



ALTO PRODUCTS CORP.

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Material Handling

FRICITION & STEEL
TRANSMISSION PLATES

Alto Material Handling

ALLISON

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 352702-520 | 23041616 | Friction | 72 INT | 371.68 | 302.74 | 5.18 | 14.633 | 11.92 | .204 |
| 352704-388 | 6768446 | Friction Bronze | 60 INT | 253.59 | 187.81 | 3.91 | 9.984 | 7.39 | .154 |

BENATI

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|-------------|---------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 023719 | 3212112 | Steel | 60 EXT | 154.1 | 114.05 | 1.73 | 6.067 | 4.49 | .068 |
| 049700BR235 | 3213744 | Friction Bronze | 45 INT | 133.35 | 92.79 | 2.36 | 5.25 | 3.65 | .093 |

BORG WARNER

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|-------------|---------------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 023701A | 10-16-166-001 | Steel | 51 EXT | 138.99 | 99.01 | 1.73 | 5.472 | 3.90 | .068 |
| 023703 | 3-65 | Steel | 54 EXT | 138.99 | 99.01 | 1.73 | 5.472 | 3.90 | .068 |
| 023738 | 10-17-666-001 | Friction | 59 INT | 190.19 | 146.76 | 2.92 | 7.488 | 5.78 | .115 |
| 023738BR155 | 72-A66 | Friction Bronze | 59 INT | 190.61 | 147.17 | 1.57 | 7.504 | 5.79 | .062 |
| 023739 | 72-176 | Steel | 3 EXT | 214.83 | 155.58 | 1.75 | 8.458 | 6.13 | .069 |
| 049722 | W-1597A | Friction | 45 INT | 133.35 | 92.79 | 1.55 | 5.25 | 3.65 | .061 |

BRAY EQUIPMENT

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 311712 | P11294/22 | Friction | 22 INT | 223.77 | 53.52 | 3.1 | 8.81 | 2.11 | .122 |

CASE

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 023701-300 | E159987 | Steel | 54 EXT | 138.99 | 99.01 | 3.01 | 5.472 | 3.90 | .119 |
| 023712-295 | 86029058 | Friction | 52 INT | 148.5 | 107.72 | 2.95 | 5.85 | 4.24 | .116 |
| 023767 | D50047 | Steel | 8 INT | 134.34 | 73.74 | 1.85 | 5.289 | 2.90 | .073 |
| 049700BR | N7217 | Friction Bronze | 45 INT | 128.6 | 92.79 | 1.55 | 5.063 | 3.65 | .061 |
| 049720-200 | E159992 | Friction | 45 INT | 133.35 | 92.79 | 2.08 | 5.25 | 3.65 | .082 |
| 310727-225 | A175806 | Steel | 26 EXT | 143.46 | 89.51 | 2.24 | 5.649 | 3.52 | .088 |

CATERPILLAR

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 053701 | 6T6277 | Steel | 24 EXT | 107.82 | 76.17 | 1.8 | 4.245 | 3.00 | .071 |
| 053703-120 | 6T6481 | Steel | 12 EXT | 156.03 | 119.13 | 1.19 | 6.143 | 4.69 | .047 |
| 079730A365 | 101-5162 | Friction | 41 INT | 124.54 | 68.83 | 3.66 | 4.907 | 2.71 | .144 |
| 308700 | 3T3400 | Friction | 44 INT | 197.03 | 138.3 | 2.79 | 7.757 | 5.45 | .11 |
| 308700A | 7G8107 | Friction | 44 INT | 196.6 | 138.2 | 2.79 | 7.73 | 5.43 | .11 |
| 308703 | 3T2567 | Steel | 43 EXT | 205.49 | 145.42 | 3.53 | 8.09 | 5.73 | .139 |

Alto Material Handling

CLARK

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|-------------|---------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 023701 | 234109 | Steel | 54 EXT | 138.99 | 99.01 | 1.73 | 5.472 | 3.90 | .068 |
| 023712BR260 | 234727 | Friction Bronze | 52 INT | 148.5 | 107.72 | 2.62 | 5.85 | 4.24 | .103 |
| 023719 | 224772 | Steel | 60 EXT | 154.1 | 114.05 | 1.73 | 6.067 | 4.49 | .068 |
| 049720 | 999736 | Friction | 45 INT | 133.35 | 92.79 | 1.55 | 5.25 | 3.65 | .061 |
| 049740-230 | 234108 | Friction | 45 INT | 133.35 | 92.79 | 2.31 | 5.25 | 3.65 | .091 |
| 310701 | 224246 | Steel | 4 EXT | 162.03 | 115.93 | 1.7 | 6.379 | 4.56 | .067 |
| 310703 | 219393 | Steel | 42 EXT | 160.63 | 103.3 | 1.5 | 6.324 | 4.07 | .059 |
| 310713 | 217140 | Steel | 16 EXT | 257.2 | 190.5 | 2.7 | 10.11 | 7.49 | .106 |
| 310716 | 216677 | Friction | 19 INT | 165.07 | 74.3 | 3.99 | 6.499 | 2.93 | .157 |
| 310721-180 | 243691 | Steel | 76 EXT | 182.88 | 118.21 | 1.75 | 7.2 | 4.65 | .069 |
| 310722 | 244979 | Friction | 52 INT | 175.77 | 107.59 | 2.9 | 6.92 | 4.24 | .114 |
| 310723 | 242717 | Steel | 35 EXT | 228.19 | 159 | 2.64 | 8.984 | 6.26 | .104 |
| 310726-270 | 2821953 | Friction | 40 INT | 127.25 | 82.19 | 2.69 | 5.01 | 3.24 | .106 |
| 310728-215 | 245239 | Friction | 33 INT | 117.58 | 68.28 | 2.16 | 4.629 | 2.69 | .085 |
| 310728A215 | 246744 | Friction | 33 INT | 117.58 | 68.28 | 2.16 | 4.629 | 2.69 | .085 |
| 310729-150 | 245238 | Steel | 4 EXT | 129.16 | 76 | 1.52 | 5.085 | 2.99 | .06 |
| 310733-200 | 927620 | Steel | 6 EXT | 152.4 | 95 | 2.01 | 6 | 3.74 | .079 |
| 310734-236 | 927619 | Friction | 36 INT | 134.11 | 87.88 | 2.36 | 5.28 | 3.46 | .093 |
| 311702 | 473725 | Friction | 45 INT | 133.35 | 92.79 | 2.03 | 5.25 | 3.65 | .08 |
| 318701 | 215296 | Steel | 20 EXT | 191.5 | 117.5 | 2.1 | 7.53 | 4.62 | .083 |

DAEWOO

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|---------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 023719-310 | 6T9456 | Steel | 60 EXT | 154.1 | 114.05 | 3.1 | 6.067 | 4.49 | .122 |
| 308708-460 | D141112 | Friction | 54 INT | 215.87 | 135.08 | 4.57 | 8.499 | 5.32 | .18 |

DAVID BROWN

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|---------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 023701-300 | E159987 | Steel | 54 EXT | 138.99 | 99.01 | 3.01 | 5.472 | 3.90 | .119 |
| 023767 | D50047 | Steel | 8 INT | 134.34 | 73.74 | 1.85 | 5.289 | 2.90 | .073 |
| 049700BR | N7217 | Friction Bronze | 45 INT | 128.6 | 92.79 | 1.55 | 5.063 | 3.65 | .061 |
| 049720-200 | 4913985 | Friction | 45 INT | 133.35 | 92.79 | 2.08 | 5.25 | 3.65 | .082 |
| 310727-225 | A175806 | Steel | 26 EXT | 143.46 | 89.51 | 2.24 | 5.649 | 3.52 | .088 |

DRESSER

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 352711-495 | 313807R1 | Steel | 30 EXT | 386.94 | 322.78 | 4.95 | 15.234 | 12.71 | .195 |

FIAT ALLIS

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 053700 | 4917896 | Friction | 34 INT | 99.85 | 68.17 | 1.55 | 3.931 | 2.68 | .061 |
| 053703 | 4917871 | Steel | 12 EXT | 156.03 | 119.13 | 1.8 | 6.143 | 4.69 | .071 |
| 329708 | 790 72918 | Friction | 35 EXT | 177.32 | 109.22 | 2.01 | 6.981 | 4.30 | .079 |
| 352701 | 73058782 | Steel | 6 EXT | 274.32 | 202.49 | 2.72 | 10.8 | 7.97 | .107 |

FORD

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 311713 | E9NN2N315CB | Steel | 1 EXT | 228.17 | 147.32 | 2.64 | 8.983 | 5.80 | .104 |

Alto Material Handling

FUNK

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 023712A170 | 4002787 | Friction | 52 INT | 148.5 | 107.72 | 1.7 | 5.85 | 4.24 | .067 |
| 079741 | YZ121323 | Steel | 60 EXT | 154.23 | 113.87 | 1.75 | 6.072 | 4.48 | .069 |

HITACHI

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 329708 | 790 72918 | Friction | 35 EXT | 177.32 | 109.22 | 2.01 | 6.981 | 4.30 | .079 |

HYSTER

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|---------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 023701-250 | 1311653 | Steel | 54 EXT | 138.99 | 99.01 | 2.5 | 5.472 | 3.90 | .098 |
| 023712-180 | 299646 | Friction | 52 INT | 148.5 | 107.72 | 1.78 | 5.85 | 4.24 | .07 |
| 049730-250 | 1469300 | Friction | 45 INT | 133.35 | 92.79 | 2.51 | 5.25 | 3.65 | .099 |

INTERNATIONAL

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 352711-495 | 313807R1 | Steel | 30 EXT | 386.94 | 322.78 | 4.95 | 15.234 | 12.71 | .195 |

J C BAMFORD

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 049720A235 | 456/01001 | Friction | 45 INT | 133.35 | 92.79 | 2.36 | 5.25 | 3.65 | .093 |
| 049740-230 | 445/30011 | Friction | 45 INT | 133.35 | 92.79 | 2.31 | 5.25 | 3.65 | .091 |
| 324700A385 | 458/20383 | Friction | 15 INT | 221.95 | 49.61 | 3.89 | 8.738 | 1.95 | .153 |
| 324701-385 | 458/20285 | Steel | 3 EXT | 238.02 | 140.08 | 3.89 | 9.371 | 5.52 | .153 |
| 324702-240 | 331/16520 | Friction | 45 INT | 140.21 | 92.48 | 2.39 | 5.517 | 3.64 | .094 |

JOHN DEERE

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 049700 | AT26632BR | Friction | 45 INT | 128.6 | 92.79 | 1.55 | 5.063 | 3.65 | .061 |

KOMATSU

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|--------------|-----------------|--------|---------|---------|------------|---------|---------|------------|
| 079731-310 | 3EA1511180 | Steel | 4 EXT | 137.82 | 80.09 | 3.18 | 5.426 | 3.15 | .125 |
| 306710R | 381-922541-1 | Friction Red | 32 INT | 166.98 | 78.74 | 1.8 | 6.574 | 3.10 | .071 |
| 306712R | 381-922551-1 | Friction Red | 34 INT | 167.18 | 104.82 | 1.8 | 6.582 | 4.13 | .071 |
| 325702BR | 3EC1519270 | Friction Bronze | 47 INT | 147.19 | 90.42 | 3 | 5.795 | 3.56 | .118 |
| 325703 | 3EC1519280 | Steel | 8 EXT | 157.02 | 100.3 | 1.4 | 6.182 | 3.95 | .055 |
| 325709-200 | 3EC-15-31280 | Steel | 8 EXT | 168.3 | 100.2 | 2 | 6.62 | 3.94 | .079 |
| 325714-280 | 23S-15-42730 | Friction | 56 INT | 214.88 | 168.66 | 2.79 | 8.46 | 6.64 | .11 |
| 330700B300 | 3EA-15-11171 | Friction | 41 INT | 124.64 | 68.83 | 3.05 | 4.907 | 2.71 | .12 |

MITSUI TCM

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 079731 | 64323-45200 | Steel | 4 EXT | 137.82 | 80.09 | 2.26 | 5.426 | 3.15 | .089 |
| 308705-230 | 9182408200 | Steel | 6 EXT | 170.38 | 99.97 | 2.09 | 6.708 | 3.94 | .09 |
| 308707-160 | 134G-382121 | Steel | 24 EXT | 131.7 | 80.09 | 1.6 | 5.185 | 3.15 | .063 |
| 330700A260 | AE-602-893-105 | Friction | 41 INT | 124.64 | 68.83 | 2.59 | 4.907 | 2.71 | .102 |
| 334712 | BK7031009000 | Friction | 38 INT | 133.7 | 77.3 | 2.8 | 5.26 | 3.04 | .11 |

Alto Material Handling

NISSAN

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|-------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 312701-160 | 31536-25H00 | Steel | 42 EXT | 131.55 | 79.96 | 1.6 | 5.179 | 3.15 | .063 |
| 312701A180 | 31536 22H00 | Steel | 42 EXT | 131.55 | 77.34 | 1.78 | 5.179 | 3.05 | .07 |
| 330701A160 | 31536-L1002 | Steel | 8 EXT | 131.67 | 80.16 | 1.6 | 5.184 | 3.16 | .063 |

SKYTRAK

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|--------------------|------------------------|--------|---------|---------|------------|---------|---------|------------|
| 328700 | R30WA120 | Friction | 23 | 177.62 | 69.42 | 3.81 | 6.993 | 2.73 | .15 |
| 328701 | R30WA109 | Steel | 61 | 200.1 | 102.1 | 6.1 | 7.87 | 4.01 | .087 |
| 328750 | 8033096 8034688 | Friction and Steel Kit | NA | 0 | 0 | 0 | 0 | 0.00 | . |

TOYOTA

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|----------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 330702-250 | 324322203071 | Friction | 37 INT | 155.7 | 87.86 | 2.54 | 6.13 | 3.46 | .1 |
| 330703-200 | 324122203071 | Steel | 12 EXT | 165.5 | 100 | 2 | 6.51 | 3.93 | .079 |
| 330704-257 | 32461-23830-71 | Friction | 30 INT | 130.63 | 79.27 | 2.6 | 5.143 | 3.12 | .102 |
| 330705-230 | 323443052071 | Steel | 52 EXT | 161.5 | 100 | 2.3 | 6.358 | 3.94 | .09 |
| 330706-260 | 32432-22030-71 | Friction | 37 INT | 155.7 | 87.86 | 2.59 | 6.13 | 3.46 | .102 |
| 330707-203 | 32425U217071 | Steel | 8 EXT | 139.52 | 88.52 | 1.98 | 5.493 | 3.49 | .078 |
| 330709-200 | 324312363071 | Steel | 6 EXT | 143.1 | 88.7 | 2 | 5.633 | 3.49 | .079 |
| 330710 | 324321203071 | Friction | 42 INT | 149.66 | 107.67 | 2.62 | 5.892 | 4.24 | .103 |
| 330711 | 324311205071 | Steel | 8 EXT | 161.11 | 114.15 | 1.8 | 6.343 | 4.49 | .071 |
| 330713-200 | 324133171071 | Steel | 18 EXT | 165.43 | 100.05 | 2 | 6.513 | 3.94 | .079 |

WARNER GEAR

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|-------------|---------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 023701A | 10-16-166-001 | Steel | 51 EXT | 138.99 | 99.01 | 1.73 | 5.472 | 3.90 | .068 |
| 023703 | 3-65 | Steel | 54 EXT | 138.99 | 99.01 | 1.73 | 5.472 | 3.90 | .068 |
| 023738 | 10-17-666-001 | Friction | 59 INT | 190.19 | 146.76 | 2.92 | 7.488 | 5.78 | .115 |
| 023738BR155 | 72-A66 | Friction | 59 INT | 190.61 | 147.17 | 1.57 | 7.504 | 5.79 | .062 |
| 023739 | 72-176 | Steel | 3 EXT | 214.83 | 155.58 | 1.75 | 8.458 | 6.13 | .069 |
| 049722 | W-1597A | Friction | 45 INT | 133.35 | 92.79 | 1.55 | 5.25 | 3.65 | .061 |

YALE

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|----------|-----------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 319722G | 580019516 | Steel | 45 INT | 133.35 | 92.79 | 2.49 | 5.25 | 3.65 | .098 |

ZF

| ALTO REF | OE REF | DESCRIPTION | SPLINE | OD (MM) | ID (MM) | Thick (MM) | OD (IN) | ID (IN) | Thick (IN) |
|------------|--------------|-------------|--------|---------|---------|------------|---------|---------|------------|
| 023719-310 | 6T9456 | Steel | 60 EXT | 154.1 | 114.05 | 3.1 | 6.067 | 4.49 | .122 |
| 329716-330 | 0501-31-4381 | Friction | 35 INT | 179.83 | 103.12 | 3.3 | 7.08 | 4.06 | .13 |