

# Chelsea® 890 Series

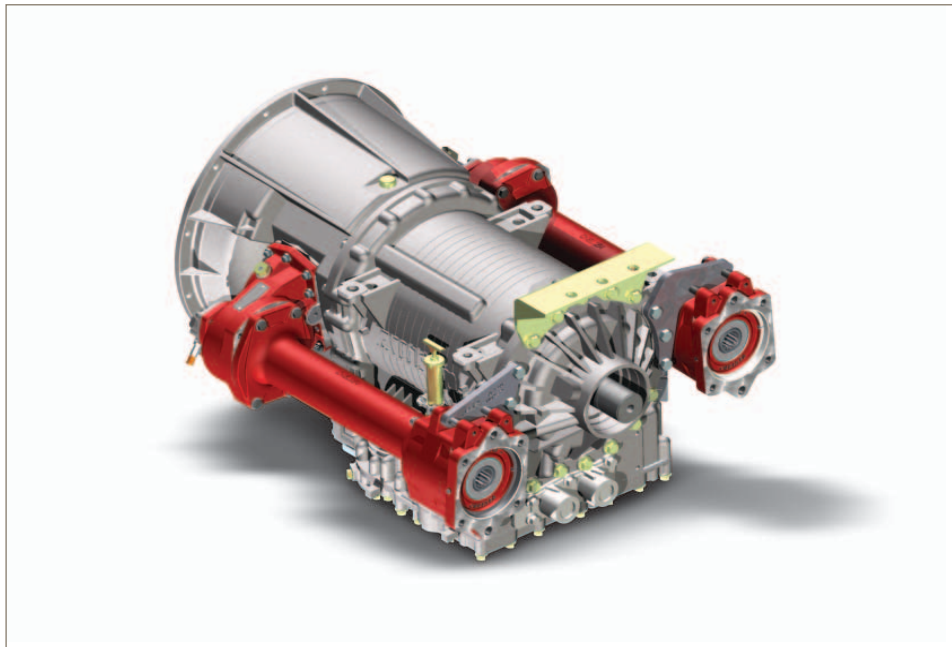
PowerShift PTO for Allison  
3000/4000 Transmissions



## Overview:

The 890 Series Power Take-Off (PTO) mounts like a standard side mounted PTO with an extended shaft and additional bracket at the rear of the transmission for greater pump support. It places the output of the PTO beyond the rear of the transmission where there is extra space. The 890 Series is a single unit, not a solid shaft PTO with an extension. The main shaft is one piece eliminating the input splines between the PTO and the shaft extension. The clutch is located in the rear of the unit to allow the housing and gear section to tuck in tight to the transmission. The output utilizes Wet Spline Technology which virtually eliminates fretting issues.

- Fire & Rescue
- Pumper Cleaner
- Truck Cranes
- Refuse



## Product Features and Benefits:

- **Pump Clearance** – Moves the PTO output flange to the rear of the transmission.
- **Compact** – Requires less space than current PTOs.
- **Power** – Torque ratings up to 670 lbs-ft.
- **Ratio Choices** – Multiple output ratios available.
- **Ease of Installation** – Installed in two pieces.
- **Single piece shaft** – Solid steel shaft.
- **Wet Spline outputs** – Extends shaft life for Pump & PTO.
- **Patent Pending**

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# 890 SERIES POWER TAKE-OFF SPECIFICATIONS AND TECHNICAL DATA

**890 L A FJ W - B 5 XS**

## Basic Model

890

## Mounting Option

**X** = Less Bracket & Hose Kit

### 3000 Family (Side/Side Openings)

**L** = MD Left Side (5 Arr.)  
**N** = MD Left Side w/ Cooler (3 Arr.)  
**M** = MD Left Side w/ Retarder (5 Arr.)  
**A** = MD Left Side w/ Retarder & Cooler (3 Arr.)  
**R** = MD Right Side w/ or w/o Cooler (5 Arr.)  
**Y** = MD Right Rotated CW (5 Arr.)  
**N/A** = MD Right Side w/ Retarder

### 3000 Family (Side/Top Openings)

**E** = MD Left Side (5 Arr.)  
**D** = MD Left Side w/ Cooler (3 Arr.)  
**F** = MD Left Side w/ Retarder (5 Arr.)  
**B** = MD Left Side w/ Retarder & Cooler (3 Arr.)  
**T** = MD Top Side w/ or w/o Cooler, w/o Retarder (5 Arr.)  
**G** = MD Top Side w/ Retarder (5 Arr.)

### 4000 Family

**H** = HD Left Side (5 Arr.)  
**C** = HD Left Side w/ Cooler (3 Arr.)  
**P** = HD Left Side w/ Retarder (5 Arr.)  
**J** = HD Left Side w/ Retarder (3 Arr.)  
**U** = HD Top Side (5 Arr.)  
**K** = HD Top Side w/ Retarder (5 Arr.)

## Gear Ratio

**A** = 24/40 **E** = 29/35  
**B** = 25/39 **F** = 31/33  
**C** = 26/38 <sup>33 61</sup> **G** = 33/31  
**D** = 27/37 <sup>33 61</sup> **H** = 34/30

## Input Option

**FJ** = Allison

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

## Lube Option

### Wet Spline

<sup>37</sup> **W** = Wet Spline

- <sup>33</sup> G & H ratio for Allison MD only  
<sup>34</sup> DA output is not available for transmission with a retarder or cooler  
<sup>35</sup> XS, XK, AF, AZ, XY, outputs available with 5 ass'y arrangement and all mtg options except C & J  
<sup>36</sup> CS, CK, CF, CZ, outputs only available with 3 ass'y arrangement and C & J mtg options  
<sup>37</sup> Automatically Pressure lubed with wet spline  
<sup>61</sup> For HD requires Engineering Approval

## Output Option

### 5 Assembly Arrangement

**AC** = DIN 100 Flange  
**AB** = DIN 120 Flange  
<sup>35</sup> **XK** = SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)  
<sup>35</sup> **AF** = SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)  
<sup>35</sup> **AZ** = SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)  
<sup>35</sup> **XS** = SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)  
**ZS** = SAE C 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T) (Modified **XS**)  
<sup>34</sup> **DA** = SAE D 4-Bolt Flange, SAE D Shaft (1-3/4" - 13T)  
**XV** = 1410 Series Companion Flange  
<sup>35</sup> **XY** = ISO 7653 Pump Mounting DIN 5462 Shaft

### 3 Assembly Arrangement

**AC** = DIN 100 Flange  
**AB** = DIN 120 Flange  
<sup>36</sup> **CK** = SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)  
<sup>36</sup> **CF** = SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)  
<sup>36</sup> **CZ** = SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)  
<sup>36</sup> **CS** = SAE C 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)  
**ZS** = SAE C 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T) (Modified **XS**)  
**XV** = 1410 Series Companion Flange  
<sup>35</sup> **XY** = ISO 7653 Pump Mounting DIN 5462 Shaft

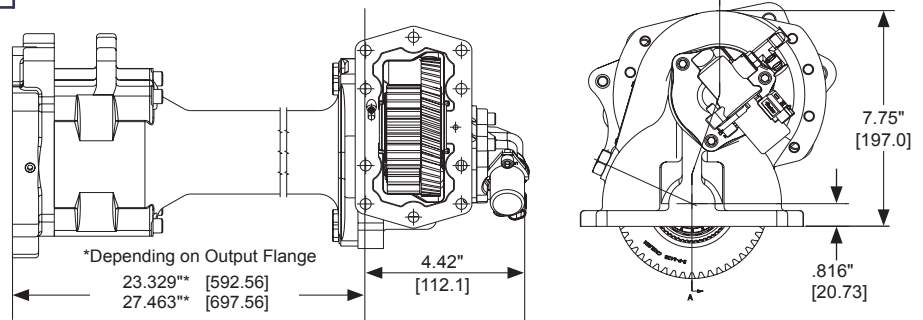
## Assembly Arrangement

<sup>36</sup> **3** = Right side - bulge down  
 Left side - bulge up  
<sup>35</sup> **5** = Left side - bulge down  
 Right side - bulge up

## Shift Option

### Hydraulic

**B** = 12V Elec/Hyd  
**D** = 24V Elec/Hyd  
**K** = 12V Elec/Hyd w/ EOC  
**L** = 24V Elec/Hyd w/ EOC  
**G** = 12V Elec/Hyd w/o EOC - Remote Valve  
**H** = 24V Elec/Hyd w/o EOC - Remote Valve



## Specifications Chart

Approximate Weight: 97 lbs. [44 kg]

	890*A	890*B	890*C	890*D	890*E	890*F	890*G	890*H
Intermittent & Continuous Torque Rating (lbs-ft) [Nm]	670 [908]	630 [854]	590 [800]	550 [746]	485 [658]	430 [583]	379 [513]	356 [482]
HP Rating for Intermittent & Continuous Duty								
At 500 RPM of Output Shaft (HP) [Kw]	64 [48]	60 [45]	56 [42]	52 [39]	46 [35]	41 [31]	36 [27]	34 [25]
At 1000 RPM of Output Shaft (HP) [Kw]	128 [95]	120 [90]	112 [84]	105 [78]	92 [69]	82 [61]	72 [53]	68 [50]

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Supersedes HY25-0081-B1/US September 2016 HY25-0081-B1/US June 2017



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