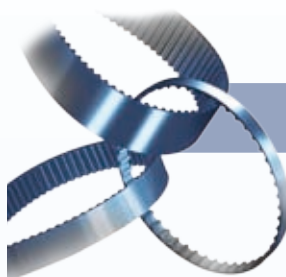




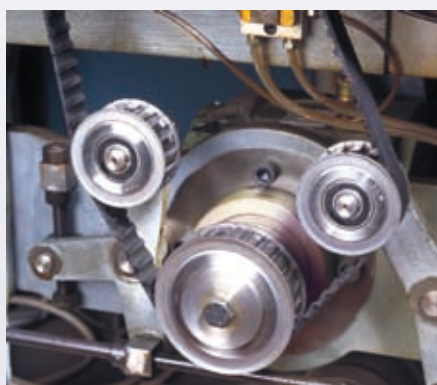
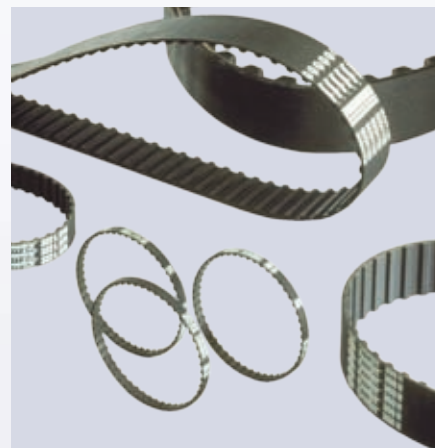
SYNCHRONOUS BELTS FOR A WIDE VARIETY OF APPLICATIONS



## **POWERGRIP® XL, L, H, XH & XXH**

*Classical synchronous belt*

Gates classical synchronous PowerGrip® belt offers a maintenance-free and economical alternative to conventional drives like chains and gears. Its application range extends from minimum drives (computer printers) to heavy-duty machinery (oil pumps, etc).



### **Identification**

Three part number on the back of the belt indicating belt length, pitch and width.

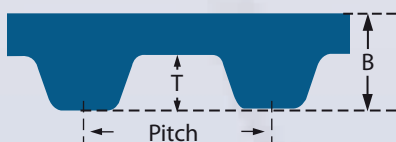
### **Construction**

- Trapezoidal tooth form.
- Precisely formed and accurately spaced elastomeric teeth ensure correct engagement with the pulley grooves.
- Fibreglass tensile cords.
- Nylon fabric cover protects the tooth surfaces.
- Available in standard pitches according to ISO 5296: MXL, XL, L, H, XH, XXH. For MXL sizes and description, see chapter on PowerGrip® MXL on pages 54-55.

### **Advantages**

- Power transmission of up to 150 kW and speeds of up to 10,000 rpm.
- Peripheral speed up to 80 m/s.
- Positive slip-proof engagement.
- Constant angular velocity.
- Efficiencies up to 99%.
- Low bearing load because of freedom of high tension.
- Maintenance-free continuity of operation.
- Wide range of load capacities and speed ratios.
- Compact design.
- Economical operation.

### **Sections and nominal dimensions**



|            | Pitch<br>inch | T<br>mm | B<br>mm |
|------------|---------------|---------|---------|
| <b>XL</b>  | 1/5           | 1.27    | 2.3     |
| <b>L</b>   | 3/8           | 1.91    | 3.5     |
| <b>H</b>   | 1/2           | 2.29    | 4.0     |
| <b>XH</b>  | 7/8           | 6.36    | 11.4    |
| <b>XXH</b> | 1.1/4         | 9.53    | 15.2    |

#### **NOTE**

For correct usage of the belt please request Gates' Synchronous Belt Drive Design Manual (E2/20099).

**XL**

Pitch: 1/5" (5.080 mm)

| Description   | Pitch length<br>mm | Number<br>of<br>teeth |
|---------------|--------------------|-----------------------|
| 46-XL         | 116.84             | 23                    |
| 50-XL         | 127.00             | 25                    |
| 58-XL         | 147.32             | 29                    |
| <b>60-XL</b>  | <b>152.40</b>      | <b>30</b>             |
| 66-XL         | 167.64             | 33                    |
| <b>70-XL</b>  | <b>177.80</b>      | <b>35</b>             |
| 76-XL         | 193.04             | 38                    |
| 78-XL         | 198.12             | 39                    |
| <b>80-XL</b>  | <b>203.20</b>      | <b>40</b>             |
| 84-XL         | 213.36             | 42                    |
| 86-XL         | 218.44             | 43                    |
| 88-XL         | 223.52             | 44                    |
| <b>90-XL</b>  | <b>228.60</b>      | <b>45</b>             |
| 92-XL         | 233.68             | 46                    |
| 94-XL         | 238.76             | 47                    |
| 96-XL         | 243.84             | 48                    |
| 98-XL         | 248.92             | 49                    |
| <b>100-XL</b> | <b>254.00</b>      | <b>50</b>             |
| 102-XL        | 259.08             | 51                    |
| 106-XL        | 269.24             | 53                    |
| 108-XL        | 274.32             | 54                    |
| <b>110-XL</b> | <b>279.40</b>      | <b>55</b>             |
| 112-XL        | 284.48             | 56                    |
| 114-XL        | 289.56             | 57                    |
| 116-XL        | 294.64             | 58                    |
| 118-XL        | 299.72             | 59                    |
| <b>120-XL</b> | <b>304.80</b>      | <b>60</b>             |
| 122-XL        | 309.88             | 61                    |
| 124-XL        | 314.96             | 62                    |
| 126-XL        | 320.04             | 63                    |
| <b>128-XL</b> | <b>325.12</b>      | <b>64</b>             |
| <b>130-XL</b> | <b>330.20</b>      | <b>65</b>             |
| 132-XL        | 335.28             | 66                    |
| 134-XL        | 340.36             | 67                    |
| <b>136-XL</b> | <b>345.44</b>      | <b>68</b>             |
| 138-XL        | 350.52             | 69                    |
| <b>140-XL</b> | <b>355.60</b>      | <b>70</b>             |
| 142-XL        | 360.68             | 71                    |
| 144-XL        | 365.76             | 72                    |
| 146-XL        | 370.84             | 73                    |
| 148-XL        | 375.92             | 74                    |
| <b>150-XL</b> | <b>381.00</b>      | <b>75</b>             |
| 154-XL        | 391.16             | 77                    |
| <b>156-XL</b> | <b>396.24</b>      | <b>78</b>             |
| 158-XL        | 401.32             | 79                    |
| <b>160-XL</b> | <b>406.40</b>      | <b>80</b>             |
| 164-XL        | 416.56             | 82                    |
| 166-XL        | 421.64             | 83                    |
| <b>170-XL</b> | <b>431.80</b>      | <b>85</b>             |
| 174-XL        | 441.96             | 87                    |
| 176-XL        | 447.04             | 88                    |
| 178-XL        | 452.12             | 89                    |
| <b>180-XL</b> | <b>457.20</b>      | <b>90</b>             |
| <b>182-XL</b> | <b>462.28</b>      | <b>91</b>             |
| 184-XL        | 467.36             | 92                    |
| 188-XL        | 477.52             | 94                    |
| <b>190-XL</b> | <b>482.60</b>      | <b>95</b>             |
| 192-XL        | 487.68             | 96                    |
| 194-XL        | 492.76             | 97                    |
| 196-XL        | 497.84             | 98                    |
| 198-XL        | 502.92             | 99                    |
| <b>200-XL</b> | <b>508.00</b>      | <b>100</b>            |
| 202-XL        | 513.08             | 101                   |
| 204-XL        | 518.16             | 102                   |
| 208-XL        | 528.32             | 104                   |
| <b>210-XL</b> | <b>533.40</b>      | <b>105</b>            |
| 212-XL        | 538.48             | 106                   |
| 214-XL        | 543.56             | 107                   |

| Description   | Pitch length<br>mm | Number<br>of<br>teeth |
|---------------|--------------------|-----------------------|
| <b>220-XL</b> | <b>558.80</b>      | <b>110</b>            |
| 228-XL        | 579.12             | 114                   |
| <b>230-XL</b> | <b>584.20</b>      | <b>115</b>            |
| 232-XL        | 589.28             | 116                   |
| 234-XL        | 594.36             | 117                   |
| <b>240-XL</b> | <b>609.60</b>      | <b>120</b>            |
| <b>250-XL</b> | <b>635.00</b>      | <b>125</b>            |
| <b>260-XL</b> | <b>660.40</b>      | <b>130</b>            |
| 264-XL        | 670.56             | 132                   |
| <b>270-XL</b> | <b>685.80</b>      | <b>135</b>            |
| 274-XL        | 695.96             | 137                   |
| <b>280-XL</b> | <b>711.20</b>      | <b>140</b>            |
| 284-XL        | 721.36             | 142                   |
| 286-XL        | 726.44             | 143                   |
| <b>290-XL</b> | <b>736.60</b>      | <b>145</b>            |
| 296-XL        | 751.84             | 148                   |
| <b>300-XL</b> | <b>762.00</b>      | <b>150</b>            |
| 306-XL        | 777.24             | 153                   |
| <b>310-XL</b> | <b>787.40</b>      | <b>155</b>            |
| <b>316-XL</b> | <b>802.64</b>      | <b>158</b>            |
| 322-XL        | 817.88             | 161                   |
| <b>330-XL</b> | <b>838.20</b>      | <b>165</b>            |
| <b>340-XL</b> | <b>863.60</b>      | <b>170</b>            |
| 344-XL        | 873.76             | 172                   |
| 348-XL        | 883.92             | 174                   |
| 350-XL        | 889.00             | 175                   |
| 352-XL        | 894.08             | 176                   |
| <b>362-XL</b> | <b>919.48</b>      | <b>181</b>            |
| 372-XL        | 944.88             | 186                   |
| 380-XL        | 965.20             | 190                   |
| 382-XL        | 970.28             | 191                   |
| 384-XL        | 975.36             | 192                   |
| <b>390-XL</b> | <b>990.60</b>      | <b>195</b>            |
| 392-XL        | 995.68             | 196                   |
| 404-XL        | 1026.16            | 202                   |
| 412-XL        | 1046.48            | 206                   |
| <b>424-XL</b> | <b>1076.96</b>     | <b>212</b>            |
| 432-XL        | 1097.28            | 216                   |
| <b>434-XL</b> | <b>1102.36</b>     | <b>217</b>            |
| 438-XL        | 1112.52            | 219                   |
| <b>450-XL</b> | <b>1143.00</b>     | <b>225</b>            |
| 460-XL        | 1168.40            | 230                   |
| 490-XL        | 1244.60            | 245                   |
| 506-XL        | 1285.24            | 253                   |
| 540-XL        | 1371.60            | 270                   |
| 554-XL        | 1407.16            | 277                   |
| 564-XL        | 1432.56            | 282                   |
| 580-XL        | 1473.20            | 290                   |
| 592-XL        | 1503.68            | 296                   |
| 672-XL        | 1706.88            | 336                   |
| 736-XL        | 1869.44            | 368                   |
| 770-XL        | 1955.80            | 385                   |

Available in widths of 6.4 mm (code 025), 7.9 mm (code 031) and 9.5 mm (code 037).

**L**

Pitch: 3/8" (9.525 mm)

| Description  | Pitch length<br>mm | Number<br>of<br>teeth |
|--------------|--------------------|-----------------------|
| <b>124-L</b> | <b>314.33</b>      | <b>33</b>             |
| 135-L        | 342.90             | 36                    |
| <b>150-L</b> | <b>381.00</b>      | <b>40</b>             |
| 165-L        | 419.10             | 44                    |
| <b>169-L</b> | <b>428.63</b>      | <b>45</b>             |
| 172-L        | 438.15             | 46                    |
| <b>187-L</b> | <b>476.25</b>      | <b>50</b>             |
| <b>202-L</b> | <b>514.35</b>      | <b>54</b>             |
| <b>210-L</b> | <b>533.40</b>      | <b>56</b>             |
| <b>225-L</b> | <b>571.50</b>      | <b>60</b>             |
| 236-L        | 600.08             | 63                    |
| <b>240-L</b> | <b>609.60</b>      | <b>64</b>             |
| 244-L        | 619.13             | 65                    |
| 251-L        | 638.18             | 67                    |
| <b>255-L</b> | <b>647.70</b>      | <b>68</b>             |
| <b>270-L</b> | <b>685.80</b>      | <b>72</b>             |
| <b>285-L</b> | <b>723.90</b>      | <b>76</b>             |
| <b>300-L</b> | <b>762.00</b>      | <b>80</b>             |
| <b>322-L</b> | <b>819.15</b>      | <b>86</b>             |
| <b>345-L</b> | <b>876.30</b>      | <b>92</b>             |
| <b>367-L</b> | <b>933.45</b>      | <b>98</b>             |
| <b>390-L</b> | <b>990.60</b>      | <b>104</b>            |
| <b>405-L</b> | <b>1028.70</b>     | <b>108</b>            |
| <b>420-L</b> | <b>1066.80</b>     | <b>112</b>            |
| <b>450-L</b> | <b>1143.00</b>     | <b>120</b>            |
| 461-L        | 1171.58            | 123                   |
| <b>480-L</b> | <b>1219.20</b>     | <b>128</b>            |
| <b>510-L</b> | <b>1295.40</b>     | <b>136</b>            |
| <b>540-L</b> | <b>1371.60</b>     | <b>144</b>            |
| <b>600-L</b> | <b>1524.00</b>     | <b>160</b>            |
| <b>630-L</b> | <b>1600.20</b>     | <b>168</b>            |
| <b>660-L</b> | <b>1676.40</b>     | <b>176</b>            |

Available in widths of 12.7 mm (code 050), 19.1 mm (code 075) and 25.4 mm (code 100).



| H                     |                    |                       |
|-----------------------|--------------------|-----------------------|
| Pitch: 1/2" (12.7 mm) |                    |                       |
| Description           | Pitch length<br>mm | Number<br>of<br>teeth |
| 240-H                 | 609.60             | 48                    |
| 255-H                 | 647.70             | 51                    |
| 270-H                 | 685.80             | 54                    |
| 300-H                 | 762.00             | 60                    |
| 310-H                 | 787.40             | 62                    |
| 330-H                 | 838.20             | 66                    |
| 360-H                 | 914.40             | 72                    |
| 370-H                 | 939.80             | 74                    |
| 375-H                 | 952.50             | 75                    |
| 390-H                 | 990.60             | 78                    |
| 420-H                 | 1066.80            | 84                    |
| 440-H                 | 1117.60            | 88                    |
| 450-H                 | 1143.00            | 90                    |
| 480-H                 | 1219.20            | 96                    |
| 485-H                 | 1231.90            | 97                    |
| 510-H                 | 1295.40            | 102                   |
| 520-H                 | 1320.80            | 104                   |
| 540-H                 | 1371.60            | 108                   |
| 570-H                 | 1447.80            | 114                   |
| 600-H                 | 1524.00            | 120                   |
| 615-H                 | 1562.10            | 123                   |
| 630-H                 | 1600.20            | 126                   |
| 660-H                 | 1676.40            | 132                   |
| 700-H                 | 1778.00            | 140                   |
| 750-H                 | 1905.00            | 150                   |
| 800-H                 | 2032.00            | 160                   |
| 850-H                 | 2159.00            | 170                   |
| 885-H                 | 2247.90            | 177                   |
| 900-H                 | 2286.00            | 180                   |
| 905-H                 | 2298.70            | 181                   |
| 1000-H                | 2540.00            | 200                   |
| 1100-H                | 2794.00            | 220                   |
| 1130-H                | 2870.20            | 226                   |
| 1250-H                | 3175.00            | 250                   |
| 1325-H                | 3365.50            | 265                   |
| 1400-H                | 3556.00            | 280                   |
| 1460-H                | 3708.40            | 292                   |
| 1700-H                | 4318.00            | 340                   |

Available in widths of 19.1 mm (code 075), 25.4 mm (code 100), 38.1 mm (code 150), 50.8 mm (code 200) and 76.2 mm (code 300).

| XH                      |                    |                       |
|-------------------------|--------------------|-----------------------|
| Pitch: 7/8" (22.225 mm) |                    |                       |
| Description             | Pitch length<br>mm | Number<br>of<br>teeth |
| 507-XH                  | 1289.05            | 58                    |
| 560-XH                  | 1422.40            | 64                    |
| 630-XH                  | 1600.20            | 72                    |
| 700-XH                  | 1778.00            | 80                    |
| 770-XH                  | 1955.80            | 88                    |
| 787-XH                  | 2000.25            | 90                    |
| 831-XH                  | 2111.38            | 95                    |
| 840-XH                  | 2133.60            | 96                    |
| 980-XH                  | 2489.20            | 112                   |
| 1120-XH                 | 2844.80            | 128                   |
| 1260-XH                 | 3200.40            | 144                   |
| 1400-XH                 | 3556.00            | 160                   |
| 1540-XH                 | 3911.60            | 176                   |
| 1680-XH                 | 4267.20            | 192                   |
| 1750-XH                 | 4445.00            | 200                   |

Available in widths of 50.8 mm (code 200), 76.2 mm (code 300), 101.6 mm (code 400) and 127 mm (code 500).

| XXH                      |                    |                       |
|--------------------------|--------------------|-----------------------|
| Pitch: 1.1/4" (31.75 mm) |                    |                       |
| Description              | Pitch length<br>mm | Number<br>of<br>teeth |
| 700-XXH                  | 1778.00            | 56                    |
| 800-XXH                  | 2032.00            | 64                    |
| 900-XXH                  | 2286.00            | 72                    |
| 1000-XXH                 | 2540.00            | 80                    |
| 1200-XXH                 | 3048.00            | 96                    |
| 1400-XXH                 | 3556.00            | 112                   |
| 1600-XXH                 | 4064.00            | 128                   |
| 1800-XXH                 | 4572.00            | 144                   |

Available in widths of 50.8 mm (code 200), 76.2 mm (code 300), 101.6 mm (code 400) and 127 mm (code 500).

**PowerGrip® ordering code is composed as follows:**

**507-XH-200**

**507** - Pitch length in 1/10 inch  
**XH** - Pitch 7/8" (22.225 mm)  
**200** - Belt width 2.0" (50.8 mm)

Dimensions in bold are available from stock.