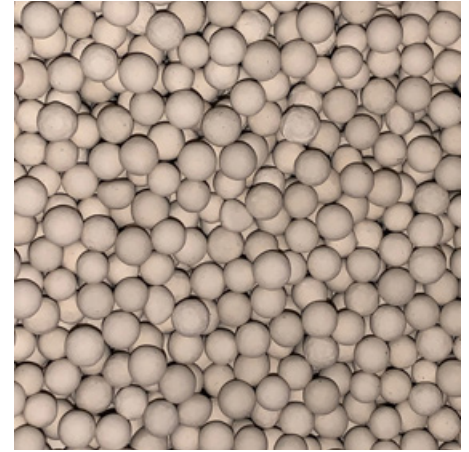


# Clean, Dry Compressed Air

## KA-MT 1 - 8



### Adsorption Dryers

Whether a compressed air user wants to control the growth of micro-organisms (essential for direct and in-direct contact applications in the food, beverage & pharmaceutical industries), ensure air used for critical applications / instrumentation is free from water contamination or has external piping where low ambient temperature can cause condensation, adsorption dryers are the go to dryer technology.

There are many different adsorption dryer technologies available and whilst they all reduce water from the compressed air in the same way, they differ in the way they regenerate the desiccant material.

### Heatless Adsorption Dryers

The simplest and most common method used to regenerate the adsorbent desiccant material is the 'heatless' method (so called as it does not use heat for desiccant regeneration).

Using a proportion of the clean, dry process air for regeneration, heatless dryers typically have the lowest capital costs of all adsorption dryer types (due to the simplicity of the heatless design).

Being very robust and having fewer components, they typically have the lowest maintenance cost of all the adsorption technologies.

Heatless dryers are available to suit all compressed air flow rates from small to large, whereas the more complicated regeneration methods are often only available for higher flow rates due to cost and complexity of the designs.



### Advantages

- Parker KA-MT dryers provide a constant outlet dewpoint in accordance with ISO8573-1 classes 1, 2 or 3 for water vapour
- Parker KA-MT dryers provide an outlet dewpoint which inhibits the growth of micro-organisms (allowing their efficient reduction using filtration)
- Parker KA-MT dryers use clean, dry purge air for regeneration, eliminating any risk of damage to the adsorption bed or re-contamination of the downstream compressed air
- No heat is used for regeneration; therefore, no insulation is required and loss of dewpoint on column changeover due to inefficient cool down is eliminated
- Parker KA-MT dryers include Parker OIL-X High Efficiency Coalescing pre-filtration, Oil Vapour Reduction Stage and General Purpose Dry Particulate post filtration as standard
- Fitted with Parker Multitronic electronic control with the option of dewpoint display and dewpoint switching Energy Saving Technology



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## Dryer Performance

Dryer Models	Dewpoint (Standard)		ISO8573-1:2010 Classification (Standard)	Dewpoint (Option 1)		ISO8573-1:2010 Classification (Option 1)	Dewpoint (Option 2)		ISO8573-1:2010 Classification (Option 2)
	°C	°F		°C	°F		°C	°F	
KA-MT 1 - 8	-40	-40	Class 2.2.1	-70	-100	Class 2.1.1	-25	-13	Class 2.3.1

## Technical Data

Dryer Models	Minimum Operating Pressure		Maximum Operating Pressure		Minimum Operating Temperature		Maximum Operating Temperature		Maximum Ambient Temperature		Electrical Supply (Standard)	Electrical Supply (Optional)	Thread Type	Noise Level dB(A)
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				
KA-MT 1 - 8	4	58	16	232	5	41	50	122	50	122	230V 1ph 50/60Hz	115V 1ph 50/60Hz or 24V DC	BSPP	65-86

## Flow Rates

Model	Pipe Size BSP	Inlet Flow Rate			
		L/s	m³/min	m³/hr	cfm
KA-MT 1	G 1/4	2	0.13	8	5
KA-MT 2	G 1/4	4	0.25	15	9
KA-MT 3	G 1/4	7	0.42	25	15
KA-MT 4	G 1/4	10	0.58	35	21
KA-MT 6	G 1/2	16	0.93	56	33
KA-MT 7	G 1/2	20	1.2	72	42
KA-MT 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.

$$\text{Minimum Drying Capacity} = \text{System Flow} \times \text{CFIT} \times \text{CFAT} \times \text{CFMIP} \times \text{CFOD}$$

### 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

### CFOD - Correction Factor Outlet Dewpoint

Outlet Dewpoint	°C	-25	-40	-70
	°F	-13	-40	-100
Correction Factor		1.00	1.00	2.00

## Controller Functions

Dryer Models	Controller Function							
	Power On Indication	Visual Fault Indication	Dewpoint Display	DDS - Energy Saving Technology	Filter Service Indicator	Dryer Service Indicator	Fault Relay: Power Loss Dewpoint Alarm Sensor Failure	4-20mA Dewpoint Re-transmission
KA-MT 1 - 8	•					•		
Optional Dewpoint Sensor	•		•	•		•	•	Optional

## Included Filtration

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

Included in standard scope of supply:  
 Prefilter (AA) including float drain.  
 Afterfilter (AO) including manual drain.

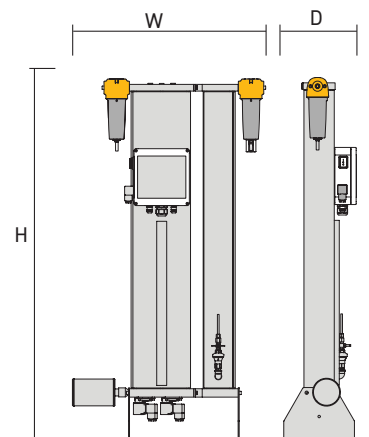
Optional: (Delivered separately):  
 Oil vapour reduction filter (ACS)  
 High efficiency dry particulate filter (AA) including manual drain

## Filtration Performance

	High Efficiency Filter	General Purpose Dry Particulate Filter	Oil Vapour Reduction Filter	High Efficiency Dry Particulate Filter
Filtration Grade	Grade AA	Grade AO	AKM	Grade AA
Filtration Type	Coalescing	Dry Particulate	Adsorption	Dry Particulate
Particle Reduction (inc water & oil aerosols)	Down to 0.01 micron	Down to 1 micron	N/A	Down to 0.01 micron
Maximum Remaining Oil Aerosol Content at 21°C	≤0.01 mg/m <sup>3</sup> (≤0.01 ppm(w))	N/A	≤0.003 mg/m <sup>3</sup> (≤0.003 ppm(w))	N/A
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A	N/A	N/A
Filtration Efficiency	99.9999%	99.925%	N/A	99.9999%

## Weights & Dimensions

Model	Pipe Size BSPP or NPT	Dimensions						Weight	
		Height (H)		Width (W)		Depth (D)		kg	lbs
		mm	ins	mm	ins	mm	ins		
KA-MT 1	¼"	434	17	486	19	210	8	15	33
KA-MT 2	¼"	609	24	477	19	210	8	20	44
KA-MT 3	¼"	859	34	577	23	210	8	28	62
KA-MT 4	¼"	1109	44	577	23	210	8	35	77
KA-MT 6	½"	1164	55	692	27	300	12	68	150
KA-MT 7	½"	1389	55	692	27	300	12	81	179
KA-MT 8	¾"	1589	63	692	27	300	12	92	203



## Quality Assurance / IP Rating / Pressure Vessel Approvals

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	IP65 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 not required
AUS	Approval to AS1210 not required
Russia	TR (formerly GOST-R)
<b>For use with Compressed Air Only</b>	

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### US Product Information Centre

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

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