

Chelsea® 489 Series

Two Gear PTO for Mechanical Transmissions



Overview:

The Chelsea 489 Series PTO is the best in the business. Designed to simplify installation and reduce mounting time, the 489 Series is a one-piece, cast iron PTO, which gives the same torque capacity as the 442 Series. That means one less part to buy, one less surface to leak, and faster installation! The 489 Series has strong tapered input bearings instead of needle bearings for greater load capacity. There now are twenty-seven output options available for this versatile PTO, including the brand new RJ output. Eleven internal speed ratios and fifteen shift options make this one versatile PTO. Take advantage of over 75 years of Chelsea PTO technology to increase performance and lower costs. With the newly added RJ output option, our 489 Series PTO will have an SAE B 2 or 4-Bolt Rotatable Flange with an SAE BB Shaft (1" - 15T internal spline).

Applications:

- Aerial
- Snow & Ice Removal
- Dump Truck & Trailer
- Fire & Rescue
- Refuse
- Service

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Product Features and Benefits:

- Flange – 442 Series family, with an 8-Bolt mounting flange.
- Adapter Plate – Not required.
- Confidence – Two Year Warranty.
- Ease of Installation – Reduced installation time with less leak points.
- Outputs – Twenty-seven output options, including greaseable and rotatable options.
- Shift Options – Fifteen shift options.
- Speeds – Eleven speed ratios.



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489 SERIES POWER TAKE-OFF SPECIFICATIONS AND TECHNICAL DATA

489 X L AH X - A 3 X K

Basic Model

489

Mounting Option

- G** = Standard Mount w/ Metric Stud Kit
- K** = Standard Mount w/o Stud Kit
- * **Q** = Eaton Endurant™
- * **X** = Standard Mount
- Z** = Deep Mount
- D** = Daimler DT12™ w/ Req Adapter (See Daimler - specific output options)

Gear Ratio

- | | |
|------------------|-------------------------------|
| A = 14/39 | R = 22/24 |
| C = 17/37 | ¹ S = 24/22 |
| F = 21/37 | U = 26/20 |
| H = 23/35 | W = 26/17 |
| L = 25/34 | X = 38/21 |
| Q = 19/24 | |

Input Option

AB, AH, AR, BG, DA, DU, EV, IT, LZ, *MA, *MB, *MC, *ME

NOTE: For more details, see Application Catalog (Transmission Model Number required)

Lube Option

Pressure Lube

P = Pressure Lube

No Pressure Lube

X = Splash Lubrication/No Pressure Lubrication

Shift Option

Air Shift

- ¹ **A** = Air Shift
- ¹ **P** = 12VDC Elec/Air Shift
- * **Q** = 24VDC Elec/Air Shift
- * **D** = 12VDC Elec/Air Shift Eaton Endurant™
- ²¹ **S** = Air Shift w/ PTO/Dump Pump Combo Valve w/ Kick Out w/ Neutral Spring Return
- ²¹ **T** = Air Shift w/ PTO/Dump Pump Combo Valve w/o Kick Out w/ Neutral Spring Return
- * ²¹ **U** = Air Shift w/ PTO/Dump Pump Combo Valve w/ Kick Out w/o Neutral Spring Return
- V** = Air Shift Less Installation Kit

Wire Shift

- ¹ **W** = Wire Shift
- X** = Wire Shift w/o Cable & Knob

Other Shift

- C** = Special Shift Control & Bracket Kit
- * **5** = Double Acting (DA) Shift Less Installation Kit for Daimler DT12™ & Eaton Endurant XD™
- * **6** = Double Acting (DA) Shift for Eaton Endurant XD™
- H** = No Shifter Assembly
- M** = Constant Mesh

Output Option

Driveline Output

- XD** = Rd Standard Shaft (1-1/4" - 5/16" Key)
- XX** = 1-1/4" Tapered Output Shaft w/ Keyway

Pump Mount

- AF** = SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)
- AK** = SAE B 2-Bolt Flange, SAE B Shaft (7/8" - 13T)
- AZ** = SAE B 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)
- GA** = Greaseable SAE B 2-Bolt Rotatable Flange, SAE B Shaft (7/8" - 13T)
- GB** = Greaseable SAE B 4-Bolt Rotatable Flange, SAE B Shaft (7/8" - 13T)
- GF** = Greaseable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)
- GK** = Greaseable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- ⁵⁹ **GQ** = Greasable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- GR** = Greaseable Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)
- RA** = Rotatable SAE B 2-Bolt Flange, SAE B Shaft (7/8" - 13T)
- RB** = Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- RC** = Rotatable SAE A 2-Bolt Flange, SAE A Shaft (5/8" - 9T)
- RD** = Rotatable SAE A 2-Bolt Flange, SAE B Shaft (7/8" - 13T)
- RE** = Rotatable SAE B 4-Bolt Flange, SAE BB Shaft (1" - 15T)
- RF** = Rotatable SAE B 2-Bolt Flange, SAE BB Shaft (1" - 15T)
- * **RJ** = Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)
- * **RK** = Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- ⁷⁹ **RY** = Rotatable ISO 7653 Pump Mount DIN 5462 Shaft
- SQ** = SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- XE** = SAE A 2 or 4-Bolt Flange, SAE A Shaft (5/8" - 9T)
- XK** = SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- ⁵⁹ **XQ** = SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
- XR** = Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)
- * **XV** = 1410 Series Companion Flange
- XY** = ISO 7653 Pump Mount DIN 5462 Shaft

Assembly Arrangement

- 3** = Right side - bulge down Left side - bulge up
- 4** = Right side - bulge down Left side - bulge up
- 5** = Left side - bulge down Right side - bulge up
- 6** = Left side - bulge down Right side - bulge up

* New option added

¹ Includes mounting parts

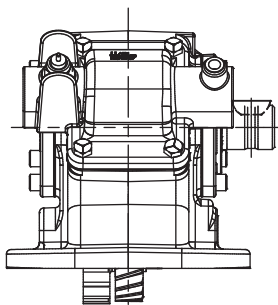
²¹ Includes installation kit, console sold separately

⁵⁹ Same as XK excerpy rotated 90°

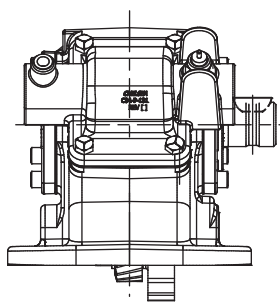
⁷⁹ Flooded Cavity

489 SERIES POWER TAKE-OFF SPECIFICATIONS AND TECHNICAL DATA

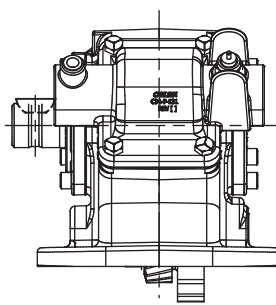
Assembly Arrangements



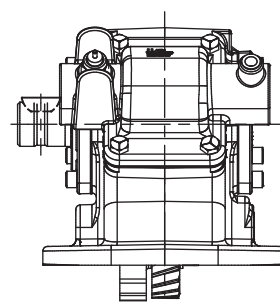
Assembly 3



Assembly 4

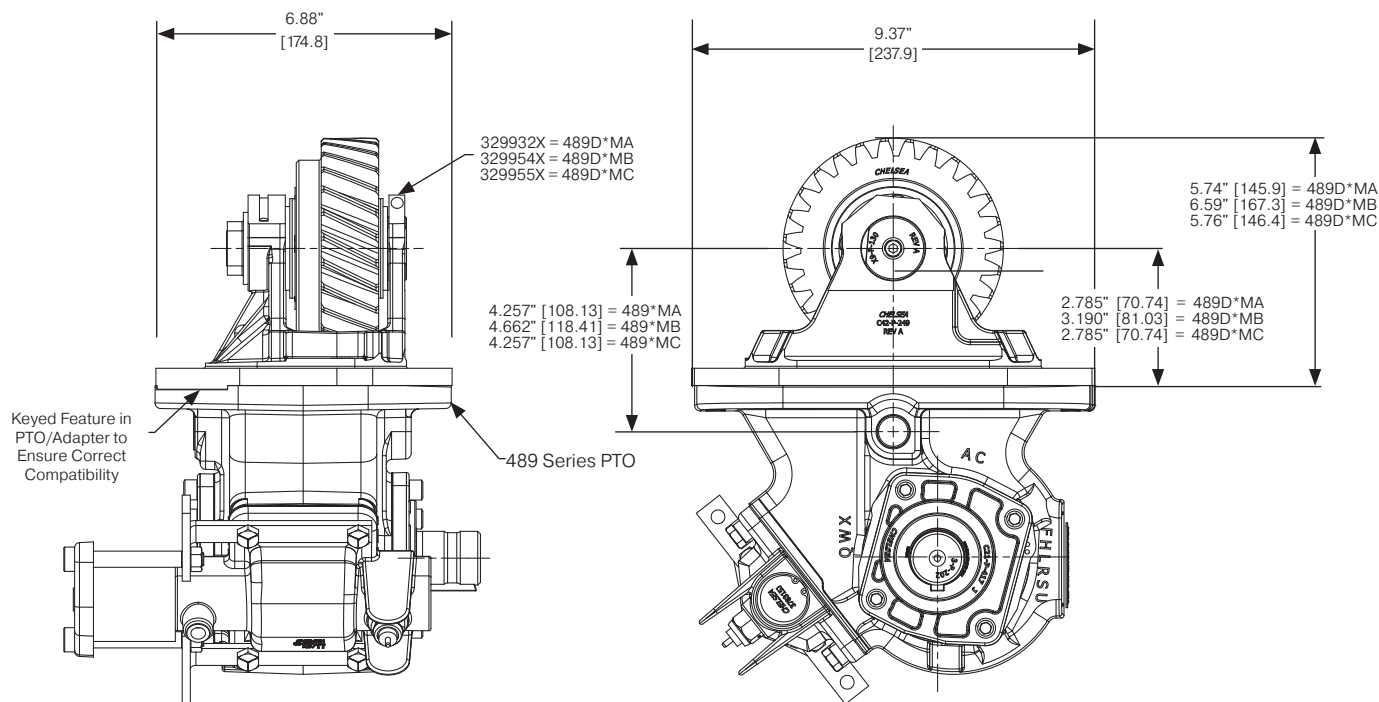


Assembly 5



Assembly 6

PTO Daimler DT12™ Adapter



Specifications Chart	Approximate Weight: 30 lbs. [13.6 kg]										
	489*A	489*C	489*F	489*H	489*L	489*Q	489*R	489*S	489*U	489*W	489*X
Intermittent Torque Rating (lb-ft) [N-m]	250 [339]	250 [339]	250 [339]	250 [339]	250 [339]	225 [305]	225 [305]	200 [271]	195 [264]	175 [237]	140 [190]
HP Rating for Duty											
At 500 RPM of Output Shaft (HP) [kW]	24 [18]	24 [18]	24 [18]	24 [18]	24 [18]	21 [16]	21 [16]	19 [14]	19 [14]	17 [13]	13 [10]
At 1000 RPM of Output Shaft (HP) [kW]	48 [36]	48 [36]	48 [36]	48 [36]	48 [36]	43 [32]	43 [32]	38 [28]	37 [28]	33 [25]	27 [20]

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Supersedes HY25-0019-B1/US June 2023

HY25-0019-B1/US January 2024



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