

Flameproof Alternators

ASX-240, ASX-241, ASX-340, ASX-341, ASX-350

Overview

Standard automotive type alternators are a continuous potential source of ignition when operated in hazardous atmospheres where combustible concentrations of gas, vapor or dust may exist. To overcome this, Chalwyn offer a range of hazardous area approved flameproof alternators designed specifically to mount on diesel engines as direct replacements for standard alternators.



Description

Chalwyn alternators use twelve pole rotating field coil technology, designed and approved for use in designated hazardous areas. A range of standard or multi-groove pulleys are available, as well as special versions to meet customer design requirements.



Features and Benefits

- Hazardous Area Rated (see Specifications)
- Speed signal output for overspeed shutdown
- Compact high-performance design
- Certified cable gland kit available
- Wide choice of optional pulleys
- Suitable for offshore conditions

Applications

- For use in ATEX, IECEx and UKEX defined hazardous areas (see Specifications)
- Suitable for a wide range of local ambient temperatures (see Specifications)
- Designed as a belt driven diesel engine mounted alternator



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Specifications

Standard materials	Enclosure	Aluminium
	Fan, fan discs, pulleys	Carbon steel
	Cowls	Copper
Excitation	ASX-240, ASX-241, ASX-340, ASX-341	Externally excited
	ASX-350	Self-excited

Output / Temperature Class ASX-240, ASX-241

Ambient Temperature Range - °C (°F)	Max. Output Voltage - V	Max. Permitted Current* - A	Max. Power Consumption (W)	Temp. Class (Gas)	Temp. Class (Dust)
-30 to 55 (-22 to 131)	14.7	30	441	T4	T135°C
-30 to 50 (-22 to 122)		34	500		
-30 to 45 (-22 to 113)		38	559		
-30 to 40 (-22 to 104)		42	618		
-30 to 35 (-22 to 95)		46	677		

* Must be limited by installation

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Ambient Temperature Range - °C (°F)	Max. Output Voltage - V	Max. Permitted Current* - A	Max. Power Consumption (W)	Temp. Class (Gas)	Temp. Class (Dust)
-30 to 55 (-22 to 131)	28.5	16	456	T4	T135°C
-30 to 50 (-22 to 122)		18	513		
-30 to 45 (-22 to 113)		19	542		
-30 to 40 (-22 to 104)		21	599		
-30 to 35 (-22 to 95)		23	656		

* Must be limited by installation

Weight (estimated)	Product Weight	7.2 kg (15.8 lbs)
	Shipping Weight	8 kg (17.5 lbs)
Certifications	Ingress protection	IP66
	Certificate Numbers	SIRA 99ATEX1127X IECEX SIR 12.0132X CSAE 21UKEX1526X
Area Classification	ATEX & UKEX (Europe & UK)	II 2 G D
	ATEX, UKEX & IECEX (Europe, UK & IECEX)	Ex db T4 Gb Ex tb IIIC T135°C Db

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Models Available

Standard

ASX-240: 12V (side entry cable)

ASX-241: 12V (rear entry cable)

ASX-340: 24V (side entry cable)

ASX-341: 24V (rear entry cable)

Self-exciting

ASX-350: 24V

Pulley Selection

Using the table below, select the pulley profile, appropriate width and drive diameter. Consider the alternator speed range when selecting the diameter of the pulley. When fitting a pulley use an 8mm hexagonal Allen drive in the rotor hole and tighten the nut supplied to 60 NM (44 lb ft) torque. If a non-Chalwyn pulley is to be fitted, please forward design details to local factory office. Pulleys are available for all models except as noted below.

Pulley Profile	Belt Width	Drive Diameter (mm)	Pulley Model No.
SPA (Small)	1/2" / 13mm	55	ASX-546
SPA (Medium)	1/2" / 13mm	71	ASX-549
SPA (Large)	1/2" / 13mm	80	ASX-574
SPB (Small)	5/8" / 16mm	66	ASX-539
SPB (Medium)	5/8" / 16mm	71	ASX-548
SPB (Large)	5/8" / 16mm	90	ASX-563
6 Groove Poly-V	DIN 6-PK	56	ASX-575
6 Groove Poly-V	DIN 6-PK	66	ASX-556

Speed calculation formula

$$\frac{\text{Crankshaft pulley diameter (mm)}}{\text{Alternator pulley drive diameter (mm)}} \times \text{Engine Speed (rpm)} = \text{Alternator Speed (rpm)}$$

Target Alternator Speeds

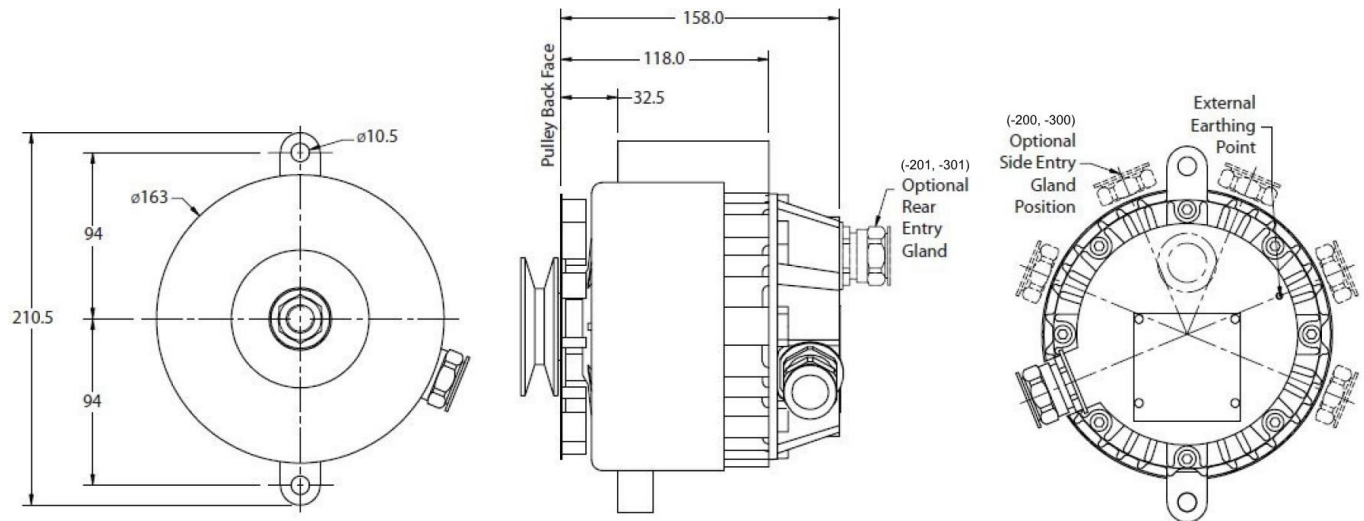
Engine Speed (rpm)	Alternator Speed (rpm)
Fixed	5000 - 7000
Variable	3500 - 8000
Low idle	2000 - 2500

Flameproof Alternators

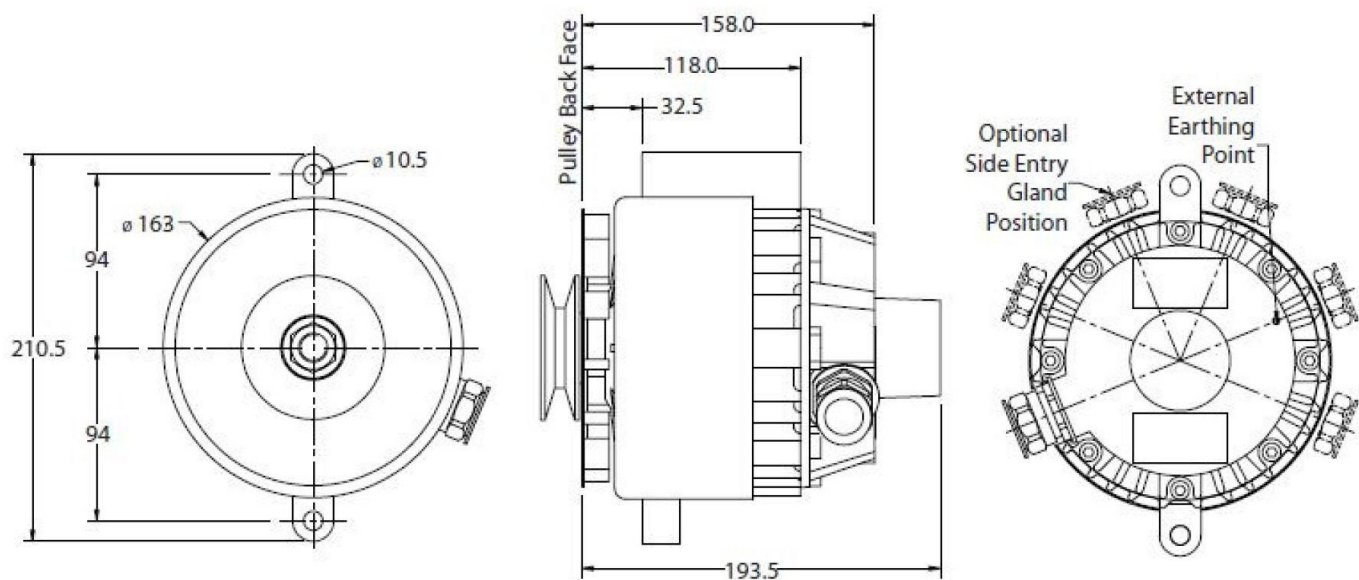
ASX-240, ASX-241, ASX-340, ASX-341, ASX-350

Dimensions

ASX-240, ASX-241, ASX-340, ASX-341 – Shown with optional Cable Gland kit fitted for clarity



ASX-350 – Shown with optional Cable Gland kit fitted for clarity



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Chalwyn's quality
management system
is approved by LRQA.

