Filters
Challenge made easy

Filters / Industrial filters


Filters
Challenge made easy

From experience to excellence.

Filters.
Different elements.

Filters was founded in 1989 and has since become a market leader in the field of specialized and custom-made industrial filters. Today, Filters combines outstanding know-how in filtration and separation technologies, with an in depth experience in engineering. We work all over the world with the most important companies providing equipment, technology, services for the Oil & Gas, power generation and petrochemical industries.

Filters is an ever-expanding company: we receive requests from all sorts of enterprises to develop projects in the oil & gas, petrochemical, power generation and water treatment sectors. We have distributors and agencies in many strategic locations around the globe, this means, direct contact, assistance and personalized service on the ground.


FILTERS

Specialists in advanced customization.

Filters customers benefit from our technical expertise characterized by specialists in chemical process, mechanical engineering, fluid dynamic simulation, modeling and analysis. Filters specialized teams are structured to create and manage the highly specific needs of their customers' projects.

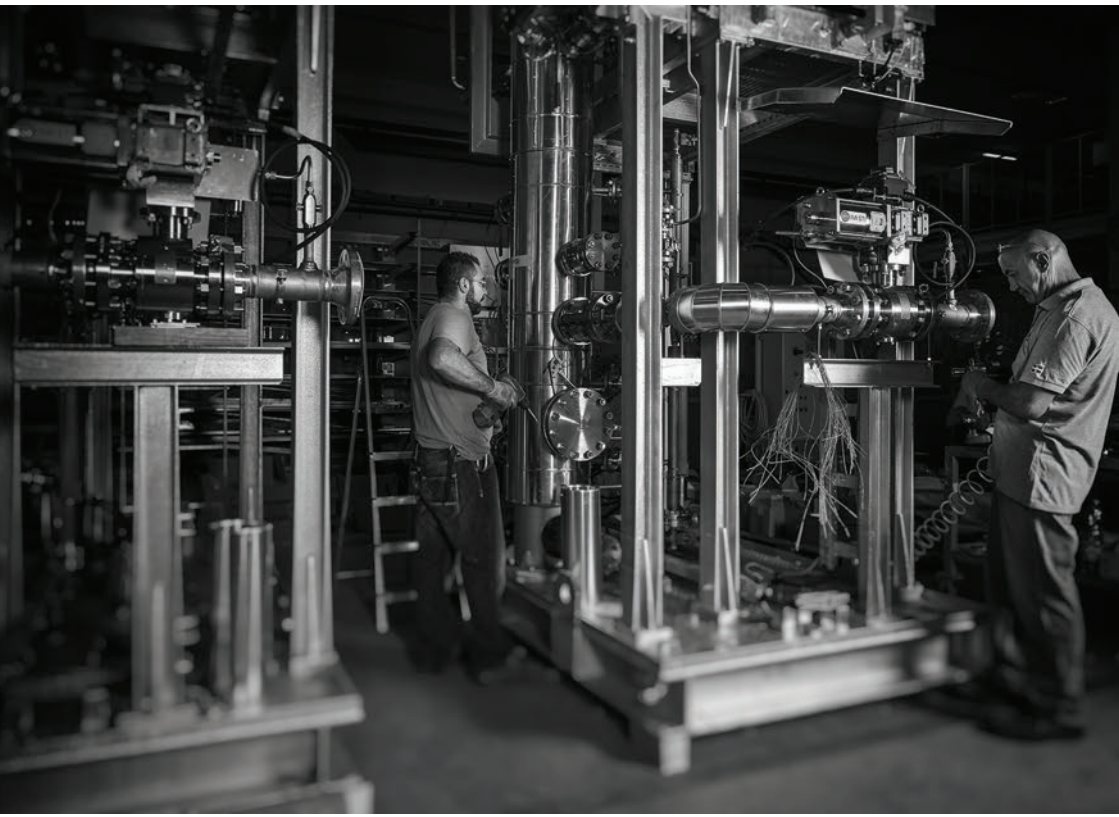
Our production is based on two keywords, technology and services, offered in a range of different steps:

In-house production

The filtering elements are produced in a dedicated facility, which has been designed and built to guarantee high quality standards for all Filters' products. Filters is also specialized in the design and construction of specific piping and pressure vessel components.

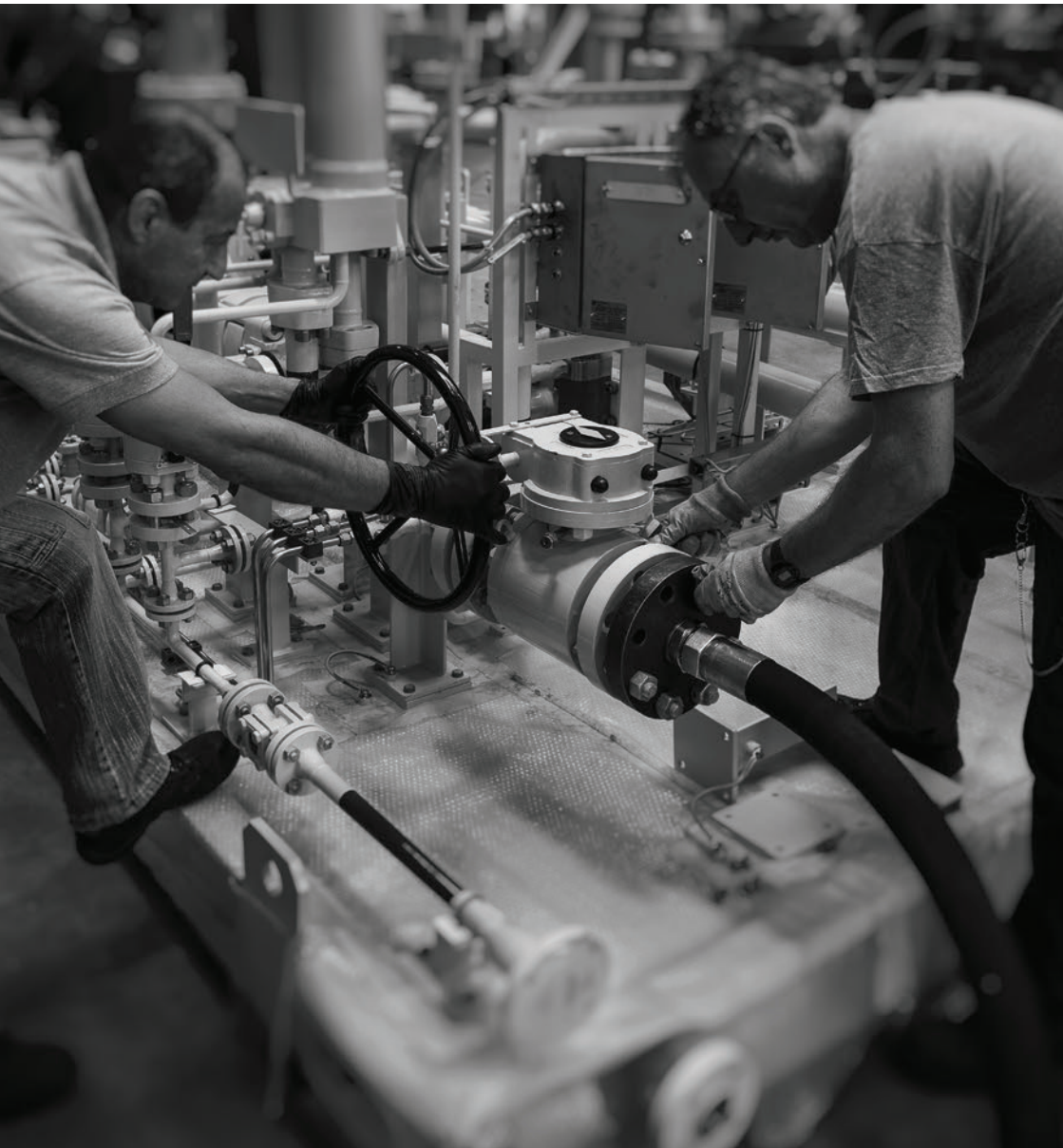
Cross-sector knowledge

Filters works with a broad range of customers in the private and public sectors: this gives us experience and knowledge of the specific needs in different segments of the market.



Emergency management

Shutdown times mean economic losses. Companies need a quick and reliable response to their emergencies: Filters gives its customers just this, thanks to our internal organization and tested procedures.



An experienced team

Filters' technical team offers solutions in chemical processes, computational fluid dynamics, mechanical design and environmental engineering.

Warranties

Filters assures the supply of guaranteed spare parts for each component.

Filters manufacturing.

Filters S.p.A. offers a considerable range of filtration components, filters and packages.
Our products are installed worldwide directly or through contractors and we can supply products with a wide range of materials and filtration or separation performances.
All of them are customized to your needs and requirements (dimensions, materials, filtration elements etc..). Filters guarantee the construction of pressure vessels with a rating over 300 bar and with weight up to 16.000 kg.
Furthermore, our filters and separators can reach minimum design temperatures of -196° C in Stainless Steel and -52° C in Carbon Steel. Other extreme design temperatures on request.

FILTRATION

SIMPLEX FILTERS

Description: All industrial processes that involve moving parts need lubrication to reduce friction and fitting.
The lubricating fluid needs to be pure and contaminant free. In order to obtain the quality needed it is necessary to instal the correct kind of filtering element for this fluid.
Our company's filtering elements ensure that the lubricating fluids are always of the purest and highest quality, guaranteeing trouble free processes; long life of machinary and costs reduction.

Application: oil & gas, water, petrochemical.

GENERAL DATA

Standard Pressure Range: HP: 100 barg / LP:14 barg
Materials: Carbon steel, Stainless steel, Super Duplex, Duplex, LTCS, Carbon Steel HT
Filtration Rating: from 5 to 22 µm

Product Certifications:
ASME VIII div.1 design not stamped
ASME VIII div.1 design "U" stamped
CSA B51/CRN
AS 1210
PED 2014/68/UE
EAC TR CU (032/2013)
SELO + ASME VIII div.1 not stamped
BRAZILIAN NR 13


Filters
CERTIFIED BY Filters S.p.a
SERIAL NUMBER
YEAR

DUPLEX FILTERS

Description: All industrial processes that involve moving parts need lubrication to reduce friction and fitting.
The lubricating fluid needs to be pure and contaminant free. In order to obtain the quality needed it is necessary to instal the correct kind of filtering element for this fluid.
Our company's filtering elements ensure that the lubricating fluids are always of the purest and highest quality, guaranteeing trouble free processes; long life of machinary and costs reduction.
The continuous operation of this duplex filter is due to the duplex filter design and the installation of a 3 or 6 way valve.
Duplex filters could be designed according to API 614

Application: oil & gas, water, petrochemical.

GENERAL DATA

Pressure Range: HP: 100 barg / LP:14 barg
Materials: Carbon steel, Stainless steel, Super Duplex, Duplex, Carbon Steel (low and high temperature)
Filtration Rating: from 5 to 22 µm

Product Certifications:
ASME VIII div.1 design not stamped
ASME VIII div.1 design "U" stamped
CSA B51/CRN
AS 1210
PED 2014/68/UE
EAC TR CU (032/2013)
SELO + ASME VIII div.1 not stamped
BRAZILIAN NR 13


NOT WORKING FILTER
ÇALIŞMIYAN FİLTRE
CAUTION
CLEAN AND APPLY
SILICON BASE GREASE
ON BOTH CAP AND SHELL
THREADS BEFORE ASSEMBLY
Filters
TECHNICAL FILE
CUSTOMER CODE
RE0349185206E
MANUFACTURER CODE
ADNHF15F055
SERIAL NUMBER
180421/2
CARTRIDGE CODE
RC0369481321
DESIGN CODE
ASME VIII DIV.1
YEAR BUILT
2018
DESIGN TEMPERATURE
175°C=347°F
DESIGN PRESSURE
8 BarG=1160.3 PsiG
SHOP TEST PRESSURE
139.7 BarG=2026.1 PsiG
TEST DATE
11/Sept./2018
3469
Filters S.p.a.
U
W
MAWP
MPa AT
175
°C
MDMT
AT
8
MPa
SERIAL NUMBER
180421/2
YEAR
2018

HIGH PRESSURE FILTERS

Description: All industrial processes that involve moving parts need lubrication to reduce friction and fitting.
The lubricating fluid needs to be pure and contaminant free. In order to obtain the quality needed it is necessary to instal the correct kind of filtering element for this fluid.
Our company's filtering elements ensure that the lubricating fluids are always of the purest and highest quality, guaranteeing trouble free processes; long life of machinary and costs reduction.

Application: oil & gas, water, petrochemical.

GENERAL DATA

Operating Pressure: Up to 360 barg
Materials: Carbon steel or Stainless steel
Filtration Rating: from 5 to 22 µm

Product Certifications:
ASME VIII div.1 design not stamped
ASME VIII div.1 design "U" stamped
CSA B51/CRN
AS 1210
PED 2014/68/UE
EAC TR CU (032/2013)
SELO + ASME VIII div.1 not stamped
BRAZILIAN NR 13


CERTIFIED BY
Filters
MAWP
MPa
AT
°C
MDMT
°C
AT
MPa
SERIAL NUMBER
YEAR

AUTOMATIC BACK WASHING FILTER

Application: Automatic back washing filter and scraper filter are used to filter all types of liquids, when mechanical removal of impurities is required.
The working system, is completely automatic, it is safe and needs very little maintenance. It is ideal for unmanned installations.

Technical characteristics: Easy and quick cleaning and maintenance effective removal of the contamination.
During the back washing process, each cartridge operates in turn, and meanwhile the other cartridges continue the filtration process without being affected.
Direct installation on pipelines.
Directly mounted on baseplate. Customized as per customer specification

GENERAL DATA
Nominal diameter: 1" ÷ 28"
Maximum Flow Rate: 4000 m3/h
Standard Pressure Working: 12 barg
Operating Temperature: 150°C ÷ 200°C
Fluid Compatibility: sea water
Materials: Carbon steel or Stainless steel
Filtration degree: from 25 to 2000 µm

Applicable codes and standards:
2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011

Product Certifications:
ASME VIII div.1 design not stamped
ASME VIII div.1 design "U" stamped
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AS 1210
PED 2014/68/UE
EAC TR CU (032/2013)
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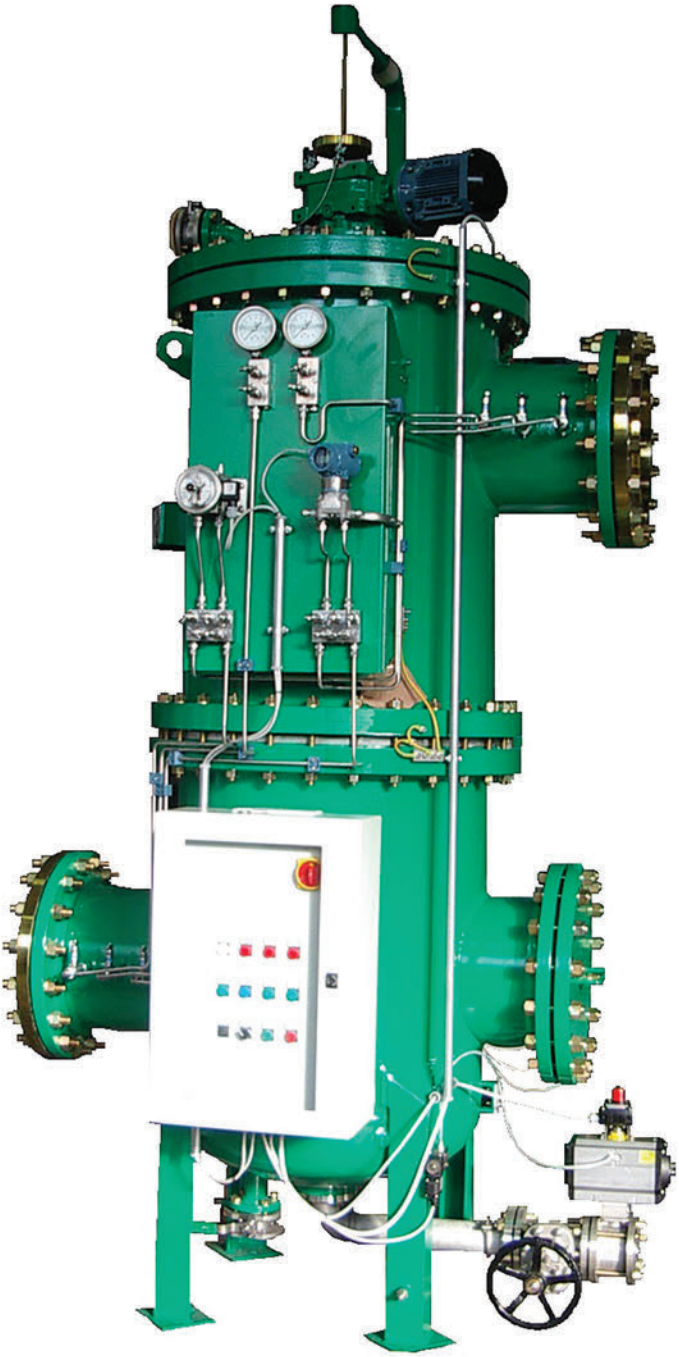
BRAZILIAN NR 13



ULTRA - PORE SERIES FD

Ultra-Pore series cartridges are particular suitable for the filtration of mineral oils, synthetic oils, fuels and other fluids with viscosity up to 250 cSt.

Application: liquid filtration

Flow direction: from external to internal

Fluid: Mineral and Synthetic oils, fuels and other fluid with viscosity up to 250 cSt.

Internal Structure: without internal core in standard construction.
Filtration Element: Borosilicate fiberglass microfiber.
Filtration Rating: 2 to 31 µm
βx (c) ≥ 1000

Collapse Pressure: 10 barg
Min. Storage Temperature: -60°C
Max Operating Temperature: 130°C

Type: Pleated

Advantages: Wide fluid compatibility
Long working life
Increasing system components life

ULTRA - PORE SERIES F

Ultra-Pore series cartridges are particular suitable for the filtration of mineral oils, synthetic oils, fuels and other fluids with viscosity up to 250 cSt.

Application: liquid filtration

Flow direction: from external to internal

Fluid: Mineral and Synthetic oils, fuels and other fluid with viscosity up to 250 cSt.

Internal Structure: without internal core.
Filtration Element: Borosilicate fiberglass microfiber.
Filtration Rating: 2 to 31 µm
βx (c) ≥ 1000

Collapse Pressure: 10 barg
Min. Storage Temperature: -60°C
Max Operating Temperature: 130°C

Type: Pleated

Advantages: Wide fluid compatibility
Long working life
Increasing system components life

ULTRA - PORE SERIES FCN

Ultra-Pore series cartridges are particular suitable for the filtration of mineral oils, synthetic oils, fuels and other fluids with viscosity up to 250 cSt.

Application: liquid filtration

Flow direction: from external to internal

Fluid: Mineral and Synthetic oils, fuels and other fluid with viscosity up to 250 cSt.

Internal Structure: without internal core.
Filtration Element: Borosilicate fiberglass microfiber.
Filtration Rating: 2 to 31 µm
βx (c) ≥ 1000

Collapse Pressure: 10 barg
Min. Storage Temperature: -60°C
Max Operating Temperature: 130°C

Type: Pleated

Advantages: Wide fluid compatibility
Long working life
Increasing system components life

ULTRAMESH SINTERED SERIES RS

The series RS cartridges is the perfect synchrony between high filtering surface and efficiency regeneration requirements.

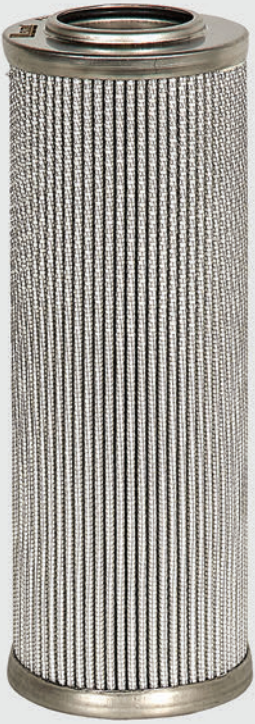
Application: Liquid and gas filtration
Flow direction: from external to internal
Fluid: Mineral and Synthetic oils, fuels and other fluid with viscosity up to 250 cSt.

Internal Structure: without internal core in standard construction.
Filtration Element: Ultra mesh sintered media and woven cloth
Filtration rating: 0,5 to 5 µm
βx (c) ≥ 1000

Collapse Pressure: 2 barg
Min. Storage Temperature: -60°C
Temperature Range: -20 / +140°C

Type: Pleated

Advantages: Reducing at minimum the pressure drops
High filtration area
Wide fluid application



ULTRAMESH SERIES R

The series R cartridges is the perfect synchrony between high filtering surface and efficiency regeneration requirements.

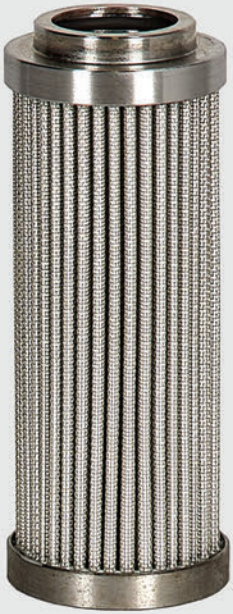
Application: Liquid and gas filtration
Flow direction: from external to internal
Fluid: Lubricant-cooling fluid, waters, heavy and light fuels, lubrication oils, corrosive fluids, gas, synthetic and mineral oils.

Internal Structure: without internal core.
Filtration Element: Ultra mesh woven cloth
Filtration Rating: 10 to 1000 µm
βx (c) ≥ 1000

Collapse Pressure: 2 barg
Min. Storage Temperature: -60°C
Temperature Range: -20 / +140°C

Type: Pleated

Advantages: Reducing at minimum the pressure drops
High filtration area
Wide fluid application



ULTRAMESH SERIES T

The series T cartridges is the perfect synchrony between high filtering surface and efficiency regeneration requirements.

Application: Liquid and gas filtration
Flow direction: from external to internal
Fluid: Lubricant-cooling fluid, waters, heavy and light fuels, lubrication oils, corrosive fluids, gas, synthetic and mineral oils.

Internal Structure: without internal core.
Filtration Element: Ultra mesh woven cloth
Filtration Rating: 10 to 1000 µm
βx (c) ≥ 1000

Collapse Pressure: 10 barg
Min. Storage Temperature: -60°C
Temperature Range: -20 / +140°C

Type: Pleated

Advantages: Reducing at minimum the pressure drops
High filtration area
Wide fluid application

SEPARATION

OIL MIST ELIMINATOR

Application: Large volumes of lubricating oil are necessary to cool and protect the internal working surfaces of rotating machinery.
These conditions can create an oil mist has traditionally been vented to the atmosphere. Oil Mist Separators are designed to capture this mist to help meet increasingly demanding environmental and safety legislation.
Applications includes : Diesel engines; Crankcase breathers; Gas turbines; Gland vents; Lube oil tank vents; Steam turbines; Lube oil tank vents; Compressors; Glands; Gearboxes.

Technical characteristics: Foot or skid mounted, customized as per customer specification. Installation type indoor or outdoor, off-shore/ on-shore, industrial and/or marine environment.

Operation condition: Up to 2500 Nm3/h - customized as per customer specification

Fluid Compatibility: Mineral lube oil

Materials: Carbon steel or Stainless steel

Applicable codes and standards:

2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011


WARNING
INCREASE VACUUM
DECREASE VACUUM

OIL CLEANING UNIT PURIFIER

Application: The Oil Cleaning Unit Purifiers are a complete series of dialysis equipment developed to increase the quality and life of industrial oils. The oil purifier is based on special coalescing systems, which remove free water and solid contaminants from lubricating, hydraulic or control oil systems for all kinds of rotating machinery. The system supplied is suitable for the treatment of the oil contained in a reservoir both when pressurized or also at atmospheric pressure. The skid pump system is capable at circulating the oil through two separate cartridge filters dedicated for water removal and particle removal service. The oil is sent back to the reservoir after treatment.

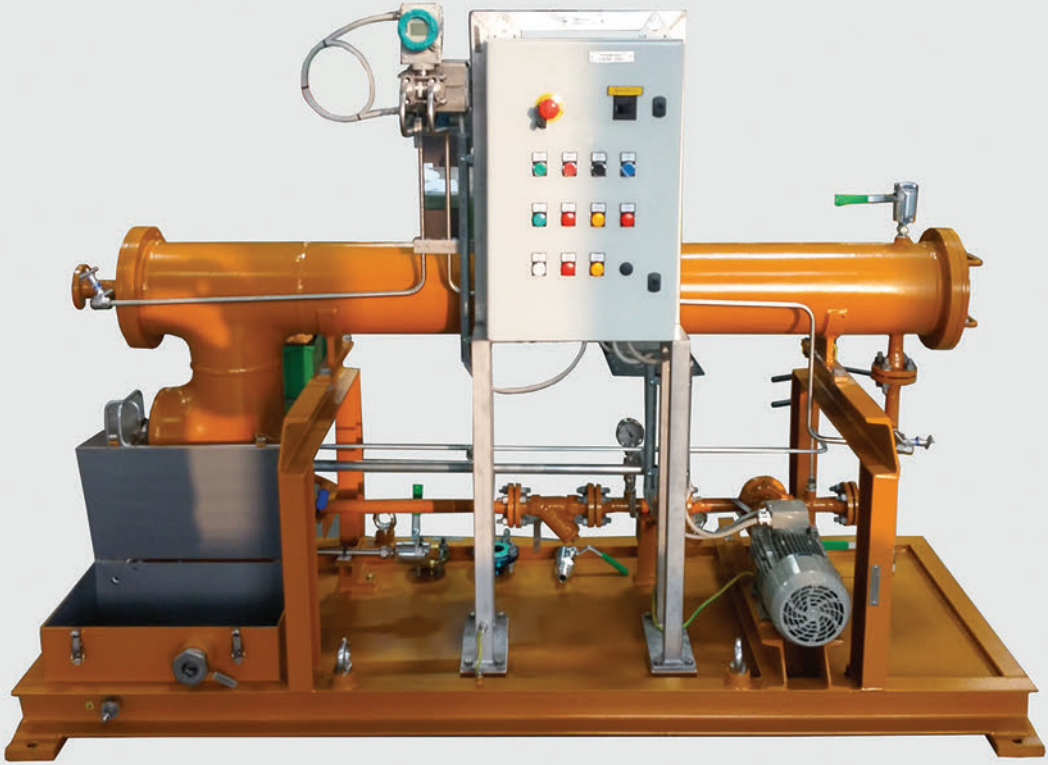
Technical characteristics: Minimum 20 lpm up to customer requirement

Operation Condition:
Operating fluid temperature: 20 ÷ 70 °C
Vessel design Press. / Temp. : 12 barg / 100 °C

Fluid Compatibility: ISO VG32
ISO VG46
ISO VG100
ISOVG15

Materials of construction: Carbon steel or Stainless steel

Applicable codes and standards:
2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011



COALESCING CARTRIDGES

Coalescing cartridges are designed to liquid aerosol filtration from air or gas streams in high flow applications.
Aerosol droplets are removed by coalescence on filtration media.
This kind of cartridges are also designed to natural gas filtration.

Application: Liquid aerosol coalescing filtration, natural gas filtration.

GENERAL DATA

Flow direction: from external to internal (dry gas applications and from internal to external (coalescing application)
Fluid: Natural gas, Mineral and Synthetic oil mist up to 250 cSt.
Internal structure: without internal core in standard construction.
Carbon Steel Znt or Stainless Steel on request welded on the vessel.
Filtration Element: Borosilicate fiberglass microfiber.
Filtration Rating: 0,15 to 5 µm
βx (c) ≥ 1000

Collapse Pressure: 2 barg
Min. Storage Temperature: -60°C
Max Operating Temperature: 140°C

Type: Pleated

Advantages: High operating temperature
High filtration rating

SYSTEMS

WATER WASHING TROLLEY

Application: Water washing trolley could be a combined On & Off-line washing system for gas turbines.
The trolley have the purpose to deliver the specified water + detergent flow to the turbine nozzles (located at the inlet of axial compressor) on both modes: On-line (during turbine operation & (in this case) Off-line (during turbine shutdown).

Technical characteristics: Water washing trolley it's a movable equipment with tank, heater, centrifugal motor pump, local control panel valves and instruments suitable for injection of detergent/water mixture or simply water into gas turbine compressor inlet.
Being a trolley it is equipped with flex hose for connection to package and electrical cable with plug for connection to local socket.

Customized as per customer specification
This product is also available as a skid

Operation condition: customized as per customer specification

Fluid Compatibility: de-mineralized water plus detergent

Materials: Carbon steel or Stainless steel

Applicable codes and standards:
2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011

TM3701TSHH4435
TSH4434

JET FUEL SKID

Application: The Jet Fuel Skid is composed by a main filter, cylinder shaped designed, specifically to remove solid contaminants such as dirt, rust, scale, sand and metal particles from liquid product streams.
The main filter is composed by coalescer elements that break the fuel-water emulsion and remove solids by microfiltration simultaneously.
The water sump can be drained manually.

Fluid Compatibility: Jet Fuel
Materials of construction: Carbon steel or Stainless steel
Main Components:
- Automatic air eliminator with non-return valve;
- Differential pressure gauge;
- Pressure relief valve;
- Manual drain valve.

Applicable codes and standards:
2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011

Hazardous area classifications and application international codes:
SAFE AREA
IIEC/ATEX
NEC/NEMA/CSA
TR-CU
INMETRO

LIQUID FUEL BOOSTER SKID

Application: Liquid fuel booster skid provides the liquid fuel from a ground storage tank to a Gas Turbine at pressure, temperature and flow rate required by turbine fuel system. The fuel forwarding skid shall include also a duplex filter with mechanical interlock & pressure gauge and two AC motor-driven centrifugal pumps, factory assembled and skid mounted.

Technical characteristics: Skid mounted type, customized as per customer specification. Installation type indoor or outdoor, off-shore/on-shore, industrial and/or marine environment

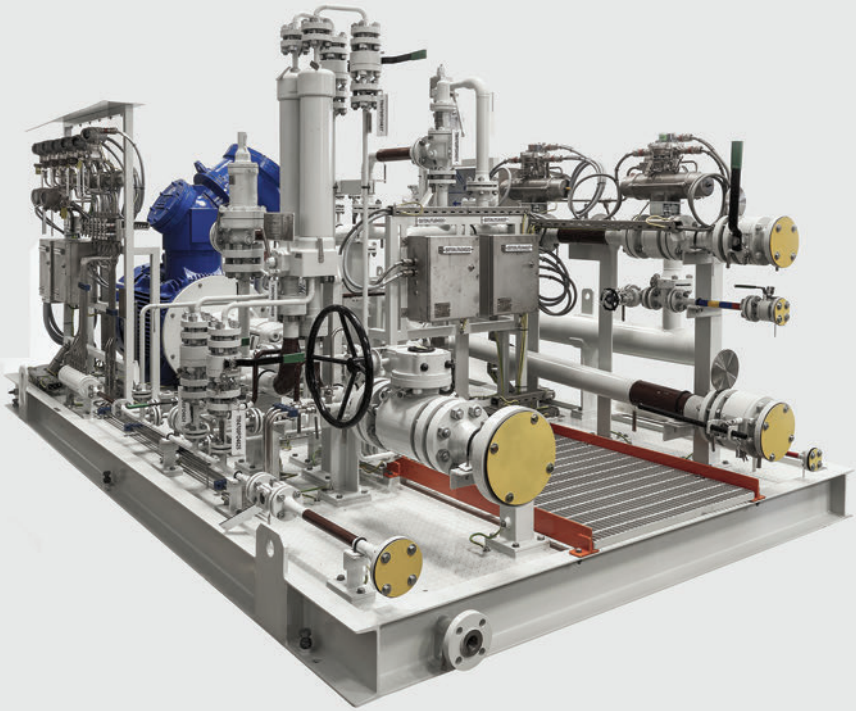
Operation: Customized as per customer specification

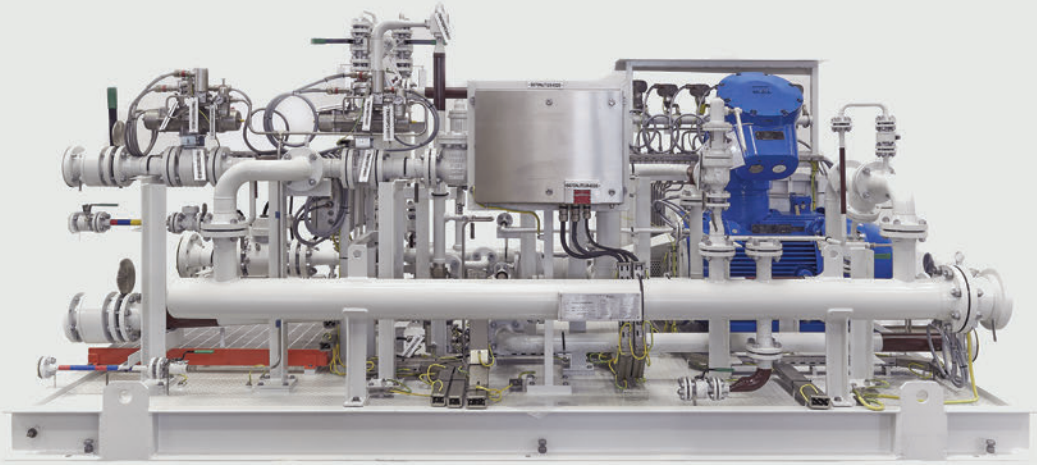
Fluid Compatibility: Diesel Oil

Materials of construction: Carbon steel or Stainless steel

Scope of supply: The liquid fuel system include design (in according to customer P&ID), construction, assembly, painting, test, and shipping logistic.

Following components are necessary for a correct operation and installation:
- Liquid fuel pump
- Electric motor
- Inlet strainer
- Inlet shut-off valve
- Startup fuel electric heater
- Startup preheating control valve
- Inlet pressure safety valve
- Outlet pressure safety valve
- Manual isolation valve and check valve
- Discharge last change filter duplex type
- Piping & tubing and compression fitting
- Winterization
- All bolts & nuts, gasket necessary for components assembly
- Instrumentation and wiring diagram





FUEL GAS VALVE SKID

Application: The Fuel Gas Valve skid is able to supply fuel gas to the gas turbine. The supply shall include all the materials necessary to ensure the system requirements are met and the system operates properly.

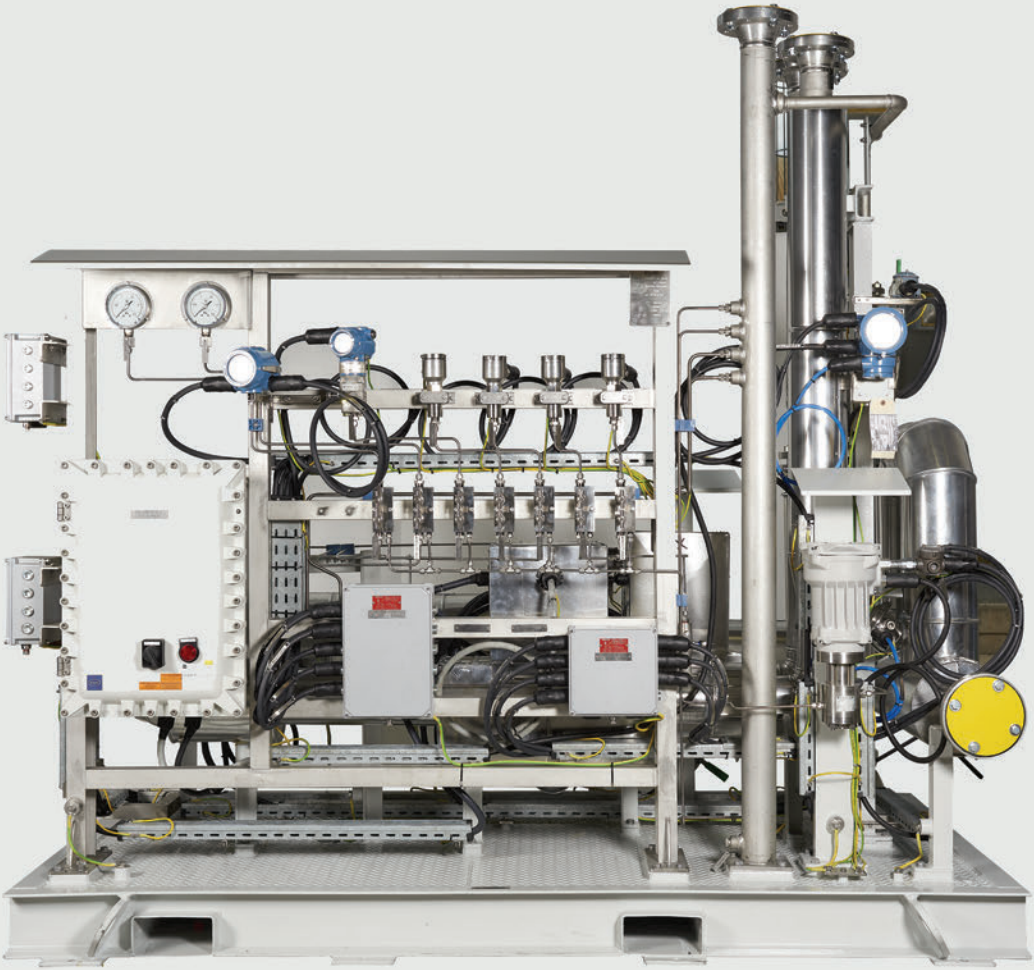
Technical characteristics: According to customer requirements
Operation condition: According to customer requirements
Fuel Gas Composition and operating condition: According to customer requirements
Materials: Carbon steel or Stainless steel

Scope of supply: The Fuel Gas Valve Skid include design (in according to customer P&ID), construction, assembly, painting, test, and shipping logistic.

Following components are necessary for a correct operation and installation:
- Fuel gas filter (strainer type)
- Shut-off valve
- Flow gas control valve
- Intervalve vent valve
- Warm up valve
- Electrical instruments
- Flow transmitter

Applicable codes and standards:
2014/34/UE
2006/42/EC
2004/108/EC
NEC (USA)
CSA
EN1090
EAC CU TR 012/2011
EAC CU TR 010/2011

Hazardous area classifications and application international codes:
IEC/ATEX
NEC/NEMA/CSA
TR-CU
INMETRO



FUEL GAS TREATMENT SKID

Application: The Fuel Gas Treatment skid is suitable for Gas turbine.
The equipment shall be able to separate liquid and solid particles that may damage the gas turbine. The scrubber separator shall be designed in accordance to code and technical customer requirement The supply shall include all the materials necessary to assure the system requirements are met and the system operates properly.

Technical characteristics: According to customer requirements

Operation condition: According to customer requirements

Fuel Gas Composition and operating condition: According to customer requirements

Materials: Carbon steel or Stainless steel

Scope of supply: The Fuel Gas Treatment Skid include design (in according to customer P&ID), construction, assembly, painting, test and shipping logistic.

Following components are necessary for a correct operation and installation:
- Fuel gas scrubber
- Drain pot
- Pressurized drain valve
- Shut-off valve
- Electrical instrumentation
- Wiring cable and JB
- Manual valve

Hazardous area classifications and application international codes:
Iec/ATEX
NEC/NEMA/CSA
TR-CU
INMETRO

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