

# AKM 10-95

Activated carbon adsorber for the efficient purification of compressed air



AKM 10-95 activated carbon adsorbers purify pre-dried, industrial compressed air reliably and efficiently down to a remaining oil content of 0,003 mg/m<sup>3</sup>. 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 940 m<sup>3</sup>/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/m<sup>3</sup>
- 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 10 - 95	4	58	16	232	5	41	50	122	50	122	BSPP

## Flow Rates

Model	Pipe Size BSP	Inlet Flow Rate			
		l/s	m <sup>3</sup> /min	m <sup>3</sup> /h	cfm
AKM 10	1"	30	1.8	105	62
AKM 15	1"	40	2.4	145	85
AKM 20	1"	56	3.3	200	118
AKM 25	1 ½"	70	4.3	255	150
AKM 35	1 ½"	97	5.8	350	206
AKM 45	1 ½"	117	7	420	247
AKM 60	2"	172	10.3	620	365
AKM 75	2"	208	12.5	750	441
AKM 95	2 ½"	261	15.7	940	553

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 Filtration

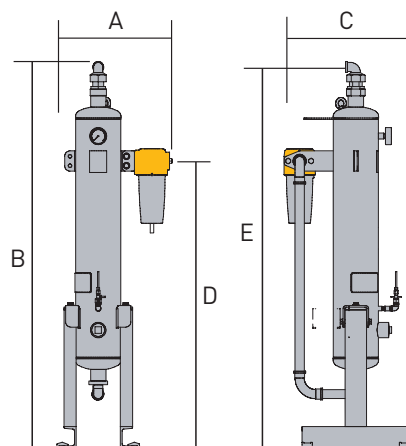
Model	Dryer Outlet	
	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter (Option)
AKM 10	AOPX025E	AAPX025E
AKM 15	AOPX025E	AAPX025E
AKM 20	AOPX025E	AAPX025E
AKM 25	AOPX030G	AAPX030G
AKM 35	AOPX030G	AAPX030G
AKM 45	AOPX035G	AAPX035G
AKM 60	AOPX040H	AAPX040H
AKM 75	AOPX040H	AAPX040H
AKM 95	AOPX045I	AAPX045I

## 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	D	E	Weight
AKM 10	420	1450	480	1070	1425	59
AKM 15	420	1780	480	1320	1755	70
AKM 20	340	1550	480	1160	1530	70
AKM 25	360	1785	515	1320	1755	82
AKM 35	370	1805	515	1320	1770	92
AKM 45	400	1830	535	1320	1795	109
AKM 60	460	1930	615	1320	1890	140
AKM 75	480	2010	615	1515	1970	172
AKM 95	520	2080	645	1515	2030	215



## 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)
<b>For use with Compressed Air Only</b>	

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### AE – United Arab Emirates,

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Tel: +971 4 8127100

### AT – Austria, St. Florian

Tel: +43 (0)7224 66201

### AZ – Azerbaijan, Baku

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### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

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### US Product Information Centre

Toll-free number: 1-800-27 27 537

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