

For more than 1000 engine types

FUEL INJECTION PIPES

Tailor made solutions

High-pressure fuel injection pipes to 3,000 bar rating

Marine Class witness pressure testing to 6,000 bar

Distillate and heavy fuel oil arrangements

Perfect fit - minimising machinery downtime and premature failure

Sheathed fuel pipes for alternative fuels – your partner through decarbonisation

Cleanliness - in house or customers specification

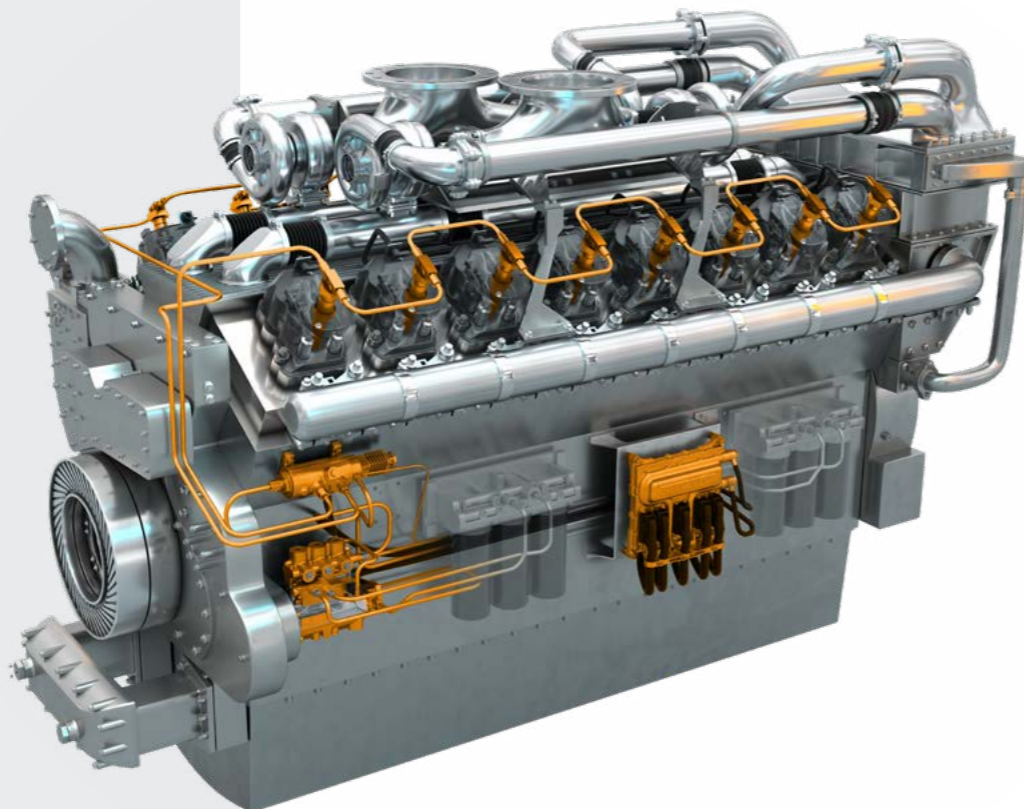


HIGH QUALITY FUEL PIPES

Founded in 1980, Giro Engineering Ltd. is a UK based designer and manufacturer of high-pressure fuel injection pipework and associated components for diesel engines. From inception to date, continual investment, together with the development of innovative manufacturing techniques and flexible production methods, allows us to produce high quality, reliable products with on-time deliveries, ensuring that we stay at the forefront in our chosen field and continue to meet the demands of engine builders and operators alike.

Giro Engineering Ltd specialise in the development and production of single wall and double wall, "Duoline" high-pressure fuel injection pipes. We provide sheathed and conventional fuel injection pipes for the marine, power generation and transportation industries from the simplest single cylinder engine to the complexities of the modern day common rail systems.

With the heritage of 40+ years of successful pipe design, Giro has the experience, tools and personnel to ensure success on each and every project. Our large and varied customer base includes the most prestigious names in the diesel engine marketplace, with a product range that covers more than 1,000 different engine types in the marine, power generation and vehicle industries.



KEY FEATURES

- ▶ High-pressure fuel injection pipes to 3,000 bar rating
- ▶ Distillate and heavy fuel oil arrangements
- ▶ Alternative fuel piping including Methanol to customer specifications and requirements
- ▶ Marine class witness pressure testing to 6,000 bar
- ▶ Autofrettage process
- ▶ Cleanliness - in house or customers specification
- ▶ Full design or sub contract manufacture to customers drawings as required
- ▶ Large or prototype/development batch sizes
- ▶ SOLAS compliant (double wall) or standard single wall
- ▶ Perfect fit - minimising machinery downtime and premature failure

FUEL INJECTION PIPES

Critical parts in the reliable operation of modern diesel engines fuel injection systems, high-pressure fuel lines are often overlooked resulting in poor reliability, machinery downtime and risks to operating personnel.

SHEATHED FUEL INJECTION PIPES - COMMON RAIL (CR)

Where common rail engine requirements increase the pressure rating of fuel lines, Giro is well equipped to cater for the most stringent pressures.

- 3,000 bar working pressures
- Clean - In-house or to customer specification
- Accepted by major classification societies
- Integrating with common rail shielding



SHEATHED FUEL INJECTION PIPES - PUMP LINE NOZZLE (PLN)

Sheathed fuel injection pipe assemblies and systems. Accepted by all major classification societies.

- LR, ABS, DNV and Bureau Veritas

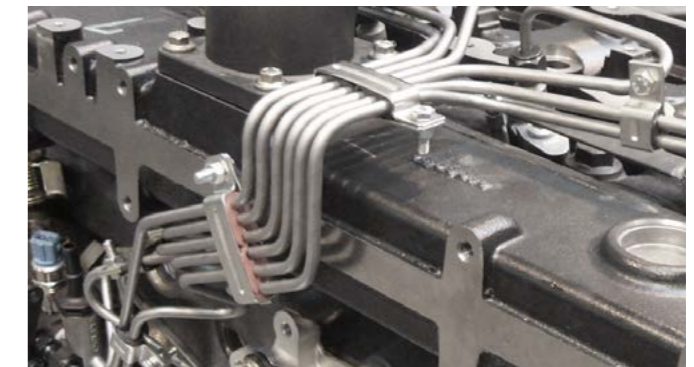


As a core product, all our high-pressure fuel lines are CAD designed using modern techniques and produced on CNC machinery to meet the highest standards of safety, reliability and compliance.

SINGLE SKINNED FUEL INJECTION PIPES

Unsheathed fuel injection pipes for high, medium and low-speed engines.

- Designed and manufactured to the same exacting standards as our double wall fuel lines
- Common rail & pump line nozzle versions available



COMMON RAIL INJECTION SYSTEMS

Modern high-pressure common rail systems that require double wall fuel pipes can also require common rail shielding to satisfy class societies. Giro supplies:

- CR Injection systems for higher pressures
- Shielding designs provide full integration with our double wall fuel lines



AUXILIARY PRODUCTS

To complement our high-pressure pipes, we have developed a range of related components to aid engine builders and operators with maintenance and compliance.

VISUAL BURST INDICATORS

Instant visual identification of a failed double wall fuel line.

- Suitable for pump and line and common rail injection systems
- Minimises machinery downtime and reduces lost man hours
- Range of sizes and operating pressures



Fully integrating with our high-pressure products, these components offer a single, reliable source for identifying, managing and monitoring leakages.

COMMON RAIL ENCLOSURES

Giro Engineering will liaise with customers to supply a suitable common rail enclosure:

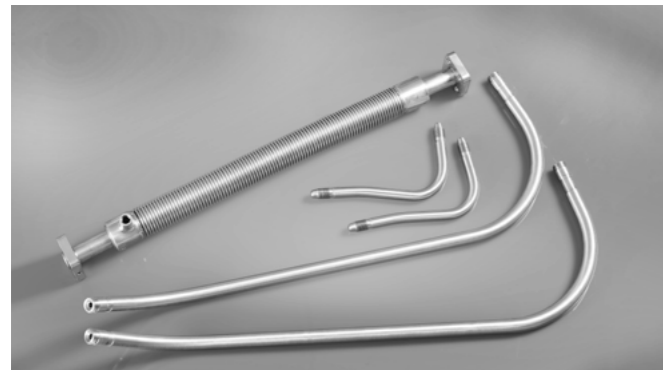
- Fabricated - suitable for lower volume
- Casting - tailored for higher volume production



FLEXIBLE HOSES

Giro Engineering supplies various flexible hose assemblies including:

- Convolute double walled
- Firesleeve and firesafe
- Bespoke options available



ALARM TANKS

Liquid level tanks and alarm sender units are available in a range of sizes and switch ratings:

- Options to suit distillate and heavy fuel oils
- Choice of normally open/normally closed switch operating modes



LOW-PRESSURE PIPEWORK

Giro supply low-pressure pipework suitable for many applications including

- Water cooling pipes
- Fuel supply manifolds
- Cylinder pressure monitoring



INJECTOR FEED STEMS

Giro offer a range of injector feed stems as a complimentary product to fuel injection lines.

- Many of our component parts are produced in house
- Ability to design and produce enables bespoke solutions where required



HIGH QUALITY

Our commitment to providing clients with the highest quality is reinforced through accreditation to ISO 9001:2015 and our own continuous improvement program. Our products are accepted by all major classification societies including LR, ABS, DNV and Bureau Veritas.

DESIGN CAPABILITIES

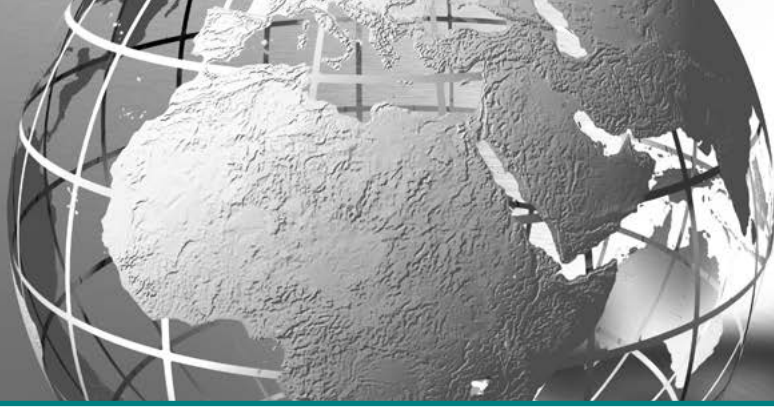
Giro Engineering is recognised worldwide as an authority on the design and development of sheathed and conventional fuel injection pipes for the marine, power generation and transportation industries from the simplest single cylinder engine to the complexities of the modern day common rail systems.

CLEANLINESS

Cleanliness is one of the key elements on any fuel system. Giro has installed a range of cleaning and flushing equipment all housed in a clean room environment. This enables us to satisfy the most stringent OEM cleanliness standards. A dedicated filtration system provides a clean medium used to test cleanliness by visual or patch-weight measurement.

IN-HOUSE PRODUCTION

CNC production machinery, coupled with stringent quality control techniques ensure our products demonstrate low defect rates and high repeatability. In our UK facilities we manufacture sheathed and unsheathed fuel pipe assemblies from 6 mm outside diameter up to 30 mm outside diameter.



HEINZMANN GROUP - THINKING IN DRIVE AND CONTROL

HEINZMANN is a globally active family business founded in 1897 with its headquarters in Schönau (Germany), in the Black Forest.

Today, in the field of engine management HEINZMANN is one of the leading suppliers of components and systems for industrial combustion engines, generators and turbines. As a specialist and development partner, HEINZMANN is committed to developing exactly the right solution for increasing efficiency and reducing emissions.

In the Electric Drives division, HEINZMANN also demonstrates innovative strength and development expertise in engine technologies of the future. The company has established itself as a reliable partner and system provider for electric drive systems.

Our collaborative interaction with more than 40 globally active subsidiaries and sales companies characterizes the spirit within the HEINZMANN group of companies and makes us a reliable partner.

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