PNEUDRI Compressed Air Dryer

MiDAS DAS1 - DAS7

Engineering Data Sheet

Description

Parker domnick hunter desiccant dryers are designed to remove moisture vapour from compressed air. Providing pressure dewpoints of -40°C (-40°F) or -70°C (-100°F) at specified conditions.

ISO8573.1 : 2001 Edition

Dewpoint Selected	Product Installed	ISO Classification
-40°C Pressure Dewpoint	AO Filter + Dryer	ISO8573.1 : 2001 Class 3.2.2
-70°C Pressure Dewpoint	AO Filter + Dryer	ISO8573.1 : 2001 Class 3.1.2

ISO8573.1 1991 Edition

Dewpoint Selected	Product Installed	ISO Classification
-40°C Pressure Dewpoint	AO Filter + Dryer	ISO8573.1 : 1991 Class 2.2.2
-70°C Pressure Dewpoint	AO Filter + Dryer	ISO8573.1 : 1991 Class 2.1.2

The dryers comprise of extruded aluminium columns. Each column contains twin chambers filled with desiccant material that dries the compressed air as it passes through. One chamber is operational (drying), whilst the opposite chamber is regenerating by Pressure Swing Adsorption (PSA).

Pressure Swing Adsorption (PSA)
A small amount of the dried compressed air is used to regenerate the spent desiccant bed. Dried air at line pressure is expanded to atmospheric pressure through the regenerating column.

Technical Specification

This specification is valid when the equipment is located, installed, operated, and maintained as specified within this user guide.

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

Model	Pipe Size	m^3/min	m^3/hr	cfm
DAS1	3/8”	0.09	5.1	3
DAS2	3/8”	0.14	8.5	5
DAS3	3/8”	0.23	13.6	8
DAS4	3/8”	0.28	17.0	10
DAS5	3/8”	0.37	22.1	13
DAS6	3/8”	0.43	25.5	15
DAS7	3/8”	0.57	34.0	20

Correction Factors

Minimum Drying Capacity = Inlet Flow Requirement x Correction Factor

Minimum Inlet Pressure		Maximum Inlet Temperature °C (°F)			
bar g	psi g	35 (95)	40 (104)	45 (113)	50 (122)
4	58	1.59	1.64	1.82	2.17
5	73	1.33	1.37	1.52	1.82
6	87	1.14	1.18	1.30	1.56
7	100	1.00	1.03	1.14	1.37
8	116	1.03	1.06	1.18	1.41
9	135	0.93	0.95	1.05	1.27
10	145	0.85	0.88	0.96	1.16
11	160	0.78	0.80	0.88	1.06
12	175	0.71	0.74	0.81	0.98

Minimum Operating Pressure	4 bar g
	58 psi g
Maximum Operating Pressure	12 bar g
	175 psi g
Minimum Operating Temperature	2°C
	35°F
Maximum Inlet Air Temperature	50°C
	122°F
Maximum Ambient Air Temperature	55°C
	131°F
Noise Level	<70 dB(A)
Standard Electrical Supply	230 V 1ph 50 Hz 60Hz
Optional Electrical Supply	110 V 1ph 50 Hz 60Hz
Dewpoint	-40°C
	-40°F
Optional Dewpoint	-70°C
	-70°F
ISO 8573.1 : 2001 Classification	Class 2 Water
Standard Thread Connections	BSPP
Optional Thread Connections	NPT

Approvals	
CRN	OH0182.9C
CSA	173682 (LR56310

Caution

Before continuing with the installation and commissioning of this equipment:

Ensure that it is correctly sized for the inlet pressure, taking into consideration the pressure drop caused by the valves, pipes and filters within the system. Allowance should be made for purge air loss. The dryer should be typically sized at 1 bar (14 psi/0.1MPa) below nominal compressor output pressure.

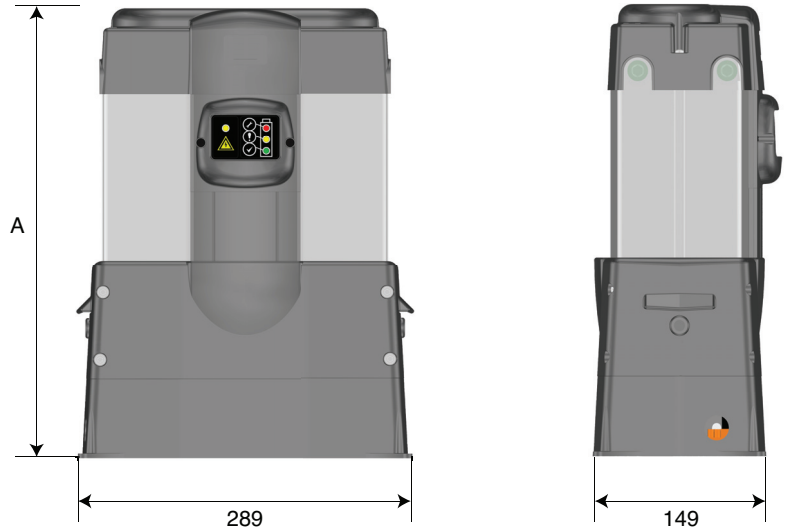
The purge air flow is factory set for 6 bar g (87 psi g) minimum system pressure. Should the minimum supply pressure be lower than this figure the purge air flow must be reset in order to maintain the specified dewpoint. Please contact your local Parker domnick hunter office for assistance.

Ensure that it is correctly sized for inlet temperature to meet the dewpoint specified.
-40°C (-40°F)

Ensure that the electrical supply voltage and frequency meet the requirements detailed within this specification and on the equipment rating plate.

Dimensions

DAS1 - DAS7



Model	A mm (inches)	Weight Kg (lbs)
DAS1	422 (16.6)	11 (24.2)
DAS2	400 (19.7)	13 (28.7)
DAS3	616 (24.2)	16 (35.3)
DAS4	692 (27.2)	18 (39.7)
DAS5	847 (33.3)	20 (44.1)
DAS6	906 (35.7)	23 (50.7)
DAS7	1098 (43.2)	28 (61.7)

Servicing

The recommended service procedures identified in table 5.2 and all other repair and calibration work should be undertaken by a ***Parker domnick hunter*** trained, qualified and approved engineer.

Cleaning

Clean the equipment with a damp cloth only and avoid excessive moisture around any electrical sockets. If required you may use a mild detergent, however do not use abrasives or solvents as they may damage the warning labels on the equipment.

Service Intervals

Description Of Maintenance Required		Typical Recommended Maintenance Interval					
Component	**Operation**	**Daily**	**3-month**	**6-month**	**12-month**	**24-month**	**30-month**
Dryer	Check POWER ON indicator is illuminated.	✓					
Dryer	Check STATUS / FAULT indicators located on the controller.	✓					
Dryer	Check for air leaks.	✓					
Dryer	Check the condition of electrical supply cables and conduits.		✓				
Dryer	Check for cyclic operation.			✓			
Filtration	Check Drain operation		✓				
Dryer	Replace active exhaust silencers **Recommended Service A**				🔧		
Filtration	Replacethe inlet and outlet air filters and service drains **Recommended Service B**				🔧		
Dryer	Service valves **Recommended Service D**					🔧	
Dryer	Replace the Desiccant. **Recommended Service E**					🔧	

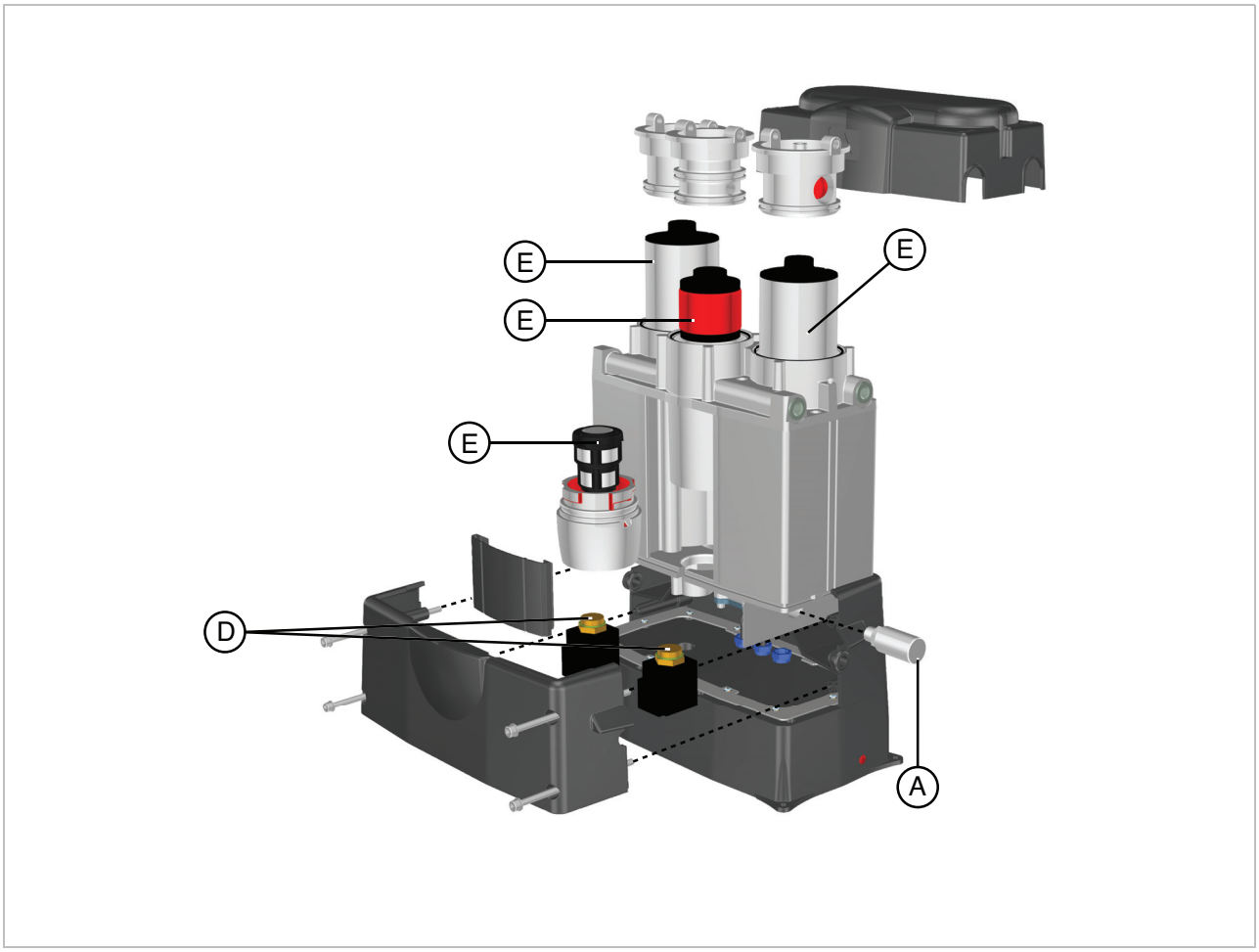
Key: ✓ - Check 🔧 – Replace

Note: When cartridges require changing an audible alarm will sound every 6 seconds.

Temporary resetting of the alarm to prevent nuisance noise is possible after alarm has sounded for the first time. This is done by depressing once the reset button located inside the control enclosure, accessed by removing the black insert on the side. The alarm will be muted for a 24 hour interval until the dryer has been serviced and the reset sequence completed.

Service Kits

Service Kit	Description	Kit No.	Quantity
A	Kit: Silencer element	608310003	1
B	Refer to Filter user guide	171184000	-
D	Kit: Exhaust Valve 50Hz	608310001	1
	Kit: Exhaust Valve 60Hz	608310002	1
E	DAS1 Service kit	608203081	1
	DAS2 Service kit	608203082	1
	DAS3 Service kit	608203083	1
	DAS4 Service kit	608203084	1
	DAS5 Service kit	608203085	
	DAS6 Service kit	608203086	
	DAS7 Service kit	608203087	



ELEMENTS

Parker filters are designed to produce clean compressed air, gas and liquid to the highest industry standards. To maintain impeccable results, Elements within the filter must be replaced annually.

Choosing the Parker brand means you can be assured that Elements are readily available, affordable and the most energy efficient product of its kind on the market. The elements are also supplied in 100% recyclable packaging. An additional advantage of purchasing Parker Elements is that you will reduce your company's carbon footprint by 190kg. This is the equivalent of a 700 mile flight from Edinburgh to Berlin!
Parker Filter Elements also prove to be highly efficient when used in any leading competitor's filters.

PARTS

Parker Kits make everyday maintenance easy. They are available for all of our products and are simply value-for money. The Parts within the kits support our customers' varied maintenance, repair and overhaul activities.

Additionally, Preventative Maintenance Kits can be purchased for dryers and gas generators. These kits mean our customers dryer's and generator's can be serviced easily to ensure optimum performance.
An extensive range of durable Parker Parts can be obtained within 24 hours to any European, Middle East or African destination.

SPECIALISED SERVICES

Parker Specialist Service Engineers test on-site efficiency measuring many variables including airflow, pressure, temperature, dewpoint and power consumption.

Our team of highly trained experts are the best in the industry. They take into account a range of environmental factors that could affect your system's performance. The results from this Specialist Service are extremely accurate and produce invaluable information.
Importantly, Parker informed recommendations lead to significant savings for our customers, which mean they return time and time again for our advice and products.

M.R.O

Maintenance Repair & Overhaul - Parker Technicians are the industry's finest. Their skills and qualifications are annually approved to keep their product and legislation knowledge fresh and expertise relevant.

With this in mind, Parker offers onsite and on demand servicing to meet customers' unique requirements in a timely and efficient manner.

Parker MRO service ranges from a basic maintenance check covered under product warranty right through to a comprehensive programme, which even puts the onsite application under the microscope.

With customers at the heart of everything Parker does, the MRO service is no exception to this.
Parker Filter Elements also prove to be highly efficient when used in any leading competitor's filters

SUPPORT SERVICES

Parker Support Services are the first port of call for customers in need of help or guidance.

The fact that this team is responsible for the production of User Guides and Manuals gives you an insight into the level and detail of their parts and product knowledge.

Over-the-phone support is just one way in which Parker's extremely knowledgeable team, quickly reduces downtime or resolves product queries.

On some occasions engineers need to be on site to carry out a repair. In these cases, the local engineer will be quickly dispatched to ensure our customers can return to production as soon as possible.
One-to-one training can also be provided by our Support Services team. This has enabled hundreds of Parker distributors to gain an in-depth understanding. Training will also ensure distributors can make timely repairs and easily maintain their customers' products.

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