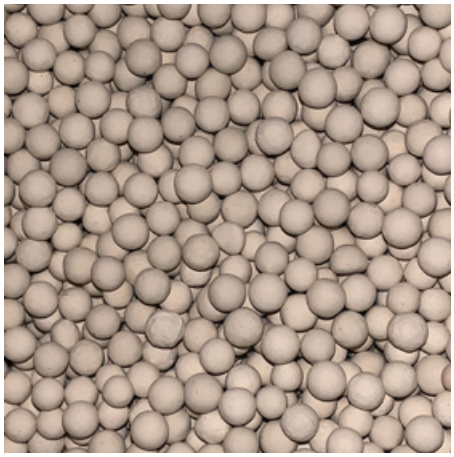
Clean, Dry Compressed Air

KE-MT 120 - 600



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 KE-MT dryers provide a constant outlet dewpoint in accordance with ISO8573-1 classes 1, 2 or 3 for water vapour
- Air purity is complemented by installing Parker OIL-X General Purpose & High Efficiency Coalescing pre-filtration and General Purpose Dry Particulate post filtration
- Parker KE-MT dryers provide an outlet dewpoint which inhibits the growth of micro-organisms (allowing their efficient reduction using filtration)
- Parker KE-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
- 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	
KE-MT 120 - 600	-40	-40	Class 2.2.2	-70	-100	Class 2.1.2	-20	-4	Class 2.3.2

ISO8573-1 Classifications when used with Parker OIL-X pre / post filtration

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
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				dB(A)
KE-MT 120 - 600	4	58	10*	145	5	41	50	122	50	122	230V 1ph 50Hz/60Hz	115V / 1ph 50/60Hz	Flange	< 120

* Higher operating pressures on request

Flow Rates

Model	Pipe Size	Inlet Flow Rate			
		L/s	m^3/min	m^3/hr	cfm
KE-MT 120	DN 50	333	20	1200	706
KE-MT 150	DN 65	430	26	1550	912
KE-MT 200	DN 65	556	33	2000	1177
KE-MT 250	DN 80	695	42	2500	1472
KE-MT 300	DN 80	833	50	3000	1766
KE-MT 380	DN 100	1056	63	3800	2237
KE-MT 500	DN 100	1347	81	4850	2855
KE-MT 600	DN 125	1695	102	6100	3590

Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure. For flows at other pressures, apply the correction factors shown below.

Dryers for smaller flows are available on request.

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 x 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
	psi g	58	73	87	100	116	131	145
Correction Factor		1.60	1.33	1.12	1.00	0.88	0.79	0.76

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	DS - Energy Saving Technology	Filter Service Indicator	Dryer Service Indicator	Fault Relay: Power Loss Dewpoint Alarm Sensor Failure	4-20mA Dewpoint Re-transmission
KE-MT 120 - 600	•					•		
Optional Dewpoint Sensor	•		•	•		•	•	Optional

Recommended Filtration

Model	Dryer Inlet		Dryer Outlet		
	General Purpose Prefilter mandatory*	**High Efficiency Filter** mandatory*	**General Purpose Dry Particulate Filter** mandatory*	**Oil Vapour Reduction Filter** optional	**High Efficiency Dry Particulate Filter** optional
KE-MT 120	AOPX050I	AAPX050I	AOPX050I	ACSPX050I	AAPX050I
KE-MT 150	AOPX050I	AAPX050I	AOPX050I	ACSPX050I	AAPX050I
KE-MT 200	AOPX055I	AAPX055I	AOPX055I	ACSPX055I	AAPX055I
KE-MT 250	AOPX060K	AAPX060K	AOPX060K	ACSPX060K	AAPX060K
KE-MT 300	AOPX060K	AAPX060K	AOPX060K	ACSPX060K	AAPX060K
KE-MT 380	AO070O	AA070O	AO070O	ACS070O	AA070O
KE-MT 500	AO075O	AA075P	AO075O	ACS075O	AA075O
KE-MT 600	AO075O	AA075P	AO075O	ACS075O	AA075O

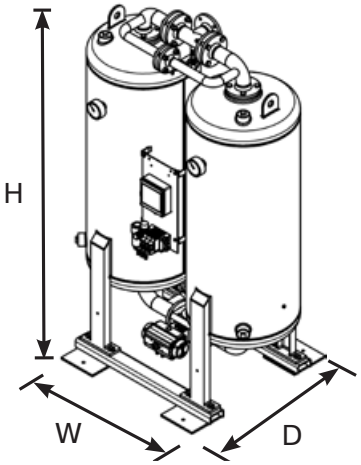
* prefilters (AO and AA) and afterfilter (AO) are mandatory but not included in scope of supply and must be ordered separately. The filtration is mandatory to maintain trouble-free dryer operation.

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	Grade ACS	Grade AA
Filtration Type	Coalescing	Dry Particulate	Oil Vapour Reduction	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/m³ (⩽0.01 ppm(w))	N/A	0.003 mg/m³ 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)			
		mm	ins	mm	ins	mm	ins	kg	lbs
KE-MT 120	DN 50	2080	82	1060	42	840	33	640	1411
KE-MT 150	DN 65	2120	83	1270	50	900	35	830	1830
KE-MT 200	DN 65	2160	85	1350	53	990	39	955	2106
KE-MT 250	DN 80	2210	87	1530	60	1040	41	1075	2370
KE-MT 300	DN 80	2255	88	1600	62	1100	43	1500	3307
KE-MT 380	DN 100	2385	93	1875	73	1200	47	1990	4388
KE-MT 500	DN 100	2660	104	1925	76	1250	49	2410	5314
KE-MT 600	DN 125	2816	111	2155	85	1304	51	2700	5953



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
AUS*	Approval to AS1210
Russia*	TR (formerly GOST-R)
For use with Compressed Air Only	

* Approvals on request only

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