

S T A R T E R M O T O R S

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STARTER MOTORS WITH REDUCTION GEAR

APPLICATIONS

Diesel engines of 2 to 6 litre displacement.

FEATURES

- High specific power output and efficiency.
- Excellent cold crank capability with low current drain from battery.
- Reduced weight and dimensions in comparison to direct drive starter motors.
- Highly efficient drive assembly for idle run of the pinion.

DESIGN

Nose or noseless versions for specific applications on the engine.

Rubber shock absorber, low-noise, iron planetary reduction gear using a coaxial pinion with an armature.

Pinion shift mechanism with solenoid, fork lever and helix.

Solenoid switch with pull-in and hold-in winding and double return spring for effective breaking of the main contacts.

Six-roller clutch and drive assembly is designed to transmit power from the starter motor to the engine.

High quality thermal resistant materials.

Support brackets of grey cast iron (GCI), modular cast iron (NCI) or die cast aluminium (DCA).

Free of asbestos, cadmium, beryllium and ammonia.

Additional dust protection is available with lip seal on the pinion.

Water protection is achieved using drain holes, O-rings and a rubber boot.

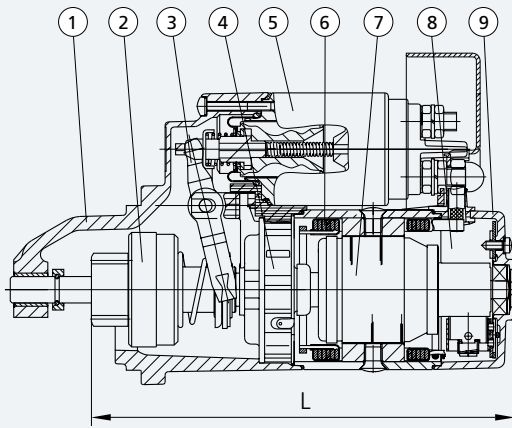
Oil-proof versions for wet clutch applications.

Insulated return versions are available.

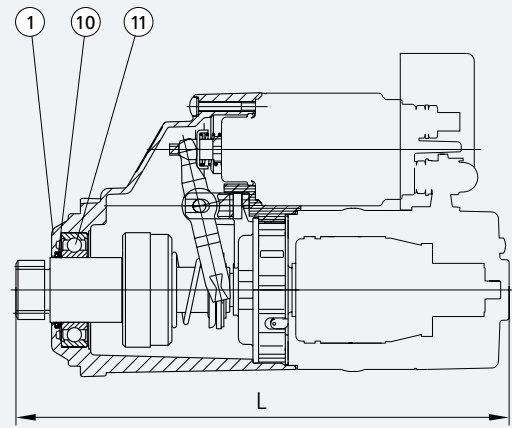
MAIN TECHNICAL DATA

Type	AZE41 / AZE45...- nose / AZE46...- noseless	
Nominal voltage (V)	12V	24V
Rated power (kW)	3.2	3.5
Length-nose	< 246	< 246
Length-noseless (mm)	< 274	< 274
Weight-nose	6.5 - 8.3	6.5 - 8.3
Weight-noseless (kg)	6.5 - 8.5	6.5 - 8.5
Yoke diameter (mm)	90	
Stator	4-pole windings	
Drive assembly	6 rollers	
Solenoid 12V	pull-in current < 62 A	
	hold-in current < 14 A	
24V	pull-in current < 30 A	
	hold-in current < 6 A	
Terminals	30 - M8, M10	
	31 - M8	
	50 - M4, M5, M6, 6.4 x 0.8	
Basic protection	Protected against ingress of dust, solid foreign objects and splashing water (IP 56)	
Ambient temperature	- 40°C to + 110°C	

CROSS SECTION



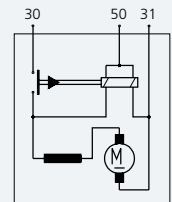
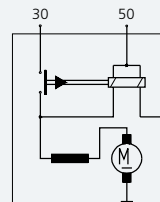
WITH NOSE



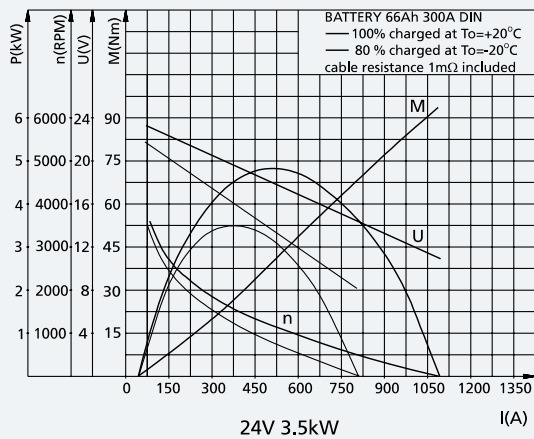
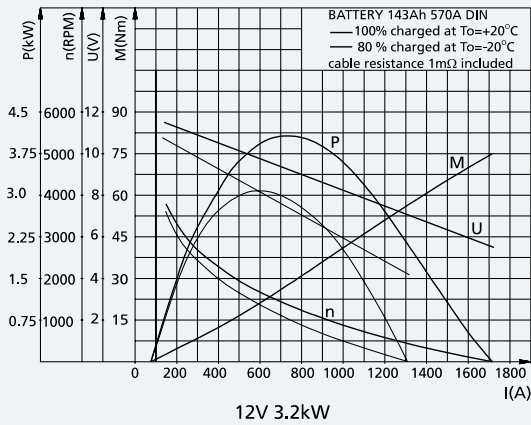
NOSELESS

1. Drive end bracket • 2. Drive assembly • 3. Engaging lever • 4. Reduction gear • 5. Starter switch • 6. Stator
7. Armature • 8. Brush holder • 9. Commutator end bracket • 10. Gasket • 11. Bearing

CONNECTION DIAGRAMS



CHARACTERISTICS



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