



Filtration and Purification of Compressed Air, Gasses and Liquids

Air, Gas, and Liquid Purification

EHL can design and deliver a complete system of filtration and separation products for compressed air, liquid transfer and gas systems. EHL's technology and experience in the field of compressed air treatment, gas filtration, and fluid separation extends from the compressor room to all points of use in your facility. Components and systems are designed and matched to ensure optimal performance. EHL can design and build solutions from concept to reality. Our partnership with leading global manufacturers and filtration providers, ensure a global support base for local challenges. EHL's portfolio covers an extensive range of industrial filters, refrigeration and adsorption dryers, and condensate treatment.



PRODUCTS

- Activated carbon filters
- Cartridge filters
- Demisters
- Emulsion separators
- Filter housing
- High-pressure filters
- Oil/vapour absorbers
- Oil/water separation systems
- Process filter elements
- Refrigeration compressed air dryers
- Silicon-free filters
- Sub-micro filters
- Vent filters
- Adsorption dryers
- Condensate drains
- Disposable filters
- Filters
- High-performance filters
- Medical vacuum filters
- Oil/water separators
- Pre-filters
- Process filter housing
- Pure gas filters
- Service Kits
- Steam filters
- System solution
- Breathing-air units
- Cyclone separators
- Elements
- Fine Filters
- Micro filters
- Sterile filters
- Vacuum filters

SERVICES

- Air Audit - Detailed analysis with optimisation action plan
- Air flow measurement
- Air Performance - Optimisation of compressed air networks
- Air Survey - Analysis of compressed air systems
- Condensate sampling • Dew point measurement
- Differential pressure measurement
- Integrity tests
- Leak localisation
- Maintenance agreement
- Oil-aerosol measurement
- Service agreement

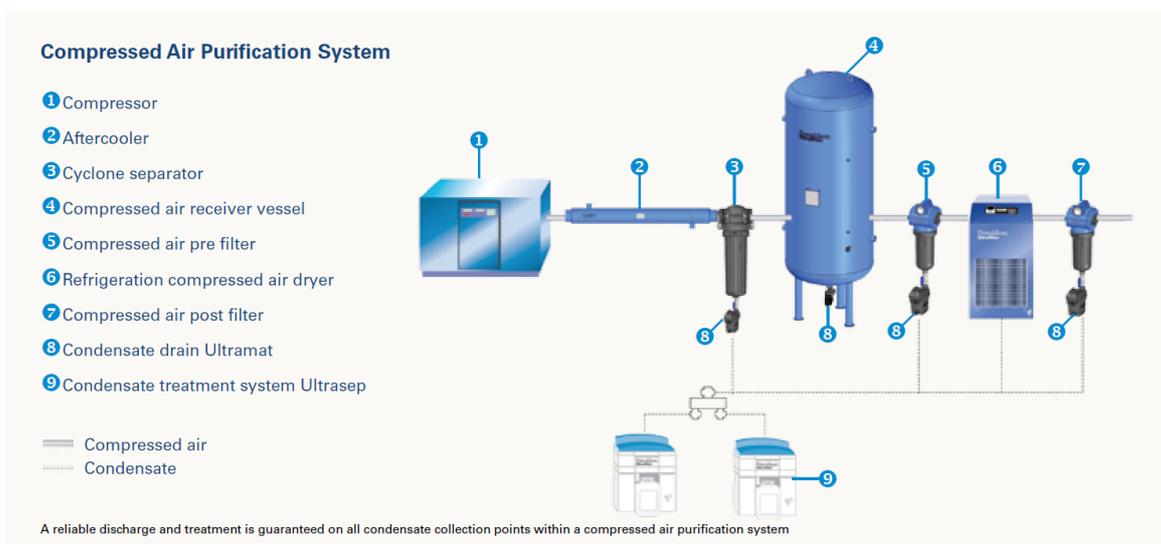
Process Filtration

Where quality requirements are exceptionally high, EHL has a selection of process filters which will enable you to reach required maximum purity standards. For these purposes EHL supplies an extensive range of pre and sub-micro filters for liquids, for compressed air, gases and sterile air systems.



Adsorption Dryer and System Solutions

Processing concepts consisting of filtration and drying are an integral part of various compressed air applications. EHL designs and manufactures complete solutions that are tailor-made to individual customer requirements. This guarantees high reliability and simultaneously efficient operation.



Industrial and Process Filtration



- Flow rates from 35m³/hr to 1100 m³/hr
- Flow-optimised filter housing and filter element design
- Validated filter performance according to DIN ISO 125800-1
- Outer and inner surfaces protected against corrosion
- Simple installation and operation
- Economiser function with digital differential pressure gauge

High Pressure Filter Housing • Working pressure 20 barg to 400 barg •

Suitable for compressed air and technical gases

Vacuum Filter VAK / MVAK “Medical” • Including drain flask (medical)

Silicone Free Filters • Specifically designed for use in the automotive and paint industries



(Three) Stage Filter This unique filter element combines 3 high efficiency purification stages in one single element. • Sub-Micro coalescence filter • Activated carbon adsorbent • High efficiency particle filter (class 1 acc. to ISO8573-1:2010) • Nominal flow rates up to 110 m³/hr @ 7 barg • Economiser offers control of filter lifetime and differential pressure • Compact space saving solution for point of use application • Service advantages vs. multiple housing combination



Cyclone Separator • DF-C Cyclone Separator will remove abrasive contamination (solid & liquid particles) from the flow of air pressure • Low differential pressure and simultaneously lowered requirements of energy, the cyclone separator offers substantial cost savings • High retention rates over large flow range • The bayonet fixing between housings head and housing bowl makes for ease of inspection and cleaning of housing • Housing cannot be opened under pressure due to bayonet lock - high safety during operation



Filter Housings • Flow rate from 1440 m³/hr to 2880 m³/hr (AG) and from 1080 m³/hr to 38400 m³/hr (SG) • Low pressure drop • Include differential pressure gauge and condensate drain • SG available with ATEX specification • Maximum working pressure 16 barg

Cyclone Separators • Innovative spin insert improves efficiency • Flow optimised filter housing design • Cost efficient removal of bulk water, particles and oil droplets • Retention rate >99% for particle size of 10 micron and larger • Include UFM-D condensate drain



Filter Elements Available as prefilter, microfilter submicrofilter, activated carbon filter • Binder-free Syntec XP media • Low differential pressure • High dirt holding capacity • Longer service life • Lowest filtration costs

Competitor Filter Elements Experience quality and performance in your existing compressed air filter housings • Improved filtration efficiency • Lower differential pressure • Longer service life • Lower filtration costs

Process Filtration



Process Filter Housings

- Industrial quality air and gas/steam housings P-EG
- High capacity steam housings P-EGS
- Sanitary gas housings PG-EG
- Industrial, sanitary, pharma quality liquid housings PF-EG
- Vent filter housings
- Disposable laboratory filters UFTD
- Industrial quality PP liquid housings P-KG



- **Process Filter Elements**
- Sterile compressed air filters P-SRF, P-SRF N
- Sterile tank vent filters P-BE
- Sterile membrane liquid filters PF-BEV, PF-PT, PF-PES
- Depth liquid filters PP, PP 100
- Steam filters P-GS VE
- High capacity gas, steam, liquid filters P-GSL, P-GSLN
- Competitor replacements in P7, P9, DOE connection

Low Pressure Sterile Air Systems P-SLF

- Cost effective generation of sterile air from 35 - 900 m³/hr
- May be used stationary or mobile
- Includes blower and filtration system in a stainless steel cabinet



PROCESS FILTER INTEGRITY TESTER

- **FTC Filter Test Centre**
- Integrity and efficiency test centre for sterile depth filters
- DOP (Dispersed Oil Particulate) test
- **Membra-Check**
- Integrity test centre for membrane filters
- Bubble point test, WIT, diffusion test

Compressed Air Dryers



HIGH EFFICIENCY REFRIGERATION DRYERS

- Flow rate 20 m³/hr to 1650 m³/hr
- Reliable pressure dew point +3 OC
- Corrosion resistant aluminium heat exchanger
- Environmentally friendly refrigerant R407c / R134a with high overload capacity

HI-Flow

- Flow rate 1800 m³/hr to 28500 m³/hr • Load dependent control with frequency converter • Corrosion resistant aluminium heat exchanger • Environmentally friendly refrigerant R134a with high overload capacity • Available aircooled and watercooled



HIGH EFFICIENCY REFRIGERATION DRYERS/ MEMBRANE DRYERS

Custom-Built Refrigeration Dryer

- Designed and built according to customer requirements
- Use of semi-hermetic screw compressors

Membrane Dryer

- Point-of-use compressed air dryer • No electrical power supply necessary
- PDP reduction up to 20 Kelvin (k)

Bora DHP

- Flow rate 25 m³/hr to 5,000 m³/hr • Working pressure 50 barg • Ideal for PET applications • Environmental friendly refrigerant R134a/ R404a with high overload capacity



HEATLESS HIGH EFFICIENCY ADSORPTION DRYERS (Dryer/Filtration) Systems

- Complete purification package with pre and afterfilter • Desiccant cartridges
- Compact, space saving design • Flow rate 5 m³/hr to 100 m³/hr
- PDP -40oC / -70oC

Oil Free / Odour Free / Medical Grade

- Complete purification package with pre and afterfilter • Flow rate 5 m³/hr to 8750 m³/hr • PDP -40oC / -70oC • Available in “tropical” version • Up to 1000 m³/hr in cabinet construction



Oilfree / Odour Free / Medical Grade

- Complete purification package for oilfree air • 17 sizes available

High Pressure Adsorption Dryer

- Working pressure 25 barg to 400 barg • Complete purification package including pre and afterfilter

Activated Carbon

- Residual oil content <0.003 mg/m³ • Activated Carbon Lifetime > 10,000 hrs
- Includes residual oil indicator

Breathing Air System

- Package includes adsorption dryer • Removal of CO, CO₂, NO_x and SO₂ • Complies with international standards



HEAT REGENERATED HIGH EFFICIENCY ADSORPTION DRYERS

“Zero-Loss” (PDP: -70 oC)

- No loss of compressed air • Low noise level • Consistent pressure dew point
- No over sizing of compressor • Desorption in counterflow • Valves and key components “made in Germany”

HRE (PDP: -40 oC)

- Low investment cost • Average cooling air consumption 2% • Desorption in counterflow

CO₂ (PDP: -50 OC)

- Ideal for CO2 recovery plants • Adsorption dryer / deodoriser package

Condensate Management

Reliable Condensate Discharge without Pressure Losses

You will achieve an especially safe and reliable condensate discharge without pressure loss when using electronically level-controlled condensate drains. This range is distinguished by a compact design and is available in five sizes. A rugged housing design, a low noise development during the discharging process and a high resistance against dirt are only a few of the performance features of the condensate drain. All condensate drains are easy to maintain and functionally tested by the manufacturer.



Electronic Zero-Loss Drains

- Reliable operation • No purge air loss due to electronic control • Simple installation • High pressure version UFM-DHP up to 40 barg available

Minimum Expenditure with Service and Maintenance

- Complete replacement of all wear parts and pressurised parts with one-handed operation* • Only one spare part is needed • No assembly of seals and individual parts

is required

*Applies to the condensate

Oil/Water Separators reduce Disposal Costs



With an oil content of 5% on average, condensate is too harmful to the environment and must not pass in to the wastewater without purification. The specified critical value by legislation is at a maximum of 20 mg/l (measured according to DIN EN ISO 9377-2) - some local regulations of today are even more restrictive. Ultrasep Superplus N oil/water separators fulfil these requirements, reduce disposal costs and protect the environment. EHL will provide the optimal solution for each application in seven sizes for compressor capacities ranging from 120 Nm³/hr to 7,200 Nm³/hr.

ACCESSORIES, SPARE PARTS and SERVICES



AFTERCoolERS AND DEMISTERS

Air/Water Cooled Aftercoolers

- Ensures an energy efficient compressed air system
- Contributes to long pre and afterfilter service life
- Improves compressor efficiency
- Lowers operation cost for downstream equipment

Demisters

- Cost efficient removal of bulk water, particles and oil droplets
- Retention rate 99% for particle sized > 10 micron
- Including UFM-D condensate drain



MEASUREMENT SERVICES AND EQUIPMENT

- Volume flow measurement with consumption profile
- Pressure dew point measurement
- Leakage measurements
- Oil aerosol measurement
- Differential pressure management
- Compressed air condensate analysis

Leakage Detector Pressure Dewpoint Meters

- Stationary
- Portable

Massflowmeters for CA and N2

- Stationary
- Portable



SERVICES, SPARE PARTS AND CONSUMABLES

- Compressed air audits with detailed analysis and optimisation action plan
- Commissioning
- Preventative maintenance agreements
- Servicing
- Compressed air leak localisation

Desiccant

- Silica gel
- Activated alumina
- Molecular sieve
- Specialty desiccants

Desiccant Replacements for Other Brands of Adsorption

Dryers

- Dewpoint dependent and control retrofits for energy savings

