

# FILTER ELEMENT – H<sup>2</sup>

Series: AF Series

(Catalyst (Hopcalite) + Particulate)



## DESCRIPTION

New H<sup>2</sup> two stage filter elements have been specifically developed for high efficient reduction of carbon monoxide as well as some other substances<sup>(2)</sup> from compressed breathing air<sup>(1)</sup>. In first stage Hopcalite catalyst reduces specified substances from the air and in second stage depth fiber filter media intercepts all Hopcalite dust particles. It is essential that coalescing filter element is installed as pre-filter to the H<sup>2</sup> grade filter and that relative humidity is sufficiently low.

<sup>(1)</sup>For any other technical gas please contact us or your local dealer

## FILTER ELEMENT RATING ACCORDING TO ISO 8573-1

Solid particles class	Water class	Oil class
1*	/	/

Validated according to ISO12500-3

\* Valid if "S" filter cartridge is installed upstream

## TECHNICAL SPECIFICATION

Operating temperature	1,5 - 45 °C / 35 - 113 °F
Operating pressure	0 - 16 barg / 0 - 232 psi
Differential pressure (dry)	/
Differential pressure (wet)	/
Particle retention (nominal)	99,9999% (0,1 µm)
Particle retention rate ISO <sup>(3)</sup>	99,98%
Residual oil content <sup>(4)</sup>	/
Flow Direction	INSIDE to OUTSIDE
Capacity (ISO12500-2) <sup>(5)</sup>	/
Inlet humidity	-40°C (pressure dew point)

<sup>(3)</sup>Tested according to ISO12500-3, 1bar(a), nominal flow, 06050 M, Most penetrating particle size MPPS 0,3mm

## MATERIALS

Filter media	Borosilicate micro fibers
Protection media	Polyester fleece
Drainage media	Polyester based polyurethane
Adsorption media	Activated carbon granulate
Support (inner-outer)	Stainless steel 1.4301
Bonding	Polyurethane
Endcaps	PA6 with 30% glass fibers
Sealing	NBR
Chamber	Acryl
Catalyst material	Hopcalite

**SIZES**

Model	Diameter [mm]	Height [mm]	Flow Capacity [Nm <sup>3</sup> /h]	Flow Capacity [scfm]	Fits into filter housing	Hopcalite [g]
07050 H <sup>2</sup>	51	70	78	46	AF 0076	35
14050 H <sup>2</sup>	51	140	120	70	AF 0106	135
12075 H <sup>2</sup>	75	125	198	116	AF 0186	155
22075 H <sup>2</sup>	75	225	335	197	AF 0306	430
32075 H <sup>2</sup>	75	325	510	300	AF 0476	740
50075 H <sup>2</sup>	75	505	780	459	AF 0706	1410

**DIFFERENTIAL PRESSURE [mbar] AT % OF NOMINAL FLOW**

Model	25%	50%	75%	100%
07050 H <sup>2</sup>	20	40	60	80
14050 H <sup>2</sup>	28	55	83	110
12075 H <sup>2</sup>	30	60	90	120
22075 H <sup>2</sup>	105	210	315	420*
32075 H <sup>2</sup>	183	365*	548*	730*
50075 H <sup>2</sup>	343	685*	1028*	1400*

To reach required pressure drop reduce the flow.

\*It is strongly recommended to reduce the flow so that pressure drop is below 350mbar

**IMPORTANT**

- Differential pressure should never exceed 1500mbar, otherwise filter element can be damaged.
- If filter housing is equipped with differential pressure gauge check maximum allowable differential pressure of the gauge.
- If tie-rod is used to fix the element into filter housing max differential pressure must not exceed 350mbar.

**CORRECTION FACTORS**

To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor(s). CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C<sub>OP</sub>


**OPERATING PRESSURE**

[bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
[psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
C <sub>OP</sub>	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

**MAINTENANCE**

Replace filter element at least every 3 months or sooner if it is required for specific application.

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	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2015
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