Product Data Sheet
Filter Cartridges ERDH - CA, CHL

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Field of application

Type ERDH filter cartridges of filtration grades CA and CHL provide the opportunity to use our high performance, energy efficient and safe to operate filtration technology also in domnick-hunter series Oil-X Plus filter housings. We recommend the following filtration grade assignment:

	FST GmbH	domnick-hunter
Activated carbon	CA	AC
Catalyst	CHL	HC

Features

ERDH..CA filter cartridges consist of a loose activated carbon granulate filling, ERDH..CHL filter cartridges of a catalyst granulate filling, both embedded between two coarse filter cloths and fine mesh screens. Furthermore a pleated general purpose filter element (Z) is fully integrated into the cartridge downstream in order to reliably prevent even the finest dust, caused by abrasion, from leaving the filter cartridge. A transparent perspex cylinder as a main body makes the granulate filling visible. The pleated general purpose filter media is located between two stainless steel cylinders. Both granulate and filter stage are completed / separated by plastic end caps. As a result, the adsorptive/catalytic filter stage as well as general purpose filter stage is fully incorporated in a single, compact cartridge unit. A further downstream dust filtration is no longer required.

Cartridges in general offer much higher amounts of granulate fillings compared to same size filter elements. The longish shaped filling bed ensures a long contact time of the compressed air with the granulate and thus low amounts of residuals downstream as well as a long lifetime.

All the features mentioned above contribute to a filter cartridge which has a long service life (high granulate amounts), combined with a high efficiency (low amounts of residuals) and maximum operating safety (integrated design).

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Basic data

Model	Nominal volume flow (VN)*1	Max. operating pressure	Min./Max. operating temperature
ERDH006CA	22 m³/h	---	+2°C - +45°C
ERDH013CA	47 m³/h		
ERDH025CA	90 m³/h		
ERDH040CA	144 m³/h		
ERDH065CA	234 m³/h		
ERDH085CA	306 m³/h		
ERDH013CHL	47 m³/h		
ERDH040CHL	144 m³/h		

*1 - refers to 1 bar(a) and 20°C at 7 bar operating pressure
Reducing the volume flow improves all specifications

Purity classes according to ISO 8573-1

Contamination	CA	CHL
Solid particles*2	(Class 2)	(Class 2)
Water content	---	---
Total oil content*2 *3	Class 0-1	---

*2 - typical result, on the assumption of suitable inlet concentrations as well as operating and marginal conditions.
*3 - the liquid residual oil content is not taken into account and may reduce the purity class (should be separated in advance by means of fine filtration)

Volume flow conversion factors

«F1» - Pressure (in bar)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0.125	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

«F2» - Temperature (in °C)

2	5	10	15	20	25	30	35	40	45
1.07	1.05	1.04	1.02	1.00	0.98	0.97	0.95	0.94	0.92

Calculation of the converted volume flow

Converted volume flow VK	Nominal required volume flow VN_{min}
VK = VN x F1 x F2	VN_{min} *= VK / F1 / F2*

VK : Converted volume flow calculated for the operating conditions
VN_{min}: Nominal required volume flow calculated for the operating conditions, based on the volume flow at operating conditions

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Maintenance rules

Pressure range	CA	CHL
Entire pressure range	Replacement of filter cartridge every 6 months, depending on the operating temperature and therefore on the specified oil vapour amount earlier, if required	Replacement of filter cartridge every 6 months, depending on the operating temperature and therefore on the specified amount of humidity earlier, if required

Product specific data

Specification	CA	CHL
Oil vapour content (nominal) *5	≤ 0.003 mg/m³	---
Capacity (ISO 12500-2)*6	---	---

*5 - at an inlet concentration ≤ 0.01 mg/m³, the liquid residual oil content is not taken into account (should be separated in advance by means of fine filtration)
*6 - measured referring to ISO 12500-2 with n-hexane, model EFST30, test concentration100 mg/kg, result at 80% saturation

Model	Amount of activated carbon	Amount of catalyst
ERDH006 (granulate filling)	15 g	---
ERDH013 (granulate filling)	37 g	62 g
ERDH025 (granulate media)	15 g	---
ERDH040 (granulate filling)	180 g	300 g
ERDH065 (granulate media)	30 g	---
ERDH085 (granulate media)	50 g	---

Materials

Component	
Activated carbon filling	Activated carbon pellets
Catalyst filling	Carulite®
Filter cloths	Polyester-Polyurethane
Mesh screens	Stainless steel 1.4301
Filter media general purpose filtration	Glass fibre
Bonded joint	PU (Polyurethane)
Cylinder filling	Acrylic
Cylinders filter media	Stainless steel 1.4301
End caps	PA6 (Polyamide)
Sealing materials	NBR

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Dimensions

Model	Height (total height)	∅	∅ Inlet (inside)
ERDH006	70 mm (73 mm)	42 mm (36 mm)	27 mm
ERDH013	90 mm (93 mm)	63 mm (51 mm)	36 mm
ERDH025	101 mm (104 mm)	63 mm (49 mm)	36 mm
ERDH040	156 mm (158 mm)	93 mm (73 mm)	46 mm
ERDH065	163 mm (165 mm)	93 mm (69 mm)	46 mm
ERDH085	263 mm (265 mm)	93 mm (69 mm)	46 mm

Classification according to Pressure Equipment Directive 2014/68/EU for group 2 fluids

Model	Volume	Category	Commissioning-in-spection	Routine Inspection
All models	Filter cartridges are not part of the Pressure Equipment Directive 2014/68/EU			

Other directives

Model	
All models	---

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