



**STAMFORD®
& AvK®
RAIL
ALTERNATORS**



Powering your reliability

STAMFORD | AvK™

POWERING TOMORROW, TOGETHER

DIESEL ELECTRIC AND HYBRID DRIVE

It's not just the products we make that set us apart – it's how we engage our customers every day. The unique combination of knowledge, dependability and innovation we bring to each customer relationship turns everyday service into excellent efficiency, making it possible for them to compete more successfully throughout the world.

Under the market-leading STAMFORD® and AvK® product brands we manufacture synchronous alternators that are robustly engineered and specifically designed to meet the rigorous challenges of the most arduous power generation applications and environments.

From our extensive experience and knowledge across power generation, we are a proven and reliable partner for your turn-key power solutions. We have the expertise to provide solutions for drive train and auxiliary power in diesel-electric rail systems as well hybrid drive applications.

For main traction and auxiliary power, STAMFORD® and AvK® offer a comprehensive range of modular based alternators in the range from 7.5 to 11,200kVA low to high voltage, which can be customised to meet specific customer needs and application demands.

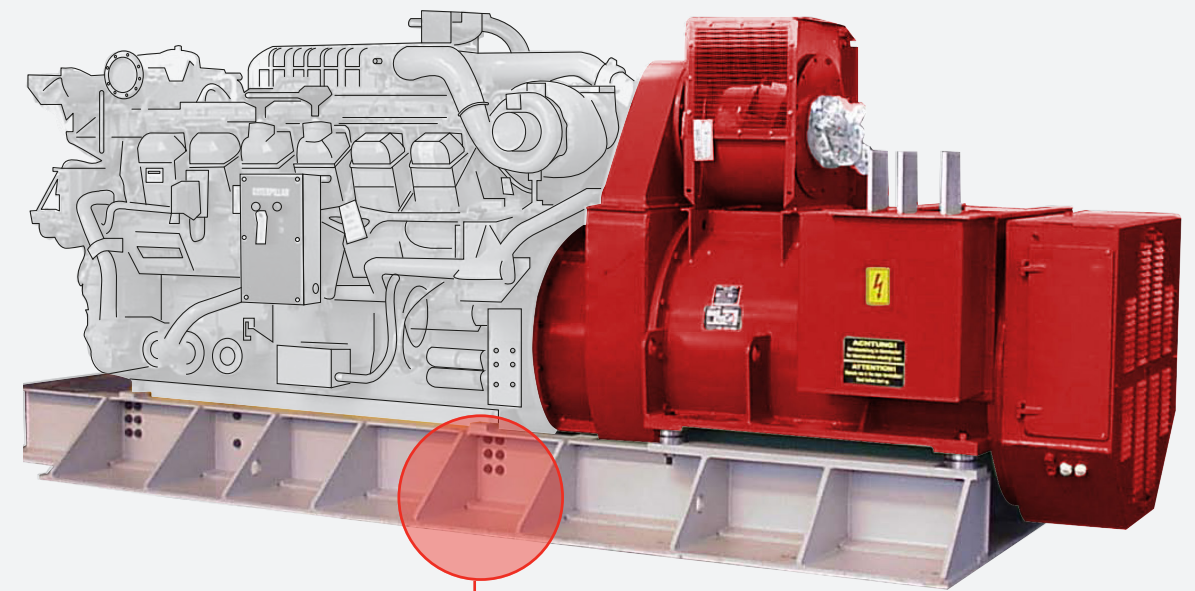
<p>Where: Switzerland</p> <p>AvK® 1 x DSG74 2016 - 2021 Purpose: Traction power, rail grinders</p>	<p>Where: Australia</p> <p>STAMFORD® 200+ UC27 2005 Purpose: Auxiliary power, power car</p>	<p>Where: Australia</p> <p>STAMFORD® 1 x S1 & 5 x S4 2016 - 2021 Purpose: Auxiliary power, rail grinders</p>	<p>Where: Korea</p> <p>STAMFORD® 66 x HC4 2012 - 2021 Purpose: Auxiliary power, passenger locomotive</p>
<p>Where: Hungary</p> <p>STAMFORD® 10 x UC27 2009 - 2013 Purpose: Auxiliary power, shunting locomotive</p>	<p>Where: Austria</p> <p>STAMFORD® 11 x UC22 & 11 x UC27 2016 - 2021 Purpose: Auxiliary power, rail grinders</p>	<p>Where: Australia</p> <p>STAMFORD® 50+ x UC27 2022 Purpose: Auxiliary power, locomotive</p>	<p>Where: Austria</p> <p>STAMFORD® 1 x HC4 & 3 x HC6 2016 - 2021 Purpose: Auxiliary power, rail grinders</p>
<p>Where: Hungary</p> <p>STAMFORD® 19 x UC27 2016 Purpose: Auxiliary power, shunting locomotive</p>	<p>Where: Hungary</p> <p>STAMFORD® 12 x HC4 2018 Purpose: Auxiliary power, shunting locomotive</p>	<p>Where: Hungary</p> <p>AvK® 50+ x DSG62 2008 Purpose: Auxiliary, locomotive</p>	<p>Where: Hungary</p> <p>AvK® 50+ x DSG86 2008 Purpose: Traction power, locomotive</p>

Rotor and bearings

Our rotor is designed to meet typical runaway speeds of rail applications. A number of bearing options are also available, and our alternators can be equipped with single or double bearings with roller bearings available, dependent on customer's requests and our engineering analysis.

Design

Our alternators are compact and flexible in design and can accommodate a wide range of customisation to meet the requirements of your rail application.



Mounting

Frames are of rigid and robust steel construction, able to be skid mounted or underslung and designed to withstand high levels of shock and vibration, providing great results in rail operating environments.

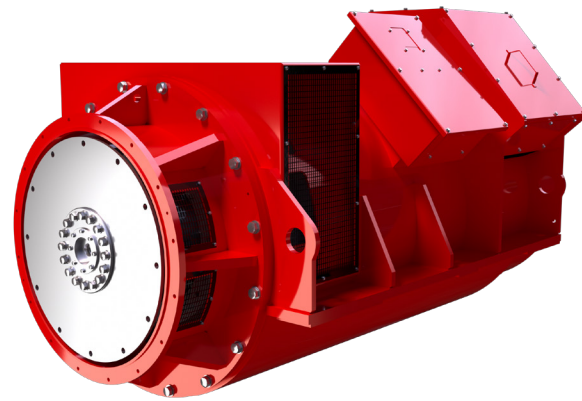


We are here to support your future decarbonisation goals, through our end-to-end expertise in versatile solutions. Backed by the reassurance of our world-renowned brands recognised for reliability and complete peace of mind, we are with you on your journey towards sustainability.

stamford-avk.com/future-ready

THE COMPLETE ALTERNATOR RANGE FOR RAIL APPLICATIONS

Covering Traction and Auxiliary Power



AvK® range The custom design solution

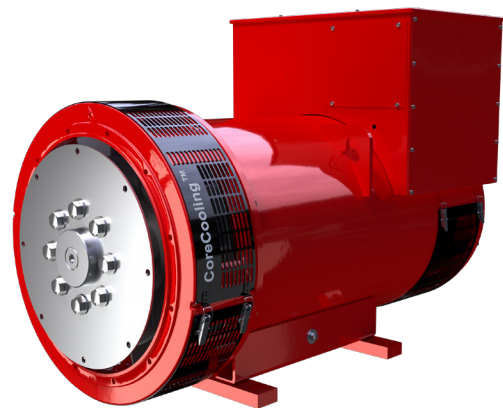
Robustly engineered bar wound alternator designed to meet the challenges of the most arduous applications and environments. AvK® alternators can be customised to meet specific customer needs:

- Power range: 600 - 11,200kVA
- Voltage range: 380 - 13,800V at 50 & 60Hz
- A choice of running speeds in most frames (4, 6, 8 and 10 pole options)

STAMFORD® range The world-renowned versatile solution

High-quality, durable alternators utilising wirewound technology for rail traction and auxiliary power:

- 4 pole: 7.5 - 5,000kVA
- Voltage range: 220 - 690V at 50 & 60Hz
- Market leading 3 year warranty as standard on STAMFORD® S-Range
- Patented CoreCooling™ technologies providing maximum efficiency and fuel savings
- Genuine STAMFORD® authenticity guarantee on every machine



TESTIMONIALS



CUSTOM PACKAGE FOR TRACK MOTOR LOCOMOTIVE RAIL APPLICATION

Specified:
STAMFORD® HC5
30+ year partnership with custom packages designed with special environmental treatment and distinct windings to suit the requirements for rail application

“The STAMFORD® option of removable feet made it easier to convert to underslung design for rail”



REPLACEMENT AUXILIARY POWER FOR RAIL CARS TO EXTEND LIFECYCLE

Specified:
STAMFORD® HC4
Established partnership with Korail, a key contributor to the growth of South Korea's economic and social growth through their intercity, commuter and metro trains

“STAMFORD® alternators continue to be the right choice for Korail's re-powering process”



RELIABLE POWER FOR HEATING AND AIR CONDITIONING

Specified:
AvK® DSG62
35 alternators supplied to deliver auxiliary power as part of the repowering of Hungarian Railways' diesel hydraulic passenger and freight trains

“AvK® was the ideal alternator for this auxiliary power application”



30-YEAR-OLD FLEET PUT BACK INTO SERVICE IN SUBSTANTIAL REPOWER

Specified:
AvK® DSG86
A twin-series repower development requiring traction power alternators in each locomotive, with a total of 46 units completed in the first phase of repowering

“Lithuanian Railways chose AvK® for robustness”



TRACTION POWER FOR UPGRADED FREIGHT RAIL FLEET

Specified:
AvK® DSG86
Upgrade programme project for Hungarian Railways, providing traction power to M62 series freight locomotives

“with 1,250kW of traction power to provide, AvK® was the obvious solution”



LATVIAN RAILWAYS LOOK FOR RELIABILITY IN FREIGHT REPOWER

Specified:
AvK® DSG86
When 1,800kW of traction power was required by each of the locomotives in the multiple working 2M62U series, Latvian Railways opted for AvK®

“AvK® had proven its long-term reliability on similar locomotives”

YOUR RAIL PARTNER FOR MAXIMUM UPTIME THROUGH WORLD CLASS ALTERNATORS AND A 24/7 GLOBAL SERVICE NETWORK



Reliable Performance

3 year warranty as standard on STAMFORD® S-Range



Technical Expertise

delivering the right solution to your needs



Customisation

to meet all your requirements



Responsive Service

within 24hrs and regional inventory



Personal Support

for service and parts wherever you are



Service Support

a large service network to support you wherever you are

GLOBAL SUPPORT

Technical Support and After Sales Service

Our engineers are available to provide technical information to assist in selecting the correct generator specifications that your job demands. We continue our active support through commissioning and into after-sales service.

Our engineers are experienced professionals trained in electrical, electronic and mechanical skills. They in turn are supported by a worldwide spares and service network.

Our Global Service Network offers:

- 24 hour response to service emergencies - 7 days a week every day of the year
- Commissioning of generators on site
- Onsite bearing maintenance and bearing condition monitoring
- Onsite insulation integrity checks
- AVR and accessories set up on site
- Extensive aftermarket distribution for genuine parts.

Product training

Product familiarity will ensure maximum productivity and optimum use of the generator. Our Customer Support department offers product training courses for engineers, operators, and service & support staff. Each course is individually tailored to suit the needs of the customer, the genset builder and the end-user.

Product familiarisation courses, with a choice of training modules - including generator control systems, applications, trouble-shooting, maintenance or other specific requirements are also available.

Vibration analysis

Alternators coupled to reciprocating engines are exposed to engine induced vibrations. We use design tools to analyse the impact of linear and torsional vibrations, and work with the engine or genset builder to validate the design of the genset, as well as to solve end-user vibration issues. This technology is key in enabling customers to improve the innovation and reliability of new and current product designs.



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Part No. PB_RAIL_EN_AF_Rev03

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