

**contec:**

clean solutions on demand®

Air and gas filters



Oil mist separators



Liquid filters



Level measurement



**Products and solutions  
in the fields of industrial filtration,  
separation and level measurement.**

## Cooperative and fair from the very beginning. Our philosophy.

The principles, based on which we operate, are as simple as they are logical:

- We focus on the individual needs of our customers - regardless of its position in the market or the volume of its order.
- In the consultation, project planning and in terms of our products, we stand for solutions that meet the highest standards.
- Every order is carefully planned and implemented with a clearly defined goal. Through a lean project management with professional contacts, we ensure maximum transparency of the project's progress. We are a strictly respectful and honest company.
- It is with maximum team spirit and commitment that we run our daily business - regardless of the subject matter.

In this sense, our slogan "clean solutions on demand" is claim and promise at the same time.

Find out for yourself how we distinguish ourselves from our competitors.  
For example by sending your enquiry to us.

## Start by implementing your goals. contec GmbH will support you.

As an internationally operating technology company headquartered in Bad Honnef/Germany, we have increasingly focused on quality engineering and system solutions in the segments of **air and gas filtration, oil mist filtration, liquid filtration and level measurement**, since our foundation in 1972.

For our customers, we are an estimated and reliable partner because:

- we work closely with our customers due to our flexibility, from planning to production, to create optimum and technically efficient and appropriate solutions.
- we offer a broad product portfolio due to our long-standing partnerships and networks in the filtration industry, covering almost all customer requirements.
- we optimize industrial processes and protect investments thanks to over 40 years of know-how.

contec products are used in diverse industries, including energy, oil and gas, chemical, laboratory technology, food technology, shipbuilding, water treatment, process engineering, automotive and commercial vehicles.

Count on us. Our high levels of consulting and product quality are the culmination of many years of experience. Our discussions will be based on a technically competent, partnership approach, including the planning and professional execution on schedule.

### INDEX

COGA: Air and gas filters	Page 4
COMS: Oil mist separators	Page 6
Application examples	Page 9
COLF: Liquid filters	Page 10
COLM: Level measurement	Page 12



## Air and gas filters



### Applications

- Separation of particles, dusts, aerosols and droplets
- Elimination of vapours, disturbing amounts of gas, drying of gases
- Separation of oil, condensates and solids from compressed air
- Separation of oil mist from the exhaust air of oil lubricated vacuum pumps and tank systems
- Filters for protection of gas analysis systems, pumps, blowers, fans, etc.
- Filters, adsorbents and catalysts for the treatment of reference gases in gas analysis
- Treatment of process gases

### Delivery program

- Suction and exhaust air filters
- Particle and coalescence filters
- Fine and coarse filters
- Depth and surface filters
- By-pass filters
- High-pressure and high-temperature filters
- Adsorber and adsorber cartridges
- Catalysts for zero air generators
- Chemically highly resistant filters
- Heatable filters
- Quick-change filters
- Disposable filters for hose lines
- Water barrier filters
- Zero air generators



# COGA: contec-components for the cleaning of air and gases.

### Interesting facts

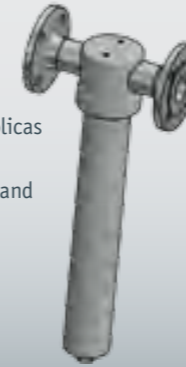
Due to our long-standing collaboration with Headline Filters GmbH, we offer a wide range of standard filters that cover a variety of applications. We also develop and manufacture custom-made filtration solutions. Benefit from short delivery times and competitive prices.

contec air and gas filter housings for all industry standards are available in stainless steel, aluminium or various plastics. Filter housings and components can be used at high pressures and temperatures and in aggressive media.

You want the best possible technical solution? It will be our pleasure to support you. Contact us.

### 1. Special constructions

- We develop your special filter housings from all standard materials
- Small dead volume, limited installation conditions and demanding conditions, such as temperature, high pressure or aggressive media
- Pressure test, leak test to individual TÜV certificates
- New developments, replicas and advancements
- Special filter elements and filter housings for OEM applications



### 2. Suction and exhaust air filters

- Exhaust air filters for oil lubricated vacuum pumps
- Pump protection
- Air suction filter for fans and blowers
- Aeration and ventilation filters
- Connections 1/8" to DN 100
- Flow rate up to 765 m³/h
- Housings made of stainless steel, aluminium or plastic



### 3. Disposable filters and adsorber for hose lines

- Housings made of PA or PVDF
- In-line filters in various sizes
- Water barrier
- Filter cartridges made from glass fibre, PE, PTFE, stainless steel etc.
- Filled with sorbents such as active carbon, silicon gel, molecular sieves etc.
- Connections for 4, 6 and 12 mm hose or various threaded connections 1/8", 1/4" and M5
- Various connectors and conduit fittings available



### 4. Filter housings made of stainless steel

- Housings of stainless steel, Hastelloy, Monell and Titanium
- Transparent version with glass cylinder
- Optical or electrical differential pressure monitoring optional
- Connections 1/8" to 2"
- High-pressure housings up to 1.300 bar
- High-temperature up to 500°C
- Heatable filter housings with and without trace heating
- Membrane filter housings
- In-line filter housings with or without bypass
- Automatic drains and condensate drain reservoirs



### 5. Filter housings made of aluminium

- Typical compressed air filters with manual or fully automatic condensate drain
- Optionally with differential pressure gauge
- Complete filter housing from aluminium (black anodized) or with transparent nylon sump
- Connections 1/8" to 2"



### 6. Filter housings made of plastic

- Housings made of PA, PP, PVDF, PTFE and PTFE/glass
- Filter sumps, also available in transparent design
- Connections 1/8" to 1"
- Maximum pressure of up to 7 bar
- Thermally stable up to 150°C



### 7. Filter elements made of glass fibre

- Borosilicate-microfiber, single or double layer
- Very low differential pressure, high flow rate
- Coalescing and particle filters at different degrees of fineness
- Separation efficiency 0.1 microns from gas: 75% to 99.99%
- Separation efficiency particles 0.1 microns from gas: 75% to 99.99998%
- Excellent chemical resistance with PVDF binder
- Heat resistant up to 500 °C with silicate binder



### 8. Alternative filter elements

- Porously sintered PTFE - highly resistant and inert
- Porously sintered polyethylene
- Fiberglass elements with sintered PE type Polyglas®
- Stainless steel sieve elements - regenerable and for high differential pressures
- Nylon sieve fabric elements
- Activated carbon elements
- PP meltblown
- Adsorber cartridges



### 9. Adsorber vessels sorbents and catalysts

- 8 different series with container sizes from 25 ml to 3.6 l volume
- Vessels of plexiglas, PVC or aluminium
- Larger containers made of PP or PVDF
- Various sorbents and catalysts



## Oil mist separators



### Facts and figures

Our oil mist separators (COMS) comply with all legal requirements and are significantly below the statutory limit of the German TA Luft. The filter elements excel with a separation efficiency of 99.98%.

The residual oil content is verifiably less than 0.1 mg/m<sup>3</sup> and does not contain any particles between 0.2 µm and 0.9 µm in clean gas\*.

### Applications

- Lubrication oil tanks of turbines
- Gas and steam turbines
- Turbo-compressors and turbo-engines
- Gas and diesel engines
- Vacuum pumps
- Rotating machines
- Large-scale compressors
- Crankdrives
- Generators
- Other equipment with oil systems

### Tasks

Technical task:

- Filtering, separation and almost 100% regaining high-quality lubrication oil including all its additives

Operational task:

- Avoiding oil leakage (at bearings etc.) by creating a permanent slight negative pressure in the lube oil system

Environmental task:

- High-efficiency filters prevent the emission of oil mist into the atmosphere
- Protecting the environment by reducing oil mist emission down to < 0,1 mg/m<sup>3</sup>, cleaner than the German TA regulations of clean air and long-term protection of the environment

### Standard versions

- All compact series with filter housing are made of mild steel and completely hot dip galvanized and painted on the outside
- Internal parts made of aluminium
- Filter elements made of glass fiber fleece with an inorganic binder
- Electric motor, 230/400 V, 50 Hz, IP 55 protection

### Special versions

- Explosion-proof versions/ATEX
- EX protective version
- EX pressure-resistant
- Special voltages
- Without side channel blowers
- Project specific process connections
- Materials: carbon steel, stainless steel 304/304L and 316L
- Special paint coatings, e.g. for off-shore applications

### 1. COMS-compact series Type 180/435 to 2.200/630

- 24 Nm<sup>3</sup>/h to 255 Nm<sup>3</sup>/h at 50 Hz
- ATEX version for applications up to Zone 2 (3/3G)
- Space-saving construction by mounting the motor/blower unit entirely on the cover



# COMS: contec-solutions for the extraction and filtration of oil mist.

### Interesting facts

Oil mist separators from contec convince due to their high efficiency, compact construction and minimal maintenance. On that you can rely:

- Approximately 3,000 sold COMS units in use worldwide
- Approved oil mist separators on facilities from Siemens, MAN Diesel & Turbo, Dresser Rand, Mitsubishi, Hitachi, Toshiba, GE, Alstom and many more
- Modular system allows a simple constructional adjustment to the respective application
- Rapid and long-term supply of spare parts
- Long service life and easy change of the filter elements
- Automatic oil recycling system with oil drain sight glass
- Environmental Technology Prize for 1990
- Project-specific planning and construction
- Various options

You want to get the best possible technical solution?

From planning through duration of the entire project to the desired result, we work closely with you!

### 2. COMS-series with side-mounted blower Type 180/435-M04 to 9.200/762-M04

- 24 Nm<sup>3</sup>/h to 1.200 Nm<sup>3</sup>/h at 50 Hz
- ATEX version for applications up to Zone 1 inside and outside (2/2G)
- Compact frame construction for large and heavy Zone 1 side channel blowers and motor/blower units



### 3. COMS-series with recirculator

- Hand valve for admixing system-internal, purified exhaust air to control the negative pressure
- Specially suitable for applications in Zone 1 environments or with very dirty or polluted environmental



### 4. COMS-series with bypass

- Complete bypass with integrated check valve
- The bypass normally mounted on the oil tank is compactly integrated in the system
- „Emergency“ bypass to avoid high pressure in the lubrication oil system in the event of system failure



Picture credits:  
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Gesellschaft für OELTECHNIK mbH

\*Tested by the Institute of Energy and Environmental Technology e. V. (IUTA) in Duisburg in accordance with ISO 12500-1:2007.

### 5. COMS-series with double blower

- Redundant motor/blower unit on a special frame construction
- The motor/blower units can be controlled independently from each other, using hand valves and check valves
- The motor/blower unit can easily be decoupled and disassembled with the butterfly or ball valves
- Easy maintenance due to mirror-inverted construction



### 6. COMS-series with hinged cover

- Only for compact series, especially for Type 1.500/980 and type 2.200/630
- Specially developed mechanical eccentric lifter
- Slight lifting of the filter cover and easy replacement of filter elements, especially when no indoor crane is available or can't be used



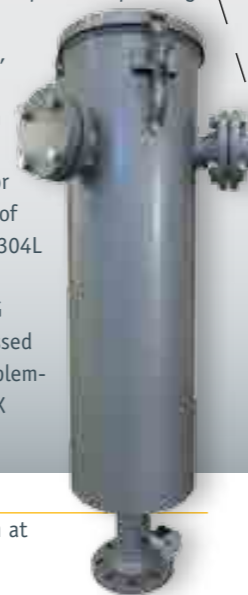
### 7. COMS-series without motor/blower unit

- Filtration and separation of oil mist for lubrication systems with sufficient high pressure



### 8. COMS-series with ejector

- Four COMS types with flow rates of up to max. 100 Nm<sup>3</sup>/h
- Optional with filter regulator incl. pressure gauge for setting the optimum operating pressure to 6 bar
- Carbon steel variant, ejector made of anodized aluminium
- Stainless steel version, 304/304L or 316L, ejector made of stainless steel 304/304L
- Compressed air connection G 3/8" IG
- Powered by compressed air, resulting in problem-free utilization in EX areas Zone 1 and 2



### 9. Validation of filter elements

contec oil mist separators meet all legal requirements and are well below the limit of the TA Luft (German Clean Air Act). The residual oil content in the clean air is verifiably less than 0.1 mg/m<sup>3</sup> and contains no particles between 0.2 µm and 0.9 µm\*\*.



### Technical data for contec oil mist separators

At present, 16 standard types with flow volumes from 8 Nm<sup>3</sup>/h to 1200 Nm<sup>3</sup>/h at 50 Hz operation and -60 mbar Δp differential pressure are available.

COMS- Typ	100/138*	100/154*	200/423*	200/448*
Flow rate	8 - 15 Nm <sup>3</sup> /h	15 - 30 Nm <sup>3</sup> /h	30 - 70 Nm <sup>3</sup> /h	70 - 100 Nm <sup>3</sup> /h
Compressed air demand	0 - 1.000 NL/min	0 - 1.000 NL/min	0 - 2.200 NL/min	0 - 2.200 NL/min

COMS-Typ	180/435	300/935	550/980	1.500/980	2.200/630	3.000/630	3.000/762	4.000/630	5.500/762	7.500/762	8.000/762	9.200/762
Flow rate	24 Nm <sup>3</sup> /h	50 Nm <sup>3</sup> /h	110 Nm <sup>3</sup> /h	190 Nm <sup>3</sup> /h	255 Nm <sup>3</sup> /h	360 Nm <sup>3</sup> /h	340 Nm <sup>3</sup> /h	480 Nm <sup>3</sup> /h	600 Nm <sup>3</sup> /h	710 Nm <sup>3</sup> /h	950 Nm <sup>3</sup> /h	1.200 Nm <sup>3</sup> /h
Motor power	0,18 kW	0,37 kW	0,75 kW	1,10 kW	2,20 kW	2,20 kW	3,00 kW	3,00 kW	4,00 kW	5,50 kW	9,20 kW	11,00 kW

\* Ejectors

\*\*As per test by Institute of Energy and Environmental Technology e. V. (IUTA), Duisburg with reference to ISO 12500-1:2007.

# contec products in use

## Air and gas filters



Oil-free exhaust air of oil-sealed vacuum pumps

### The challenge:

In the production of wind turbines, the exhaust air of oil-sealed vacuum pumps is enriched with a fine, stable oil aerosol. An elimination of these pollutants is essential, as these are harmful to health and the environment.

### The solution:

contec's coalescence filters eliminate up to 99.99% of the sea aerosols with a low pressure drop and long service life, since only solid particles clog the elements slowly. The purified and accumulated oil collected by the filter can be reused and fed back to the pumps.



Vacuum pump filter type 447

## Oil mist separators



Solution for separating airborne aerosols

### The challenge:

Lubricating oil systems produce oleaginous smoke and oil mist. Aerosols are a health hazard and cause dirt, debris and air/gas mixtures. A slight negative pressure in the lubricating oil system and filtering of the oleaginous air are necessary for safe machine operation. In compact packages, the space for this important filter system is limited.

### The solution:

The compact series of the COMS oil mist separators is the ideal filter system, especially in limited spaces. The COMS ensures an adjustable, continuous vacuum and clean, oil-free air in the lubricating oil tank of the turbine. With a separation efficiency of 99.98% at 0.1 µ droplet size, the residual oil content is below 0.1 mg/m



MAN Turbo Gas turbine package COMS type 2.200/630

## Liquid filters



Self-cleaning wedge wire filter for high viscous media

### The challenge:

Thick chocolate mass is to be cleaned with a self-cleaning filter system before filling. Previously, this was achieved with an open filtration.

### The solution:

After successful trial with a standard wedge wire filter this was modified for special use. The wedge wire filter CSF700-FD with flange cover is very easy to maintain and can be integrated into the existing tracing over the heating jacket. An integrated magnetic separator after the filter system provides ultimate security.



Modified wedge wire filter CSF 700 FD

## Level measurement



Innovative tank sensor for transport refrigeration

### The challenge:

Ensuring an uninterrupted cold chain and creating an overview of the aggregate tank levels of the cooling trailers.

### The solution:

The capacitive, electronic solid state sensor provides accurate measurement and visualization of the level via LED display directly on the vehicle or telematics on the online portal. The integrated alarm function prevents breakdowns and cargo damage. The identification of tank and withdrawal transactions with the reporting function is particularly advantageous.



Tank sensor type TL350 in Schmitz Cargobull trailer

## Liquid filters



### Applications

- Water supply systems
- Microfiltration
- Food and beverage industry
- Sewage treatment plants
- Dams, reservoirs, cooling towers and fountain technology
- Surface technology
- Electronic industry
- Photo industry
- Cosmetic industry

### Medien

- Difficult, viscous and gel-like media such as bitumen, chocolate, coatings, polyurethane, etc.
- Aqueous media such as water, acids, alkalis, oils, emulsions, sterile water, river water, cooling water and process water etc.
- Food
- Pharmaceutical products
- Solvents

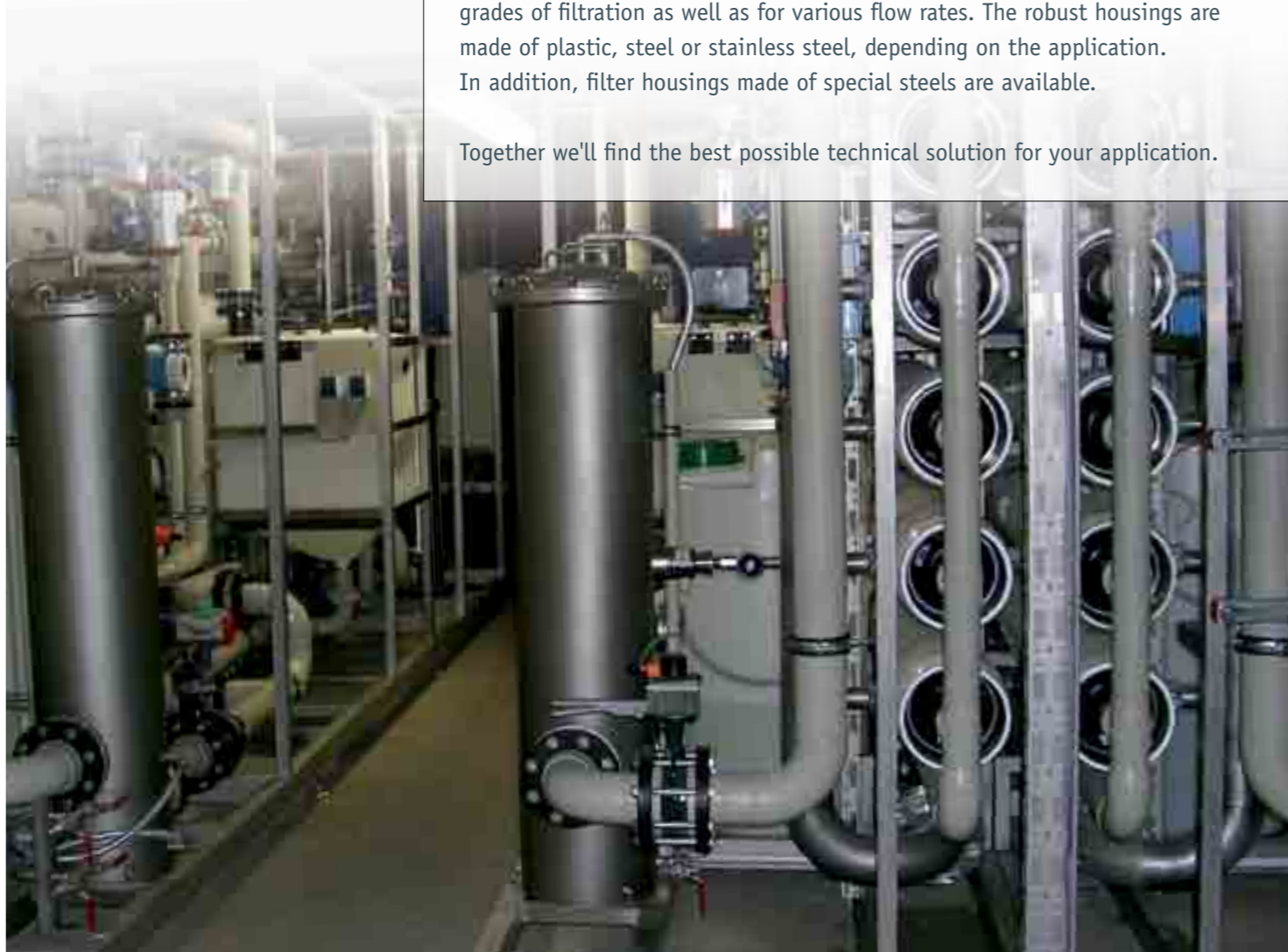
# COLF: contec-solutions for the filtration and treatment of liquids.

### Interesting facts

For the accurate and reliable separation of solids from liquids, contec provides various filter components and systems. The wide range of products includes standard filter elements and housings and complete components to custom designs.

contec liquid filters are available in various designs and sizes with various grades of filtration as well as for various flow rates. The robust housings are made of plastic, steel or stainless steel, depending on the application. In addition, filter housings made of special steels are available.

Together we'll find the best possible technical solution for your application.



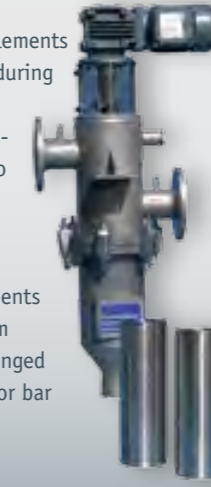
### 1. Cartridge filter housings made of plastic

- Robust filter housing for use in chemical and salt-water applications
- Pre-filter for reverse osmosis systems and ion exchangers
- Housing made of Polypropylene, PVDF, etc.
- Operating pressure range 6 bar and 10 bar, others by request
- Wide range of applications due to modular construction



### 2. Wedge wire filter

- Exceptionally robust, self-cleaning filter unit for rough applications
- Self-cleaning without operating interruptions
- No disposal of filter elements
- Minimal product loss during solid discharge
- Large range of application options related to liquid filtration
- Flow rates of 1 m<sup>3</sup>/h to 35 m<sup>3</sup>/h
- Wedge wire filter elements of 25 µm to 3.000 µm
- Special design with hinged cover, heating jacket or bar magnets available



### 3. Self-cleaning automatic filtration systems

- Filter systems available in 4 different versions
- CKF-TAF series for flow rates of up to 50 m<sup>3</sup>/h
- FMA 1000 E series for flow rates of up to 120 m<sup>3</sup>/h
- FMA 2000/9000 series, for flow rates of up to 1.800 m<sup>3</sup>/h
- FMA 10000 series, for flow rates of up to 3.600 m<sup>3</sup>/h
- Filtration degrees: 10 µm to 1.000 µm
- Contact-free cleaning using special suction nozzles
- Fully electronic control



### 4. Membrane filter housings made of stainless steel

- Special filter housing inserts for applications with highest hygiene requirements
- Specially designed for the pharmaceutical, cosmetics, beverage and electronics industries
- Surfaces with a high-gloss polish
- Can be sterilized using steam (up to 145°C)
- Type series for up to 7 membrane filter cartridges with length of 40 inch
- Various adaptor types possible



### 5. Cartridge filter housings made of stainless steel

- Universally usable filter housing
- Electropolished and pickled version, glass bead-blasted, etc.
- Connections from 3/4" to DN 150
- Type series for up to 40 cartridges with length of 40 inch
- Suitable for numerous industrial applications with filtration requirements from 0.02 µm up to 1000 µm
- Special inserts for the various filter cartridge adapters
- Special versions at customer request



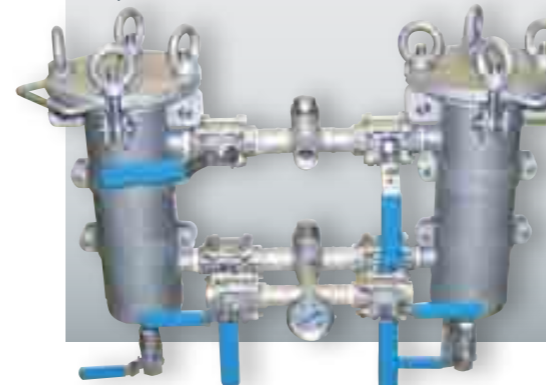
### 6. Bag filter housings

- Special housings with filter bags and stainers for high amounts of solids
- Housings made of stainless steel, Polypropylene, PVDF or special materials on request
- Connections up to 1" to DN 150
- Flow rates up to a maximum of 35 m<sup>3</sup>/h for individual housings
- Standard versions with clamp closure or hinged cover with swinging bolts
- Adjustable tripods
- Optionally available as multiple bag filter housings with quick release fastener for high flow rates



### 7. Custom-made products

- Special filter housings made of various materials
- Compact filter systems with pipes and armatures
- Switchable filter systems
- With material certificates and TÜV certification on request
- Water pressure test up to 1.000 bar
- Special constructions for OEM customers



### 8. Filter elements

contec filter elements are used in both contec housings and in housings provided by other manufacturers.

The range includes inserts made from a wide variety of materials, shapes and filter sizes.

contec provides specific filter solutions for numerous applications, including:

- pre-filtration of RO systems
- treatment of cooling water
- filtration of paints and varnishes
- filtration of variety of oils.

The broad standard range can be supplemented with complete systems and specially designed systems, depending on the requirements of the individual customers.





**Applications**

Level measurement, monitoring and temperature control of fuels, oils and other fluids, even with changing media during ongoing operation, in:

- Telemetry systems
- IBC containers
- Engines and engine cooling systems
- Mobile and stationary tanks
- Diesel engines
- Cooling and commercial vehicles
- Construction machinery and vehicles
- Motorsport vehicles

**Delivery program**

- Capacitance liquid level sensors (solid state)
- Capacitance liquid level switches (solid state)
- Electromechanical solutions with resistance and voltage signal or switching point
- Side-entry and vertical float switches
- Mechanical liquid level gauges
- Temperature switches

# COLM: contec-solutions for accurate measuring and control of liquid levels.

**Interesting facts**

contec provides numerous components for the precise monitoring of levels and temperatures that reliably measure and regulate both in changing media as well as in hazardous areas, or in respectively required applications.

All capacitive (solid state) sensors, liquid level gauges and float switches are designed and manufactured according to customer specifications. Within the technical possibilities, we configure the right solution according to the required application parameters such as output, position and number, as well as function of the switching points, immersion depth and material.

For the precise control of temperatures in motors, motor cooling systems, concrete pumps and diesel engines, contec provides temperature switches, which may vary, according to the application, in different housing forms, various electrical connection options, selectable switching temperatures and switching functions.



**1. Sensors with analogue signal**

- For use in water, diesel, fuel or oils, or even with changing media
- Configurable resistance, PWM, amperage or voltage output
- No moving parts (solid state) in capacitive sensors
- Electromechanical sensors can also be used for hazardous areas
- Control of default display instruments to PLC systems
- Optional manual or automatic calibration of the sensor to another medium

Capacitive (solid state) sensor



Electromechanical sensor



**2. Digital sensors and switches**

- Through selectable switching delays and functions, the capacitive (solid state) switches are precisely adaptable to the application
- Also available as an electromechanical solution
- Different thread forms depending on the process connection
- Various electrical connection options
- Depending on the pressure, temperature and medium, different sensors/switches can be selected

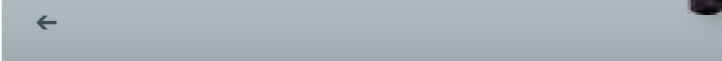
Capacitive (solid state) sensor



Float switch vertical/horizontal



Electromechanical solution see figure left



**3. Mechanical gauges**

- Design according to the application specification
- Hermetic encapsulation of the display by magnetic coupling
- Magnetic coupling enables robust mechanical level gauges for a leak-tight installation
- Different versions depending on the tank shape (swing arm or spiral indicators)
- Use in hazardous areas possible
- Various material mixes depending on the application
- Various process connections selectable
- Easy upgrade to electromechanical sensor possible (at structurally appropriate indicators)



**4. Temperature switches**

- Wide range of switches that can be specified according to customers' applications
- Various configurations of switching temperatures and switching functions, housing types and connector types selectable
- Robust and durable product range, designed for extensive use in demanding environments
- Suitable for use in industrial engines with strong vibrations, shocks, high temperatures and humidity





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**COMS: Oil mist separators**  
**COLF: Liquid filters**  
**COLM: Level measurement**

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