



MIRETTI

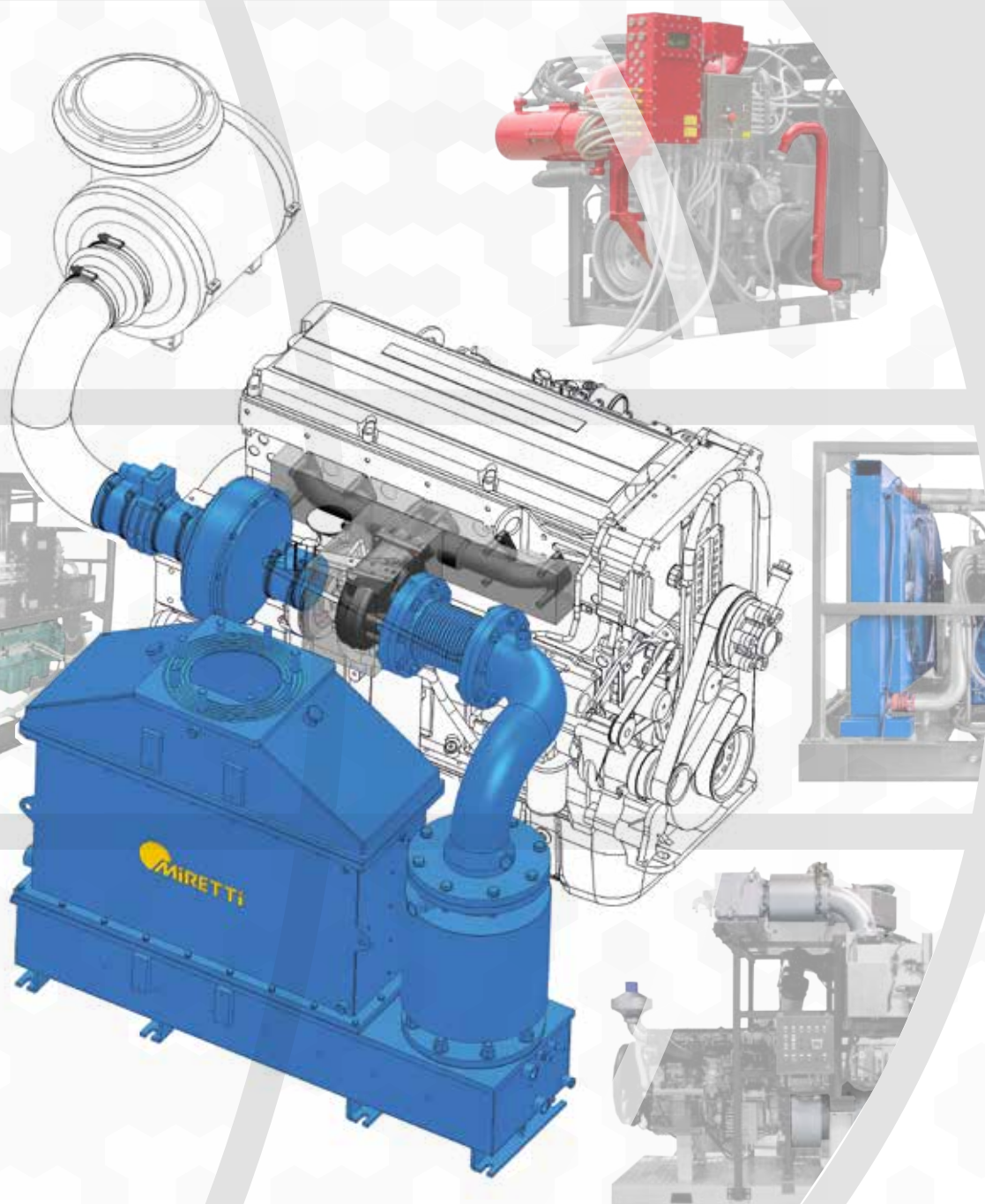
Miretti Engine Explosion Protection Systems

Zone 2 (ATEX) Kits

Class I Div. 1-2 (US)

TIER 4 Engines

IECEx



**Ex Engine Powerpacks
and Ex Engine Kits
for Explosive Environments**



SINCE 1973

The priority is to ensure safety for the environment and for human beings.

Diesel engines, working in potentially flammable atmospheres, can be an explosive mix that places workers and businesses at serious risk and could result in untold damage to the environment.

History has taught us the lesson that such risks are very real and the impact is often catastrophic.

Our priority is to protect people and the environment by providing safe, affordable and internationally compliant explosion protection systems; a requirement which cannot be compromised.



The PROBLEM...

Dangerous ignition sources of unprotected diesel engines such as: electrical, mechanical, or static sparks, overspeed or flame from inlet or exhaust, and hot surfaces that could cause an auto-ignition of a flammable gas or vapour.

Flammable gases in the atmosphere can be sucked in through the air intake along with air for combustion. This results in backfires in the inlet and exhaust or engine overspeed situation whereby the engine runs out of control. Different surfaces on a diesel engine can become hot and therefore sources of ignition. These surfaces need to be protected to avoid the danger of explosion.

The SOLUTIONS...

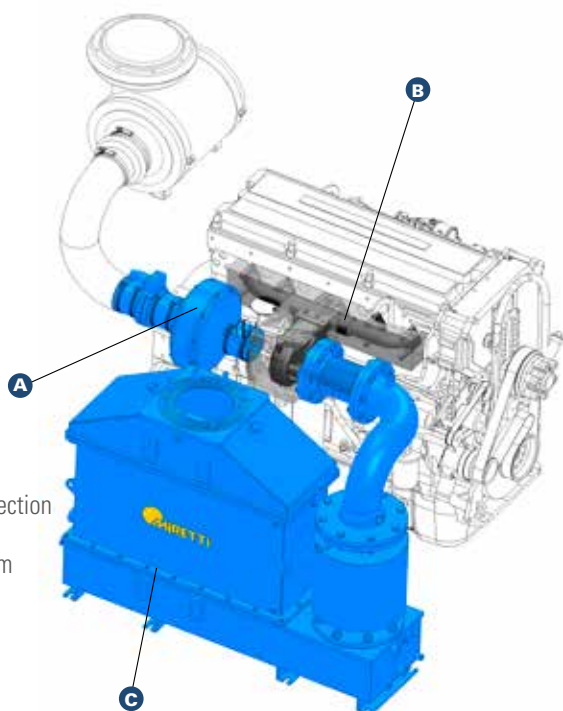
Miretti Engine Explosion Protection Systems

- Zone 2 ATEX compliant kits
- Class I Division 1-2 Explosion Protection Solutions Electrical System
- TIER 4 Engines Explosion Proof Technology
- IECEx

The explosion proof conversions of area classified provide the electrical and mechanical protection of the diesel engine, removing the risk of explosive ignition.



Miretti Zone 2 (ATEX) Kits include features designed to prevent an ignition source causing an explosion



Miretti Zone 2 (ATEX) Kits also include:
Battery and electrics Ex Protection
Charge Air Pipe
Automated shut-down system
ECM Ex Protection

Miretti Group have developed a range of Explosion Proof Solutions and Kits for marine and industrial engines.

Miretti Ex Solutions are available for Atlas Copco, MTU, Cummins, Caterpillar, Volvo, Perkins, JCB, FPT, Deutz, Man, Doosan etc...

A

Miretti Air Inlet Flame Arrestor and Shut Down Valve
Provides shutdown on overspeed

B

Miretti CoatEx Exhaust Manifold and Turbocharger
Ensures surface temperature is below 200°C (T3)

C

Miretti FilterEx Flame Arrestor, Heat Exchanger and Spark Arrestor
Cools the engine exhaust below 200°C (T3). Ensures that no sparks or not particles escape into the atmosphere

our Certifications, your Safety

All Miretti Ex Solutions Diesel Engine Hazardous Packages are certified, with some having tri-certification to ATEX 2014/34/EU, IECEx and NEC 500.

Miretti Diesel Engine Explosion Protection Systems are designed, tested and certified to support the equipments of our clients, thanks to high quality know-how of our specialist engineers.



After Sales Service and Training

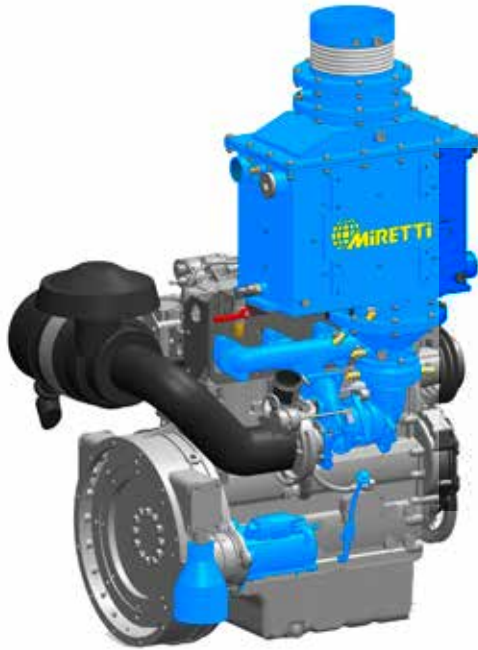
The Miretti after-sales service, present in most countries, ensures fast response times, dedicated assistance, telephone and on-site support and the availability of specific spare parts for more than ten years to help maintain constant productivity for customers.

Conversions are studied and implemented using solutions that simplify and speed up machinery maintenance. Maintenance interventions are carried out by skilled personnel, authorised and trained for the purpose in our head offices.

The Miretti After-Sales Service and the availability of local technical support through training courses for service engineers (carried out at the Milan HQ or locally when available) will support the client step by step in ensuring continuous uptime and protection of their environment.

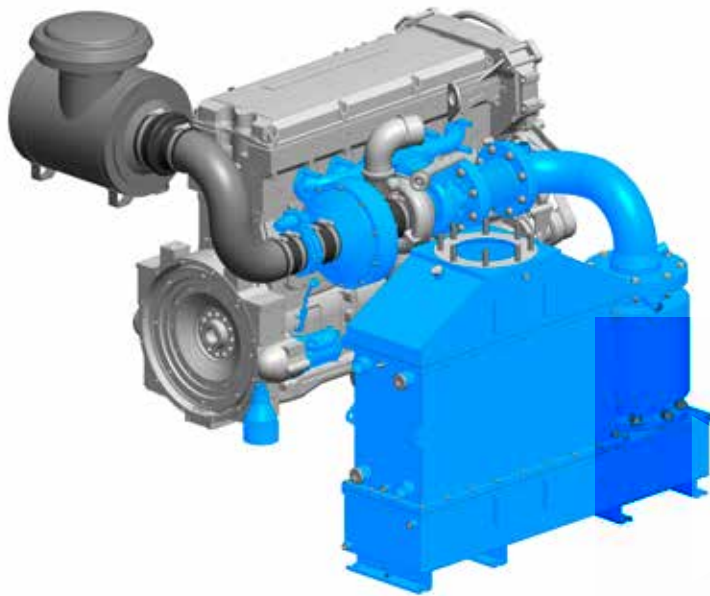
Annual and/or three yearly Safety Audits for the Ex protection system are available on request.





FilterEx Manicooler

< 90 kw



Miretti Zone 2

FilterEx

size 60-120 kw

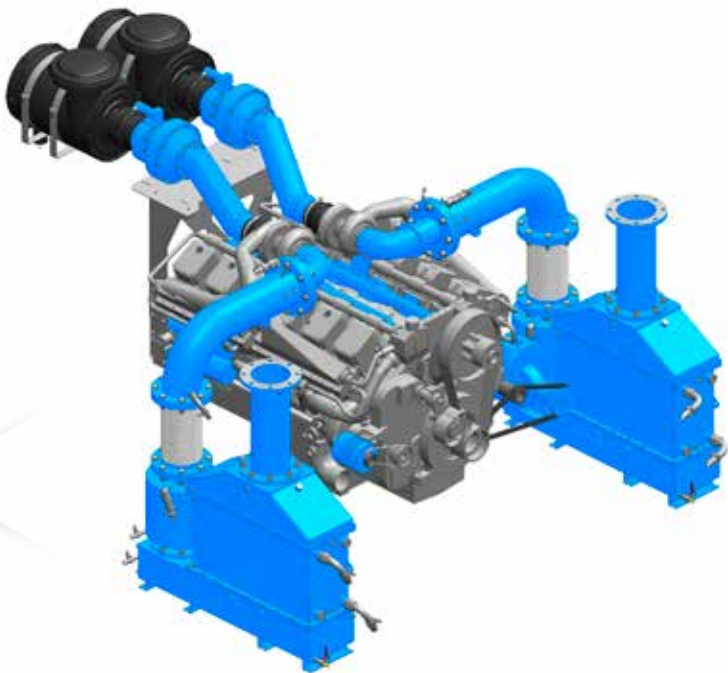
size 121-250 kw

size 251-499 kw



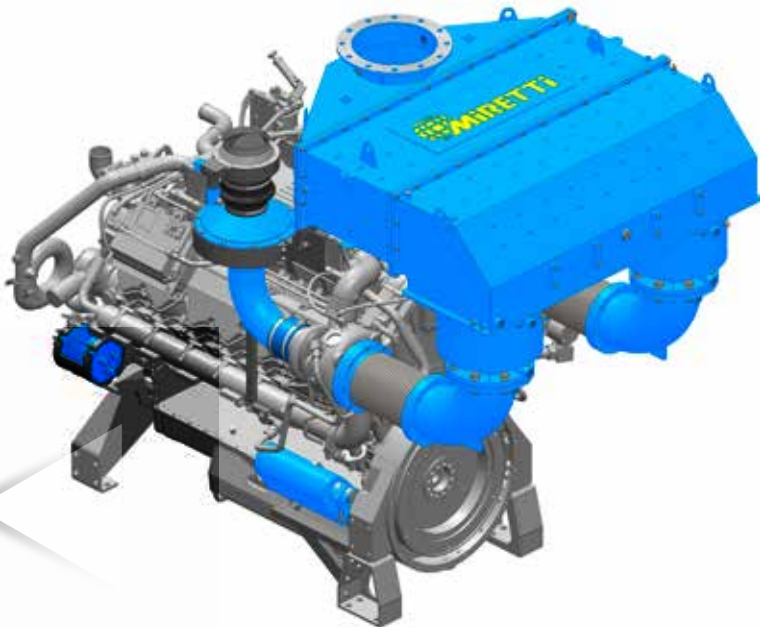
Models

FilterEx
500-800 kw



(ATEX) Kits

FilterEx
> 800 kw



The images are indicative of a standard engine package. Options are available . Please contact us for more information!



Section 2

Miretti Class I Division 1 Explosion Protection Electrical Only

NTRL certified and labeled electrical components. Complete Electrical System Certification available.



Miretti Class I Division 2 Explosion Protection Electrical Only

NTRL certified and labeled electrical components.
Complete Electrical System Certification available.

Miretti Division 2 / Zone 2 Tri-certification Explosion Protection

ATEX Zone 2, IECEx Zone 2, NEC Class I Div. 2 certificates.



Miretti TIER 4 Engines Explosion Protection ATEX Zone 1-2 / Div. 1-2 (US)

Miretti explosion proof diesel conversions are designed not to have an impact on the functionality and compliance standards of the original diesel engine. Here is an example of Tier 4 Explosion Protected Diesel Engine with tri-certification to NEC 500, ATEX 2014/34/EU, IECEx.



Section 3 Miretti Oil & Gas Solutions

Miretti FilterEx

A 'compact' exhaust cooling system with integral self-cleaning exhaust flame and spark arrestors. Enables maximum engine 'uptime' as the self-cleaning flame arrestor can operate for approx. 1,000 hours before requiring cleaning.

Reduces costly service maintenance while conventional exhaust flame arrestors need to be changed every 20 hours.

II 2GD

I M2

Tamb=20 +130°C

*designed to suit any engine type



Miretti CoatEx

Provides a thermal barrier between hot engine surfaces (e.g. turbochargers and exhaust manifolds) and the external atmosphere.

Enables the OEM "dry" turbocharger and manifold to be retained reducing Zone 2 conversion costs and minimising risk of failure by fitting non OEM turbo and water cooled manifold. It plays a crucial role in controlling heat release and limiting surface temperatures.

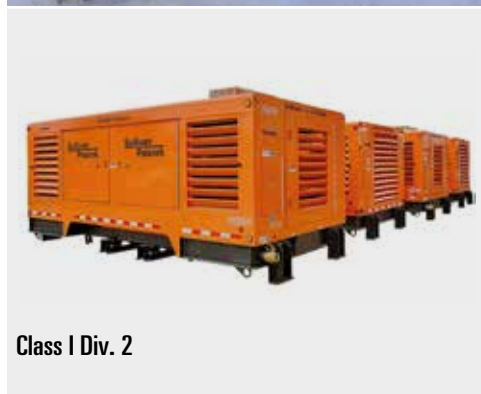
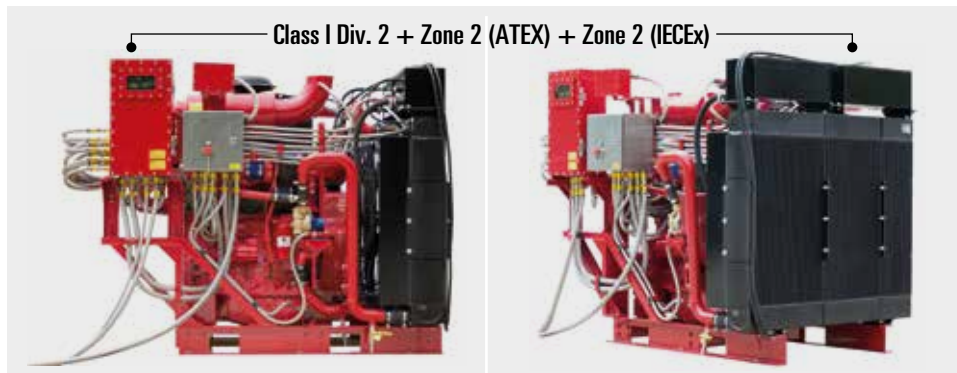
II 2G IIC

II 2D IIIC

Tamb-20°C +60°C



Miretti is at the forefront of New Technologies & Innovative Solutions





Miretti has been leader since 1973 in the **Explosion Proof Protection** of mobile vehicles and industrial equipment and boasts impressive experience in the field. The company operates all over the world with branches in Italy (head office), USA, Singapore, China, Germany, UK, France, Spain, Hungary, Benelux, Middle East, Algeria, Israel, Australia.

Miretti is ISO 9001, ISO 14001 and ISO 45001 certified and is an approved supplier for the most important world producers. Constant research focuses on new technologies and innovative solutions.

All explosion proof conversions are developed and implemented in agreement with OEM Original Equipment Manufacturers to maintain original safety levels and ergonomics in conformity with local standards and regulations.

Miretti ensures a reliable after-sales service, qualified technicians, quality and fast maintenance. Miretti Group has also been on the market since 1973 as a supplier of SCR DeNOx Systems and Catalysts thanks to many years of experience also in the field of Exhaust Cleaning Solutions reducing exhaust pollution. *"Explosion Protection Safety and Green Environment"*.



Worldwide Action

《Forward Thinking》

Quality & Reliability

《Safety Culture》

Customized Solutions

《Working for Excellence & Innovation》

Certifications & Testing



we operate all over the world



Miretti Production Facilities

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