

Worms & Wheels

Materials

16 DP, 0.1963" Pitch

STD : Phosphor Bronze PB2
and Steel 214M15 / 655M13



**LEAD ANGLE
RIGHT HAND
STANDARD**

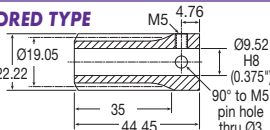
DISCOUNTS

| Quantity | List Price |
|-----------|------------|
| 1 - 5 | |
| 6 - 19 | - 12% |
| 20 - 39 | - 25% |
| 40 - 59 | - 33% |
| 60 - 99 | - 37% |
| 100 - 200 | - 42% |

20° Pressure Angle

Worm STEEL 214 M15 - En202

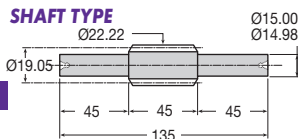
BORED TYPE



214M15 - EN202 UNHARDENED

| PART NUMBER | PRICE EACH 1-5 | No. of STARTS | LEAD ANGLE | 214M15 - EN202 HARDENED | PRICE EACH 1-5 |
|-------------|----------------|---------------|------------|----------------------------|----------------|
| W16-1 | £20.92 | 1 | 4°45' | WH16-1 | £29.75 |
| W16-2 | £24.24 | 2 | 9°27' | WH16-2 | £34.52 |
| W16-3 | £25.52 | 3 | 14°02' | WH16-3 | £36.26 |
| W16-4 | £27.64 | 4 | 18°26' | WH16-4 | £39.28 |

SHAFT TYPE

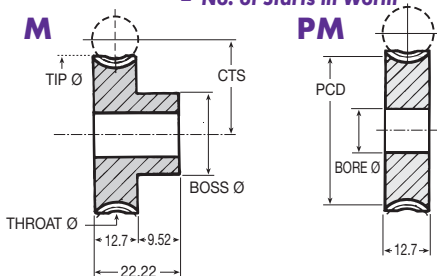


214M15 - EN202 UNHARDENED

| PART NUMBER | PRICE EACH 1-5 | No. of STARTS | LEAD ANGLE | 655M13 - EN36 HARDENED | PRICE EACH 1-5 |
|-------------|----------------|---------------|------------|---------------------------|----------------|
| SW16-1 | £39.22 | 1 | 4°45' | SWH16-1 | £55.76 |
| SW16-2 | £41.30 | 2 | 9°27' | SWH16-2 | £58.65 |
| SW16-3 | £42.54 | 3 | 14°02' | SWH16-3 | £60.45 |
| SW16-4 | £43.04 | 4 | 18°26' | SWH16-4 | £61.19 |

Wheel PHOSPHOR BRONZE - PB2

**REDUCTION RATIO = No. of Teeth in Wheel
= No. of Starts in Worm**



**Double
Bossed
Wheels
Available @
Price x 1.4**

15.62



Unit 14, Foxwood Ind. Park, Foxwood Rd. Chesterfield, Derbyshire S41 9RN
Telephone +44(0)1246 268080 Fax +44(0)1246 260003

LEAD ANGLE RIGHT HAND STANDARD

| TORQUE CHECK variations at back | 50 TEETH x 1000 R.P.M. INPUT | |
|------------------------------------|------------------------------|----------------|
| | WITH STD WORM | WITH HARD WORM |
| TORQUE Nm | 16.80 | 30.00 |
| K.W. | 0.035 | 0.063 |

Number of Teeth 12 - 115*See Technical Section**Note: When ordering Wheel, the number of starts on the mating Worm must be specified.*

| PART NUMBER | TEETH | PCD (ins) | CTS (ins) | Throat Ø (ins) | Tip Ø (ins) | Boss Ø (ins) | Bore Ø (ins) | PRICE EACH 1 - 5 | |
|-------------|-------|-----------|-----------|----------------|-------------|--------------|--------------|------------------|---------|
| | | | | | | | | M | PM |
| M16-12 | 12 | 0.750 | 0.750 | 0.875 | 0.938 | 0.562 | 0.375 | £27.13 | £15.65 |
| M16-14 | 14 | 0.875 | 0.813 | 1.000 | 1.063 | 0.687 | 0.375 | £28.78 | £17.27 |
| M16-15 | 15 | 0.938 | 0.844 | 1.063 | 1.125 | 0.750 | 0.375 | £29.52 | £18.24 |
| M16-16 | 16 | 1.000 | 0.875 | 1.125 | 1.188 | 0.750 | 0.375 | £30.48 | £19.27 |
| M16-18 | 18 | 1.125 | 0.938 | 1.250 | 1.313 | 0.750 | 0.375 | £32.27 | £20.42 |
| M16-20 | 20 | 1.250 | 1.000 | 1.375 | 1.438 | 1.000 | 0.500 | £34.04 | £21.61 |
| M16-22 | 22 | 1.375 | 1.063 | 1.500 | 1.563 | 1.000 | 0.500 | £35.83 | £22.79 |
| M16-24 | 24 | 1.500 | 1.125 | 1.625 | 1.688 | 1.000 | 0.500 | £38.14 | £24.19 |
| M16-25 | 25 | 1.563 | 1.156 | 1.688 | 1.750 | 1.000 | 0.500 | £40.39 | £25.60 |
| M16-28 | 28 | 1.750 | 1.250 | 1.875 | 1.938 | 1.000 | 0.500 | £42.64 | £27.04 |
| M16-30 | 30 | 1.875 | 1.313 | 2.000 | 2.063 | 1.000 | 0.500 | £44.81 | £28.60 |
| M16-32 | 32 | 2.000 | 1.375 | 2.125 | 2.188 | 1.000 | 0.500 | £47.70 | £30.32 |
| M16-34 | 34 | 2.125 | 1.438 | 2.250 | 2.313 | 1.000 | 0.500 | £49.16 | £31.21 |
| M16-35 | 35 | 2.188 | 1.469 | 2.313 | 2.375 | 1.000 | 0.500 | £50.58 | £32.10 |
| M16-38 | 38 | 2.375 | 1.563 | 2.500 | 2.563 | 1.250 | 0.625 | £54.07 | £36.69 |
| M16-40 | 40 | 2.500 | 1.625 | 2.625 | 2.688 | 1.250 | 0.625 | £59.42 | £40.51 |
| M16-42 | 42 | 2.625 | 1.688 | 2.750 | 2.813 | 1.250 | 0.625 | £65.73 | £43.77 |
| M16-44 | 44 | 2.750 | 1.750 | 2.875 | 2.938 | 1.250 | 0.625 | £71.43 | £47.59 |
| M16-45 | 45 | 2.813 | 1.781 | 2.938 | 3.000 | 1.250 | 0.625 | £74.33 | £49.51 |
| M16-48 | 48 | 3.000 | 1.875 | 3.125 | 3.188 | 1.250 | 0.625 | £83.49 | £55.55 |
| M16-50 | 50 | 3.125 | 1.938 | 3.250 | 3.313 | 1.250 | 0.625 | £89.84 | £59.85 |
| M16-52 | 52 | 3.250 | 2.000 | 3.375 | 3.438 | 1.250 | 0.625 | £96.47 | £64.27 |
| M16-54 | 54 | 3.375 | 2.063 | 3.500 | 3.563 | 1.250 | 0.625 | £103.32 | £68.84 |
| M16-55 | 55 | 3.438 | 2.094 | 3.563 | 3.625 | 1.250 | 0.625 | £106.86 | £71.19 |
| M16-58 | 58 | 3.625 | 2.188 | 3.750 | 3.813 | 1.250 | 0.625 | £117.68 | £78.47 |
| M16-60 | 60 | 3.750 | 2.250 | 3.875 | 3.938 | 1.250 | 0.625 | £125.31 | £82.58 |
| M16-62 | 62 | 3.875 | 2.313 | 4.000 | 4.063 | 1.250 | 0.625 | £133.03 | £88.71 |
| M16-64 | 64 | 4.000 | 2.375 | 4.125 | 4.188 | 1.250 | 0.625 | £142.73 | £94.02 |
| M16-65 | 65 | 4.063 | 2.406 | 4.188 | 4.250 | 1.250 | 0.625 | £145.24 | £96.78 |
| M16-68 | 68 | 4.250 | 2.500 | 4.375 | 4.438 | 1.250 | 0.625 | £157.91 | £105.16 |
| M16-70 | 70 | 4.375 | 2.563 | 4.500 | 4.563 | 1.250 | 0.625 | £166.63 | £111.04 |
| M16-72 | 72 | 4.500 | 2.625 | 4.625 | 4.688 | 1.250 | 0.625 | £175.59 | £117.00 |
| M16-74 | 74 | 4.625 | 2.688 | 4.750 | 4.813 | 2.000 | 0.625 | £184.79 | £123.14 |
| M16-75 | 75 | 4.688 | 2.719 | 4.813 | 4.875 | 2.000 | 0.625 | £189.44 | £126.29 |
| M16-78 | 78 | 4.875 | 2.813 | 5.000 | 5.063 | 2.000 | 0.625 | £203.91 | £135.92 |
| M16-80 | 80 | 5.000 | 2.875 | 5.125 | 5.188 | 2.000 | 0.625 | £213.80 | £142.53 |
| M16-82 | 82 | 5.125 | 2.938 | 5.250 | 5.313 | 2.000 | 0.625 | £223.93 | £149.27 |
| M16-85 | 85 | 5.313 | 3.031 | 5.438 | 5.500 | 2.000 | 0.625 | £239.54 | £159.71 |
| M16-88 | 88 | 5.500 | 3.125 | 5.625 | 5.688 | 2.000 | 0.625 | £255.81 | £170.48 |
| M16-90 | 90 | 5.625 | 3.188 | 5.750 | 5.813 | 2.000 | 0.625 | £266.73 | £177.91 |
| M16-92 | 92 | 5.750 | 3.250 | 5.875 | 5.938 | 2.000 | 0.625 | £278.19 | £185.51 |
| M16-95 | 95 | 5.938 | 3.344 | 6.063 | 6.125 | 2.000 | 0.625 | £295.61 | £197.04 |
| M16-98 | 98 | 6.125 | 3.438 | 6.250 | 6.313 | 2.000 | 0.625 | £313.56 | £209.01 |
| M16-100 | 100 | 6.250 | 3.500 | 6.375 | 6.438 | 2.000 | 0.625 | £325.80 | £216.39 |
| M16-115 | 115 | 7.187 | 3.968 | 7.312 | 7.375 | 2.000 | 0.750 | £433.36 | £368.34 |



Worms & Wheels

16 DP, 0.1963" Pitch

Materials

STD : Delrin
Machined Parts



20° Pressure Angle

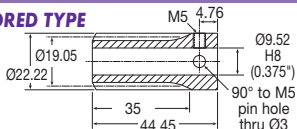
LEAD ANGLE
RIGHT HAND
STANDARD

DISCOUNTS

| Quantity | List Price |
|-------------|------------|
| 1 - 5 | List Price |
| 6 - 29 | - 22% |
| 30 - 99 | - 44% |
| 100 - 399 | - 47% |
| 400 - 999 | - 50% |
| 1000 - 5000 | - 53% |

Worm DELRIN - Machined Parts

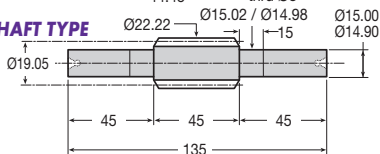
BORED TYPE



PLASTIC

| PART NUMBER | No. of STARTS | LEAD ANGLE | PRICE EACH 1-5 |
|-------------|---------------|------------|----------------|
| ZW16-1 | 1 | 4°45' | £14.76 |
| ZW16-2 | 2 | 9°27' | £17.06 |
| ZW16-3 | 3 | 14°02' | £17.94 |
| ZW16-4 | 4 | 18°26' | £19.42 |

SHAFT TYPE

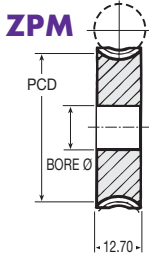
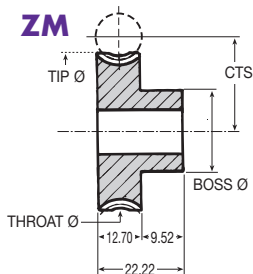


PLASTIC

| PART NUMBER | No. of STARTS | LEAD ANGLE | PRICE EACH 1-5 |
|-------------|---------------|------------|----------------|
| ZSW16-1 | 1 | 4°45' | £27.60 |
| ZSW16-2 | 2 | 9°27' | £29.10 |
| ZSW16-3 | 3 | 14°02' | £29.93 |
| ZSW16-4 | 4 | 18°26' | £30.34 |

Wheel DELRIN - Machined Parts

REDUCTION RATIO = $\frac{\text{No. of Teeth in Wheel}}{\text{No. of Starts in Worm}}$



Double
Bossed
Wheels
Available @
Price x 1.4

15.64



Unit 14, Foxwood Ind. Park, Foxwood Rd. Chesterfield, Derbyshire S41 9RN
Telephone +44(0)1246 268080 Fax +44(0)1246 260003

LEAD ANGLE RIGHT HAND STANDARD

| | | |
|------------------------------------|------------------------------|-----------------|
| TORQUE CHECK variations at back | 50 TEETH x 1000 R.P.M. INPUT | |
| | WITH PLASTIC WORM | WITH STEEL WORM |
| TORQUE Nm | 4.10 | 10.05 |
| K.W. | 0.008 | 0.021 |

Number of Teeth **12 - 115**
See **Technical Section**

Note: When ordering Wheel, the number of starts on the mating Worm must be specified.

| PART NUMBER | TEETH | PCD (ins) | CTS (ins) | Throat Ø (ins) | Tip Ø (ins) | Boss Ø (ins) | Bore Ø (ins) | PRICE EACH 1 - 5 | ZM | ZPM |
|-------------|-------|-----------|-----------|----------------|-------------|--------------|--------------|------------------|---------|-----|
| ZM16-12 | 12 | 0.750 | 0.750 | 0.875 | 0.938 | 0.562 | 0.375 | £13.64 | £10.46 | |
| ZM16-14 | 14 | 0.875 | 0.813 | 1.000 | 1.063 | 0.687 | 0.375 | £14.46 | £11.10 | |
| ZM16-15 | 15 | 0.938 | 0.844 | 1.063 | 1.125 | 0.750 | 0.375 | £14.78 | £11.34 | |
| ZM16-16 | 16 | 1.000 | 0.875 | 1.125 | 1.188 | 0.750 | 0.375 | £15.36 | £11.73 | |
| ZM16-18 | 18 | 1.125 | 0.938 | 1.250 | 1.313 | 0.750 | 0.375 | £16.22 | £12.42 | |
| ZM16-20 | 20 | 1.250 | 1.000 | 1.375 | 1.438 | 1.000 | 0.500 | £18.84 | £14.46 | |
| ZM16-22 | 22 | 1.375 | 1.063 | 1.500 | 1.563 | 1.000 | 0.500 | £19.81 | £15.20 | |
| ZM16-24 | 24 | 1.500 | 1.125 | 1.625 | 1.688 | 1.000 | 0.500 | £21.10 | £16.18 | |
| ZM16-25 | 25 | 1.563 | 1.156 | 1.688 | 1.750 | 1.000 | 0.500 | £22.38 | £17.13 | |
| ZM16-28 | 28 | 1.750 | 1.250 | 1.875 | 1.938 | 1.000 | 0.500 | £26.85 | £20.57 | |
| ZM16-30 | 30 | 1.875 | 1.313 | 2.000 | 2.063 | 1.000 | 0.500 | £28.24 | £21.62 | |
| ZM16-32 | 32 | 2.000 | 1.375 | 2.125 | 2.188 | 1.000 | 0.500 | £30.04 | £23.07 | |
| ZM16-34 | 34 | 2.125 | 1.438 | 2.250 | 2.313 | 1.000 | 0.500 | £30.88 | £23.80 | |
| ZM16-35 | 35 | 2.188 | 1.469 | 2.313 | 2.375 | 1.000 | 0.500 | £31.86 | £24.40 | |
| ZM16-38 | 38 | 2.375 | 1.563 | 2.500 | 2.563 | 1.250 | 0.625 | £34.03 | £26.11 | |
| ZM16-40 | 40 | 2.500 | 1.625 | 2.625 | 2.688 | 1.250 | 0.625 | £37.44 | £28.69 | |
| ZM16-42 | 42 | 2.625 | 1.688 | 2.750 | 2.813 | 1.250 | 0.625 | £41.39 | £31.74 | |
| ZM16-44 | 44 | 2.750 | 1.750 | 2.875 | 2.938 | 1.250 | 0.625 | £45.01 | £34.53 | |
| ZM16-45 | 45 | 2.813 | 1.781 | 2.938 | 3.000 | 1.250 | 0.625 | £46.84 | £35.96 | |
| ZM16-48 | 48 | 3.000 | 1.875 | 3.125 | 3.188 | 1.250 | 0.625 | £52.64 | £40.32 | |
| ZM16-50 | 50 | 3.125 | 1.938 | 3.250 | 3.313 | 1.250 | 0.625 | £56.60 | £43.43 | |
| ZM16-52 | 52 | 3.250 | 2.000 | 3.375 | 3.438 | 1.250 | 0.625 | £60.81 | £46.66 | |
| ZM16-54 | 54 | 3.375 | 2.063 | 3.500 | 3.563 | 1.250 | 0.625 | £65.09 | £49.96 | |
| ZM16-55 | 55 | 3.438 | 2.094 | 3.563 | 3.625 | 1.250 | 0.625 | £67.33 | £51.64 | |
| ZM16-58 | 58 | 3.625 | 2.188 | 3.750 | 3.813 | 1.250 | 0.625 | £74.22 | £56.93 | |
| ZM16-60 | 60 | 3.750 | 2.250 | 3.875 | 3.938 | 1.250 | 0.625 | £78.94 | £60.59 | |
| ZM16-62 | 62 | 3.875 | 2.313 | 4.000 | 4.063 | 1.250 | 0.625 | £83.86 | £64.34 | |
| ZM16-64 | 64 | 4.000 | 2.375 | 4.125 | 4.188 | 1.250 | 0.625 | £90.00 | £69.01 | |
| ZM16-65 | 65 | 4.063 | 2.406 | 4.188 | 4.250 | 1.250 | 0.625 | £91.57 | £70.23 | |
| ZM16-68 | 68 | 4.250 | 2.500 | 4.375 | 4.438 | 1.250 | 0.625 | £99.54 | £76.37 | |
| ZM16-70 | 70 | 4.375 | 2.563 | 4.500 | 4.563 | 1.250 | 0.625 | £105.04 | £80.59 | |
| ZM16-72 | 72 | 4.500 | 2.625 | 4.625 | 4.688 | 1.250 | 0.625 | £110.70 | £84.95 | |
| ZM16-74 | 74 | 4.625 | 2.688 | 4.750 | 4.813 | 2.000 | 0.625 | £116.48 | £89.37 | |
| ZM16-75 | 75 | 4.688 | 2.719 | 4.813 | 4.875 | 2.000 | 0.625 | £119.48 | £91.66 | |
| ZM16-78 | 78 | 4.875 | 2.813 | 5.000 | 5.063 | 2.000 | 0.625 | £128.53 | £98.64 | |
| ZM16-80 | 80 | 5.000 | 2.875 | 5.125 | 5.188 | 2.000 | 0.625 | £134.79 | £103.41 | |
| ZM16-82 | 82 | 5.125 | 2.938 | 5.250 | 5.313 | 2.000 | 0.625 | £141.16 | £108.34 | |
| ZM16-85 | 85 | 5.313 | 3.031 | 5.438 | 5.500 | 2.000 | 0.625 | £150.98 | £115.86 | |
| ZM16-88 | 88 | 5.500 | 3.125 | 5.625 | 5.688 | 2.000 | 0.625 | £161.24 | £123.74 | |
| ZM16-90 | 90 | 5.625 | 3.188 | 5.750 | 5.813 | 2.000 | 0.625 | £168.18 | £129.04 | |
| ZM16-92 | 92 | 5.750 | 3.250 | 5.875 | 5.938 | 2.000 | 0.625 | £175.42 | £134.58 | |
| ZM16-95 | 95 | 5.938 | 3.344 | 6.063 | 6.125 | 2.000 | 0.625 | £186.41 | £143.00 | |
| ZM16-98 | 98 | 6.125 | 3.438 | 6.250 | 6.313 | 2.000 | 0.625 | £197.70 | £151.70 | |
| ZM16-100 | 100 | 6.250 | 3.500 | 6.375 | 6.438 | 2.000 | 0.625 | £205.46 | £157.61 | |
| ZM16-115 | 115 | 7.187 | 3.968 | 7.312 | 7.375 | 2.000 | 0.750 | £369.20 | £232.17 | |

