



Filtration Technology

ECOCLEAN®

Adsorption Technology

ECOTROC®

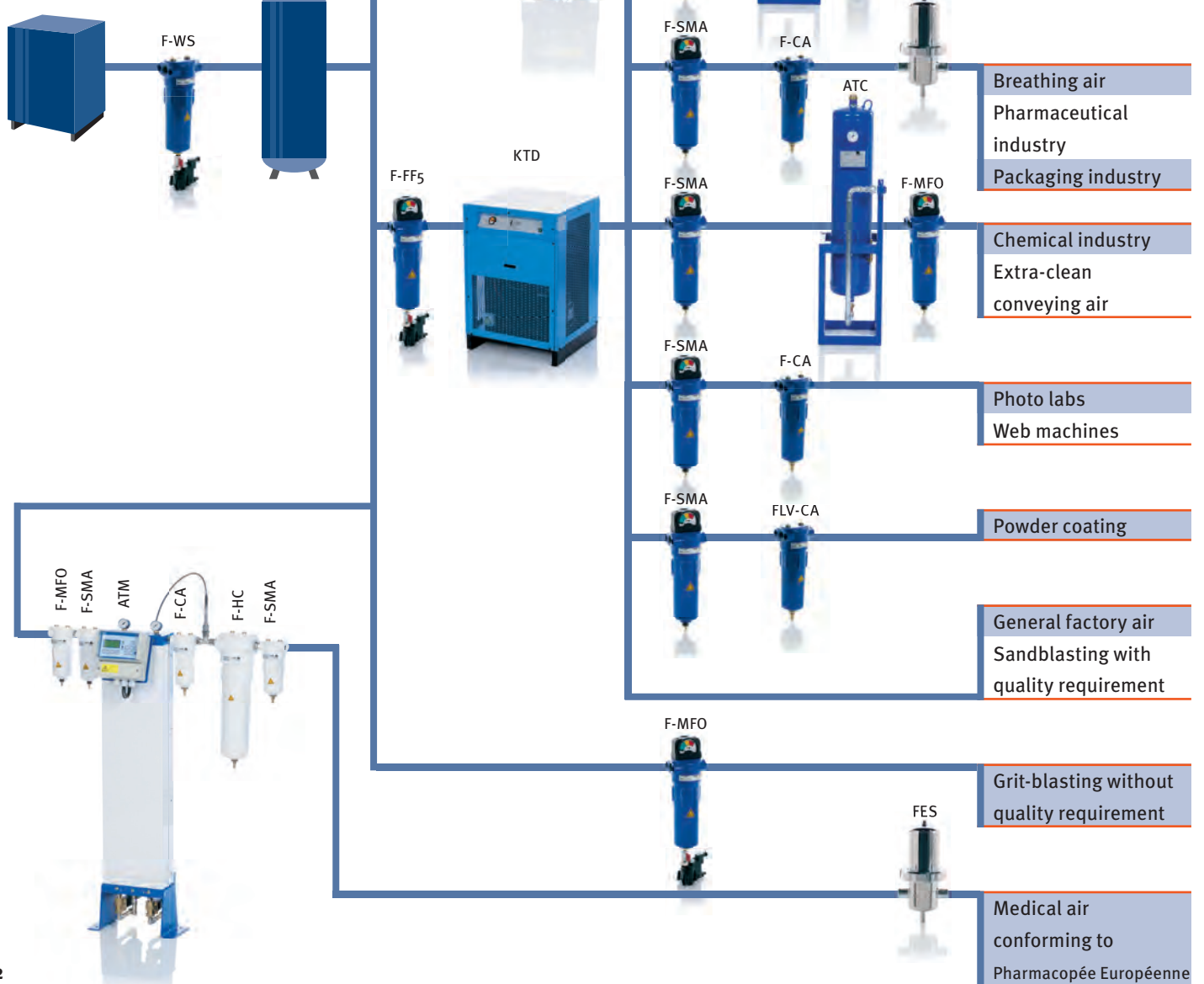
Condensate Technology

KONDRAIN® · KONTREC®



Compressed Air Purification

Compressor



The KSI Product Range

ECOCLEAN® Compressed Air Filters



Reliable, energy-saving, environmentally friendly and easy-to-service product for filtering compressed air **4**

ECOCLEAN® Filter Elements and Cartridges



For use with ECOCLEAN® compressed air filters; also available for other makes of compressed air filters **5**

ECOTROC® AT Adsorption Dryers – heatless type



System solutions for reliable and safe purification of compressed air and gases **6**

ECOTROC® KTD Refrigeration Dryers



Reliable, energy-saving and easy to service product for drying compressed air **7**

KONDRAIN® Condensate Drains



Reliable system for draining condensate without any loss of compressed air **8**

KONTREC® SEP Oil-Water Separators



The concept for safe and economical treatment of condensates containing oil **9**

KONTREC® Activated Carbon Filters



For use with KONTREC® SEP oil-water separators; also suitable for other makes of oil-water separators **10**

ECOCOMP® Filters for Compressors and Vacuum Pumps



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ECOCLEAN® compressed air filters meet the strictest quality requirements and are extremely economical to purchase, operate and maintain. The housing is made of cast aluminium, with a chrome-based protective coating on the inside and outside and an additional powder coating on the outside.

Other features:

- Optimized flow, due to the curved compressed air inlet
- Prevention of corrosion and bacteria formation
- The filter element is fastened securely by tie-rod
- Filter element with stainless steel cylinder for high strength
- The filter medium is wound up to 8 times, ensuring long life and low differential pressure
- The dimensionally stable drainage layer made of needled felt prevents any deterioration in filter performance
- Fitted with automatic condensate drain as standard
- Easy to service and maintain, with hexagon nut flats on housing

Specifications | Separation efficiency

Element type	VF25	FF5	MFO	SMA	CA
Particle filtration	25 microns	5 microns	1 micron	0,01 micron	–
Max. residual oil content at 20°C	10 mg/m ³	5 mg/m ³	0,1 mg/m ³	0,01 mg/m ³	0,003 mg/m ³
Maximum temperature	120°C	120°C	120°C	120°C (recom:50°C)	25°C
Max. working pressure	F25 - F130: 16 bar g F140 - F170: 12 bar g				

Other filter types



Cartridge filters

CAK Activated carbon cartridge
MSK Molecular sieve cartridge
HC Hopcalite catalyst cartridge



Flanged filters

up to 11200 m³/h, DN 200



Water separators WS

up to 1500m³/h, 2 1/2"



High-pressure filters

50 bar



Medical sterile filters

up to 1500m³/h, 2 1/2"



Stainless steel filters

FES Sterile filters
FPF Process filters



Vacuum filters

Vacuum pump protection filters
Vacuum pump exhaust filters



Vacuum filters

Medical vacuum filters

Standard filtration product range

Threaded filters 10 versions: F25 with 35 m³/h and 1/4" connection to F170 with 1500m³/h and 2 1/2" connection

Flanged filters 6 versions: F065-01 with 1400 m³/h and DN65 connection to F200-08 with 11200 m³/h and DN200 connection

Higher capacities available on request.

ECOCLEAN®

Filter Elements and Cartridges

For use with ECOCLEAN® compressed air filters; also available for other makes of compressed air filters



The ECOCLEAN® approach of KSI filter elements and its comprehensive advantages:

The combination of operating safety and economy in a single product - that is the KSI ECOCLEAN® approach, implemented to perfection in KSI filter elements.

All the advantages of the ECOCLEAN® filter elements are available to customers not only when using the elements in an ECOCLEAN® compressed air filter but also when using almost all housings of other makes available on the market.

Filter elements

Suitable for housings of other makes (alternative filter elements)

Alup VA/MA/SA/AK 1030 - 5075 VA/MA/SA/AK 3/1 - 30/5	Boge 1/5 - 1/250 V/F/A	Domnick Hunter K009 - K620 PF/AO R/AA/AX/ACS K006 - K500 PF/AO R/AA/ACS	Hross Q/P/S/C 010 - 280	Schneider B640288 - B640296 B640308 - B640316 B640348 - B640356
Atlas Copco DD/PD/QD 009 - 520(ab 2002) DD/PD/QD 6G - 500G	Compair 98245 121-130/141-150/161-179 CE0005 - 0372 A/B/C/D	AC E006 - E085 AC	MTA 1/06050 - 1/76090 P/M/S/A	Sullair 2500024 423-430/431-438/443-441
Beko FE361 - 981 X25/X5/X1/XA/AC	Deltech VA/MA/SA/AK 1030 - 5075 VA/MA/SA/AK 3/1 - 30/5	Ecoair EV/EF/ES/EA 01 - 10	Ingersoll Rand E4 - E300 AO R/AA/AC	ultrafilter (Donaldson) PE/FF/MF/SMF/AK 2/05 - 30/50 (90 series) V-PE/FF/MF/SMF/AK 3/1 - 30/5 (80 series)
		Hankison E9/E7/E5/E3/E1-12-54	Kaeser E-B/D/E/F/G 6 - 283 (from 2000) 02/05 - 30/50 V /X/A (1991 - 2000) 9.2100.0 - 9.2109.0 9.2125.0 - 9.2134.0 9.9150.0 - 9.2159.0 (prior 1991)	Zander 1030 - 5075 V/Z/X/X/A/XP/ZP

Cartridges



For KSI filter housings:

CAK Activated carbon cartridges
MSK Molecular sieve cartridges
HC Catalyst filter cartridges

For other makes of filter housing:

CAK stage: Suitable for Donaldson (ultrafilter) housing / AC element size: 03/10 - 10/30
CAK stage: Suitable for Zander housing / AC element size: KTA 1012 to KTA 2053 / 1050 - 2050
MSK stage: Suitable for Zander housing / MDK element size: KT 2016 M - MDK 6 to KT 2053 M - MDK15

ECOCLEAN® filter elements for ECOCLEAN® compressed air filters

Element type	VF25	FF5	MFO	SMA	CA
Particle filtration	25 microns	5 microns	1 micron	0,01 micron	-
Max. residual oil content at 20°C	10 mg/m ³	5 mg/m ³	0,1 mg/m ³	0,01 mg/m ³	0,003 mg/m ³

ECOTROC® AT

Adsorption Dryers – heatless type

System solutions for reliable and safe purification of compressed air and gases



ECOTROC® AT adsorption dryers ensure high reliability and economical operation through a comprehensive design concept that provides basic uniformity whilst permitting diversified product family development.

Features:

- Highly hygroscopic desiccant, ensuring stable pressure dew points of -20°C to -70°C
- The changeover valves used have no electric controls, and so there is no potential risk from this source
- Standardized brand-name blow-down valves ensure operating safety
- Microprocessor control ensures an economical and low-wear 10-minute cycle
- Integrated compressor synchronizing circuit as standard
- Flow-optimized components, such as ECOCLEAN® compressed air filters, large pipe cross-sections in the dryer and large valve and silencer cross-sections

Specifications

Fully automatic adsorption dryers	Activated carbon adsorbers	Fully automatic adsorption dryers
ATK and ATK-AL - heatless type	ATC and ATC-AL	ATO und ATO-AL - heatless type
Included as standard:	Included as standard:	Included as standard:
ECOCLEAN® SMA prefilter	ECOCLEAN® MFO final filter	Fully automatic adsorption dryer
ECOCLEAN® MFO final filter		Activated carbon adsorber
ECOMATIC electric control device		ECOCLEAN® SMA/MFO prefilter/final filter
		ECOMATIC electric control device



Option

ECOTROCONOMY® Dew Point Control

- Reduction of regeneration air
- Alarm signal in the event of a fault
- Automatic service indicator
- Data output to PC interface

ECOTROC® ATM and ATM-AL adsorption dryers for medical air

KSI Filtertechnik is certified compliant with DIN EN ISO 9001:2000 and EN ISO 13485:11.2003 and is therefore your ideal partner if you are looking for a medical device manufacturer able to ensure risk-free installation. The ATM-AL is a compact conditioning unit with integral catalyst. It ensures compliance with the legally required compressed air quality (medical air) for patient ventilation, providing absolute operating safety combined with low service and maintenance costs.

7 models: ATM-AL 1 with 6 m³/h to ATM-AL 9 with 108 m³/h
6 models: ATM 15 with 180 m³/h to ATM 55 with 720 m³/h

Breathing air purification in conformity with Pharmacopée Européenne



Standard product range

ATK-AL and ATK 8 models ATK-AL 1 with 5 m³/h to ATK-AL 10 with 110 m³/h | 9 models ATK 15 with 150 m³/h to ATK 110 with 1200 m³/h
ATC-AL and ATC 8 models ATC-AL 1 with 5 m³/h to ATC-AL 10 with 110 m³/h | 9 models ATC 15 with 150 m³/h to ATC 110 with 1200 m³/h
ATO-AL and ATO 8 models ATO-AL 1 with 5 m³/h to ATO-AL 10 with 110 m³/h | 9 models ATO 15 with 150 m³/h to ATO 110 with 1200 m³/h

Higher flow rates, high-pressure dryers and heat regenerated dryers are available on request.

ECOTROC® KTD

Refrigeration Dryers

Reliable, energy-saving and easy to service products for drying compressed air

The **ECOTROC® KTD-TM** and **ECOTROC® KTD-B** product series use different technologies, because different applications make specific demands on the refrigeration dryers used. Both families of refrigeration dryers provide condensate-free and dry compressed air, thereby maintaining the efficiency and reliability of the compressed air system at low operating cost.



Features

ECOTROC® KTD-TM (thermal mass)

- Used in applications with varying demand for compressed air
- Thermal mass in the heat exchanger compensates for demand peaks, thereby preventing the problems that would otherwise be caused by insufficient air flow or unnecessary energy
- Heat exchangers made of copper and aluminium
- Hermetically sealed compressor
- Axial fan
- High-pressure and low-pressure switches
- Digital display provides constant information on the condition of the compressed air
- Bureau VERITAS certified

ECOTROC® KTD-B

- Compact construction
- High capacity
- Durability and reliability due to the use of brand-name components
- High-efficiency single-unit (monobloc) heat exchanger
- Low investment costs

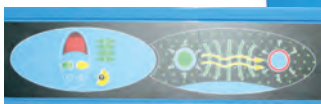


Fig.: Digital display



Product range

ECOTROC® KTD-TM 15 models KTD-TM 30 with 30 m³/h to KTD-TM 1020 with 1020 m³/h

ECOTROC® KTD-B 29 models KTD-B 15 with 11 m³/h to KTD-B 7200 with 7200 m³/h

Safe draining is ensured by using **KONDRAIN®** electric condensate drains. They prevent condensate from entering the system, thereby providing reliable protection to downstream devices. The level-regulated condensate drains of the **KONDRAIN® SENS** and **KONDRAIN® N** series ensure economical condensate draining, because any unnecessary pressure loss is prevented during the draining process.



KONDRAIN® SENS

level-controlled by sensor

KONDRAIN® N

level-controlled

KONDRAIN® KMT

timer-controlled



- Contactless measurement of the condensate level
- No moving parts
- Self-monitoring controller
- Membrane protected by built-in filter
- Test switch for manual draining
- LED for “Drain” and “Alarm” states
- Voltage indicator
- Suitable for all types of condensate, from 100% oil to 100% water

- Potential-free alarm output (except for KN1)
- Self-monitoring controller
- Membrane protected against fouling and malfunction by built-in cup filter
- Test switch for manual draining
- Auto-Reset function
- Alarm function
- Voltage indicator (except for KN1)
- Suitable for all types of condensate, from 100% oil to 100% water

- Compact dimensions
- Simple to adjust
- Settings can be changed at any time
- Opening intervals can be read off at a glance
- Test switch for manual draining
- Maximum reliability
- Extremely economical
- Environment-friendly

Product range

KONDRAIN® SENS 3 types KONDRAIN®SENS 5 with 5 m³/min* to KONDRAIN® SENS 50 with 50 m³/min*

KONDRAIN® N 6 types KONDRAIN® N5 with 5 m³/min* to KONDRAIN® N200 with 200 m³/min*

KONDRAIN® KMT 1 type KONDRAIN® KMT with up to 60 m³/min*

KONTREC® SEP

Oil-Water Separators

The concept for safe and economical treatment of condensate containing oil



The **KONTREC® SEP** is the safe and economical solution for treating condensate, so that it can be discharged into the public drainage system without problem and in accordance with legislation. It is installed as part of the compressed air system and reduces the oil concentration of the condensate to a permitted level. One special feature of the **KONTREC® SEP** is that it can not only separate petroleum fractions from the condensate but also synthetic oils and polyglycols. It can also separate stable emulsions. It can therefore be used with all types of condensate drain.

Product specification

Features

KONTREC® SEP Oil-Water Separators, including filter sets and test kit

Residual oil content	<10 mg/l
Separation of petroleum-based lubricants	yes
Separation of synthetic lubricants*	yes
Separation of polyglycol**	yes
Housing colour	blue
Housing material	PE, fully recyclable

*at 50% of standard capacity, **at 25% of standard capacity



Standard package

KONTREC® SEP

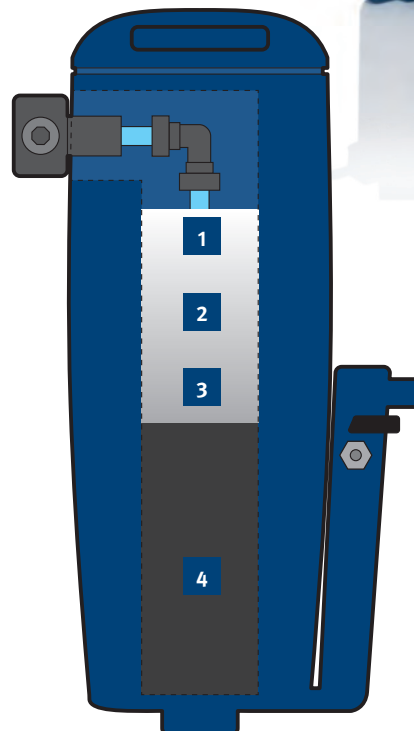
includes primary filter and activated carbon filter

The innovative and simple 4-stage concept

- Extremely compact construction
- Investment costs kept to a minimum by simple manufacturing methods and the use of commercially available components
- By abandoning the conventional method of depressurising, rapid fouling is prevented

The 4 stages:

- 1** The primary filter provides a safe and clean pressure relief stage through a robust, permeable side wall that lets in the condensate under system pressure.
- 2** Free oil fractions are bound by an adsorbent filling of the primary filter.
- 3** Solids are filtered in the primary filter, thereby preventing clogging of the activated carbon filter.
- 4** An activated carbon filter cleans the condensate of the last traces of oil. Only top-quality activated carbon is used for this stage.



Product range

KONTREC® SEP 4 types: K-SEP 3 with 3 m³/min* to K-SEP 42 with 42 m³/min*

* Compressor capacity

Activated Carbon Filters

For use with KONTREC® SEP oil-water separators;
also for all other makes of oil-water separator



100% availability – all filters:

KSI has an immediately available KONTREC® replacement filter for all oil-water separators on the market. And these filters are available in exactly the configuration required on-site. In other words, all pre-filters are already included in the overall package. It all comes down to the carbon.

- For this type of application, optimally adapted activated carbon ensures high adsorption capacity
- A 4x welded seam gives the filter strength and dimensional stability
- Absolute dimensional stability and the use of PE material for the outer jacket prevent any by-pass flow

KONTREC® activated carbon filters are available for the following makes of equipment:

OEM Manufacturer	Device model	Device type
Alup	Aquamat	120/250/450/900/1800/3600/7200
Atlas Copco	OSW	5/11/30/55/110/315
Atlas Copco	OSC 35 - 2400*	35/95/145/355/600/825/1200/2400
Beko	Öwamat	1/2/3/4/5/5R/6/8/20
Boge	Öwamat	1/2/3/4/5/5R/6/8/20
Boge	Ökomat	5/10/15/30/60/120/240
Domnik Hunter	ES	36/90/125/250/500/1000/2100/2150/2200/2300/2400/2500/2600
Domnik Hunter	H2OIL-X	2010/2015/2030
Donaldson (ultrafilter)	ultrasep P	7,5/15/30/60/120/240
Donaldson (ultrafilter)	ultrasep SP	5/7,5/10/15/30/60/120/240
Donaldson (ultrafilter)	ultrasep SP	N 5/10 N/15 N/30 N/60 N/120 N/240 N
Ecoair	TS	3/4/15/16/60
Hankison	HS	60 - 120/140 - 900/1800/3600
Jorc	Puro	Enviro / Puro Mini / Puro / Puro Midi / Puro Grand / Puro Xtender
Kaeser	Aquamat	1/2/3/4/5/5R/6/8/20
Kaeser	WO	I - II / III / VI
Sabroe	Divisor	IE - IIE / IIIIE / IVE
Sabroe	SAB	25/45/90/180/360/720
Schneider	Öwatec	10/40/130/175/250
Schneider	ÖwateC (alte Baureihe)	Typ 40 / Typ 50 / Typ 75 / Typ 120
Wortmann	drukomat	1/2 1/2 15/30/60
Wortmann	drukosep	1/2/3/6/12/25/40
Wortmann	WO	I - II / III / IV
Zander	ecosep S	1/2 - 15/30/60
Zander	WT	1 - 2/3/4
Zander	ecosep SL	1 - 5/8/15/30/60

* Adsorption filter, suitable for Atlas Copco OSC, is supplied as static (non-floating) element.

KONTREC® Filter Kits for KONTREC® SEP oil-water separators

K-KIT 3	1 primary filter	1 activated carbon filter
K-KIT 9	1 primary filter	1 activated carbon filter
K-KIT 21	1 primary filter	1 activated carbon filter
K-KIT 42	2 primary filters	2 activated carbon filters

Filters for Compressors and Vacuum Pumps



ECOCOMP® oil filters, air filters and oil separator cartridges in the KSI product range:

- More than 50,000 units delivered per year through our dealer network.
- Over 1200 m² of storage space reserved for this product line.
- 94% of ordered ECOCOMP® filters are dispatched the same day as the order.
- 4600 OEM references in the current price list.
- Recoding on the basis of OEM numbers, compressor types and/or dimensions by experienced KSI staff.

Oil separator cartridges, air filters and oil filters

Available for the following makes of compressor and vacuum pump or as replacement for filters of other makes:

Abac	Bottarini	Fluidair	Mann & Hummel	Rotair
Aerzen	Busch	Gardner Denver Wittig	Mark / Ceccato	Schneider
Alup	Champion	Gnutti	Mehrer	Stenhoj
Atlas Copco	Chinook	Hengst	Parise	Sullair
Axeco	Compair / Demag	Hydrovane / Mattei	Pneumofore	Tamrock
Blitz Schneider	Ecoair	Ingersoll Rand	Power System	Worthington
Bauer	Effepizeta	Kaeser	Purolator	
Becker	Fiac	Leybold	Renner	
BOC Edwards	Fini	Maco	Rotorcomp	
Boge	Flottmann	Mahle	Rietschle	



Oil separator cartridges (separators)



Air filters



Oil filters

ECOCOMP® Oil Separator Cartridges: Operating principle

KSI ECOCOMP® oil separators are based on the “coalescer principle”. Glass fibre micro-layers separate oil droplets from the compressed air, coalesce them into larger oil droplets and channel them back into the machine’s oil circuit. This separation method is effective down to the submicron range. This process minimizes both the oil consumption of the compressor system and oil ingress into the connected compressed air network. KSI ECOCOMP® oil separator cartridges are compatible with all common types of lubricating oil, whether mineral-based (petroleum), synthetic or part-synthetic.

