

**Extreme power ...**



**TITAN**  
**125**

**... for extreme conditions**

**SETTING THE STANDARD...AGAIN**



## *Feature* \_\_\_\_\_

• In-line gear reduced design \_\_\_\_\_

• Rotatable nose housing \_\_\_\_\_

• Power, torque and speed \_\_\_\_\_

• Electrical soft start \_\_\_\_\_

• Integral mag switch relay \_\_\_\_\_

• OCP standard \_\_\_\_\_

## *Benefit*

Gear reduced starters provide more power in a package that is considerably smaller and lighter than conventional starters. The in-line design further reduces the space required for the unit, allowing for maximum flexibility with the minimum number of units.

A rotatable nose housing greatly reduces the number of part numbers that are required to provide complete coverage for your customer's vehicles. Inventory levels can be kept low while keeping customer service at a maximum.

The 8kW Titan™125 is the strongest commercially available 12 volt starter available on the market today. Period. But it's not just torque, modern diesel engines require speed to start. The Titan™125 has been engineered to provide maximum speed at the required torque, to start the toughest engines in the toughest environments.

Electrical soft start is the most dependable way to eliminate milling of the ring gear. The soft start design slowly rotates the pinion as the starter is being engaged, ensuring that the pinion is fully engaged with the ring gear before full power is applied.

The magnetic switch is a necessary component of the electrical soft start capability, it only makes sense to incorporate it onto the starter. This allows for minimal connection wiring, creating maximum dependability. It also allows for simple replacement of any conventional starter motor.

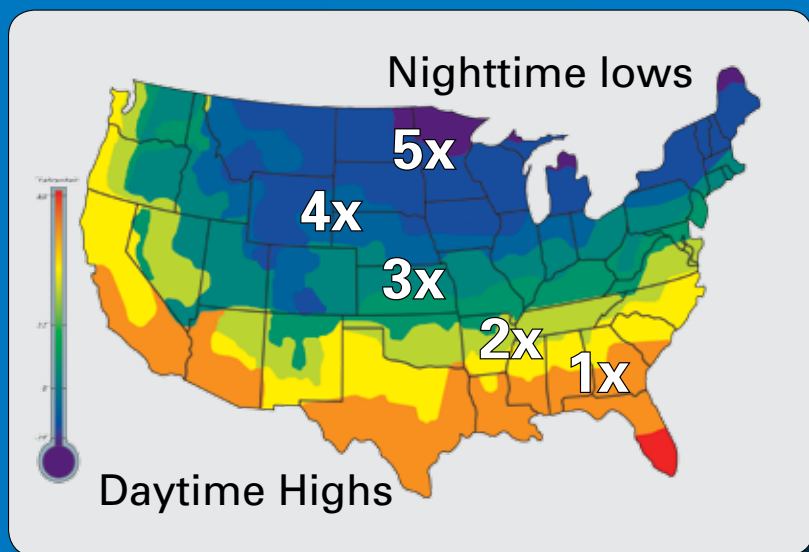
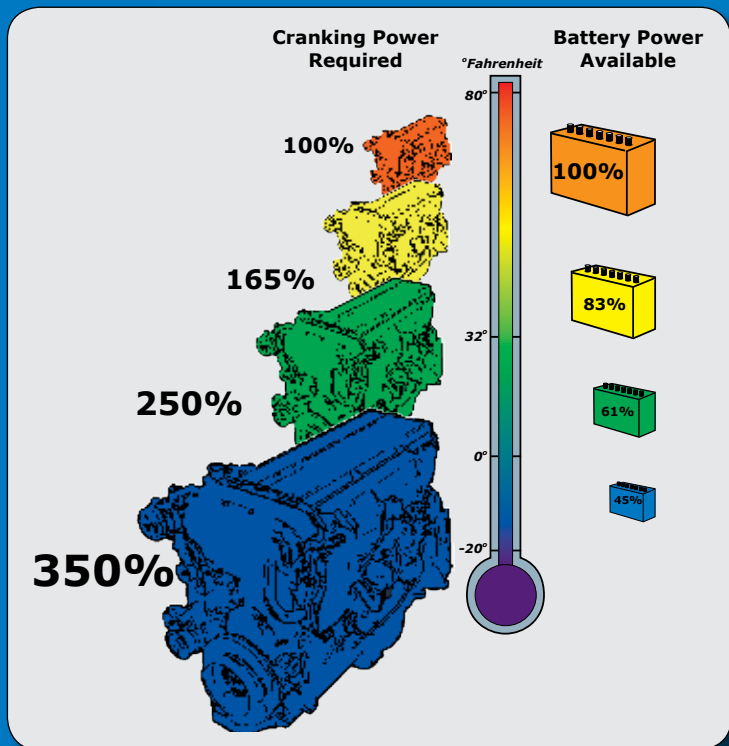
Over crank protection is part of the internal design of the starter, eliminating the external plastic connector that can break or corrode. We set out to create the most dependable starter on the market, so it just made sense to build this feature into each and every unit.

# Why is that big bore diesel so hard to start in the cold?

Cold temperatures inhibit the chemical reaction within the batteries, reducing their efficiency. At 0°F the available current from the batteries is only about 45% of the output available at 80°F.

To make matters worse, thickening of the fluids and tighter clearances due to metal contraction make the engine 3 1/2 times more difficult to turn over.

Add these together and you get a diesel engine that is 4 to 5 times harder to turn at 0°F than it is at 80°F.



When you have trucks going coast to coast and north to south you know that you're going to hit cold weather.

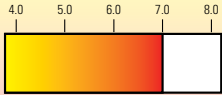

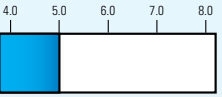

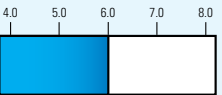

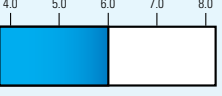

You may have an engine that is 4-5 times harder to turn over at night than it was just that morning.

You need a cranking motor that has the right mix of power, torque and speed to keep you on the move.

## *It's not just the torque ... ... it's the speed that counts*

When it's cold you need more than just torque, you need to be able to crank that engine fast enough. New electronically managed engines need to reach a minimum speed (typically around 100 RPM) before the electronic sensors will allow the engine controller to release fuel into the cylinders.

As soon as the starter has created enough torque to successfully turn the engine over it's the speed that it can achieve that will determine if that engine is going to start.

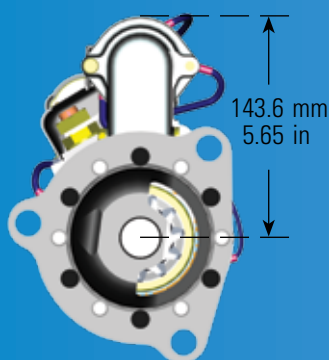
Product	Type	Starter Output @ 70 N·m* (kW)	Engine Speed @ 70 N·m* (RPM)
Titan™125	In-line	 <b>7.0</b>	 <b>106</b>
Comp 1	Offset	 <b>5.0</b>	 <b>70</b>
Comp 2	In-line	 <b>6.0</b>	 <b>95</b>
Comp 3	In-line	 <b>6.0</b>	 <b>91</b>

Assumes (3)1000 CCA Battery  
\*Torque required to crank typical big bore diesel engine @ 0°F

Of these gear reduced starters only the Titan™125 can generate enough speed to successfully start this engine below 20°F.

***More power ...  
Tighter, cleaner design ...  
Rotatable nose housing ...***

Of course, even the best starter would be useless if it won't fit on the vehicle. That's why every aspect of the design of the Titan™125 has been carefully considered to make it easy to install. With a 40% reduction in weight and a 20% reduction in length from typical direct drive starters, the Titan™125 is easier to handle and install than any starter in its class.



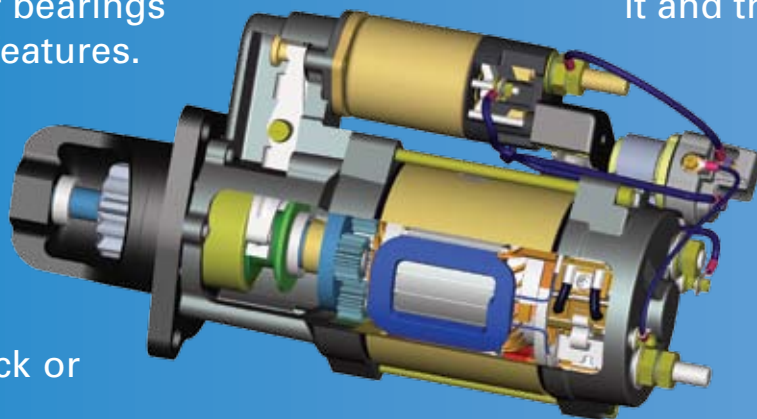
Thoughtful design produces a starter with a smaller diameter footprint than any starter with the same output.

The rotatable nose allows you to stock fewer units - simply index the nose to fit the application.



Electrical soft-start, 4 gear planetary gear reduction, heavy duty roller clutch drive, needle and heavy duty roller bearings are all standard features.

OCP is standard and completely internal, so there is no external connector to crack or corrode.



The magnetic switch relay is mounted directly on the starter, allowing for a minimum amount of wiring between it and the solenoid.

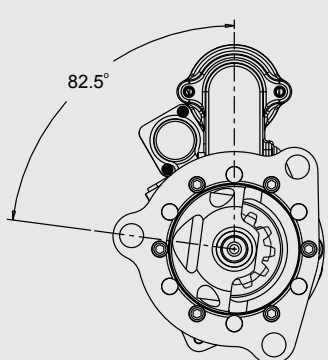
With an output of **8kW** the Titan™125 has the power to crank even the coldest large bore diesel engine faster than any competitive unit on the market today

***OCP standard  
3 Year - 350,000 mile warranty  
Integrated mag switch standard***

# TITAN 125

Engine	Freightliner	Sterling	International	Peterbilt	Kenworth	Mack	Volvo	W. Star
CAT C11			M125601					
CAT C13	M125601	M125601	M125601	M125601	M125601			
CAT C15	M125601		M125601	M125601	M125601		M125601	M125601
CAT C16			M125601	M125601	M125601			M125601
Cummins ISM	M125601	M125601	M125601	M125601	M125601			
Cummins ISX	M125601	M125601	M125601	M125601	M125601	M125601	M125601	
Cummins M11	M125601	M125601	M125601	M125601	M125601			
Cummins N14	M125601	M125601	M125601	M125601	M125601		M125601	
Detroit S60	M125601	M125601	M125601				M125601	
Volvo/Mack						M125601	M125601	
MBE 4000	M12560x	M12560x						

In development	Limited models	Available
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Front View	Details	Teeth	Pitch	Pinion at rest	Replaces			
					Delco	Denso	Leece	
	M125601  12V CW with thermal overcrank	11	6/8	1.909" 48.5mm	8300009	19011530	428000-4420	MS2-500
					8300019	1990355	428000-4440	MS2-501
					10461753	1990352		MS2-503
					10461777	8200083		MS2-504
					8200033	10462155		MS2-510
					19011506	10462196		MS2-511
					19011516	10462175		
					19011518	10479266		
					19011521	10479265		
					19011529			

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