

PFEIFER INDUSTRIES, LLC.

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8mm PITCH - HTD / POWERGRIP GT / GT2

| Pitch Diameter (PD) Calculation | |
|--------------------------------------|----------------------|
| PD = (Pitch x Number of Teeth) / π | |
| Variables: | |
| Pitch | <u>8</u> mm |
| Number of teeth | <u>22</u> Teeth |
| Pi (π) | <u>3.14159265</u> Pi |
| Result: | |
| PD (Pitch Diameter) = | 2.206 inches |

| Outside Diameter (O.D.) Calculation | |
|---|----------------------|
| O.D. = [(Pitch x Number of Teeth) / π] - (2 x Distance from belt pitch line to belt tooth bottom) | |
| Variables: | |
| Pitch | <u>8</u> mm |
| Number of teeth | <u>22</u> Teeth |
| Pi (π) | <u>3.14159265</u> Pi |
| Distance from belt pitch line to belt tooth bottom | <u>0.027</u> inches |
| Result: | |
| O.D. (Outside Diameter) | 2.152 inches |

| Number of Teeth | Inches (in) | | Metric (mm) | |
|-----------------|---------------------|-------------------------|---------------------|-------------------------|
| | Pitch Diameter (PD) | Outside Diameter (O.D.) | Pitch Diameter (PD) | Outside Diameter (O.D.) |
| 14 | 1.404 | 1.350 | 35.651 | 34.28 |
| 15 | 1.504 | 1.450 | 38.197 | 36.83 |
| 16 | 1.604 | 1.550 | 40.744 | 39.37 |
| 17 | 1.704 | 1.650 | 43.290 | 41.92 |
| 18 | 1.805 | 1.751 | 45.84 | 44.47 |
| 19 | 1.905 | 1.851 | 48.38 | 47.01 |
| 20 | 2.005 | 1.951 | 50.93 | 49.56 |
| 21 | 2.105 | 2.051 | 53.48 | 52.10 |
| 22 | 2.206 | 2.152 | 56.02 | 54.65 |
| 23 | 2.306 | 2.252 | 58.57 | 57.20 |
| 24 | 2.406 | 2.352 | 61.12 | 59.74 |
| 25 | 2.506 | 2.452 | 63.66 | 62.29 |
| 26 | 2.607 | 2.553 | 66.21 | 64.84 |
| 27 | 2.707 | 2.653 | 68.75 | 67.38 |
| 28 | 2.807 | 2.753 | 71.30 | 69.93 |
| 29 | 2.907 | 2.853 | 73.85 | 72.48 |
| 30 | 3.008 | 2.954 | 76.39 | 75.02 |
| 31 | 3.108 | 3.054 | 78.94 | 77.57 |
| 32 | 3.208 | 3.154 | 81.49 | 80.12 |
| 33 | 3.308 | 3.254 | 84.03 | 82.66 |
| 34 | 3.409 | 3.355 | 86.58 | 85.21 |
| 35 | 3.509 | 3.455 | 89.13 | 87.76 |
| 36 | 3.609 | 3.555 | 91.67 | 90.30 |
| 37 | 3.709 | 3.655 | 94.22 | 92.85 |
| 38 | 3.810 | 3.756 | 96.77 | 95.39 |
| 39 | 3.910 | 3.856 | 99.31 | 97.94 |
| 40 | 4.010 | 3.956 | 101.86 | 100.49 |
| 41 | 4.110 | 4.056 | 104.41 | 103.03 |
| 42 | 4.211 | 4.157 | 106.95 | 105.58 |
| 43 | 4.311 | 4.257 | 109.50 | 108.13 |
| 44 | 4.411 | 4.357 | 112.05 | 110.67 |
| 45 | 4.511 | 4.457 | 114.59 | 113.22 |
| 46 | 4.612 | 4.558 | 117.14 | 115.77 |
| 47 | 4.712 | 4.658 | 119.68 | 118.31 |
| 48 | 4.812 | 4.758 | 122.23 | 120.86 |
| 49 | 4.912 | 4.858 | 124.78 | 123.41 |

| Number of Teeth | Inches (in) | | Metric (mm) | |
|-----------------|---------------------|-------------------------|---------------------|-------------------------|
| | Pitch Diameter (PD) | Outside Diameter (O.D.) | Pitch Diameter (PD) | Outside Diameter (O.D.) |
| 50 | 5.013 | 4.959 | 127.32 | 125.95 |
| 51 | 5.113 | 5.059 | 129.87 | 128.50 |
| 52 | 5.213 | 5.159 | 132.42 | 131.05 |
| 53 | 5.313 | 5.259 | 134.96 | 133.59 |
| 54 | 5.414 | 5.360 | 137.51 | 136.14 |
| 55 | 5.514 | 5.460 | 140.06 | 138.68 |
| 56 | 5.614 | 5.560 | 142.60 | 141.23 |
| 57 | 5.715 | 5.661 | 145.15 | 143.78 |
| 58 | 5.815 | 5.761 | 147.70 | 146.32 |
| 59 | 5.915 | 5.861 | 150.24 | 148.87 |
| 60 | 6.015 | 5.961 | 152.79 | 151.42 |
| 61 | 6.116 | 6.062 | 155.34 | 153.96 |
| 62 | 6.216 | 6.162 | 157.88 | 156.51 |
| 63 | 6.316 | 6.262 | 160.43 | 159.06 |
| 64 | 6.416 | 6.362 | 162.97 | 161.60 |
| 65 | 6.517 | 6.463 | 165.52 | 164.15 |
| 66 | 6.617 | 6.563 | 168.07 | 166.70 |
| 67 | 6.717 | 6.663 | 170.61 | 169.24 |
| 68 | 6.817 | 6.763 | 173.16 | 171.79 |
| 69 | 6.918 | 6.864 | 175.71 | 174.34 |
| 70 | 7.018 | 6.964 | 178.25 | 176.88 |
| 71 | 7.118 | 7.064 | 180.80 | 179.43 |
| 72 | 7.218 | 7.164 | 183.35 | 181.97 |
| 73 | 7.319 | 7.265 | 185.89 | 184.52 |
| 74 | 7.419 | 7.365 | 188.44 | 187.07 |
| 75 | 7.519 | 7.465 | 190.99 | 189.61 |
| 76 | 7.619 | 7.565 | 193.53 | 192.16 |
| 77 | 7.720 | 7.666 | 196.08 | 194.71 |
| 78 | 7.820 | 7.766 | 198.63 | 197.25 |
| 79 | 7.920 | 7.866 | 201.17 | 199.80 |
| 80 | 8.020 | 7.966 | 203.72 | 202.35 |
| 81 | 8.121 | 8.067 | 206.26 | 204.89 |
| 82 | 8.221 | 8.167 | 208.81 | 207.44 |
| 83 | 8.321 | 8.267 | 211.36 | 209.99 |
| 84 | 8.421 | 8.367 | 213.90 | 212.53 |
| 85 | 8.522 | 8.468 | 216.45 | 215.08 |

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8mm PITCH - HTD / POWERGRIP GT / GT2

Pitch Diameter (PD) Calculation

$$PD = (\text{Pitch} \times \text{Number of Teeth}) / \pi$$

Variables:

Pitch 8 mm
 Number of teeth 22 Teeth
 Pi (π) 3.14159265 Pi

Result:

PD (Pitch Diameter) = **2.206** inches

Outside Diameter (O.D.) Calculation

$$O.D. = [(\text{Pitch} \times \text{Number of Teeth}) / \pi] - (2 \times \text{Distance from belt pitch line to belt tooth bottom})$$

Variables:

Pitch 8 mm
 Number of teeth 22 Teeth
 Pi (π) 3.14159265 Pi
 Distance from belt pitch line to belt tooth bottom 0.027 inches

Result:

O.D. (Outside Diameter) **2.152** inches

| Number of Teeth | Inches (in) | | Metric (mm) | |
|-----------------|---------------------|-------------------------|---------------------|-------------------------|
| | Pitch Diameter (PD) | Outside Diameter (O.D.) | Pitch Diameter (PD) | Outside Diameter (O.D.) |
| 86 | 8.622 | 8.568 | 219.00 | 217.63 |
| 87 | 8.722 | 8.668 | 221.54 | 220.17 |
| 88 | 8.822 | 8.768 | 224.09 | 222.72 |
| 89 | 8.923 | 8.869 | 226.64 | 225.27 |
| 90 | 9.023 | 8.969 | 229.18 | 227.81 |
| 91 | 9.123 | 9.069 | 231.73 | 230.36 |
| 92 | 9.223 | 9.169 | 234.28 | 232.90 |
| 93 | 9.324 | 9.270 | 236.82 | 235.45 |
| 94 | 9.424 | 9.370 | 239.37 | 238.00 |
| 95 | 9.524 | 9.470 | 241.92 | 240.54 |
| 96 | 9.624 | 9.570 | 244.46 | 243.09 |
| 97 | 9.725 | 9.671 | 247.01 | 245.64 |
| 98 | 9.825 | 9.771 | 249.55 | 248.18 |
| 99 | 9.925 | 9.871 | 252.10 | 250.73 |
| 100 | 10.025 | 9.971 | 254.65 | 253.28 |
| 101 | 10.126 | 10.072 | 257.19 | 255.82 |
| 102 | 10.226 | 10.172 | 259.74 | 258.37 |
| 103 | 10.326 | 10.272 | 262.29 | 260.92 |
| 104 | 10.426 | 10.372 | 264.83 | 263.46 |
| 105 | 10.527 | 10.473 | 267.38 | 266.01 |
| 106 | 10.627 | 10.573 | 269.93 | 268.56 |
| 107 | 10.727 | 10.673 | 272.47 | 271.10 |
| 108 | 10.828 | 10.774 | 275.02 | 273.65 |
| 109 | 10.928 | 10.874 | 277.57 | 276.19 |
| 110 | 11.028 | 10.974 | 280.11 | 278.74 |
| 111 | 11.128 | 11.074 | 282.66 | 281.29 |
| 112 | 11.229 | 11.175 | 285.21 | 283.83 |
| 113 | 11.329 | 11.275 | 287.75 | 286.38 |
| 114 | 11.429 | 11.375 | 290.30 | 288.93 |
| 115 | 11.529 | 11.475 | 292.85 | 291.47 |
| 116 | 11.630 | 11.576 | 295.39 | 294.02 |
| 117 | 11.730 | 11.676 | 297.94 | 296.57 |
| 118 | 11.830 | 11.776 | 300.48 | 299.11 |
| 119 | 11.930 | 11.876 | 303.03 | 301.66 |
| 120 | 12.031 | 11.977 | 305.58 | 304.21 |
| 121 | 12.131 | 12.077 | 308.12 | 306.75 |

| Number of Teeth | Inches (in) | | Metric (mm) | |
|-----------------|---------------------|-------------------------|---------------------|-------------------------|
| | Pitch Diameter (PD) | Outside Diameter (O.D.) | Pitch Diameter (PD) | Outside Diameter (O.D.) |
| 122 | 12.231 | 12.177 | 310.67 | 309.30 |
| 123 | 12.331 | 12.277 | 313.22 | 311.85 |
| 124 | 12.432 | 12.378 | 315.76 | 314.39 |
| 125 | 12.532 | 12.478 | 318.31 | 316.94 |
| 126 | 12.632 | 12.578 | 320.86 | 319.48 |
| 127 | 12.732 | 12.678 | 323.40 | 322.03 |
| 128 | 12.833 | 12.779 | 325.95 | 324.58 |
| 129 | 12.933 | 12.879 | 328.50 | 327.12 |
| 130 | 13.033 | 12.979 | 331.04 | 329.67 |
| 131 | 13.133 | 13.079 | 333.59 | 332.22 |
| 132 | 13.234 | 13.180 | 336.14 | 334.76 |
| 133 | 13.334 | 13.280 | 338.68 | 337.31 |
| 134 | 13.434 | 13.380 | 341.23 | 339.86 |
| 135 | 13.534 | 13.480 | 343.77 | 342.40 |
| 136 | 13.635 | 13.581 | 346.32 | 344.95 |
| 137 | 13.735 | 13.681 | 348.87 | 347.50 |
| 138 | 13.835 | 13.781 | 351.41 | 350.04 |
| 139 | 13.935 | 13.881 | 353.96 | 352.59 |
| 140 | 14.036 | 13.982 | 356.51 | 355.14 |
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