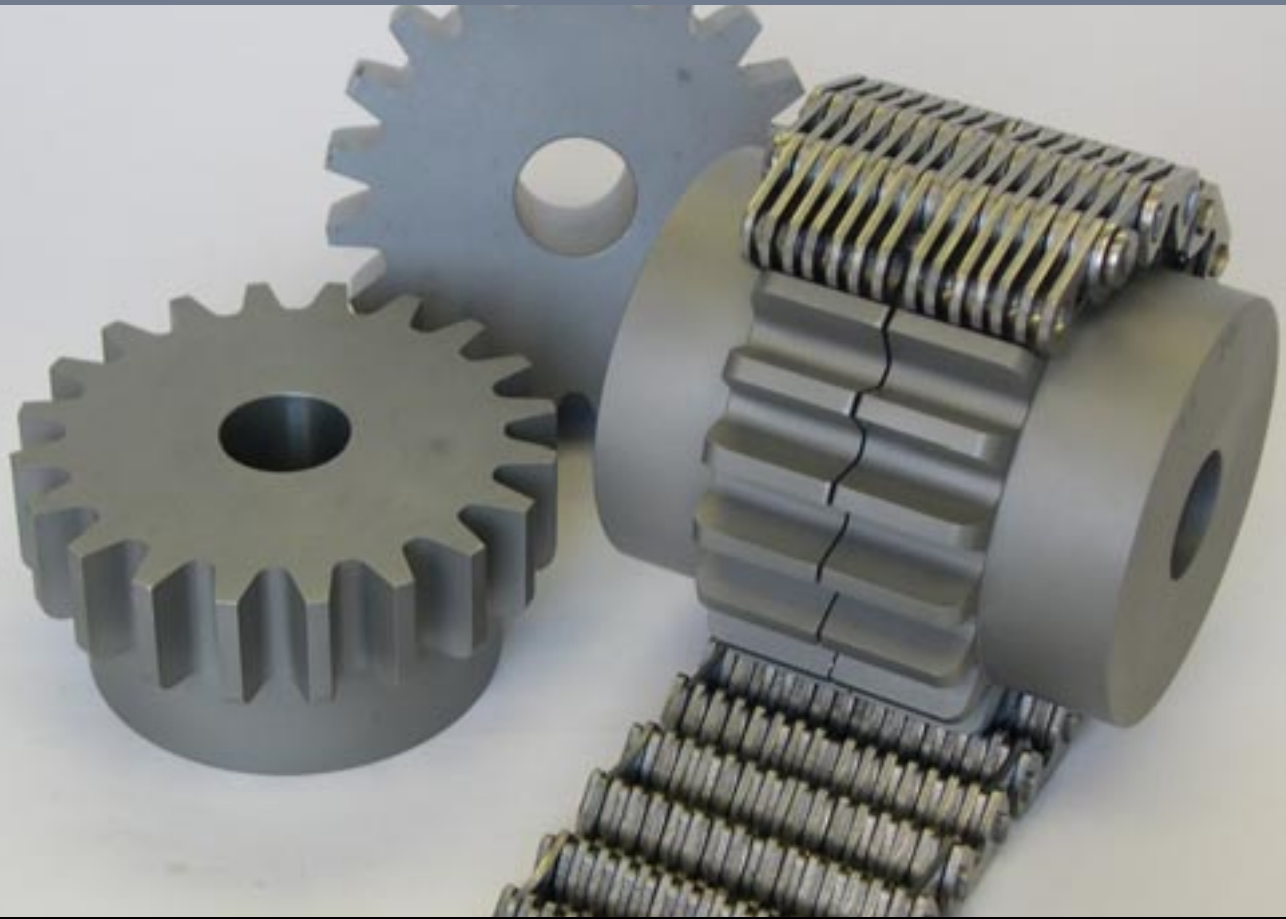


Silent Chain Couplings



FLEXIBLE, STRONG, AND EASY TO INSTALL



The Stronger Chain Coupling

Ramsey Silent Chain Couplings combine the simplicity and ease of installation of a chain type coupling with the strength and ruggedness of Ramsey Silent Chain. The result is a family of chain couplings that offers significantly higher torque capacities than similarly sized roller chain couplings. In fact, all Ramsey Couplings have a torque capacity that exceeds that of the largest mild steel shaft on which they can be installed.

TOLERANT OF SHAFT MISALIGNMENT

Ramsey Couplings easily accommodate shaft angular misalignment of 1 degree and parallel misalignment equal to 2% of the chain pitch.

STEEL CONSTRUCTION

All couplings consist of two fully machined sprockets with hardened teeth, enclosed by a Ramsey chain. Sprockets and chain are typically made from alloy carbon steel. Some sizes are also available in 316 stainless steel.

CHOICE OF STYLES AND LOAD CAPACITY

Ramsey Couplings are available in two styles: straight and diagonal. Straight style couplings are machined so the sprocket faces are perpendicular to the shaft axes. Diagonal couplings are machined so the faces are at an angle to the shaft axes. Diagonal couplings have a somewhat higher load capacity due to the manner in which driving loads are distributed within the coupling chain. They can also be easier to install on shafts, especially where space is limited.



OPTIONAL COUPLING COVERS

Covers help to protect couplings from environmental contamination and corrosion. Standard covers consist of machined aluminum castings with grease seals at each end. Stainless steel covers are also available.



COVER DIMENSIONS

| COUPLING NO. | OVERALL LENGTH | APPROX. DIAMETER | APPROX. WEIGHT, LB |
|--------------|--------------------------------|--------------------------------|--------------------|
| 3A or 3AD | 2 ⁵ / ₈ | 3 ³ / ₁₆ | 1.0 |
| 4A or 4AD | 3 ¹ / ₈ | 4 | 1.2 |
| 4B or 4BD | 3 ¹ / ₈ | 4 ⁵ / ₈ | 1.25 |
| 4C or 4CD | 3 ¹ / ₈ | 5 ¹ / ₄ | 2.0 |
| 5BD | 3 ⁵ / ₈ | 5 ³ / ₄ | 3.0 |
| 6B or 6BD | 4 ⁵ / ₁₆ | 6 ⁵ / ₈ | 4.2 |
| 6C or 6CD | 4 ⁵ / ₁₆ | 7 ⁵ / ₈ | 5.0 |
| 8B or 8BD | 5 ⁷ / ₈ | 8 ¹ / ₄ | 6.5 |
| 8C or 8CD | 5 ⁷ / ₈ | 9 ¹ / ₂ | 9.0 |
| 12A or 12AD | 8 ¹ / ₈ | 10 ¹ / ₄ | 15.0 |
| 12B or 12BD | 8 ¹ / ₈ | 12 ¹ / ₈ | 18.0 |

Note: Coupling numbers that end with "D", for example, 4BD are diagonal style couplings.

COUPLING SIZING AND SELECTION

When sizing a coupling, multiply the power to be transmitted by an appropriate service factor to obtain the design power. Referring to the power capacity tables, find the expected rotational speed (RPM) of the coupling then choose a coupling size with a rating that is equal to, or higher than, the design power.

SERVICE FACTORS

| OPERATING CHARACTERISTICS | SERVICE | ELECTRIC MOTOR | GAS OR DIESEL ENGINE |
|---|------------|----------------|----------------------|
| Uniform loading with starting load only slightly higher than running load | 10 hrs/day | 1 | 1.2 |
| | 24 hrs/day | 1.3 | 1.5 |
| Variable running load with frequent starting and high starting load | 10 hrs/day | 1.4 | 1.6 |
| | 24 hrs/day | 1.7 | 1.9 |
| Very high starting load with reversing or shock loads | 10 hrs/day | 1.6 | 1.9 |
| | 24 hrs/day | 2 | 2.5 |

POWER RATINGS (HORSEPOWER)

STRAIGHT COUPLINGS

| COUPLING NUMBER | REVOLUTIONS PER MINUTE | | | | | | | | | | | | |
|--------------------|------------------------|-----|-----|-----|-----|---------------------|-----|-----|------|------|------|------|------|
| | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 900 | 1200 | 1500 | 1800 | 2400 | 3600 |
| 3AA | 1.6 | 2.2 | 2.8 | 3.2 | 3.6 | 4.0 | 4.2 | 4.8 | 5.5 | 6.2 | 6.6 | 8.0 | 9.2 |
| 3A | 2.4 | 3.4 | 4.2 | 4.8 | 5.4 | 5.9 | 6.4 | 7.2 | 8.3 | 9.3 | 10 | 12 | 14 |
| 4A | 6.0 | 8.5 | 11 | 12 | 13 | 14 | 16 | 18 | 21 | 23 | 25 | 29 | 36 |
| 4B | 9.5 | 14 | 17 | 19 | 21 | 23 | 25 | 29 | 33 | 37 | 40 | 46 | 57 |
| 4C | 13 | 18 | 22 | 26 | 29 | 32 | 34 | 39 | 45 | 50 | 55 | 64 | 78 |
| 6B | 30 | 42 | 52 | 60 | 67 | 74 | 80 | 90 | 105 | 115 | 125 | 145 | - |
| 6C | 44 | 62 | 76 | 88 | 98 | 110 | 115 | 130 | 150 | 170 | 185 | 215 | - |
| 8B | 70 | 100 | 120 | 140 | 155 | 170 | 185 | 210 | 240 | 270 | 300 | - | - |
| 8C | 100 | 140 | 175 | 200 | 225 | 250 | 265 | 300 | 350 | 390 | 430 | - | - |
| 12A | 150 | 210 | 260 | 300 | 335 | 370 | 400 | 450 | 520 | 580 | - | - | - |
| 12B | 240 | 335 | 410 | 475 | 530 | 580 | 630 | 715 | 825 | - | - | - | - |
| TYPE I LUBRICATION | | | | | | TYPE II LUBRICATION | | | | | | | |

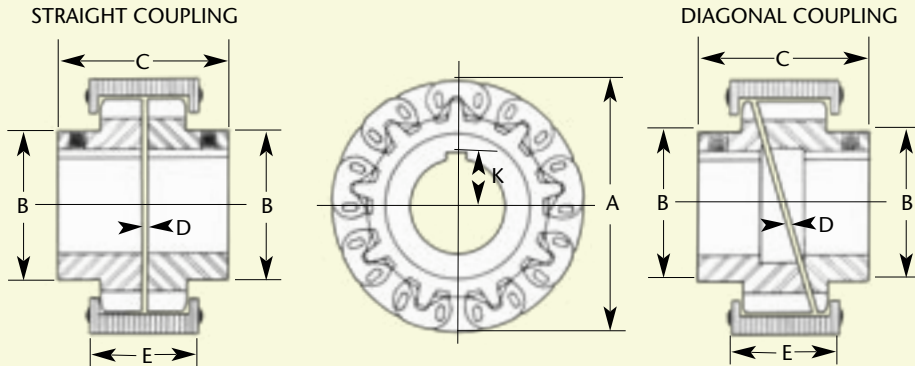
DIAGONAL COUPLINGS

| COUPLING NUMBER | REVOLUTIONS PER MINUTE | | | | | | | | | | | | |
|--------------------|------------------------|-----|-----|-----|-----|---------------------|-----|-----|------|------|------|------|------|
| | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 900 | 1200 | 1500 | 1800 | 2400 | 3600 |
| 3AD | 2.5 | 3.5 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7.5 | 8.5 | 9.5 | 11 | 13 | 15 |
| 4AD | 6 | 9 | 11 | 13 | 14 | 15 | 17 | 19 | 22 | 24 | 26 | 30 | 38 |
| 4BD | 10 | 14 | 17 | 20 | 22 | 24 | 26 | 30 | 34 | 39 | 42 | 48 | 59 |
| 4CD | 14 | 19 | 23 | 27 | 30 | 33 | 35 | 41 | 47 | 52 | 57 | 67 | 81 |
| 5BD | 19 | 26 | 32 | 37 | 42 | 46 | 50 | 57 | 65 | 73 | 79 | 92 | 115 |
| 6BD | 31 | 44 | 54 | 62 | 70 | 77 | 83 | 95 | 110 | 120 | 130 | 150 | - |
| 6CD | 46 | 65 | 79 | 92 | 100 | 115 | 120 | 135 | 155 | 175 | 195 | 225 | - |
| 8BD | 75 | 105 | 125 | 145 | 160 | 175 | 190 | 220 | 250 | 280 | 310 | 350 | - |
| 8CD | 105 | 145 | 180 | 210 | 235 | 260 | 275 | 310 | 360 | 405 | 445 | - | - |
| 12AD | 155 | 220 | 270 | 310 | 350 | 380 | 410 | 465 | 540 | 600 | - | - | - |
| 12BD | 250 | 350 | 430 | 500 | 560 | 610 | 660 | 750 | 870 | 970 | - | - | - |
| TYPE I LUBRICATION | | | | | | TYPE II LUBRICATION | | | | | | | |

For maximum service life, lubricate well and use a cover when operating to the right of the line.

TYPES OF LUBRICATION: TYPE I - MANUAL, BRUSH OR OIL CUP TYPE II - OIL BATH OR DISK

Specifications



DIMENSIONS

| COUPLING NUMBER | PITCH & NO. TEETH | *MAX. BORE | MIN. PLAIN BORE | A | B | C STD TYPE | C TYPE D | D | E | K | APPROX. WEIGHT, LBS |
|-----------------|-------------------|------------|-----------------|---------|--------|------------|----------|------|-------|--------|---------------------|
| 3AA | 3/8-16T | 7/8 | 7/16 | 2 1/4 | 1 1/16 | 2 3/16 | - | 1/6 | 1 | 5/16 | 1 1/2 |
| 3A or 3AD | 3/8-16T | 7/8 | 1/2 | 2 1/4 | 1 1/16 | 2 11/16 | 2 11/16 | 1/6 | 1 1/2 | 5/16 | 1 1/2 |
| 4A or 4AD | 1/2-16T | 1 1/4 | 3/4 | 3 1/16 | 1 3/8 | 3 3/16 | 3 11/16 | 1/8 | 2 | 3/4 | 4 |
| 4B or 4BD | 1/2-20T | 1 3/4 | 3/4 | 3 11/16 | 2 1/2 | 3 3/16 | 3 11/16 | 1/8 | 2 | 1 1/16 | 6 1/4 |
| 4C or 4CD | 1/2-24T | 2 1/4 | 1 | 4 3/8 | 3 3/8 | 3 3/16 | 3 11/16 | 1/8 | 2 | 1 3/8 | 10 |
| 5BD | 5/8-20T | 2 1/4 | 1 | 4 3/8 | 3 3/8 | - | 3 3/4 | 1/8 | 2 | 1 3/8 | 10 |
| 6B or 6BD | 3/4-20T | 2 3/8 | 1 1/4 | 5 5/16 | 3 3/4 | 4 1/2 | 4 15/16 | 1/8 | 3 | 1 5/8 | 20 |
| 6C or 6CD | 3/4-24T | 3 5/16 | 1 1/4 | 6 1/2 | 4 3/4 | 4 1/2 | 4 15/16 | 1/8 | 3 | 2 1/8 | 30 |
| 8B or 8BD | 1-20T | 3 3/8 | 1 1/2 | 7 3/8 | 5 | 5 3/8 | 5 3/8 | 3/16 | 4 | 2 3/32 | 40 |
| 8C or 8CD | 1-24T | 4 1/2 | 1 1/2 | 8 11/16 | 6 1/4 | 5 3/8 | 5 3/8 | 3/16 | 4 | 2 3/4 | 60 |
| 12A or 12AD | 1 1/2-16T | 3 3/4 | 1 3/4 | 9 1/8 | 5 5/8 | 8 1/8 | 8 1/8 | 1/4 | 6 | 2 5/16 | 95 |
| 12B or 12BD | 1 1/2-20T | 5 1/4 | 2 | 11 | 7 1/2 | 8 3/8 | 8 3/8 | 1/4 | 6 | 3 1/4 | 105 |

* The maximum bores can be exceeded slightly but the keyway depth cannot exceed "K" dimension.

Note: Coupling numbers that end with "D", for example 4BD, are diagonal style couplings.

Replacing "SA" style couplings: Ramsey also manufactures "SA" style couplings that directly interchange with couplings manufactured by Emerson Power Transmission.

Contact Ramsey for more information

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