

CHELSEA® 281 SERIES

Hydraulic PowerShift 10-Bolt PTO for Allison 3000/4000 Family Transmissions

The 281 Series PTO is evidence that Parker Chelsea is constantly investing in developing the world's greatest solutions to solve industry challenges. Chelsea's 281 Series features a ductile iron bearing cap which is 117% stronger than its predecessor. It features an o-ring sealing configuration between the housing and bearing cap to improve clamp load. The thickness of the steel discs within the clutch pack have also been increased by 80%. All of these improvements are focused on reducing the damaging vibrational effects caused by today's and future engine designs.

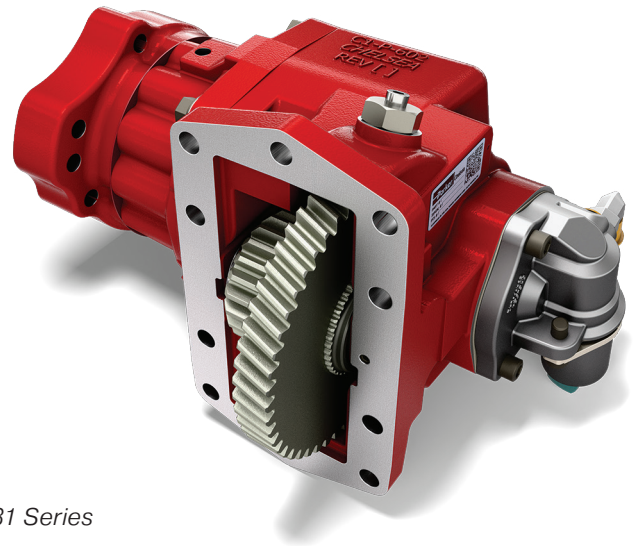
Over the years, Parker Chelsea has cultivated this PTO design into what it is today. With its improved durability, versatility, power, and ease of maintenance & installation, the 281 Series cannot be beat.

Applications:

- Fire and Rescue Trucks
- Truck Cranes
- Pumper Cleaner Trucks
- Refuse Trucks

Product Features and Benefits:

- Ductile Iron Bearing Cap – 117% stronger than gray iron.
- Improved Seal – O-ring sealing configuration to reduce vibrational effects and improve clamp load.
- Enhanced Clutch Pack – 80% thicker steel disks in the clutch pack to resist premature tooth wear.
- Torque – Single, continuous duty torque rating.
- Clearance – Rotatable cast iron flanges to improve pump clearance.
- Positive Stop for Driveline Outputs – Eliminates oil seal damage from coupling.
- Wet Spline Lubrication Option – Provides 7 to 10 times greater shaft life.
- Speeds – Multiple speed ratios including low and high-speeds.
- SmartStart – Reduces shock load at start-up for certain applications.
- Insurance – Electronic Overspeed Control (EOC) protects driven equipment.



281 Series



281 Series Power Take-Off – Allison

Model Number Designator

281	G	C	FJ	P	-	B	5	XD																							
Basic Model	Mounting Option	Gear Ratio	Input Option	Lube Option		Shift Option	Assembly Arrangement	Output Option																							
281		<table><tr><th>Option Code</th></tr><tr><td>B</td></tr><tr><td>C</td></tr><tr><td>D</td></tr><tr><td>G</td></tr><tr><td>K</td></tr><tr><td>M</td></tr><tr><td>P</td></tr><tr><td>S</td></tr><tr><td>T</td></tr></table>	Option Code	B	C	D	G	K	M	P	S	T		<table><tr><th>Option Code</th></tr><tr><td>Pressure Lube</td></tr><tr><td>P Pressure Lube</td></tr><tr><td>⁴⁵ R Pressure Lube Valve Body Rotated 120°</td></tr><tr><td>S Pressure Lube Valve Body Rotated 240°</td></tr><tr><td>Wet Spline</td></tr><tr><td>⁵ W Wet Spline</td></tr><tr><td>^{5, 45} V Wet Spline Valve Body Rotated 120°</td></tr><tr><td>⁵ Y Wet Spline Valve Body Rotated 240°</td></tr></table>	Option Code	Pressure Lube	P Pressure Lube	⁴⁵ R Pressure Lube Valve Body Rotated 120°	S Pressure Lube Valve Body Rotated 240°	Wet Spline	⁵ W Wet Spline	^{5, 45} V Wet Spline Valve Body Rotated 120°	⁵ Y Wet Spline Valve Body Rotated 240°			<table><tr><th>Option Code</th></tr><tr><td>3</td></tr><tr><td>5</td></tr><tr><td>8</td></tr></table>	Option Code	3	5	8	
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Option Code	
Driveline Output	
AB	DIN 120 Flange
AC	DIN 100 Flange
BD	Shaft Brake - 1-1/4" Round w/ 5/16" Key
BV	Shaft Brake - 1410 Series Companion Flange
SB	Smart Start - DIN 120 Flange
SC	Smart Start - DIN 100 Flange
SD	Smart Start - Rd Standard Shaft (1-1/4" - 5/16" Key)
SV	Smart Start - 1410 Series Companion Flange
XD	Rd Standard Shaft (1-1/4" - 5/16" Key)
XV	1410 Series Companion Flange
Pump Mount	
⁶⁸ RB	Rotatable SAE B 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
⁴⁷ RF	Rotatable SAE B 2 or 4-Bolt Flange, SAE BB Shaft (1" - 15T)
⁴⁷ RK	Rotatable SAE B 2 or 4-Bolt Flange, SAE B Shaft (7/8" - 13T)
⁴⁷ RS	Rotatable SAE C 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)
⁴⁷ RY	Rotatable DIN 5462 Pump Mount, DIN 5462 Shaft (B8x32x36)
⁴⁷ RZ	Rotatable SAE B 2 or 4-Bolt Flange, SAE C Shaft (1-1/4" - 14T)
XR	Chelsea Special (Cloverleaf), SAE B Shaft (7/8" - 13T)

⁵ Automatically pressured lubed

¹⁵ The remote mount solenoid option cannot utilize the EOC option

²¹ Includes installation kit, console sold separately

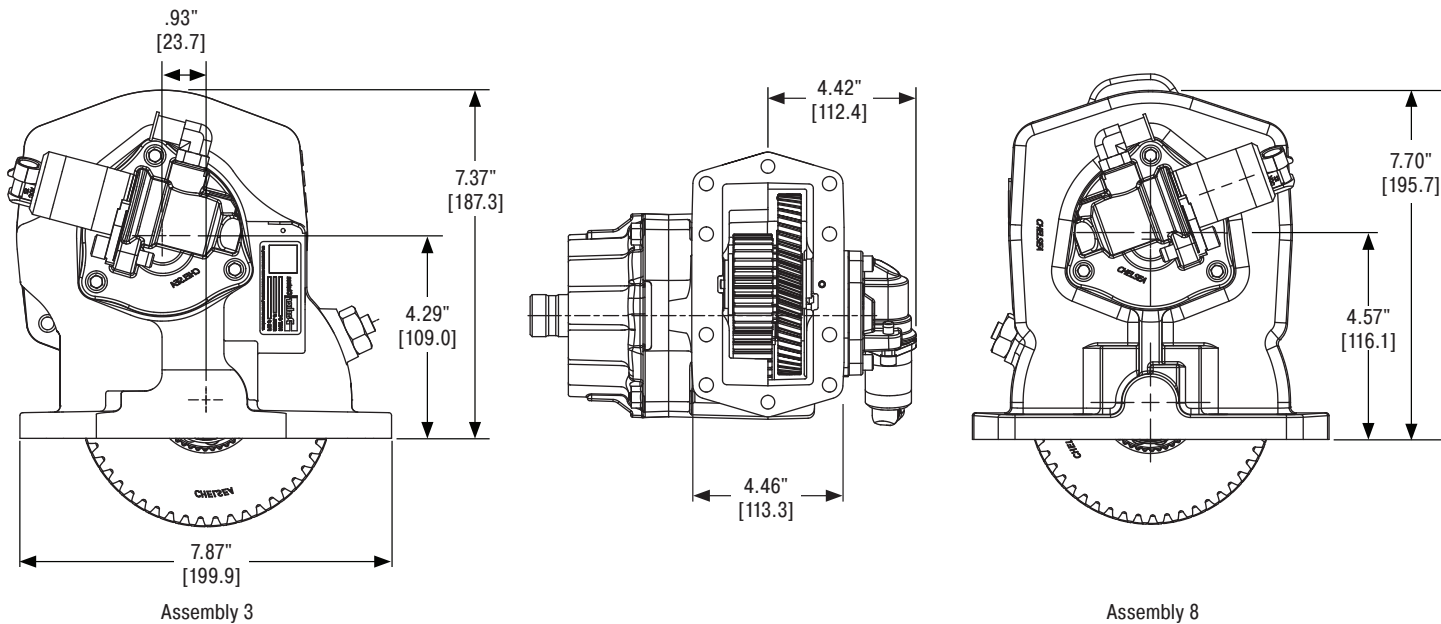
⁴⁵ Available on shift option B, D, K, L, M, N, S & T

⁴⁶ Available with Rotated Valve

⁴⁷ Available with Wet Spline

⁶⁸ Check for Wet Spline availability

281 Series Power Take-Off – Allison
Dimensions & Specifications – For PTO output information see application catalog



Specifications Chart	Approximate Weight: 50 lbs. [22.7 kg]								
	281*B	281*C	281*D	281*G	281*K	281*M	281*P	281*S	281*T
Continuous Torque Rating lb-ft [N-m]	300 [407]	390 [529]	390 [529]	360 [488]	340 [461]	318 [431]	290 [393]	265 [359]	240 [325]
HP Rating for Continuous Service									
At 500 RPM of Output Shaft HP [kW]	29 [22]	37 [28]	37 [28]	34 [25]	32 [24]	30 [22]	28 [21]	25 [19]	23 [17]
At 1000 RPM of Output Shaft HP [kW]	57 [43]	74 [55]	74 [55]	69 [51]	65 [48]	61 [45]	55 [41]	50 [37]	46 [34]

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