



D¹ heatless desiccant air dryer user guide

about us

Experience.

Our team is comprised of and supported by individuals spanning all disciplines from research & development, engineering & manufacturing, marketing & sales and service & support. Our backgrounds are in air and gas purification and our experience in this field spans a wide range of industries. We combine this knowledge and experience to ensure our products and services are designed and provided to meet the objectives and expectations of you - our Customer.



Customer.

We recognise that our Customers are not only our valuable distribution partners who sell and support our products or the machine builders who depend on them as protection for their equipment. They are the contractors who install them, the manufacturers who use them in their processes and the service people who maintain them. At SENDFINTEC we have developed our products, packaging and support materials to ensure they exceed all of our Customers' expectations.



Service.

At SENDFINTEC we recognise that world-class customer service is the most important component to any successful business. Your business needs to exceed your customers' expectations to stand out from your competitors and our service must positively impact your business so you can be successful in doing so. Our commitment is simple... we will stand behind our products and ensure that our customer service is unrivaled in the industry.



Experience. Customer. Service.



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1.1 general information

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range: series 1 heatless desiccant air dryers
models: NAD or NAD-M 000, 001, 002, 003, 005
doc no: 17-100-0100
issue: 004

1.2 manufacturers details and support

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internet: www.n-psi.co.uk
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China

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annotations



CAUTIONS: indicate any situation or operation that may result in potential damage to the product, injury to the user, or render the product unsafe.



NOTES: highlight important sections of information where particular care and attention should be paid.

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1.3 document introduction

This manual provides factory prescribed installation and maintenance procedures for a series 1 heatless desiccant compressed air dryer. The procedures illustrated in this document are only to be performed by authorized personnel. For further information regarding the procedures outlined in this document contact the manufacturer before proceeding. Be sure to read this document carefully before attempting to install or operate the dryer. This document should be permanently available at the dryer installation site and be kept in an easily accessible place alongside the dryer.

1.4 warranty guidelines

All products are supplied with a 2 year manufacturer's warranty from the date of purchase, when purchased without an ES (Energy Saving) system and installed and maintained in accordance with the manufacturers guidelines. Only genuine service parts should be used and no modifications made.

When purchased with an ES (Energy Saving) system and installed and maintained in accordance with the manufacturers guiddlines the product will be supplied with an extended 5 year valve warranty.

1.5 packaging

All products are securely packaged in a specifically designed packing box. The dryer will be held in a horizontal position utilising a bespoke moulded packaging system.

1.6 damage to packaging

Check immediately to establish whether damage has occurred to the external packaging and if the damage extends to the product inside. If there is damage to a product, contact the relevant supplier immediately.



In no circumstances must a damaged product be used in operation. Using damaged products can lead to irreparable functional faults or cause serious physical harm.



The support packing box permits limited longitudinal stacking; however the central section of the packing box should not be considered load bearing.





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1.7 general safety

No modifications must be made to the product. Any modifications may reduce the operational safety of the product and invalidate the manufacturer's warranty. This could potentially result in damage to the product and serious personal injury.



For your own safety, when carrying out work on this product, all relevant national safety regulations must be complied with relating to pressurized and electrical systems.

1.8 intended use of the product

The dryer is exclusively intended for the treatment of compressed air, which is free from bulk water, oil and solid matter constituents.

The product should be located within a building and protected from extreme conditions and weather. The dryer must be operated only in accordance with the data on the rating plate. Any operations that do not comply with those stated on the product rating label will render the warranty void.



This product is only designed to operate at pressures stated in the technical specification. Do not exceed the maximum working pressure.



IMPORTANT: It is essential that the system into which the dryer is installed is fitted with a pressure limiting/relief device. This device should be between the compressor and the dryer. The device must be set to prevent the maximum working pressure from being exceeded.

1.9 personnel

Only authorized, competent and trained personnel are permitted to work on this product. This user guide is intended solely for such personnel and is to be used only as a reference; it should not be used to replace conventional training.

1.10 safe handling

Please ensure the relevant safe engineering practices and handling procedures are employed when handling, installing and operating this product. Ensure that the equipment is depressurized and electrically isolated prior to carrying out any of the scheduled maintenance instructions specified within this user guide.



In no circumstances must a damaged product be used in operation. Using damaged products can lead to irreparable functional faults or cause serious physical harm.



A suitable lifting aid must be used to minimize the risk of physical injury or damage to the product.

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1.11 technical description

The compressed air dryer uses the pressure swing adsorption principle of drying compressed air, utilizing two identical columns each containing a hygroscopic desiccant bed.

- Inlet filtration removes water, oil aerosols and particles (Inlet filtration supplied separately).
- Wet air enters the dryer through the inlet valve and is directed into one of the columns.
- Each column contains a densely filled desiccant cartridge.
- Air then passes through the desiccant cartridge where any remaining moisture is adsorbed.
- Simultaneously, a small amount of dry filtered air is counter flowed through the other desiccant cartridge and exhausted to atmosphere, removing the moisture and regenerating the desiccant bed.
- The dryer controller periodically switches columns after top end repressurization; ensuring a continuous supply of dry air at constant pressure. The dryer can also be controlled using a Zero Volt signal from the compressor. This energy saving feature senses when the compressor is switched off and stops the dryer operation until the compressor restarts.
- The dry air passes out through the final particulate filter (<1micron/ISO8573.1 Class 2).

1.12 product contents

when ordering a series 1 desiccant air dryer you will receive the following;

- 1 x dryer box
- 1 x series 1 compressed air dryer
- 1 x user guide
- 1x declaration of conformity

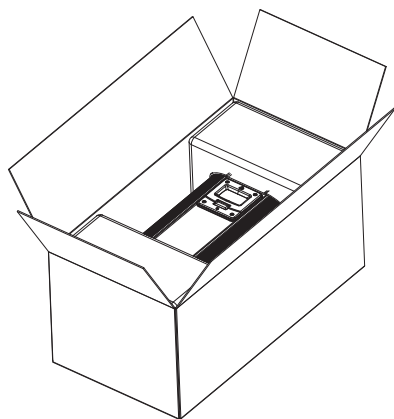


Figure 1



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2.1 technical specification

specifications	standard	optional
maximum water content (ISO class) (4)	class 2 -40°C (-40°F) pdp	class 1: -70°C (-94°F) pdp
minimum operating pressure	4 barg (58 psig)	-
maximum operating pressure	16 barg (232 psig)	-
recommended operating temp range	1.5 to 35°C (34 to 95°F)	-
design operating temperature range	1.5 to 50°C (34 to 122°F)	-
power supply requirements	100 to 240V AC @ 50 or 60 Hz	24V DC



All dryers should be preceded by a coalescing filter regardless of oil or oil free applications, a 0.01mg/m1 grade coalescing filter must be installed on the inlet to the dryer.

2.2 flow rates

model	inlet flow rate		connection	
	Nm³/hr	scfm	inlet	outlet
NAD-000	5.1	3	8 mm PTC	
NAD-001	8.5	5		
NAD-002	17	10		
NAD-003	26	15		
NAD-005	41	24	12 mm PTC	

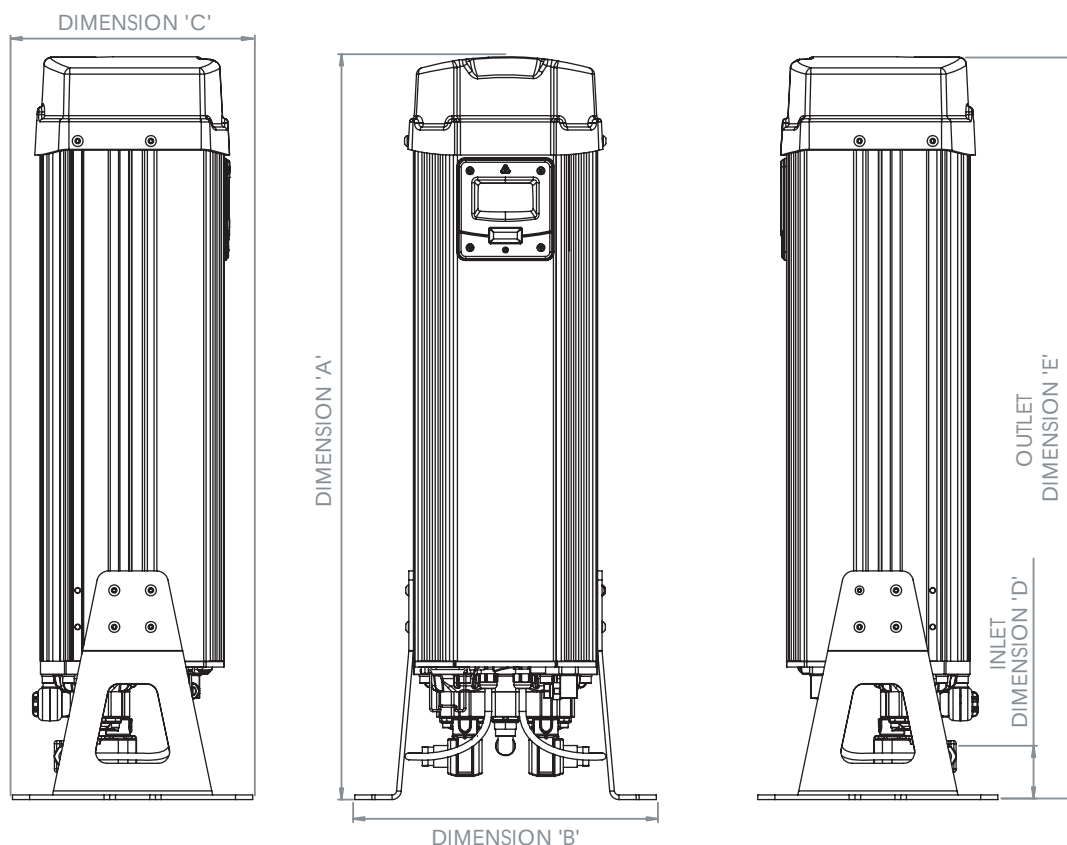
2.3 correction factors

inlet air pressure	barg	4	5	6	7	8	9	10	11	12	13	14	15	16
	psig	58	72	87	101	116	130	145	159	174	188	203	217	232
correction factor		0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.01	2.13

inlet air temperature	°C	25	30	35	40	45	50	pressure dew-point	°C	-20	-40	-70
	°F	77	86	95	104	113	122		°F	-4		-94
correction factor		1.00	1.00	1.00	0.97	0.88	0.73	correction factor		1.10	1.00	0.70



2.4 product dimensions



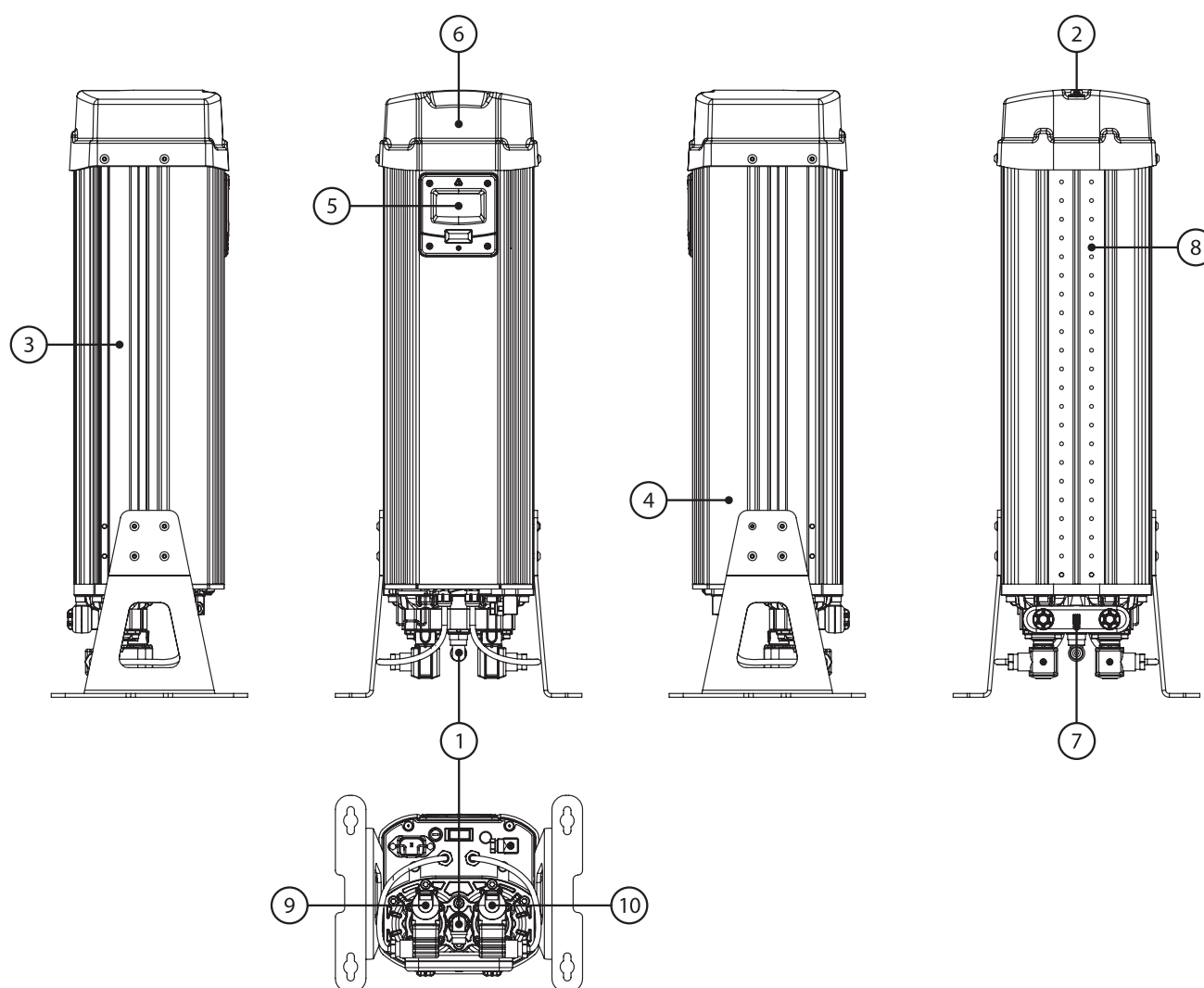
model	dimension										weight	
	A		B		C		D		E			
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	kg	lbs
NAD-000	432	17.0	229	9.0	254	10.0	47	1.8	432	17.0	9.0	20
NAD-001	432	17.0			254	10.0			432	17.0	9.0	20
NAD-002	635	25.0			254	10.0			635	25.0	13.5	30
NAD-003	889	35.0			330	13.0			889	35.0	18.5	41
NAD-005	1092	43.0			330	13.0			1092	43.0	25.5	56



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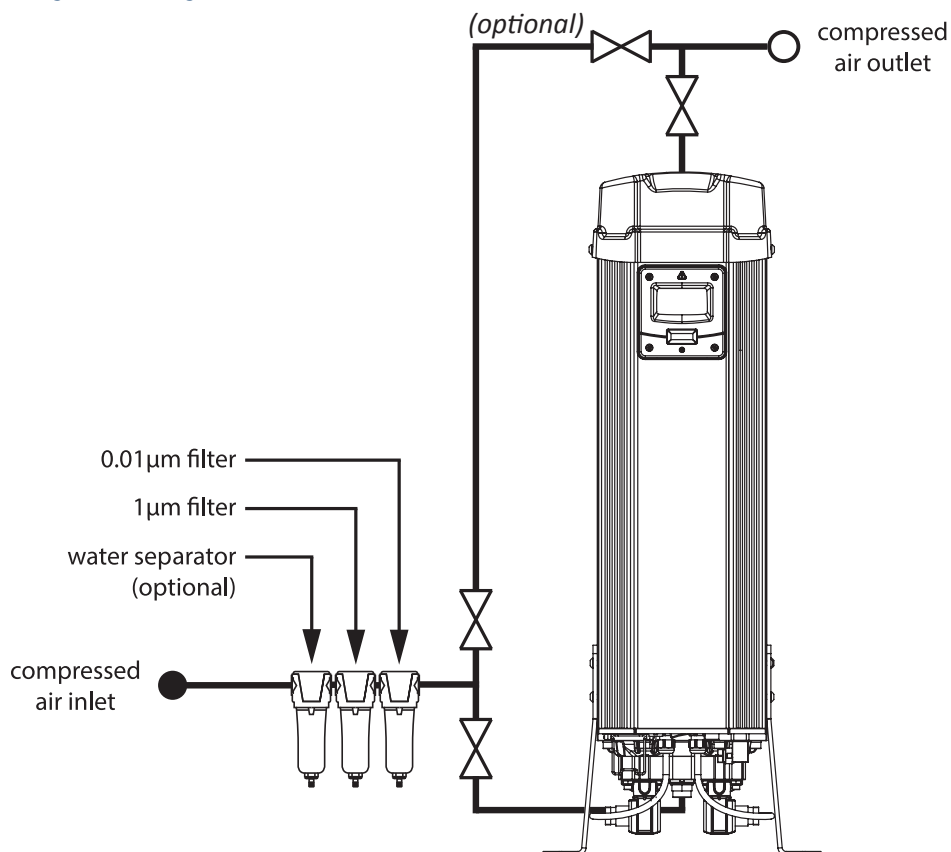
2.5 product overview



number	description	number	description
1	compressed air inlet	6	dryer top cover
2	compressed air outlet	7	exhaust box
3	dryer column	8	exhaust silencer strip
4	dryer shroud	9	exhaust valve 'A'
5	dryer control panel display	10	exhaust valve 'B'



2.6 typical system layout



IMPORTANT: It is essential that the system into which the dryer is installed is fitted with a pressure limiting/relief device. This device should be installed between the compressor and the dryer.

2.7 site location

When selecting an installation site for the dryer, ensure the following conditions are met:

- Installation site should be located indoors on a flat surface protected from the weather and other harmful conditions.
- The ambient temperature must not drop below 1.5°C (34.7°F) or exceed 50°C (122°F).
- The installation site should be level and able to support the weight of the product.
- Ensure sufficient space around the product, to allow access for operation and maintenance.
- Take into account the noise generated by the dryer exhausting while in use when considering location.



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2.8 wall mounting

All D1 desiccant air dryers can be configured so they may be wall mounted.

- Locate and remove the four M5 leg mounting screws using the allen key provided.
- Remove the leg and rotate 90°.
- Align the leg and insert the four M5 leg mounting screws and tighten.
- Align the additional wall mounting brackets with the four mounting holes located near the top of the dryer (see figure 2).

Only Applicable to NAD-003 & 005

- Insert the four M5 mounting screws and tighten using the allen key provided.
- Only Applicable to NAD-003 & 005*

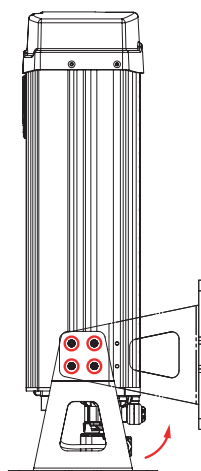


Figure 1

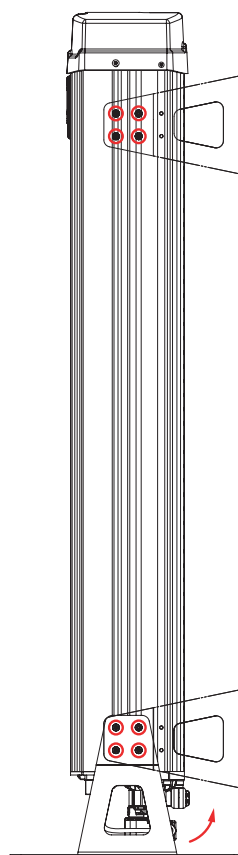


Figure 2



All NAD-000, 001 & 002 dryers can use the standard leg supplied with the product. These can be configured to allow for wall mounting. All NAD-003 & 005 dryers are recommended to have the additional wall mounting kit (sold separately) fitted due to the size and weight of the dryer.



2.9 remote start/stop control

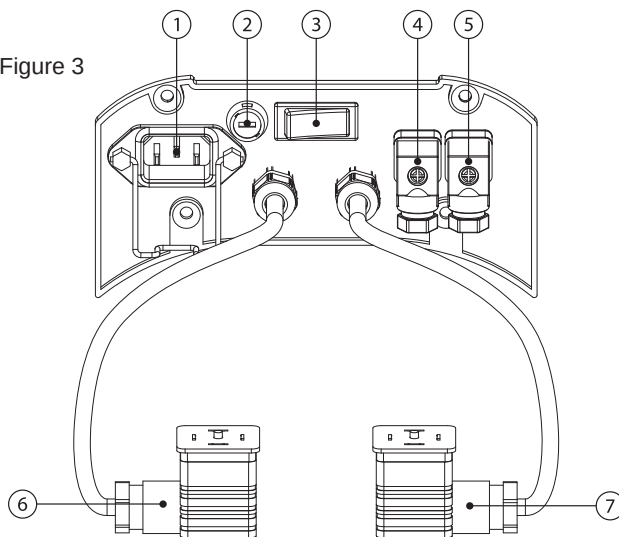
To gain access to the remote start/stop feature:

- Locate electrical connector 5 (see figure 3). Remove the screw from electrical connector.
- Remove the electrical connectors cover.
- Locate and remove the link between pins 1 and 4.
- A zero volt switching signal from the remote control needs to be connected between pins 1 and 4.
- When the connection is made, the dryer will operate as normal. If the connection is broken, i.e. the dryer has been remotely switched off, the dryer will stop cycling and go into standby mode, displaying "REMOTE STOP ACTIVE".
- Re-attach the electrical connectors cover and screw back onto the control plate.
- Using remote stop / start ensures the correct shut-down sequence is implemented.



Under no circumstances should an external voltage or current be applied to any of these wires, as damage to the control system will occur, negating the warranty.

Figure 3



No.	description
1	IEC mains inlet connection
2	Fuse Holder (1.6A)
3	Dryer On/Off Switch
4	Remote Start & Alarms Feature
5	Remote Stop (Remote Override)
6	Exhaust Valve 'A' connector
7	Exhaust Valve 'B' connector



IMPORTANT: Ensure the mains is isolated/switched off prior to the service of the product. Under no circumstances should the controller be used without being fitted to the product. This product should be connected to a grounded, metallic, permanent wiring system or an equipment-grounding terminal or lead.



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2.10 remote stop control

To gain access to the remote stop feature:

- Locate electrical connector 4 (see figure 3). Remove the screw from electrical connector.
- Remove the electrical connectors cover.
- Using the connections available create a link between pins 1 and 4;
Pin 1: 24V DC + (Positive) Output
Pin 2: N/A
Pin 3: N/A
Pin 4: Remote Stop Input
- When the connection is made, i.e. the dryer has been remotely switched off, the dryer will stop cycling and go into standby mode, displaying “REMOTE STOP ACTIVE”. If the connection is broken the dryer will operate as normal.
- Re-attach the electrical connectors cover and screw back onto the control plate.
- Using remote stop ensures the correct shut-down sequence is implemented.

2





2.11 dryer operation



Do not allow the dryer to flow air unless switched on and cycling. Resulting effect could be desiccant contamination; requiring replacement of desiccant cartridges.

- Ensure all pipe work is connected as per section 8 and the dryer is securely hardwired into the electrical supply.
- Ensure the inlet operating pressure parameters are between 4 and 16barg (58 and 232 psig).
- Ensure the inlet air temperature is between 2°C and 50°C (35°F and 122°F).
- Turn on the power to the dryer, the dryer will display it's status.
- Slowly open the inlet valve and allow the dryer to pressurize.
- Check for leaks and rectify if any are found.
- Allow the dryer to cycle at least 2 times before slowly opening the outlet valve.
- In case of using the Remote Start/Stop function, ensure external voltage is active.

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2.12 control panel displays

1	Power-up Display (only visable on power start-up for 10 seconds)	(CS) STARTING 99-100-0200-M04 Total Hours: 00000 x10,000: 00000 ⏮⏭
2	Normal Operation Display	Column A - ONLINE Column B - PURGE Hours Run: 00000 ⏮⏭
3	Service Re-set Display	Column A - ONLINE Column B - READY SERVICE RE-SET ⏮⏭
4	Normal Operation Display (ES Models)	Column A - ONLINE Column B - PURGE Hours Run: 00000 -040 DEG C PDP ⏮⏭ Column A - ONLINE Column B - PURGE Hours Run: 00000 -040 DEG F PDP ⏮⏭



5	Energy Saving Mode Active Display	
	While energy saving mode is active the screen will display: - Column 'A' status and Column 'B' status, this will be shown as; • ONLINE; this column is flowing 'ENERGY SAVING MODE' - Hours the dryer has run between services/hours in ES mode - Constantly updated dew-point reading, this can be displayed in either degrees celcius or degrees fahrenheit.	<pre>Column A - ONLINE ENERGY SAVING MODE Hours In ES: 00000 -040 DEG C PDP</pre>
6	Dew-point Sensor Fault Display	
	If a fault occurs with the dew-point sensor or the connection to the dew-point sensor, the screen will display; - Column 'A' status and Column 'B' status - Hours the dryer has run between services/hours in ES mode 'DEWPT SENSOR FAULT'	<pre>Column A - ONLINE Column B - READY Hours Run: 00000 DEWPT SENSOR FAULT</pre>
7	Dew-point Alarm Display	
	If the dew-point sensor reading falls below the desired alarm limit the screen will display; - Column 'A' status and Column 'B' status - Hours the dryer has run between services/hours in ES mode 'DEWPOINT ALARM'	<pre>Column A - ONLINE Column B - READY Hours Run: 00000 DEWPOINT ALARM</pre>
8	Energy Savings Adjustment Display	
	When adjusting the ES set-point the screen will display; 'Upper Limit' this is the point which the dryer de-activates ES mode. 'Lower Limit' this is the point which the dryer activates ES mode. 'Alarm Limit' this is the point which the dryer will activate the dew-point alarm and remote alarms.	<pre>-ES ADJUSTMENT- Upper Limit:-00040 Lower Limit:-00042 Alarm Limit:-00030</pre>





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2.13 monitoring dryer performance

- The dew-point is displayed on the display of the control panel. When the pressure dew-point displayed is better than -42°C (-44°F) PDP the dryer will switch into energy saving mode and stop cycling, resulting in zero purge, but no interruption in flow. When the dew-point degrades to -40°C (-40°F) the dryer will restart cycling ensuring the dew-point is maintained at or better than -40°C (-40°F).
- If, during normal operation, the dryer fails to achieve dew-point (falls below -30°C (-22°F)) the alarm output will be indicated on the front screen and the remote alarm output will activate.
- The set levels for the ES and dewpoint alarm are adjustable and can be accessed by carefully removing the front bezel to expose the PLC and adjustment buttons (see Figure1.)
- Hold buttons A & B down for 8 seconds to access the menu shown on page 17 display 8.
- Select the line you want to adjust by using the up down buttons, then press ok. The digits will flash and can be changed again using the up/down buttons.
- When set, press ok to store then move to the next line.
- The screen will exit after 60 seconds or when escape is pressed.

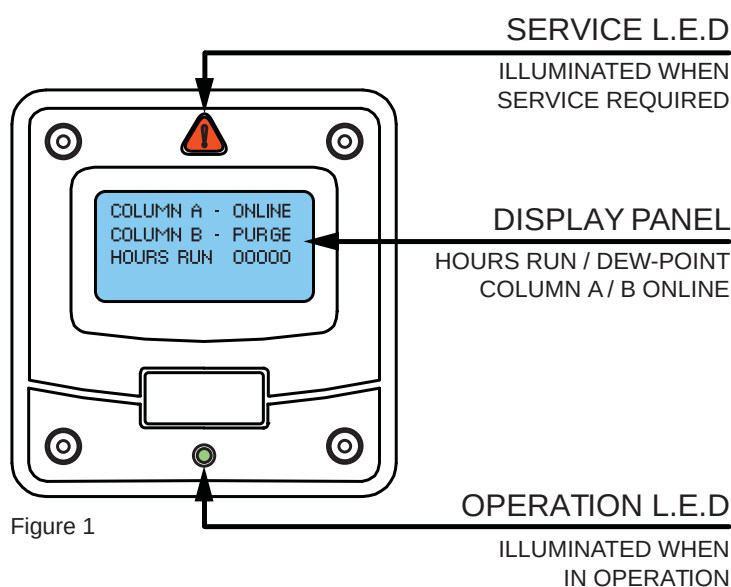


Figure 1



Beware this is only an example as the dew-point set-points and alarms are adjustable through the display panel.



2.14 shutdown procedure

- Close both the inlet and outlet valves ensure the dryer is completely isolated.



The dryer will still be pressurized! In order to depressurize the dryer; ensure the dryer is isolated from the compressed air supply source.

- Cycle the dryer at least twice to ensure the dryer exhausts and is completely depressurized.
- When fully depressurized the 'clicking' of the exhaust valves will be heard but no air exhausted.
- When the dryer is fully depressurized, isolate from the electrical supply.





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NAD-M

3.1 technical specification

specifications	standard	optional
maximum water content (ISO class) (4)	class 2 -40°C (-40°F) pdp	class 1: -70°C (-94°F) pdp
minimum operating pressure	4 barg (58 psig)	-
maximum operating pressure	16 barg (232 psig)	-
recommended operating temp range	1.5 to 35°C (35 to 95°F)	-
design operating temperature range	1.5 to 50°C (35 to 122°F)	-
power supply requirements	-	24V DC, 110V or 240V AC



All dryers should be preceded by a coalescing filter regardless of oil or oil free applications, a 0.01mg/m1 grade coalescing filter must be installed on the inlet to the dryer.

3.2 flow rates

model	inlet flow rate		connection	
	Nm³/hr	scfm	inlet	outlet
NAD-000-M	5.1	3	8 mm PTC	
NAD-001-M	8.5	5		
NAD-002-M	17	10		
NAD-003-M	26	15		
NAD-005-M	41	24	12 mm PTC	

3.3 correction factors

inlet air pressure	barg	4	5	6	7	8	9	10	11	12	13	14	15	16
	psig	58	72	87	101	116	130	145	159	174	188	203	217	232
correction factor		0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.01	2.13

inlet air temperature	°C	25	30	35	40	45	50	pressure dew-point	°C	-20	-40	-70
	°F	77	86	95	104	113	122		°F	-4		-94
correction factor		1.00	1.00	1.00	0.97	0.88	0.73	correction factor		1.10	1.00	0.70

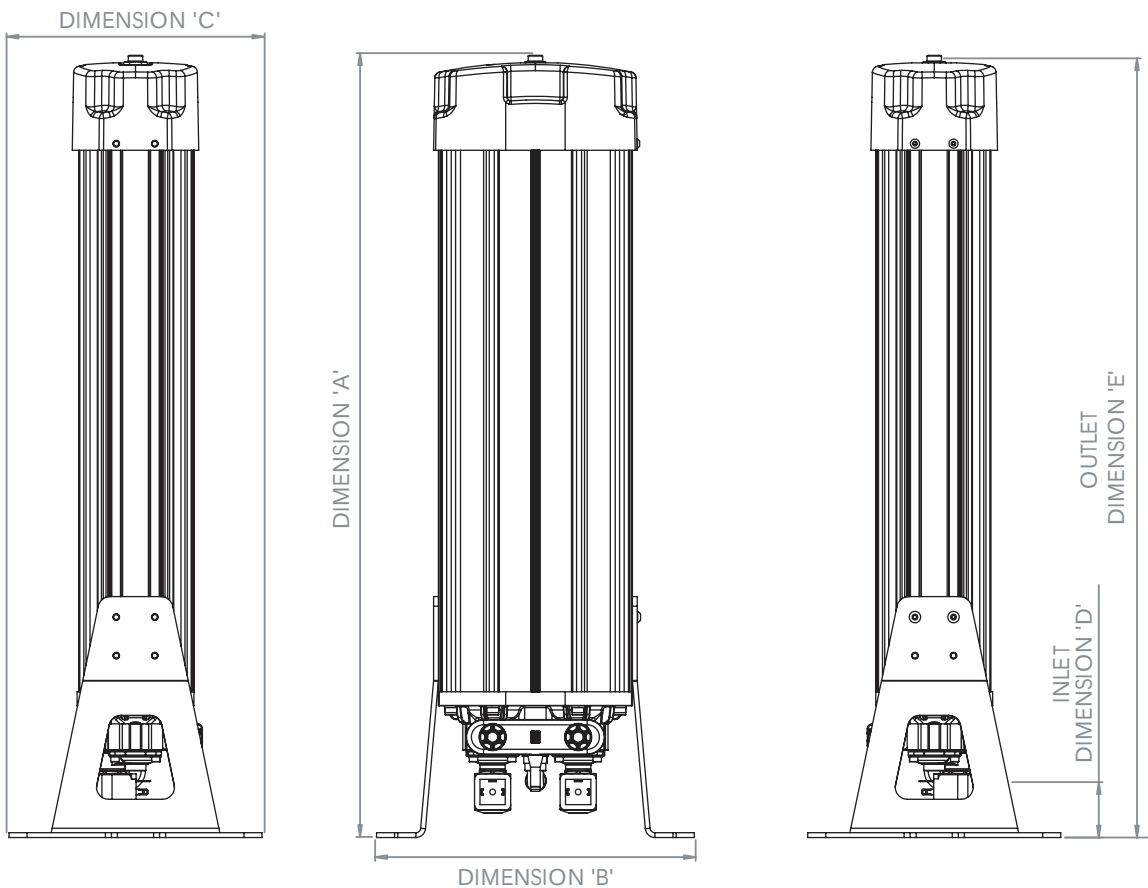
NAD-M

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3.4 product dimensions



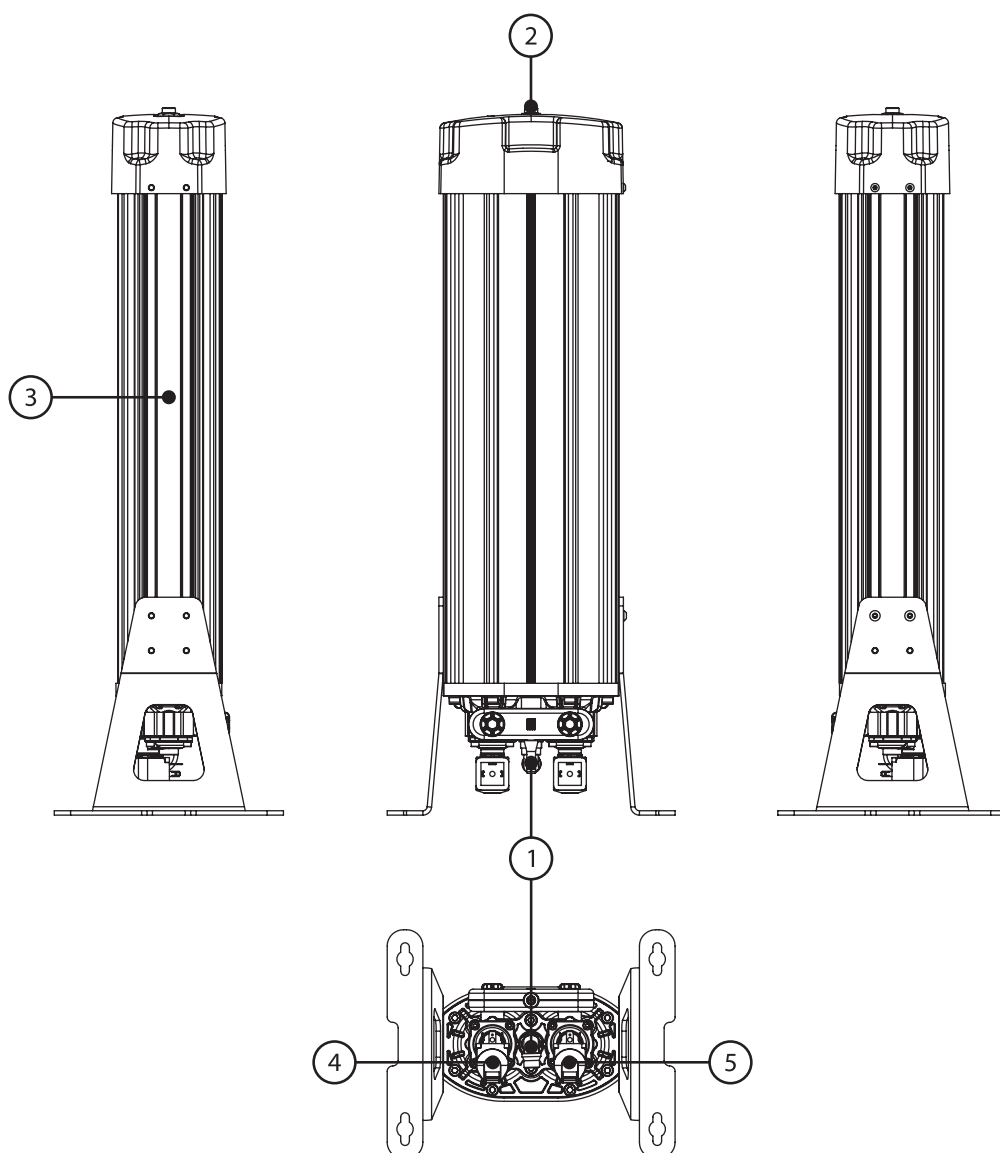
model	dimension										weight	
	A		B		C		D		E			
	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	kg	lbs
NAD-000-M	432	17.0	229	9.0	254	10.0	47	1.8	432	17.0	8.3	18
NAD-001-M	432	17.0			254	10.0			432	17.0	8.3	18
NAD-002-M	635	25.0			254	10.0			635	25.0	12.8	28
NAD-003-M	889	35.0			330	13.0			889	35.0	16.4	36
NAD-005-M	1092	43.0			330	13.0			1092	43.0	19.3	42



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NAD-M

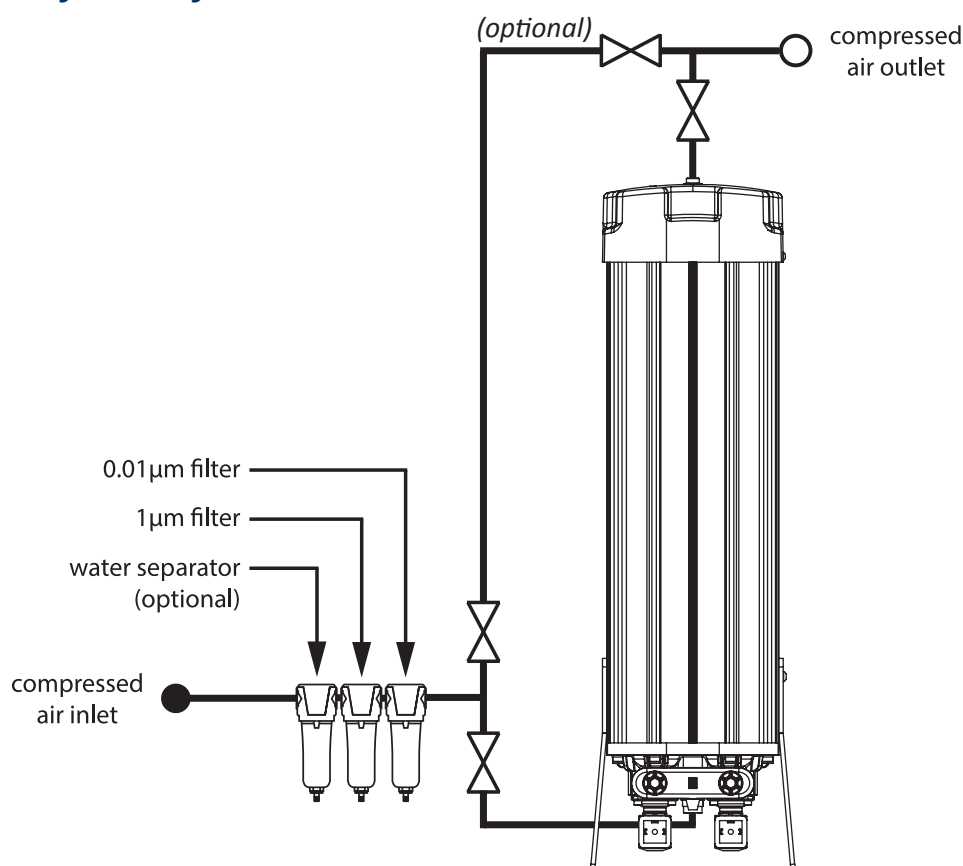
3.5 product overview



number	description	number	description
1	compressed air inlet	4	exhaust valve 'A'
2	compressed air outlet	5	exhaust valve 'B'
3	dryer column		



3.6 typical system layout



IMPORTANT: It is essential that the system into which the dryer module is installed is fitted with a pressure limiting/relief device. This device should be installed between the compressor and the dryer module.

3.7 site location

When selecting an installation site for the dryer module, ensure the following conditions are met:

- Installation site should be located indoors on a flat surface protected from the weather and other harmful conditions.
- The ambient temperature must not drop below 1.5°C (34.7°F) or exceed 50°C (122°F).
- The installation site should be level and able to support the weight of the product.
- Ensure sufficient space around the product, to allow access for operation and maintenance.
- Take into account the noise generated by the dryer module exhausting while in use when considering location.



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4.1 maintenance



Maintenance operations should only be carried out by authorized, suitably trained personnel.

- Maintenance operation should only be conducted when the system has been shut down and fully depressurized.
- All connections must be isolated and removed with care, paying particular attention to the areas that become pressurized.
- Do not modify or adjust the control settings.
- Only certified and approved replacement parts should be used.
- Always check all connections for leakage and secure seating.
- Ensure all loose parts are removed or secured to the dryer before operation.

4.2 cleaning

Clean the equipment with a damp cloth only and avoid excessive moisture around any electrical connections. If required a mild detergent may be used, however do not use abrasives or solvents as these may cause damage.

4.3 daily checks

- Check the dryers for any external damage.
(*assess and eliminate any defects found*)
- If the red service light appears, the dryer must be serviced to ensure the best air quality possible.
(*contact the service provider and request a service kit for the product, applicable to NAD range only*)
- Remove any loose dust or dirt from the dryer, clean all surfaces that appear to have attracted unwanted contaminants.
- Check the dew-point sensor display (if option if fitted). If the dew-point is not maintained at $<-30^{\circ}\text{C}$ ($<-22^{\circ}\text{F}$) the reading on the display will alternate with 'DEWPOINT ALARM' every 5 seconds. The no-volt alarm will also activate.
(*contact the service provider and request a service kit for the product, applicable to NAD range only*)
- Always check all connections for leakage and secure seating.
- Ensure all loose parts are removed or secured to the dryer before operation.

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4.4 servicing guidelines

- Maintenance operation should only be conducted when the system has been shut down and fully depressurized.
- Isolate the dryer from the compressed air and electrical supply ensuring the system is in a safe condition for maintenance to be carried out on.
- All connections must be removed with care, paying particular attention to the areas that become pressurized.
- All gasket seals removed during maintenance operations must be replaced with new gaskets.
- Only certified and approved replacement parts should be used.
- Do not modify or adjust the control settings.
- Always check all connections and sealing faces for cleanliness and secure seating prior to assembly.
- Ensure all components are re-fitted to the product before operation.
- Always check all connection and sealing faces for any leakage, if any found resolve and check again.
- Ensure the dryer is left operating in a safe working condition after completion of maintenance.





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4.5 service schedule and breakdown

service	year 1 (12 months)	year 2 (24 months)	year 3 (36 months)	year 4 (48 months)	year 5 (60 months)	year 6 (72 months)	year 7 (84 months)	year 8 (96 months)
A		✓		✓		✓		✓
B		✓		✓		✓		✓
C		✓		✓		✓		✓
D				✓				✓
E (ES MODELS ONLY)	✓	✓	✓	✓	✓	✓	✓	✓



When contacting your service provider be sure to provide the part number and serial number of your dryer, this can be found on the rating plate located top right hand side of the dryer.

- Service A** - Every 2 year (24 months)
 Replace desiccant cartridges
 Replace top manifold gasket seal
Applicable to all models
- Service B** - Every 2 year (24 months)
 Replace internal inlet & outlet ball valve & seals
Applicable to all models
- Service C** - Every 2 year (24 months)
 Replace exhaust silencer strip
Applicable to NAD models only
- Service D** - Every 4 year (48 months)
 Replace exhaust valves
Applicable to all models
- Service E** - Every 1 year (12 months)
 Calibrate dew-point sensor
Applicable to ES models only

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4.6 service kits and spares

model	service A		service B	service C	service D	service E	
	standard -40°C (-40°F)	low dew-point -70°C (-94°F)				standard -40°C (-40°F)	low dew-point -70°C (-94°F)
NAD-000	NDK-010	NDK-010-LDP		ESK-010			
NAD-001	NDK-020	NDK-020-LDP		ESK-020			
NAD-002	NDK-030	NDK-030-LDP	RBK-050	ESK-030	NVK-050	NSK-130	NSK-130-LDP
NAD-003	NDK-040	NDK-040-LDP		ESK-040			
NAD-005	NDK-050	NDK-050-LDP		ESK-050			

kit number	description		kit contents
ESK-010	Replacement exhaust silencer/muffler	trip for NAD-000	
ESK-020	Replacement exhaust silencer/muffler	trip for NAD-001	
ESK-030	Replacement exhaust silencer/muffler	trip for NAD-002	(x1) Exhaust Silencer/Muffler Str
ESK-040	Replacement exhaust silencer/muffler	trip for NAD-003	
ESK-050	Replacement exhaust silencer/muffler	trip for NAD-005	
NDK-010	Replacement desiccant cartridges for NAD-000/NAD-000-M		
NDK-010-LDP	Replacement desiccant cartridges for NAD-000/NAD-000-M LDP		
NDK-020	Replacement desiccant cartridges for NAD-001/NAD-001-M		
NDK-020-LDP	Replacement desiccant cartridges for NAD-001/NAD-001-M LDP		
NDK-030	Replacement desiccant cartridges for NAD-002/NAD-002-M		(x2) Desiccant Cartridge (x1) Gasket Seal
NDK-030-LDP	Replacement desiccant cartridges for NAD-002/NAD-002-M LDP		
NDK-040	Replacement desiccant cartridges for NAD-003/NAD-003-M		
NDK-040-LDP	Replacement desiccant cartridges for NAD-003/NAD-003-M LDP		
NDK-050	Replacement desiccant cartridges for NAD-005/NAD-005-M		
NDK-050-LDP	Replacement desiccant cartridges for NAD-005/NAD-005-M LDP		
RBK-050	Replacement internal ball valve & seals		(x2) Ball Valves (2x) Manifold Sealing Kits



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kit number		description		kit contents	
NVK-050		Replacement exhaust valves		(x2) Exhaust Valves	
RCK-024				(x2) 24V DC Coils	
RCK-110		Replacement solenoid coils		(x2) 110V AC Coils	
RCK-240				(x2) 240V AC Coils	
NSK-130	Dew-point sensor calibration for standard -40°C (-40°F) sensors			(x1) Calibration	
NSK-130-LDP	Dew-point sensor calibration for standard -70°C (-94°F) sensors				
ESU-050		Energy Saving Upgrade Kit		(x1) Dew-point Sensor (x1) Sensor Lead	

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4.7 service record

part number			serial number		
installed by			installation date		
service interval	hours run (if applicable)	date	served by		comments / observations
			print	sign	
year 1					
year 2					
year 3					
year 4					
year 5					
year 6					
year 7					
year 8					
year 9					
year 10					
year 11					
year 12					

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5.1 trouble shooting

problem	problem caused	solution
Poor dew-point performance	Insufficient inlet pressure	Inlet pressure should be a minimum of 4barg (58psig) if not then adjust inlet pressure settings.
	Electrical fault	Ensure the power is on and the dryer front panel is illuminated; check the dryer is cycling correctly
	Moist or contaminated desiccant	Eliminate the cause of contamination, replace desiccant cartridges (do not re-use).
	Excessive inlet air temperature	Check against the technical specification
	Insufficient purge air	Purge incorrectly adjusted, consult the service personnel to adjust settings (factory pre-set).
	Exhaust silencer blocked	Replace exhaust silencer/muffler element.
Failure of dryer to cycle	controller not functioning correctly	ensure the controller is powered up, check the on screen column status to ensure it is powering the solenoid valves during operation
	insufficient inlet pressure	Inlet pressure should be a minimum of 4barg (58psig) if not then adjust inlet pressure settings.
	controller not illuminated	Check power supply to the dryer, check fuse and replace.
	failure to de-pressurize when cycling	Solenoid valve not functioning correctly; if there is power to the coil, replace valve.
	outlet flow stops	Check inlet air supply
	failure to initialize dryer	Switch off and restart dryer. Ensure dryer is pressurized before powering up to allow the dryer to initialize before operation.
	erratic air flow from exhaust	Faulty or damaged valves, carry out service

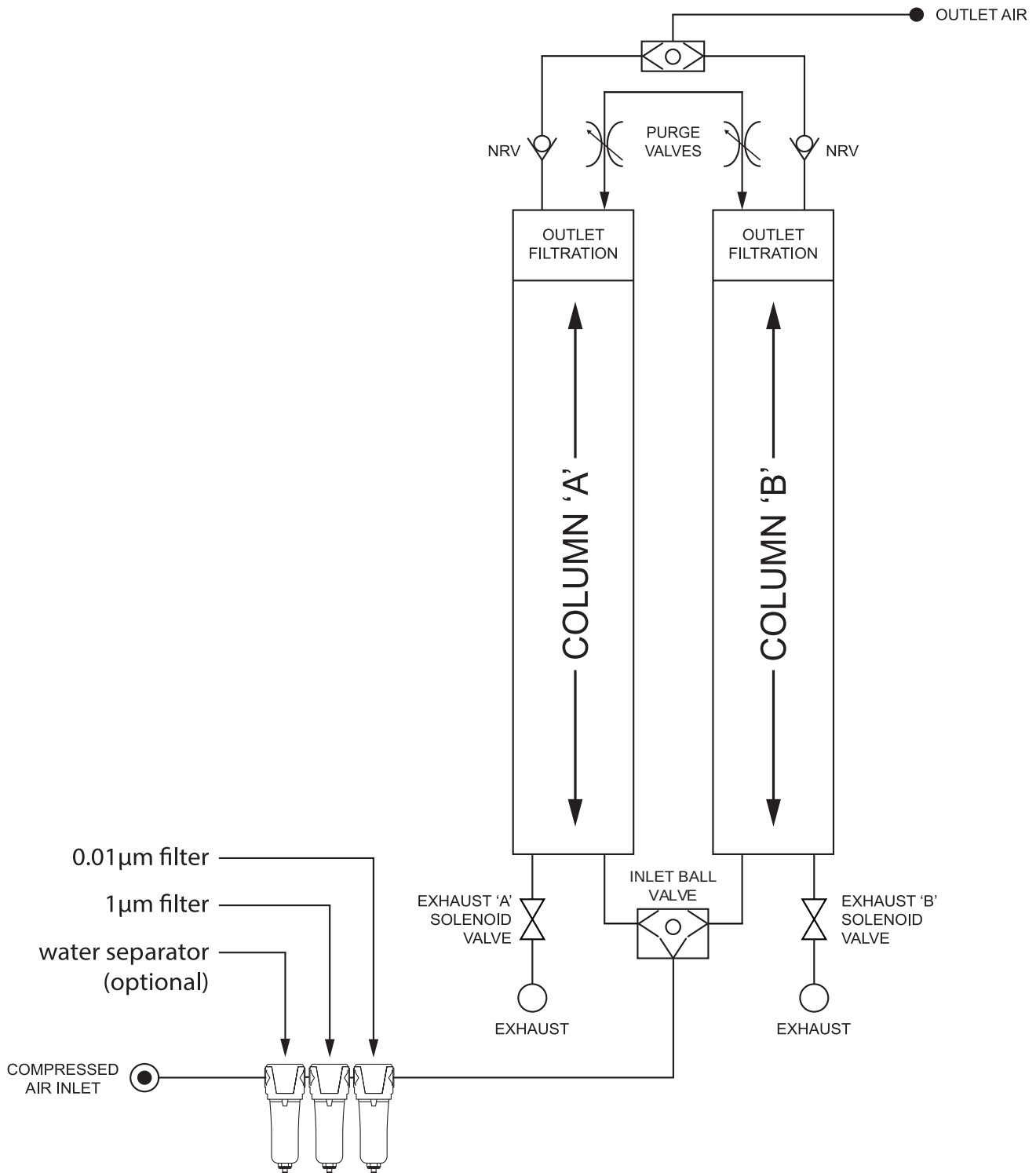


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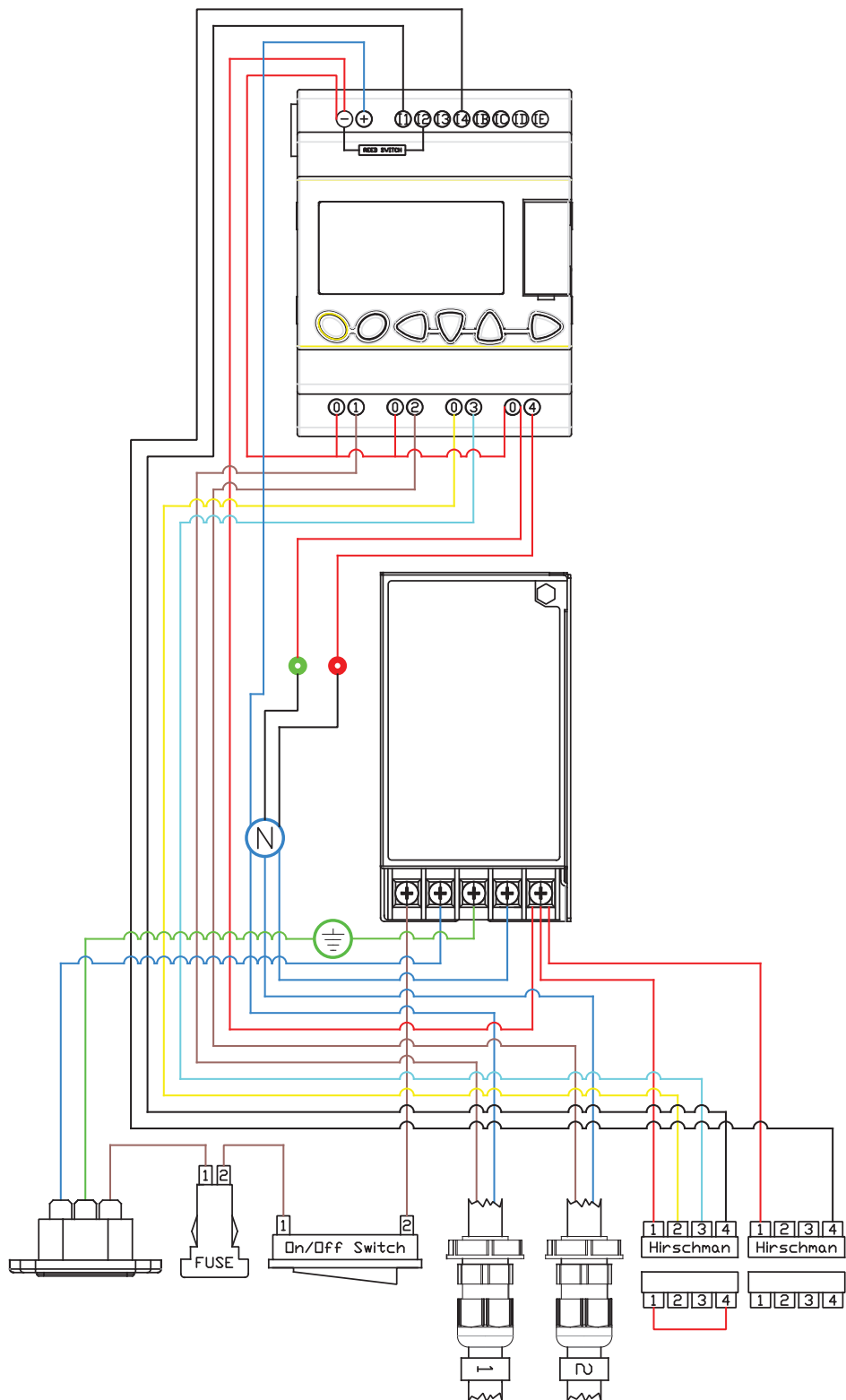
5.2 process and instrumentation diagram





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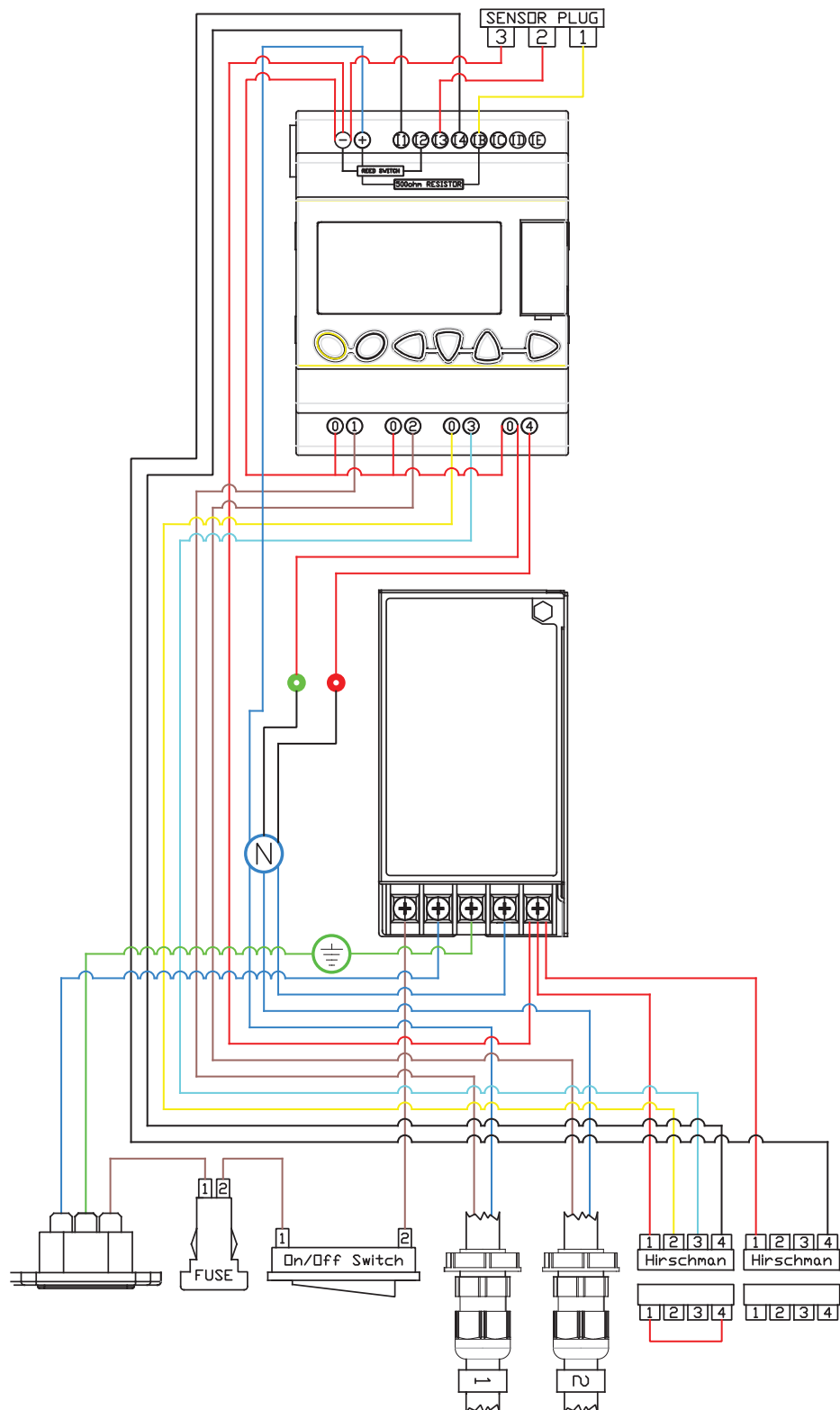
5.3 wiring diagram



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5.4 wiring diagram (ES Models)



notes

additional *DreaBesiPa* products



F-series industrial filters

D-series desiccant dryers



B-series breathing air purifiers

GEN₂-series nitrogen generators



ECO GEN₂-series nitrogen generators

V-series oil vapour removal systems



R-series refrigeration dryers



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