Specialists in Filtration and Process Engineering



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Specialists in Filtration and Process Engineering

GFSA specialises in the design and manufacture of customised, high integrity filters, strainers and flame arresters in carbon steel, stainless steel, duplex, super duplex, 6Mo, titanium and many other exotic alloys. Established in the UK in 1997 we have become a leading supplier to the oil and gas, petrochemical, power generation, water and process industries world-wide. We are committed to innovation, technical excellence, continuous improvement and environmental responsibility.

In addition to GFSA's core range of filters, strainers and flame arresters, we also manufacture a variety of related process equipment, including hydro-cyclones, compact flotation units, heater vessels, pig launchers and receivers, tanks and pipework manifolds. This equipment can be supplied either as single units or as fully assembled skid packages.

Our on-going success is based on a combination of four vital factors:

1. **Continuous programme of research and development of our filtration technology**
2. **Investment in state of the art design and manufacturing equipment**
3. **A highly- skilled workforce**
4. **A thorough understanding of the requirements of the industries that we serve**

> By bringing these together, we deliver products of the highest quality within short time frames – providing a significant advantage for our clients.



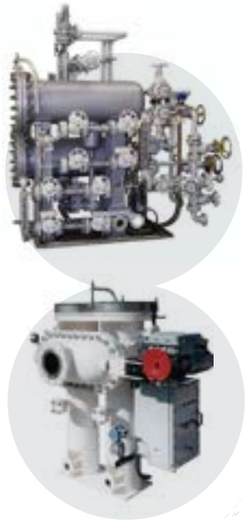
Filtration products designed for efficiency and performance

Our filter range covers both standard and bespoke equipment to suit specific process requirements. Solutions are available for both liquids and gas/vapour for solid/liquid and liquid/liquid separation. Filter retentions are available from 50 Microns down to sub-micron levels with 99.99% efficiency.

We also produce a wide range of industrial strainers from simple temporary strainers to complex self-cleaning back-flushing strainers. Both filters and strainers are available in sizes ranging from ½" nb to 48" nb with pressure ratings up to 2500LB. GFSA is highly experienced in producing filtration solutions in materials suitable for virtually all industrial applications. Materials range from cast iron and plastic to exotic white metals such as Duplex and Super Duplex Stainless Steel, 6 Mo, Titanium, Inconel and Hastelloy.

The following are our main product groupings but we also design and manufacture bespoke solutions based on the technologies we have developed.

- **Process Skid Packages**
- **Quick Release Closures**
- **Filters** (Cartridge Filters, Gas Filters, Activated Carbon Filters, Duplex Filters, Seawater Filters, Filter Housings)
- **Strainers** (Temporary Strainers, Y-Type Strainers, Basket Strainers, Multi-Basket Strainers, Duplex Strainers, Self-Cleaning Strainers, Backwashing Strainers, Strainer Housings)
- **Separators**
- **Coalescers**
- **Flame Arresters**
- **Pressure Vessels**
- **Vessels/Tanks** (Surge Vessels, Stripping Columns, Demister Vessels, Heat Exchanger Vessels, Hydro-Cyclone Vessels, Knock-Out Vessels)
- **Pig Traps**
- **Drain/Seal Pots**
- **Air Receivers**







Manufacturing and engineering excellence

GFSA manufactures to the very highest standards. Design and engineering excellence underpins all our activities, as does a total commitment to customer satisfaction and on-time deliveries.

Quality Assurance and inspection is controlled and documented by our Quality Management System which has been approved and accredited by LRQA to BS EN ISO 9001: 2015. As an ISO 9001 approved company we are fully committed to the total quality approach and continuous improvement. Our Environmental Management System is approved and accredited by LRQA to ISO 14001:2015 as is also our Health and Safety Management to ISO 45001:2018.

We also hold a vast array of other manufacturing accreditations including:

- **EN1090 for structural products and engineering.**
- **ISO-3834 for fusion welding of metallic materials.**
- **Approved ASME U & UM stamp authorised manufacturer.**
- **We are fully conversant and experienced with working to international codes of construction including: ASME VIII Div. 1, EN13445, PD5500, ASME B31.3/B31.4/B31.8, GOST, PED2014/68/EU, PED2014/34/EU & NORSOK MDS Standards to approved requirements of Norsok M-650.**
- **All materials used in the construction of our products are new and of first quality, fully traceable and certified to BS EN 10204 3.1 or 3.2 as standard whilst non-pressure containing parts/materials are certified to BS EN 10204 2.2.**



A comprehensive set of support services

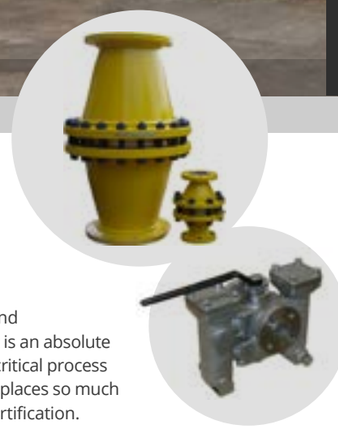
Working closely with our clients from preliminary project design through manufacturing, project management and testing to installation, full documentation, after-sales services and spares, we ensure that process equipment supplied by us performs reliably and to specification throughout its service life.

> DESIGN

Operating in the most demanding and safety-critical industries, our design teams, using the latest AutoCAD/SolidWorks 3D design technology, have the experience and expertise to deliver bespoke solutions, tailored to our clients' specific needs. All our units are designed for ease of installation and to provide the minimum restriction to fluid flow thus reducing both pressure losses and power requirements.

GFSA strainers and filters have large filtration areas that provide:

- **Lower operating differentials.**
- **Increased dirt-holding capacity.**
- **Increased time between maintenance periods.**



> WELDING

Maintaining the strength, integrity and corrosion-resistance of welded joints is an absolute requirement when providing safety-critical process systems and is the reason that GFSA places so much emphasis on quality, training and certification.

Our welding management system has been approved and accredited to ISO 3834 by LRQA. All welding is carried out by approved, coded welders to ASME IX, EN287, ISO 9606. More than 250 welding procedure qualifications are held, covering a wide range of materials and thicknesses. Our in-house weld processes include: TIG, MIG, MAG, MMA, SAW and FCAW.

> FABRICATION

Having invested heavily in modern production facilities and a highly skilled workforce, GFSA is able to provide specialist fabrication services both in support of its core process engineering business and in general engineering production where consistently high-quality fabrication is required. GFSA has extensive experience of working with Stainless Steels, high performance alloys and exotic metals within the most demanding industries where quality and engineering excellence is a basic requirement. In-house capabilities include fabrication, machining, rolling and bending.

All our cast and fabricated units are designed to maximise operating efficiency and minimise environmental impact. Wall thicknesses include allowances for corrosion, erosion, external loadings and manufacturing tolerances for ultimate safety. Great care is taken to avoid excessive wall thickness which increases weight and wastes valuable energy, material and resources.

GFSA's fully integrated process systems can include all associated elements including structural steelwork, such as walkways and stairs, platforms, support steelwork, pipe supports and pipe bridges. Piping systems can be provided in Carbon Steel, Stainless Steel, Duplex and Super Duplex Steel, Nickel Alloys, Titanium, Zirconium and clad combinations.

> TESTING

GFSA ensures the integrity of the systems it provides through extensive testing which can include high pressure testing (2000 Bar), specialised mechanical testing in NAMAS accredited laboratories, and a wide range of Non-Destructive Testing (NDT).

NDT methods can detect surface and sub-surface defects without affecting the operating performance of the inspected products. Options include: Hydrostatic Pressure Testing, Ultrasonic Testing, Magnetic Particle Inspection, Liquid Penetrant Testing, X-Ray Inspection, Positive Material Identification and Ferrite Testing.

> TREATMENTS AND FINISHING

GFSA works with local companies to offer heat treatment of components or fabrications. This can have the effect of stabilising fabrications by relieving stress or modifying the properties of the metal component; making them harder, softer or easier to manufacture, without altering their shape.

Techniques include annealing, quenching, case hardening, precipitation strengthening and tempering. All work of this kind carried out by GFSA conforms to strict standards and quality assurance.

> SURFACE PREPARATION AND PAINTING

GFSA can provide paint finishes to fabrications and machined components to suit a wide range of applications and environments. Initial surface preparation through shot-blasting achieves SA Standards 1,2.5 or 3 depending on customer specification. Paint coatings are applied in strict accordance with customer specifications. Rigorous inspection routines throughout the coating process ensure compliance with client requirements.

We can provide paint finishes in the following systems: Alkyd, Zinc Rich Primers, Single and Two Pack Epoxies, Glass Flake and Acrylic. All products are supplied with a full traceability pack to ensure that finishes are compliant with the required standards.

> ON-SITE SERVICES: INSTALLATION, COMMISSIONING AND SERVICING

The erection, installation and commissioning of our equipment does not normally require the presence of a GFSA Engineer. However, upon request a GFSA Engineer can be on site within 48 hours to assist in installation and commissioning.

GFSA provides a complete back up service for field maintenance of plant and equipment supplied by the company both on-shore and offshore. 12-month warranties are standard on all equipment and extended warranties are also available including service contracts carried out by our own highly qualified and experienced engineers.



Our commitment to the environment

GFSA operates an **Environmental Management System** in accordance and accredited to ISO EN14001. We are fully committed to analyse every aspect of our business in terms of its **impact on the environment** and take appropriate measures and preventative actions where necessary.

As a market leader in the design and manufacture of filters, strainers and flame arresters, our products make a **major contribution to de-contaminating the environment** by cleaning process fluids generated and used within the industrial world.

