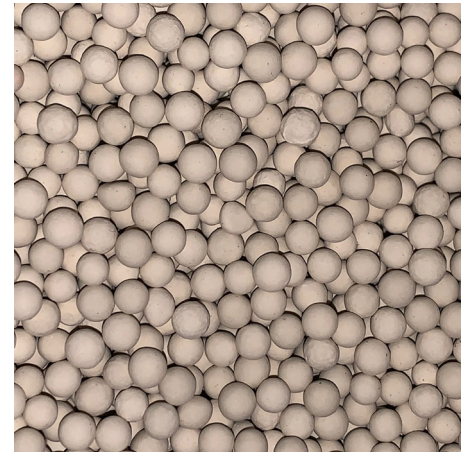


Antares Plus-E

Green Hybrid Technology

Low Energy Dryer

ATT+060 - ATT+340



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.

Hybrid Technology Low Energy Dryers

The Antares Plus-E hybrid technology low energy dryer (ATT+ 060-340) is a green and eco-friendly solution integrating the principles of refrigeration and adsorption into a single compact compressed air treatment package, resulting in a highly efficient, economic and low maintenance drying solution, with particular attention to the environment thanks to the use of a low GWP refrigerant (R513A).

The refrigeration dryer pre-dries the compressed air before it is passed through an externally heated purge adsorption dryer. The adsorbent desiccant material is regenerated using heated process air (purge air). Removing the heat source allows the process air to cool the desiccant before adsorption takes place.

This unique combination of refrigeration and adsorption techniques delivers a reduction in energy consumption of up to 60% compared to non-hybrid drying solutions and a longer desiccant lifetime means which reduced maintenance costs and increased operational uptime.

Antares Plus-E hybrid dryers deliver a cost-effective solution across a wide range of industrial and processing applications. Furthermore, they are especially suited for



general purpose applications with external piping: in warmer months, the adsorption dryer can be bypassed to save energy and simply be reinstated in colder months when a refrigeration dryer dewpoint would be insufficient to prevent condensation in external piping.

Advantages

- Parker ATT+ dryers provide a constant outlet dewpoint in accordance with ISO8573-1 classes 1, 2, 3 or 4 for water vapour.
- User can set customisable dewpoints
- Parker ATT+ 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.
- Adsorption dryer can be switched off and bypassed during warmer months to increase energy savings (running as a refrigeration dryer only).
- Parker ATT+ dryers include Parker OIL-X General Purpose & High Efficiency Coalescing pre-filtration and General Purpose Dry Particulate post filtration as standard.

- All ATT+ units are equipped with a strip LED unit status indicator and a full feature, touch screen, electronic control including a remote communication protocol making ATT+ an Industry 4.0 and IoT ready product.
- Integrated electronic capacitive drain on all models.
- ATT+ fridge side uses R513A refrigerant with low GWP, in line with the requirements of the F-Gas regulation, protects the environment and prevents from potential disruptions coming from refrigerants with higher GWP.
- Low maintenance costs, thanks to a longer desiccant lifetime, and reduced desiccant quantity.
- Quick maintenance operation. Thanks to easy service access, removable filter insulation, data log via USB port, HP / LP gauges on all models and service indicators.
- Very low running costs with a reduction in energy consumption of up to 60% compared to non-hybrid drying solutions.



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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	
ATT+	-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 dB(A)
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				
ATT+ 060/090	2	29	12	174	5	41	65	149	50	122	230V 1ph 50Hz	N/A	BSPP	<75
ATT+ 140	2	29	12	174	5	41	65	149	50	122	400V 3ph 50Hz	N/A	BSPP	<75
ATT+ 260/340	4	58	12	174	5	41	65	149	50	122	400V 3ph 50Hz	N/A	BSPP	<75

Flow Rates

Dryer Models	Pipe Size	Inlet Flow Rate				Average Power kW
		L/s	m³/min	m³/hr	cfm	
ATT+ 060	1½"	100	6	360	212	1.9
ATT+ 090	1½"	150	9	540	318	2.3
ATT+ 140	2"	233	14	840	494	2.6
ATT+ 260	2½"	433	26	1560	918	4.2
ATT+ 340	2½"	567	34	2040	1200	5.6

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.

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	55	60	65
	°F	77	86	95	104	113	122	131	140	149
Correction Factor ATT+		0.82	0.82	1.00	1.23	1.45	1.82	2.44	2.63	2.94

CFAT - Correction Factor Maximum Ambient Temperature

Maximum Ambient Temperature	°C	20	25	30	35	40	45	50
	°F	68	77	86	95	104	113	122
Correction Factor ATT+ 060/090		0.93	1.00	1.06	1.14	1.23	1.33	1.47
Correction Factor ATT+ 140/260/340		0.94	1.00	1.05	1.11	1.20	1.30	1.39

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 ATT+		1.61	1.33	1.15	1.00	0.96	0.93	0.91	0.88	0.87	N/A	N/A	N/A	N/A

CFOD - Correction Factor Outlet Dewpoint

Outlet Dewpoint	°C	-20	-40	-70
	°F	-4	-40	-100
Correction Factor		1	1	1

Controller Main Functions

Hybrid Dryer	Controller Function												
	Touchscreen	Visual Fault Indication	Service Indicator	EST - Energy Saving Technology	Visual Operation Status (Strip LED)	Power On Indication	Dewpoint Display	Alarm History	0-10V / 4-20mA Dewpoint Re-transmission	Data Log/ Retrieve*	Local Web Server	Modbus Protocol**	IOT Ready
ATT+	7"	•	•	•	•	•	•	•	•	•	•	•	•

*USB

**RTU RS485 TCP/IP RJ45

Included Filtration

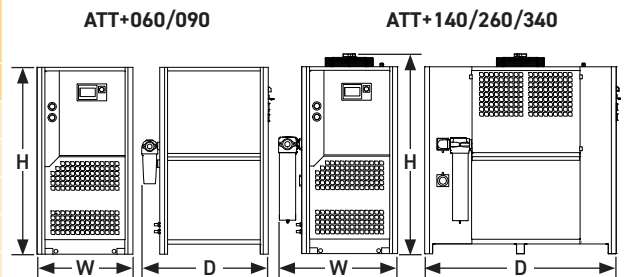
Dryer Models	Pipe Size BSPP	Dryer Inlet		Dryer Outlet		
		General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
ATT+ 060	1½"	AOPX030G	AAPX030G	-	AOPX030G	-
ATT+ 090	1½"	AOPX035G	AAPX035G	-	AOPX035G	-
ATT+140	2"	AOPX045I	AAPX045I	-	AOPX045I	-
ATT+ 260	2½"	AOPX055J	AAPX055J	-	AOPX055J	-
ATT+ 340	2½"	AOPX055J	AAPX055J	-	AOPX055J	-

Filtration Performance

	General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
Filtration Grade	Grade AO	Grade AA	-	Grade AO	-
Filtration Type	Coalescing	Coalescing	-	Dry Particulate	-
Particle Reduction (inc water & oil aerosols)	Down to 1 micron	Down to 0.01 micron	-	Down to 1 micron	-
Maximum Remaining Oil Aerosol Content at 21°C	≤0.5 mg/m³ (≤0.5 ppm(w))	≤0.01 mg/m³ (≤0.01 ppm(w))	-	N/A	-
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A	-	N/A	-
Filtration Efficiency	99.925%	99.9999%	-	99.925%	-

Weights & Dimensions

Model	Pipe Size BSPP	Dimensions (with Filters)						Weight (with Filters)	
		Height (H)		Width (W)		Depth (D)		kg	lbs
		mm	ins	mm	ins	mm	ins		
ATT+ 060	1½"	1900	74.8	973	38.3	1312	51.7	380	838
ATT+ 090	1½"	1900	74.8	973	38.3	1312	51.7	420	926
ATT+ 140	2"	2030	79.9	1180	46.5	1974	77.7	650	1433
ATT+ 260	2½"	2030	79.9	1205	47.4	1974	77.7	920	2028
ATT+ 340	2½"	2030	79.9	1205	47.4	1974	77.7	960	2116



Quality Assurance / IP Rating / Pressure Vessel Approvals

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	IP44 Indoor Use Only
EU	Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU
USA	Not Applicable
AUS	Not Applicable
GUS	Not Applicable
For use with Compressed Air Only	

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US Product Information Centre

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