br>Nº furos x Ø | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|------|-------|-------|--------------------|-----------------|-----------|
| 1/2"   | 95,2  | 14,2 | 66,6  | 35,1  | 4 x 15,7           | 0,64            | 2C12 9170 |
| 3/4"   | 117,3 | 15,8 | 82,6  | 42,9  | 4 x 19,1           | 1,11            | 2C12 9191 |
| 1"     | 124,0 | 17,5 | 88,9  | 50,8  | 4 x 19,1           | 1,50            | 2C12 9218 |
| 1 1/4" | 133,4 | 19,1 | 98,6  | 63,5  | 4 x 19,1           | 1,79            | 2C12 9243 |
| 1 1/2" | 155,4 | 20,6 | 114,3 | 73,2  | 4 x 22,4           | 2,66            | 2C12 9259 |
| 2"     | 165,1 | 22,4 | 127,0 | 91,9  | 8 x 19,1           | 3,18            | 2C12 9286 |
| 2 1/2" | 190,5 | 25,4 | 149,4 | 104,6 | 8 x 22,4           | 4,85            | 2C12 9309 |
| 3"     | 209,5 | 28,4 | 168,1 | 127,0 | 8 x 22,4           | 6,81            | 2C12 9338 |
| 4"     | 254,0 | 31,8 | 200,2 | 157,2 | 8 x 22,4           | 11,50           | 2C19 9364 |
| 5"     | 279,4 | 35,1 | 235,0 | 185,7 | 8 x 22,4           | 15,60           | 2C12 9380 |
| 6"     | 317,5 | 36,6 | 269,7 | 215,9 | 12 x 22,4          | 20,90           | 2C12 9399 |
| 8"     | 381,0 | 41,1 | 330,2 | 269,7 | 12 x 25,4          | 34,30           | 2C12 9415 |
| 10"    | 444,5 | 47,8 | 387,4 | 323,8 | 16 x 28,4          | 53,30           | 2C12 9427 |
| 12"    | 520,7 | 50,8 | 450,9 | 381,0 | 16 x 31,8          | 78,80           | 2C12 9441 |
| 14"    | 584,2 | 53,8 | 514,4 | 412,8 | 20 x 31,8          | 105,00          | 2C12 9458 |
| 16"    | 647,7 | 57,2 | 571,5 | 469,9 | 20 x 35,1          | 137,00          | 2C12 9465 |
| 18"    | 711,2 | 60,5 | 628,7 | 533,4 | 24 x 35,1          | 175,00          | 2C12 9476 |
| 20"    | 774,7 | 63,5 | 685,8 | 584,2 | 24 x 35,1          | 223,00          | 2C12 9484 |
| 24"    | 914,4 | 69,8 | 812,8 | 692,2 | 24 x 41,7          | 342,00          | 2C12 9496 |

**Flanges cegas ASME B16.5, 600 LB, ASTM A105N**  
 Blind flanges

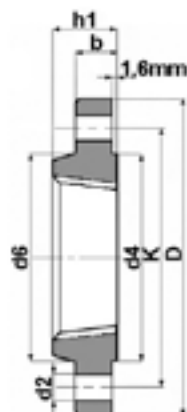
**Lista 2382**

| NPS    | D     | b    | k     | d4    | d2<br>Nº furos x Ø | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|------|-------|-------|--------------------|-----------------|-----------|
| 3/4"   | 117,3 | 15,8 | 82,6  | 42,9  | 4 x 19,1           | 1,28            | 2C22 9191 |
| 1"     | 124,0 | 17,5 | 88,9  | 50,8  | 4 x 19,1           | 1,60            | 2C22 9218 |
| 1 1/4" | 133,4 | 20,6 | 98,6  | 63,5  | 4 x 19,1           | 2,23            | 2C22 9243 |
| 1 1/2" | 155,4 | 22,4 | 114,3 | 73,2  | 4 x 22,4           | 3,25            | 2C22 9259 |
| 2"     | 165,1 | 25,4 | 127,0 | 91,9  | 8 x 19,1           | 4,15            | 2C22 9286 |
| 2 1/2" | 190,5 | 28,6 | 149,4 | 104,6 | 8 x 22,4           | 6,13            | 2C22 9309 |
| 3"     | 209,5 | 31,8 | 168,1 | 127,0 | 8 x 22,4           | 8,44            | 2C22 9338 |
| 4"     | 273,1 | 38,1 | 215,9 | 157,2 | 8 x 25,4           | 17,30           | 2C22 9364 |
| 6"     | 355,6 | 47,8 | 292,1 | 215,9 | 12 x 28,4          | 36,10           | 2C22 9399 |
| 8"     | 419,1 | 55,6 | 349,3 | 269,7 | 12 x 31,8          | 58,90           | 2C22 9414 |
| 10"    | 508,0 | 63,5 | 431,8 | 323,8 | 16 x 35,1          | 97,50           | 2C22 9427 |
| 12"    | 558,0 | 66,5 | 489,0 | 381,0 | 20 x 35,1          | 124,00          | 2C22 9441 |
| 14"    | 603,3 | 69,9 | 527,1 | 412,8 | 20 x 38,1          | 151,00          | 2C22 9453 |



**Flanges roscadas ASME B16.5, 150 LB, ASTM A105N**  
Threaded flanges

Lista 2380



| NPS    | D     | k     | d4    | d6    | d2<br>Nº furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   |
|--------|-------|-------|-------|-------|--------------------|------|------|-----------------|-----------|
| 1/2"   | 88,9  | 60,5  | 35,1  | 30,2  | 4 x 15,7           | 15,7 | 11,2 | 0,39            | 2C92 9170 |
| 3/4"   | 98,6  | 69,9  | 42,9  | 38,1  | 4 x 15,7           | 15,7 | 12,7 | 0,56            | 2C92 9191 |
| 1"     | 108,0 | 79,2  | 50,8  | 49,3  | 4 x 15,7           | 17,5 | 14,2 | 0,78            | 2C92 9218 |
| 1 1/4" | 117,3 | 88,9  | 63,5  | 58,7  | 4 x 15,7           | 20,6 | 15,7 | 1,03            | 2C92 9243 |
| 1 1/2" | 127,0 | 98,6  | 73,2  | 65,0  | 4 x 15,7           | 22,4 | 17,5 | 1,32            | 2C92 9259 |
| 2"     | 152,4 | 120,7 | 91,9  | 77,7  | 4 x 19,1           | 25,4 | 19,1 | 2,06            | 2C92 9286 |
| 2 1/2" | 177,8 | 139,7 | 104,6 | 90,4  | 4 x 19,1           | 28,4 | 22,4 | 3,28            | 2C92 9309 |
| 3"     | 190,5 | 152,4 | 127,0 | 108,0 | 4 x 19,1           | 30,2 | 23,9 | 3,85            | 2C92 9339 |
| 4"     | 228,5 | 190,5 | 157,2 | 134,9 | 8 x 19,1           | 33,3 | 23,9 | 5,30            | 2C92 9364 |
| 5"     |       |       |       |       |                    |      |      |                 |           |
| 6"     |       |       |       |       |                    |      |      |                 |           |

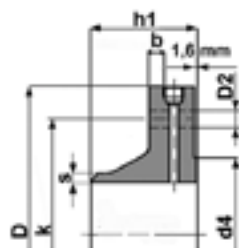
**Flanges roscadas ASME B16.11, 300 LB, ASTM A105N**  
Threaded flanges

Lista 2382

| NPS    | D     | k     | d4    | d6    | d2<br>Nº furos x Ø | h1   | b    | Kg/Pc<br>Weight | Art. Nº   | €/ pc |
|--------|-------|-------|-------|-------|--------------------|------|------|-----------------|-----------|-------|
| 1/2"   | 95,2  | 66,5  | 35,0  | 38,1  | 4 x 15,7           | 22,3 | 14,2 | 0,64            | 2C91 9170 |       |
| 3/4"   | 117,3 | 82,6  | 42,9  | 47,8  | 4 x 15,7           | 25,4 | 15,7 | 1,12            | 2C91 9193 |       |
| 1"     | 124,0 | 88,9  | 50,8  |       |                    |      |      |                 |           |       |
| 1 1/4" | 133,4 | 98,6  | 63,5  | 53,8  | 4 x 15,7           | 26,9 | 17,5 | 1,36            | 2C91 9218 |       |
| 1 1/2" | 155,4 | 114,3 | 73,2  | 63,5  | 4 x 15,7           | 26,9 | 19,1 | 1,68            | 2C91 9243 |       |
| 2"     | 165,1 | 127,0 | 91,9  | 69,9  | 4 x 15,7           | 30,2 | 20,6 | 2,49            | 2C91 9259 |       |
| 2 1/2" | 190,5 | 149,4 | 104,6 | 84,1  | 8 x 19,1           | 33,3 | 22,4 | 2,87            | 2C91 9286 |       |
|        |       |       |       | 100,1 | 8 x 22,4           | 38,1 | 25,4 | 4,32            | 2C91 9309 |       |
| 3"     | 209,5 | 168,1 | 127,0 |       |                    |      |      |                 |           |       |
| 4"     | 254,2 | 200,2 | 157,2 | 117,3 | 8 x 22,4           | 42,9 | 28,4 | 5,85            | 2C91 9339 |       |
|        |       |       |       | 146,1 | 8 x 22,4           | 47,8 | 31,8 | 9,61            | 2C91 9364 |       |

**Flanges orifício ASME B16.5, 300 LB, ASTM A105N**  
Orifice flanges

Lista 2386



| NPS    | D        | k     | s     | d4    | d2<br>Nº furos x Ø | h1    | b<br>Mínimo | Kg/Pc<br>Weight | Art. Nº   |
|--------|----------|-------|-------|-------|--------------------|-------|-------------|-----------------|-----------|
| 1"     | XS 124,0 | 88,9  | 4,55  | 50,8  | 4 x 19,1           | 82,6  | 38,1        | 4,50            | 2B92 9218 |
| 1 1/2" | XS 155,4 | 114,3 | 5,08  | 73,2  | 4 x 22,4           | 85,9  | 38,1        | 6,50            | 2B92 9259 |
| 2"     | XS 165,1 | 127,0 | 5,54  | 91,9  | 8 x 19,1           | 85,9  | 38,1        | 7,00            | 2B92 9286 |
| 2 1/2" | XS 190,0 | 149,2 | 7,01  | 104,6 | 8 x 22,4           | 38,1  | 7,5         | 7,50            | 2B92 9310 |
| 3"     | XS 209,6 | 168,1 | 7,62  | 127,0 | 8 x 22,4           | 80,9  | 38,1        | 9,40            | 2B92 9338 |
| 4"     | XS 254,0 | 200,2 | 8,56  | 157,2 | 8 x 22,4           | 91,9  | 38,1        | 13,20           | 2B72 9364 |
| 6"     | XS 317,5 | 269,7 | 10,97 | 215,9 | 12 x 22,4          | 100,1 | 38,1        | 14,60           | 2B72 9399 |
| 8"     | XS 381,0 | 330,2 | 12,70 | 269,7 | 12 x 25,4          | 111,3 | 41,1        | 30,00           | 2B72 9415 |
| 10"    | XS 444,5 | 387,4 | 12,70 | 323,9 | 16 x 28,4          | 117,3 | 47,8        | 41,00           | 2B72 9427 |
| 12"    | XS 520,7 | 450,9 | 12,70 | 381,0 | 16 x 31,8          | 130,0 | 50,8        | 62,00           | 2B72 9441 |
| 14"    | XS 584,2 | 514,4 | 12,70 | 412,8 | 20 x 31,8          | 142,7 | 53,8        | 84,00           | 2B92 9453 |
| 16"    | XS 647,7 | 571,5 | 12,70 | 469,9 | 20 x 35,1          | 146,1 | 57,2        | 111,00          | 2B92 9465 |
| 18"    | XS 711,0 | 628,7 | 12,70 | 533,4 | 24 x 35,1          | 158,8 | 60,5        | 171,00          | 2B92 9477 |
| 20"    | XS 774,7 | 685,8 | 12,70 | 584,2 | 24 x 35,1          | 162,1 | 63,5        | 420,00          | 2B92 9484 |
| 24"    | XS 914,0 | 812,8 | 12,70 | 692,2 | 24 x 41,1          | 168,1 | 69,9        | 247,00          | 2B92 9497 |

**Flanges orifício ASME B16.5, 600 LB, ASTM A105N**  
Orifice flanges

Lista 2386

| NPS    | D         | k      | s     | d4     | d2<br>Nº furos x Ø | h1    | b<br>Mínimo | Kg/Pc<br>Weight | Art. Nº   |
|--------|-----------|--------|-------|--------|--------------------|-------|-------------|-----------------|-----------|
| 1"     | XS 124,00 | 88,90  | 4,55  | 50,80  | 4 x 19,1           | 81    | 36,6        | 5,50            | 2C82 9220 |
| 1 1/2" | XS 155,40 | 114,30 | 5,08  | 73,20  | 4 x 22,4           | 84,3  | 36,6        | 7,80            | 2C82 9262 |
| 2"     | XS 165,10 | 127,00 | 5,54  | 91,90  | 8 x 19,1           | 84,3  | 36,6        | 8,30            | 2C82 9289 |
| 2 1/2" | XS 190,00 | 149,20 | 7,01  | 104,60 | 8 x 22,4           | 87,3  | 36,6        | 10,80           | 2C82 9310 |
| 3"     | XS 209,60 | 168,10 | 7,62  | 127,00 | 8 x 22,4           | 87,3  | 36,6        | 12,60           | 2C82 9339 |
| 4"     | XS 273,10 | 215,90 | 8,56  | 157,20 | 8 x 25,4           | 101,6 | 38,1        | 19,89           | 2C82 9365 |
| 6"     | XS 355,60 | 292,10 | 10,97 | 215,90 | 12 x 28,4          | 117,3 | 47,8        | 37,00           | 2C82 9400 |
| 8"     | XS 419,10 | 349,20 | 12,7  | 269,90 | 12 x 31,8          | 133,4 | 55,6        | 53,00           | 2C82 9416 |
| 10"    | XS 508,00 | 431,80 | 12,7  | 323,80 | 16 x 35,1          | 152,4 | 63,5        | 86,00           | 2C82 9418 |
| 12"    | XS 558,80 | 488,90 | 12,7  | 381,00 | 20 x 35,1          | 155,4 | 66,5        | 102,00          | 2C82 9441 |

As flanges são fornecidas aos pares, com respectivos pernos com 2 porcas e ainda 4 buíões e 2 extratores.  
Para fornecer flanges de orifício Weldig Neck, Slip On ou Thred 150 a 2500 Lb de 1/2" a 24".

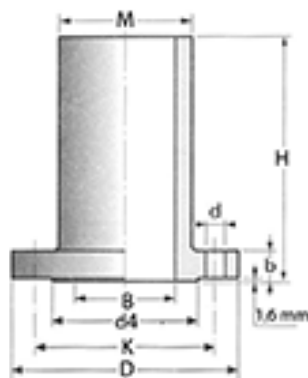
**Flanges "LONG WELDING NECK" 150lb**  
 LONG WELDING NECK flanges

**Lista**


| NPS    | D mm | H mm  | M mm  | J mm  | b mini mm | d4 mm | K mm  | Nº furos | d * mm | Kg/Pc Weight | Art. Nº    |
|--------|------|-------|-------|-------|-----------|-------|-------|----------|--------|--------------|------------|
| 1/2"   | 89   | 228,6 | 30,5  | 12,7  | 11,2      | 34,9  | 60,3  | 4        | 15,8   | 3,6          | 2C32 9170L |
| 3/4"   | 99   | 228,6 | 38,0  | 19,0  | 12,7      | 42,9  | 69,8  | 4        | 15,8   | 3,6          | 2C32 9191L |
| 1"     | 108  | 228,6 | 51,0  | 25,4  | 14,3      | 50,8  | 79,4  | 4        | 15,8   | 3,6          | 2C32 9218L |
| 1 1/4" | 117  | 228,6 | 60,5  | 31,8  | 15,7      | 63,5  | 88,9  | 4        | 15,8   | 4,5          | 2C32 9243L |
| 1 1/2" | 127  | 228,6 | 67,0  | 38,1  | 17,5      | 73,0  | 98,4  | 4        | 15,8   | 5,4          | 2C32 9260L |
| 2"     | 152  | 228,6 | 82,5  | 50,8  | 19,1      | 92,1  | 120,6 | 4        | 19,0   | 7,2          | 2C32 9286L |
| 2 1/2" | 178  | 228,6 | 95,5  | 63,5  | 22,3      | 104,8 | 139,7 | 4        | 19,0   | 9,5          | 2C32 9309L |
| 3"     | 190  | 228,6 | 108,0 | 76,2  | 23,9      | 127,0 | 152,4 | 4        | 19,0   | 10,9         | 2C32 9338L |
| 3 1/2" | 216  | 228,6 | 124,0 | 88,9  | 23,9      | 139,7 | 177,8 | 8        | 19,0   | 14,1         | 2C32 9345L |
| 4"     | 229  | 304,8 | 140,0 | 101,6 | 23,9      | 157,2 | 190,5 | 8        | 19,0   | 21,3         | 2C32 9364L |
| 5"     | 254  | 304,8 | 165,0 | 127,0 | 23,9      | 185,7 | 215,9 | 8        | 22,2   | 25,9         | 2C32 9380L |
| 6"     | 279  | 304,8 | 197,0 | 152,4 | 25,4      | 215,9 | 241,3 | 8        | 22,2   | 34,9         | 2C32 9399L |
| 8"     | 343  | 304,8 | 248,0 | 203,2 | 28,5      | 269,9 | 298,4 | 12       | 22,2   | 46,7         | 2C32 9415L |
| 10"    | 406  | 304,8 | 305,0 | 254,0 | 30,2      | 323,8 | 362,0 | 12       | 25,4   | 68,0         | 2C32 9427L |
| 12"    | 483  | 304,8 | 365,0 | 304,8 | 31,8      | 381,0 | 431,8 | 12       | 25,4   | 97,5         | 2C32 9441L |
| 14"    | 533  | 304,8 | 406,5 | 355,6 | 35,0      | 412,8 | 476,2 | 12       | 28,5   | 100,2        | 2C32 9453L |
| 16"    | 597  | 304,8 | 457,0 | 406,4 | 36,6      | 469,9 | 539,8 | 16       | 28,5   | 115,2        | 2C32 9464L |
| 18"    | 635  | 304,8 | 508,0 | 457,2 | 39,7      | 533,4 | 577,8 | 16       | 31,8   | 126,1        | 2C32 9476L |
| 20"    | 698  | 304,8 | 559,0 | 508,0 | 42,9      | 584,2 | 635,0 | 20       | 31,8   | 147,0        | 2C32 9484L |
| 24"    | 813  | 304,8 | 667,0 | 609,6 | 47,7      | 692,2 | 749,3 | 20       | 35,0   | 199,1        | 2C32 9496L |

Na sua consulta indique a qualidade pretendida.  
 Please inform the required quality.

\* Queiram tomar nota, de que as flanges "Long Welding Neck" são fornecidas com furos (para os parafusos) reduzidos de 1/8".  
 Please take note the long welding neck flanges will be supplied with drilled bolts diameter 1/8" smaller than relating bolts holes."


**Flanges "LONG WELDING NECK" 300lb**  
 LONG WELDING NECK flanges

**Lista**

| NPS    | D mm | H mm  | M mm  | B mm  | b mm | d4 mm | K mm  | Nº furos | d * mm | Kg/Pc Weight | Art. Nº    |
|--------|------|-------|-------|-------|------|-------|-------|----------|--------|--------------|------------|
| 1/2"   | 95   | 228,6 | 38,0  | 12,7  | 14,2 | 34,9  | 66,7  | 4        | 15,8   | 4,5          | 2C42 9170L |
| 3/4"   | 117  | 228,6 | 47,5  | 19,0  | 15,7 | 42,9  | 82,6  | 4        | 19,0   | 4,5          | 2C42 9191L |
| 1"     | 124  | 228,6 | 54,0  | 25,4  | 17,5 | 50,8  | 88,9  | 4        | 19,0   | 4,5          | 2C42 9218L |
| 1 1/4" | 133  | 228,6 | 63,5  | 31,8  | 19,0 | 63,5  | 98,4  | 4        | 19,0   | 6,3          | 2C42 9243L |
| 1 1/2" | 156  | 228,6 | 70,0  | 38,1  | 20,6 | 73,0  | 114,3 | 4        | 22,2   | 7,7          | 2C42 9260L |
| 2"     | 165  | 228,6 | 84,0  | 50,8  | 22,4 | 92,1  | 127,0 | 8        | 19,0   | 8,6          | 2C42 9286L |
| 2 1/2" | 190  | 228,6 | 100,0 | 63,5  | 25,4 | 104,8 | 149,2 | 8        | 22,2   | 12,7         | 2C42 9309L |
| 3"     | 210  | 228,6 | 117,0 | 76,2  | 28,4 | 127,0 | 168,3 | 8        | 22,2   | 16,3         | 2C42 9338L |
| 3 1/2" | 229  | 228,6 | 133,0 | 88,9  | 30,2 | 139,7 | 184,1 | 8        | 22,2   | 20,4         | 2C42 9345L |
| 4"     | 254  | 304,8 | 146,0 | 101,6 | 31,8 | 157,2 | 200,0 | 8        | 22,2   | 24,5         | 2C42 9364L |
| 5"     | 279  | 304,8 | 184,0 | 127,0 | 35,0 | 185,7 | 235,0 | 8        | 22,2   | 39,0         | 2C42 9380L |
| 6"     | 318  | 304,8 | 206,0 | 152,4 | 36,6 | 215,9 | 269,9 | 12       | 22,2   | 49,0         | 2C42 9399L |
| 8"     | 381  | 304,8 | 260,0 | 203,2 | 41,1 | 269,9 | 330,2 | 12       | 25,4   | 68,0         | 2C42 9415L |
| 10"    | 444  | 304,8 | 321,0 | 254,0 | 47,8 | 323,8 | 387,4 | 16       | 28,5   | 98,9         | 2C42 9427L |
| 12"    | 521  | 304,8 | 375,0 | 304,8 | 50,8 | 381,0 | 450,8 | 16       | 31,8   | 131,1        | 2C42 9441L |
| 14"    | 584  | 304,8 | 425,0 | 355,6 | 53,8 | 412,8 | 514,4 | 20       | 31,8   | 155,1        | 2C42 9453L |
| 16"    | 648  | 304,8 | 483,0 | 406,4 | 57,2 | 469,9 | 571,5 | 20       | 35,0   | 193,2        | 2C42 9464L |
| 18"    | 711  | 304,8 | 533,0 | 457,2 | 60,5 | 533,4 | 628,6 | 24       | 35,0   | 223,8        | 2C42 9476L |
| 20"    | 775  | 304,8 | 587,0 | 508,0 | 63,5 | 584,2 | 685,8 | 24       | 35,0   | 260,8        | 2C42 9484L |
| 24"    | 914  | 304,8 | 702,0 | 609,6 | 69,9 | 692,2 | 812,8 | 24       | 41,1   | 373,0        | 2C42 9496L |

Na sua consulta indique a qualidade pretendida.  
 Please inform the required quality.

\* Queiram tomar nota, de que as flanges "Long Welding Neck" são fornecidas com furos (para os parafusos) reduzidos de 1/8".  
 Please take note the long welding neck flanges will be supplied with drilled bolts diameter 1/8" smaller than relating bolts holes.

**Flanges "LONG WELDING NECK" 600lb**  
LONG WELDING NECK flanges

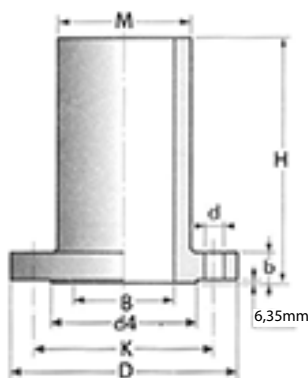
Lista



| NPS    | D mm | H mm  | M mm  | B mm  | b mini mm | d4 mm | K mm  | Nº furos | d * mm | Kg/Pc Weight | Art. Nº    |
|--------|------|-------|-------|-------|-----------|-------|-------|----------|--------|--------------|------------|
| 1/2"   | 95   | 228,6 | 38,0  | 12,7  | 14,2      | 34,9  | 66,7  | 4        | 15,8   | 5,0          | 2C52 9170L |
| 3/4"   | 117  | 228,6 | 48,0  | 19,0  | 15,7      | 42,9  | 82,6  | 4        | 19,0   | 5,0          | 2C52 9191L |
| 1"     | 124  | 228,6 | 54,0  | 25,4  | 17,5      | 50,8  | 88,9  | 4        | 19,0   | 5,0          | 2C52 9218L |
| 1 1/4" | 133  | 228,6 | 63,5  | 31,8  | 20,6      | 63,5  | 98,4  | 4        | 19,0   | 6,3          | 2C52 9243L |
| 1 1/2" | 156  | 228,6 | 70,0  | 38,0  | 22,4      | 73,0  | 114,3 | 4        | 22,2   | 7,7          | 2C52 9260L |
| 2"     | 165  | 228,6 | 84,0  | 50,8  | 25,4      | 92,1  | 127,0 | 4        | 19,0   | 9,5          | 2C52 9286L |
| 2 1/2" | 190  | 228,6 | 100,0 | 63,5  | 28,4      | 104,8 | 149,2 | 4        | 22,2   | 13,1         | 2C52 9309L |
| 3"     | 210  | 228,6 | 117,0 | 76,2  | 31,8      | 127,0 | 168,3 | 4        | 22,2   | 17,2         | 2C52 9338L |
| 3 1/2" | 229  | 228,6 | 133,0 | 88,9  | 35,0      | 139,7 | 184,1 | 8        | 25,4   | 21,8         | 2C52 9345L |
| 4"     | 273  | 304,8 | 152,0 | 101,6 | 38,1      | 157,2 | 215,9 | 8        | 25,4   | 36,4         | 2C52 9364L |
| 5"     | 330  | 304,8 | 190,0 | 127,0 | 44,5      | 185,7 | 266,7 | 8        | 28,5   | 58,1         | 2C52 9380L |
| 6"     | 356  | 304,8 | 222,0 | 152,4 | 47,8      | 215,9 | 292,1 | 12       | 28,5   | 71,7         | 2C52 9399L |
| 8"     | 419  | 304,8 | 273,0 | 203,2 | 55,6      | 269,9 | 349,2 | 12       | 31,8   | 97,5         | 2C52 9415L |
| 10"    | 508  | 304,8 | 343,0 | 254,0 | 63,5      | 323,8 | 431,8 | 16       | 35,0   | 147,0        | 2C52 9427L |
| 12"    | 559  | 304,8 | 400,0 | 304,8 | 66,5      | 381,0 | 489,0 | 20       | 35,0   | 192,8        | 2C52 9441L |
| 14"    | 603  | 304,8 | 432,0 | 355,6 | 69,9      | 412,8 | 527,0 | 20       | 38,1   | 189,1        | 2C52 9453L |
| 16"    | 686  | 304,8 | 495,0 | 406,4 | 76,2      | 469,9 | 603,2 | 20       | 41,1   | 255,8        | 2C52 9464L |
| 18"    | 743  | 304,8 | 546,0 | 457,2 | 82,6      | 533,4 | 654,0 | 20       | 44,5   | 296,6        | 2C52 9476L |
| 20"    | 813  | 304,8 | 610,0 | 508,0 | 88,9      | 584,2 | 723,9 | 24       | 44,5   | 381,0        | 2C52 9484L |
| 24"    | 940  | 304,8 | 718,0 | 609,6 | 101,6     | 692,2 | 838,2 | 24       | 50,8   | 499,0        | 2C52 9496L |

Na sua consulta indique a qualidade pretendida.  
Please inform the required quality.

\* Queiram tomar nota, de que as flanges "Long Welding Neck" são fornecidas com furos (para os parafusos) reduzidos de 1/8".  
Please take note the long welding neck flanges will be supplied with drilled bolts diameter 1/8" smaller than relating bolts holes.


**Flanges "LONG WELDING NECK" 900lb**  
LONG WELDING NECK flanges

Lista

| NPS    | D mm | H mm  | M mm  | B mm  | b mm  | d4 mm | K mm  | Nº furos | d * mm | Kg/Pc Weight | Art. Nº    |
|--------|------|-------|-------|-------|-------|-------|-------|----------|--------|--------------|------------|
| 1/2"   | 121  | 228,6 | 38,0  | 12,7  | 22,4  | 34,9  | 82,6  | 4        | 22,2   | 6,8          | 2C62 9170L |
| 3/4"   | 130  | 228,6 | 48,0  | 19,0  | 25,4  | 42,9  | 88,9  | 4        | 22,2   | 6,8          | 2C62 9191L |
| 1"     | 149  | 228,6 | 54,0  | 25,4  | 28,4  | 50,8  | 101,6 | 4        | 25,4   | 6,8          | 2C62 9218L |
| 1 1/4" | 159  | 228,6 | 63,5  | 31,8  | 28,4  | 63,5  | 111,1 | 4        | 25,4   | 8,2          | 2C62 9243L |
| 1 1/2" | 178  | 228,6 | 70,0  | 38,0  | 31,8  | 73,0  | 123,8 | 4        | 28,5   | 10,4         | 2C62 9260L |
| 2"     | 216  | 228,6 | 100,0 | 50,8  | 38,1  | 92,1  | 165,1 | 8        | 25,4   | 20,0         | 2C62 9280L |
| 2 1/2" | 244  | 304,8 | 124,0 | 63,5  | 41,1  | 104,8 | 190,5 | 8        | 28,5   | 32,7         | 2C62 9309L |
| 3"     | 241  | 304,8 | 127,0 | 76,2  | 38,1  | 127,0 | 190,5 | 8        | 25,4   | 29,5         | 2C62 9338L |
| 4"     | 292  | 304,8 | 158,5 | 101,6 | 44,5  | 157,2 | 235,0 | 8        | 31,8   | 44,5         | 2C62 9364L |
| 5"     | 349  | 304,8 | 190,0 | 127,0 | 50,8  | 185,7 | 279,4 | 8        | 35,0   | 64,8         | 2C62 9380L |
| 6"     | 381  | 304,8 | 235,0 | 152,4 | 55,6  | 215,9 | 317,5 | 12       | 31,8   | 90,3         | 2C62 9399L |
| 8"     | 470  | 304,8 | 298,5 | 203,2 | 63,5  | 269,9 | 393,7 | 12       | 38,1   | 140,6        | 2C62 9415L |
| 10"    | 546  | 304,8 | 368,5 | 254,0 | 69,9  | 323,8 | 469,9 | 16       | 38,1   | 174,6        | 2C62 9427L |
| 12"    | 610  | 304,8 | 419,0 | 304,8 | 79,2  | 381,0 | 533,4 | 20       | 38,1   | 302,5        | 2C62 9441L |
| 14"    | 641  | 304,8 | 451,0 | 355,6 | 85,9  | 412,8 | 558,8 | 20       | 41,1   | 253,1        | 2C62 9453L |
| 16"    | 705  | 304,8 | 508,0 | 406,4 | 88,9  | 469,9 | 616,0 | 20       | 44,5   | 303,9        | 2C62 9464L |
| 18"    | 787  | 304,8 | 565,0 | 457,2 | 101,6 | 533,4 | 685,8 | 20       | 50,8   | 430,5        | 2C62 9476L |
| 20"    | 857  | 304,8 | 622,5 | 508,0 | 108,0 | 584,2 | 749,3 | 20       | 53,8   | 471,7        | 2C62 9484L |
| 24"    | 1041 | 304,8 | 749,5 | 609,6 | 139,7 | 692,2 | 901,7 | 20       | 66,5   | 805,1        | 2C62 9496L |

Na sua consulta indique a qualidade pretendida.  
Please inform the required quality.

\* Queiram tomar nota, de que as flanges "Long Welding Neck" são fornecidas com furos (para os parafusos) reduzidos de 1/8".  
Please take note the long welding neck flanges will be supplied with drilled bolts diameter 1/8" smaller than relating bolts holes.

# **G Lock CLAMP**

**G-LOCK® CLAMP CONNECTOR**

As empresas de Petróleo, Gás, Energia e Petroquímica usam estes produtos em variadas aplicações onde os problemas técnicos complexos podem agora ser resolvidos a custos reduzidos.

A união G-LOCK® é desenhada de acordo com ANSI 16.5, ASME VIII, API 6A/Q1 e outras normas de projecto. Têm a aprovação Lloyds, DNV e Stoomwezen. Todos os testes anti-fogo de acordo com API 6FB partes 1 e 2. Também testada para gás comprindo todos os aspectos de ASME B31.3 Capítulo IX (ex. 1440 bar a 180°C Gas test with bending).

As uniões G-LOCK® oferecem:

- Montagem fácil
- Construção compacta
- Peso reduzido
- Design totalmente aprovado
- Flexibilidade
- Tecnologia de vedação metal-metal: re-utilizável

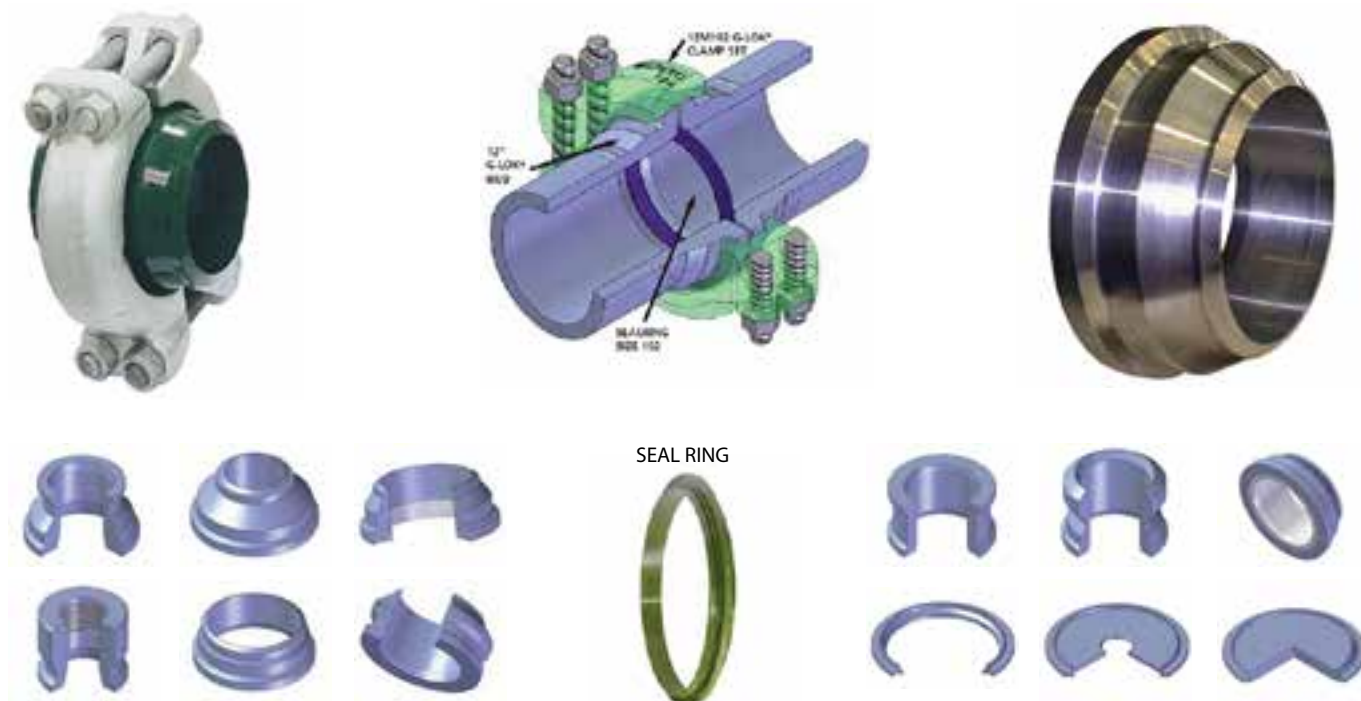
**G-LOCK® CLAMP CONNECTOR**

Oil, Gas, Power and Petrochemical Companies utilize these products in a variety of applications, where often complex technical problems can now be solved cost effectively.

The G-LOCK® connector is designed to meet ANSI 16.5, ASME VIII, API 6A/Q1 and other design codes. The design has the approval of Lloyds, DNV and Stoomwezen. Fully fire tested in accordance with API 6FB parts 1 and 2. Also gas tested to meet all aspects of ASME B31.3 Chapter IX (e.g. 1440 bar at 180°C Gas test with bending).

The G-LOCK® clamp connectors offer:

- Easy Assembly
- Compact Construction
- Reduced Weight
- Full Design approval
- Flexibility
- Metal to metal sealing technology: re-usable



É possível fornecer outras configurações.

**Dimensões:**

De ½" até 36"

**Tipos :**

"But weld hubs" - "Blind hubs" - "Heavy Duty But Weld Hubs"  
"Heavy Duty Blind Hubs"

**Hub material :**

AISI 4140  
SS A182 F316  
Duplex Steel A182 F51/UNS31803

**Material anel de vedação:**

AISI 4140 ou A564 Gr.630

**Por favor envie-nos a sua consulta com os dados mais importantes, tais como:**

- Diâmetro e espessura do tubo
- Qualidade do tubo
- Tipo de fluido
- Pressão e temperatura máximas

Other Hub configurations are possible.

**Sizes :**

From ½" up to 36"

**Types :**

But weld hubs - Blind hubs - Heavy Duty But Weld Hubs -  
Heavy Duty Blind Hubs

**Hub material :**

AISI 4140  
SS A182 F316  
Duplex Steel A182 F51/UNS31803

**Seal ring material:**

AISI 4140 or A564 Gr.630

**Please send us your enquiry with all relevant data such as:**

- Pipe size and Pipe schedule
- Pipe quality
- Type of fluid
- Pressure and temperature

**Tubos sem costura ASTM A333/ grau 6**  
 Seamless steel pipe

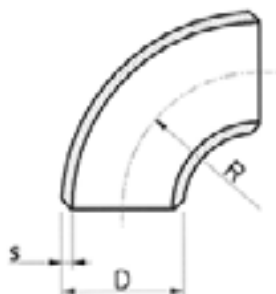
**Lista 2230**


| NPS           | OD mm  | Espessura Thickness | Kg/m Weight | Art. Nº   |
|---------------|--------|---------------------|-------------|-----------|
| 1/2" Sch 40   | 21,34  | 2,77                | 1,29        | 2A01 7170 |
| 1/2" Sch 80   | 21,34  | 3,73                | 1,64        | 2A01 7172 |
| 3/4" Sch 40   | 26,67  | 2,87                | 1,69        | 2A01 7191 |
| 3/4" Sch 80   | 26,67  | 3,91                | 2,20        | 2A01 7193 |
| 1" Sch 40     | 33,40  | 3,38                | 2,50        | 2A01 7218 |
| 1" Sch 80     | 33,40  | 4,55                | 3,24        | 2A01 7220 |
| 1 1/4" Sch 40 | 42,16  | 3,56                | 3,39        | 2A01 7243 |
| 1 1/4" Sch 80 | 42,16  | 4,85                | 4,53        | 2A01 7245 |
| 1 1/2" Sch 40 | 48,26  | 3,58                | 4,05        | 2A01 7260 |
| 1 1/2" Sch 80 | 48,26  | 5,08                | 5,41        | 2A01 7262 |
| 2" Sch 40     | 60,32  | 3,91                | 5,52        | 2A01 7286 |
| 2" Sch 80     | 60,32  | 5,54                | 7,60        | 2A01 7289 |
| 2 1/2" Sch 40 | 73,03  | 5,16                | 8,77        | 2A01 7309 |
| 3" Sch 40     | 88,90  | 5,49                | 11,47       | 2A01 7338 |
| 3" Sch 80     | 88,90  | 7,62                | 15,51       | 2A01 7339 |
| 4" Sch 40     | 114,30 | 6,02                | 16,32       | 2A01 7364 |
| 4" Sch 80     | 114,30 | 8,56                | 22,66       | 2A01 7365 |
| 6" Sch 40     | 114,30 | 7,11                | 28,68       | 2A01 7399 |
| 6" Sch 80     | 141,30 | 10,97               | 43,21       | 2A01 7400 |
| 8" Sch 40     | 219,10 | 8,18                | 43,20       | 2A01 7415 |
| 8" Sch 80     | 219,10 | 12,70               | 64,64       | 2A01 7416 |
| 10" Sch 40    | 273,05 | 9,27                | 60,31       | 2A01 7427 |
| 10" Sch 60    | 273,05 | 12,70               | 81,55       | 2A01 7428 |
| 12" Sch 20    | 323,85 | 6,35                | 50,48       | 2A01 7439 |
| 12" STD       | 323,85 | 9,53                | 73,88       | 2A01 7441 |
| 12" Sch 40    | 323,85 | 10,31               | 67,94       | 2A01 7442 |
| 14" Sch 20    | 355,6  | 7,92                | 67,91       | 2A01 7452 |
| 14" STD       | 355,6  | 9,53                | 81,33       | 2A01 7453 |
| 14" Sch XS    | 355,6  | 12,7                | 107,39      | 2A01 7454 |
| 16" Sch 20    | 406,4  | 7,92                | 77,86       | 2A01 7463 |
| 16" Sch STD   | 406,4  | 9,53                | 93,27       | 2A01 7465 |
| 16" Sch 40    | 406,4  | 12,70               | 123,30      | 2A01 7466 |
| 18" STD       | 457,20 | 9,53                | 105,14      | 2A01 7476 |
| 18" Sch 30    | 457,20 | 11,13               | 124,32      | 2A01 7477 |
| 20" STD       | 508,00 | 9,53                | 116,78      | 2A01 7484 |
| 20" Sch 30    | 508,00 | 12,70               | 155,13      | 2A01 7486 |
| 24" STD       | 609,60 | 9,53                | 141,00      | 2A01 7496 |
| 24" Sch 30    | 609,60 | 14,27               | 212,72      | 2A01 7498 |

Dimensões de 1/2" a 2 1/2" comprimento é de cerca de 6m, 3" e superior em comprimentos de 10 a 12m.  
 Pipe length for NPS 1/2" until 2 1/2" - 6 m, NPS 3" and larger length 10 to 12m.

**Curvas LR 90° ANSI B16.9 ASTM A420 WPL6**  
Elbows LR 90°

Lista 2310



| NPS           | D<br>mm | s<br>mm | R     | Kg/Pc<br>Weight | Art. Nº   |
|---------------|---------|---------|-------|-----------------|-----------|
| 1/2" Sch 40   | 21,34   | 2,77    | 38,1  | 0,078           | 2D35 4170 |
| 1/2" Sch 80   | 21,34   | 3,73    | 38,1  | 0,990           | 2D35 4172 |
| 3/4" Sch 40   | 26,67   | 2,87    | 28,6  | 0,100           | 2D35 4191 |
| 3/4" Sch 80   | 26,67   | 3,91    | 28,6  | 0,120           | 2D35 4193 |
| 1" Sch 40     | 33,40   | 3,38    | 38,0  | 0,160           | 2D35 4218 |
| 1" Sch 80     | 33,40   | 4,55    | 38,0  | 0,200           | 2D35 4220 |
| 1" Sch 160    | 33,40   | 6,35    | 38,0  | 0,300           | 2D35 4221 |
| 1 1/4" Sch 40 | 42,16   | 3,56    | 47,6  | 0,260           | 2D35 4243 |
| 1 1/4" Sch 80 | 42,16   | 4,85    | 47,6  | 0,350           | 2D35 4245 |
| 1 1/2" Sch 40 | 48,26   | 3,68    | 57,15 | 0,400           | 2D35 4260 |
| 1 1/2" Sch 80 | 48,26   | 5,08    | 57,15 | 0,510           | 2D35 4262 |
| 2" Sch 40     | 60,32   | 3,91    | 76,2  | 0,710           | 2D35 4286 |
| 2" Sch 80     | 60,32   | 5,54    | 76,2  | 0,910           | 2D35 4289 |
| 2" Sch 160    | 60,32   | 8,71    | 76,2  | 1,330           | 2D35 4291 |
| 2 1/2" Sch 40 | 73,03   | 5,16    | 95,24 | 1,370           | 2D35 4309 |
| 2 1/2" Sch 80 | 73,03   | 7,01    | 95,24 | 1,700           | 2D35 4310 |
| 3" Sch 40     | 88,90   | 5,49    | 114,3 | 2,180           | 2D35 4338 |
| 3" Sch 80     | 88,90   | 7,62    | 114,3 | 2,980           | 2D35 4339 |
| 4" Sch 40     | 114,30  | 6,02    | 152,4 | 4,180           | 2D35 4364 |
| 4" Sch 80     | 114,30  | 8,56    | 152,4 | 6,200           | 2D35 4365 |
| 5" Sch 40     |         |         |       |                 | 2D35 4380 |
| 6" Sch 40     | 168,30  | 7,11    | 228,6 | 10,200          | 2D35 4399 |
| 6" Sch 80     | 168,30  | 10,97   | 228,6 | 16,350          | 2D35 4400 |
| 8" Sch 40     | 219,08  | 8,18    | 304,8 | 20,300          | 2D35 4415 |
| 8" Sch 80     | 219,08  | 12,70   | 304,8 | 29,900          | 2D35 4416 |
| 10" Sch 40    | 273,05  | 9,27    | 381,0 | 38,500          | 2D35 4427 |
| 10" Sch 60    | 273,05  | 12,70   | 381,0 | 48,600          | 2D35 4428 |
| 12" STD       | 323,85  | 9,53    | 457,2 | 54,000          | 2D35 4441 |
| 12" Sch 40    | 323,85  | 10,31   | 457,2 | 58,300          | 2D35 4442 |
| 14" Sch 30    | 355,60  | 9,52    | 533,4 | 68,000          | 2D35 4453 |
| 14" XS        | 355,60  | 12,70   | 533,4 | 94,350          | 2D35 4454 |
| 16" Sch 30    | 406,00  | 9,52    | 609,6 | 89,200          | 2D35 4465 |
| 16" Sch 40    | 406,00  | 12,70   | 609,6 | 124,750         | 2D35 4466 |
| 18" STD       | 457,20  | 9,53    | 685,8 | 119,000         | 2D35 4476 |
| 18" Sch 30    | 457,20  | 11,13   | 685,8 | 137,500         | 2D35 4477 |
| 20" STD       | 508,00  | 9,53    | 762,0 | 147,000         | 2D35 4484 |
| 20" Sch 30    | 508,00  | 12,70   | 762,0 | 194,000         | 2D35 4486 |
| 24" STD       | 609,60  | 9,53    | 914,4 | 212,000         | 2D35 4496 |
| 24" Sch 30    | 609,60  | 14,27   | 914,4 | 230,000         | 2D35 4498 |

**Reduções concêntricas ANSI B16.9 ASTM A420 WPL6**  
 Concentric redution ASME B16.9 ASTM A420 WPL6

**Lista 3202**


| NPS                 | D1 x d2<br>mm   | e<br>mm       | H     | Kg/Pc<br>Weight | Art. N°   |
|---------------------|-----------------|---------------|-------|-----------------|-----------|
| 3/4" x 1/2" STD     | 26,67 x 21,34   | 2,87 / 2,77   | 38,1  | 0,07            | 2D85 4654 |
| 1" x 3/4" STD       | 33,40 x 26,67   | 3,38 / 2,87   | 50,8  | 0,12            | 2D85 4660 |
| 1" x 1/2" STD       | 33,40 x 21,34   | 3,38 / 2,77   | 50,8  | 0,13            | 2D85 4664 |
| 1 1/4" x 1" STD     | 42,16 x 33,40   | 3,56 / 3,38   | 50,8  | 0,17            | 2D85 4670 |
| 1 1/2" x 1 1/4" STD | 48,26 x 42,16   | 3,68 / 3,56   | 63,5  | 0,26            | 2D85 4679 |
| 1 1/2" x 1" STD     | 48,26 x 33,40   | 3,68 / 3,38   | 63,5  | 0,26            | 2D85 4683 |
| 1 1/2" x 1" XS      | 48,26 x 33,40   | 5,08 / 4,55   | 63,5  | 0,35            | 2D85 4684 |
| 1 1/2" x 3/4" STD   | 48,26 x 26,67   | 3,68 / 2,87   | 63,5  | 0,26            | 2D85 4687 |
| 1 1/2" x 1/2" STD   | 48,26 x 21,34   | 3,68 / 2,77   | 63,5  | 0,26            | 2D85 4689 |
| 1 1/2" x 1/2" XS    | 48,26 x 21,34   | 5,08 / 3,73   | 63,5  | 0,35            | 2D85 4690 |
| 2" x 1 1/2" STD     | 60,32 x 48,26   | 3,91 / 3,68   | 76,2  | 0,41            | 2D85 4693 |
| 2" x 1 1/2" XS      | 60,32 x 48,26   | 5,54 / 5,08   | 76,2  | 0,57            | 2D85 4694 |
| 2" x 1 1/4" STD     | 60,32 x 42,16   | 3,91 / 3,56   | 76,2  | 0,41            | 2D85 4697 |
| 2" x 1" STD         | 60,32 x 33,40   | 3,91 / 3,38   | 76,2  | 0,41            | 2D85 4701 |
| 2" x 1" XS          | 60,32 x 33,40   | 5,54 / 4,55   | 76,2  | 0,57            | 2D85 4702 |
| 2" x 3/4" STD       | 60,32 x 26,67   | 3,91 / 3,38   | 76,2  | 0,41            | 2D85 4705 |
| 2" x 3/4" XS        | 60,32 x 26,67   | 5,54 / 3,91   | 76,2  | 0,57            | 2D85 4706 |
| 2 1/2" x 2" STD     | 73,00 x 60,32   | 5,16 / 3,91   | 88,9  | 0,77            | 2D85 4714 |
| 2 1/2" x 1 1/2" STD | 73,00 x 48,26   | 5,16 / 3,68   | 88,9  | 0,77            | 2D85 4718 |
| 2 1/2" x 1 1/4" STD | 73,00 x 42,16   | 5,16 / 3,56   | 88,9  | 0,77            | 2D85 4722 |
| 3" x 2 1/2" STD     | 88,90 x 73,00   | 5,49 / 5,16   | 88,9  | 0,99            | 2D85 0733 |
| 3" x 2 1/2" XS      | 88,90 x 73,00   | 7,62 / 5,16   | 88,9  | 1,39            | 2D85 0734 |
| 3" x 2" STD         | 88,90 x 60,32   | 5,49 / 3,91   | 88,9  | 0,99            | 2D85 4737 |
| 3" x 2" XS          | 88,90 x 60,32   | 7,62 / 5,54   | 88,9  | 1,36            | 2D85 4738 |
| 3" x 1 1/2" STD     | 88,90 x 48,26   | 5,49 / 3,68   | 88,9  | 0,99            | 2D85 4742 |
| 3" x 1 1/2" XS      | 88,90 x 48,26   | 7,62 / 5,08   | 88,9  | 1,36            | 2D85 4743 |
| 4" x 3" STD         | 114,3 x 88,90   | 6,02 / 5,49   | 101,6 | 1,55            | 2D85 4769 |
| 4" x 3" XS          | 114,3 x 88,90   | 8,52 / 7,62   | 101,6 | 2,27            | 2D85 4770 |
| 4" x 2 1/2" STD     | 114,3 x 73,00   | 6,02 / 5,16   | 101,6 | 1,63            | 2D85 4774 |
| 4" x 2 1/2" XS      | 114,3 x 73,00   | 8,52 / 7,01   | 101,6 | 2,27            | 2D85 4775 |
| 4" x 2" STD         | 114,30 x 60,32  | 6,02 / 3,91   | 101,6 | 1,63            | 2D85 4778 |
| 4" x 2" XS          | 114,30 x 60,32  | 8,52 / 5,54   | 101,6 | 2,26            | 2D85 4779 |
| 4" x 1 1/2" STD     | 114,3 x 48,3    | 6,02 / 3,68   | 101,6 |                 | 2D85 4783 |
| 5" x 4" STD         | 141,30 x 114,30 | 6,55 / 6,02   | 127,0 | 2,80            | 2D85 4793 |
| 5" x 3" STD         | 141,30 x 88,90  | 6,55 / 5,49   | 127,0 | 2,80            | 2D85 4790 |
| 6" x 5" STD         | 168,30 x 141,30 | 7,11 / 6,55   | 139,7 | 3,90            | 2D85 4818 |
| 6" x 5" XS          | 168,30 x 141,30 | 10,97 / 9,53  | 139,7 | 5,95            | 2D85 4819 |
| 6" x 4" STD         | 168,30 x 114,30 | 7,11 / 6,02   | 139,7 | 3,90            | 2D85 4823 |
| 6" x 4" XS          | 168,30 x 114,30 | 10,97 / 8,56  | 139,7 | 5,95            | 2D85 4824 |
| 6" x 3" STD         | 168,30 x 88,90  | 7,11 / 5,49   | 139,7 | 3,90            | 2D85 4828 |
| 6" x 3" XS          | 168,30 x 88,90  | 10,97 / 7,62  | 139,7 | 5,95            | 2D85 4829 |
| 6" x 2" STD         | 168,3 x 60,3    | 7,11 / 3,91   | 139,7 |                 | 2D85 4837 |
| 8" x 6" STD         | 219,08 x 168,30 | 8,11 / 7,11   | 152,4 | 6,50            | 2D85 4845 |
| 8" x 5" STD         | 219,08 x 141,30 | 8,11 / 6,55   | 152,4 | 6,50            | 2D85 4852 |
| 8" x 4" STD         | 219,08 x 114,30 | 8,11 / 6,02   | 152,4 | 6,50            | 2D85 4859 |
| 10" x 8" STD        | 273,05 x 219,08 | 9,27 / 8,18   | 177,8 | 10,70           | 2D85 0874 |
| 10" x 8" XS         | 273,05 x 219,08 | 12,07 / 12,07 | 177,8 | 14,50           | 2D85 0875 |
| 10" x 6" STD        | 273,05 x 168,30 | 9,27 / 7,11   | 177,8 | 10,70           | 2D85 0880 |
| 12" x 10" STD       | 323,85 x 273,05 | 9,53 / 9,27   | 203,2 | 15,00           | 2D85 0893 |
| 12" x 8" STD        | 323,85 x 219,08 | 9,53 / 8,18   | 203,2 | 15,00           | 2D85 0898 |
| 12" x 6" STD        | 323,85 x 168,30 | 9,53 / 7,11   | 203,2 | 26,90           | 2D85 0902 |
| 14" x 12" STD       | 355,60 x 323,85 | 9,53 / 9,53   | 330,2 | 26,90           | 2D85 0907 |
| 14" x 10" STD       | 355,60 x 273,05 | 9,53 / 9,27   | 330,2 | 26,90           | 2D85 0912 |
| 14" x 8" STD        | 355,60 x 219,08 | 9,53 / 8,18   | 330,2 | 26,90           | 2D85 0917 |
| 16" x 12" STD       | 406,40 x 323,85 | 9,53 / 9,53   | 355,6 | 33,00           | 2D85 0931 |
| 16" x 10" STD       | 406,40 x 273,05 | 9,52 / 9,27   | 355,6 | 33,00           | 2D85 0935 |
| 18" x 16" STD       | 457,20 x 406,40 | 9,52 / 9,52   | 381,0 | 40,00           | 2D85 0945 |
| 20" x 16" STD       | 508,00 x 406,40 | 9,53 / 9,53   | 508,0 | 59,00           | 2D85 0952 |
| 20" x 12" STD       | 508,00 x 323,85 | 9,53 / 9,53   | 508,0 | 59,00           | 2D85 0960 |

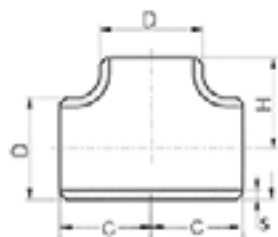
**Reduções excêntricas ANSI B16.9 ASTM A420 WPL6**  
Eccentric reduction ASME B16.9 ASTM A420 WPL6

Lista 2302



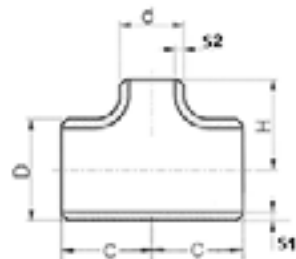
| NPS                 | d1 x d2<br>mm   | s1 / s2<br>mm | H     | Kg/Pc<br>Weight | Art. Nº   |
|---------------------|-----------------|---------------|-------|-----------------|-----------|
| 3/4" x 1/2" STD     | 26,67 x 21,34   | 2,87 / 2,77   | 38,1  | 0,07            | 2D95 4654 |
| 3/4" x 1/2" XS      | 26,67 x 21,34   | 3,91 / 2,77   | 38,1  | 0,10            | 2D95 4655 |
| 1" x 3/4" STD       | 33,40 x 26,67   | 3,38 / 2,87   | 50,8  | 0,13            | 2D95 4660 |
| 1" x 3/4" XS        | 33,40 x 26,67   | 4,55 / 3,91   | 50,8  | 0,16            | 2D95 4661 |
| 1" x 1/2" STD       | 33,40 x 21,34   | 3,38 / 2,77   | 50,8  | 0,13            | 2D95 4664 |
| 1" x 1/2" XS        | 33,40 x 21,34   | 4,55 / 3,73   | 50,8  | 0,16            | 2D95 4665 |
| 1 1/4" x 1" STD     | 42,16 x 33,40   | 3,56 / 3,38   | 50,8  | 0,17            | 2D95 4670 |
| 1 1/4" x 1" XS      | 42,16 x 33,40   | 4,85 / 4,55   | 50,8  | 0,24            | 2D95 4671 |
| 1 1/2" x 1 1/4" STD | 48,26 x 42,16   | 3,68 / 3,56   | 63,5  | 0,26            | 2D95 4679 |
| 1 1/2" x 1 1/4" XS  | 48,26 x 42,16   | 5,08 / 4,55   | 63,5  | 0,34            | 2D95 4680 |
| 1 1/2" x 1" STD     | 48,26 x 33,40   | 3,68 / 3,38   | 63,5  | 0,26            | 2D95 4683 |
| 1 1/2" x 1" XS      | 48,26 x 33,40   | 5,08 / 4,55   | 63,5  | 0,35            | 2D95 4684 |
| 1 1/2" x 3/4" STD   | 48,26 x 26,67   | 3,68 / 2,87   | 63,5  | 0,26            | 2D95 4687 |
| 2" x 1 1/2" STD     | 60,32 x 48,26   | 3,91 / 3,68   | 76,1  | 0,41            | 2D95 4693 |
| 2" x 1 1/2" XS      | 60,32 x 48,26   | 5,54 / 5,08   | 76,1  | 0,57            | 2D95 4694 |
| 2" x 1 1/4" STD     | 60,32 x 42,16   | 3,91 / 3,56   | 76,1  | 0,41            | 2D95 4697 |
| 2" x 1" STD         | 60,32 x 33,40   | 3,91 / 3,38   | 76,1  | 0,41            | 2D95 4701 |
| 2" x 1" XS          | 60,32 x 33,40   | 5,54 / 4,55   | 76,1  | 0,57            | 2D95 4702 |
| 2 1/2" x 2" STD     | 73,0 x 60,32    | 5,16 / 3,91   | 88,9  | 0,77            | 2D95 4714 |
| 2 1/2" x 2" XS      | 73,0 x 60,32    | 7,01 / 5,54   | 88,9  | 1,01            | 2D95 4715 |
| 2 1/2" x 1 1/2" XS  | 73,0 x 48,26    | 5,16 / 3,68   | 88,9  | 0,77            | 2D95 4719 |
| 3" x 2 1/2" STD     | 88,9 x 73,0     | 5,49 / 5,16   | 88,9  | 1,00            | 2D95 4733 |
| 3" x 2 1/2" XS      | 88,9 x 73,0     | 7,62 / 7,01   | 88,9  | 1,36            | 2D95 4734 |
| 3" x 2" STD         | 88,9 x 60,32    | 5,49 / 3,91   | 88,9  | 1,00            | 2D95 4737 |
| 3" x 2" XS          | 88,9 x 60,32    | 7,62 / 5,54   | 88,9  | 1,36            | 2D95 4738 |
| 3" x 1 1/2" STD     | 88,9 x 48,26    | 5,49 / 3,68   | 88,9  | 1,00            | 2D95 4742 |
| 3" x 1 1/2" XS      | 88,9 x 48,26    | 7,62 / 5,08   | 88,9  | 1,36            | 2D95 4743 |
| 4" x 3" STD         | 114,30 x 88,90  | 6,02 / 5,49   | 101,6 | 1,60            | 2D95 4769 |
| 4" x 3" XS          | 114,30 x 88,90  | 8,56 / 7,62   | 101,6 | 2,27            | 2D95 4770 |
| 4" x 2 1/2" STD     | 114,30 x 73,0   | 6,02 / 5,16   | 101,6 | 1,60            | 2D95 4774 |
| 4" x 2" STD         | 114,30 x 60,32  | 6,02 / 3,91   | 101,6 | 1,60            | 2D95 4778 |
| 5" x 4" STD         | 141,3 x 114,30  | 6,55 / 6,02   | 127,0 | 2,80            | 2D95 4793 |
| 5" x 3" STD         | 141,3 x 88,90   | 6,55 / 5,49   | 127,0 | 2,80            | 2D95 4798 |
| 6" x 4" STD         | 168,30 x 114,30 | 7,11 / 6,02   | 139,7 | 3,90            | 2D95 4823 |
| 6" x 4" XS          | 168,30 x 114,30 | 10,97 / 8,56  | 139,7 | 5,95            | 2D95 4824 |
| 6" x 3" STD         | 168,3 x 88,90   | 7,11 / 5,49   | 139,7 | 3,95            | 2D95 4828 |
| 6" x 3" XS          | 168,3 x 88,90   | 10,97 / 7,62  | 139,7 | 5,95            | 2D95 4829 |
| 6" x 2 1/2" STD     | 168,3 x 73,0    | 7,11 / 5,16   | 139,7 | 3,90            | 2D95 4833 |
| 8" x 6" STD         | 219,08 x 168,3  | 8,11 / 7,11   | 152,4 | 6,50            | 2D95 4845 |
| 8" x 6" XS          | 219,08 x 168,3  | 12,07 / 10,97 | 152,4 | 9,86            | 2D95 4846 |
| 8" x 5" STD         | 219,08 x 141,4  | 8,11 / 6,55   | 152,4 | 6,50            | 2D95 4849 |
| 8" x 4" STD         | 219,08 x 114,3  | 8,11 / 6,02   | 152,4 | 6,50            | 2D95 4859 |
| 8" x 4" XS          | 219,08 x 114,3  | 12,07 / 8,56  | 152,4 | 9,86            | 2D95 4860 |
| 10" x 8" STD        | 273,05 x 219,08 | 9,27 / 8,18   | 177,8 | 10,70           | 2D95 4874 |
| 10" x 6" STD        | 273,05 x 168,30 | 9,27 / 7,11   | 177,8 | 10,70           | 2D95 4880 |
| 12" x 10" STD       | 323,85 x 273,05 | 9,53 / 9,27   | 203,7 | 15,00           | 2D95 4893 |
| 12" x 8" STD        | 323,85 x 219,08 | 9,53 / 8,18   | 203,7 | 15,00           | 2D95 4898 |
| 12" x 6" STD        | 323,85 x 168,3  | 9,53 / 7,11   | 203,7 | 15,00           | 2D95 4902 |
| 14" x 10" STD       | 355,6 x 273,05  | 9,53 / 9,27   | 330,7 | 26,90           | 2D95 4912 |
| 16" x 12" STD       | 406,40 x 323,85 | 9,53 / 9,53   | 355,6 | 33,00           | 2D95 4931 |
| 16" x 10" STD       | 406,40 x 273,05 | 9,53 / 9,27   | 355,6 | 33,00           | 2D95 4935 |
| 20" x 16" STD       | 508,0 x 406,40  | 9,53 / 9,53   | 508,0 | 59,00           | 2D95 4952 |

**Tês ANSI B16.9 ASTM A420 WPL6**  
 Equal tee ANSI B16.9 ASTM A420 WPL6

**Lista 2304**


| NPS            | D<br>mm | s<br>mm | C<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|----------------|---------|---------|---------|---------|-----------------|-----------|
| 1/2" STD       | 21,34   | 2,77    | 25,4    | 25,4    | 0,200           | 2E05 4170 |
| 3/4" STD       | 26,67   | 2,87    | 28,4    | 28,4    | 0,200           | 2E05 4191 |
| 3/4" XS        | 26,67   | 3,91    | 28,4    | 28,4    | 0,250           | 2E05 4193 |
| 1" STD         | 33,40   | 3,38    | 38,1    | 38,1    | 0,290           | 2E05 4218 |
| 1" XS          | 33,40   | 4,55    | 38,1    | 38,1    | 0,380           | 2E05 4220 |
| 1" Sch 160     | 33,40   | 6,35    | 38,1    | 38,1    | 0,450           | 2E05 4221 |
| 1 1/4" STD     | 42,16   | 3,56    | 47,8    | 47,8    | 0,610           | 2E05 4243 |
| 1 1/2" STD     | 48,26   | 3,68    | 57,2    | 57,2    | 0,900           | 2E05 4260 |
| 1 1/2" XS      | 48,26   | 5,08    | 57,2    | 57,2    | 1,100           | 2E05 4262 |
| 1 1/2" Sch 160 | 48,26   | 7,14    | 57,2    | 57,2    | 1,400           | 2E05 4263 |
| 2" STD         | 60,32   | 3,91    | 63,5    | 63,5    | 1,400           | 2E05 4286 |
| 2" XS          | 60,32   | 5,54    | 63,5    | 63,5    | 1,700           | 2E05 4289 |
| 2" Sch 160     | 60,32   | 8,71    | 63,5    | 63,5    | 2,000           | 2E05 4291 |
| 2 1/2" STD     | 73,00   | 5,16    | 76,7    | 76,2    | 2,400           | 2E05 4309 |
| 3" STD         | 88,90   | 5,49    | 85,9    | 85,9    | 3,400           | 2E05 4338 |
| 3" XS          | 88,90   | 7,62    | 85,9    | 85,9    | 4,300           | 2E05 4339 |
| 4" STD         | 114,30  | 6,02    | 104,6   | 104,6   | 5,700           | 2E05 4364 |
| 4" XS          | 114,30  | 8,56    | 104,6   | 104,6   | 7,400           | 2E05 4365 |
| 5" STD         | 141,30  | 6,55    | 124,0   | 124,0   | 9,000           | 2E05 4380 |
| 6" STD         | 168,30  | 7,11    | 142,7   | 142,7   | 13,00           | 2E05 4399 |
| 6" XS          | 168,30  | 10,97   | 142,7   | 142,7   | 21,00           | 2E05 4400 |
| 8" Sch 20      | 219,08  | 6,35    | 177,8   | 177,8   | 25,00           | 2E05 4414 |
| 8" STD         | 219,08  | 8,18    | 177,8   | 177,8   | 25,00           | 2E05 4415 |
| 8" XS          | 219,08  | 12,7    | 177,8   | 177,8   | 37,00           | 2E05 4416 |
| 10" Sch 20     | 273,05  | 6,35    | 215,9   | 215,9   | 34,70           | 2E05 4425 |
| 10" STD        | 273,05  | 9,27    | 215,9   | 215,9   | 42,00           | 2E05 4427 |
| 10" XS         | 273,05  | 12,7    | 215,9   | 215,9   | 58,57           | 2E05 4428 |
| 12" STD        | 323,85  | 9,52    | 254,0   | 254,0   | 59,90           | 2E05 4441 |
| 12" XS         | 323,85  | 12,7    | 254,0   | 254,0   | 75,70           | 2E05 4442 |
| 14" STD        | 355,60  | 9,53    | 279,4   | 279,4   | 72,10           | 2E05 4453 |
| 16" STD        | 406,40  | 9,53    | 304,8   | 304,8   | 99,30           | 2E05 4465 |
| 18" STD        | 457,20  | 9,53    | 342,9   | 342,9   | 135,00          | 2E05 4476 |
| 20" STD        | 508,00  | 9,53    | 381,0   | 381,0   | 168,00          | 2E05 4487 |
| 24" STD        | 609,60  | 9,53    | 431,8   | 431,8   | 240,00          | 2E05 4509 |

**Tês de redução ANSI B16.9 ASTM A420 WPL6**  
 Reduction tee ANSI B16.9 ASTM A420 WPL6

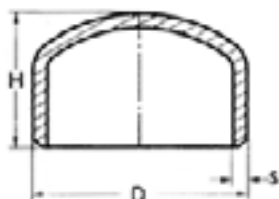
**Lista 2075**


| NPS               | D X d<br>mm     | s2 / s1<br>mm | C<br>mm | H<br>mm | Kg/Pc<br>Weight | Art. Nº   |
|-------------------|-----------------|---------------|---------|---------|-----------------|-----------|
| 3/4" x 1/2" STD   | 26,67 x 21,34   | 2,87 / 2,77   | 28,4    | 28,58   | 0,154           | 2E15 4654 |
| 1" x 3/4" STD     | 33,40 x 26,67   | 3,38 / 2,87   | 38,1    | 38,1    | 0,295           | 2E15 4660 |
| 1" x 1/2" STD     | 33,40 x 21,34   | 3,38 / 2,77   | 38,1    | 38,1    | 0,290           | 2E15 4664 |
| 1 1/2" x 1" STD   | 48,3 x 33,40    | 3,56 / 3,38   | 57,2    | 57,2    | 0,762           | 2E15 4683 |
| 1 1/2" x 1" XS    | 48,3 x 33,40    | 5,08 / 4,55   | 57,2    | 57,2    | 0,948           | 2E15 4684 |
| 1 1/2" x 3/4" STD | 48,3 x 26,67    | 3,58 / 2,87   | 57,2    | 57,2    | 0,730           | 2E15 4687 |
| 1 1/2" x 3/4" XS  | 48,3 x 26,67    | 5,08 / 3,91   | 57,2    | 57,2    | 0,921           | 2E15 4688 |
| 2" x 1 1/2" STD   | 60,32 x 48,26   | 3,91 / 3,68   | 63,5    | 60,5    | 1,210           | 2E15 4693 |
| 2" x 1 1/2" XS    | 60,32 x 48,26   | 5,54 / 5,08   | 63,5    | 60,5    | 1,540           | 2E15 4694 |
| 2" x 1" STD       | 60,32 x 33,40   | 3,91 / 3,38   | 63,5    | 50,8    | 1,120           | 2E15 4701 |
| 2" x 1" XS        | 60,32 x 33,40   | 5,54 / 4,55   | 63,5    | 50,8    | 1,440           | 2E15 4702 |
| 3" x 2" STD       | 88,9 x 60,32    | 5,49 / 3,91   | 85,9    | 76,2    | 2,950           | 2E15 4737 |
| 3" x 2" XS        | 88,9 x 60,32    | 7,62 / 5,54   | 85,9    | 76,2    | 3,790           | 2E15 4738 |
| 3" x 1 1/2" STD   | 88,9 x 48,26    | 5,49 / 3,68   | 85,9    | 73,2    | 2,920           | 2E15 4742 |
| 4" x 3" STD       | 114,30 x 88,90  | 6,02 / 5,49   | 104,6   | 98,6    | 5,170           | 2E15 4769 |
| 4" x 2" STD       | 114,30 x 60,32  | 6,02 / 3,91   | 104,6   | 88,9    | 4,990           | 2E15 4778 |
| 4" x 2" XS        | 114,30 x 60,32  | 8,56 / 5,54   | 104,6   | 88,9    | 6,55            | 2E15 4779 |
| 5" x 4" STD       | 141,30 x 114,30 | 6,55 / 6,02   | 124,0   | 117,3   | 8,21            | 2E15 4793 |
| 5" x 3" STD       | 141,30 x 88,90  | 6,55 / 5,49   | 124,0   | 111,3   | 7,98            | 2E15 4798 |
| 6" x 4" STD       | 168,30 x 114,30 | 7,11 / 6,02   | 142,7   | 130,2   | 11,90           | 2E15 4823 |
| 6" x 3" STD       | 168,30 x 88,90  | 7,11 / 5,49   | 142,7   | 124,0   | 11,70           | 2E15 4828 |
| 8" x 6" STD       | 219,08 x 168,30 | 8,18 / 7,11   | 177,8   | 168,1   | 22,10           | 2E15 4845 |
| 8" x 4" STD       | 219,08 x 114,30 | 8,18 / 6,02   | 177,8   | 155,6   | 21,70           | 2E15 4859 |
| 10" x 8" STD      | 273,05 x 219,08 | 9,27 / 8,18   | 215,9   | 203,2   | 40,00           | 2E15 4874 |
| 10" x 6" STD      | 273,05 x 168,30 | 9,27 / 7,11   | 215,9   | 193,5   | 40,50           | 2E15 4880 |
| 10" x 4" STD      | 273,05 x 114,30 | 9,27 / 6,02   | 215,9   | 184,2   | 36,80           | 2E15 4887 |
| 12" x 10" STD     | 323,85 x 273,05 | 9,53 / 9,27   | 254,0   | 241,3   | 63,00           | 2E15 4893 |
| 14" x 12" STD     | 355,60 x 323,85 | 9,53 / 9,27   | 279,4   | 269,7   | 107,00          | 2E15 4907 |
| 16" x 12" STD     | 406,40 x 323,85 | 9,53 / 9,53   | 304,8   | 295,1   | 119,00          | 2E15 4940 |
| 20" x 12" STD     | 508,0 x 323,85  | 9,53 / 9,53   | 381,0   | 346,0   | 163,00          | 2E15 4960 |
| 20" x 16" XS      | 508,0 x 406,4   | 12,70 / 12,70 | 381,0   | 356,0   | 200,00          | 2E15 4953 |

Tês de redução de 14" e superior a altura "H" é a recomendada, mas não é obrigatória.

**Tampas ANSI B16.9 ASTM A420 WPL6**  
Caps ANSI B16.9 ASTM A420 WPL6

Lista 2304



| NPS        | D<br>mm | s<br>mm | H     | Kg/Pc<br>Weight | Art. Nº   |
|------------|---------|---------|-------|-----------------|-----------|
| 1" STD     | 33,4    | 3,38    | 38,1  | 0,10            | 2E25 4218 |
| 1" XS      | 33,4    | 4,55    | 38,1  | 0,13            | 2E25 4219 |
| 1 1/4" STD | 42,2    | 3,56    | 38,1  | 0,18            | 2E25 4243 |
| 1 1/2" STD | 48,3    | 3,68    | 38,1  | 0,18            | 2E25 4260 |
| 1 1/2" XS  | 48,3    | 5,08    | 38,1  | 0,22            | 2E25 4262 |
| 2" STD     | 60,3    | 3,91    | 38,1  | 0,23            | 2E25 4286 |
| 2" XS      | 60,3    | 5,54    | 38,1  | 0,31            | 2E25 4289 |
| 2 1/2" STD | 73,0    | 5,16    | 38,1  | 0,37            | 2E25 4309 |
| 2 1/2" XS  | 73,0    | 7,01    | 38,1  | 0,46            | 2E25 4310 |
| 3" STD     | 88,9    | 5,54    | 50,8  | 0,64            | 2E25 4338 |
| 3" XS      | 88,9    | 7,62    | 50,8  | 0,85            | 2E25 4339 |
| 4" STD     | 114,3   | 6,02    | 63,5  | 1,16            | 2E25 4364 |
| 4" XS      | 114,3   | 8,56    | 63,5  | 1,55            | 2E25 4365 |
| 5" STD     | 141,3   | 6,55    | 76,2  | 1,91            | 2E25 4380 |
| 6" STD     | 168,3   | 7,11    | 88,9  | 2,91            | 2E25 4399 |
| 6" XS      | 168,3   | 10,97   | 88,9  | 4,19            | 2E25 4400 |
| 8" STD     | 219,1   | 8,18    | 101,6 | 5,13            | 2E25 4415 |
| 8" XS      | 219,1   | 12,70   | 101,6 | 7,56            | 2E25 4416 |
| 10" STD    | 273,0   | 9,27    | 127,0 | 9,08            | 2E25 4427 |
| 10" XS     | 273,0   | 12,70   | 127,0 | 11,9            | 2E25 4428 |
| 12" STD    | 323,8   | 9,53    | 152,4 | 13,4            | 2E25 4441 |
| 12" XS     | 323,8   | 12,70   | 152,4 | 17,3            | 2E25 4442 |
| 14" STD    | 355,6   | 9,53    | 165,1 | 16,0            | 2E25 4453 |
| 16" STD    | 406,4   | 9,53    | 177,8 | 20,1            | 2E25 4465 |
| 18" STD    | 457,0   | 9,53    | 203,2 | 25,9            | 2E25 4476 |
| 20" STD    | 508,0   | 9,53    | 228,6 | 32,5            | 2E25 4484 |
| 24" STD    | 610,0   | 9,53    | 266,7 | 46,3            | 2E25 4496 |

**Tubo sem costura em aço carbono para condensadores ASTM A179 - A219**  
Heatexchanger carbon steel tubes as per ASTM A179 - A219

Lista



| OD               | Espessura<br>BWG (mm) | Thickness<br>minimum wall | Kg/m<br>Minimum | Kg/m<br>Máximo | Art. Nº |
|------------------|-----------------------|---------------------------|-----------------|----------------|---------|
| 5/8" (15,88 mm)  | 18                    | (1,24 mm)                 | 0,445           | 0,511          |         |
| 5/8" (15,88 mm)  | 16                    | (1,65 mm)                 | 0,578           | 0,655          |         |
| 5/8" (2,108 mm)  | 14                    | (2,108 mm)                | 0,727           | 0,807          |         |
| 3/4" (19,05 mm)  | 16                    | (1,65 mm)                 | 0,719           | 0,798          |         |
| 3/4" (19,05 mm)  | 14                    | (2,11 mm)                 | 0,896           | 0,993          |         |
| 3/4" (19,05 mm)  | 12                    | (2,77 mm)                 | 1,120           | 1,243          |         |
| 1" (25,4 mm)     | 16                    | (1,65 mm)                 | 0,981           | 1,089          |         |
| 1" (25,4 mm)     | 14                    | (2,11 mm)                 | 1,231           | 1,368          |         |
| 1" (25,4 mm)     | 12                    | (2,77 mm)                 | 1,570           | 1,742          |         |
| 1 1/4" (31,8 mm) | 16                    | (1,65 mm)                 | 1,246           | 1,380          |         |
| 1 1/4" (31,8 mm) | 14                    | (2,11 mm)                 | 1,566           | 1,738          |         |
| 1 1/4" (31,8 mm) | 12                    | (2,77 mm)                 | 2,010           | 2,231          |         |

Podemos fornecer também estes tubos em outras diâmetros e espessuras, e também em outras qualidades.

We can supply these tubes in other diameters and thicknesses and in other qualities.

Tubos para condensadores em aço inoxidável, veja pag D3.

Condenser tubes in stainless steel see page D3.

**Tubos sem costura ASTM A335**  
 Seamless ferritic alloy steel pipes

| 335 pes |        |        | Lista 2233                 | Lista 2234                 | Lista 2235                 | Lista 2236                  | Lista 2237            |
|---------|--------|--------|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------|
| NPS     |        | Kg     | P5 (UNS K41545)<br>Art. N° | P9 (UNS S50400)<br>Art. N° | P11(UNS K11597)<br>Art. N° | P22 (UNS K21590)<br>Art. N° | P91 (UNS K<br>Art. N° |
| 1/2"    | Sch40  | 1,27   | 2A01 8170                  | 2A02 1170                  | 2A01 9170                  | 2A02 0170                   | 2A03 0170             |
| 1/2"    | Sch80  | 1,64   | 2A01 8172                  | 2A02 1172                  | 2A01 9172                  | 2A02 0172                   | 2A03 0172             |
| 1/2"    | Sch160 | 1,97   | 2A01 8173                  | 2A02 1173                  | 2A01 9173                  | 2A02 0173                   | 2A03 0173             |
|         |        |        |                            |                            |                            |                             |                       |
| 3/4"    | Sch40  | 1,71   | 2A01 8191                  | 2A02 1191                  | 2A01 9191                  | 2A02 0191                   | 2A03 0191             |
| 3/4"    | Sch80  | 2,23   | 2A01 8193                  | 2A02 1193                  | 2A01 9193                  | 2A02 0193                   | 2A03 0193             |
| 3/4"    | Sch160 | 2,93   | 2A01 8194                  | 2A02 1 194                 | 2A01 9194                  | 2A02 0194                   | 2A03 0194             |
|         |        |        |                            |                            |                            |                             |                       |
| 1"      | Sch40  | 2,54   | 2A01 8218                  | 2A02 1218                  | 2A01 9218                  | 2A02 0218                   | 2A03 0218             |
| 1"      | Sch80  | 3,29   | 2A01 8220                  | 2A02 1220                  | 2A01 9220                  | 2A02 0220                   | 2A03 0220             |
| 1"      | Sch160 | 4,30   | 2A01 8221                  | 2A02 1221                  | 2A01 9221                  | 2A02 0221                   | 2A03 0221             |
|         |        |        |                            |                            |                            |                             |                       |
| 1 1/4"  | Sch40  | 3,44   | 2A01 8243                  | 2A02 1243                  | 2A01 9243                  | 2A02 0243                   | 2A03 0243             |
| 1 1/4"  | Sch80  | 4,50   | 2A01 8245                  | 2A02 1245                  | 2A01 9245                  | 2A02 0245                   | 2A03 0245             |
| 1 1/4"  | Sch160 | 5,69   | 2A01 8246                  | 2A02 1246                  | 2A01 9246                  | 2A02 0246                   | 2A03 0246             |
|         |        |        |                            |                            |                            |                             |                       |
| 1 1/2"  | Sch40  | 4,11   | 2A01 8260                  | 2A02 1260                  | 2A01 9260                  | 2A02 0260                   | 2A03 0260             |
| 1 1/2"  | Sch80  | 5,49   | 2A01 8262                  | 2A02 1262                  | 2A01 9262                  | 2A02 0262                   | 2A03 0262             |
| 1 1/2"  | Sch160 | 7,35   | 2A01 8263                  | 2A02 1263                  | 2A01 9263                  | 2A02 0263                   | 2A03 0263             |
|         |        |        |                            |                            |                            |                             |                       |
| 2"      | Sch40  | 5,52   | 2A01 8286                  | 2A02 1286                  | 2A01 9286                  | 2A02 0286                   | 2A03 0286             |
| 2"      | Sch80  | 7,60   | 2A01 8289                  | 2A02 1289                  | 2A01 9289                  | 2A02 0289                   | 2A03 0289             |
| 2"      | Sch160 | 11,26  | 2A01 8291                  | 2A02 1291                  | 2A01 9291                  | 2A02 0291                   | 2A03 0291             |
|         |        |        |                            |                            |                            |                             |                       |
| 2 1/2"  | Sch40  | 8,77   | 2A01 8309                  | 2A02 1309                  | 2A01 9209                  | 2A02 0209                   | 2A03 0209             |
| 2 1/2"  | Sch80  | 11,95  | 2A01 8310                  | 2A02 1310                  | 2A01 9310                  | 2A02 0310                   | 2A03 0310             |
| 2 1/2"  | Sch160 | 15,15  | 2A01 8311                  | 2A02 1311                  | 2A01 9311                  | 2A02 0311                   | 2A03 0311             |
|         |        |        |                            |                            |                            |                             |                       |
| 3"      | Sch40  | 11,47  | 2A01 8338                  | 2A02 1338                  | 2A01 9338                  | 2A02 0338                   | 2A03 0338             |
| 3"      | Sch80  | 15,51  | 2A01 8339                  | 2A02 1339                  | 2A01 9339                  | 2A02 0339                   | 2A03 0339             |
| 3"      | Sch160 | 21,67  | 2A01 8340                  | 2A02 1340                  | 2A01 9340                  | 2A02 0340                   | 2A03 0340             |
|         |        |        |                            |                            |                            |                             |                       |
| 3 1/2"  | Sch40  | 13,78  | 2A01 8348                  | 2A02 1348                  | 2A01 9348                  | 2A02 0348                   | 2A03 0348             |
| 3 1/2"  | Sch80  | 18,92  | 2A01 8349                  | 2A02 1349                  | 2A01 9349                  | 2A02 0349                   | 2A03 0349             |
|         |        |        |                            |                            |                            |                             |                       |
| 4"      | Sch40  | 16,32  | 2A01 8364                  | 2A02 1364                  | 2A01 9364                  | 2A02 0364                   | 2A03 0364             |
| 4"      | Sch80  | 22,66  | 2A01 8365                  | 2A02 1365                  | 2A01 9365                  | 2A02 0365                   | 2A03 0365             |
| 4"      | Sch120 | 28,75  | 2A01 8366                  | 2A02 1366                  | 2A01 9366                  | 2A02 0366                   | 2A03 0366             |
| 4"      | Sch160 | 34,05  | 2A01 8367                  | 2A02 1367                  | 2A01 9367                  | 2A02 0367                   | 2A03 0367             |
|         |        |        |                            |                            |                            |                             |                       |
| 5"      | Sch40  | 22,10  | 2A01 8380                  | 2A02 1380                  | 2A01 9380                  | 2A02 0380                   | 2A03 0380             |
| 5"      | Sch80  | 31,44  | 2A01 8381                  | 2A02 1381                  | 2A01 9381                  | 2A02 0381                   | 2A03 0381             |
| 5"      | Sch120 | 40,90  | 2A01 8382                  | 2A02 1382                  | 2A01 9382                  | 2A02 0382                   | 2A03 0382             |
| 5"      | Sch160 | 49,87  | 2A01 8383                  | 2A02 1383                  | 2A01 9383                  | 2A02 0383                   | 2A03 0383             |
|         |        |        |                            |                            |                            |                             |                       |
| 6"      | Sch40  | 28,69  | 2A01 8399                  | 2A02 1399                  | 2A01 9399                  | 2A02 0399                   | 2A03 0399             |
| 6"      | Sch80  | 43,21  | 2A01 8400                  | 2A02 1480                  | 2A01 9480                  | 2A02 0480                   | 2A03 0480             |
| 6"      | Sch120 | 55,03  | 2A01 8401                  | 2A02 1401                  | 2A01 9401                  | 2A02 0401                   | 2A03 0401             |
| 6"      | Sch160 | 168,28 | 2A01 8402                  | 2A02 1402                  | 2A01 9402                  | 2A02 0402                   | 2A03 0402             |
|         |        |        |                            |                            |                            |                             |                       |
| 8"      | Sch20  | 33,82  | 2A01 8414                  | 2A02 1414                  | 2A01 9414                  | 2A02 0414                   | 2A03 0414             |
| 8"      | Sch30  | 37,38  | 2A01 84141                 | 2A02 1141                  | 2A01 9141                  | 2A02 0141                   | 2A03 0141             |
| 8"      | Sch40  | 43,20  | 2A01 8415                  | 2A02 1415                  | 2A01 9415                  | 2A02 0415                   | 2A03 0415             |
| 8"      | Sch60  | 53,90  | 2A01 84451                 | 2A02 1451                  | 2A01 9451                  | 2A02 0451                   | 2A03 0451             |
| 8"      | Sch80  | 65,63  | 2A01 8416                  | 2A02 1416                  | 2A01 9416                  | 2A02 0416                   | 2A03 0416             |
| 8"      | Sch100 | 76,93  | 2A01 84161                 | 2A02 1161                  | 2A01 9461                  | 2A02 0461                   | 2A03 0461             |
| 8"      | Sch120 | 91,73  | 2A01 8417                  | 2A02 1417                  | 2A01 9417                  | 2A02 0417                   | 2A03 0417             |
| 8"      | Sch140 | 102,47 | 2A01 84171                 | 2A02 1171                  | 2A01 9171                  | 2A02 0171                   | 2A03 0171             |
| 8"      | Sch160 | 111,25 | 2A01 8402                  | 2A02 1402                  | 2A01 9402                  | 2A02 0402                   | 2A03 0402             |
|         |        |        |                            |                            |                            |                             |                       |
| 10"     | Sch40  | 61,22  | 2A01 8427                  | 2A02 1427                  | 2A01 9427                  | 2A02 0427                   | 2A03 0427             |
| 10"     | Sch60  | 82,80  | 2A01 8428                  | 2A02 1428                  | 2A01 9428                  | 2A02 0428                   | 2A03 0428             |
| 10"     | Sch80  | 97,27  | 2A01 8429                  | 2A02 1429                  | 2A01 9429                  | 2A02 0429                   | 2A03 0429             |
| 10"     | Sch100 | 116,38 | 2A01 84291                 | 2A02 14291                 | 2A01 9291                  | 2A02 0291                   | 2A03 0291             |
| 10"     | Sch120 | 134,90 | 2A01 8430                  | 2A02 1430                  | 2A01 9430                  | 2A02 0430                   | 2A03 0430             |
| 10"     | Sch140 | 157,51 | 2A01 8431                  | 2A02 1431                  | 2A01 9431                  | 2A02 0431                   | 2A03 0431             |
| 10"     | Sch160 | 172,97 | 2A01 8432                  | 2A02 1432                  | 2A01 9432                  | 2A02 0432                   | 2A03 0432             |

As dimensões até NPS 2 1/2" são fornecidas de stock em comprimentos cerca de 6m. NPS 3" e superior são fornecidos de stock em comprimentos cerca de 12m.

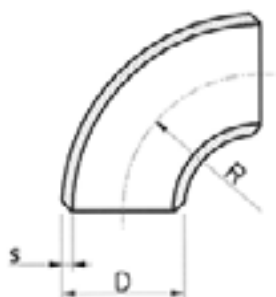
Pipe lenght for NPS 2 1/2" are - 6m, NPS 3" and larger, lenght 10 to 12m.

**Tubos sem costura ASTM A335 (continuação)**  
Seamless ferritic alloy steel pipes

|            |        |  | Lista<br>2233              | Lista<br>2234              | Lista<br>2235               | Lista<br>2236               | Lista<br>2237         |
|------------|--------|--|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------|
| NPS        | Kg     |  | P5 (UNS K41545)<br>Art. N° | P9 (UNS S50400)<br>Art. N° | P11 (UNS K11597)<br>Art. N° | P22 (UNS K21590)<br>Art. N° | P91 (UNS K<br>Art. N° |
| 12" Sch20  | 49,72  |  | 2A01 8439                  | 2A02 1439                  | 2A01 9439                   | 2A02 0439                   | 2A03 0439             |
| 12" Sch30  | 66,20  |  | 2A01 8440                  | 2A02 1440                  | 2A01 9440                   | 2A02 0440                   | 2A03 0440             |
| 12" STD    | 75,01  |  | 2A01 8441                  | 2A02 1441                  | 2A01 9441                   | 2A02 0441                   | 2A03 0441             |
| 12" Sch40  | 80,94  |  | 2A01 84411                 | 2A02 14411                 | 2A01 9411                   | 2A02 04411                  | 2A03 04411            |
| 12" XS     | 98,95  |  | 2A01 8442                  | 2A02 1442                  | 2A01 9442                   | 2A02 0442                   | 2A03 0442             |
| 12" Sch60  | 110,62 |  | 2A01 84421                 | 2A02 14421                 | 2A01 9421                   | 2A02 04421                  | 2A03 04421            |
| 12" Sch80  | 133,88 |  | 2A01 8443                  | 2A02 1443                  | 2A01 9443                   | 2A02 0443                   | 2A03 0443             |
| 12" Sch100 | 162,14 |  | 2A01 84431                 | 2A02 14431                 | 2A01 94431                  | 2A02 04431                  | 2A03 04431            |
| 12" Sch120 | 189,82 |  | 2A01 8444                  | 2A02 1444                  | 2A01 9444                   | 2A02 0444                   | 2A03 0444             |
| 12" Sch140 | 211,31 |  | 2A01 84441                 | 2A02 14441                 | 2A01 94441                  | 2A02 04441                  | 2A03 04441            |
| 12" Sch160 | 242,40 |  | 2A01 84442                 | 2A02 14442                 | 2A01 94442                  | 2A02 04442                  | 2A03 04442            |
|            |        |  |                            |                            |                             |                             |                       |
| 14" Sch30  | 82,58  |  | 2A01 8453                  | 2A02 1453                  | 2A01 9453                   | 2A02 0453                   | 2A03 0453             |
| 14" Sch40  | 96,00  |  | 2A01 84531                 | 2A02 14531                 | 2A01 94531                  | 2A02 04531                  | 2A03 04531            |
| 14" XS     | 109,04 |  | 2A01 8454                  | 2A02 1454                  | 2A01 9454                   | 2A02 0454                   | 2A03 0454             |
| 14" Sch60  | 128,42 |  | 2A01 8455                  | 2A02 1455                  | 2A01 9455                   | 2A02 0455                   | 2A03 0455             |
| 14" Sch80  | 160,54 |  | 2A01 8456                  | 2A02 1456                  | 2A01 9456                   | 2A02 0456                   | 2A03 0456             |
| 14" Sch100 | 197,74 |  | 2A01 8457                  | 2A02 1457                  | 2A01 9457                   | 2A02 0457                   | 2A03 0457             |
| 14" Sch120 | 227,88 |  | 2A01 8458                  | 2A02 1458                  | 2A01 9458                   | 2A02 0458                   | 2A03 0458             |
| 14" Sch140 | 257,47 |  | 2A01 84580                 | 2A02 14580                 | 2A01 94580                  | 2A02 04580                  | 2A03 04580            |
| 14" Sch160 | 286,04 |  | 2A01 8 459                 | 2A02 1459                  | 2A01 9459                   | 2A02 0459                   | 2A03 0459             |
|            |        |  |                            |                            |                             |                             |                       |
| 16" Sch30  | 94,70  |  | 2A01 8465                  | 2A02 1465                  | 2A01 9465                   | 2A02 0465                   | 2A03 0465             |
| 16" Sch40  | 125,20 |  | 2A01 8466                  | 2A02 1466                  | 2A01 9466                   | 2A02 0466                   | 2A03 0466             |
| 16" Sch60  | 162,59 |  | 2A01 8467                  | 2A02 1467                  | 2A01 9467                   | 2A02 0467                   | 2A03 0467             |
| 16" Sch80  | 206,40 |  | 2A01 8468                  | 2A02 1468                  | 2A01 9468                   | 2A02 0468                   | 2A03 0468             |
| 16" Sch100 | 249,34 |  | 2A01 84681                 | 2A02 14681                 | 2A01 94681                  | 2A02 04681                  | 2A03 04681            |
| 16" Sch120 | 290,88 |  | 2A01 8469                  | 2A02 1469                  | 2A01 9469                   | 2A02 0469                   | 2A03 0469             |
| 16" Sch140 | 338,32 |  | 2A01 84691                 | 2A02 14691                 | 2A01 94691                  | 2A02 04691                  | 2A03 04691            |
| 16" Sch160 | 370,74 |  | 2A01 8470                  | 2A02 1470                  | 2A01 9470                   | 2A02 0470                   | 2A03 0470             |
|            |        |  |                            |                            |                             |                             |                       |
| 18" STD    | 110,6  |  | 2A01 8476                  | 2A02 1476                  | 2A01 9476                   | 2A02 0476                   | 2A03 0476             |
| 18" Sch30  | 124,32 |  | 2A01 84761                 | 2A02 14761                 | 2A01 94761                  | 2A02 04761                  | 2A03 04761            |
| 18" XS     | 141,35 |  | 2A01 8477                  | 2A02 1477                  | 2A01 9477                   | 2A02 0477                   | 2A03 0477             |
| 18" Sch40  | 158,27 |  | 2A01 8478                  | 2A02 1478                  | 2A01 9478                   | 2A02 0478                   | 2A03 0478             |
| 18" Sch60  | 209,00 |  | 2A01 84781                 | 2A02 14781                 | 2A01 94781                  | 2A02 04781                  | 2A03 04781            |
| 18" Sch80  | 258,29 |  | 2A01 84782                 | 2A02 14782                 | 2A01 94782                  | 2A02 04782                  | 2A03 04782            |
| 18" Sch100 | 314,54 |  | 2A01 84783                 | 2A02 14783                 | 2A01 94783                  | 2A02 04783                  | 2A03 04783            |
| 18" Sch120 | 369,34 |  | 2A01 84784                 | 2A02 14784                 | 2A01 94784                  | 2A02 04784                  | 2A03 04784            |
| 18" Sch140 | 414,75 |  | 2A01 84785                 | 2A02 14785                 | 2A01 94785                  | 2A02 04785                  | 2A03 04785            |
| 18" Sch160 | 466,67 |  | 2A01 84786                 | 2A02 14786                 | 2A01 94786                  | 2A02 04786                  | 2A03 04786            |
|            |        |  |                            |                            |                             |                             |                       |
| 20" STD    | 118,95 |  | 2A01 8484                  | 2A02 8484                  | 2A01 9484                   | 2A02 0484                   | 2A03 0484             |
| 20" Sch30  | 157,51 |  | 2A01 8486                  | 2A02 8486                  | 2A01 9486                   | 2A02 0486                   | 2A03 0486             |
| 20" Sch40  | 185,89 |  | 2A01 8487                  | 2A02 8487                  | 2A01 9487                   | 2A02 0487                   | 2A03 0487             |
| 20" Sch60  | 251,65 |  | 2A01 8488                  | 2A02 8488                  | 2A01 9488                   | 2A02 0488                   | 2A03 0488             |
| 20" Sch80  | 315,97 |  | 2A01 8489                  | 2A02 8489                  | 2A01 9489                   | 2A02 0489                   | 2A03 0489             |
| 20" Sch100 | 387,41 |  | 2A01 8490                  | 2A02 8490                  | 2A01 9490                   | 2A02 0490                   | 2A03 0490             |
| 20" Sch120 | 448,30 |  | 2A01 8491                  | 2A02 8491                  | 2A01 9491                   | 2A02 0491                   | 2A03 0491             |
| 20" Sch140 | 515,94 |  | 2A01 84911                 | 2A02 84911                 | 2A01 94911                  | 2A02 04911                  | 2A03 04911            |
| 20" Sch160 | 573,31 |  | 2A01 84912                 | 2A02 84912                 | 2A01 94912                  | 2A02 04912                  | 2A03 04912            |

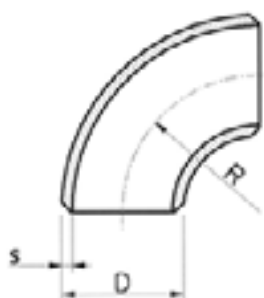
Para as dimensões de NPS 1/2" a 2 1/2" são fornecidos de stock, com comprimento de cerca de 6m, NPS 3" e superior com comprimento de cerca de 10 a 12m.



**Curvas LR 90° ASTM A234**  
 Elbows LR ASTM A234


|              |        | Lista 2238 |  | Lista 2243 |  | Lista 2248 |  | Lista 2252 |  | Lista 2258 |  |
|--------------|--------|------------|--|------------|--|------------|--|------------|--|------------|--|
| NPS          | Kg     | WP5        |  | WP9        |  | WP11       |  | WP22       |  | WP91       |  |
|              |        | Art. N°    |  | Art. N°    |  | Art. N°    |  | Art. N°    |  | Art. N°    |  |
| 1/2" Sch40   | 0,08   | 2D35 1170  |  | 2D35 3170  |  | 2D35 2170  |  | 2D35 5170  |  | 2D35 6170  |  |
| 1/2" Sch80   | 0,18   | 2D35 1172  |  | 2D35 3172  |  | 2D35 2172  |  | 2D35 5172  |  | 2D35 6172  |  |
| 1/2" Sch160  | 0,22   | 2D35 1173  |  | 2D35 3173  |  | 2D35 2173  |  | 2D35 5173  |  | 2D35 6173  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 3/4" Sch40   | 0,08   | 2D35 1191  |  | 2D35 3191  |  | 2D35 2191  |  | 2D35 5191  |  | 2D35 6191  |  |
| 3/4" Sch80   | 0,20   | 2D35 1193  |  | 2D35 3193  |  | 2D35 2193  |  | 2D35 5193  |  | 2D35 6193  |  |
| 3/4" Sch160  | 0,25   | 2D35 1194  |  | 2D35 3194  |  | 2D35 2194  |  | 2D35 5194  |  | 2D35 6194  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 1" Sch40     | 0,15   | 2D35 1218  |  | 2D35 3218  |  | 2D35 2218  |  | 2D35 5218  |  | 2D35 6218  |  |
| 1" Sch80     | 0,20   | 2D35 1220  |  | 2D35 3220  |  | 2D35 2220  |  | 2D35 5220  |  | 2D35 6220  |  |
| 1" Sch160    | 0,30   | 2D35 1221  |  | 2D35 3221  |  | 2D35 2221  |  | 2D35 5221  |  | 2D35 6221  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 1 1/4"Sch40  | 0,25   | 2D35 1243  |  | 2D35 3243  |  | 2D35 2243  |  | 2D35 5243  |  | 2D35 6243  |  |
| 1 1/4"Sch80  | 0,35   | 2D35 1245  |  | 2D35 3245  |  | 2D35 2245  |  | 2D35 5245  |  | 2D35 6245  |  |
| 1 1/4"Sch160 | 0,44   | 2D35 1246  |  | 2D35 3246  |  | 2D35 2246  |  | 2D35 5246  |  | 2D35 6246  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 1 1/2"Sch40  | 0,36   | 2D35 1260  |  | 2D35 3260  |  | 2D35 2260  |  | 2D35 5260  |  | 2D35 6260  |  |
| 1 1/2"Sch80  | 0,60   | 2D35 1262  |  | 2D35 3262  |  | 2D35 2262  |  | 2D35 5262  |  | 2D35 6262  |  |
| 1 1/2"Sch160 | 0,80   | 2D35 1263  |  | 2D35 3263  |  | 2D35 2263  |  | 2D35 5263  |  | 2D35 6263  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 2" Sch40     | 0,65   | 2D35 1286  |  | 2D35 2286  |  | 2D35 2286  |  | 2D35 5286  |  | 2D35 6286  |  |
| 2" Sch80     | 0,94   | 2D35 1289  |  | 2D35 2289  |  | 2D35 2289  |  | 2D35 5289  |  | 2D35 6289  |  |
| 2" Sch160    | 1,50   | 2D35 1291  |  | 2D35 3291  |  | 2D35 2291  |  | 2D35 5291  |  | 2D35 6291  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 2 1/2"Sch40  | 1,28   | 2D35 1309  |  | 2D35 3309  |  | 2D35 2309  |  | 2D35 5309  |  | 2D35 6309  |  |
| 2 1/2"Sch80  | 1,70   | 2D35 1310  |  | 2D35 3310  |  | 2D35 2310  |  | 2D35 5310  |  | 2D35 6310  |  |
| 2 1/2"Sch160 | 2,35   | 2D35 1311  |  | 2D35 3311  |  | 2D35 2311  |  | 2D35 5311  |  | 2D35 6311  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 3" Sch40     | 2,03   | 2D35 1338  |  | 2D35 3338  |  | 2D35 2338  |  | 2D35 5338  |  | 2D35 6338  |  |
| 3" Sch80     | 2,75   | 2D35 1339  |  | 2D35 3339  |  | 2D35 2339  |  | 2D35 5339  |  | 2D35 6339  |  |
| 3" Sch160    | 4,00   | 2D35 1340  |  | 2D35 3340  |  | 2D35 2340  |  | 2D35 5340  |  | 2D35 6340  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 3 1/2"Sch40  | 2,87   | 2D35 1348  |  | 2D35 3348  |  | 2D35 2348  |  | 2D35 5348  |  | 2D35 6348  |  |
| 3 1/2"Sch80  | 3,95   | 2D35 1349  |  | 2D35 3349  |  | 2D35 2349  |  | 2D35 5349  |  | 2D35 6349  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 4" Sch40     | 3,90   | 2D35 1364  |  | 2D35 3364  |  | 2D35 2364  |  | 2D35 5364  |  | 2D35 6364  |  |
| 4" Sch80     | 5,40   | 2D35 1365  |  | 2D35 3365  |  | 2D35 2365  |  | 2D35 5365  |  | 2D35 6365  |  |
| 4" Sch120    | 6,95   | 2D35 1366  |  | 2D35 3366  |  | 2D35 2366  |  | 2D35 5366  |  | 2D35 6366  |  |
| 4" Sch160    | 9,00   | 2D35 1367  |  | 2D35 3367  |  | 2D35 2367  |  | 2D35 5367  |  | 2D35 6367  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 5" Sch40     | 6,50   | 2D35 1380  |  | 2D35 3380  |  | 2D35 2380  |  | 2D35 5380  |  | 2D35 6380  |  |
| 5" Sch80     | 8,85   | 2D35 1381  |  | 2D35 3381  |  | 2D35 2381  |  | 2D35 5381  |  | 2D35 6381  |  |
| 5" Sch120    | 12,62  | 2D35 1382  |  | 2D35 3382  |  | 2D35 2382  |  | 2D35 5382  |  | 2D35 6382  |  |
| 5" Sch160    | 15,44  | 2D35 13821 |  | 2D35 33821 |  | 2D35 23821 |  | 2D35 53821 |  | 2D35 63821 |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 6" Sch40     | 10,20  | 2D35 1399  |  | 2D35 3399  |  | 2D35 2399  |  | 2D35 5399  |  | 2D35 6399  |  |
| 6" Sch80     | 15,35  | 2D35 1400  |  | 2D35 3400  |  | 2D35 2400  |  | 2D35 5400  |  | 2D35 6400  |  |
| 6" Sch120    | 23,00  | 2D35 1401  |  | 2D35 3401  |  | 2D35 2401  |  | 2D35 5401  |  | 2D35 6401  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 8" Sch20     | 16,57  | 2D35 1414  |  | 2D35 3414  |  | 2D35 2414  |  | 2D35 5414  |  | 2D35 6414  |  |
| 8" Sch30     | 17,50  | 2D35 14141 |  | 2D35 34141 |  | 2D35 24141 |  | 2D35 54141 |  | 2D35 64141 |  |
| 8" Sch40     | 20,30  | 2D35 1415  |  | 2D35 3415  |  | 2D35 2415  |  | 2D35 5415  |  | 2D35 6415  |  |
| 8" Sch60     | 26,30  | 2D35 14151 |  | 2D35 34151 |  | 2D35 24151 |  | 2D35 54151 |  | 2D35 64151 |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 8" Sch80     | 29,90  | 2D35 1416  |  | 2D35 3416  |  | 2D35 2416  |  | 2D35 5416  |  | 2D35 6416  |  |
| 8" Sch100    | 38,00  | 2D35 14161 |  | 2D35 34161 |  | 2D35 24161 |  | 2D35 54161 |  | 2D35 64161 |  |
| 8" Sch120    | 40,50  | 2D35 1417  |  | 2D35 3417  |  | 2D35 2417  |  | 2D35 5417  |  | 2D35 6417  |  |
| 8" Sch140    | 52,00  | 2D35 1418  |  | 2D35 3418  |  | 2D35 2418  |  | 2D35 5418  |  | 2D35 6418  |  |
|              |        |            |  |            |  |            |  |            |  |            |  |
| 10" Sch40    | 37,00  | 2D35 1427  |  | 2D35 3427  |  | 2D35 2427  |  | 2D35 5427  |  | 2D35 6427  |  |
| 10" Sch60    | 48,60  | 2D35 1428  |  | 2D35 3428  |  | 2D35 2428  |  | 2D35 5428  |  | 2D35 6428  |  |
| 10" Sch80    | 57,11  | 2D35 1429  |  | 2D35 3429  |  | 2D35 2429  |  | 2D35 5429  |  | 2D35 6429  |  |
| 10" Sch100   | 75,00  | 2D35 14191 |  | 2D35 34291 |  | 2D35 24291 |  | 2D35 54291 |  | 2D35 64291 |  |
| 10" Sch120   | 85,00  | 2D35 1430  |  | 2D35 3430  |  | 2D35 2430  |  | 2D35 5430  |  | 2D35 6430  |  |
| 10" Sch140   | 97,00  | 2D35 1431  |  | 2D35 3431  |  | 2D35 2431  |  | 2D35 5431  |  | 2D35 6431  |  |
| 10" Sch160   | 108,00 | 2D35 14311 |  | 2D35 34311 |  | 2D35 24311 |  | 2D35 54311 |  | 2D35 64311 |  |

**Curvas LR 90° ASTM A234**  
Elbows LR ASTM A234

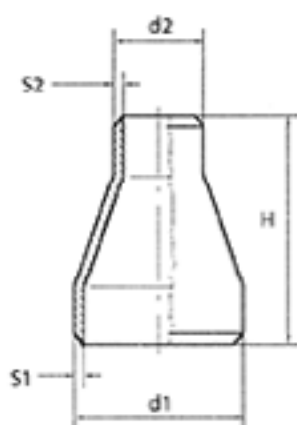


|            |        | Lista 2238     | Lista 2243     | Lista 2248      | Lista 2252      | Lista 2258      |
|------------|--------|----------------|----------------|-----------------|-----------------|-----------------|
| NPS        | Kg     | WP5<br>Art. N° | WP9<br>Art. N° | WP11<br>Art. N° | WP22<br>Art. N° | WP91<br>Art. N° |
| 12" Sch30  | 46,50  | 2D35 1440      | 2D35 3440      | 2D35 2440       | 2D35 5440       | 2D35 6440       |
| 12" STD    | 52,00  | 2D35 1441      | 2D35 3441      | 2D35 2441       | 2D35 5441       | 2D35 6441       |
| 12" Sch40  | 57,00  | 2D35 14411     | 2D35 34411     | 2D35 24411      | 2D35 54411      | 2D35 64411      |
| 12" XS     | 70,00  | 2D35 1442      | 2D35 3442      | 2D35 2442       | 2D35 5442       | 2D35 6442       |
| 12" Sch60  | 82,62  | 2D35 14421     | 2D35 34421     | 2D35 24421      | 2D35 54421      | 2D35 64421      |
|            |        |                |                |                 |                 |                 |
| 12" Sch80  | 94,82  | 2D35 1443      | 2D35 3443      | 2D35 2443       | 2D35 5443       | 2D35 6443       |
| 12" Sch100 | 123,00 | 2D35 14431     | 2D35 34431     | 2D35 24431      | 2D35 54431      | 2D35 64431      |
| 12" Sch120 | 140,00 | 2D35 1444      | 2D35 3444      | 2D35 2444       | 2D35 5444       | 2D35 6444       |
| 12" Sch140 | 157,00 | 2D35 14441     | 2D35 34441     | 2D35 24441      | 2D35 54441      | 2D35 64441      |
| 12" Sch160 | 180,00 | 2D35 14442     | 2D35 34442     | 2D35 24442      | 2D35 54442      | 2D35 64442      |
|            |        |                |                |                 |                 |                 |
| 14" Sch30  | 68,00  | 2D35 1453      | 2D35 3453      | 2D35 2453       | 2D35 5453       | 2D35 6453       |
| 14" Sch40  | 79,96  | 2D35 14531     | 2D35 34531     | 2D35 24531      | 2D35 54531      | 2D35 64531      |
| 14" XS     | 94,35  | 2D35 1454      | 2D35 3454      | 2D35 2454       | 2D35 5454       | 2D35 6454       |
| 14" Sch60  | 111,26 | 2D35 1455      | 2D35 3455      | 2D35 2455       | 2D35 5455       | 2D35 6455       |
| 14" Sch80  | 132,16 | 2D35 1456      | 2D35 3456      | 2D35 2456       | 2D35 5456       | 2D35 6456       |
|            |        |                |                |                 |                 |                 |
| 14" Sch100 | 188,00 | 2D35 1457      | 2D35 3457      | 2D35 2457       | 2D35 5457       | 2D35 6457       |
| 14" Sch120 | 190,00 | 2D35 1458      | 2D35 3458      | 2D35 2458       | 2D35 5458       | 2D35 6458       |
| 14" Sch140 | 224,00 | 2D35 14580     | 2D35 34580     | 2D35 24580      | 2D35 54580      | 2D35 64580      |
| 14" Sch160 | 247,50 | 2D35 1459      | 2D35 3459      | 2D35 2459       | 2D35 5459       | 2D35 6459       |
|            |        |                |                |                 |                 |                 |
| 16" Sch30  | 89,20  | 2D35 1465      | 2D35 3465      | 2D35 2465       | 2D35 5465       | 2D35 6465       |
| 16" Sch40  | 124,75 | 2D35 1466      | 2D35 3466      | 2D35 2466       | 2D35 5466       | 2D35 6466       |
| 16" Sch60  | 161,17 | 2D35 1467      | 2D35 3467      | 2D35 2467       | 2D35 5467       | 2D35 6467       |
| 16" Sch80  | 204,30 | 2D35 1468      | 2D35 3468      | 2D35 2468       | 2D35 5468       | 2D35 6468       |
|            |        |                |                |                 |                 |                 |
| 16" Sch100 | 260,00 | 2D35 14681     | 2D35 34681     | 2D35 24681      | 2D35 54681      | 2D35 64681      |
| 16" Sch120 | 274,00 | 2D35 1469      | 2D35 3469      | 2D35 2469       | 2D35 5469       | 2D35 6469       |
| 16" Sch140 | 323,00 | 2D35 14691     | 2D35 34691     | 2D35 24691      | 2D35 54691      | 2D35 64691      |
| 16" Sch160 | 367,00 | 2D35 1470      | 2D35 3470      | 2D35 2470       | 2D35 5470       | 2D35 6470       |
|            |        |                |                |                 |                 |                 |
| 18" Sch30  | 139,83 | 2D35 1476      | 2D35 3476      | 2D35 2476       | 2D35 5476       | 2D35 6476       |
| 18" XS     | 157,50 | 2D35 1477      | 2D35 3477      | 2D35 2477       | 2D35 5477       | 2D35 6477       |
| 18" Sch40  | 177,06 | 2D35 1478      | 2D35 3478      | 2D35 2478       | 2D35 5478       | 2D35 6478       |
| 18" Sch60  | 231,54 | 2D35 14781     | 2D35 34781     | 2D35 24781      | 2D35 54781      | 2D35 64781      |
| 18" Sch80  | 287,84 | 2D35 1479      | 2D35 3479      | 2D35 2479       | 2D35 5479       | 2D35 6479       |
|            |        |                |                |                 |                 |                 |
| 18" Sch100 | 390,00 | 2D35 14791     | 2D35 34791     | 2D35 24791      | 2D35 54791      | 2D35 64791      |
| 18" Sch120 | 405,00 | 2D35 1480      | 2D35 3480      | 2D35 2480       | 2D35 5480       | 2D35 6480       |
| 18" Sch140 | 422,00 | 2D35 14801     | 2D35 34801     | 2D35 24801      | 2D35 54801      | 2D35 64801      |
| 18" Sch160 | 545,00 | 2D35 14802     | 2D35 34802     | 2D35 24802      | 2D35 54802      | 2D35 64802      |
|            |        |                |                |                 |                 |                 |
| 20" STD    | 142,40 | 2D35 1484      | 2D35 3484      | 2D35 2484       | 2D35 5484       | 2D35 6484       |
| 20" Sch30  | 194,30 | 2D35 1486      | 2D35 3486      | 2D35 2486       | 2D35 5486       | 2D35 6486       |
| 20" Sch40  | 230,00 | 2D35 1487      | 2D35 3487      | 2D35 2487       | 2D35 5487       | 2D35 6487       |
| 20" Sch60  | 311,44 | 2D35 1488      | 2D35 3488      | 2D35 2488       | 2D35 5488       | 2D35 6488       |
| 20" Sch80  | 390,90 | 2D35 1489      | 2D35 3489      | 2D35 2489       | 2D35 5489       | 2D35 6489       |
|            |        |                |                |                 |                 |                 |
| 20" Sch100 | 476,00 | 2D35 1490      | 2D35 3490      | 2D35 2490       | 2D35 5490       | 2D35 6490       |
| 20" Sch120 | 508,00 | 2D35 1491      | 2D35 3491      | 2D35 2491       | 2D35 5491       | 2D35 6491       |
| 20" Sch140 | 607,00 | 2D35 14911     | 2D35 34911     | 2D35 24911      | 2D35 54911      | 2D35 64911      |
| 20" Sch160 | 770,00 | 2D35 1492      | 2D35 3492      | 2D35 2492       | 2D35 5492       | 2D35 6492       |

**Reduções concêntricas ASTM A234**  
 BW concentric reducers ASTM A234


| M A234<br>A234  |        |       | Lista<br>2239  | Lista<br>2244  | Lista<br>2247   | Lista<br>2254   | Lista<br>2259   |
|-----------------|--------|-------|----------------|----------------|-----------------|-----------------|-----------------|
| NPS             |        | Kg    | WP5<br>Art. N° | WP9<br>Art. N° | WP11<br>Art. N° | WP22<br>Art. N° | WP91<br>Art. N° |
| 3/4" x 1/2"     | Sch40  | 0,07  | 2D85 1654      | 2D85 3654      | 2D85 2654       | 2D85 5654       | 2D85 6654       |
|                 | Sch80  | 0,08  | 2D85 1655      | 2D85 3655      | 2D85 2655       | 2D85 5655       | 2D85 6655       |
|                 | Sch160 | 0,19  | 2D85 16611     | 2D85 36611     | 2D85 26611      | 2D85 56611      | 2D85 66611      |
| 1" x 3/4"       | Sch40  | 0,12  | 2D85 1660      | 2D85 3660      | 2D85 2660       | 2D85 5660       | 2D85 6660       |
|                 | Sch80  | 0,15  | 2D85 1661      | 2D85 3661      | 2D85 2661       | 2D85 5661       | 2D85 6661       |
|                 | Sch160 | 0,19  | 2D85 16611     | 2D85 36611     | 2D85 26611      | 2D85 56611      | 2D85 66611      |
| 1" x 1/2"       | Sch40  | 0,13  | 2D85 1664      | 2D85 3664      | 2D85 2664       | 2D85 5664       | 2D85 6664       |
|                 | Sch80  | 0,14  | 2D85 1665      | 2D85 3665      | 2D85 2665       | 2D85 5665       | 2D85 6665       |
|                 | Sch160 | 0,17  | 2D85 16651     | 2D85 36651     | 2D85 26651      | 2D85 56651      | 2D85 66651      |
| 1 1/4" x 1"     | Sch40  | 0,17  | 2D85 1670      | 2D85 3670      | 2D85 2670       | 2D85 5670       | 2D85 6670       |
|                 | Sch80  | 0,21  | 2D85 1671      | 2D85 3671      | 2D85 2671       | 2D85 5671       | 2D85 6671       |
| 1 1/4" x 3/4"   | Sch40  | 0,15  | 2D85 1674      | 2D85 3674      | 2D85 2674       | 2D85 5674       | 2D85 6674       |
|                 | Sch80  | 0,19  | 2D85 1675      | 2D85 3675      | 2D85 2675       | 2D85 5675       | 2D85 6675       |
| 1 1/2" x 1 1/4" | Sch40  | 0,26  | 2D85 1679      | 2D85 3679      | 2D85 2679       | 2D85 5679       | 2D85 6679       |
|                 | Sch80  | 0,33  | 2D85 1680      | 2D85 3680      | 2D85 2680       | 2D85 5680       | 2D85 6680       |
| 1 1/2" x 1"     | Sch40  | 0,26  | 2D85 1683      | 2D85 3683      | 2D85 2683       | 2D85 5683       | 2D85 6683       |
|                 | Sch80  | 0,35  | 2D85 1684      | 2D85 3684      | 2D85 2684       | 2D85 5684       | 2D85 6684       |
|                 | Sch160 | 0,38  | 2D85 16841     | 2D85 36841     | 2D85 26841      | 2D85 56841      | 2D85 66841      |
| 1 1/2" x 3/4"   | Sch40  | 0,26  | 2D85 1687      | 2D85 3687      | 2D85 2687       | 2D85 5687       | 2D85 6687       |
|                 | Sch80  | 0,27  | 2D85 1688      | 2D85 3688      | 2D85 2688       | 2D85 5688       | 2D85 6688       |
|                 | Sch160 | 0,35  | 2D85 16881     | 2D85 36881     | 2D85 26881      | 2D85 56881      | 2D85 66881      |
| 2" x 1 1/2"     | Sch40  | 0,41  | 2D85 1693      | 2D85 3693      | 2D85 2693       | 2D85 5693       | 2D85 6693       |
|                 | Sch80  | 0,57  | 2D85 1694      | 2D85 3 694     | 2D85 2694       | 2D85 5694       | 2D85 6694       |
|                 | Sch160 | 0,75  | 2D85 16941     | 2D85 36941     | 2D85 26941      | 2D85 56941      | 2D85 66941      |
| 2" x 1 1/4"     | Sch40  | 0,41  | 2D85 1697      | 2D85 3697      | 2D85 2697       | 2D85 5697       | 2D85 6697       |
|                 | Sch80  | 0,48  | 2D85 1698      | 2D85 3698      | 2D85 2698       | 2D85 5698       | 2D85 6698       |
| 2" x 1"         | Sch160 | 0,70  | 2D85 16981     | 2D85 36981     | 2D85 26981      | 2D85 56981      | 2D85 66981      |
|                 | Sch40  | 0,41  | 2D85 1701      | 2D85 3701      | 2D85 2701       | 2D85 5701       | 2D85 6701       |
|                 | Sch80  | 0,57  | 2D85 1702      | 2D85 3702      | 2D85 2702       | 2D85 5702       | 2D85 6702       |
| 2 1/2" x 2"     | Sch160 | 0,64  | 2D85 17021     | 2D85 37021     | 2D85 27021      | 2D85 57021      | 2D85 67021      |
|                 | Sch40  | 0,77  | 2D85 1714      | 2D85 3714      | 2D85 2714       | 2D85 5714       | 2D85 6714       |
| 2 1/2" x 1 1/2" | Sch80  | 0,95  | 2D85 1715      | 2D85 3715      | 2D85 2715       | 2D85 5715       | 2D85 6715       |
|                 | Sch40  | 0,70  | 2D85 1718      | 2D85 3718      | 2D85 2718       | 2D85 5718       | 2D85 6718       |
|                 | Sch80  | 0,87  | 2D85 1719      | 2D85 3719      | 2D85 2719       | 2D85 5719       | 2D85 6719       |
|                 | Sch160 | 1,08  | 2D85 17191     | 2D85 37191     | 2D85 27191      | 2D85 57191      | 2D85 67191      |
| 3" x 2"         | Sch40  | 0,99  | 2D85 1737      | 2D85 3737      | 2D85 2737       | 2D85 5737       | 2D85 6737       |
|                 | Sch80  | 1,36  | 2D85 1738      | 2D85 3738      | 2D85 2738       | 2D85 5738       | 2D85 6738       |
|                 | Sch160 | 1,57  | 2D85 17381     | 2D85 37381     | 2D85 27381      | 2D85 57381      | 2D85 67381      |
| 3" x 1 1/2"     | Sch40  | 0,99  | 2D85 1742      | 2D85 3742      | 2D85 2742       | 2D85 5742       | 2D85 6742       |
|                 | Sch80  | 1,36  | 2D85 1743      | 2D85 3743      | 2D85 2743       | 2D85 5743       | 2D85 6743       |
|                 | Sch160 | 1,50  | 2D85 17431     | 2D85 37431     | 2D85 27431      | 2D85 57431      | 2D85 67431      |
| 4" x 3"         | Sch40  | 1,55  | 2D85 1769      | 2D85 3769      | 2D85 2769       | 2D85 5769       | 2D85 6769       |
|                 | Sch80  | 2,17  | 2D85 1770      | 2D85 3770      | 2D85 2770       | 2D85 5770       | 2D85 6770       |
|                 | Sch160 | 3,00  | 2D85 17701     | 2D85 37701     | 2D85 27701      | 2D85 57701      | 2D85 67701      |
| 4 x 2 1/2"      | Sch40  | 1,50  | 2D85 1774      | 2D85 3774      | 2D85 2774       | 2D85 5774       | 2D85 6774       |
|                 | Sch80  | 2,27  | 2D85 1775      | 2D85 3775      | 2D85 2775       | 2D85 5775       | 2D85 6775       |
| 4" x 2"         | Sch40  | 1,50  | 2D85 1778      | 2D85 3778      | 2D85 2778       | 2D85 5778       | 2D85 6778       |
|                 | Sch80  | 2,00  | 2D85 1779      | 2D85 3779      | 2D85 2779       | 2D85 5779       | 2D85 6779       |
|                 | Sch160 | 2,60  | 2D85 17791     | 2D85 37791     | 2D85 27791      | 2D85 57791      | 2D85 67791      |
| 6" x 4"         | Sch40  | 3,90  | 2D85 1823      | 2D85 3823      | 2D85 2823       | 2D85 5823       | 2D85 6823       |
|                 | Sch80  | 5,95  | 2D85 1824      | 2D85 3824      | 2D85 2824       | 2D85 5824       | 2D85 6824       |
|                 | Sch160 | 8,00  | 2D85 1825      | 2D85 3825      | 2D85 2825       | 2D85 5825       | 2D85 6825       |
| 6" x 3"         | Sch40  | 3,90  | 2D85 1828      | 2D85 3828      | 2D85 2828       | 2D85 5828       | 2D85 6828       |
|                 | Sch80  | 5,95  | 2D85 1829      | 2D85 3829      | 2D85 2829       | 2D85 5829       | 2D85 6829       |
|                 | Sch160 | 8,00  | 2D85 1830      | 2D85 3830      | 2D85 2830       | 2D85 5830       | 2D85 6830       |
| 8" x 6"         | Sch40  | 6,50  | 2D85 1845      | 2D85 3 845     | 2D85 2845       | 2D85 5845       | 2D85 6845       |
|                 | Sch60  | 10,31 | 2D85 1846      | 2D85 3846      | 2D85 2846       | 2D85 5846       | 2D85 6846       |
|                 | Sch80  | 9,80  | 2D85 1847      | 2D85 3847      | 2D85 2847       | 2D85 5847       | 2D85 6847       |
| 8" x 4"         | Sch120 | 13,70 | 2D85 1849      | 2D85 3849      | 2D85 2849       | 2D85 5849       | 2D85 6849       |
|                 | Sch160 | 16,90 | 2D85 18491     | 2D85 38491     | 2D85 28491      | 2D85 58491      | 2D85 68491      |
|                 | Sch40  | 6,50  | 2D85 1859      | 2D85 3859      | 2D85 2859       | 2D85 5859       | 2D85 6859       |
|                 | Sch60  | 8,50  | 2D85 18591     | 2D85 38591     | 2D85 28591      | 2D85 58591      | 2D85 68591      |
|                 | Sch80  | 9,86  | 2D85 1860      | 2D85 3860      | 2D85 2860       | 2D85 5860       | 2D85 6860       |
|                 | Sch120 | 13,70 | 2D85 1862      | 2D85 3862      | 2D85 2862       | 2D85 5862       | 2D85 6862       |
|                 | Sch160 | 16,00 | 2D85 18621     | 2D85 38621     | 2D85 28621      | 2D85 58621      | 2D85 68621      |

**Reduções concêntricas ASTM A234**  
BW concentric reducers ASTM A234



|           |        |             | Lista 2239  | Lista 2244   | Lista 2247   | Lista 2254   | Lista 2259 |
|-----------|--------|-------------|-------------|--------------|--------------|--------------|------------|
| NPS       | Kg     | WP5 Art. N° | WP9 Art. N° | WP11 Art. N° | WP22 Art. N° | WP22 Art. N° |            |
| 10" x 8"  | Sch40  | 10,70       | 2D85 1874   | 2D85 3874    | 2D85 2874    | 2D85 5874    | 2D85 6874  |
|           | Sch60  | 14,50       | 2D85 18741  | 2D85 38741   | 2D85 28741   | 2D85 58741   | 2D85 68741 |
|           | Sch80  | 16,00       | 2D85 1875   | 2D85 3875    | 2D85 2875    | 2D85 5875    | 2D85 6875  |
|           | Sch100 | 20,40       | 2D85 18751  | 2D85 38751   | 2D85 28751   | 2D85 58751   | 2D85 68751 |
|           | Sch120 | 23,60       | 2D85 18752  | 2D85 38752   | 2D85 28752   | 2D85 58752   | 2D85 68752 |
|           | Sch160 | 30,00       | 2D85 18753  | 2D85 38753   | 2D85 28753   | 2D85 58753   | 2D85 68753 |
| 10" x 6"  | Sch40  | 10,70       | 2D85 1880   | 2D85 3880    | 2D85 2880    | 2D85 5880    | 2D85 6880  |
|           | Sch60  | 14,50       | 2D85 18801  | 2D85 38801   | 2D85 28801   | 2D85 58801   | 2D85 68801 |
|           | Sch80  | 27,00       | 2D85 1881   | 2D85 3881    | 2D85 2881    | 2D85 5881    | 2D85 6881  |
|           | Sch100 | 20,40       | 2D85 18811  | 2D85 38811   | 2D85 28811   | 2D85 58811   | 2D85 68811 |
|           | Sch120 | 23,50       | 2D85 18812  | 2D85 38812   | 2D85 28812   | 2D85 58812   | 2D85 68812 |
|           | Sch160 | 26,00       | 2D85 18813  | 2D85 38813   | 2D85 28813   | 2D85 58813   | 2D85 68813 |
| 12" x 10" | Sch30  | 13,20       | 2D85 1892   | 2D85 3892    | 2D85 2892    | 2D85 5892    | 2D85 6892  |
|           | Sch40  | 16,00       | 2D85 1893   | 2D85 3893    | 2D85 2893    | 2D85 5893    | 2D85 6893  |
|           | Sch60  | 22,20       | 2D85 18931  | 2D85 38931   | 2D85 28931   | 2D85 58931   | 2D85 68931 |
|           | Sch80  | 26,80       | 2D85 1894   | 2D85 3894    | 2D85 2894    | 2D85 5894    | 2D85 6894  |
|           | Sch100 | 32,40       | 2D85 18941  | 2D85 38941   | 2D85 28941   | 2D85 58941   | 2D85 68941 |
|           | Sch120 | 38,00       | 2D85 18942  | 2D85 38942   | 2D85 28942   | 2D85 58942   | 2D85 68942 |
| 12" x 8"  | Sch160 | 44,60       | 2D85 18943  | 2D85 38943   | 2D85 28943   | 2D85 58943   | 2D85 68943 |
|           | Sch30  | 13,20       | 2D85 1897   | 2D85 3897    | 2D85 2897    | 2D85 5897    | 2D85 6897  |
|           | STD    | 15,00       | 2D85 1898   | 2D85 3898    | 2D85 2898    | 2D85 5898    | 2D85 6898  |
|           | Sch40  | 16,00       | 2D85 18981  | 2D85 38981   | 2D85 28981   | 2D85 58981   | 2D85 68981 |
|           | XS     | 19,00       | 2D85 1899   | 2D85 3899    | 2D85 2899    | 2D85 5899    | 2D85 6899  |
|           | Sch60  | 22,80       | 2D85 18991  | 2D85 38991   | 2D85 28991   | 2D85 58991   | 2D85 68991 |
| 12" x 6"  | Sch80  | 26,80       | 2D85 18992  | 2D85 38992   | 2D85 28992   | 2D85 58992   | 2D85 68992 |
|           | Sch100 | 32,40       | 2D85 18993  | 2D85 38993   | 2D85 28993   | 2D85 58993   | 2D85 68993 |
|           | Sch120 | 38,00       | 2D85 18994  | 2D85 38994   | 2D85 28994   | 2D85 58994   | 2D85 68994 |
|           | Sch160 | 48,00       | 2D85 18995  | 2D85 38995   | 2D85 28995   | 2D85 58995   | 2D85 68995 |
|           | Sch30  | 14,00       | 2D85 1901   | 2D85 3901    | 2D85 2901    | 2D85 5901    | 2D85 6901  |
|           | Sch40  | 16,00       | 2D85 1902   | 2D85 3902    | 2D85 2902    | 2D85 5902    | 2D85 6902  |
| 14" x 10" | Sch80  | 26,00       | 2D85 1903   | 2D85 3903    | 2D85 2903    | 2D85 5903    | 2D85 6903  |
|           | Sch100 | 32,40       | 2D85 19031  | 2D85 39031   | 2D85 29031   | 2D85 59031   | 2D85 69031 |
|           | Sch120 | 38,00       | 2D85 19032  | 2D85 39032   | 2D85 29032   | 2D85 59032   | 2D85 69032 |
|           | Sch160 | 39,00       | 2D85 19033  | 2D85 39033   | 2D85 29033   | 2D85 59033   | 2D85 69033 |
|           | Sch30  | 26,9        | 2D85 1911   | 2D85 3911    | 2D85 2911    | 2D85 5911    | 2D85 6911  |
|           | Sch40  | 31,10       | 2D85 1912   | 2D85 3912    | 2D85 2912    | 2D85 5912    | 2D85 6912  |
| 14" x 8"  | Sch60  | 42,00       | 2D85 19121  | 2D85 39121   | 2D85 29121   | 2D85 59121   | 2D85 69121 |
|           | Sch80  | 52,00       | 2D85 1914   | 2D85 3914    | 2D85 2914    | 2D85 5914    | 2D85 6914  |
|           | Sch30  | 26,9        | 2D85 1916   | 2D85 3916    | 2D85 2916    | 2D85 5916    | 2D85 6916  |
|           | Sch40  | 31,10       | 2D85 1918   | 2D85 3918    | 2D85 2918    | 2D85 5918    | 2D85 6918  |
|           | Sch60  | 42,00       | 2D85 1919   | 2D85 3919    | 2D85 2919    | 2D85 5919    | 2D85 6919  |
|           | Sch80  | 43,00       | 2D85 19191  | 2D85 39191   | 2D85 29191   | 2D85 59191   | 2D85 69191 |
| 16" x 12" | Sch30  | 33,00       | 2D85 1930   | 2D85 3930    | 2D85 2930    | 2D85 5930    | 2D85 6930  |
|           | Sch40  | 43,80       | 2D85 1931   | 2D85 3931    | 2D85 2931    | 2D85 5931    | 2D85 6931  |
|           | Sch60  | 57,00       | 2D85 19311  | 2D85 39311   | 2D85 29311   | 2D85 59311   | 2D85 69311 |
|           | Sch80  | 72,00       | 2D85 1932   | 2D85 3932    | 2D85 2932    | 2D85 5932    | 2D85 6932  |
|           | Sch30  | 33,10       | 2D85 1934   | 2D85 3934    | 2D85 2934    | 2D85 5934    | 2D85 6934  |
|           | Sch40  | 48,00       | 2D85 1935   | 2D85 3935    | 2D85 2935    | 2D85 5935    | 2D85 6935  |
| 16" x 10" | Sch60  | 57,00       | 2D85 19351  | 2D85 39351   | 2D85 29351   | 2D85 59351   | 2D85 69351 |
|           | Sch80  | 62,00       | 2D85 1936   | 2D85 3936    | 2D85 2936    | 2D85 5936    | 2D85 6936  |
| 18" x 12" | Sch30  | 48,00       | 2D85 1943   | 2D85 3943    | 2D85 2943    | 2D85 5943    | 2D85 6943  |
|           | XS     | 53,00       | 2D85 1944   | 2D85 3944    | 2D85 2944    | 2D85 5944    | 2D85 6944  |
|           | Sch40  | 58,00       | 2D85 19441  | 2D85 39441   | 2D85 29441   | 2D85 59441   | 2D85 69441 |
|           | Sch60  | 79,00       | 2D85 19442  | 2D85 39442   | 2D85 29442   | 2D85 59442   | 2D85 69442 |
|           | Sch80  | 96,00       | 2D85 19443  | 2D85 39443   | 2D85 29443   | 2D85 59443   | 2D85 69443 |

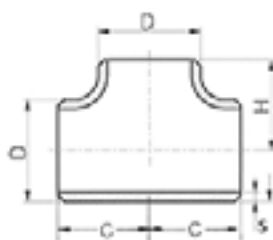
**Reduções excêntricas BW ASTM A234**  
 BW excentric fittings ASTM A234


| STM A234        |        |         | Lista 2240 | Lista 2245 | Lista 2250 | Lista 2255 | Lista 2260 |
|-----------------|--------|---------|------------|------------|------------|------------|------------|
| NPS             | Kg     | WP5     | WP9        | WP11       | WP22       | WP91       |            |
|                 |        | Art. N° | Art. N°    | Art. N°    | Art. N°    | Art. N°    |            |
| 3/4" x 1/2"     | Sch40  | 0,07    | 2D95 1654  | 2D95 3654  | 2D95 2654  | 2D95 5654  | 2D85 9654  |
|                 | Sch80  | 0,08    | 2D95 1655  | 2D95 3655  | 2D95 2655  | 2D95 5655  | 2D85 9655  |
| 1" x 3/4"       | Sch40  | 0,12    | 2D95 1660  | 2D95 3660  | 2D95 2660  | 2D95 5660  | 2D85 9660  |
|                 | Sch80  | 0,15    | 2D95 1661  | 2D95 3661  | 2D95 2661  | 2D95 5661  | 2D85 9661  |
| 1" x 1/2"       | Sch160 | 0,19    | 2D95 16611 | 2D95 36611 | 2D95 26611 | 2D95 56611 | 2D85 96611 |
|                 | Sch40  | 0,13    | 2D95 1664  | 2D95 3664  | 2D95 2664  | 2D95 5664  | 2D85 9664  |
| 1 1/4" x 1"     | Sch80  | 0,14    | 2D95 1665  | 2D95 3665  | 2D95 2665  | 2D95 5665  | 2D85 9665  |
|                 | Sch160 | 0,17    | 2D95 16651 | 2D95 36651 | 2D95 26651 | 2D95 56651 | 2D85 96651 |
| 1 1/4" x 3/4"   | Sch40  | 0,17    | 2D95 1670  | 2D95 3670  | 2D95 2670  | 2D95 5670  | 2D85 9670  |
|                 | Sch80  | 0,21    | 2D95 1671  | 2D95 3671  | 2D95 2671  | 2D95 5671  | 2D85 9671  |
| 1 1/2" x 1 1/4" | Sch40  | 0,15    | 2D95 1674  | 2D95 3674  | 2D95 2674  | 2D95 5674  | 2D85 9674  |
|                 | Sch80  | 0,19    | 2D95 1675  | 2D95 3675  | 2D95 2675  | 2D95 5675  | 2D85 9675  |
| 1 1/2" x 1 1/2" | Sch40  | 0,26    | 2D95 1679  | 2D95 3679  | 2D95 2679  | 2D95 5679  | 2D85 9679  |
|                 | Sch80  | 0,33    | 2D95 1680  | 2D95 3680  | 2D95 2680  | 2D95 5680  | 2D85 9680  |
| 1 1/2" x 1"     | Sch40  | 0,26    | 2D95 1683  | 2D95 3683  | 2D95 2683  | 2D95 5683  | 2D85 9683  |
|                 | Sch80  | 0,35    | 2D95 1684  | 2D95 3684  | 2D95 2684  | 2D95 5684  | 2D85 9684  |
| 1 1/2" x 3/4"   | Sch160 | 0,38    | 2D95 16841 | 2D95 36841 | 2D95 26841 | 2D95 56841 | 2D85 96841 |
|                 | Sch40  | 0,26    | 2D95 1687  | 2D95 3687  | 2D95 2687  | 2D95 5687  | 2D85 9687  |
|                 | Sch80  | 0,27    | 2D95 1688  | 2D95 3688  | 2D95 2688  | 2D95 5688  | 2D85 9688  |
|                 | Sch160 | 0,35    | 2D95 16881 | 2D95 36881 | 2D95 26881 | 2D95 56881 | 2D85 96881 |
|                 |        |         |            |            |            |            |            |
| 2" x 1 1/2"     | Sch40  | 0,41    | 2D95 1693  | 2D95 3693  | 2D95 2693  | 2D95 5693  | 2D85 9693  |
|                 | Sch80  | 0,57    | 2D95 1694  | 2D95 3694  | 2D95 2694  | 2D95 5694  | 2D85 9694  |
|                 | Sch160 | 0,75    | 2D95 16941 | 2D95 36941 | 2D95 26941 | 2D95 56941 | 2D85 96941 |
| 2" x 1 1/4"     | Sch40  | 0,41    | 2D95 1697  | 2D95 3697  | 2D95 2697  | 2D95 5697  | 2D85 9697  |
|                 | Sch80  | 0,48    | 2D95 1698  | 2D95 3698  | 2D95 2698  | 2D95 5698  | 2D85 9698  |
|                 | Sch160 | 0,70    | 2D95 16981 | 2D95 36981 | 2D95 26981 | 2D95 56981 | 2D85 96981 |
| 2" x 1"         | Sch40  | 0,41    | 2D95 1701  | 2D95 3701  | 2D95 2701  | 2D95 5701  | 2D85 9701  |
|                 | Sch80  | 0,57    | 2D95 1702  | 2D95 3702  | 2D95 2702  | 2D95 5702  | 2D85 9702  |
|                 | Sch160 | 0,64    | 2D95 17021 | 2D95 37021 | 2D95 27021 | 2D95 57021 | 2D85 97021 |
| 2 1/2" x 2"     | Sch40  | 0,77    | 2D95 1714  | 2D95 3714  | 2D95 2714  | 2D95 5714  | 2D85 9714  |
|                 | Sch80  | 0,95    | 2D95 1715  | 2D95 3715  | 2D95 2715  | 2D95 5715  | 2D85 9715  |
| 2 1/2" x 1 1/2" | Sch40  | 0,70    | 2D95 1718  | 2D95 3718  | 2D95 2718  | 2D95 5718  | 2D85 9718  |
|                 | Sch80  | 0,87    | 2D95 1719  | 2D95 3719  | 2D85 2719  | 2D95 5719  | 2D85 9719  |
|                 | Sch160 | 1,08    | 2D95 17191 | 2D95 37191 | 2D95 27191 | 2D95 57191 | 2D85 97191 |
|                 |        |         |            |            |            |            |            |
| 3" x 2"         | Sch40  | 0,99    | 2D95 1737  | 2D95 3737  | 2D95 2737  | 2D95 5737  | 2D85 9737  |
|                 | Sch80  | 1,36    | 2D95 1738  | 2D95 3738  | 2D95 2738  | 2D95 5738  | 2D85 9738  |
|                 | Sch160 | 1,57    | 2D95 17381 | 2D95 37381 | 2D95 27381 | 2D95 57381 | 2D85 97381 |
| 3" x 1 1/2"     | Sch40  | 0,99    | 2D95 1742  | 2D95 3742  | 2D95 2742  | 2D95 5742  | 2D85 9742  |
|                 | Sch80  | 1,36    | 2D95 1743  | 2D95 3743  | 2D95 2743  | 2D95 5743  | 2D85 9743  |
|                 | Sch160 | 1,50    | 2D95 17431 | 2D95 37431 | 2D95 27431 | 2D95 57431 | 2D85 97431 |
| 4" x 3"         | Sch40  | 1,55    | 2D95 1769  | 2D95 3769  | 2D95 2769  | 2D95 5769  | 2D85 9769  |
|                 | Sch80  | 2,17    | 2D95 1770  | 2D95 3770  | 2D95 2770  | 2D95 5770  | 2D85 9770  |
|                 | Sch160 | 3,00    | 2D95 17701 | 2D95 37701 | 2D95 27701 | 2D95 57701 | 2D85 97701 |
| 4 x 2 1/2"      | Sch40  | 1,50    | 2D95 1774  | 2D95 3774  | 2D95 2774  | 2D95 5774  | 2D85 9774  |
|                 | Sch80  | 2,27    | 2D95 1775  | 2D95 3775  | 2D95 2775  | 2D95 5775  | 2D85 9775  |
| 4" x 2"         | Sch40  | 1,50    | 2D95 1778  | 2D95 3778  | 2D95 2778  | 2D95 5778  | 2D85 9778  |
|                 | Sch80  | 2,00    | 2D95 1779  | 2D95 3779  | 2D95 2779  | 2D95 5779  | 2D85 9779  |
|                 | Sch160 | 2,60    | 2D95 17791 | 2D95 37791 | 2D95 27791 | 2D95 57791 | 2D85 97791 |
|                 |        |         |            |            |            |            |            |
| 6" x 4"         | Sch40  | 3,90    | 2D95 1823  | 2D95 3823  | 2D95 2823  | 2D95 5823  | 2D85 9823  |
|                 | Sch80  | 5,95    | 2D95 1824  | 2D95 3824  | 2D95 2824  | 2D95 5824  | 2D85 9824  |
|                 | Sch160 | 8,00    | 2D95 1825  | 2D95 3825  | 2D95 2825  | 2D95 5825  | 2D85 9825  |
| 6" x 3"         | Sch40  | 3,90    | 2D95 1828  | 2D95 3828  | 2D95 2828  | 2D95 5828  | 2D85 9828  |
|                 | Sch80  | 5,00    | 2D95 1829  | 2D95 3829  | 2D95 2829  | 2D95 5829  | 2D85 9829  |
|                 | Sch160 | 8,00    | 2D95 1830  | 2D95 3830  | 2D95 2830  | 2D95 5830  | 2D85 9830  |
| 8" x 6"         | Sch40  | 6,50    | 2D95 1845  | 2D95 3845  | 2D95 2845  | 2D95 5845  | 2D85 9845  |
|                 | Sch60  | 10,31   | 2D95 1846  | 2D95 3846  | 2D95 2846  | 2D95 5846  | 2D85 9846  |
|                 | Sch80  | 9,80    | 2D95 1847  | 2D95 3847  | 2D95 2847  | 2D95 5847  | 2D85 9847  |
|                 | Sch100 | 15,06   | 2D95 1848  | 2D95 3848  | 2D95 2848  | 2D95 5848  | 2D85 9848  |
|                 | Sch120 | 14,00   | 2D95 1849  | 2D95 3849  | 2D95 2849  | 2D95 5849  | 2D85 9849  |
| 8" x 4"         | Sch160 | 16,00   | 2D95 18491 | 2D95 38491 | 2D95 28491 | 2D95 58491 | 2D85 98491 |
|                 | Sch40  | 6,50    | 2D95 1859  | 2D95 3859  | 2D95 2859  | 2D95 5859  | 2D85 9859  |
|                 | Sch60  | 10,31   | 2D95 18591 | 2D95 38591 | 2D95 28591 | 2D95 58591 | 2D85 98591 |
|                 | Sch80  | 8,96    | 2D95 1860  | 2D95 3860  | 2D95 2860  | 2D95 5860  | 2D85 9860  |
|                 | Sch100 | 15,06   | 2D95 1861  | 2D95 3861  | 2D95 2861  | 2D95 5861  | 2D85 9861  |
|                 | Sch120 | 13,70   | 2D95 1862  | 2D95 3862  | 2D95 2862  | 2D95 5862  | 2D85 9862  |
|                 | Sch160 | 16,00   | 2D95 18621 | 2D95 38621 | 2D95 28621 | 2D95 58621 | 2D85 98621 |
|                 |        |         |            |            |            |            |            |

**Reduções excêntricas BW ASTM A234**  
BW excentric fittings ASTM A234



|           |        |       | Lista 2240     | Lista 2245     | Lista 2250      | Lista 2255      | Lista 2260      |
|-----------|--------|-------|----------------|----------------|-----------------|-----------------|-----------------|
| NPS       |        | Kg    | WP5<br>Art. N° | WP9<br>Art. N° | WP11<br>Art. N° | WP22<br>Art. N° | WP91<br>Art. N° |
| 10" x 8"  | Sch40  | 10,70 | 2D95 1874      | 2D95 3874      | 2D95 2874       | 2D95 5874       | 2D95 6874       |
|           | Sch60  | 14,50 | 2D95 18741     | 2D95 38741     | 2D95 28741      | 2D95 58741      | 2D95 68741      |
|           | Sch80  | 16,00 | 2D95 1875      | 2D95 3875      | 2D95 2875       | 2D95 5875       | 2D95 6875       |
|           | Sch100 | 20,40 | 2D95 18751     | 2D95 38751     | 2D95 28751      | 2D95 58751      | 2D95 68751      |
|           | Sch120 | 23,60 | 2D95 18752     | 2D95 38752     | 2D95 28752      | 2D95 58752      | 2D95 68752      |
|           | Sch160 | 30,00 | 2D95 18753     | 2D95 38753     | 2D95 28753      | 2D95 58753      | 2D95 68753      |
| 10" x 6"  | Sch40  | 10,70 | 2D95 1880      | 2D95 3880      | 2D95 2880       | 2D95 5880       | 2D95 6880       |
|           | Sch60  | 14,50 | 2D95 18801     | 2D95 38801     | 2D95 28801      | 2D95 58801      | 2D95 68801      |
|           | Sch80  | 17,00 | 2D95 1881      | 2D95 3881      | 2D95 2881       | 2D95 5881       | 2D95 6881       |
|           | Sch100 | 20,40 | 2D95 18811     | 2D95 38811     | 2D95 28811      | 2D95 58811      | 2D95 68811      |
|           | Sch120 | 23,60 | 2D95 18812     | 2D95 38812     | 2D95 28812      | 2D95 58812      | 2D95 68812      |
|           | Sch160 | 26,00 | 2D95 18813     | 2D95 38813     | 2D95 28813      | 2D95 58813      | 2D95 68813      |
| 12" x 10" | Sch30  | 13,20 | 2D95 1892      | 2D95 3892      | 2D95 2892       | 2D95 5892       | 2D95 6892       |
|           | Sch40  | 16,00 | 2D95 1893      | 2D95 3893      | 2D95 2893       | 2D95 5893       | 2D95 6893       |
|           | Sch60  | 22,20 | 2D95 18931     | 2D95 38931     | 2D95 28931      | 2D95 58931      | 2D95 68931      |
|           | Sch80  | 26,80 | 2D95 1894      | 2D95 3894      | 2D95 2894       | 2D95 5894       | 2D95 6894       |
|           | Sch100 | 32,40 | 2D95 18941     | 2D95 38941     | 2D95 28941      | 2D95 58941      | 2D95 68941      |
|           | Sch120 | 38,00 | 2D95 18942     | 2D95 38942     | 2D95 28942      | 2D95 58942      | 2D95 68942      |
| 12" x 8"  | Sch30  | 13,20 | 2D95 1897      | 2D95 3897      | 2D95 2897       | 2D95 5897       | 2D95 6897       |
|           | STD    | 15,00 | 2D95 1898      | 2D95 3898      | 2D95 2898       | 2D95 5898       | 2D95 6898       |
|           | Sch40  | 16,00 | 2D95 18981     | 2D95 38981     | 2D95 28981      | 2D95 58981      | 2D95 68981      |
|           | XS     | 19,00 | 2D95 1899      | 2D95 3899      | 2D95 2899       | 2D95 5899       | 2D95 6899       |
|           | Sch60  | 22,20 | 2D95 18991     | 2D95 38991     | 2D95 28991      | 2D95 58991      | 2D95 68991      |
|           | Sch80  | 26,80 | 2D95 18992     | 2D95 38992     | 2D95 28992      | 2D95 58992      | 2D95 68992      |
| 12" x 6"  | Sch100 | 32,40 | 2D95 18993     | 2D95 38993     | 2D95 28993      | 2D95 58993      | 2D95 68993      |
|           | Sch120 | 38,00 | 2D95 18994     | 2D95 38994     | 2D95 28994      | 2D95 58994      | 2D95 68994      |
|           | Sch160 | 48,00 | 2D95 18995     | 2D95 38995     | 2D95 28995      | 2D95 58995      | 2D95 68995      |
|           | Sch30  | 14,00 | 2D95 1901      | 2D95 3901      | 2D95 2901       | 2D95 5901       | 2D95 6901       |
|           | Sch40  | 16,00 | 2D95 1902      | 2D95 3902      | 2D95 2902       | 2D95 5902       | 2D95 6902       |
|           | Sch80  | 26,00 | 2D95 1903      | 2D95 3903      | 2D95 2903       | 2D95 5903       | 2D95 6903       |
| 14" x 10" | Sch100 | 32,40 | 2D95 19031     | 2D95 39031     | 2D95 29031      | 2D95 59031      | 2D95 69031      |
|           | Sch120 | 38,00 | 2D95 19032     | 2D95 39032     | 2D95 29032      | 2D95 59032      | 2D95 69032      |
|           | Sch160 | 39,00 | 2D95 19033     | 2D95 39033     | 2D95 29033      | 2D95 59033      | 2D95 69033      |
|           | Sch30  | 26,90 | 2D95 1911      | 2D95 3911      | 2D95 2911       | 2D95 5911       | 2D95 6911       |
|           | Sch40  | 31,10 | 2D95 1912      | 2D95 3912      | 2D95 2912       | 2D95 5912       | 2D95 6912       |
|           | Sch60  | 42,00 | 2D95 19121     | 2D95 39121     | 2D95 29121      | 2D95 59121      | 2D95 69121      |
| 14" x 8"  | Sch80  | 52,00 | 2D95 1914      | 2D95 3914      | 2D95 2914       | 2D95 5914       | 2D95 6914       |
|           | Sch30  | 26,00 | 2D95 1916      | 2D95 3916      | 2D95 2916       | 2D95 5916       | 2D95 6916       |
|           | Sch40  | 31,10 | 2D95 1918      | 2D95 3918      | 2D95 2918       | 2D95 5918       | 2D95 6918       |
|           | Sch60  | 42,00 | 2D95 1919      | 2D95 3919      | 2D95 2919       | 2D95 5919       | 2D95 6919       |
|           | Sch80  | 52,00 | 2D95 19191     | 2D95 39191     | 2D95 29191      | 2D95 59191      | 2D95 69191      |
|           | Sch100 | 52,00 | 2D95 19191     | 2D95 39191     | 2D95 29191      | 2D95 59191      | 2D95 69191      |
| 16" x 12" | Sch30  | 33,00 | 2D95 1930      | 2D95 3930      | 2D95 2930       | 2D95 5930       | 2D95 6930       |
|           | Sch40  | 43,80 | 2D95 1931      | 2D95 3931      | 2D95 2931       | 2D95 5931       | 2D95 6931       |
|           | Sch60  | 57,00 | 2D95 19311     | 2D95 39311     | 2D95 29311      | 2D95 59311      | 2D95 69311      |
|           | Sch80  | 72,00 | 2D95 1932      | 2D95 3932      | 2D95 2932       | 2D95 5932       | 2D95 6932       |
|           | Sch30  | 33,1  | 2D95 1934      | 2D95 3934      | 2D95 2934       | 2D95 5934       | 2D95 6934       |
|           | Sch40  | 43,20 | 2D95 1935      | 2D95 3935      | 2D95 2935       | 2D95 5935       | 2D95 6935       |
| 16" x 10" | Sch60  | 57,00 | 2D95 19351     | 2D95 39351     | 2D95 29351      | 2D95 59351      | 2D95 69351      |
|           | Sch80  | 72,00 | 2D95 1936      | 2D95 3936      | 2D95 2936       | 2D95 5936       | 2D95 6936       |
|           | Sch30  | 48,00 | 2D95 1943      | 2D95 3943      | 2D95 2943       | 2D95 5943       | 2D95 6943       |
|           | XS     | 53,00 | 2D95 1944      | 2D95 3944      | 2D95 2944       | 2D95 5944       | 2D95 6944       |
|           | Sch40  | 59,00 | 2D95 19441     | 2D95 39441     | 2D95 29441      | 2D95 59441      | 2D95 69441      |
|           | Sch60  | 79,00 | 2D95 19442     | 2D95 39442     | 2D95 29442      | 2D95 59442      | 2D95 69442      |
| 18" x 12" | Sch80  | 96,00 | 2D95 19443     | 2D95 39443     | 2D95 29443      | 2D95 59443      | 2D95 69443      |
|           | Sch80  | 96,00 | 2D95 19443     | 2D95 39443     | 2D95 29443      | 2D95 59443      | 2D95 69443      |

**Tês BW ANSI B16.9 ASTM A234**  
 Tees BW ASTM A234


|        |        |       | Lista 2241     | Lista 2246     | Lista 2251      | Lista 2256      | Lista 2261      |
|--------|--------|-------|----------------|----------------|-----------------|-----------------|-----------------|
| NPS    | Sch    | Kg    | WP5<br>Art. N° | WP9<br>Art. N° | WP11<br>Art. N° | WP22<br>Art. N° | WP91<br>Art. N° |
| 1/2"   | Sch40  | 0,08  | 2E05 1170      | 2E05 3170      | 2E05 2170       | 2E05 5170       | 2E05 6170       |
| 1/2"   | Sch80  | 0,18  | 2E05 1172      | 2E05 3172      | 2E05 2172       | 2E05 5172       | 2E05 6172       |
| 1/2"   | Sch160 | 0,22  | 2E05 1173      | 2E05 3173      | 2E05 2173       | 2E05 5173       | 2E05 6173       |
| 3/4"   | Sch40  | 0,08  | 2E05 1191      | 2E05 3191      | 2E05 2191       | 2E05 5191       | 2E05 6191       |
| 3/4"   | Sch80  | 0,20  | 2E05 1193      | 2E05 3193      | 2E05 2193       | 2E05 5193       | 2E05 6193       |
| 3/4"   | Sch160 | 0,25  | 2E05 1194      | 2E05 3194      | 2E05 2194       | 2E05 5194       | 2E05 6194       |
| 1"     | Sch40  | 0,15  | 2E05 1218      | 2E05 3218      | 2E05 2218       | 2E05 5218       | 2E05 6218       |
| 1"     | Sch80  | 0,20  | 2E05 1220      | 2E05 3220      | 2E05 2220       | 2E05 5220       | 2E05 6220       |
| 1"     | Sch160 | 0,30  | 2E05 1221      | 2E05 3221      | 2E05 2221       | 2E05 5221       | 2E05 6221       |
| 1 1/4" | Sch40  | 0,25  | 2E05 1243      | 2E05 3243      | 2E05 2243       | 2E05 5243       | 2E05 6243       |
| 1 1/4" | Sch80  | 0,35  | 2E05 1245      | 2E05 3245      | 2E05 2245       | 2E05 5245       | 2E05 6245       |
| 1 1/4" | Sch160 | 0,44  | 2E05 1246      | 2E05 3246      | 2E05 2246       | 2E05 5246       | 2E05 6246       |
| 1 1/2" | Sch40  | 0,36  | 2E05 1260      | 2E05 3260      | 2E05 2260       | 2E05 5260       | 2E05 6260       |
| 1 1/2" | Sch80  | 0,60  | 2E05 1262      | 2E05 3262      | 2E05 2262       | 2E05 5262       | 2E05 6262       |
| 1 1/2" | Sch160 | 0,80  | 2E05 1263      | 2E05 3263      | 2E05 2263       | 2E05 5263       | 2E05 6263       |
| 2"     | Sch40  | 0,65  | 2E05 1286      | 2E05 3286      | 2E05 2286       | 2E05 5286       | 2E05 6286       |
| 2"     | Sch80  | 0,94  | 2E05 1289      | 2E05 3289      | 2E05 2289       | 2E05 5289       | 2E05 6289       |
| 2"     | Sch160 | 1,50  | 2E05 1291      | 2E05 3291      | 2E05 2291       | 2E05 5291       | 2E05 6291       |
| 2 1/2" | Sch40  | 1,28  | 2E05 1309      | 2E05 3309      | 2E05 2309       | 2E05 5309       | 2E05 6809       |
| 2 1/2" | Sch80  | 1,70  | 2E05 1310      | 2E05 3310      | 2E05 2310       | 2E05 5310       | 2E05 6310       |
| 2 1/2" | Sch160 | 2,35  | 2E05 1311      | 2E05 3311      | 2E05 2311       | 2E05 5311       | 2E05 6311       |
| 3"     | Sch40  | 2,03  | 2E05 1338      | 2E05 3338      | 2E05 2338       | 2E05 5338       | 2E05 6338       |
| 3"     | Sch80  | 2,75  | 2E05 1339      | 2E05 3339      | 2E05 2339       | 2E05 5339       | 2E05 6339       |
| 3"     | Sch160 | 4,00  | 2E05 1340      | 2E05 3340      | 2E05 2340       | 2E05 5340       | 2E05 6340       |
| 3 1/2" | Sch40  | 2,87  | 2E05 1348      | 2E05 3348      | 2E05 2348       | 2E05 5348       | 2E05 6388       |
| 3 1/2" | Sch80  | 3,95  | 2E05 1349      | 2E05 3349      | 2E05 2349       | 2E05 5349       | 2E05 6349       |
| 4"     | Sch40  | 3,90  | 2E05 1364      | 2E05 3364      | 2E05 2364       | 2E05 5364       | 2E05 6364       |
| 4"     | Sch80  | 5,40  | 2E05 1365      | 2E05 3365      | 2E05 2365       | 2E05 5365       | 2E05 6365       |
| 4"     | Sch120 | 6,95  | 2E05 1366      | 2E05 3366      | 2E05 2366       | 2E05 5366       | 2E05 6366       |
| 4"     | Sch160 | 9,00  | 2E05 1367      | 2E05 3367      | 2E05 2367       | 2E05 5367       | 2E05 6367       |
| 5"     | Sch40  | 6,50  | 2E05 1380      | 2E05 3380      | 2E05 2380       | 2E05 5380       | 2E05 6380       |
| 5"     | Sch80  | 8,85  | 2E05 1381      | 2E05 3381      | 2E05 2381       | 2E05 5381       | 2E05 6381       |
| 5"     | Sch120 | 12,62 | 2E05 1382      | 2E05 3382      | 2E05 2382       | 2E05 5382       | 2E05 6382       |
| 5"     | Sch160 | 15,44 | 2E05 13821     | 2E05 33821     | 2E05 23821      | 2E05 53821      | 2E05 63821      |
| 6"     | Sch40  | 10,20 | 2E05 1399      | 2E05 3399      | 2E05 2399       | 2E05 5399       | 2E05 6399       |
| 6"     | Sch80  | 15,35 | 2E05 1400      | 2E05 3400      | 2E05 2400       | 2E05 5400       | 2E05 6400       |
| 6"     | Sch120 | 23,00 | 2E05 1401      | 2E05 3401      | 2E05 2401       | 2E05 5401       | 2E05 6401       |
| 6"     | Sch160 | 27,00 | 2E05 1402      | 2E05 3402      | 2E05 2402       | 2E05 5402       | 2E05 6402       |
| 8"     | Sch20  | 16,57 | 2E05 1414      | 2E05 3414      | 2E05 2414       | 2E05 5414       | 2E05 6414       |
| 8"     | Sch30  | 17,50 | 2E05 14141     | 2E05 34141     | 2E05 24141      | 2E05 54141      | 2E05 64141      |
| 8"     | Sch40  | 20,30 | 2E05 1415      | 2E05 3415      | 2E05 2415       | 2E05 5415       | 2E05 6415       |
| 8"     | Sch60  | 26,30 | 2E05 14151     | 2E05 34151     | 2E05 24151      | 2E05 54151      | 2E05 64151      |
| 8"     | Sch80  | 29,90 | 2E05 1416      | 2E05 3416      | 2E05 2416       | 2E05 5416       | 2E05 6416       |
| 8"     | Sch100 | 38,00 | 2E05 14161     | 2E05 34161     | 2E05 24161      | 2E05 54161      | 2E05 64161      |
| 8"     | Sch120 | 40,50 | 2E05 1417      | 2E05 3417      | 2E05 2417       | 2E05 5417       | 2E05 6417       |
| 8"     | Sch140 | 52,00 | 2E05 1418      | 2E05 3418      | 2E05 2418       | 2E05 5418       | 2E05 6418       |
| 8"     | Sch160 | 58,00 | 2E05 14181     | 2E05 34181     | 2E05 24181      | 2E05 54181      | 2E05 64181      |
| 10"    | Sch40  | 37,00 | 2E05 1427      | 2E05 3427      | 2E05 2427       | 2E05 5427       | 2E05 6427       |
| 10"    | Sch60  | 48,60 | 2E05 1428      | 2E05 3428      | 2E05 2428       | 2E05 5428       | 2E05 6428       |
| 10"    | Sch80  | 57,11 | 2E05 1429      | 2E05 3429      | 2E05 2429       | 2E05 5429       | 2E05 6429       |
| 10"    | Sch100 | 75,00 | 2E05 14291     | 2E05 34291     | 2E05 24291      | 2E05 54291      | 2E05 64291      |
| 10"    | Sch120 | 85,00 | 2E05 1430      | 2E05 3430      | 2E05 2430       | 2E05 5430       | 2E05 6430       |
| 10"    | Sch140 | 97,00 | 2E05 1431      | 2E05 3431      | 2E05 2431       | 2E05 5431       | 2E05 6431       |

**Tês BW ANSI B16.9 ASTM A234**  
Tees BW ANSI A234

**Lista  
2241**

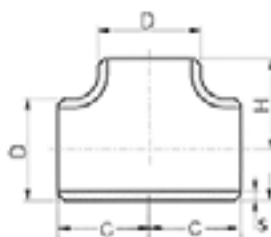
**Lista  
2246**

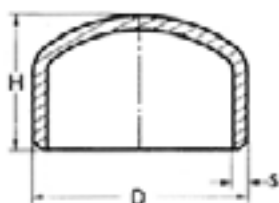
**Lista  
2251**

**Lista  
2256**

**Lista  
2261**

| NPS | Kg     | W P5    |            | W P9       |            | W P11      |            | W P22   |  | W P91   |  |
|-----|--------|---------|------------|------------|------------|------------|------------|---------|--|---------|--|
|     |        | Art. N° |            | Art. N°    |            | Art. N°    |            | Art. N° |  | Art. N° |  |
| 12" | Sch30  | 46,06   | 2E05 1440  | 2E05 3440  | 2E05 2440  | 2E05 5440  | 2E05 6440  |         |  |         |  |
| 12" | STD    | 54,00   | 2E05 1441  | 2E05 3441  | 2E05 2441  | 2E05 5441  | 2E05 6441  |         |  |         |  |
| 12" | Sch40  | 58,15   | 2E05 14411 | 2E05 34411 | 2E05 24411 | 2E05 54411 | 2E05 64411 |         |  |         |  |
| 12" | XS     | 70,00   | 2E05 1442  | 2E05 3442  | 2E05 2442  | 2E05 5442  | 2E05 6442  |         |  |         |  |
| 12" | Sch60  | 82,62   | 2E05 14421 | 2E05 34421 | 2E05 24421 | 2E05 54421 | 2E05 64421 |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 12" | Sch80  | 94,82   | 2E05 1443  | 2E05 3443  | 2E05 2443  | 2E05 5443  | 2E05 6443  |         |  |         |  |
| 12" | Sch100 | 123,00  | 2E05 14431 | 2E05 34431 | 2E05 24431 | 2E05 54431 | 2E05 64431 |         |  |         |  |
| 12" | Sch120 | 140,00  | 2E05 1444  | 2E05 3444  | 2E05 2444  | 2E05 5444  | 2E05 6444  |         |  |         |  |
| 12" | Sch140 | 157,00  | 2E05 14441 | 2E05 34441 | 2E05 24441 | 2E05 54441 | 2E05 64441 |         |  |         |  |
| 12" | Sch160 | 180,00  | 2E05 14442 | 2E05 34442 | 2E05 24442 | 2E05 54442 | 2E05 64442 |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 14" | Sch30  | 68,00   | 2E051453   | 2E05 3453  | 2E05 2453  | 2E05 5453  | 2E05 6453  |         |  |         |  |
| 14" | Sch40  | 79,96   | 2E0514531  | 2E05 34531 | 2E05 24531 | 2E05 54531 | 2E05 64531 |         |  |         |  |
| 14" | XS     | 94,35   | 2E051454   | 2E05 3454  | 2E05 2454  | 2E05 5454  | 2E05 6454  |         |  |         |  |
| 14" | Sch60  | 111,26  | 2E051455   | 2E05 3455  | 2E05 2455  | 2E05 5455  | 2E05 6455  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 14" | Sch80  | 132,16  | 2E05 1456  | 2E05 3456  | 2E05 2456  | 2E05 5456  | 2E05 6456  |         |  |         |  |
| 14" | Sch100 | 188,00  | 2E05 1457  | 2E05 3457  | 2E05 2457  | 2E05 5457  | 2E05 6457  |         |  |         |  |
| 14" | Sch120 | 190,00  | 2E05 1458  | 2E05 3458  | 2E05 2458  | 2E05 5458  | 2E05 6458  |         |  |         |  |
| 14" | Sch140 | 224,00  | 2E05 14580 | 2E05 34580 | 2E05 24580 | 2E05 54580 | 2E05 64580 |         |  |         |  |
| 14" | Sch160 | 247,50  | 2E05 1459  | 2E05 3459  | 2E05 2459  | 2E05 5459  | 2E05 6459  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 16" | Sch30  | 89,20   | 2E05 1465  | 2E05 3465  | 2E05 2465  | 2E05 5465  | 2E05 6465  |         |  |         |  |
| 16" | Sch40  | 124,75  | 2E05 1466  | 2E05 3466  | 2E05 2466  | 2E05 5466  | 2E05 6466  |         |  |         |  |
| 16" | Sch60  | 161,17  | 2E05 1467  | 2E05 3467  | 2E05 2467  | 2E05 5467  | 2E05 6467  |         |  |         |  |
| 16" | Sch80  | 204,30  | 2E05 1468  | 2E05 3468  | 2E05 2468  | 2E05 5468  | 2E05 6468  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 16" | Sch100 | 260,00  | 2E05 14681 | 2E05 34681 | 2E05 24681 | 2E05 54681 | 2E05 64681 |         |  |         |  |
| 16" | Sch120 | 274,00  | 2E05 1469  | 2E05 3469  | 2E05 2469  | 2E05 5469  | 2E05 6469  |         |  |         |  |
| 16" | Sch140 | 323,00  | 2E05 14691 | 2E05 34691 | 2E05 24691 | 2E05 54691 | 2E05 64691 |         |  |         |  |
| 16" | Sch160 | 367,00  | 2E05 1470  | 2E05 3470  | 2E05 2470  | 2E05 5470  | 2E05 6470  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 18" | Sch30  | 139,83  | 2E05 1476  | 2E05 3476  | 2E05 2476  | 2E05 5476  | 2E05 6476  |         |  |         |  |
| 18" | XS     | 157,50  | 2E05 1477  | 2E05 3477  | 2E05 2477  | 2E05 5477  | 2E05 6477  |         |  |         |  |
| 18" | Sch40  | 177,06  | 2E05 1478  | 2E05 3478  | 2E05 2478  | 2E05 5478  | 2E05 6478  |         |  |         |  |
| 18" | Sch60  | 231,54  | 2E05 14781 | 2E05 34781 | 2E05 24781 | 2E05 54781 | 2E05 64781 |         |  |         |  |
| 18" | Sch80  | 287,84  | 2E05 1479  | 2E05 3479  | 2E05 2479  | 2E05 5479  | 2E05 6479  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 18" | Sch100 | 390,00  | 2E05 14791 | 2E05 34791 | 2E05 24791 | 2E05 54791 | 2E05 64791 |         |  |         |  |
| 18" | Sch120 | 405,00  | 2E05 1480  | 2E05 3480  | 2E05 2480  | 2E05 5480  | 2E05 6480  |         |  |         |  |
| 18" | Sch140 | 422,00  | 2E05 14801 | 2E05 34801 | 2E05 24801 | 2E05 54801 | 2E05 64801 |         |  |         |  |
| 18" | Sch160 | 545,00  | 2E05 14802 | 2E05 34802 | 2E05 24802 | 2E05 54802 | 2E05 64802 |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 20" | STD    | 142,40  | 2E05 1484  | 2E05 3484  | 2E05 2484  | 2E05 5484  | 2E05 6484  |         |  |         |  |
| 20" | Sch30  | 194,30  | 2E05 1486  | 2E05 3486  | 2E05 2486  | 2E05 5486  | 2E05 6486  |         |  |         |  |
| 20" | Sch40  | 230,00  | 2E05 1487  | 2E05 3487  | 2E05 2487  | 2E05 5487  | 2E05 6487  |         |  |         |  |
| 20" | Sch60  | 311,44  | 2E05 1488  | 2E05 3488  | 2E05 2488  | 2E05 5488  | 2E05 6488  |         |  |         |  |
| 20" | Sch80  | 390,90  | 2E05 1489  | 2E05 3489  | 2E05 2489  | 2E05 5489  | 2E05 6489  |         |  |         |  |
|     |        |         |            |            |            |            |            |         |  |         |  |
| 20" | Sch100 | 476,00  | 2E05 1490  | 2E05 3490  | 2E05 2490  | 2E05 5490  | 2E05 6490  |         |  |         |  |
| 20" | Sch120 | 508,00  | 2E05 1491  | 2E05 3491  | 2E05 2491  | 2E05 5491  | 2E05 6491  |         |  |         |  |
| 20" | Sch140 | 607,00  | 2E05 14911 | 2E05 34911 | 2E05 24911 | 2E05 54911 | 2E05 64911 |         |  |         |  |
| 20" | Sch160 | 770,00  | 2E05 1492  | 2E05 3492  | 2E05 2492  | 2E05 5492  | 2E05 6492  |         |  |         |  |



**Tampos BW ANSI B16.9 ASTM A234**  
 Caps BW ANSI B16.9 ASTM A234


|        |        |       | Lista<br>2242   | Lista<br>2247   | Lista<br>2252    | Lista<br>2257    | Lista<br>2262    |
|--------|--------|-------|-----------------|-----------------|------------------|------------------|------------------|
| NPS    |        | Kg    | W P5<br>Art. N° | W P9<br>Art. N° | W P11<br>Art. N° | W P22<br>Art. N° | W P91<br>Art. N° |
| 1/2"   | Sch40  | 0,08  | 2E25 1170       | 2E25 3170       | 2E25 2170        | 2E25 5170        | 2E25 6170        |
| 1/2"   | Sch80  | 0,18  | 2E25 1172       | 2E25 3172       | 2E25 2172        | 2E25 5172        | 2E25 6172        |
| 1/2"   | Sch160 | 0,22  | 2E25 1173       | 2E25 3173       | 2E25 2173        | 2E25 5173        | 2E25 6173        |
| 3/4"   | Sch40  | 0,08  | 2E25 1191       | 2E25 3191       | 2E25 2191        | 2E25 5191        | 2E25 6191        |
| 3/4"   | Sch80  | 0,20  | 2E25 1193       | 2E25 3193       | 2E25 2193        | 2E25 5193        | 2E25 6193        |
| 3/4"   | Sch160 | 0,25  | 2E25 1194       | 2E25 3194       | 2E25 2194        | 2E25 5194        | 2E25 6194        |
| 1"     | Sch40  | 0,15  | 2E25 1218       | 2E25 3218       | 2E25 2218        | 2E25 5218        | 2E25 6218        |
| 1"     | Sch80  | 0,20  | 2E25 1220       | 2E25 3220       | 2E25 2220        | 2E25 5220        | 2E25 6220        |
| 1"     | Sch160 | 0,30  | 2E25 1221       | 2E25 3221       | 2E25 2221        | 2E25 5221        | 2E25 6221        |
| 1 1/4" | Sch40  | 0,25  | 2E25 1243       | 2E25 3243       | 2E25 2243        | 2E25 5243        | 2E25 6243        |
| 1 1/4" | Sch80  | 0,35  | 2E25 1245       | 2E25 3245       | 2E25 2245        | 2E25 5245        | 2E25 6245        |
| 1 1/4" | Sch160 | 0,44  | 2E25 1246       | 2E25 3246       | 2E25 2246        | 2E25 5246        | 2E25 6246        |
| 1 1/2" | Sch40  | 0,36  | 2E25 1260       | 2E25 3260       | 2E25 2260        | 2E25 5260        | 2E25 6260        |
| 1 1/2" | Sch80  | 0,60  | 2E25 1262       | 2E25 3262       | 2E25 2262        | 2E25 5262        | 2E25 6262        |
| 1 1/2" | Sch160 | 0,80  | 2E25 1263       | 2E25 3263       | 2E25 2263        | 2E25 5263        | 2E25 6263        |
| 2"     | Sch40  | 0,65  | 2E25 1286       | 2E25 3286       | 2E25 2286        | 2E25 5286        | 2E25 6286        |
| 2"     | Sch80  | 0,94  | 2E25 1289       | 2E25 3289       | 2E25 2289        | 2E25 5289        | 2E25 6289        |
| 2"     | Sch160 | 1,50  | 2E25 1291       | 2E25 3291       | 2E25 2291        | 2E25 5291        | 2E25 6291        |
| 2 1/2" | Sch40  | 1,28  | 2E25 1309       | 2E25 3309       | 2E25 2309        | 2E25 5309        | 2E25 6309        |
| 2 1/2" | Sch80  | 1,70  | 2E25 1310       | 2E25 3310       | 2E25 2310        | 2E25 5310        | 2E25 6310        |
| 2 1/2" | Sch160 | 2,35  | 2E25 1311       | 2E25 3311       | 2E25 2311        | 2E25 5311        | 2E25 6311        |
| 3"     | Sch40  | 2,03  | 2E25 1338       | 2E25 3338       | 2E25 2338        | 2E25 5338        | 2E25 6338        |
| 3"     | Sch80  | 2,75  | 2E25 1339       | 2E25 3339       | 2E25 2339        | 2E25 5339        | 2E25 6339        |
| 3"     | Sch160 | 4,00  | 2E25 1340       | 2E25 3340       | 2E25 2340        | 2E25 5340        | 2E25 6340        |
| 3 1/2" | Sch40  | 2,87  | 2E25 1348       | 2E25 3348       | 2E25 2348        | 2E25 5348        | 2E25 6348        |
| 3 1/2" | Sch80  | 3,95  | 2E25 1349       | 2E25 3349       | 2E25 2349        | 2E25 5349        | 2E25 6349        |
| 4"     | Sch40  | 3,90  | 2E25 1364       | 2E25 1364       | 2E25 2364        | 2E25 5364        | 2E25 6364        |
| 4"     | Sch80  | 5,40  | 2E25 1365       | 2E25 1365       | 2E25 2365        | 2E25 5365        | 2E25 6365        |
| 4"     | Sch120 | 6,95  | 2E25 1366       | 2E25 1366       | 2E25 2366        | 2E25 5366        | 2E25 6366        |
| 4"     | Sch160 | 9,00  | 2E25 1367       | 2E25 1367       | 2E25 2367        | 2E25 5367        | 2E25 6367        |
| 5"     | Sch40  | 6,50  | 2E25 1380       | 2E25 1380       | 2E25 2380        | 2E25 5380        | 2E25 6380        |
| 5"     | Sch80  | 8,85  | 2E25 1381       | 2E25 1381       | 2E25 2381        | 2E25 5381        | 2E25 6381        |
| 5"     | Sch120 | 12,62 | 2E25 1382       | 2E25 1382       | 2E25 2382        | 2E25 5382        | 2E25 6382        |
| 5"     | Sch160 | 15,44 | 2E25 13821      | 2E25 13821      | 2E25 23821       | 2E25 53821       | 2E25 63821       |
| 6"     | Sch40  | 10,20 | 2E25 1399       | 2E25 1399       | 2E25 2399        | 2E25 5399        | 2E25 6399        |
| 6"     | Sch80  | 15,35 | 2E25 1400       | 2E25 1400       | 2E25 2400        | 2E25 5400        | 2E25 6400        |
| 6"     | Sch120 | 23,00 | 2E25 1401       | 2E25 1401       | 2E25 2401        | 2E25 5401        | 2E25 6401        |
| 6"     | Sch160 | 27,00 | 2E25 1402       | 2E25 1402       | 2E25 2402        | 2E25 5402        | 2E25 6402        |
| 8"     | Sch20  | 16,57 | 2E25 1414       | 2E25 1414       | 2E25 2414        | 2E25 5414        | 2E25 6414        |
| 8"     | Sch30  | 17,50 | 2E25 14141      | 2E25 14141      | 2E25 24141       | 2E25 54141       | 2E25 64141       |
| 8"     | Sch40  | 20,30 | 2E25 1415       | 2E25 1415       | 2E25 2415        | 2E25 5415        | 2E25 6415        |
| 8"     | Sch60  | 26,30 | 2E25 14151      | 2E25 14151      | 2E25 24151       | 2E25 54151       | 2E25 64151       |
| 8"     | Sch80  | 29,90 | 2E25 1416       | 2E25 1416       | 2E25 2416        | 2E25 5416        | 2E25 6416        |
| 8"     | Sch100 | 38,00 | 2E25 14161      | 2E25 14161      | 2E25 24161       | 2E25 54161       | 2E25 64161       |
| 8"     | Sch120 | 40,50 | 2E25 1417       | 2E25 1417       | 2E25 2417        | 2E25 5417        | 2E25 6417        |
| 8"     | Sch140 | 52,00 | 2E25 1418       | 2E25 1418       | 2E25 2418        | 2E25 5418        | 2E25 6418        |
| 8"     | Sch160 | 58,00 | 2E25 14181      | 2E25 14181      | 2E25 24181       | 2E25 54181       | 2E25 64181       |
| 10"    | Sch40  | 37,00 | 2E25 1427       | 2E25 1427       | 2E25 2427        | 2E25 5427        | 2E25 6427        |
| 10"    | Sch60  | 48,60 | 2E25 1428       | 2E25 1428       | 2E25 2428        | 2E25 5428        | 2E25 6428        |
| 10"    | Sch80  | 57,11 | 2E25 1429       | 2E25 1429       | 2E25 2429        | 2E25 5429        | 2E25 6429        |
| 10"    | Sch100 | 75,00 | 2E25 14291      | 2E25 14291      | 2E25 24291       | 2E25 54291       | 2E25 64291       |
| 10"    | Sch120 | 85,00 | 2E25 1430       | 2E25 1430       | 2E25 2430        | 2E25 5430        | 2E25 6430        |
| 10"    | Sch140 | 97,00 | 2E25 1431       | 2E25 1431       | 2E25 2431        | 2E25 5431        | 2E25 6431        |

**Tampos BW ANSI B16.9 ASTM A234**  
Caps BW ANSI B16.9 ASTM A234

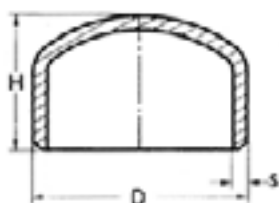
**Lista  
2242**

**Lista  
2247**

**Lista  
2252**

**Lista  
2257**

**Lista  
2262**



| NPS        | Kg     | W P5       | W P9       | W P11      | W P22      | W P91      |
|------------|--------|------------|------------|------------|------------|------------|
|            |        | Art. N°    | Art. N°    | Art. N°    | Art. N°    | Art. N°    |
| 12" Sch30  | 46,06  | 2E25 1440  | 2E25 3440  | 2E25 2440  | 2E25 5440  | 2E25 6440  |
| 12" STD    | 54,00  | 2E25 1441  | 2E25 3441  | 2E25 2441  | 2E25 5441  | 2E25 6441  |
| 12" Sch40  | 58,15  | 2E25 14411 | 2E25 34411 | 2E25 24411 | 2E25 54411 | 2E25 64411 |
| 12" XS     | 70,00  | 2E25 1442  | 2E25 3442  | 2E25 2442  | 2E25 5442  | 2E25 6442  |
|            |        |            |            |            |            |            |
| 12" Sch60  | 82,62  | 2E25 14421 | 2E25 34421 | 2E25 24421 | 2E25 54421 | 2E25 64421 |
| 12" Sch80  | 94,82  | 2E25 1443  | 2E25 3443  | 2E25 2443  | 2E25 5443  | 2E25 6443  |
| 12" Sch100 | 123,00 | 2E25 14431 | 2E25 34431 | 2E25 24431 | 2E25 54431 | 2E25 64431 |
| 12" Sch120 | 140,00 | 2E25 1444  | 2E25 3444  | 2E25 2444  | 2E25 5444  | 2E25 6444  |
| 12" Sch140 | 157,00 | 2E25 14441 | 2E25 34441 | 2E25 24441 | 2E25 54441 | 2E25 64441 |
| 12" Sch160 | 180,00 | 2E25 14442 | 2E25 34442 | 2E25 24442 | 2E25 54442 | 2E25 6442  |
|            |        |            |            |            |            |            |
| 14" Sch30  | 68,00  | 2E25 1453  | 2E25 3453  | 2E25 2453  | 2E25 5453  | 2E25 6453  |
| 14" Sch40  | 79,96  | 2E25 14531 | 2E25 34531 | 2E25 24531 | 2E25 54531 | 2E25 64531 |
| 14" XS     | 94,35  | 2E25 1454  | 2E25 3454  | 2E25 2454  | 2E25 5454  | 2E25 6454  |
| 14" Sch60  | 111,26 | 2E25 1455  | 2E25 3455  | 2E25 2455  | 2E25 5455  | 2E25 6455  |
| 14" Sch80  | 132,16 | 2E25 1456  | 2E25 3456  | 2E25 2456  | 2E25 5456  | 2E25 6456  |
|            |        |            |            |            |            |            |
| 14" Sch100 | 188,00 | 2E25 1457  | 2E25 3457  | 2E25 2457  | 2E25 5457  | 2E25 6457  |
| 14" Sch120 | 190,00 | 2E25 1458  | 2E25 3458  | 2E25 2458  | 2E25 5458  | 2E25 6458  |
| 14" Sch140 | 224,00 | 2E25 14580 | 2E25 34580 | 2E25 24580 | 2E25 54580 | 2E25 64580 |
| 14" Sch160 | 247,50 | 2E25 1459  | 2E25 3459  | 2E25 2459  | 2E25 5459  | 2E25 6459  |
|            |        |            |            |            |            |            |
| 16" Sch30  | 89,20  | 2E25 1465  | 2E25 3465  | 2E25 2465  | 2E25 5465  | 2E25 6465  |
| 16" Sch40  | 124,75 | 2E25 1466  | 2E25 3466  | 2E25 2466  | 2E25 5466  | 2E25 6466  |
| 16" Sch60  | 161,17 | 2E25 1467  | 2E25 3467  | 2E25 2467  | 2E25 5467  | 2E25 6467  |
| 16" Sch80  | 204,30 | 2E25 1468  | 2E25 3468  | 2E25 2468  | 2E25 5468  | 2E25 6468  |
|            |        |            |            |            |            |            |
| 16" Sch100 | 260,00 | 2E25 14681 | 2E25 34681 | 2E25 24681 | 2E25 54681 | 2E25 6681  |
| 16" Sch120 | 274,00 | 2E25 1469  | 2E25 3469  | 2E25 2469  | 2E25 5469  | 2E25 6469  |
| 16" Sch140 | 323,00 | 2E25 14691 | 2E25 34691 | 2E25 24691 | 2E25 54691 | 2E25 64691 |
| 16" Sch160 | 367,00 | 2E25 1470  | 2E25 3470  | 2E25 2470  | 2E25 5470  | 2E25 6470  |
|            |        |            |            |            |            |            |
| 18" Sch30  | 139,83 | 2E25 1476  | 2E25 3476  | 2E25 2476  | 2E25 5476  | 2E25 6476  |
| 18" XS     | 157,50 | 2E25 1477  | 2E25 3477  | 2E25 2477  | 2E25 5477  | 2E25 6477  |
| 18" Sch40  | 177,06 | 2E25 1478  | 2E25 3478  | 2E25 2478  | 2E25 5478  | 2E25 6478  |
| 18" Sch60  | 231,54 | 2E25 14781 | 2E25 34781 | 2E25 24781 | 2E25 54781 | 2E25 64781 |
| 18" Sch80  | 287,84 | 2E25 1479  | 2E25 3479  | 2E25 2479  | 2E25 1479  | 2E25 6479  |
|            |        |            |            |            |            |            |
| 18" Sch100 | 390,00 | 2E25 14791 | 2E25 34791 | 2E25 24791 | 2E25 54791 | 2E25 64791 |
| 18" Sch120 | 405,00 | 2E25 1480  | 2E25 3480  | 2E25 2480  | 2E25 5480  | 2E25 6480  |
| 18" Sch140 | 422,00 | 2E25 14801 | 2E25 34801 | 2E25 24801 | 2E25 54801 | 2E25 64801 |
| 18" Sch160 | 545,00 | 2E25 14802 | 2E25 34802 | 2E25 24802 | 2E25 54802 | 2E25 64802 |
|            |        |            |            |            |            |            |
| 20" STD    | 142,40 | 2E25 1484  | 2E25 3484  | 2E25 2484  | 2E25 5484  | 2E25 6484  |
| 20" Sch30  | 194,30 | 2E25 1486  | 2E25 3486  | 2E25 2486  | 2E25 5486  | 2E25 6486  |
| 20" Sch40  | 230,00 | 2E25 1487  | 2E25 3487  | 2E25 2487  | 2E25 5487  | 2E25 6487  |
| 20" Sch60  | 311,44 | 2E25 1488  | 2E25 3488  | 2E25 2488  | 2E25 5488  | 2E25 6488  |
| 20" Sch80  | 390,90 | 2E25 1489  | 2E25 3489  | 2E25 2489  | 2E25 5489  | 2E25 6489  |
|            |        |            |            |            |            |            |
| 20" Sch100 | 476,00 | 2E25 1490  | 2E25 3490  | 2E25 2490  | 2E25 5490  | 2E25 6490  |
| 20" Sch120 | 508,00 | 2E25 1491  | 2E25 3491  | 2E25 2491  | 2E25 5491  | 2E25 6491  |
| 20" Sch140 | 607,00 | 2E25 14911 | 2E25 34911 | 2E25 24911 | 2E25 54911 | 2E25 64911 |
| 20" Sch160 | 770,00 | 2E25 1492  | 2E25 3492  | 2E25 2492  | 2E25 5492  | 2E25 6492  |

## American Pipe Threads

|             |              | pipe thread       | external thread        | internal thread | remarks                                                               |
|-------------|--------------|-------------------|------------------------|-----------------|-----------------------------------------------------------------------|
| <b>NPT</b>  |              | „general purpose“ | taper                  | taper           |                                                                       |
| <b>NPTF</b> |              | dry sealing       | taper                  | taper           |                                                                       |
| <b>NPSC</b> | C=coupling   | „general purpose“ | taper (NPT)            | cylindrical     | profile as NPT                                                        |
| <b>NP3M</b> | M=mechanical | fastening thread  | cylindrical            | cylindrical     | UN-thread profile                                                     |
| <b>NP3F</b> |              | dry sealing       | taper (NPTF)           | cylindrical     | profile as NPTF                                                       |
| <b>NP3I</b> |              | dry sealing       | taper (NPT-SAE / NPTF) | cylindrical     | thread diameter slightly increased with same width of tolerance field |
| <b>NP3L</b> | L=Locknut    |                   | cylindrical            | cylindrical     |                                                                       |

NPT-, NP3C-, NP3M- and NP3L-thread are defined in ANSI/ASME B1.20.1, NPTF, NP3F and NP3I-thread are given in ANSI B1.20.3

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