



GENUINE  
**STAMFORD**  
DESIGN

# **STAMFORD® S-RANGE** **STAMFORD® S5**



LOW VOLTAGE ALTERNATOR

500-750 kVA 50Hz

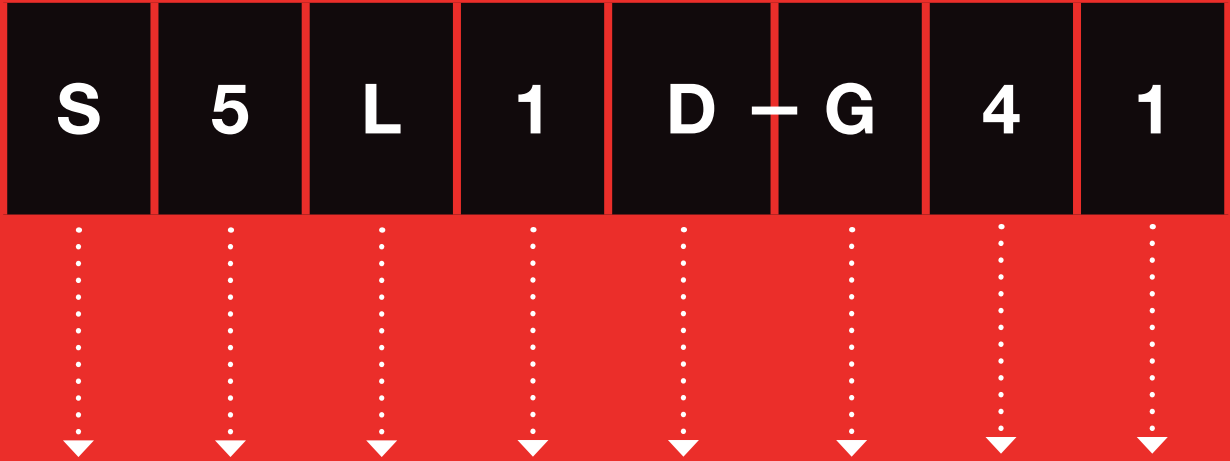
594-937 kVA 60Hz

**STAMFORD | AvK™**

POWERING TOMORROW, TOGETHER

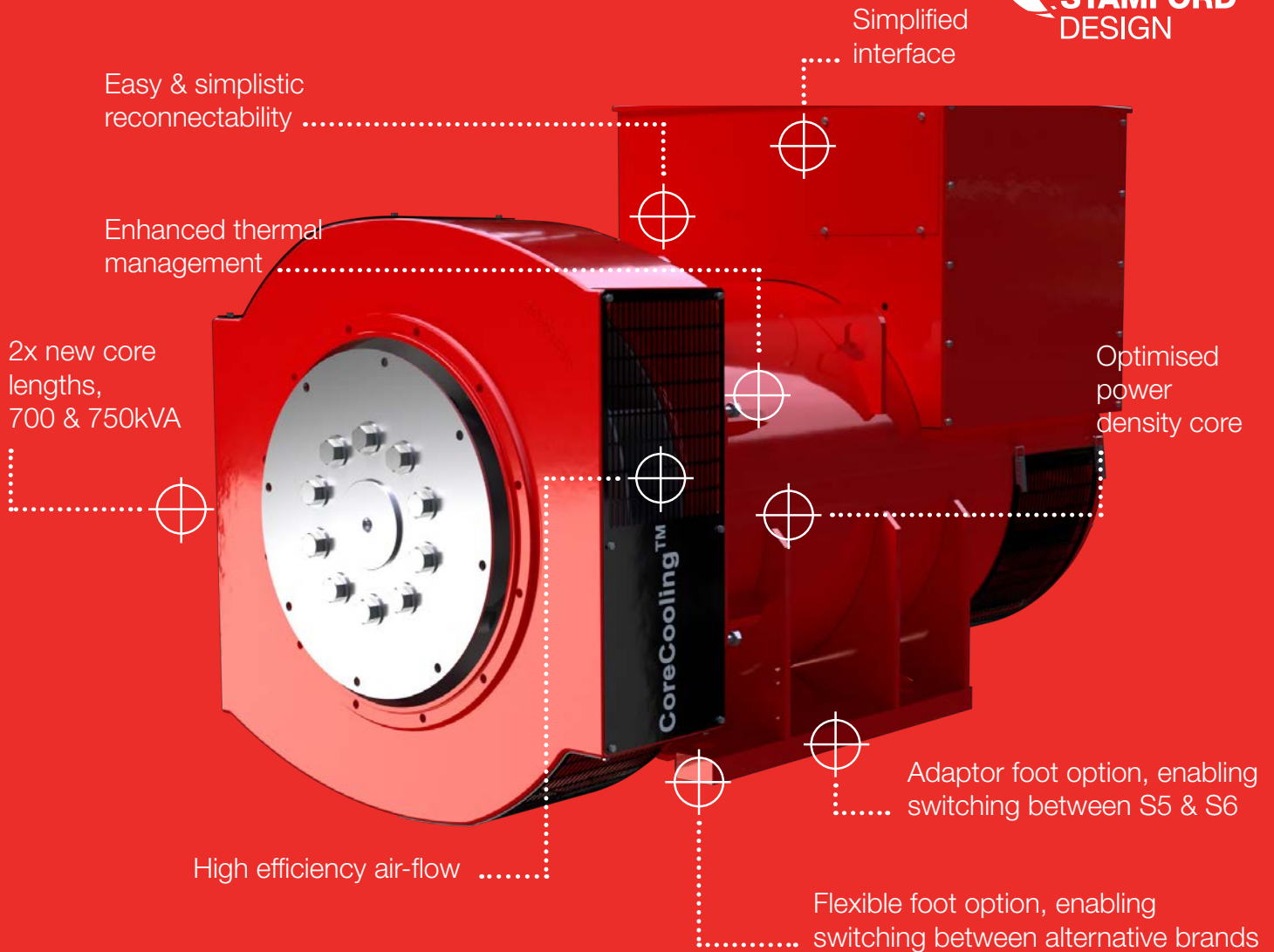


# The S5 Nomenclature



Character	Brand	Family Series	Voltage	Revision	Descriptor	Core Length	Pole	Bearing
Examples	STAMFORD	5	L = Low	1	D = Dedicated S = Special M = Marine	C/D/E/F	4	1/2

# STAMFORD® S5 Dedicated



Product evolution through technological revolution.  
Our new **CoreCooling™** technology results in improved thermal performance and increased power density... it's in the detail.

# S5 Dedicated Ratings

## 50Hz

Class H 125/40						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	364	<b>455</b>	400	<b>500</b>	364	<b>455</b>
S5L1D-D4	400	<b>500</b>	440	<b>550</b>	400	<b>500</b>
S5L1D-E4	480	<b>600</b>	488	<b>610</b>	480	<b>600</b>
S5L1D-F4	536	<b>670</b>	536	<b>670</b>	536	<b>670</b>
S5L1D-G4	544	<b>680</b>	560	<b>700</b>	560	<b>700</b>
S5L1D-H4	568	<b>710</b>	600	<b>750</b>	600	<b>750</b>

Standby 150/40						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	382	<b>478</b>	410	<b>512</b>	382	<b>478</b>
S5L1D-D4	412	<b>515</b>	460	<b>575</b>	412	<b>515</b>
S5L1D-E4	509	<b>636</b>	512	<b>640</b>	509	<b>636</b>
S5L1D-F4	568	<b>710</b>	568	<b>710</b>	568	<b>710</b>
S5L1D-G4	576	<b>720</b>	592	<b>740</b>	592	<b>740</b>
S5L1D-H4	604	<b>755</b>	640	<b>800</b>	640	<b>800</b>

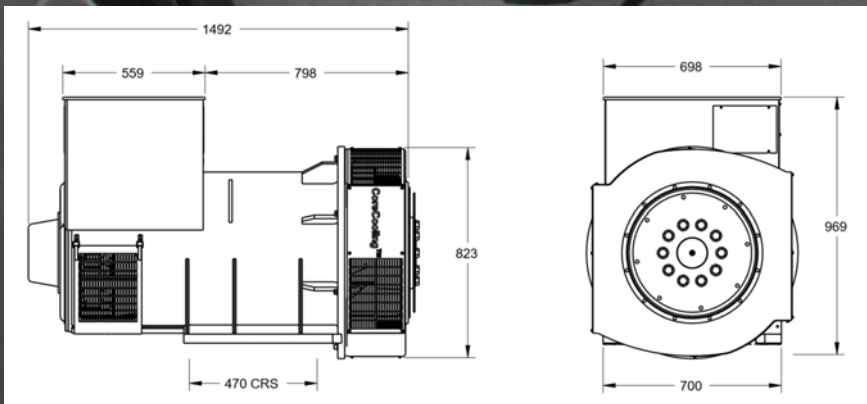
Standby 163/27						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	400	<b>500</b>	416	<b>520</b>	400	<b>500</b>
S5L1D-D4	440	<b>550</b>	472	<b>590</b>	440	<b>550</b>
S5L1D-E4	548	<b>660</b>	532	<b>665</b>	528	<b>660</b>
S5L1D-F4	590	<b>738</b>	590	<b>738</b>	590	<b>738</b>
S5L1D-G4	600	<b>750</b>	616	<b>770</b>	616	<b>770</b>
S5L1D-H4	624	<b>780</b>	660	<b>825</b>	660	<b>825</b>

## 60Hz

Class H 125/40						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	<b>420</b>	525	<b>440</b>	550	<b>475</b>	594
S5L1D-D4	<b>460</b>	575	<b>475</b>	594	<b>515</b>	644
S5L1D-E4	<b>545</b>	681	<b>570</b>	713	<b>600</b>	750
S5L1D-F4	<b>590</b>	738	<b>620</b>	775	<b>660</b>	825
S5L1D-G4	<b>600</b>	750	<b>635</b>	794	<b>700</b>	875
S5L1D-H4	<b>640</b>	800	<b>675</b>	844	<b>750</b>	937

Standby 150/40						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	<b>440</b>	550	<b>465</b>	581	<b>500</b>	625
S5L1D-D4	<b>470</b>	588	<b>500</b>	625	<b>540</b>	675
S5L1D-E4	<b>575</b>	719	<b>600</b>	750	<b>640</b>	800
S5L1D-F4	<b>625</b>	781	<b>655</b>	819	<b>700</b>	875
S5L1D-G4	<b>635</b>	794	<b>670</b>	837	<b>730</b>	913
S5L1D-H4	<b>680</b>	850	<b>715</b>	894	<b>785</b>	981

Standby 163/27						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1D-C4	<b>455</b>	569	<b>480</b>	600	<b>515</b>	644
S5L1D-D4	<b>485</b>	606	<b>515</b>	644	<b>555</b>	694
S5L1D-E4	<b>590</b>	738	<b>615</b>	869	<b>655</b>	819
S5L1D-F4	<b>645</b>	806	<b>675</b>	844	<b>725</b>	906
S5L1D-G4	<b>660</b>	825	<b>695</b>	869	<b>755</b>	944
S5L1D-H4	<b>705</b>	881	<b>745</b>	931	<b>810</b>	1013



# Specification

MODEL	S5-Dedicated
Ratings at 50Hz (kVA) Class H	450-750
Ratings at 60Hz (kVA) Class H	525-937
Specifications	
Voltage Range	380-480
Poles	4
Technology	Wire Wound
AVR	Analogue
Voltage Sensing	2 Phase
Bearing Arrangement	Single
SAE Adaptors	SAE 1
Terminals	12
Material Insulation Class	H
Excitation System	AS440/Self-Exciting
Ingress Protection	IP23
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	—
SAE Adaptors	0.5, 0
Excitation System	PMG
Ingress Protection	IP23 Air Filters
Output Configurations	3 Phase Reconnectable
Voltage sensing	3 Phase sensing
Temperature Monitoring	Winding RTDs
Temperature Monitoring	Thermistors
Environmental Protection	Anti-Condensation Heater
Adaptor Feet	✓
Flexible Feet	✓
Prime Movers	
Diesel Engine	✓
Gas Engine	✓

# Accessories

Factory Build Options
Anti-Condensation Heater (with Terminal Box)
Quadrature Droop kit
Bearing RTD
Air Inlet Filter
Remote Voltage Trimmer
Radio frequency interference (RFI) Suppressor Kit
Excitation Loss Module
Diode Failure Detector
CSA Approval

Available With	MX321	MX341	AS440
Current Sensing Kit	✓	✓	✓
Controlled Short Circuit	✓	X	X
Manual Voltage Regulator	✓	✓	X
Frequency Detection Module	✓	✓	X
Power Factor Controller - PFC3	✓	✓	✓
Remote Control Interface	✓	✓	✓
Excitation Circuit Breaker	✓	✓	✓
Dual AVR	✓	✓	X

Voltage Regulator Options
MX341 with PMG
MX321 AVR with PMG
UL AS440 AVR
UL MX341 with PMG
No AVR with or without PMG

\*GA Drawings are indicative of S5-H dimensions

\*\*Please contact our applications department for additional voltages that are available

\*\*\*Ratings are preliminary and are subject to change throughout 2018

**3 YEAR  
WARRANTY**

# S5 Special Ratings

## 50Hz

Class H 125/40						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	364	<b>455</b>	400	<b>500</b>	364	<b>455</b>
S5L1S-D4	400	<b>500</b>	440	<b>550</b>	400	<b>500</b>
S5L1S-E4	480	<b>600</b>	488	<b>610</b>	480	<b>600</b>
S5L1S-F4	536	<b>670</b>	536	<b>670</b>	536	<b>670</b>

Standby 150/40						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	382	<b>478</b>	410	<b>512</b>	382	<b>478</b>
S5L1S-D4	412	<b>515</b>	460	<b>575</b>	412	<b>515</b>
S5L1S-E4	509	<b>636</b>	512	<b>640</b>	509	<b>636</b>
S5L1S-F4	568	<b>710</b>	568	<b>710</b>	568	<b>710</b>

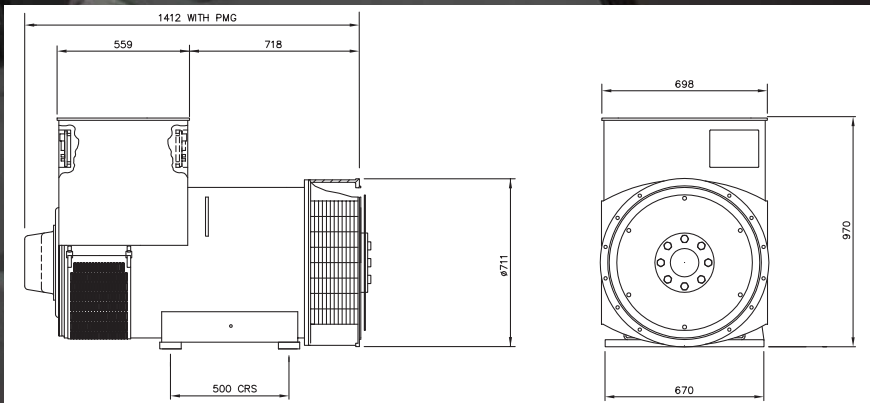
Standby 163/27						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	400	<b>500</b>	416	<b>520</b>	400	<b>500</b>
S5L1S-D4	440	<b>550</b>	472	<b>590</b>	440	<b>550</b>
S5L1S-E4	528	<b>660</b>	532	<b>665</b>	528	<b>660</b>
S5L1S-F4	590	<b>738</b>	590	<b>738</b>	590	<b>738</b>

## 60Hz

Class H 125/40						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	<b>420</b>	525	<b>440</b>	550	<b>475</b>	594
S5L1S-D4	<b>460</b>	575	<b>475</b>	594	<b>515</b>	644
S5L1S-E4	<b>545</b>	681	<b>570</b>	713	<b>600</b>	750
S5L1S-F4	<b>590</b>	738	<b>620</b>	775	<b>660</b>	825

Standby 150/40						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	<b>440</b>	550	<b>465</b>	581	<b>500</b>	625
S5L1S-D4	<b>470</b>	588	<b>500</b>	625	<b>540</b>	675
S5L1S-E4	<b>575</b>	719	<b>600</b>	750	<b>640</b>	800
S5L1S-F4	<b>625</b>	781	<b>655</b>	819	<b>700</b>	875

Standby 163/27						
Winding Number	311					
Volts	416		440		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1S-C4	<b>455</b>	569	<b>480</b>	600	<b>515</b>	644
S5L1S-D4	<b>485</b>	606	<b>515</b>	644	<b>555</b>	694
S5L1S-E4	<b>590</b>	738	<b>615</b>	769	<b>655</b>	819
S5L1S-F4	<b>645</b>	806	<b>675</b>	844	<b>725</b>	906



# Specification

MODEL	S5-Special
Ratings at 50Hz (kVA) Class H	455-670
Ratings at 60Hz (kVA) Class H	525-825
Specifications	
Voltage Range	380-690
Poles	4
Technology	Wire Wound
AVR	Analogue
Voltage Sensing	2 Phase
Bearing Arrangement	Single
SAE Adaptors	SAE 1
Terminals	12
Material Insulation Class	H
Excitation System	AS440/Self-Exciting
Ingress Protection	IP23
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Double
SAE Adaptors	0.5, 0, 00
Excitation System	PMG
Ingress Protection	IP23 Air Filters
Output Configurations	3 Phase Reconnectable
Voltage sensing	3 Phase sensing
Temperature Monitoring	Winding RTDs
Temperature Monitoring	Thermistors
Environmental Protection	Anti-Condensation Heater
Adaptor Feet	X
Flexible Feet	X
Prime Movers	
Diesel Engine	✓
Gas Engine	✓

# Accessories

Factory Build Options
Anti-Condensation Heater (with Terminal Box)
Quadrature Droop kit
Bearing RTD (Each Bearing)
Air Inlet Filter
Drip Proof Louvres
Remote Voltage Trimmer
Radio frequency interference (RFI) Suppressor Kit
Excitation Loss Module
Diode Failure Detector
CSA Approval

Available With	MX321	MX341	AS440
Current Sensing Kit	✓	✓	✓
Controlled Short Circuit	✓	X	X
Manual Voltage Regulator	✓	✓	X
Frequency Detection Module	✓	✓	X
Power Factor Controller - PFC3	✓	✓	✓
Remote Control Interface	✓	✓	✓
Excitation Circuit Breaker	✓	✓	✓
Dual AVR	✓	✓	X

Voltage Regulator Options
MX341 with PMG
MX321 AVR with PMG
UL AS440 AVR
UL MX341 with PMG
No AVR with or without PMG

\*GA Drawings are indicative of S5-F dimensions

\*\*Please contact our applications department for additional voltages that are available

\*\*\*Ratings are preliminary and are subject to change throughout 2018

**3 YEAR  
WARRANTY**

# S5 Marine Ratings

## 50Hz

Class B (70°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	256	<b>320</b>	260	<b>325</b>	264	<b>330</b>
S5L1M-D4	284	<b>355</b>	292	<b>365</b>	300	<b>375</b>
S5L1M-E4	332	<b>415</b>	344	<b>430</b>	352	<b>440</b>
S5L1M-F4	352	<b>440</b>	368	<b>460</b>	380	<b>475</b>

Class F (90°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	292	<b>365</b>	296	<b>370</b>	304	<b>380</b>
S5L1M-D4	324	<b>405</b>	332	<b>415</b>	344	<b>430</b>
S5L1M-E4	380	<b>475</b>	392	<b>490</b>	404	<b>505</b>
S5L1M-F4	404	<b>505</b>	420	<b>525</b>	432	<b>540</b>

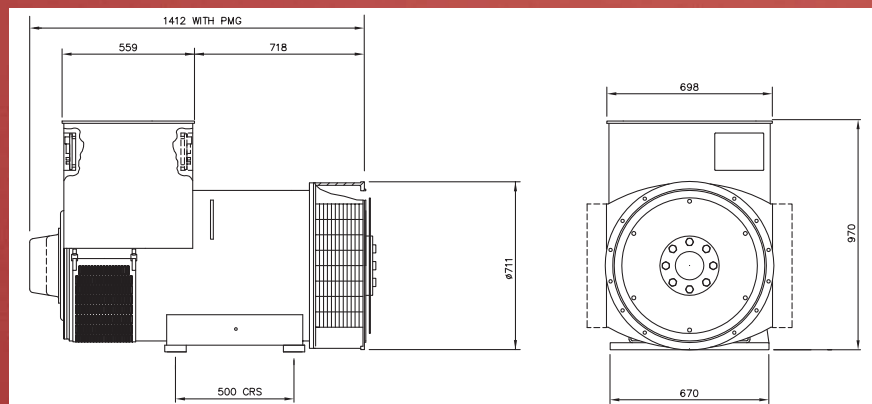
Class H (110°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	380		400		415	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	312	<b>390</b>	312	<b>390</b>	312	<b>390</b>
S5L1M-D4	348	<b>435</b>	348	<b>435</b>	348	<b>435</b>
S5L1M-E4	424	<b>530</b>	424	<b>530</b>	424	<b>530</b>
S5L1M-F4	452	<b>565</b>	468	<b>585</b>	480	<b>600</b>

## 60Hz

Class B (70°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	440		460		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	<b>316</b>	395	<b>332</b>	415	<b>336</b>	420
S5L1M-D4	<b>340</b>	425	<b>356</b>	445	<b>372</b>	465
S5L1M-E4	<b>412</b>	515	<b>416</b>	520	<b>424</b>	530
S5L1M-F4	<b>452</b>	565	<b>463</b>	578	<b>466</b>	582

Class F (90°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	440		460		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	<b>360</b>	450	<b>380</b>	475	<b>385</b>	481
S5L1M-D4	<b>390</b>	488	<b>405</b>	506	<b>425</b>	531
S5L1M-E4	<b>470</b>	588	<b>475</b>	594	<b>485</b>	606
S5L1M-F4	<b>515</b>	644	<b>525</b>	656	<b>530</b>	663

Class H (110°C) Temperature Rise, Continuous, 50°C Ambient						
Winding Number	311					
Volts	440		460		480	
Model	kW	kVA	kW	kVA	kW	kVA
S5L1M-C4	<b>388</b>	485	<b>412</b>	515	<b>416</b>	520
S5L1M-D4	<b>416</b>	520	<b>436</b>	545	<b>456</b>	570
S5L1M-E4	<b>500</b>	625	<b>510</b>	638	<b>520</b>	650
S5L1M-F4	<b>555</b>	694	<b>565</b>	706	<b>580</b>	725





# Specification

MODEL	S5-Marine
Ratings at 50Hz (kVA) Class H	390-600
Ratings at 60Hz (kVA) Class H	485-725
Specifications	
Voltage Range	380-690
Poles	4
Technology	Wire Wound
AVR	Analogue
Voltage Sensing	2 Phase
Bearing Arrangement	Single
SAE Adaptors	SAE 1
Terminals	12
Material Insulation Class	H
Excitation System	MX341/PMG
Ingress Protection	IP23
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Double
SAE Adaptors	0.5, 0, 00
Excitation System	PMG
Ingress Protection	IP23 Air Filters
Output Configurations	3 Phase Reconnectable
Voltage sensing	3 Phase sensing
Temperature Monitoring	Winding RTDs
Temperature Monitoring	Thermistors
Environmental Protection	Anti-Condensation Heater
Adaptor Feet	X
Flexible Feet	X
Prime Movers	
Diesel Engine	✓
Gas Engine	✓

# Accessories

Factory Build Options
Anti-Condensation Heater (with Terminal Box)
Quadrature Droop kit
Bearing RTD (Each Bearing)
Air Inlet Filter
Remote Voltage Trimmer
Radio frequency interference (RFI) Suppressor Kit
Excitation Loss Module
Diode Failure Detector
CSA Approval

Available With	MX321	MX341
Current Sensing Kit	✓	✓
Controlled Short Circuit	✓	X
Manual Voltage Regulator	✓	✓
Frequency Detection Module	✓	✓
Power Factor Controller - PFC3	✓	✓
Remote Control Interface	✓	✓
Excitation Circuit Breaker	✓	✓
Dual AVR	✓	✓

Voltage Regulator Options
MX321 AVR with PMG
UL MX341 with PMG
No AVR with PMG

\*GA Drawings are indicative of S5-F dimensions

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**3 YEAR  
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# Applications



## Case Study

Purpose:

Prime Power

Location:

Cortina d'Ampezzo, Italy

Specified:

72 x **STAMFORD**<sup>®</sup> range of alternators

Visa SpA, was chosen to supply power for the Alpine World Ski Championships in Cortina d'Ampezzo, February 2021, a popular racing event set at the foot of the Tofane Mountains, Italy. As the chosen technical sponsor for the event, Visa specified **STAMFORD**<sup>®</sup> alternators for use in the gensets for the 8MW output of power required.

A fleet of 72 gensets, which had been specially developed with **STAMFORD**<sup>®</sup> S-Range alternators contributed an overall output of 12,690 kVA power supply. Each set was distributed throughout Cortina in strategic points of the territory to ensure maximum safety energy flow in support of the electricity grid during event.

“We use **STAMFORD**<sup>®</sup> in our products because of the exceptional quality and reliability needed in market challenging sectors”

- Project Manager, Visa SpA



## End-to-end Support

From pre-sales applications support all the way through to our extensive worldwide channel of customer service and authorised Parts and Service dealers servicing your **STAMFORD® I AvK®** alternators, we're there for you.

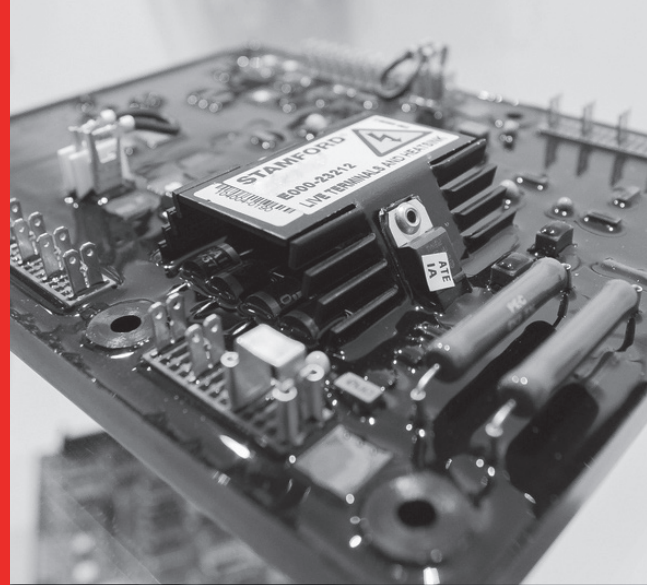
Selecting the right alternator for the right application? We understand the performance requirements that each application and operating environment demands.

**Always Advancing** — We also offer a comprehensive suite of Service Training courses designed to introduce, refresh, develop or expand your existing knowledge of STAMFORD and AvK genuine products.

We are here to support your future decarbonisation goals, through our end-to-end expertise in versatile solutions. Backed by the reassurance of our world-renowned brands recognised for reliability and complete peace of mind, we are with you on your journey towards sustainability.



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[stamford-avk@cummins.com](mailto:stamford-avk@cummins.com)

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POWERING TOMORROW, TOGETHER