BERGEN ENGINES

ON LAND. AT SEA.

ON LAND.

PRODUCT PORTFOLIO

A Langley Holdings Company

POWERING
YOUR SUCCESS

Discover unparalleled power and efficiency with Bergen Engines' medium-speed liquid fuel and gas generating sets. For over 75 years, we've been at the forefront of innovation, crafting engines renowned for their exceptional performance on both land and sea.

Since introducing our first lean-burn gas engine in 1992, Bergen has become a global leader in medium-speed power generation. **Our land-based engine portfolio spans from 3.2 to 11.8 MW per unit** and is built on a modular design that scales easily to installations exceeding 200 MW.

We have the power.

Flexible Power, Engineered for a Changing Energy Landscape.

Bergen's medium-speed engine systems are engineered to deliver dependable, high-efficiency power for large-scale operations—from utility-grade power plants and data centres to mining sites and off-grid installations. Designed for scalability, fast response, and seamless integration with hybrid systems, our solutions meet the toughest demands for continuous, resilient power.

With modular designs, advanced digital monitoring, and low-emission performance, Bergen engines provide the flexibility and reliability today's energy-critical environments require. Backed by global support and ongoing innovation in future fuels like hydrogen, we're powering the transition to cleaner, more secure energy infrastructure.

Our engines feature precision load control and fast ramp-up capabilities, making them ideal for grid-stabilizing applications and environments with high renewable penetration. Integrated heat recovery systems support combined heat and power (CHP) and trigeneration configurations, significantly improving total system efficiency while reducing emissions and fuel consumption.

Advanced diagnostics and condition-based maintenance, supported by real-time remote monitoring, ensure operational continuity and reduce unplanned downtime. Combined with a global network of service engineers and parts availability, Bergen delivers lifecycle value for mission-critical operations where power reliability is non-negotiable.

OUR MISSION

BERGEN ENGINES IS A LEADING PRODUCER OF MEDIUM-SPEED ENGINES FOR APPLICATIONS ON LAND AND AT SEA.

Our mission is to power key sectors with high-performance, reliable, and efficient engine solutions that meet the evolving needs of the global market.

OUR VISION

TO BECOME THE GLOBAL LEADER IN MEDIUM-SPEED ENGINE SOLUTIONS, DRIVING INNOVATION IN SUSTAINABLE TECHNOLOGIES AND ALTERNATIVE FUELS.

Bergen Engines strives to shape the future of energy by pioneering 100% hydrogen-fueled engines and providing advanced, future-proof solutions across marine, power generation, and industrial sectors.

Efficient, Scalable Power Solutions for a Cleaner Future **On Land.**

THE POWER OF MEDIUM SPEED

When it comes to powering your land-based operations, choosing the right engine is crucial. Our medium speed engines offer unparalleled advantages over high-speed alternatives, ensuring your investment translates into sustained performance, cost-effectiveness, and peace of mind.

Up to 30%

lower fuel consumption compared to high-speed engines, reducing operational costs and extending engine life.

EXCEPTIONAL FUEL EFFICIENCY

Our medium-speed engines achieve efficiency ratings of 45-50%, whereas high-speed engines generally range from 35-42% depending on the application. This difference can result in significant fuel cost savings over time, particularly in continuous operation environments like power plants.

For a 10MW power plant operating at an average of 8,000 hours/year with fuel costs of $0.20/kWh, a 5% increase in efficiency with a medium speed engine can save around $800,000 annually in fuel costs alone.

LOWER MAINTENANCE COSTS AND LESS OPERATIONAL DOWNTIME

In land-based operations where uptime is critical (e.g., hospitals, data centers, industrial plants), medium-speed engines can provide a more reliable power source due to their longer maintenance intervals and robust construction.

RELIABILITY IN HARSH CONDITIONS

Medium-speed engines are built for durability and can often operate reliably for 20-30 years or more, even in demanding environments. High-speed engines, while suitable for applications requiring rapid start-stop cycles, often have a shorter operational lifespan in heavy-duty scenarios.

EMISSIONS AND ENVIRONMENTAL IMPACT

Due to higher fuel efficiency, Bergen's medium-speed engines emit approximately 5-10% less CO2 per kWh of energy produced compared to high-speed engines. This reduction is significant for industries focusing on minimizing their carbon footprint.

Our engines typically produce lower nitrogen oxide (NOx) emissions compared to high-speed engines due to their optimized combustion process. For example, modern medium-speed engines can achieve NOx emissions levels below 2 g/kWh, meeting stringent emissions regulations such as those set by the Environmental Protection Agency (EPA) and the European Union.

FUTURE-PROOFING WITH FUEL FLEXIBILITY

With Bergen's latest B3X series, our engines can seamlessly convert between gas and liquid fuel operations, offering flexibility in land-based applications where fuel type availability and price can vary. This flexibility can protect operations from fuel price volatility.

Similarly, our research in alternative fuels like hydrogen offer an option toward decarbonizing industries around the world.

ENHANCED RELIABILITY

Medium-speed engines operate at lower RPMs (typically 500-1,000 RPM) compared to high-speed engines (often 1,500-3,000 RPM). This reduced speed leads to less stress on engine components, resulting in higher reliability and a lower risk of failure, particularly in demanding land-based applications like power plants, manufacturing, and data centers.

LOAD RESPONSE AND STABILITY

Medium-speed engines offer excellent load response and stability, particularly in applications with fluctuating power demands. They can handle sudden load changes efficiently, maintaining a stable power output. This characteristic is crucial for applications like data centers, hospitals, and industrial facilities where power stability is critical.

COMPREHENSIVE SUPPORT AND SERVICE

Invest in more than just an engine; invest in a partnership. Our commitment to customer satisfaction extends beyond the sale with comprehensive support and service. From installation and commissioning to ongoing maintenance and upgrades, our expert team is dedicated to keeping your engines running at peak performance.

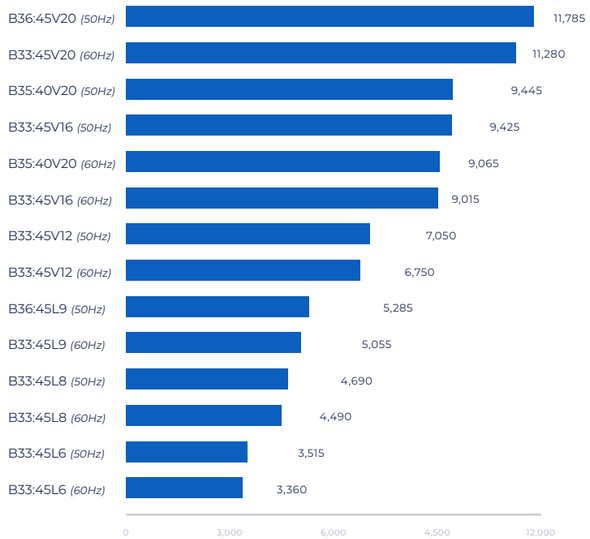
ENGINE PORTFOLIO

NATURAL GAS

Bergen's medium-speed natural gas engines deliver reliable, efficient power with lower emissions—ideal for power generation, industrial use, and district energy. With the flexibility to blend hydrogen, they offer a scalable path toward a low-carbon future.

Backed by over 40 years of gas engine expertise, Bergen systems are trusted worldwide for their performance, durability, and role in enabling cleaner, more sustainable energy solutions.

Bergen's Gas Engine Range
Electrical Output (kW)



B35:40V

V-Configuration
Natural Gas
9.1 - 9.4 MW

Weight & Dimensions

	Total Length of Generator Set (mm)	Total Width of Generator Set (mm)	Total Height of Generator Set (mm)	Total Weight of Generator Set (dry, kg)
B35:40V20 AG2	13,260	3,176	4,990	139,960

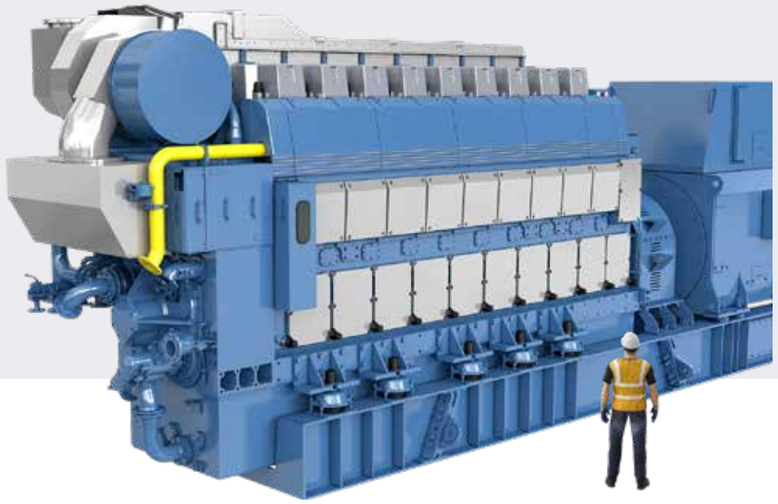
Technical Data

	50 Hz	**60 Hz**
	B35:40V20 AG2	B35:40V20 AG2
Number of Cylinders	20	20
Cylinder Diameter (mm)	350	350
Piston Stroke (mm)	400	400
Engine Speed (r/min)	750	720
Electrical Output (kW, 100% MCR PF 1.0)	**9,445**	**9,065**
Charge Air Cooler HT (kW)	1,665	1,590
Charge Air Cooler LT (kW)	625	600
Lube Oil Cooler (kW)	950	910
Jacket Water Cooler (kW)	1,200	1,155
Exhaust Mass (kg/h)	50,600	48,600
Exhaust Gas Temp (*C)	385	360
Nom. El Efficiency (MCR PF 1.0)	49%	49%

GENERAL CONDITIONS: All technical data is valid for 100% load, including two engine driven pumps. Engine power definition and fuel consumption are according to ISO 3046 and ISO 8528. Generator rating and performance in accordance with IEC 60034, power factor 1. NOx Emissions 500 mg/Nm3 @ 5% O2. Reference fuel is Natural Gas with lower heating value of 36 MJ/nm3, methane number 80. Data for heat dissipation and exhaust gas are based on a tolerance of ± 5%,turbocharger air suction temp 25°C. Due to continuous development, some data may change. The information does not carry any contractual value.

B36:45L

Inline Engine
Natural Gas
3.4 - 5.3 MW



Weight & Dimensions

	Total Length of Generator Set (mm)	Total Width of Generator Set (mm)	Total Height of Generator Set (mm)	Total Weight of Generator Set (dry, kg)
B36:45L6 AG1	9,800	2,840	4,010	65,700
B36:45L8 AG1	10,920	3,045	4,100	75,500
B36:45L9 AG1	11,240	3,045	4,130	85,220

Technical Data

	50 Hz			60 Hz		
	B36:45L6	B36:45L8	B36:45L9	B36:45L6	B36:45L8	B36:45L9
Number of Cylinders	6	8	9	6	8	9
Cylinder Diameter (mm)	360	360	360	360	360	360
Piston Stroke (mm)	450	450	450	450	450	450
Engine Speed (r/min)	750	750	750	720	720	720
Electrical Output (kW, 100% MCR PF 1.0)	**3,515**	**4,690**	**5,285**	**3,360**	**4,490**	**5,055**
Charge Air Cooler HT (kW)	735	930	1,085	700	885	1,035
Charge Air Cooler LT (kW)	225	470	620	385	450	595
Lube Oil Cooler (kW)	395	470	620	385	450	595
Jacket Water Cooler (kW)	545	720	790	520	690	755
Exhaust Mass (kg/h)	19,500	26,000	29,200	18,700	24,800	28,800
Exhaust Gas Temp (*C)	345	375	375	350	375	375
Nom. El Efficiency (MCR PF 1.0)	48%	48%	48%	48%	48%	48%

GENERAL CONDITIONS: All technical data is valid for 100% load, including two engine driven pumps. Engine power definition and fuel consumption are according to ISO 3046 and ISO 8528. Generator rating and performance in accordance with IEC 60034, power factor 1. NOx Emissions 500 mg/Nm3 @ 5% O2. Reference fuel is Natural Gas with lower heating value of 36 MJ/nm3, methane number 80. Data for heat dissipation and exhaust gas are based on a tolerance of ± 5%,turbocharger air suction temp 25°C. Due to continuous development, some data may change. The information does not carry any contractual value.

B36:45V

V-Configuration
Natural Gas
6.8 - 11.8 MW

Weight & Dimensions

	Total Length of Generator Set (mm)	Total Width of Generator Set (mm)	Total Height of Generator Set (mm)	Total Weight of Generator Set (dry, kg)
B36:45V12 AG1	11,600	3,280	4,570	107,000
B36:45V16 AG1	13,165	3,750	4,750	144,500
B36:45V20 AG1	14,200	3,750	4,750	155,000

Technical Data

	50 Hz			60 Hz		
	B36:45V12	B36:45V16	B36:45V20	B36:45V12	B36:45V16	B36:45V20
Number of Cylinders	12	16	20	12	16	20
Cylinder Diameter (mm)	360	360	360	360	360	360
Piston Stroke (mm)	450	450	450	450	450	450
Engine Speed (r/min)	750	750	750	720	720	720
Electrical Output (kW, 100% MCR PF 1.0)	**7,050**	**9,425**	**11,785**	**6,750**	**9,015**	**11,280**
Charge Air Cooler HT (kW)	1,630	2,205	2,575	1,470	2,095	2,460
Charge Air Cooler LT (kW)	420	500	460	410	475	445
Lube Oil Cooler (kW)	765	855	1,065	730	820	1,025
Jacket Water Cooler (kW)	990	1,355	1,685	950	1,300	1,620
Exhaust Mass (kg/h)	39,400	53,000	66,300	37,700	50,800	63,500
Exhaust Gas Temp (*C)	375	370	370	365	370	375
Nom. El Efficiency (MCR PF 1.0)	49%	49%	49%	48%	49%	49%

GENERAL CONDITIONS: All technical data is valid for 100% load, including two engine driven pumps. Engine power definition and fuel consumption are according to ISO 3046 and ISO 8528. Generator rating and performance in accordance with IEC 60034, power factor 1. NOx Emissions 500 mg/Nm3 @ 5% O2. Reference fuel is Natural Gas with lower heating value of 36 MJ/nm3, methane number 80. Data for heat dissipation and exhaust gas are based on a tolerance of ± 5%,turbocharger air suction temp 25°C. Due to continuous development, some data may change. The information does not carry any contractual value.

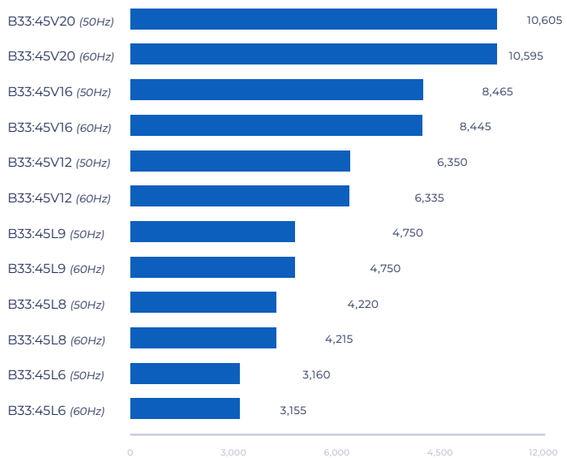
We have the power.

LIQUID FUEL

Bergen's medium-speed liquid fuel engines are built for durability, flexibility, and performance—delivering dependable power in off-grid, industrial, and emergency applications. Compatible with a range of fuels including HFO and biofuels, they're ideal for regions with challenging logistics or limited infrastructure.

With over 75 years of experience in liquid fuel technology, Bergen is a trusted partner for high-efficiency power solutions in the world's toughest environments.

Bergen's Liquid Engine Range
Electrical Output (kW)



B33:45L

Inline Engine
Liquid Fuel
3.2 - 4.8 MW

Weight & Dimensions

	Total Length of Generator Set (mm)	Total Width of Generator Set (mm)	Total Height of Generator Set (mm)	Total Weight of Generator Set (dry, kg)
B33:45L6 A1	9,775	2,710	4,100	65,300
B33:45L8 A1	10,825	2,985	4,370	81,562
B33:45L9 A1	11,240	2,985	4,390	82,395

Technical Data

	50 Hz			60 Hz		
	B33:45L6	B33:45L8	B33:45L9	B33:45L6	B33:45L8	B33:45L9
Number of Cylinders	6	8	9	6	8	9
Cylinder Diameter (mm)	330	330	330	330	330	330
Piston Stroke (mm)	450	450	450	450	450	450
Engine Speed (r/min)	750	750	750	720	720	720
Electrical Output (kW, 100% MCR PF 1.0)	**3,160**	**4,220**	**4,750**	**3,155**	**4,215**	**4,750**
Charge Air Cooler HT (kW)	710	1,115	1,175	710	1,135	1,185
Charge Air Cooler LT (kW)	250	290	295	250	290	295
Lube Oil Cooler (kW)	415	510	540	415	515	540
Jacket Water Cooler (kW)	370	525	675	370	530	675
Exhaust Mass (kg/h)	21,800	28,600	32,200	21,800	29,100	32,200
Exhaust Gas Temp (*C)	320	290	310	330	330	330
Nom. El Efficiency (MCR PF 1.0)	46%	47%	47%	46%	46%	47%

GENERAL CONDITIONS: All technical data is valid for 100% load, including two engine driven pumps. Engine power definition and fuel consumption are according to ISO 3046-1 and ISO 8528. Specific fuel consumption is based on using diesel-oil with a lower heating value of 42.7 MJ/kg. Generator rating and performance in accordance with IEC 60034-1, power factor 1. Data for heat dissipation and exhaust gas are based on a tolerance of ± 5%,turbocharger air suction temp 25°C. Due to continuous development, some data may change. The information does not carry any contractual value.

B33:45V

V-Configuration
Liquid Fuel
6.3 - 10.6 MW

Weight & Dimensions

	Total Length of Generator Set (mm)	Total Width of Generator Set (mm)	Total Height of Generator Set (mm)	Total Weight of Generator Set (dry, kg)
B33:45V12 A1	11,600	3,280	4,570	107,000
B33:45V16 A1	13,165	3,750	4,750	144,500
B33:45V20 A1	14,410	3,660	4,950	160,600

Technical Data

	50 Hz			**60 Hz**		
	B33:45V12	B33:45V16	B33:45V20	B33:45V12	B33:45V16	B33:45V20
Number of Cylinders	12	16	20	12	16	20
Cylinder Diameter (mm)	330	330	330	330	330	330
Piston Stroke (mm)	450	450	450	450	450	450
Engine Speed (r/min)	750	750	750	720	720	720
Electrical Output (kW, 100% MCR PF 1.0)	**6,350**	**8,445**	**10,605**	**6,335**	**8,465**	**10,595**
Charge Air Cooler HT (kW)	1,310	2,215	2,765	1,310	2,240	2,775
Charge Air Cooler LT (kW)	590	570	630	590	575	630
Lube Oil Cooler (kW)	735	1,015	1,140	735	1,020	1,140
Jacket Water Cooler (kW)	985	1,040	1,395	985	1,050	1,400
Exhaust Mass (kg/h)	42,200	57,200	71,600	42,200	58,200	71,600
Exhaust Gas Temp (*C)	325	345	330	325	330	330
Nom. El Efficiency (MCR PF 1.0)	47%	47%	47%	47%	47%	47%

GENERAL CONDITIONS: All technical data is valid for 100% load, including two engine driven pumps. Engine power definition and fuel consumption are according to ISO 3046-1 and ISO 8528. Specific fuel consumption is based on using diesel-oil with a lower heating value of 42.7 MJ/kg. Generator rating and performance in accordance with IEC 60034-1, power factor 1. Data for heat dissipation and exhaust gas are based on a tolerance of ± 5%,turbocharger air suction temp 25°C. Due to continuous development, some data may change. The information does not carry any contractual value.

LONG TERM SERVICE AGREEMENTS

UNINTERRUPTED OPERATION

A Long-Term Service Agreement (LTSA) outlines the terms for comprehensive service and support over an extended period of time. These agreements often include services such as scheduled maintenance, spare parts supply, technical support, and troubleshooting. The goal is to ensure the reliability, efficiency, and longevity of Bergen engines while providing peace of mind to our customers. Bergen's skilled engineers deliver both scheduled and emergency services, fostering enduring partnerships – some spanning over two decades – and a true testament to our LTSA commitment.

Our LTSAs are not just contracts; they're strategic partnerships dedicated to optimizing your engine's lifespan and efficiency. With our team of expert technicians at your service, you'll experience reduced downtime, increased reliability, and enhanced cost-effectiveness, ensuring your engines perform at their best for years to come. Say goodbye to unexpected repairs and hello to streamlined operations with our LTSAs—because when it comes to our engines, excellence is not an option, it's the standard.

WHERE MAINTENANCE MEETS SUSTAINABILITY

At our core, we believe another element of sustainability is ensuring the full lifecycle of our products through proactive maintenance and servicing—a philosophy that extends far beyond merely keeping engines running. It's about safeguarding your investment and preserving resources for the long haul. With our LTSAs, we ensure that your medium-speed engines receive the care they deserve, not just to function optimally today, but to thrive well into the future.

By preventing breakdowns and optimizing performance, we eliminate the risk of stranded assets, allowing your machinery to fulfill its entire lifecycle efficiently. Our commitment to sustainability means that every engine we service contributes to a more resource-conscious future, where operational excellence and environmental responsibility go hand-in-hand. With our LTSAs, you're not just prolonging the life of your engines; you're investing in a future where reliability, efficiency, and sustainability are paramount.

Customized Solutions for Optimal Efficiency

We understand that every operation is unique and that's why we craft long-term service agreements that are tailored to align with your requirements. Our process begins with a thorough understanding of your needs, leading to a customized agreement that perfectly fits your application, including considerations for local infrastructure access.

With Bergen Engines, you have the flexibility to choose the level of involvement that suits your preferences. Whether you prefer a hands-on approach or full operational reliance, we've got you covered. Plus, within our comprehensive framework, we offer customizable services that address your specific needs.

	Bergen OEM Spare Parts	Bergen Labor	Preventative Maintenance On-Site	Performance Guarantees	Unscheduled Maintenance Covered in Contract	Major Breakdown Covered in Contract
Master Supply Agreement (MSA)	On Demand	On Demand	On Demand	Not Available	Not Available	Not Available
S2: Maintenance	For Scheduled Maintenance; *handled by Bergen.*	For Scheduled Maintenance; *handled by Bergen.*	According to Contract	Not available	Not available	Not Available
S3: Full Maintenance	For Scheduled and Unscheduled Maintenance; *handled by Bergen*	For Scheduled and Unscheduled Maintenance; *handled by Bergen*	Regular Site Visits	Available	Yes	Available

WORKING TOGETHER

When it comes to maintenance, we understand that every operation is unique, and your level of involvement may vary based on your team's skills, experience, and resources. That's why we offer flexible service agreements that allow you to decide how much hands-on participation you want in both planned and unplanned maintenance activities.

Whether you prefer a fully managed solution where our experts handle all aspects of maintenance or a more collaborative approach where your team takes the lead with our technical support, we tailor our services to fit your needs. This flexibility ensures that you maintain full control over your equipment while benefiting from our specialized knowledge, advanced diagnostics, and industry-leading best practices. By combining your operational expertise with our maintenance solutions, you can maximize engine performance, reduce downtime, and enhance overall efficiency.

OEM SPARE PARTS FOR MAXIMUM RELIABILITY

At Bergen Engines, we prioritize the reliability and longevity of our engines by exclusively utilizing **Original Equipment Manufacturer (OEM)** spare parts. Crafted to exact specifications, each component ensures seamless integration and peak performance, backed by the latest technology and full warranty coverage.

WHY CHOOSE OEM PARTS?
They mitigate risks associated with aftermarket alternatives, safeguard your investment, and minimize unexpected failures or operational disruptions. With OEM parts, you're guaranteed unrivaled operational reliability and performance, unlike non-genuine alternatives which often result in major breakdowns and economic losses. Moreover, non-OEM parts compromise equipment quality, offering shorter service lives and higher consumption rates, leading to increased downtime and replacement needs. Our parts, continuously improved through research and development, represent a minor expense compared to the significant costs of downtime and repairs.

TRAINING

A TAILORED LEARNING EXPERIENCE

At Bergen Engines, we understand that every operator and situation is unique. That's why our training programs are customized based on equipment and operator skill level, ensuring a tailored learning experience for maximum efficacy. Our courses cover a wide array of topics that are essential for efficient operation and maintenance, gaining hands-on experience and theoretical knowledge crucial for daily tasks.

Upon successful completion of our courses, operators receive certification and ongoing support from Bergen Engines. We are committed to the continuous growth and development of your team, ensuring they remain at the forefront of operational excellence.

TYPICAL COURSE CONTENT INCLUDES:

- **Routine Maintenance Scheduling (RMS)**
- **Design, function and operational mode of main components**
- **Fuel Injection equipment (gas/liquid)**
- **Automation and Control System**
- **Engine Instrumentation**
- **Safety Systems**
- **Start, Ramp-Up, Stop and Operation**
- **Lube Oil, Fuel and Cooling Water Quality**
- **Utilization of Testing Equipment and Special Tools**

BERGEN ENGINES

ON LAND. AT SEA.

CONTACT

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Bergen Engines produces medium-speed liquid and gas fueled engines and generator sets to a broad range of land-based, commercial marine, and naval applications. The Bergen name is a watchword for quality and reliability in its field.

The tradition of engineering in Bergen, Norway, dates to 1855 when the original company Bergen Mekaniske Verksted (BMV) was founded. In 1946, the company built its first diesel engine and has since commissioned over 7,500 of its iconic liquid and gas fueled engines. Around half of them are still in operation today; such is the quality and reliability of a Bergen engine.

From 1999, Bergen Engines AS was owned by the British aerospace and defense group, Rolls-Royce plc. On 31st December 2021, the company was acquired from Rolls-Royce by the family-owned engineering and industrial group, Langley Holdings plc, and is now part of the Power Solutions division.

BergenEngines.com