AKM 1-8

Activated carbon adsorber for the efficient purification of compressed air

AKM 1-8 activated carbon adsorbers purify pre-dried, industrial compressed air reliably and efficiently down to a remaining oil content of 0,003 mg/m³. The units are constructed in a compact manner and designed to be free-standing with built-on after filters. They are sized for volumetric flows of up to 86 m³/h (suction capacity of the compressor referring to a compression of 7 bare).

Pre-dried compressed air flows from top to bottom through a single vessel containing high-quality activated carbon: Any remaining oil-aerosols and oil-vapours, including odours and tastes, are removed by the active surface area of the highly-porous activated carbon to produce high-quality, clean compressed air.

Finally, the treated compressed air exits via the validated OIL-X after-filter into the downstream compressed air network.

Using an oil-indicator tube supplied as standard, quality checks can be carried out periodically. The lifetime of the activated carbon filling can vary and is dependent on the contamination type and quantity and the relative humidity of the compressed air. Customary lifetimes for industrial applications range from 8 to 10.000 operating hours, which can be verified using a colour-change indicator to simplify planning requirements.

Advantages K-MT

- Oil vapor adsorber with a high-quality activated carbon
- Residual oil content less than 0,003 mg/m³
- Characterized by optimized differential pressure, low operating costs and long service time
- Mounted downstream filter of Oil-X series
- The adsorber is equipped with an oil indicator with an integrated needle valves for periodic measuring of the residual oil concentration in the purified compressed air

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Technical Data

Dryer Models	Minimum Operating Pressure		Maximum Operating Pressure		Minimum Operating Temperature		Maximum Operating Temperature		Maximum Ambient Temperature		Thread Type
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F	
AKM 1 - 8	4	58	16	232	5	41	50	122	50	122	BSPP

Flow Rates

Model	Pipe Size BSP	Inlet Flow Rate			
		l/s	m^3/min	m^3/h	cfm
AKM 1	G 1/4	2	0.13	8	5
AKM 2	G 1/4	4	0.25	15	9
AKM 3	G 1/4	7	0.42	25	15
AKM 4	G 1/4	10	0.58	35	21
AKM 6	G 1/2	16	0.93	56	33
AKM 7	G 1/2	20	1.2	72	42
AKM 8	G 3/4	24	1.43	86	51

Inlet flow rate relating to 1 bar(a) and 20 °C; relating to the suction performance of the compressor, compression at 7 bar(g) and 35 °C dryer inlet temperature, at 25 °C ambient temperature, 60 % relative humidity.

Product Selection & Correction Factors

For correct operation, compressed air dryers must be sized using for the maximum (summer) inlet temperature, maximum (summer) ambient temperature, minimum inlet pressure, required outlet dewpoint and maximum flow rate of the installation.

To select a dryer, first calculate the MDC (Minimum Drying Capacity) using the formula below then select a dryer from the flow rate table above with a flow rate equal to or above the MDC.

Minimum Drying Capacity = System Flow x CFIT x CFAT x CFMIP

CFIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		0.94	0.95	1.00	1.15	1.22	1.28

CFAT - Correction Factor Maximum Ambient Temperature

Maximum Ambient Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		1.00	1.00	1.00	1.00	1.00	1.00

CFMIP - Correction Factor Minimum Inlet Pressure

Minimum Inlet Pressure	bar g	4	5	6	7	8	9	10	11	12	13	14	15	16
	psi g	58	73	87	100	116	131	145	160	174	189	203	218	232
Correction Factor		1.60	1.33	1.12	1.00	0.88	0.79	0.76	0.74	0.67	0.62	0.59	0.56	0.53

Included Filteration

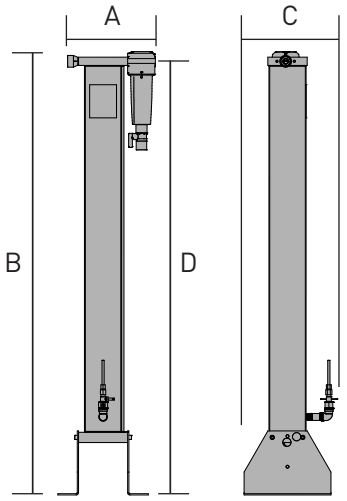
Model	Dryer Outlet	
	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter (Option)
AKM 1	AOPX010A	AAPX010A
AKM 2	AOPX010A	AAPX010A
AKM 3	AOPX010A	AAPX010A
AKM 4	AOPX010A	AAPX010A
AKM 6	AOPX015C	AAPX015C
AKM 7	AOPX015C	AAPX015C
AKM 8	AOPX020D	AAPX020D

Filtration Performance

	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
Filtration Grade	Grade AO	Grade AA
Filtration Type	Dry Particulate	Dry Particulate
Particle Reduction (inc water & oil aerosols)	Down to 1 micron	Down to 0.01 micron
Maximum Remaining Oil Aerosol Content at 21°C	N/A	N/A
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A
Filtration Efficiency	99.925%	99.9999%

Weights (kg) & Dimensions (mm)

Model	A	B	C	Weight
AKM 1	210	404	245	6.0
AKM 2	210	579	245	7.5
AKM 3	210	829	245	10
AKM 4	210	1079	245	12
AKM 6	300	1134	345	25.5
AKM 7	300	1359	345	30.0
AKM 8	300	1559	345	35.0



Quality Assurance / IP Rating / Pressure Vessel Approvals

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	Indoor and frost free installation only
EU	Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU
USA	Approval to ASME VIII Div. 1 (optional)
AUS	Approval to AS1210 (optional)
Russia	TR (formerly GOST-R) (optional)
For use with Compressed Air Only	

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