DATA SHEET
Filter sets for condensate separators (oil/water) – Parker domnick hunter ES / H2OIL-X®, Zander ecosep® SL and Hiross OWS® series

1. Product and manufacturer identification

- **Product name:** Alternative filter sets (two-layer pre-filters, adsorption bags with activated carbon and vent filters) for condensate separators
- **Intended use:** Compatible replacement parts for condensate separators of the Parker domnick hunter ES / ES2000, H2OIL-X®, Zander ecosep® SL and Hiross OWS® series
- Manufacturer: Carbon Filters – Antonín Kohoutek, U Blaženky 2616/12, 150 00 Prague 5, Czech Republic
- **Company ID (IČO):** 16643518
- **Contact:** tel.: +420 608 208 771 | e-mail: info@carbonfilters.cz | web: www.carbonfilters.cz
- **Country of origin:** Made in the Czech Republic

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2. Description and function of multi-stage filtration

The filter sets are intended for treating the condensate produced during the generation of compressed air in piston and screw compressors. They provide mechanical and adsorptive separation of free and dispersed compressor oil from the water as well as from the vent circuit before the water is discharged into the public sewer system.

- **Vent filter (air side):** Captures oil mist from the outgoing air when the condensate enters the expansion chamber under pressure. Supplied in two sizes – small (for the series ES2100–ES2200 / OWS 001–075 / SL 1, 2, 5 / H2OIL-X SE 2010–2015) and large (for the series ES2300–ES2600 / OWS 125, 185, 355, 485 / SL 8, 15, 30, 60 / H2OIL-X SE 2030 and equivalents).
- **Stage 1 – Two-layer graded pre-filter (PES + PP melt-blown):**
  - **Upper layer (50 % PES):** Resilient polyester fibres capture coarse mechanical impurities (rust, scale, dust) and free oil, prevent compaction and distribute the water flow evenly.
  - **Lower layer (50 % PP melt-blown):** Fine oleophilic polypropylene microfibres capture finely dispersed oil droplets and protect the downstream carbon bags from exhaustion as much as possible.
- **Stage 2 – Main adsorption filter (AC):** A filter bag in a rigid, permeable polyester (PES) casing, filled with highly active carbon, which adsorbs residual dispersed oil and reduces the content of non-polar extractable substances (NEL) below the legal limits.

3. Overview of variants, compatibility and composition of the sets

domnick hunter ES / ES2000	Hiross OWS®	Zander ecosep® SL	domnick hunter H2OIL-X®	Composition of the filter set
ES2100 / ES2150 / ES2200	**OWS 001 / 060 / 075**	**ecosep® SL 1 / SL 2 / SL 5**	**SE 2010 / SE 2015**	1× two-layer pre-filter (PES/PP), 1× AC main carbon bag, 1× small vent filter
ES2300	**OWS 125**	**ecosep® SL 8**	-	1× two-layer pre-filter (PES/PP), 1× AC main carbon bag, 1× large vent filter
ES2400	**OWS 185**	**ecosep® SL 15**	**SE 2030**	2× two-layer pre-filter (PES/PP), 2× AC main carbon bag, 1× large vent filter
ES2500	**OWS 355**	**ecosep® SL 30**	-	1× large two-layer pre-filter (PES/PP), 1× large AC main carbon bag, 1× large vent filter
ES2600	**OWS 485**	**ecosep® SL 60**	-	2× large two-layer pre-filter (PES/PP), 2× large AC main carbon bag, 1× large vent filter
ESVF1 (small)	Vent insert for ES2100–ES2200 / OWS 001–075 / SL 1, 2, 5 / SE 2010–2015	–	–	1× small vent filter (separately)
ESVF2 (large)	Vent insert for ES2300–ES2600 / OWS 125, 185, 355, 485 / SL 8, 15, 30, 60 / SE 2030	–	–	1× large vent filter (separately)

(Note: PES/PP = two-layer pre-filter of polyester / oleophilic polypropylene melt-blown in a PES casing; AC = adsorption bag with activated carbon in a PES casing. The individual bags and vent inserts can also be ordered separately.)

4. Common technical parameters and operating limits

Parameter	Specification
Pre-filter design	Two-layer graded depth filtration: 50 % polyester fibres (PES – upper layer)

	+ 50 % oleophilic polypropylene melt-blown (PP – lower layer) in a permeable polyester (PES) casing
Filter material and casing of the main filter (AC)	Granulated activated carbon in a permeable polyester (PES) casing
Working pressure	Pressure-free gravity flow through the filter stage (condensate inflow into the expansion chamber may be pressurised up to 16 bar)
Condensate operating temperature	+5 °C to +45 °C (the unit must not be exposed to frost)
Suitable oil types	Mineral oils, synthetic oils based on PAO and esters
Unsuitable medium	Stable emulsions (milky, non-separable condensate), polyglycol (PAG) oils, solvents and aggressive chemicals
Outlet water quality	Residual oil content (NEL) < 10–15 mg/l (with correct sizing of the unit and compliance with the operating conditions)

5. Installation and maintenance instructions

1. **Preparation before installation:** Before inserting into the separator, the main bags with activated carbon must be soaked in clean water for 24 hours. This displaces the air from the pores of the carbon, washes out fine carbon dust and ensures an even flow of condensate. The vent filter (small and large) is not soaked – it is always inserted dry.
2. **Filter replacement:** Close the condensate inlet, remove the exhausted bags from the separator chambers, let them drip briefly and place them in a leak-proof container for hazardous waste.
3. **Fitting new filters:** Place the main carbon bag into the lower / outlet part of the filter chamber (for twin units ES2400, OWS 185, SL 15, SE 2030 and ES2600, OWS 485, SL 60, into both chambers) and carefully spread it out so that it fits tightly against the walls and the condensate cannot bypass it. Seat the two-layer pre-filter on top of it with the correct side up (polyester layer on top, melt-blown layer at the bottom, as marked on the bag). Replace the respective vent insert in the expansion tower.
4. **Start-up:** Fill the separator chamber with clean water up to the overflow level and open the condensate inlet.
5. **Operational check:** Check the quality of the outflowing water at least once a week by taking a sample from the test tap and comparing the turbidity. Replace the filters after 6 to 12 months of operation at the latest (depending on the load and the separator manufacturer's recommendation), or immediately if the turbidity of the outlet water increases or the level in the tank rises.

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6. Storage and disposal

- **Storage:** Store in the closed packaging in a dry place at a temperature of +5 °C to +35 °C. Protect from direct sunlight, moisture and fumes of chemicals or solvents. The shelf life is 24 months from the date of manufacture.
- **Disposal:** Used filters saturated with compressor oil are hazardous waste (waste catalogue code 15 02 02* – absorbents, filter materials, wiping cloths and protective clothing contaminated by hazardous substances) and must be handed over to an authorised person for disposal in accordance with the Waste Act.

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7. Manufacturer's declaration

The manufacturer Carbon Filters – Antonín Kohoutek declares that, when professionally installed and operated under the specified operating conditions, the listed products are a fully functional replacement for the original parts and reduce the content of petroleum substances in the condensate below the usual limits of sewer regulations.

The names Parker®, domnick hunter®, H2OIL-X®, Zander®, ecosep®, Hiross® and OWS® are registered trademarks of the respective companies and are used here solely for the purpose of unambiguously identifying the compatibility of the replacement part.