

# CHELSEA®



P.T.O. General Information



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## Chelsea P.T.O. Series Information

### Mechanical Six Bolt P.T.O.s

|                     |     |
|---------------------|-----|
| Single Gear 6-Bolt  |     |
| 100 .....           | 1   |
| Two Gear 6-Bolt     |     |
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| 260 .....           | 2   |
| 290 .....           | 2   |
| 441 .....           | 3   |
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**IMPORTANT:** This publication provides general information about our products. Please refer to the Application Catalog and Owner's Manuals for Installation Instructions and Safety Information.

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## Mechanical Six Bolt Power Take-Offs

### 100 Series

- Single speed, low torque applications
- Compact size for tight areas
- Sturdy cast iron housing
- Available for most transmissions



### Specifications Chart – 100 Series

|                                            | 100*R            |
|--------------------------------------------|------------------|
| Standard Output Shaft Size                 | 7/8" Round       |
| Intermittent Torque Rating (Lbs. ft.)      | 125              |
| Intermittent Torque Rating (Nm)            | 169              |
| Horsepower Rating for Intermittent Service |                  |
| At 500 R.P.M. of Output Shaft (HP)         | 12               |
| At 1000 R.P.M. of Output Shaft (HP)        | 24               |
| At 500 R.P.M. of Output Shaft (Kw)         | 9                |
| At 1000 R.P.M. of Output Shaft (Kw)        | 18               |
| Approximate Weight:                        | 10 lbs. [4.5 kg] |

### 221 Series

- Low speed, heavy duty applications on both Manual and Automatic transmissions
- Available with both a standard housing or a special low-profile housing
- Pressure Lube option
- Wide range of pump flanges



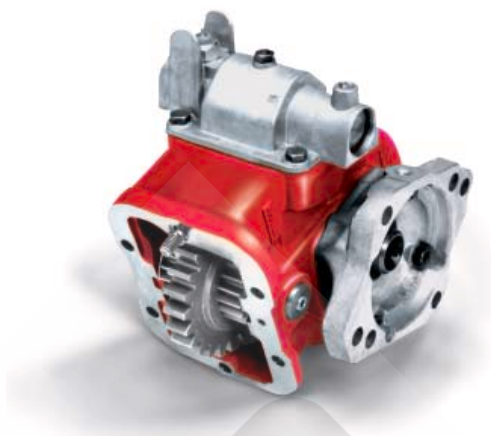
### Specifications Chart – 221 Series

|                                            | 221*C              | 221*E | 221*L |
|--------------------------------------------|--------------------|-------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 250                | 250   | 200   |
| Intermittent Torque Rating (Nm)            | 339                | 339   | 271   |
| Horsepower Rating for Intermittent Service |                    |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 | 24    | 19    |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 | 48    | 38    |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 | 18    | 14    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 | 36    | 28    |
| Approximate Weight:                        | 30 lbs. [13.6 kg]  |       |       |

## Mechanical Six Bolt Power Take-Offs

### 260 Series

- Designed for use on Automatic or high speed Manual transmissions
- Extra-low speeds available through high reduction gearing
- Pressure Lube option
- Wide range of pump flanges



### Specifications Chart – 260 Series

|                                            | 260*A              |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 250                |
| Intermittent Torque Rating (Nm)            | 339                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 |
| Approximate Weight:                        | 28 lbs. [12.7 kg]  |

### 290 Series

- 290 Series fits the Eaton's 4106 used in Mack Midliners and Mack's T2060A transmissions
- Mounts directly to transmissions, no geared adapter needed
- Cast iron housing for strength and tapered cone bearings for increased load capacity



### Specifications Chart – 290 Series

|                                            | 290*F              | 290*L | 290*Q | 290*U |
|--------------------------------------------|--------------------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 175                | 175   | 175   | 175   |
| Intermittent Torque Rating (Nm)            | 237                | 237   | 237   | 237   |
| Horsepower Rating for Intermittent Service |                    |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 17                 | 17    | 17    | 17    |
| At 1000 R.P.M. of Output Shaft (HP)        | 33                 | 33    | 33    | 33    |
| At 500 R.P.M. of Output Shaft (Kw)         | 12                 | 12    | 12    | 12    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 25                 | 25    | 25    | 25    |
| Approximate Weight:                        | 37 lbs. [16.8 kg]  |       |       |       |

## Mechanical Six Bolt Power Take-Offs

### 441 Series

- Dowel pin alignment for the Eaton Lightning transmissions
- No backlash to set
- Speed ratios providing a broad range of application coverage
- Wide range of shift and output options



#### Specifications Chart – 441 Series

|                                            | 441*A              | 441*C | 441*F | 441*H | 441*L | 441*Q | 441*R | 441*S | 441*U | 441*W | 441*X |
|--------------------------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |       |       |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 250                | 250   | 250   | 250   | 250   | 225   | 225   | 200   | 195   | 175   | 140   |
| Intermittent Torque Rating (Nm)            | 339                | 339   | 339   | 339   | 339   | 305   | 305   | 271   | 264   | 237   | 190   |
| Horsepower Rating for Intermittent Service |                    |       |       |       |       |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 | 24    | 24    | 24    | 24    | 21    | 21    | 19    | 19    | 17    | 13    |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 | 48    | 48    | 48    | 48    | 43    | 43    | 38    | 37    | 33    | 27    |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 | 18    | 18    | 18    | 18    | 16    | 16    | 14    | 14    | 12    | 10    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 | 36    | 36    | 36    | 36    | 32    | 32    | 28    | 28    | 25    | 20    |
| Approximate Weight:                        | 21 lbs. [9.5 kg]   |       |       |       |       |       |       |       |       |       |       |

### 442 Series

- Engineered to work with virtually all existing transmission applications
- Economical workhorse features a cast iron housing
- Tapered cone bearings for high torque rating and long service life
- Slip fit idler pin for easy interchange from one transmission to another
- Easy to set backlash
- Wide range of shift and output options



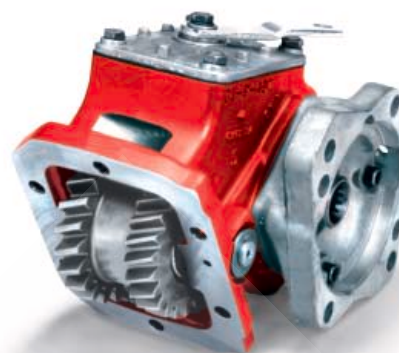
#### Specifications Chart – 442 Series

|                                            | 442*A              | 442*C | 442*F | 442*H | 442*L | 442*Q | 442*R | 442*S | 442*U | 442*W | 442*X |
|--------------------------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |       |       |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 250                | 250   | 250   | 250   | 250   | 225   | 225   | 200   | 195   | 175   | 140   |
| Intermittent Torque Rating (Nm)            | 339                | 339   | 339   | 339   | 339   | 305   | 305   | 271   | 264   | 237   | 190   |
| Horsepower Rating for Intermittent Service |                    |       |       |       |       |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 | 24    | 24    | 24    | 24    | 21    | 21    | 19    | 19    | 17    | 13    |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 | 48    | 48    | 48    | 48    | 43    | 43    | 38    | 37    | 33    | 27    |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 | 18    | 18    | 18    | 18    | 16    | 16    | 14    | 14    | 12    | 10    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 | 36    | 36    | 36    | 36    | 32    | 32    | 28    | 28    | 25    | 20    |
| Approximate Weight:                        | 21 lbs. [9.5 kg]   |       |       |       |       |       |       |       |       |       |       |

## Mechanical Six Bolt Power Take-Offs

### 447 Series

- Eliminates interference problems inside transmission/P.T.O. opening
- One-piece input/ratio gear
- Pressure Lube option
- Wide range of shift and output options



### Specifications Chart – 447 Series

|                                            | 447*Q              | 447*R | 447*S | 447*U | 447*W |
|--------------------------------------------|--------------------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 225                | 225   | 200   | 195   | 175   |
| Intermittent Torque Rating (Nm)            | 305                | 305   | 271   | 264   | 237   |
| Horsepower Rating for Intermittent Service |                    |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 21                 | 21    | 19    | 19    | 17    |
| At 1000 R.P.M. of Output Shaft (HP)        | 43                 | 43    | 38    | 37    | 33    |
| At 500 R.P.M. of Output Shaft (Kw)         | 16                 | 16    | 14    | 14    | 12    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 32                 | 32    | 28    | 28    | 25    |
| Approximate Weight:                        | 21 lbs. [9.5 kg]   |       |       |       |       |

### 660 Series

- Flexible design works with most popular transmission applications
- Designed for higher torque applications such as pneumatic blowers
- 660D designed for the Eaton Lightning transmissions
- Several speed ratios to choose from
- Wide range of shift and output options



### Specifications Chart – 660 Series

|                                                               | 660*F               | 660*Q | 660*S |
|---------------------------------------------------------------|---------------------|-------|-------|
| Standard Output Shaft Size                                    | 1-1/4" Round w/key  |       |       |
| *Intermittent Torque Rating At 1500 R.P.M. or less (Lbs. ft.) | 375                 | 375   | 229   |
| *Intermittent Torque Rating At 1500 R.P.M. or less (Nm)       | 508                 | 508   | 310   |
| Horsepower Rating for Intermittent Service                    |                     |       |       |
| At 500 R.P.M. of Output Shaft (HP)                            | 36                  | 36    | 22    |
| At 1000 R.P.M. of Output Shaft (HP)                           | 71                  | 71    | 44    |
| At 1500 R.P.M. of Output Shaft (HP)                           | 107                 | 107   | 65    |
| At 500 R.P.M. of Output Shaft (Kw)                            | 27                  | 27    | 16    |
| At 1000 R.P.M. of Output Shaft (Kw)                           | 53                  | 53    | 33    |
| At 1500 R.P.M. of Output Shaft (Kw)                           | 80                  | 80    | 49    |
| Approximate Weight:                                           | 28.2 lbs. [12.8 kg] |       |       |

\*Above 1500 R.P.M.: Call for Approval

## P.T.O. Options Chart – 6-Bolt P.T.O.s

| P.T.O. Series      |                                                                               | 100 | 221 | 260 | 290 |
|--------------------|-------------------------------------------------------------------------------|-----|-----|-----|-----|
| <b>Lubrication</b> |                                                                               |     |     |     |     |
| X                  | Standard                                                                      | x   | x   | x   | x   |
| P                  | Pressure                                                                      |     | x   | x   |     |
| <b>Shifting</b>    |                                                                               |     |     |     |     |
| A                  | Air                                                                           | x   | x   | x   | x   |
| C                  | Heavy Duty Bracket Less Cable                                                 | x   | x   | x   |     |
| H                  | Less Wire Shift                                                               |     | x   | x   | x   |
| M                  | Constant Mesh                                                                 |     | x   |     |     |
| P                  | Electric/Air 12V                                                              | x   | x   | x   | x   |
| S                  | P.T.O./Dump Pump Combo                                                        | x   | x   | x   | x   |
| T                  | P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return                     | x   | x   | x   |     |
| V                  | Air Shift Less Installation Kit                                               | x   | x   | x   | x   |
| W                  | Wire                                                                          | x   | x   | x   |     |
| X                  | Wire, Less Cable & Knob                                                       |     | x   | x   |     |
| <b>Output</b>      |                                                                               |     |     |     |     |
| AA                 | Special Pump for Europe                                                       |     | x   |     | x   |
| AF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                  |     | x   | x   | x   |
| AK                 | S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                         |     | x   | x   | x   |
| AZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                            |     | x   | x   | x   |
| GA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         |     | x   | x   |     |
| GB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         |     | x   | x   |     |
| GF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)     |     | x   | x   |     |
| GH                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       |     | x   | x   | x   |
| GJ                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       |     | x   | x   | x   |
| GK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       |     | x   | x   |     |
| GP                 | S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)            |     | x   |     |     |
| GQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       |     | x   |     |     |
| GR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)          |     | x   |     |     |
| GY                 | DIN 5462 Pump Mounting (Greaseable)                                           |     | x   | x   |     |
| GZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)               |     | x   | x   |     |
| LA                 | S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)                             |     | x   | x   |     |
| LB                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)                             |     | x   |     |     |
| LC                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)                             |     | x   |     |     |
| LD                 | 1-1/4" Round Shaft w/Lube Pump (Same as XD)                                   |     | x   |     |     |
| LF                 | S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)                        |     | x   | x   |     |
| RA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      |     | x   | x   | x   |
| RB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      |     | x   | x   | x   |
| RC                 | Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                       |     | x   | x   | x   |
| RD                 | Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      |     | x   | x   |     |
| RE                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    |     | x   | x   | x   |
| RF                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    |     | x   | x   | x   |
| RY                 | Rotatable DIN 5462 Pump Flange                                                |     |     | x   |     |
| XA                 | 7/8" Round Shaft w/key                                                        | x   |     |     |     |
| XD                 | 1-1/4" Round Shaft                                                            |     | x   | x   | x   |
| XE                 | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                     |     | x   | x   |     |
| XG                 | Non Standard S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) |     | x   | x   | x   |
| XJ                 | Non Standard S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) |     | x   | x   | x   |
| XK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    |     | x   | x   | x   |
| XQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    |     | x   | x   |     |
| XR                 | 1-1/2" 10 spline w/1410 Series Flange                                         |     | x   | x   | x   |
| XV                 | No Shaft                                                                      | x   |     | x   |     |
| XX**               | 1-1/4" S.A.E. Tapered Shaft w/keyway                                          |     | x   | x   |     |
| XY                 | DIN 5462 Pump Mounting                                                        |     | x   |     | x   |

\* XQ/GQ same as XK/GK except flange rotated 90°

\*\* Order companion (3-1-604) separately

**Check the current price book for available options.**

## P.T.O. Options Chart – 6-Bolt P.T.O.s

| P.T.O. Series      |                                                                               | 441 | 442 | 447 | 660 |
|--------------------|-------------------------------------------------------------------------------|-----|-----|-----|-----|
| <b>Lubrication</b> |                                                                               |     |     |     |     |
| X                  | Standard                                                                      | X   | X   | X   | X   |
| P                  | Pressure                                                                      | X   | X   | X   | X   |
| <b>Shifting</b>    |                                                                               |     |     |     |     |
| A                  | Air                                                                           | X   | X   | X   | X   |
| C                  | Heavy Duty Bracket Less Cable                                                 | X   | X   | X   | X   |
| G                  | Air Shift w/cyl. Location Opposite of Output                                  | X   |     | X   |     |
| H                  | Less Wire Shift                                                               | X   | X   | X   | X   |
| M                  | Constant Mesh                                                                 | X   | X   | X   | X   |
| P                  | Electric/Air 12V                                                              | X   | X   | X   | X   |
| Q                  | Electric/Air 24V                                                              | X   | X   | X   | X   |
| S                  | P.T.O./Dump Pump Combo                                                        | X   | X   | X   | X   |
| T                  | P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return                     | X   | X   |     | X   |
| U                  | P.T.O. & Pump Valve With Kick Out & Neutral Spring Return                     |     | X   |     | X   |
| V                  | Air Shift Less Installation Kit                                               | X   | X   | X   | X   |
| W                  | Wire                                                                          | X   | X   | X   | X   |
| X                  | Wire, Less Cable & Knob                                                       | X   | X   | X   | X   |
| <b>Output</b>      |                                                                               |     |     |     |     |
| AA                 | Special Pump for Europe                                                       | X   | X   | X   | X   |
| AF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                  | X   | X   | X   | X   |
| AK                 | S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                         | X   | X   | X   | X   |
| AZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                            | X   | X   | X   | X   |
| GA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         | X   | X   | X   | X   |
| GB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         | X   | X   | X   | X   |
| GF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)     | X   | X   | X   | X   |
| GH                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       | X   | X   | X   | X   |
| GJ                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       | X   | X   | X   | X   |
| GK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       | X   | X   | X   | X   |
| GP                 | S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)            | X   | X   | X   | X   |
| GQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       | X   | X   | X   | X   |
| GR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)          | X   | X   | X   | X   |
| GY                 | DIN 5462 Pump Mounting (Greaseable)                                           | X   | X   | X   | X   |
| GZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)               | X   | X   | X   | X   |
| LA                 | S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)                             | X   | X   | X   | X   |
| LB                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)                             | X   | X   | X   | X   |
| LC                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)                             | X   | X   | X   | X   |
| LD                 | 1-1/4" Round Shaft w/Lube Pump (Same as XD)                                   | X   | X   | X   | X   |
| LF                 | S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)                        | X   | X   | X   | X   |
| RA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      | X   | X   | X   | X   |
| RB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      | X   | X   | X   | X   |
| RC                 | Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                       | X   | X   | X   | X   |
| RD                 | Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      | X   | X   | X   | X   |
| RE                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    | X   | X   | X   | X   |
| RF                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    | X   | X   | X   | X   |
| RY                 | Rotatable DIN 5462 Pump Flange                                                | X   | X   | X   | X   |
| XA                 | 7/8" Round Shaft w/key                                                        |     |     |     |     |
| XE                 | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                     | X   | X   | X   | X   |
| XG                 | Non Standard S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) | X   | X   | X   | X   |
| XJ                 | Non Standard S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) | X   | X   | X   | X   |
| XK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    | X   | X   | X   | X   |
| XQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    | X   | X   | X   | X   |
| XR                 | Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)                              | X   | X   | X   | X   |
| XV                 | 1-1/2" 10 spline w/1410 Series Flange                                         |     |     |     | X   |
| XX**               | 1-1/4" S.A.E. Tapered Shaft w/keyway                                          | X   | X   | X   | X   |
| XY                 | DIN 5462 Pump Mounting                                                        | X   | X   | X   | X   |

\* XQ/GQ same as XK/GK except flange rotated 90°

\*\* Order companion flange (3-1-604) separately

**Check the current price book for available options.**

## Mechanical Eight Bolt Power Take-Offs

### 812 Series

- Only Single gear 8-Bolt P.T.O. in the industry
- High torque for extra heavy duty applications
- Ideal for Chelsea 912 Series split shaft applications
- Rotatable pump flanges available



### Specifications Chart – 812 Series

| <b>812*R</b>                               |                    |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 400                |
| Intermittent Torque Rating (Nm)            | 542                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 38                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 76                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 28                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 57                 |
| Approximate Weight:                        | 50 lbs. [22.7 kg]  |

### 489 Series

- 442 Series family, but with a 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense and less chance of leakage
- Wide range of shifters options and pump flanges



### Specifications Chart – 489 Series

|                                            | <b>489*A</b> | <b>489*C</b> | <b>489*F</b> | <b>489*H</b> | <b>489*L</b> | <b>489*Q</b> | <b>489*R</b>      | <b>489*S</b> | <b>489*U</b> | <b>489*W</b> | <b>489*X</b> |
|--------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|
| Standard Output Shaft Size                 |              |              |              |              |              |              | 1-1/4"            |              |              |              |              |
| Intermittent Torque Rating (Lbs. ft.)      | 250          | 250          | 250          | 250          | 250          | 225          | 225               | 200          | 195          | 175          | 140          |
| Intermittent Torque Rating (Nm)            | 339          | 339          | 339          | 339          | 339          | 305          | 305               | 271          | 264          | 237          | 190          |
| Horsepower Rating for Intermittent Service |              |              |              |              |              |              |                   |              |              |              |              |
| At 500 R.P.M. of Output Shaft (HP)         | 24           | 24           | 24           | 24           | 24           | 21           | 21                | 19           | 19           | 17           | 13           |
| At 1000 R.P.M. of Output Shaft (HP)        | 48           | 48           | 48           | 48           | 48           | 43           | 43                | 38           | 37           | 33           | 27           |
| At 500 R.P.M. of Output Shaft (Kw)         | 18           | 18           | 18           | 18           | 18           | 16           | 16                | 14           | 14           | 12           | 10           |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36           | 36           | 36           | 36           | 36           | 32           | 32                | 28           | 28           | 25           | 20           |
| Approximate Weight:                        |              |              |              |              |              |              | 30 lbs. [13.6 kg] |              |              |              |              |

## Mechanical Eight Bolt Power Take-Offs

### 680 Series

- Excellent coverage for transmissions with 8-Bolt openings
- Deep mount housing option for Mack applications
- Several speed ratios to choose from
- Wide range of shift and output options



#### Specifications Chart – 680 Series

|                                                               | 680*F               | 680*Q | 680*S |
|---------------------------------------------------------------|---------------------|-------|-------|
| Standard Output Shaft Size                                    | 1-1/4" Round w/key  |       |       |
| *Intermittent Torque Rating At 1500 R.P.M. or less (Lbs. ft.) | 375                 | 375   | 229   |
| *Intermittent Torque Rating At 1500 R.P.M. or less (Nm)       | 508                 | 508   | 310   |
| Horsepower Rating for Intermittent Service                    |                     |       |       |
| At 500 R.P.M. of Output Shaft (HP)                            | 36                  | 36    | 22    |
| At 1000 R.P.M. of Output Shaft (HP)                           | 71                  | 71    | 44    |
| At 1500 R.P.M. of Output Shaft (HP)                           | 107                 | 107   | 65    |
| At 500 R.P.M. of Output Shaft (Kw)                            | 27                  | 27    | 16    |
| At 1000 R.P.M. of Output Shaft (Kw)                           | 53                  | 53    | 33    |
| At 1500 R.P.M. of Output Shaft (Kw)                           | 80                  | 80    | 49    |
| Approximate Weight:                                           | 28.2 lbs. [12.8 kg] |       |       |

\*Above 1500 R.P.M.: Call for Approval

### 823 Series

- Robust design for High torque applications
- Lever shift standard
- Inspection cover for adjusting backlash
- Popular pump mounts available



#### Specifications Chart – 823 Series

|                                            | 823*B                          | 823*D | 823*G | 823*J | 823*M | 823*R | 823*T |
|--------------------------------------------|--------------------------------|-------|-------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/2" 10 Spline w/1410 Flange |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 500                            | 500   | 500   | 500   | 500   | 400   | 350   |
| Intermittent Torque Rating (Nm)            | 678                            | 678   | 678   | 678   | 678   | 542   | 475   |
| Horsepower Rating for Intermittent Service |                                |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 48                             | 48    | 48    | 48    | 48    | 38    | 33    |
| At 1000 R.P.M. of Output Shaft (HP)        | 95                             | 95    | 95    | 95    | 95    | 76    | 67    |
| At 500 R.P.M. of Output Shaft (Kw)         | 36                             | 36    | 36    | 36    | 36    | 28    | 25    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 71                             | 71    | 71    | 71    | 71    | 57    | 50    |
| Approximate Weight:                        | 76 lbs. [34.5 kg]              |       |       |       |       |       |       |

## Mechanical Eight Bolt Power Take-Offs

### 880 Series

- Wide coverage for tough applications
- Speed ratios for high and low speed applications
- Removable shift cover for adjusting backlash
- Dual-pump output for mounting a pump on each end of the P.T.O.



### Specifications Chart – 880 Series

|                                            | 880*B                          | 880*D | 880*G | 880*J | 880*M | 880*Q | 880*R | 880*T |
|--------------------------------------------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/2" 10 Spline w/1410 Flange |       |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 500                            | 500   | 500   | 500   | 500   | 450   | 400   | 350   |
| Intermittent Torque Rating (Nm)            | 678                            | 678   | 678   | 678   | 678   | 610   | 542   | 475   |
| Horsepower Rating for Intermittent Service |                                |       |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 48                             | 48    | 48    | 48    | 48    | 43    | 38    | 33    |
| At 1000 R.P.M. of Output Shaft (HP)        | 95                             | 95    | 95    | 95    | 95    | 86    | 76    | 67    |
| At 500 R.P.M. of Output Shaft (Kw)         | 36                             | 36    | 36    | 36    | 36    | 32    | 28    | 25    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 71                             | 71    | 71    | 71    | 71    | 64    | 57    | 50    |
| Approximate Weight:                        | 63 lbs. [28.6 kg]              |       |       |       |       |       |       |       |

## P.T.O. Options Chart – 8-Bolt P.T.O.s

| P.T.O. Series      |                                                                                                                                     | 489 | 680 | 812 | 823 | 880 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| <b>Lubrication</b> |                                                                                                                                     |     |     |     |     |     |
| X                  | Standard                                                                                                                            | x   | x   | x   | x   | x   |
| P                  | Pressure                                                                                                                            | x   | x   |     | x   | x   |
| <b>Shifting</b>    |                                                                                                                                     |     |     |     |     |     |
| A                  | Air                                                                                                                                 | x   | x   | x   | x   | x   |
| C                  | Heavy Duty Bracket Less Cable                                                                                                       | x   | x   |     |     |     |
| H                  | Less Wire Shift Cover                                                                                                               | x   | x   |     |     | x   |
| M                  | Constant Mesh                                                                                                                       | x   | x   |     | x   | x   |
| P                  | Electric/Air 12V                                                                                                                    | x   | x   | x   |     |     |
| S                  | P.T.O. & Combo Valve                                                                                                                | x   | x   |     |     |     |
| T                  | P.T.O. & Pump Valve Less Kick Out & Neutral Spring Return                                                                           | x   | x   |     |     |     |
| V                  | Air Shift Less Installation Kit                                                                                                     | x   | x   | x   | x   | x   |
| W                  | Wire                                                                                                                                | x   | x   | x   |     |     |
| X                  | Less Cable & Knob                                                                                                                   | x   | x   |     |     |     |
| Y                  | Lever                                                                                                                               |     |     | x   | x   | x   |
| <b>Output</b>      |                                                                                                                                     |     |     |     |     |     |
| AA                 | Special Pump for Europe                                                                                                             | x   | x   |     |     |     |
| AB                 | DIN 120 Flange                                                                                                                      |     |     |     | x   | x   |
| AC                 | DIN 100 Flange                                                                                                                      |     |     |     | x   |     |
| AF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                                        | x   | x   |     |     |     |
| AK                 | S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                                               | x   | x   | x   |     |     |
| AZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                                                                                  | x   | x   |     |     |     |
| GA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                               | x   | x   |     |     |     |
| GB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                               | x   | x   |     |     |     |
| GF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                                           |     | x   |     |     |     |
| GH                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                                             | x   | x   |     |     |     |
| GJ                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                                             | x   | x   |     |     |     |
| GK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                             | x   | x   |     |     |     |
| GP                 | S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                                  | x   | x   |     |     |     |
| GQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                             | x   | x   |     |     |     |
| GR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                                                | x   | x   |     |     |     |
| GS                 | S.A.E. "C" 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)                                                                |     |     |     | x   |     |
| GS                 | S.A.E. "C" 2 or 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)                                                           |     |     |     |     | x   |
| GY                 | DIN 5462 Pump Mounting (Greaseable)                                                                                                 | x   | x   |     |     |     |
| GZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)                                                                     | x   | x   |     |     |     |
| PA                 | Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "B" Shaft (7/8" 13 - Tooth)                         | x   |     |     |     |     |
| PF                 | Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "BB" Shaft (1.00" 15 - Tooth)                       | x   |     |     |     |     |
| LA                 | S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)                                                                                   | x   | x   |     |     |     |
| LB                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)                                                                                   | x   | x   |     |     |     |
| LC                 | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)                                                                                   | x   | x   |     |     |     |
| LD                 | 1-1/4" Round Shaft w/Lube Pump (Same as XD)                                                                                         | x   | x   |     |     |     |
| LF                 | S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)                                                                              | x   | x   |     |     | x   |
| LG                 | 1 1/2" 10 Spline w/1410 & Lube Pump (Same as XV)                                                                                    |     |     |     | x   | x   |
| LH                 | S.A.E. "C" 2 or 4 Bolt Flange w/Lube Pump (Same as XS)                                                                              |     |     |     | x   | x   |
| LJ                 | S.A.E. "C" 2 Bolt Flange w/Lube Pump (Same as XU)                                                                                   |     |     |     | x   |     |
| RA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                                            | x   | x   |     |     |     |
| RB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                                            | x   | x   | x   |     |     |
| RC                 | Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                                                                             | x   | x   |     |     |     |
| RD                 | Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                                            | x   | x   |     |     |     |
| RE                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                                          | x   | x   |     |     |     |
| RF                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                                          | x   | x   |     |     |     |
| RY                 | Rotatable DIN 5462 Pump Flange                                                                                                      | x   | x   |     |     |     |
| SK                 | Double Pump S.A.E. "B" 2 & 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) & S.A.E. "C" 2 & 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth) |     |     |     |     | x   |

\* XQ/GQ same as XK/GK except flange rotated 90°

\*\* Order companion flange (3-1-604) separately

**Continued on Next Page**

**Check the current price book for available options.**

## P.T.O. Options Chart – 8-Bolt P.T.O.s

| P.T.O. Series |                                                                           | 489 | 680 | 812 | 823 | 880 |
|---------------|---------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| <b>Output</b> |                                                                           |     |     |     |     |     |
| SS            | Double Pump S.A.E. "C" 2 & 4 Bolt Flanges, "C" Shafts (1-1/4" 14 - Tooth) |     |     |     |     | x   |
| XD            | 1-1/4" Round Shaft                                                        | x   | x   | x   |     |     |
| XE            | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                 | x   | x   |     |     |     |
| XG            | Non Std. S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) | x   | x   |     |     |     |
| XJ            | Non Std. S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) | x   | x   |     |     |     |
| XK            | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                | x   | x   |     |     | x   |
| XQ*           | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                | x   | x   |     |     |     |
| XR            | 1-1/2" 10 spline w/1410 Series Flange                                     | x   | x   | x   |     |     |
| XS            | S.A.E. "C" 2 or 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth)              |     |     |     | x   | x   |
| XS            | S.A.E. "C" 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth)                   |     |     |     | x   |     |
| XU            | S.A.E. "C" 2 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth)                   |     |     |     | x   |     |
| XV            | 1-1/2" 10 Spline w/1410 Series Flange                                     |     | x   |     | x   | x   |
| XW            | S.A.E. "C" 2 or 4 Bolt Wet Spline                                         |     |     |     | x   |     |
| XX**          | 1-1/4" Tapered Shaft for Companion Flange 3-1-604                         | x   | x   | x   |     |     |
| XY            | DIN 5462 Pump Mounting                                                    | x   | x   | x   | x   | x   |
| YY            | Double Pump DIN 80                                                        |     |     |     | x   | x   |

\* XQ/GQ same as XK/GK except flange rotated 90°

\*\* Order companion flange (3-1-604) separately

**Check the current price book for available options.**

## Powershift (“Shift on the Go”) Power Take-Offs

### 230/231 Series

- Designed for both Manual and Automatic transmissions
- 231 offers low profile housing for avoiding clearance problems
- Pressure lubrication option available for both units
- Patent pending internal self adjusting shaft brake option
- Air or Electric/Air Shift Unit



#### Series Specifications Chart – 230/231 Series

|                                            | 230*A,B,D,K & Q<br>w/Pressure Lube | 230*A,B,D,K & Q<br>w/Standard Lube | 231*A,B,D,K & Q<br>w/Pressure Lube | 231*A,B,D,K & Q<br>w/Standard Lube |
|--------------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key                 |                                    |                                    |                                    |
| Intermittent Torque Rating (Lbs. ft.)      | 300                                | 250                                | 250                                | 225                                |
| Intermittent Torque Rating (Nm)            | 407                                | 339                                | 339                                | 305                                |
| Horsepower Rating for Intermittent Service |                                    |                                    |                                    |                                    |
| At 500 R.P.M. of Output Shaft (HP)         | 29                                 | 24                                 | 24                                 | 21                                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 57                                 | 48                                 | 48                                 | 43                                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 21                                 | 18                                 | 18                                 | 16                                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 43                                 | 36                                 | 36                                 | 32                                 |
| Approximate Weight:                        | 49 lbs. [22 kg]                    |                                    |                                    |                                    |

### 236 Series

- Patent pending internal self adjusting shaft brake option
- Wide selection of input gears for virtually all currently produced transmissions
- Helical gears and optional pressure lubrication to extend P.T.O. service life
- Inspection cove for adjusting backlash
- Air or Electric/Air Shift Unit



#### Series Specifications Chart – 236 Series

|                                            | 236*D,K & Q        | 236*U |
|--------------------------------------------|--------------------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |
| Intermittent Torque Rating (Lbs. ft.)      | 250                | 225   |
| Intermittent Torque Rating (Nm)            | 339                | 305   |
| Horsepower Rating for Intermittent Service |                    |       |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 | 21    |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 | 43    |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 | 16    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 | 32    |
| Approximate Weight:                        | 49 lbs. [22 kg]    |       |

## Powershift (“Shift on the Go”) Power Take-Offs

### 243 Series

- Designed for Aisin and Mitsubishi transmissions
- Lightweight housing allows for maximum heat dissipation
- Controlled Compression Interface Gasket eliminates setting backlash
- Electronic Overspeed Control available
- Electric/Hydraulic Shift Unit

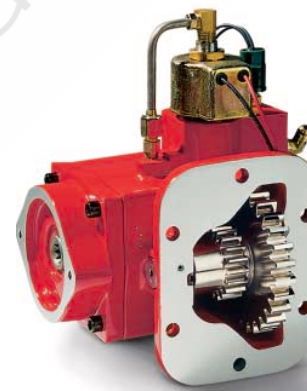


### Series Specifications Chart – 243 Series

| 243*G                                      |                  |
|--------------------------------------------|------------------|
| Standard Output Shaft Size                 | 1" Round w/key   |
| Intermittent Torque Rating (Lbs. ft.)      | 85               |
| Intermittent Torque Rating (Nm)            | 115              |
| Horsepower Rating for Intermittent Service |                  |
| At 500 R.P.M. of Output Shaft (HP)         | 8                |
| At 1000 R.P.M. of Output Shaft (HP)        | 16               |
| At 500 R.P.M. of Output Shaft (Kw)         | 6                |
| At 1000 R.P.M. of Output Shaft (Kw)        | 12               |
| Approximate Weight:                        | 18 lbs. [8.1 kg] |

### 250 Series

- Latest P.T.O. technology for Automatic transmission applications
- Patented integral solenoid design (patent # 6151975)
- Fixed Compression Gasket eliminates setting of backlash
- Weather tight electrical connectors for secure under-the-vehicle connections
- Electric/Hydraulic Shift Unit



### Series Specifications Chart – 250 Series

| 250*D                                      |                 |
|--------------------------------------------|-----------------|
| Standard Output Shaft Size                 | 1" Round w/key  |
| Intermittent Torque Rating (Lbs. ft.)      | 120             |
| Intermittent Torque Rating (Nm)            | 163             |
| Horsepower Rating for Intermittent Service |                 |
| At 500 R.P.M. of Output Shaft (HP)         | 11              |
| At 1000 R.P.M. of Output Shaft (HP)        | 23              |
| At 500 R.P.M. of Output Shaft (Kw)         | 9               |
| At 1000 R.P.M. of Output Shaft (Kw)        | 17              |
| Approximate Weight:                        | 25 lbs. [11 kg] |

## Powershift (“Shift on the Go”) Power Take-Offs

### 270/271 Series

- Designed for Automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure Lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric/Hydraulic Shift Unit



#### Series Specifications Chart – 270/271 Series

|                                            | 270*A,B,D & K<br>w/Pressure Lube | 270*A,B,D & K<br>w/Standard Lube | 271*A,B,D & K<br>All Lube Types |
|--------------------------------------------|----------------------------------|----------------------------------|---------------------------------|
| Standard Output Shaft Size                 | 1-1/4"                           |                                  |                                 |
| Intermittent Torque Rating (Lbs. ft.)      | 300                              | 250                              | 250                             |
| Intermittent Torque Rating (Nm)            | 407                              | 339                              | 339                             |
| Horsepower Rating for Intermittent Service |                                  |                                  |                                 |
| At 500 R.P.M. of Output Shaft (HP)         | 29                               | 24                               | 24                              |
| At 1000 R.P.M. of Output Shaft (HP)        | 57                               | 48                               | 48                              |
| At 500 R.P.M. of Output Shaft (Kw)         | 21                               | 18                               | 18                              |
| At 1000 R.P.M. of Output Shaft (Kw)        | 43                               | 36                               | 36                              |
| Approximate Weight:                        | 49 lbs. [22 kg]                  |                                  |                                 |

### 800 Series

- Only Single Gear Powershift P.T.O. on the market today
- Compact size makes it a good solution when space is limited
- Pressure Lubrication standard
- Electric/Hydraulic Shift Unit



#### Series Specifications Chart – 800 Series

|                                            | 800*M              |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/8" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 250                |
| Intermittent Torque Rating (Nm)            | 339                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 |
| Approximate Weight:                        | 38 lbs. [17 kg]    |

## Powershift (“Shift on the Go”) Power Take-Offs

### 852 Series

- Designed for Heavy Duty applications
- Three speed ratios to choose from
- Pump flanges to fit most popular hydraulic pumps
- Pressure Lubrication standard
- Electric/Hydraulic Shift Unit



#### Series Specifications Chart – 852 Series

| 852*B, G, J                                |                                |
|--------------------------------------------|--------------------------------|
| Standard Output Shaft Size                 | 1-1/2" 10 spline w/1410 flange |
| Intermittent Torque Rating (Lbs. ft.)      | 500                            |
| Intermittent Torque Rating (Nm)            | 678                            |
| Horsepower Rating for Intermittent Service |                                |
| At 500 R.P.M. of Output Shaft (HP)         | 48                             |
| At 1000 R.P.M. of Output Shaft (HP)        | 95                             |
| At 500 R.P.M. of Output Shaft (Kw)         | 36                             |
| At 1000 R.P.M. of Output Shaft (Kw)        | 71                             |
| Approximate Weight:                        | 88 lbs. [40 kg]                |

### 885 Series

- Designed for Heavy Duty applications such as pneumatic blowers
- Rugged cast iron housing
- Four speed ratios to choose from
- Pressure Lubrication available
- Electric/Air Shift Unit



#### Series Specifications Chart – 885 Series

| 885*B, G, J, M                             |                                |
|--------------------------------------------|--------------------------------|
| Standard Output Shaft Size                 | 1-1/2" 10 spline w/1410 flange |
| Intermittent Torque Rating (Lbs. ft.)      | 500                            |
| Intermittent Torque Rating (Nm)            | 678                            |
| Horsepower Rating for Intermittent Service |                                |
| At 500 R.P.M. of Output Shaft (HP)         | 48                             |
| At 1000 R.P.M. of Output Shaft (HP)        | 95                             |
| At 500 R.P.M. of Output Shaft (Kw)         | 36                             |
| At 1000 R.P.M. of Output Shaft (Kw)        | 71                             |
| Approximate Weight:                        | 88 lbs. [40 kg]                |

## P.T.O. Options Chart – Powershift P.T.O.s

| P.T.O. Series      |                                                                           | 230/231 | 236 | 250 | 243 | 270/271 | 800 | 852 | 885 |
|--------------------|---------------------------------------------------------------------------|---------|-----|-----|-----|---------|-----|-----|-----|
| <b>Lubrication</b> |                                                                           |         |     |     |     |         |     |     |     |
| X                  | Standard                                                                  | x       | x   | x   |     | x       |     |     | x   |
| P                  | Pressure                                                                  | x       | x   |     | x   | x       | x   | x   | x   |
| <b>Shifting</b>    |                                                                           |         |     |     |     |         |     |     |     |
| A                  | Air Shift (Pilot Valve)                                                   | x       | x   |     |     |         |     |     |     |
| P                  | Electric/Air 12V                                                          | x       | x   |     |     |         |     |     | x   |
| Q                  | Electric/Air 24V                                                          | x       | x   |     |     |         |     |     | x   |
| B                  | Electric/Hydraulic 12V                                                    |         |     | x   | x   | x       | x   | x   |     |
| D                  | Electric/Hydraulic 24V                                                    |         |     | x   | x   | x       | x   | x   |     |
| K                  | Elec./Hyd. 12V w/EOC                                                      |         |     |     | x   | x       |     |     |     |
| L                  | Elec./Hyd. 24V w/EOC                                                      |         |     |     | x   | x       |     |     |     |
| N                  | Elec./Air 12V w/EOC                                                       | x       |     |     |     |         |     |     | x   |
| J                  | Elec./Air 24V w/EOC                                                       | x       |     |     |     |         |     |     | x   |
| F                  | No Valve                                                                  |         |     |     |     |         |     | x   |     |
| V                  | Air Shift Less Installation Kit                                           |         |     |     |     |         |     |     | x   |
| <b>Output</b>      |                                                                           |         |     |     |     |         |     |     |     |
| AB                 | DIN 120 Flange                                                            |         |     |     |     |         |     |     | x   |
| AD                 | S.A.E. "A" 2 Bolt Flange, (3/4" 11 - Tooth) Shaft                         |         |     |     | x   |         |     |     |     |
| AF                 | S.A.E. "BB" 2 Bolt Flange, "BB" Shaft ( 1" 15 - Tooth)                    | x       | x   |     |     | x       |     |     |     |
| BD                 | 1-1/4" Round Shaft w/Self Adjusting Shaft Brake (Manual Transmissions)    | x       | x   |     |     |         |     |     |     |
| BA                 | 1-1/4" Round Shaft w/Self Adjusting Shaft Brake (Automatic Transmissions) | x       |     |     |     | x       |     |     |     |
| RA                 | Rot. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                       | x       | x   |     |     | x       |     |     |     |
| RB                 | Rot. "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                       | x       | x   |     |     | x       |     |     |     |
| RF                 | Rot. "B" 2 Bolt Flange, "BB" Shaft (1" 15 - Tooth)                        | x       | x   |     |     | x       |     |     |     |
| XB                 | 1" Round Shaft                                                            | x       |     | x   | x   |         |     |     |     |
| XD                 | 1-1/4" Round Shaft                                                        | x       | x   |     |     | x       |     |     |     |
| XE                 | S.A.E. "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                      | x       | x   | x   | x   | x       |     |     |     |
| XK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                | x       | x   |     |     | x       | x   |     |     |
| XP                 | S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                     | x       | x   |     |     | x       |     |     |     |
| XR                 | Chelsea Special Flange, "B" Shaft (7/8" 13 - Tooth)                       | x       | x   |     |     | x       |     |     |     |
| XS                 | S.A.E. "C" 2 or 4 Bolt w/ 1-1/4" 14 - Tooth Shaft                         |         |     |     |     |         |     | x   | x   |
| XU                 | S.A.E. "C" 2 Bolt w/ 1-1/4" 14 - Tooth Spline                             |         |     |     |     |         |     | x   |     |
| XV                 | 1-1/2" 10 Spline w/1410 Flange                                            |         |     |     |     |         | x   | x   | x   |
| XX                 | 1-1/4 Tapered Shaft w/DIN 100 Flange                                      | x       | x   |     |     | x       |     |     |     |
| XY                 | Special (DIN 5462)                                                        | x       | x   |     |     | x       | x   |     | x   |
| XZ                 | 1-1/8" Tapered Shaft                                                      |         |     |     |     |         |     | x   |     |

Check the current price book for available options.

## Power Take-Offs for Allison World Transmissions

### 267 Series

- Constant Mesh (non-shiftable) P.T.O. that is ideal for applications requiring continuous power
- Three speed ratios and ten output options
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- No backlash to adjust
- Wet Spline Output options available

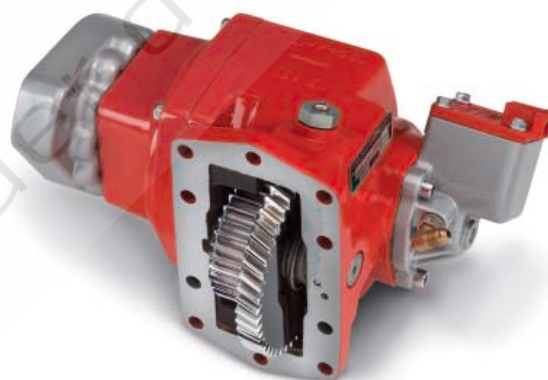


### Specifications Chart – 267 Series

|                                            | 267*B           | 267*G | 267*S | 267SB | 267SG | 267SS |
|--------------------------------------------|-----------------|-------|-------|-------|-------|-------|
|                                            | SuperTorque™    |       |       |       |       |       |
| Standard Output Shaft Size                 | 1-1/4"          |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 335             | 300   | 250   | 402   | 360   | 265   |
| Intermittent Torque Rating (Nm)            | 454             | 407   | 339   | 545   | 488   | 359   |
| Horsepower Rating for Intermittent Service |                 |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 32              | 29    | 24    | 38    | 34    | 25    |
| At 1000 R.P.M. of Output Shaft (HP)        | 64              | 57    | 48    | 77    | 69    | 50    |
| At 500 R.P.M. of Output Shaft (Kw)         | 24              | 21    | 18    | 29    | 26    | 19    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 48              | 43    | 36    | 57    | 51    | 38    |
| Approximate Weight:                        | 35 lbs. [16 kg] |       |       |       |       |       |

### 277 Series

- Exceeds the torque capacity of a 6-Bolt P.T.O. while offering the tighter sealing of a 10-Bolt pattern
- Five speed ratios and fourteen output options
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic Overspeed Control available to protect driven equipment from overspeeding
- Electric/Hydraulic Shift
- NEW internal bearing lube



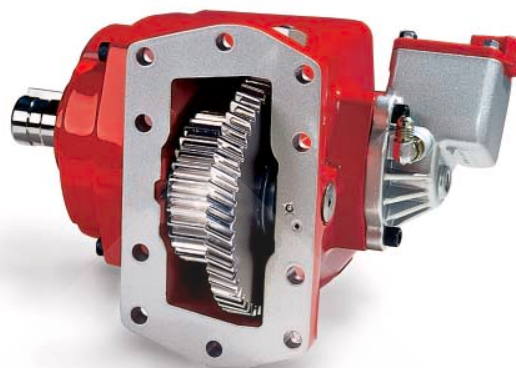
### Specifications Chart – 277 Series

|                                            | 277*B              | 277*D | 277*G | 277*M | 277*S | 277SB | 277SD | 277SG | 277SM | 277SS |
|--------------------------------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                            | SuperTorque™       |       |       |       |       |       |       |       |       |       |
| Standard Output Shaft Size                 | 1-1/4" Round w/key |       |       |       |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 335                | 325   | 300   | 265   | 250   | 402   | 390   | 360   | 318   | 265   |
| Intermittent Torque Rating (Nm)            | 454                | 441   | 407   | 359   | 339   | 545   | 529   | 488   | 431   | 359   |
| Horsepower Rating for Intermittent Service |                    |       |       |       |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 32                 | 31    | 29    | 25    | 24    | 38    | 37    | 34    | 30    | 25    |
| At 1000 R.P.M. of Output Shaft (HP)        | 64                 | 62    | 57    | 50    | 48    | 77    | 74    | 69    | 61    | 50    |
| At 500 R.P.M. of Output Shaft (Kw)         | 24                 | 23    | 21    | 19    | 18    | 29    | 28    | 26    | 23    | 19    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 48                 | 46    | 43    | 38    | 36    | 57    | 56    | 51    | 45    | 38    |
| Approximate Weight:                        | 49 lbs. [22 kg]    |       |       |       |       |       |       |       |       |       |

## Power Take-Offs for Allison World Transmissions

### 278 Series

- Enhanced housing design for maximum transmission clearance when direct mounting a pump
- Six speed ratios and fourteen output options
- Internal bearing lube
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electric/Hydraulic Shift

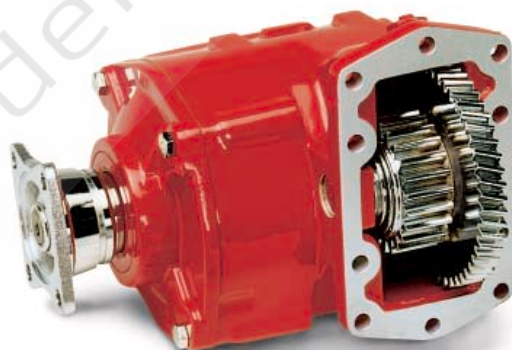


### Specifications Chart – 278 Series

|                                            | 278*B           | 278*D | 278*G | 278*M | 278*S | 278*T | 278SB        | 278SD | 278SG | 278SM | 278SS | 278ST |
|--------------------------------------------|-----------------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|
|                                            |                 |       |       |       |       |       | SuperTorque™ |       |       |       |       |       |
| Standard Output Shaft Size                 | 1-1/4" Round    |       |       |       |       |       |              |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 335             | 325   | 300   | 265   | 250   | 225   | 402          | 390   | 360   | 318   | 265   | 240   |
| Intermittent Torque Rating (Nm)            | 454             | 441   | 407   | 359   | 339   | 305   | 545          | 529   | 488   | 431   | 359   | 325   |
| Horsepower Rating for Intermittent Service |                 |       |       |       |       |       |              |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 32              | 31    | 29    | 25    | 24    | 21    | 38           | 37    | 34    | 30    | 25    | 23    |
| At 1000 R.P.M. of Output Shaft (HP)        | 64              | 62    | 57    | 50    | 48    | 43    | 77           | 74    | 69    | 61    | 50    | 46    |
| At 500 R.P.M. of Output Shaft (Kw)         | 24              | 23    | 21    | 19    | 18    | 16    | 29           | 28    | 26    | 23    | 19    | 17    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 48              | 46    | 43    | 38    | 36    | 32    | 57           | 56    | 51    | 45    | 38    | 34    |
| Approximate Weight:                        | 49 lbs. [22 kg] |       |       |       |       |       |              |       |       |       |       |       |

### 859 Series

- Highest torque capacities of any P.T.O. offered for the Allison World transmissions
- P.T.O. Torque ratings from 285 to 575 Ft. lbs
- Electronic Overspeed Control available to protect driven equipment from overspeeding
- Advanced gear design for increased tooth-contact ratio for quieter operation
- Electric/Hydraulic Shift



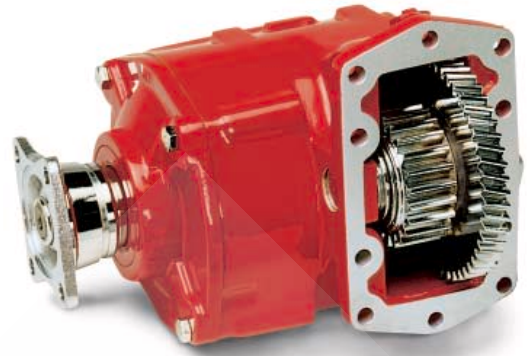
### Specifications Chart – 859 Series

|                                            | 859*G                       | 859*J | 859*M | 859*R | 859*S | 859*T | 859*W |
|--------------------------------------------|-----------------------------|-------|-------|-------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/2" Spline w/1410 flange |       |       |       |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 575                         | 525   | 490   | 415   | 385   | 350   | 285   |
| Intermittent Torque Rating (Nm)            | 780                         | 712   | 664   | 563   | 522   | 475   | 386   |
| Horsepower Rating for Intermittent Service |                             |       |       |       |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 55                          | 50    | 47    | 40    | 37    | 33    | 27    |
| At 1000 R.P.M. of Output Shaft (HP)        | 109                         | 100   | 93    | 79    | 73    | 67    | 54    |
| At 500 R.P.M. of Output Shaft (Kw)         | 41                          | 37    | 35    | 30    | 27    | 25    | 20    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 82                          | 75    | 70    | 59    | 55    | 50    | 41    |
| Approximate Weight:                        | 66 lbs. [30 kg]             |       |       |       |       |       |       |

## Power Take-Offs for Allison World Transmissions

### 867 Series

- Constant Mesh (non-shiftable) P.T.O. that is ideal for applications requiring continuous power
- Four speed ratios and five output options
- Torque ratings from 350 to 575 Ft. lbs.



### Specifications Chart – 867 Series

|                                            | 867*G                      | 867*M | 867*R | 867*T |
|--------------------------------------------|----------------------------|-------|-------|-------|
| Standard Output Shaft Size                 | 1-1/2 Spline w/1410 flange |       |       |       |
| Intermittent Torque Rating (Lbs. ft.)      | 575                        | 490   | 415   | 350   |
| Intermittent Torque Rating (Nm)            | 780                        | 664   | 563   | 475   |
| Horsepower Rating for Intermittent Service |                            |       |       |       |
| At 500 R.P.M. of Output Shaft (HP)         | 55                         | 47    | 40    | 33    |
| At 1000 R.P.M. of Output Shaft (HP)        | 109                        | 93    | 79    | 67    |
| At 500 R.P.M. of Output Shaft (Kw)         | 41                         | 35    | 30    | 25    |
| At 1000 R.P.M. of Output Shaft (Kw)        | 82                         | 70    | 59    | 50    |
| Approximate Weight:                        | 64 lbs. [29 kg]            |       |       |       |

## P.T.O. Options Chart - Allison World Transmissions

| P.T.O. Series      |                                                                                                               | 267 | 277/278 | 859 | 867 |
|--------------------|---------------------------------------------------------------------------------------------------------------|-----|---------|-----|-----|
| <b>Lubrication</b> |                                                                                                               |     |         |     |     |
| P                  | Pressure Lube                                                                                                 | x   | x       | x   | x   |
| R                  | Pressure Lube with Solenoid Cap Rotated 120 Degrees                                                           |     | x       | x   |     |
| W                  | Wet Spline ("AF", "AK" and "RY" output options)                                                               | x   |         |     |     |
| <b>Shifting</b>    |                                                                                                               |     |         |     |     |
| B                  | 12 Volt Electric/Hydraulic                                                                                    |     | x       | x   |     |
| D                  | 24 Volt Electric/Hydraulic                                                                                    |     | x       | x   |     |
| G                  | 12 Volt Electric/Hydraulic w/Remote Mounted Solenoid Valve                                                    |     | x       | x   |     |
| H                  | 24 Volt Electric/Hydraulic w/Remote Mounted Solenoid Valve                                                    |     | x       | x   |     |
| K                  | 12 Volt Electric/Hydraulic w/Electronic Overspeed Control                                                     |     | x       | x   |     |
| L                  | 24 Volt Electric/Hydraulic w/Electronic Overspeed Control                                                     |     | x       | x   |     |
| M                  | Constant Engagement No Shifter                                                                                | x   |         |     | x   |
| <b>Output</b>      |                                                                                                               |     |         |     |     |
| AB                 | DIN 120 Flange                                                                                                |     |         | x   | x   |
| AC                 | DIN 100 Flange                                                                                                |     |         | x   | x   |
| AF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                  | x   | x       |     |     |
| AK                 | S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                         | x   |         |     |     |
| AZ                 | S.A.E. "B" 2 or 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth)                                                  |     |         | x   |     |
| AZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                                                            | x   |         |     |     |
| GA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                         | x   |         |     |     |
| GB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                         | x   |         |     |     |
| GF                 | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                     | x   |         |     |     |
| GH                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                       | x   |         |     |     |
| GJ                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)                                       | x   |         |     |     |
| GK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                       | x   |         |     |     |
| GQ                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                       | x   |         |     |     |
| GR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)                                          | x   |         |     |     |
| GY                 | DIN 5462 Pump Mounting (Greaseable)                                                                           | x   |         |     |     |
| GZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)                                               | x   |         |     |     |
| PA                 | Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "B" Shaft (7/8" 13 - Tooth)   | x   | x       |     |     |
| PF                 | Special Rotatable S.A.E. "B" 2 Bolt Flange for Parker P Series Sculptured Pump, "BB" Shaft (1.00" 15 - Tooth) | x   | x       |     |     |
| RA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                      | x   | x       |     |     |
| RB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                      | x   | x       |     |     |
| RC                 | Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                                                       | x   |         |     |     |
| RD                 | Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                      | x   |         |     |     |
| RE                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                    | x   |         |     |     |
| RF                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                    | x   | x       |     |     |
| RG                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                                                    |     | x       |     |     |
| RY*                | Rotatable DIN 5462 Pump Flange                                                                                | x   |         |     |     |
| XD                 | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                                                     | x   | x       |     |     |
| XE                 | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                                                     | x   |         |     |     |
| XK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                    | x   | x       |     |     |
| XP                 | Special S.A.E. "A" Pilot 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                      |     | x       |     |     |
| XQ                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                                                    | x   |         |     |     |
| XR                 | Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)                                                              | x   | x       |     |     |
| XS                 | S.A.E. "C" 2 or 4 Bolt Flange, "C" Shaft (1-1/4" 14 - Tooth)                                                  |     |         | x   | x   |
| XV                 | 1-1/2" -10 Spline Shaft with 1410 Flange                                                                      |     |         | x   | x   |
| XX                 | 1-1/4" S.A.E. Tapered Shaft w/keyway                                                                          | x   | x       |     |     |
| XY                 | DIN 5462 Pump Mounting                                                                                        | x   | x       | x   | x   |

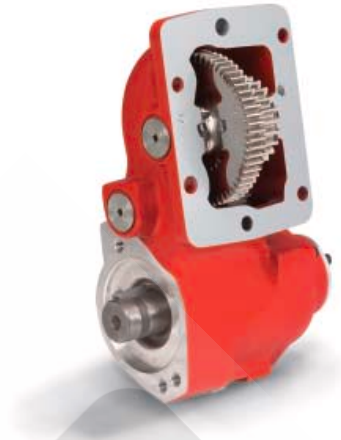
\* Must use the "W" Lube Option on the 267 Series for this Output

**Check the current price book for available options.**

## Power Take-Offs for Ford Transmissions

### 246 Series

- The only Ford tested tough P.T.O. for the TorqShift™ transmission
- Operates in all gears
- Specially matched P.T.O. and pumps for superior work load capabilities
- One P.T.O. for 4 x 2 and 4 x 4 applications
- Speed Ratio of 154% of Engine Speed



### Specifications Chart – 246 Series

| 246F                                       |                |
|--------------------------------------------|----------------|
| Standard Output Shaft Size                 |                |
| Intermittent Torque Rating (Lbs. ft.)      | 120            |
| Intermittent Torque Rating (Nm)            | 163            |
| Horsepower Rating for Intermittent Service |                |
| At 1848 R.P.M. of Output Shaft (HP)        | 42             |
| At 1848 R.P.M. of Output Shaft (Kw)        | 32             |
| Approximate Weight:                        | 20 lbs. [9 kg] |

### Chelsea CGP-P11 Series Pump Specifications for 4 x 4 or 4 x 2 Vehicles (3/4" 11 - Tooth Pump Spline)

| Order Code | Chelsea Pump Model | Displacement in³/rev | GPM (1) | Pump (1) HP | Torque (1) ft-lbs | Cont. Pressure PSI | Max Speed RPM |
|------------|--------------------|----------------------|---------|-------------|-------------------|--------------------|---------------|
| 16         | CGP-P11A016-5FC    | 0.37                 | 2.9     | 6.8         | 19.4              | 3988               | 4000          |
| 26         | CGP-P11A026-5FC    | 0.61                 | 4.9     | 11.4        | 32.3              | 3988               | 3600          |
| 37         | CGP-P11A037-5FC    | 0.85                 | 6.8     | 15.9        | 45.2              | 3988               | 3300          |
| 42         | CGP-P11A042-5FC    | 0.98                 | 7.8     | 18.2        | 51.7              | 3988               | 3000          |
| 55         | CGP-P11A055-5FC    | 1.28                 | 10.3    | 20.4        | 57.9              | 3408               | 2800          |
| 61         | CGP-P11A061-5FC    | 1.40                 | 11.3    | 22.5        | 63.9              | 3408               | 2800          |
| 71         | CGP-P11A071-5FC    | 1.65                 | 13.2    | 21.2        | 60.2              | 2755               | 2400          |
| 82         | CGP-P11A082-5FC    | 1.89                 | 15.1    | 21.1        | 60.0              | 2393               | 2300          |

### Chelsea FGP-P17 Series Pump Specifications for 4 x 2 Vehicles Only (7/8" 13 - Tooth Pump Spline)

| Order Code | Chelsea Pump Model | Displacement in³/rev | GPM (1) | Pump (1) HP | Torque (1) ft-lbs | Cont. Pressure PSI | Max Speed RPM |
|------------|--------------------|----------------------|---------|-------------|-------------------|--------------------|---------------|
| 50         | FGP-P17A050-2AN    | 1.16                 | 9.3     | 19.6        | 55.8              | 3625               | 3300          |
| 66         | FGP-P17A066-2AN    | 1.53                 | 12.2    | 25.8        | 73.4              | 3625               | 3100          |
| 87         | FGP-P17A087-2AN    | 2.01                 | 16.1    | 34.1        | 96.8              | 3625               | 3100          |
| 10         | FGP-P17A100-2AN    | 2.32                 | 18.6    | 39.2        | 111.5             | 3625               | 3000          |
| 14         | FGP-P17A137-2AN    | 3.17                 | 25.4    | 43.0        | 122.1             | 2900               | 2600          |

NOTE: FGP-P1 Pumps have a special housing design for mounting to the Ford TorqShift™ transmission.

### Chelsea P16 Series Pump Specifications for 4 x 2 Vehicles Only (7/8" 13 - Tooth Pump Spline)

| Order Code | Chelsea Pump Model | Displacement in³/rev | GPM (1) | Pump (1) HP | Torque (1) ft-lbs | Cont. Pressure PSI | Max Speed RPM |
|------------|--------------------|----------------------|---------|-------------|-------------------|--------------------|---------------|
| 18         | P16-180A-2D1       | 3.511                | 28.1    | 36.1        | 102.5             | 2200               | 2500          |
| 20         | P16-200A-2D1       | 3.902                | 31.2    | 36.4        | 103.5             | 2000               | 2000          |

(1)GPM, Pump Input HP & Torque @ 1200 Engine RPM & 1848 P.T.O. Output Shaft RPM

## P.T.O. Options Chart – Ford Transmissions

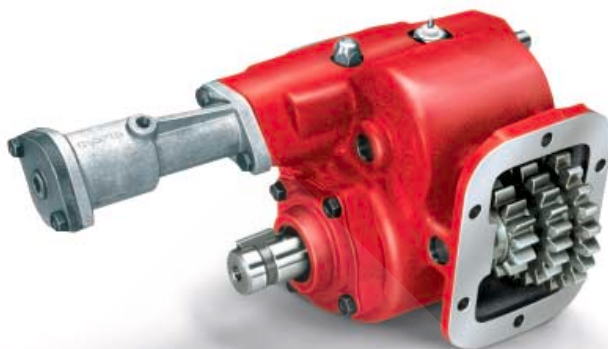
| P.T.O. Series      |                                                                      | 246 |
|--------------------|----------------------------------------------------------------------|-----|
| <b>Lubrication</b> |                                                                      |     |
| P                  | Pressure Lube                                                        | x   |
| <b>Shifting</b>    |                                                                      |     |
| B                  | 12 Volt Electric/Hydraulic                                           | x   |
| <b>Output</b>      |                                                                      |     |
| AD                 | S.A.E. "A" 2 Bolt Flange w/ 3/4" 11 - Tooth Splined                  | x   |
| XD                 | 1.25" Dia. Keyed Shaft                                               | x   |
| XE                 | S.A.E. "A" 2 Bolt Flange w/ 5/8" 9 - Tooth Splined                   | x   |
| XP                 | S.A.E. "A" 2 Bolt Flange w/ 7/8" 13 - Tooth Splined                  | x   |
| <b>Pumps</b>       |                                                                      |     |
| 16                 | Hyd. Pump 2.9 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline                | x   |
| 26                 | Hyd. Pump 4.9 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline                | x   |
| 37                 | Hyd. Pump 6.8 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline                | x   |
| 42                 | Hyd. Pump 7.8 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline                | x   |
| 55                 | Hyd. Pump 10.2 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline               | x   |
| 61                 | Hyd. Pump 11.2 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline               | x   |
| 71                 | Hyd. Pump 13.1 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline               | x   |
| 82                 | Hyd. Pump 15.1 GPM @1200 RPM w/ 3/4" 11 - Tooth Spline               | x   |
| 50                 | Hyd. Pump 9.2 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only)  | x   |
| 66                 | Hyd. Pump 12.2 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |
| 87                 | Hyd. Pump 16.0 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |
| 10                 | Hyd. Pump 18.5 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |
| 14                 | Hyd. Pump 25.0 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |
| 18                 | Hyd. Pump 28.0 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |
| 20                 | Hyd. Pump 31.0 GPM @1200 RPM w/ 7/8" 13 - Tooth Spline ( 4 x 2 Only) | x   |

Check the current price book for available options.

## Reversible Power Take-Offs

### 340 Series

- Single low-speed forward and reverse
- Removable cover plate for adjusting backlash
- Shift options include air and lever
- Variety of input gears to cover most applications
- 6-Bolt Mounting Pad



### Specifications Chart – 340 Series

| 340*F                                      |                    |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 200                |
| Intermittent Torque Rating (Nm)            | 271                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 19                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 38                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 14                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 28                 |
| Approximate Weight:                        | 32 lbs. [15 kg]    |

### 352 Series

- Offers faster speeds than the 340 Series
- Designed with tapered roller bearings for maximum durability
- Shift options include wire, lever and air
- Same input gears as the 442 Series
- 6-Bolt Mounting Pad



### Specifications Chart – 352 Series

| 352*S                                      |                    |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 140                |
| Intermittent Torque Rating (Nm)            | 190                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 13                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 27                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 10                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 20                 |
| Approximate Weight:                        | 37 lbs. [17 kg]    |

## Reversible Power Take-Offs

### 863 Series

- Designed to fit transmissions with 8-Bolt openings
- Capable of up to 500 Ft. lbs of intermittent torque
- Designed for maximum duty reversible applications such as large-capacity winches
- Lever shift is standard



### Specifications Chart – 863 Series

|                                            |                                | 863*B |
|--------------------------------------------|--------------------------------|-------|
| Standard Output Shaft Size                 | 1-1/2" 10 spline w/1410 flange |       |
| Intermittent Torque Rating (Lbs. ft.)      | 500                            |       |
| Intermittent Torque Rating (Nm)            | 678                            |       |
| Horsepower Rating for Intermittent Service |                                |       |
| At 500 R.P.M. of Output Shaft (HP)         | 48                             |       |
| At 1000 R.P.M. of Output Shaft (HP)        | 95                             |       |
| At 500 R.P.M. of Output Shaft (Kw)         | 36                             |       |
| At 1000 R.P.M. of Output Shaft (Kw)        | 71                             |       |
| Approximate Weight:                        | 96 lbs. [44 kg]                |       |

### P.T.O. Options Chart – Reversible P.T.O.s

| P.T.O. Series      |                                              | 340 | 352 | 863 |
|--------------------|----------------------------------------------|-----|-----|-----|
| <b>Lubrication</b> |                                              |     |     |     |
| X                  | Standard                                     | x   | x   | x   |
| P                  | Pressure                                     |     |     | x   |
| <b>Shifting</b>    |                                              |     |     |     |
| A                  | Air                                          | x   | x   |     |
| G                  | Air Shift w/cyl. Location Opposite of Output | x   | x   |     |
| V                  | Air Shift, less installation kit             | x   |     |     |
| W                  | Wire                                         |     | x   |     |
| Y                  | Lever                                        | x   | x   | x   |
| <b>Output</b>      |                                              |     |     |     |
| LG                 | 1-1/2" 10 Spline w/1410 & Self Lube          |     |     | x   |
| XD                 | 1-1/4" Round Shaft                           | x   | x   |     |
| XV                 | 1-1/2" 10 Spline w/1410 Series Flange        |     |     | x   |

Check the current price book for available options.

## Rear Mount and Thrushaft® Power Take-Offs

### 522 Series

- Designed for the ZF Freedomline™ transmissions (US) and ZF, Eaton and Iveco transmissions (EU)
- Direct mount pump flanges available
- Installation is quick and easy
- Comes standard with 1410 Series output flange (US)



#### Specification Chart – 522 Series

|                                            | 522*T                  | 522*V |
|--------------------------------------------|------------------------|-------|
| Standard Output Shaft Size                 | — 1-1/4" Round w/key — |       |
| Intermittent Torque Rating (Lbs. ft)       | 258                    | 258   |
| Intermittent Torque Rating (N.m.)          | 350                    | 350   |
| Horsepower Rating for Intermittent Service |                        |       |
| At 500 R.P.M. of the Output Shaft (HP)     | 25                     | 25    |
| At 1000 R.P.M. of the Output Shaft (HP)    | 49                     | 49    |
| At 500 R.P.M. of the Output Shaft (Kw)     | 18                     | 18    |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 37                     | 37    |
| Approximate Weight:                        | — 35lbs. [16 kg] —     |       |

### 541 Series

- Thrushaft® design for Eaton® Fuller® transmissions
- Three speed ratios available
- Two shift options available
- Direct mount pump flanges or driveshaft output options



#### Specifications Chart – 541 Series

|                                            | 541*L                              | 541*M | 541*N |
|--------------------------------------------|------------------------------------|-------|-------|
| Standard Output Shaft Size                 | — 1-1/2" 10 spline w/1410 flange — |       |       |
| Intermittent Torque Rating (Lbs. ft)       | 400                                | 350   | 300   |
| Intermittent Torque Rating (N.m.)          | 542                                | 475   | 407   |
| Horsepower Rating for Intermittent Service |                                    |       |       |
| At 500 R.P.M. of the Output Shaft (HP)     | 38                                 | 33    | 29    |
| At 1000 R.P.M. of the Output Shaft (HP)    | 76                                 | 67    | 57    |
| At 500 R.P.M. of the Output Shaft (Kw)     | 28                                 | 25    | 21    |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 57                                 | 50    | 43    |
| Approximate Weight:                        | — 37 lbs. [17 kg] —                |       |       |

Note: Transmissions must be ordered with the Thrushaft® or rear mount P.T.O. provision.

## P.T.O. Options Chart – Rear Mount P.T.O.s

| P.T.O. Series      |                                                                 | 522 | 541 |
|--------------------|-----------------------------------------------------------------|-----|-----|
| <b>Lubrication</b> |                                                                 |     |     |
| X                  | Standard                                                        | x   | x   |
| P                  | Pressure                                                        |     |     |
| <b>Shifting</b>    |                                                                 |     |     |
| A                  | Air                                                             | x   | x   |
| F                  | ZMTEC Installation, "AC" Input Gear (Freedomline Transmissions) | x   |     |
| H                  | Less Shifter Kit                                                | x   |     |
| P                  | 12 Volt Elec/Air                                                | x   |     |
| Q                  | 24 Volt Elec/Air                                                | x   |     |
| V                  | Air, less installation kit                                      | x   |     |
| Y                  | Lever                                                           |     | x   |
| <b>Output</b>      |                                                                 |     |     |
| XD                 | 1-1/4" Round Shaft w/keyway                                     | x   |     |
| XK                 | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)      |     | x   |
| XV                 | 1-1/2" 10 spline w/1410 Series Flange                           |     | x   |
| XX*                | 1-1/4" S.A.E. Tapered Shaft w/keyway                            | x   |     |
| XY                 | DIN 5462 Pump Mounting                                          | x   |     |

\* Order companion flange (3-1-604) separately

Check the current price book for available options.

## Dual Output Shaft Power Take-Offs

### 452 Series

- Only dual shaft P.T.O. offered in the industry
- Designed for fuel delivery trucks and other applications requiring two single-rotation shafts
- Same gearing as the 442 Series
- Both standard and deep mounting options available



### Specifications Chart – 452 Series

|                                            | 452*S              |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft)       | 140                |
| Intermittent Torque Rating (N.m.)          | 190                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of the Output Shaft (HP)     | 13                 |
| At 1000 R.P.M. of the Output Shaft (HP)    | 27                 |
| At 500 R.P.M. of the Output Shaft (Kw)     | 10                 |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 20                 |
| Approximate Weight:                        | 37 lbs. [17 kg]    |

### P.T.O. Options Chart – Dual Output Shaft P.T.O.s

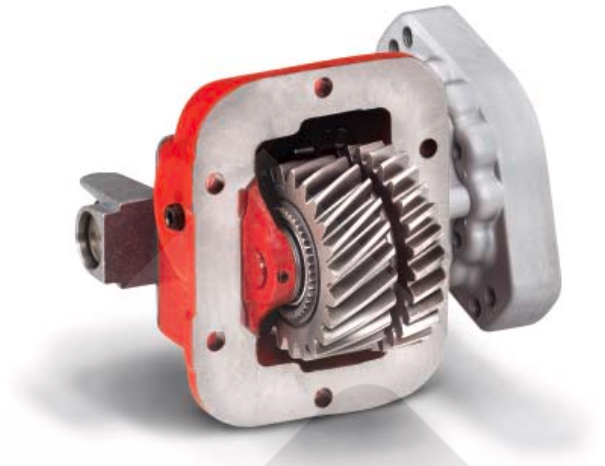
| P.T.O. Series                        | 452 |
|--------------------------------------|-----|
| <b>Lubrication</b>                   |     |
| X      Standard                      | x   |
| <b>Shifting</b>                      |     |
| W      Single Shift Wire Control     | x   |
| C      Special Control & Bracket Kit | x   |
| <b>Output</b>                        |     |
| DD      1-1/4" Round Dual Shafts     | x   |

Check the current price book for available options.

## Asia Pacific Power Take-Offs

### 429 Series

- 429 Series fits Mitsubishi MO50S5, MO60S6 and MO70S6 transmissions
- Eight output options
- Three shift options
- Mounts directly to transmissions, no geared adapter needed



#### Specifications Chart – 429 Series

|                                            | 429*Q              |
|--------------------------------------------|--------------------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs.ft)        | 175                |
| Intermittent Torque Rating (N.m.)          | 237                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of the Output Shaft (HP)     | 17                 |
| At 1000 R.P.M. of the Output Shaft (HP)    | 33                 |
| At 500 R.P.M. of the Output Shaft (Kw)     | 12                 |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 25                 |
| Approximate Weight:                        | 37 lbs. [17 kg]    |

### 435 Series

- 435 Series fits the Hino LF06S and LJ06S transmissions
- Three speed ratios and seven output options
- Mounts directly to transmissions, no geared adapter needed
- Cast iron housing for strength and tapered cone bearings for increased load capacity



#### Specifications Chart – 435 Series

|                                            | 435*S               | 435*U |
|--------------------------------------------|---------------------|-------|
| Standard Output Shaft Size                 | 1-1/4" Round w/key  |       |
| Intermittent Torque Rating (Lbs. ft)       | 175                 | 175   |
| Intermittent Torque Rating (N.m.)          | 237                 | 237   |
| Horsepower Rating for Intermittent Service |                     |       |
| At 500 R.P.M. of the Output Shaft (HP)     | 17                  | 17    |
| At 1000 R.P.M. of the Output Shaft (HP)    | 33                  | 33    |
| At 500 R.P.M. of the Output Shaft (Kw)     | 12                  | 12    |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 25                  | 25    |
| Approximate Weight:                        | — 37 lbs. [17 kg] — |       |

## P.T.O. Options Chart – Asia Pacific P.T.O.s

| P.T.O. Series      |                                                                         | 429 | 435 |
|--------------------|-------------------------------------------------------------------------|-----|-----|
| <b>Lubrication</b> |                                                                         |     |     |
| X                  | Standard                                                                | x   | x   |
| <b>Shifting</b>    |                                                                         |     |     |
| A                  | Air                                                                     | x   | x   |
| P                  | Electric/Air 12V                                                        | x   |     |
| W                  | Wire                                                                    | x   | x   |
| <b>Output</b>      |                                                                         |     |     |
| AZ                 | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                      |     | x   |
| GA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)   |     | x   |
| GB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)   |     | x   |
| GH                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable) |     | x   |
| GJ                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable) |     | x   |
| GQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable) |     | x   |
| GR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)    |     | x   |
| RA                 | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                | x   | x   |
| RB                 | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                | x   | x   |
| RE                 | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)              | x   | x   |
| RF                 | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)              | x   | x   |
| XD                 | 1-1/4" Round Shaft                                                      | x   | x   |
| XE                 | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)               | x   |     |
| XQ*                | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)              | x   | x   |
| XR                 | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth)                 | x   | x   |

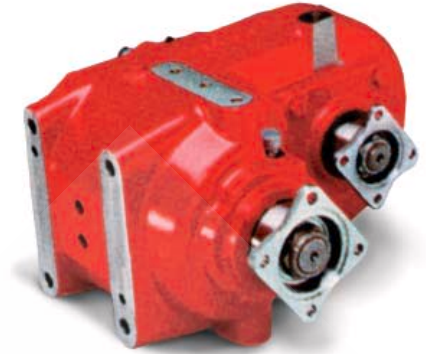
\* XQ/GQ same as XK/GK except flange rotated 90°

**Check the current price book for available options.**

## Split Shaft Power Take-Offs

### 901 Series

- Used on medium duty trucks that have applications requiring the torque capacity of an 8-Bolt P.T.O.
- Provides 100% of input speed
- Mount in any orientation with the P.T.O. shaft going to the front or rear of the truck
- Air and Lever shift available, along with three direct mount flanges



#### Specifications Chart – 901 Series

|                                            | 901              |
|--------------------------------------------|------------------|
| Standard Output Shaft Size                 | 1-3/4" 10 Spline |
| Intermittent Torque Rating (Lbs. ft)       | 500              |
| Intermittent Torque Rating (N.m.)          | 678              |
| Horsepower Rating for Intermittent Service |                  |
| At 500 R.P.M. of the Output Shaft (HP)     | 48               |
| At 1000 R.P.M. of the Output Shaft (HP)    | 95               |
| At 500 R.P.M. of the Output Shaft (Kw)     | 36               |
| At 1000 R.P.M. of the Output Shaft (Kw)    | 71               |
| Approximate Weight:                        | 185 lbs. [84 kg] |

### 912 Series

- Three 8-Bolt openings that allow you to operate a variety of auxiliary equipment
- Wide variety of 6-Bolt, 8-Bolt, Powershift, and Reversible P.T.O.s fit the 912 Series
- Air and Lever shift available



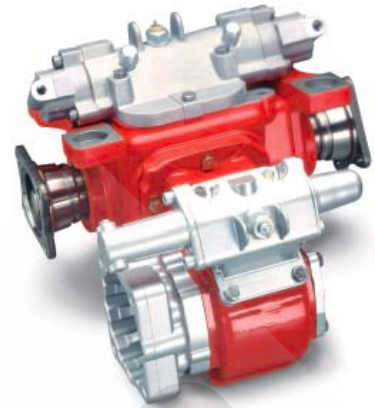
#### Specifications Chart – 912 Series

|                            |                      |        |
|----------------------------|----------------------|--------|
| Standard Output Shaft Size | — 2-3/4" 10 Spline — |        |
| Max Thru Torque Capacity   | Lbs. ft              | Nm     |
| w/ Diesel Engine           |                      |        |
| Automatic Transmission     | 13,000               | 17,625 |
| Manual Transmission        | 12,000               | 16,270 |
| w/ Gas Engine              |                      |        |
| Automatic Transmission     | 16,000               | 21,693 |
| Manual Transmission        | 15,000               | 20,337 |
| Approximate Weight:        | — 130 lbs. [59 kg] — |        |

## Split Shaft Power Take-Offs

### 941 Series

- Smaller version of the 912 Series with two 6-Bolt openings
- Designed for Class 3, 4, 5 and 6 trucks with automatic transmissions and no P.T.O. opening or trucks requiring additional P.T.O. openings
- Several 6-Bolt and Reversible P.T.O.s will fit on the 941 Series



### Specifications Chart – 941 Series

|                            |                     |       |
|----------------------------|---------------------|-------|
| Standard Output Shaft Size | —1-1/2" 12 Spline—  |       |
| Max Thru Torque Capacity   | Lbs. ft             | Nm    |
| w/ Diesel Engine           |                     |       |
| Automatic Transmission     | 3,100               | 4,203 |
| Manual Transmission        | 2,900               | 3,932 |
| w/ Gas Engine              |                     |       |
| Automatic Transmission     | 4,200               | 5,694 |
| Manual Transmission        | 3,900               | 5,288 |
| Approximate Weight:        | — 60 lbs. [27 kg] — |       |

### P.T.O. Options Chart – Split Shafts

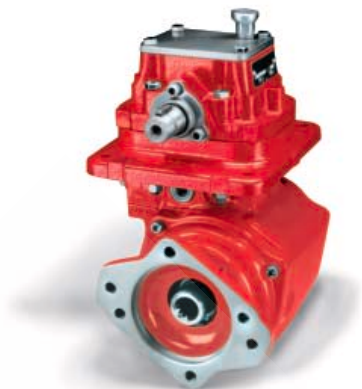
| P.T.O. Series                                                 | 901 | 912 | 941 |
|---------------------------------------------------------------|-----|-----|-----|
| <b>Shifting</b>                                               |     |     |     |
| A Air                                                         | x   | x   | x   |
| Y Lever                                                       | x   | x   | x   |
| <b>Input-Output Shaft</b>                                     |     |     |     |
| C 1-3/4" 10 Spline                                            | x   |     |     |
| G 2-3/4" Shaft w/1710 1/2 Rd. Yoke                            |     | x   |     |
| H 2-3/4" Shaft w/1810 1/2 Rd. Yoke                            |     | x   |     |
| J Without Flanges                                             |     | x   | x   |
| K 1410 Series Flange                                          |     |     | x   |
| L 1550 Series Flange                                          |     |     | x   |
| M 2-3/4" Shaft w/1610 companion flange                        |     | x   |     |
| P Output shaft for Spicer 170-4-521-1X                        |     | x   |     |
| S Output shaft for Spicer 250-4-241-1X                        |     | x   |     |
| <b>P.T.O. Output Shaft</b>                                    |     |     |     |
| XV 1-1/2" 10 Spline                                           | x   |     |     |
| XK S.A.E. "B" 2 or 4 Bolt                                     | x   |     |     |
| XS S.A.E. "C" 4 Bolt                                          | x   |     |     |
| XU S.A.E. "C" 2 Bolt                                          | x   |     |     |
| XX No PTO Shaft                                               |     |     | x   |
| XX 2 8-Bolt P.T.O. opening with air shift or 3 8-Bolt opening |     | x   |     |

Check the current price book for available options.

## Crankshaft-Driven P.T.O.s

### 2230U Series

- Allows the driver to shift “on the go”
- Electric-over-air for reliable shifting
- 2230U Series run at 88% of engine speed
- Electronic Overspeed Control (EOC) available to protect driven equipment



### Specifications Chart – Crankshaft-Driven P.T.O.s

| 2230U                                      |                    |
|--------------------------------------------|--------------------|
| Percent of Engine Speed                    | 88%                |
| Standard Output Shaft Size                 | 1-1/4" Round w/key |
| Intermittent Torque Rating (Lbs. ft.)      | 225                |
| Intermittent Torque Rating (Nm)            | 305                |
| Horsepower Rating for Intermittent Service |                    |
| At 500 R.P.M. of Output Shaft (HP)         | 21                 |
| At 1000 R.P.M. of Output Shaft (HP)        | 43                 |
| At 500 R.P.M. of Output Shaft (Kw)         | 16                 |
| At 1000 R.P.M. of Output Shaft (Kw)        | 32                 |
| Approximate Weight:                        | 88 lbs. [40 kg]    |

### 2442 Series

- The economical 2442 Series is a manual shift P.T.O.
- Operator must stop the engine before shifting
- Available in 7 different speed ratios ranging from 39% to 123% of engine speed
- 10 shift options available



### Specifications Chart – Crankshaft-Driven P.T.O.s

|                                            | 2442*F             | 2442*L | 2442*Q | 2442*S | 2442*U | 2442*W | 2442*X |
|--------------------------------------------|--------------------|--------|--------|--------|--------|--------|--------|
| Percent of Engine Speed                    | 39%                | 50%    | 54%    | 74%    | 89%    | 104%   | 123%   |
| Standard Output Shaft Size                 | 1-1/4" Round w/key |        |        |        |        |        |        |
| Intermittent Torque Rating (Lbs. ft.)      | 250                | 250    | 225    | 200    | 195    | 175    | 140    |
| Intermittent Torque Rating (Nm)            | 339                | 339    | 305    | 271    | 264    | 237    | 190    |
| Horsepower Rating for Intermittent Service |                    |        |        |        |        |        |        |
| At 500 R.P.M. of Output Shaft (HP)         | 24                 | 24     | 21     | 19     | 19     | 17     | 13     |
| At 1000 R.P.M. of Output Shaft (HP)        | 48                 | 48     | 43     | 38     | 37     | 33     | 27     |
| At 500 R.P.M. of Output Shaft (Kw)         | 18                 | 18     | 16     | 14     | 14     | 12     | 10     |
| At 1000 R.P.M. of Output Shaft (Kw)        | 36                 | 36     | 32     | 28     | 28     | 25     | 20     |
| Approximate Weight:                        | 69 lbs. [31 kg]    |        |        |        |        |        |        |

## P.T.O. Options Chart – Crankshaft-Driven P.T.O.s

| P.T.O. Series   |                                                                               | 2230U | 2442 |
|-----------------|-------------------------------------------------------------------------------|-------|------|
| <b>Shifting</b> |                                                                               |       |      |
| A               | Air Shift                                                                     | x     | x    |
| H               | Less Wire Shift Cover                                                         |       | x    |
| J               | 24V Electronic Overspeed Control                                              | x     |      |
| N               | 12V Electronic Overspeed Control                                              | x     |      |
| P               | 12 Volt Electric Over Air w/o Overspeed Control                               | x     | x    |
| S               | P.T.O. & Pump Combo Valve                                                     |       | x    |
| V               | Air Shift Less Installation Kit                                               |       | x    |
| W               | Cable Shift                                                                   |       | x    |
| X               | Less Cable and Knob                                                           |       | x    |
| <b>Output</b>   |                                                                               |       |      |
| AA              | Special Pump for England                                                      |       | x    |
| AF              | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                  | x     | x    |
| AK              | S.A.E. "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                         |       | x    |
| AZ              | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth)                            |       | x    |
| GA              | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         |       | x    |
| GB              | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)         |       | x    |
| GF              | S.A.E. "B" 2 or 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)     |       | x    |
| GH              | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       |       | x    |
| GJ              | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth) (Greaseable)       |       | x    |
| GK              | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       |       | x    |
| GP              | S.A.E. "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)            |       | x    |
| GQ*             | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth) (Greaseable)       |       | x    |
| GR              | Chelsea Special Pump Mount, "B" Shaft (7/8" 13 - Tooth) (Greaseable)          |       | x    |
| GY              | DIN 5462 Pump Mounting (Greaseable)                                           |       | x    |
| GZ              | Non Standard Flange, "C" Shaft (1-1/4" 14 - Tooth) (Greaseable)               |       | x    |
| LA              | S.A.E. "B" 2 Bolt Flange w/Lube Pump (Same as AK)                             |       | x    |
| LB              | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XP)                             |       | x    |
| LC              | S.A.E. "A" 2 Bolt Flange w/Lube Pump (Same as XQ)                             |       | x    |
| LD              | 1-1/4" Round Shaft w/Lube Pump (Same as XD)                                   |       | x    |
| LF              | S.A.E. "B" 2 or 4 Bolt Flange w/Lube Pump (Same as XK)                        |       | x    |
| RA              | Rotatable "B" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      | x     | x    |
| RB              | Rotatable "B" 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      | x     | x    |
| RC              | Rotatable "A" 2 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                       |       | x    |
| RD              | Rotatable "A" 2 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                      |       | x    |
| RE              | Rotatable "B" 4 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    |       | x    |
| RF              | Rotatable "B" 2 Bolt Flange, "BB" Shaft (1.00" 15 - Tooth)                    |       | x    |
| RY              | Rotatable DIN 5462 Pump Flange                                                |       | x    |
| XD              | 1-1/4" Round Shaft                                                            | x     | x    |
| XE              | S.A.E. "A" 2 or 4 Bolt Flange, "A" Shaft (5/8" 9 - Tooth)                     |       | x    |
| XG              | Non Standard S.A.E. "B" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) |       | x    |
| XJ              | Non Standard S.A.E. "A" 2 Bolt Flange, Non Standard Shaft (3/4" w/ 3/16" key) |       | x    |
| XK              | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    | x     | x    |
| XQ*             | S.A.E. "B" 2 or 4 Bolt Flange, "B" Shaft (7/8" 13 - Tooth)                    |       | x    |
| XR              | Non Standard Flange, "B" Shaft (7/8" 13 - Tooth)                              | x     | x    |
| XX**            | 1-1/4" S.A.E. Tapered Shaft w/keyway                                          |       | x    |
| XY              | DIN 5462 Pump Mounting                                                        | x     | x    |

\* XQ/GQ same as XK/GK except flange rotated 90°

\*\* Order companion (3-1-604) separately

**Check the current price book for available options.**

## Kit-Style Geared Adapters

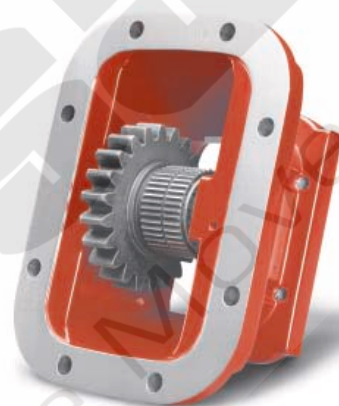
### 626 Series

- 6-Bolt P.T.O. for a 6-Bolt Transmission Opening
- Moves the P.T.O. straight out from the transmission
- Uses the same input gears as the 442 and 489 Series
- Uses the same mounting hardware and spacers used to mount a 442 Series to a specific application



### 628 Series

- 6-Bolt P.T.O. for a 8-Bolt Transmission Opening
- Moves the P.T.O. straight out from the transmission
- Uses the same input gears as the 442 and 489 Series
- Uses the same mounting hardware and spacers used to mount a 489 Series to a specific application



### 630 Series

- 6-Bolt P.T.O. for a 6-Bolt Transmission Opening
- Moves the P.T.O. down at a 30° angle, helping to eliminate interference problems
- Uses the same input gears as the 442 and 489 Series
- 630-02 used with Eaton UltraShift I-Brake for interference problems



### 645 Series

- 6-Bolt P.T.O. for a 6-Bolt Transmission Opening
- Moves the P.T.O. down at a 45° angle, helping to eliminate interference problems
- Uses the same input gears as the 442 and 489 Series



## Kit-Style Geared Adapters – 626

| Adapter Input Gear |          |             |           | Gasket Pack & Stud Kit<br>P.T.O. to Adapter |          | P.T.O. Input Gear       |          |             |           |
|--------------------|----------|-------------|-----------|---------------------------------------------|----------|-------------------------|----------|-------------|-----------|
| Model No.          | Part No. | Helix Angle | No. Teeth | Spacer                                      | Stud Kit | P.T.O. Pitch Designator | Part No. | Helix Angle | No. Teeth |
| 626*AB             | 5-P-1001 | Spur        | 19        | 7-A-140                                     | 7170-3X  | —**AB                   | 5-P-1001 | Spur        | 19        |
| 626*AH             | 5-P-1004 | Spur        | 22        | 7-A-140                                     | 7170-3X  | —**AH                   | 5-P-1004 | Spur        | 22        |
| 626*AP             | 5-P-1006 | Left Hand   | 21        | 7-A-140                                     | 7170-3X  | —**GX                   | 5-P-1183 | Right Hand  | 21        |
| 626*AR             | 5-P-1008 | Left Hand   | 21        | 7-A-187                                     | 7170-3X  | —**GY                   | 5-P-1184 | Right Hand  | 21        |
| 626*AW             | 5-P-1009 | Left Hand   | 22        | 7-A-270                                     | 7170-4X  | —**GZ                   | 5-P-1185 | Right Hand  | 22        |
| 626*BF             | 5-P-1014 | Spur        | 27        | 7-A-200                                     | 7170-4X  | —**BF                   | 5-P-1014 | Spur        | 27        |
| 626*BG             | 5-P-1015 | Left Hand   | 23        | 7-A-140                                     | 7170-3X  | —**HB                   | 5-P-1187 | Right Hand  | 23        |
| 626*BH             | 5-P-1016 | Right Hand  | 25        | 7-A-240                                     | 7170-4X  | —**BJ                   | 5-P-1017 | Left Hand   | 25        |
| 626*BM             | 5-P-1020 | Left Hand   | 22        | 7-A-165                                     | 7170-1X  | —**HC                   | 5-P-1188 | Right Hand  | 22        |
| 626*BQ             | 5-P-1023 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**BP                   | 5-P-1022 | Right Hand  | 26        |
| 626*BS             | 5-P-1025 | Left Hand   | 26        | 7-A-062                                     | 7170-4X  | —**BR                   | 5-P-1024 | Right Hand  | 26        |
| 626*CB             | 5-P-1029 | Left Hand   | 25        | 7-A-140                                     | 7170-3X  | —**HD                   | 5-P-1189 | Right Hand  | 25        |
| 626*CD             | 5-P-1031 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**HE                   | 5-P-1190 | Right Hand  | 27        |
| 626*DA             | 5-P-1037 | Spur        | 23        | —                                           | —        | —**DA                   | 5-P-1037 | Spur        | 23        |
| 626*DU             | 5-P-1050 | Left Hand   | 28        | 7-A-240                                     | 7170-4X  | —**HH                   | 5-P-1193 | Right Hand  | 28        |
| 626*ED             | 5-P-1056 | Left Hand   | 34        | 7-A-240                                     | 7170-4X  | —**HK                   | 5-P-1195 | Right Hand  | 34        |
| 626*ES             | 5-P-1059 | Left Hand   | 22        | 7-A-062                                     | —        | —**HL                   | 5-P-1196 | Right Hand  | 22        |
| 626*EV             | 5-P-1060 | Spur        | 40        | 7-A-300                                     | 7170-4X  | —**EV                   | 5-P-1060 | Spur        | 40        |
| 626*EW             | 5-P-1061 | Left Hand   | 20        | 7-A-125                                     | 7170-3X  | —**HM                   | 5-P-1197 | Right Hand  | 20        |
| 626*FC             | 5-P-1064 | Left Hand   | 26        | 7-A-165                                     | 7170-3X  | —**HP                   | 5-P-1199 | Right Hand  | 26        |
| 626*FN             | 5-P-1070 | Left Hand   | 26        | 7-A-300                                     | 7170-4X  | —**HR                   | 5-P-1201 | Right Hand  | 26        |
| 626*GR             | 5-P-1157 | Spur        | 23        | 7-A-062                                     | —        | —**GR                   | 5-P-1157 | Spur        | 23        |
| 626*HY             | 5-P-1237 | Left Hand   | 26        | 7-A-125                                     | 7170-1X  | —**JB                   | 5-P-1244 | Right Hand  | 26        |
| 630DJA             | 5-P-1243 | Left Hand   | 27        | 7-A-165                                     | 7170-3X  | —**JC                   | 5-P-1247 | Right Hand  | 27        |
| 626*JK             | 5-P-1261 | Left Hand   | 24        | 7-A-187                                     | 7170-3X  | —**JL                   | 5-P-1262 | Right Hand  | 24        |
| 626*JM             | 5-P-1263 | Left Hand   | 22        | 7-A-125                                     | 7170-3X  | —**JN                   | 5-P-1264 | Right Hand  | 22        |
| 626*JU             | 5-P-1316 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**KA                   | 5-P-1318 | Right Hand  | 25        |
| 626*JW             | 5-P-1319 | Left Hand   | 23        | 7-A-093                                     | 7170-3X  | —**KB                   | 5-P-1321 | Right Hand  | 23        |
| 626*KJ             | 5-P-1405 | Left Hand   | 33        | —                                           | 7170-1X  | —**KK                   | 5-P-1406 | Right Hand  | 33        |
| 626*KL             | 5-P-1407 | Left Hand   | 29        | 7-A-200                                     | 7170-4X  | —**KM                   | 5-P-1408 | Right Hand  | 29        |
| 626*KN             | 5-P-1383 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**KP                   | 5-P-1384 | Right Hand  | 27        |

Check the current price book for available options.

## Kit-Style Geared Adapters – 628

| Adapter Input Gear |          |             |           | Gasket Pack & Stud Kit<br>P.T.O. to Adapter |          | P.T.O. Input Gear       |          |             |           |
|--------------------|----------|-------------|-----------|---------------------------------------------|----------|-------------------------|----------|-------------|-----------|
| Model No.          | Part No. | Helix Angle | No. Teeth | Spacer                                      | Stud Kit | P.T.O. Pitch Designator | Part No. | Helix Angle | No. Teeth |
| 628*AB             | 5-P-1001 | Spur        | 19        | 7-A-140                                     | 7170-3X  | —**AB                   | 5-P-1001 | Spur        | 19        |
| 628*AH             | 5-P-1004 | Spur        | 22        | 7-A-165                                     | 7170-3X  | —**AH                   | 5-P-1004 | Spur        | 22        |
| 628*AR             | 5-P-1008 | Left Hand   | 21        | 7-A-200                                     | 7170-3X  | —**GY                   | 5-P-1184 | Right Hand  | 21        |
| 628*BG             | 5-P-1015 | Left Hand   | 23        | 7-A-165                                     | 7170-3X  | —**HB                   | 5-P-1187 | Right Hand  | 23        |
| 628*DA             | 5-P-1037 | Spur        | 23        | —                                           | 7170-2X  | —**DA                   | 5-P-1037 | Spur        | 23        |
| 628*DU             | 5-P-1050 | Left Hand   | 28        | 7-A-270                                     | 7170-5X  | —**HH                   | 5-P-1193 | Right Hand  | 28        |
| 628*EV             | 5-P-1060 | Spur        | 40        | 7-A-300                                     | 7170-5X  | —**EV                   | 5-P-1060 | Spur        | 40        |

Check the current price book for available options.

## Kit-Style Geared Adapters – 630

| Adapter Input Gear |          |             |           | Gasket Pack & Stud Kit<br>P.T.O. to Adapter |          | P.T.O. Input Gear       |          |             |           |
|--------------------|----------|-------------|-----------|---------------------------------------------|----------|-------------------------|----------|-------------|-----------|
| Model No.          | Part No. | Helix Angle | No. Teeth | Spacer                                      | Stud Kit | P.T.O. Pitch Designator | Part No. | Helix Angle | No. Teeth |
| 630*AB             | 5-P-1001 | Spur        | 19        | 7-A-140                                     | 7170-3X  | —**AB                   | 5-P-1001 | Spur        | 19        |
| 630*AH             | 5-P-1004 | Spur        | 22        | 7-A-140                                     | 7170-3X  | —**AH                   | 5-P-1004 | Spur        | 22        |
| 630*AP             | 5-P-1006 | Left Hand   | 21        | 7-A-140                                     | 7170-3X  | —**GX                   | 5-P-1183 | Right Hand  | 21        |
| 630*AR             | 5-P-1008 | Left Hand   | 21        | 7-A-187                                     | 7170-3X  | —**GY                   | 5-P-1184 | Right Hand  | 21        |
| 630*BG             | 5-P-1015 | Left Hand   | 23        | 7-A-140                                     | 7170-3X  | —**HB                   | 5-P-1187 | Right Hand  | 23        |
| 630*BH             | 5-P-1016 | Right Hand  | 25        | 7-A-240                                     | 7170-4X  | —**BJ                   | 5-P-1017 | Left Hand   | 25        |
| 630*BQ             | 5-P-1023 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**BP                   | 5-P-1022 | Right Hand  | 26        |
| 630*BS             | 5-P-1025 | Left Hand   | 26        | 7-A-062                                     | 7170-4X  | —**BR                   | 5-P-1024 | Right Hand  | 26        |
| 630*CD             | 5-P-1031 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**HE                   | 5-P-1190 | Right Hand  | 27        |
| 630*DA             | 5-P-1037 | Spur        | 23        | —                                           | —        | —**DA                   | 5-P-1037 | Spur        | 23        |
| 630*DU             | 5-P-1050 | Left Hand   | 28        | 7-A-240                                     | 7170-4X  | —**HH                   | 5-P-1193 | Right Hand  | 28        |
| 630*ED             | 5-P-1056 | Left Hand   | 34        | 7-A-240                                     | 7170-4X  | —**HK                   | 5-P-1195 | Right Hand  | 34        |
| 630*ES             | 5-P-1059 | Left Hand   | 22        | 7-A-062                                     | —        | —**HL                   | 5-P-1196 | Right Hand  | 22        |
| 630*EV             | 5-P-1060 | Spur        | 40        | 7-A-300                                     | 7170-4X  | —**EV                   | 5-P-1060 | Spur        | 40        |
| 630*EW             | 5-P-1061 | Left Hand   | 20        | 7-A-125                                     | 7170-3X  | —**HM                   | 5-P-1197 | Right Hand  | 20        |
| 630*FC             | 5-P-1064 | Left Hand   | 26        | 7-A-165                                     | 7170-3X  | —**HP                   | 5-P-1199 | Right Hand  | 26        |
| 630*FN             | 5-P-1070 | Left Hand   | 26        | 7-A-300                                     | 7170-4X  | —**HR                   | 5-P-1201 | Right Hand  | 26        |
| 630*GR             | 5-P-1157 | Spur        | 23        | 7-A-062                                     | —        | —**GR                   | 5-P-1157 | Spur        | 23        |
| 630*HY             | 5-P-1237 | Left Hand   | 26        | 7-A-125                                     | 7170-1X  | —**JB                   | 5-P-1244 | Right Hand  | 26        |
| 630DJA             | 5-P-1243 | Left Hand   | 27        | 7-A-165                                     | 7170-3X  | —**JC                   | 5-P-1247 | Right Hand  | 27        |
| 630*JK             | 5-P-1261 | Left Hand   | 24        | 7-A-187                                     | 7170-3X  | —**JL                   | 5-P-1262 | Right Hand  | 24        |
| 630*JM             | 5-P-1263 | Left Hand   | 22        | 7-A-125                                     | 7170-3X  | —**JN                   | 5-P-1264 | Right Hand  | 22        |
| 630*JU             | 5-P-1316 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**KA                   | 5-P-1318 | Right Hand  | 25        |
| 630*JW             | 5-P-1319 | Left Hand   | 23        | 7-A-093                                     | 7170-3X  | —**KB                   | 5-P-1321 | Right Hand  | 23        |
| 630*KJ             | 5-P-1405 | Left Hand   | 33        | —                                           | 7170-1X  | —**KK                   | 5-P-1406 | Right Hand  | 33        |
| 630*KL             | 5-P-1407 | Left Hand   | 29        | 7-A-200                                     | 7170-4X  | —**KM                   | 5-P-1408 | Right Hand  | 29        |
| 630*KN             | 5-P-1383 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**KP                   | 5-P-1384 | Right Hand  | 27        |

Check the current price book for available options.

## Kit-Style Geared Adapters – 645

| Adapter Input Gear |          |             |           | Gasket Pack & Stud Kit<br>P.T.O. to Adapter |          | P.T.O. Input Gear       |          |             |           |
|--------------------|----------|-------------|-----------|---------------------------------------------|----------|-------------------------|----------|-------------|-----------|
| Model No.          | Part No. | Helix Angle | No. Teeth | Spacer                                      | Stud Kit | P.T.O. Pitch Designator | Part No. | Helix Angle | No. Teeth |
| 645*AB             | 5-P-1001 | Spur        | 19        | 7-A-140                                     | 7170-3X  | —**AB                   | 5-P-1001 | Spur        | 19        |
| 645*AH             | 5-P-1004 | Spur        | 22        | 7-A-140                                     | 7170-3X  | —**AH                   | 5-P-1004 | Spur        | 22        |
| 645*AP             | 5-P-1006 | Left Hand   | 21        | 7-A-140                                     | 7170-3X  | —**GX                   | 5-P-1183 | Right Hand  | 21        |
| 645*AR             | 5-P-1008 | Left Hand   | 21        | 7-A-187                                     | 7170-3X  | —**GY                   | 5-P-1184 | Right Hand  | 21        |
| 645*AW             | 5-P-1009 | Left Hand   | 22        | 7-A-270                                     | 7170-4X  | —**GZ                   | 5-P-1185 | Right Hand  | 22        |
| 645*BG             | 5-P-1015 | Left Hand   | 23        | 7-A-140                                     | 7170-3X  | —**HB                   | 5-P-1187 | Right Hand  | 23        |
| 645*BH             | 5-P-1016 | Right Hand  | 25        | 7-A-240                                     | 7170-4X  | —**BJ                   | 5-P-1017 | Left Hand   | 25        |
| 645*BM             | 5-P-1020 | Left Hand   | 22        | 7-A-165                                     | 7170-1X  | —**HC                   | 5-P-1188 | Right Hand  | 22        |
| 645*BQ             | 5-P-1023 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**BP                   | 5-P-1022 | Right Hand  | 26        |
| 645*BS             | 5-P-1025 | Left Hand   | 26        | 7-A-062                                     | 7170-4X  | —**BR                   | 5-P-1024 | Right Hand  | 26        |
| 645*CB             | 5-P-1029 | Left Hand   | 25        | 7-A-140                                     | 7170-3X  | —**HD                   | 5-P-1189 | Right Hand  | 25        |
| 645*CD             | 5-P-1031 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**HE                   | 5-P-1190 | Right Hand  | 27        |
| 645*DA             | 5-P-1037 | Spur        | 23        | —                                           | —        | —**DA                   | 5-P-1037 | Spur        | 23        |
| 645*DU             | 5-P-1050 | Left Hand   | 28        | 7-A-240                                     | 7170-4X  | —**HH                   | 5-P-1193 | Right Hand  | 28        |
| 645*ED             | 5-P-1056 | Left Hand   | 34        | 7-A-240                                     | 7170-4X  | —**HK                   | 5-P-1195 | Right Hand  | 34        |
| 645*ES             | 5-P-1059 | Left Hand   | 22        | 7-A-062                                     | —        | —**HL                   | 5-P-1196 | Right Hand  | 22        |
| 645*EV             | 5-P-1060 | Spur        | 40        | 7-A-300                                     | 7170-4X  | —**EV                   | 5-P-1060 | Spur        | 40        |
| 645*EW             | 5-P-1061 | Left Hand   | 20        | 7-A-125                                     | 7170-3X  | —**HM                   | 5-P-1197 | Right Hand  | 20        |
| 645*FC             | 5-P-1064 | Left Hand   | 26        | 7-A-165                                     | 7170-3X  | —**HP                   | 5-P-1199 | Right Hand  | 26        |
| 645*FN             | 5-P-1070 | Left Hand   | 26        | 7-A-300                                     | 7170-4X  | —**HR                   | 5-P-1201 | Right Hand  | 26        |
| 645*GR             | 5-P-1157 | Spur        | 23        | 7-A-062                                     | —        | —**GR                   | 5-P-1157 | Spur        | 23        |
| 645*HV             | 5-P-1300 | Spur        | 24        | 7-A-140                                     | 7170-1X  | —**HV                   | 5-P-1300 | Spur        | 24        |
| 645*HY             | 5-P-1237 | Left Hand   | 26        | 7-A-125                                     | 7170-1X  | —**JB                   | 5-P-1244 | Right Hand  | 26        |
| 645DJA             | 5-P-1243 | Left Hand   | 27        | 7-A-165                                     | 7170-3X  | —**JC                   | 5-P-1247 | Right Hand  | 27        |
| 645*JD             | 5-P-1248 | Left Hand   | 20        | 7-A-200                                     | 7170-3X  | —**JE                   | 5-P-1249 | Right Hand  | 20        |
| 645*JK             | 5-P-1261 | Left Hand   | 24        | 7-A-187                                     | 7170-3X  | —**JL                   | 5-P-1262 | Right Hand  | 24        |
| 645*JM             | 5-P-1263 | Left Hand   | 22        | 7-A-125                                     | 7170-3X  | —**JN                   | 5-P-1264 | Right Hand  | 22        |
| 645*JP             | 5-P-1268 | Left Hand   | 33        | 7-A-187                                     | 7170-3X  | —**JQ                   | 5-P-1269 | Right Hand  | 33        |
| 645*JS             | 5-P-1310 | Left Hand   | 20        | 7-A-062                                     | —        | —**JY                   | 5-P-1312 | Right Hand  | 20        |
| 645*JU             | 5-P-1316 | Left Hand   | 25        | 7-A-200                                     | 7170-4X  | —**KA                   | 5-P-1318 | Right Hand  | 25        |
| 645*JW             | 5-P-1319 | Left Hand   | 23        | 7-A-093                                     | 7170-3X  | —**KB                   | 5-P-1321 | Right Hand  | 23        |
| 645*KJ             | 5-P-1405 | Left Hand   | 33        | —                                           | 7170-1X  | —**KK                   | 5-P-1406 | Right Hand  | 33        |
| 645*KL             | 5-P-1407 | Left Hand   | 29        | 7-A-200                                     | 7170-4X  | —**KM                   | 5-P-1408 | Right Hand  | 29        |
| 645*KN             | 5-P-1383 | Left Hand   | 27        | 7-A-270                                     | 7170-4X  | —**KP                   | 5-P-1384 | Right Hand  | 27        |

Check the current price book for available options.

## Shifter Options

### Wire (Cable) Shift

- Chelsea wire shift system is economical, easy to install and easy to use
- Features a vinyl-covered stainless steel push/pull cable for maximum corrosion protection
- Standard cable length is 10 feet
- 15, 20, 25, and 30 foot long cables available

### Air Shift

- Simple to install and easy to shift
- Chelsea Air shift covers feature heavy-duty seals and precisely machined pistons
- Shifter shaft cover provides protection against system contamination
- The DOT-required pressure protection valve is included with this option

### Electric-Over-Air Shift (12 and 24 Volt)

- Available for both mechanically shifted (i.e. 442 Series) and air-shifted Powershift (i.e. 230/231 Series) Power Take-Offs
- Shift option for both types of P.T.O.s features a recessed rocker switch and solenoid combination to air actuates Power Take-Offs
- For mechanically shifted P.T.O.s, when the rocker switch is pressed, the solenoid shifts and allows air to move the shift rod and fork into the engaged position
- On air-actuated Powershift units, air is used to compress a clutch pack which in turn engages the P.T.O. and eliminates clash shifting
- The DOT-required pressure protection valve is included with this option

### Electric-Over-Hydraulic Shift (12 and 24 Volt)

- This option is used for Chelsea Powershift Power Take-Offs mounted to automatic transmissions
- Pressurized fluid from the transmission main pressure port is used to compress the P.T.O. clutch pack
- Allows for clash free shifting

### Electric Overspeed Control (12 and 24 Volt)

- This state of the art Chelsea shift option is used with Powershift P.T.O.s
- Protects auxiliary power equipment ( P.T.O.s, pumps, and cylinders) by keeping the P.T.O. speed within owner-determined operational limits
- Unit combines solid-state components in a tamper-resistant housing for true reliability

### P.T.O./Dump Pump Combo Valve

- Designed to make P.T.O./Dump Pump air shift applications easier
- Compact design features a safety interlock to prevent accidental P.T.O. engagement
- Controls are easy to operate
- Ideal for use in systems with Chelsea dump pumps, wet line reservoirs and P.T.O.s

## Shifter Options – P.T.O./Dump Pump Combo Valves

| P.T.O./Dump Pump Combo Valve Features |                 |                                                |                                        |                       |                        |                |           |
|---------------------------------------|-----------------|------------------------------------------------|----------------------------------------|-----------------------|------------------------|----------------|-----------|
| Part Number                           | P.T.O. Kick Out | Spring Return to Neutral on Dump Valve Control | Manual Return to Neutral on Dump Valve | Safety Lock on P.T.O. | Detent Lock on Neutral | Smooth Descent | LED Light |
| 329214X                               | x               | x                                              |                                        | x                     | x                      | x              | x         |
| 329316X                               |                 |                                                | x                                      | x                     | x                      | x              | x         |
| 329358X                               | x               |                                                | x                                      | x                     | x                      | x              | x         |

| Order Code | Chelsea Part No.       | Installation Kit | Description                                                                                                                                                                                                                                                    |
|------------|------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S          | 329214X                | 328388-65X       | Hoist-P.T.O. control valve that allows a smooth descent of the body in the “lower” position. Features automatic disengagement of the P.T.O. in “lower”. Lever on control valve returns to neutral from the “raise” position when released (dead man’s handle). |
| T          | 329316X                | 328388-72X       | Hoist-P.T.O. control valve that allows a smooth descent of the body in the “lower” position. Requires manual disengagement of the P.T.O. in “lower”.                                                                                                           |
| U          | 329358X<br><br>329219X | 328388-79X       | Hoist-P.T.O. control valve that allows a smooth descent of the body in the “lower” position. Features automatic disengagement of the P.T.O. in “lower”.<br><br>Console Only (Optional - does not come with “S”, “T” or “U” shift option)                       |

## **Parker/Chelsea Pumps**

### **C101/102 & G101/102 Series**

- Pump/Valve combinations
- Two or three-line installation options
- Choice of mountings – remote or direct P.T.O.
- Choice of valve shift controls

### **CGP-P5 Series**

- Superior performance
- High efficiency
- Low noise operation at high operating pressures

### **CGP-P11 Series**

- Superior performance
- For 246 Series and various other Power Take-Offs
- High efficiency
- Low noise operation at high operating pressures

### **CGP-P14 Series**

- Superior performance
- For 442 Series on GM Trucks with Allison 1000/2000 Transmissions
- High efficiency
- Low noise operation at high operating pressures

### **CGP-P17 Series**

- Superior performance
- Used with various Power Take-Offs
- High efficiency
- Low noise operation at high operating pressures

### **FGP-P17 Series**

- Housing “cut” to fit Ford TorqShift™ Transmission
- Superior performance
- High efficiency
- Low noise operation at high operating pressures

### **P51 Series**

- Single, Bi-Rotational Pump
- S.A.E. 4 Bolt “B” Flange w/ 7/8" 13 - Tooth Spline
- 1.25" Porting in Gear Housing
- 6.38 in<sup>3</sup>/rev @ 2500 PSI

## Parker/Chelsea Pumps – Dump Pumps

### General Specifications

| Pump           | Gear Width | GPM US at 1000 R.P.M. | Cubic Inch Displacement | Horsepower Input (at 2000 PSI) 1000 R.P.M. | Maximum Pressure | Maximum Speed |
|----------------|------------|-----------------------|-------------------------|--------------------------------------------|------------------|---------------|
| C101/102-20    | 2.000"     | 22                    | 5.1                     | 25.6                                       | 2500             | 2400 rpm      |
| C101/102-25    | 2.500"     | 27.6                  | 6.38                    | 31                                         | 2500             | 2400 rpm      |
| G101/102-1-0.7 | .750"      | 6.4                   | 1.48                    | 6.2                                        | 2500             | 2400 rpm      |
| G101/102-1-1.5 | 1.500"     | 12.8                  | 2.96                    | 13.7                                       | 2500             | 2400 rpm      |
| G101/102-1-2.0 | 2.000"     | 17                    | 3.94                    | 18.8                                       | 2500             | 2400 rpm      |

All data based on S.A.E. 10W oil at 150°F. Minimum pump speed at pressure is 800 R.P.M. US Gallons displacements are theoretical. They will vary depending on speed, pressure, and temperature.

### Three-Line Installation (for intermittent or continuous operation)

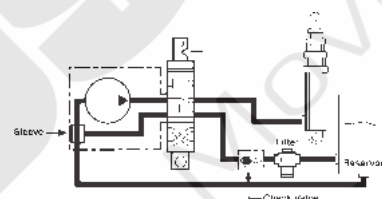
With the internal sleeve installed and three-line installation, two advantages are provided:

- A. Minimizes the possibility of overheating
- B. The filter keeps the system clean for prolonged trouble-free operation.\*

\*If filter is used, check valve must be added to prevent backflushing filter.

#### Dump Pump 3-Line System Shown in the Neutral Mode

In the neutral mode, all the flow goes across the spool to the Return Port and back to tank because the internal by-pass passage is blocked by the sleeve in the inlet port. Any pressure higher than the setting of the relief valve is relieved internally through the by-pass to the Return Port.

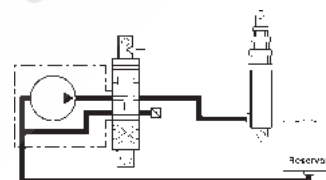


### Two-Line Installation (for intermittent operation only)

With the internal sleeve removed a two-line hook-up can be arranged, however the oil circulates internally (within the pump). Continuous operation may result in overheating.

#### Dump Pump 2-Line System Shown in the Neutral Mode

In the neutral mode, the flow goes across the spool to the Return Port and the integral by-pass passages. Because the Return Port is plugged, and the pressure drop through the by-pass is less than what is required to activate the cylinder, all flow goes through the by-pass back to the inlet side of the pump. Any pressure higher than the setting of the relief valve is relieved internally through the by-pass, back to the inlet port.



These pumps are shipped with an internal sleeve for three-line (continuous duty, filtered) systems. For two-line systems for intermittent duty cycles\*, discard the sleeve.

\*Pump/P.T.O. operates 5 out of every 15 minutes. Note that three-line systems are always recommended to prolong the trouble-free operation of the hydraulic system.

## 50 Gallon Polyethylene Hydraulic Reservoirs



Depend on Chelsea for a rugged and dependable plastic tank. Our 50-gallon polyethylene hydraulic reservoir provides long-life under the most demanding environments.

Features include:

- Extra large 63 gallon capacity/50 gallon usable
- Rugged reinforced-polyethylene
- Dual 2" NPT Ports – field serviceable if necessary
- Includes heavy duty strapless Hold Down System with powder coated steel saddle
- Pre-assembled for easy installation
- Designed for use with two or three line systems
- Screw-in diffuser – 2" to 1"
- Sight temperature gauge standard
- Heavy duty chain mounted filler breather cap – 40 micron filtration standard



URP50

Chelsea offers a complete auxiliary power system for all your needs. Power Take-Offs, pumps, valves, and your choice of steel, aluminum and plastic tanks are all available from Chelsea. For general and technical information, visit our web site at [www.parker.com/chelsea](http://www.parker.com/chelsea).

El Poder de Mover

El Poder de Mover

El Poder de Mover

## Offer of Sale

The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such items, when communicated to Parker Hannifin Corporation, its subsidiary or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

**1. Terms and Conditions of Sale:** All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

**2. Payment:** Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

**3. Delivery:** Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

**4. Warranty:** Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of:

(A) All Power Take-Off units one (1) year from date of installation.  
(B) Except 267, 277, 278, 242, 244, 246, 250, 251 and 859 series two (2) years from date of installation. **THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED. NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGNS OR SPECIFICATIONS.**

**5. Limitation Of Remedy:** SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

**6. Changes, Reschedules and Cancellations:** Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

**7. Special Tooling:** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall

have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

**8. Buyer's Property:** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property, Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

**9. Taxes:** Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

**10. Indemnity For Infringement of Intellectual Property Rights:** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. Patents, U.S. Trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights. If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

**11. Force Majeure:** Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter 'Events of Force Majeure'). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

**12. Entire Agreement/Governing Law:** The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain there/to. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

9/01-P



**Parker Hannifin Corporation**

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