

Niltox

Breathing Air Purifier Range



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Breathing Air Requirements

The main standards affecting breathing air are BSEN529, EN12021 and COSHH.

The requirements for a breathing air system are shown in the table opposite and the requirements for the quality of the air are shown below.

Niltox purifiers ensure a simple, efficient and cost effective way to meet these requirements.

Maximum concentration of contaminants in breathable air. EN12021, COSHH

Carbon monoxide	<3ppm
Carbon dioxide	<500ppm
Oil mist	0.5 ,g/m ³
Pressure Dew Point	5°C below lowest ambient or -11°C
Oxygen	20-23%
Odour and taste	None

Transcription of extract from EN529-2005.

Table A.2 — Summary of main elements associated with a compressor system for producing breathable air

1	Atmospheric air	Typical composition of natural air is given in Table A.1 of EN 12021:1998.
2	Air intake filter	The intake should be located in fresh air, upwind and as far away as possible, both vertically and horizontally from sources of contamination. The filter is to remove coarse particles to protect the compressor.
3	Main compressor	With system controls and alarms or monitoring for pressure, temperature and oil level – with standby compressor when necessary.
4	Aftercooler	With condensate drain facility.
5	Separator	To remove large water and oil droplets – with condensate drain facility.
6	Air receiver	For pressure stabilisation and compressor load control – with condensate drain facility. Typical position in system. See also reserve air storage [13] below.
7	Coalescing filter	To remove small water droplets, oil mist and particles – with condensate drain facility. Elements become blocked and should be monitored for pressure drop.
8	Dryer stage	To remove water vapour to ensure the pressure dew point is below ambient temperature: a)Desiccant type with carbon pre-filter and outlet dust filter. Essential for sub-zero temperatures and/or –11 °C when ambient temperature is not known. Also for protection to following gas and catalyst stages. Fitted with minimum pressure valve when necessary. Self-reactivating or throw-away cartridges. Should be monitored for dryness. Carbon dioxide can also be removed by some types of desiccant dryer filled with molecular sieve. b)Refrigerant type with outlet coalescing filter/carbon filter – with condensate drain facility – for ambient temperatures above zero, heated factory spaces, and when gas filters and catalyst stages are not used.
9	Gas filter stage(s)	To remove carbon dioxide and other gaseous contaminants including odour and taste. Either throw-away elements or self-reactivating. Should be monitored for effectiveness.
10	Catalyst stage	To remove carbon monoxide and ozone. Either throw-away elements or self-reactivating. Should be monitored for effectiveness.
11	Particle filter stage	To remove dust particles generated by previous stages. Often forming an integral part of the gas filter and catalyst filter.
12	non-return valve	To prevent reserve air storage from leaking back through the compressor system.
13	Reserve air storage	To provide enough air for enough time for all users to escape to a place of safety in the event of compressor failure. This is not an EBF (Emergency Breathing Facility). No protection is provided if the hose breaks. Optional position. See air receiver [6] above.
14	Breathable air	Flow control units, monitoring facilities, couplings and distribution tubes.
NOTE 1 Components should be sized for maximum air flow for the total number of breathing apparatus connected to the system at one time.		
NOTE 2 Depending on the size of the system, items 7 to 11 can be large units at source or subdivided into smaller units and wall mounted at the take off point or portable to provide personal protection at the point of use.		

Niltox Breathing Air Purifiers

Niltox purifiers are a range of compressed air breathing purifiers designed to deliver compressed air to meet current British and European standards*.

Niltox purifiers adopt a unique design concept where all the purification stages are contained in sealed cartridges.

This enables all stages to be reactivated during the purge cycle and thus ensures that all stages remain fully efficient during the life of the cartridges.

All cartridges contain the colour change monitor.

Niltox purifiers are unique in their design and offer many benefits over competitors products.

Remove Carbon Monoxide and carbon Dioxide

Only a few breathing air systems on the market actually provide protection from these gases.

Colour Change Monitor

The purifiers incorporate a highly visible colour change monitor that gives a continuous indication of the units status.

Easily Serviced

One service interval with all materials contained in cartridges. No loose materials and no complicated maintenance schedules.

Reduced testing requirements

The colour change monitor will allow reduced air quality testing intervals.

* BSEN529 EN12021, COSHH

Niltox Unique Colour Change Monitor

BLUE IS NEW

Blue strip shows unit is working and providing breathing quality air.

Change line

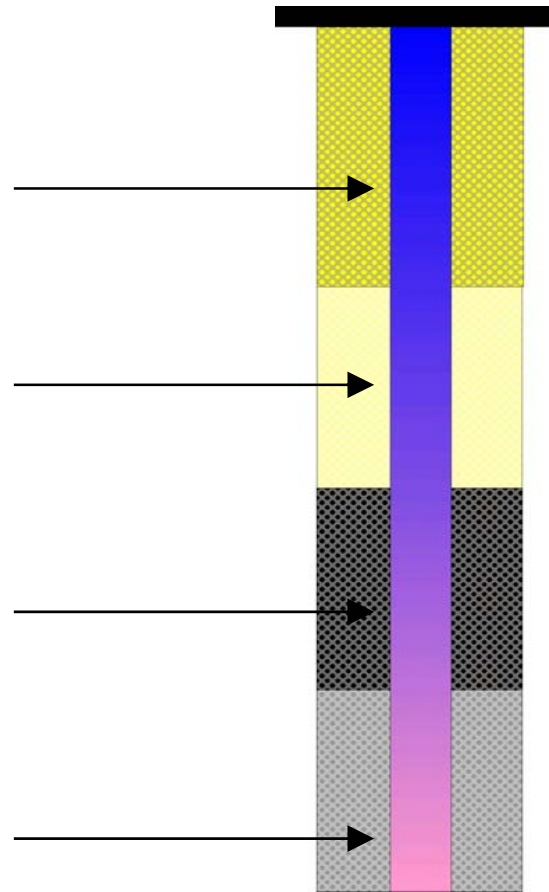
The cartridge is clearly marked to show when replacement is necessary

Normal operation

The cartridge has an area where the monitor is a mixture of pink and blue and shows normal operating.

PINK IS EXTINGUISHED

The monitor turns pink at the bottom and shows normal operation. If the pink reaches the maximum mark the cartridge should be replaced.



Every Niltox cartridge contains the unique colour change strip.

This strip is a positive indication that the purifier is working properly.

If the unit is used in a properly installed and maintained system then contamination risks have been controlled.

Under COSHH if the risk has been controlled than further monthly testing need not be carried out.

A test on the system should be carried out a least annually.

Niltox

Breathing Air Purifier Range

NILTOX PURIFIERS 6AR, 12AR and 18AR

This range of three purifiers are designed to be simple and low cost yet provide full protection.

The range provides air for 1, 2 or 3 users and utilises the unique Niltox colour change monitor.

Options include :- Fully pneumatic operation, low pressure alarm, outlet manifold a high efficiency pre filter and fully enclosed cabinet.

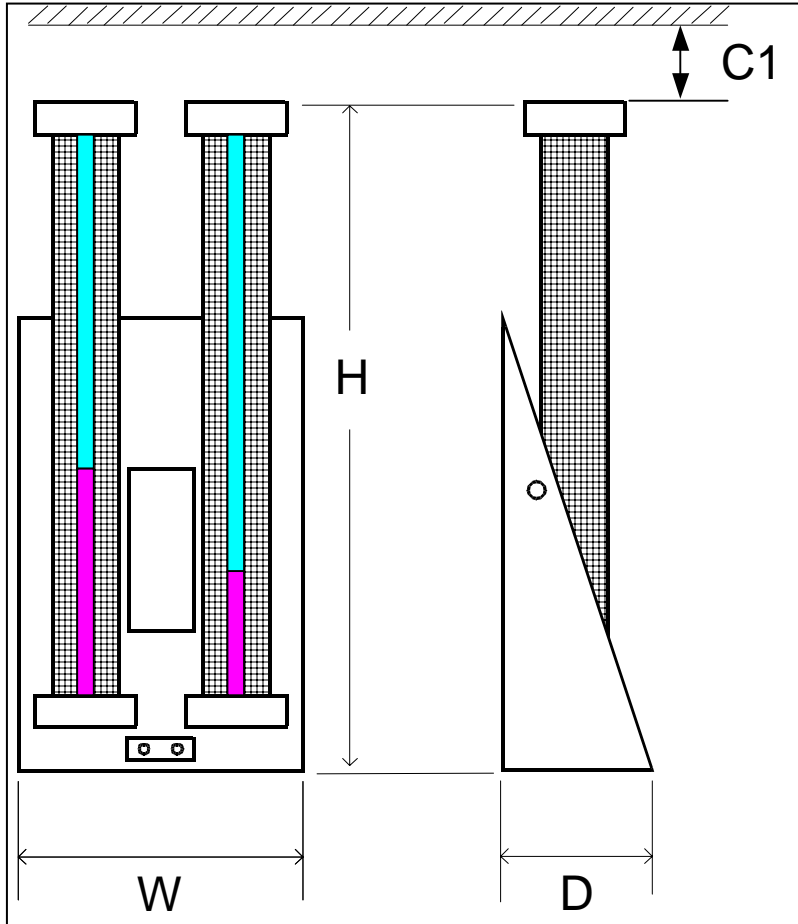


Removes Carbon Monoxide, Carbon Dioxide, water and oil vapour, smells, dirt and dust – and of course **risk** and **doubt**.

Easy maintenance – one service interval with easily replaced cartridges and no loose materials.



NILTOX PURIFIERS 6AR, 12AR and 18AR



	6AR	12AR	18AR
FLOW L/M	180	360	540
HEIGHT	500	740	970
WIDTH	400	400	400
DEPTH	240	240	240
PIPE SIZE B.S.P	1/2"	1/2"	1/2"
CLEARANCE	400	600	800
PV RATING	2@15	2@30	2@45
WEIGHT	13	17	20

Niltox

Breathing Air Purifier Range

Niltox Purifiers 24,30 and 36AR

This range of three purifiers are designed to be simple and low cost yet provide full protection.

The range provides air for 4, 5 or 6 users and utilises the unique Niltox **colour change monitor**.

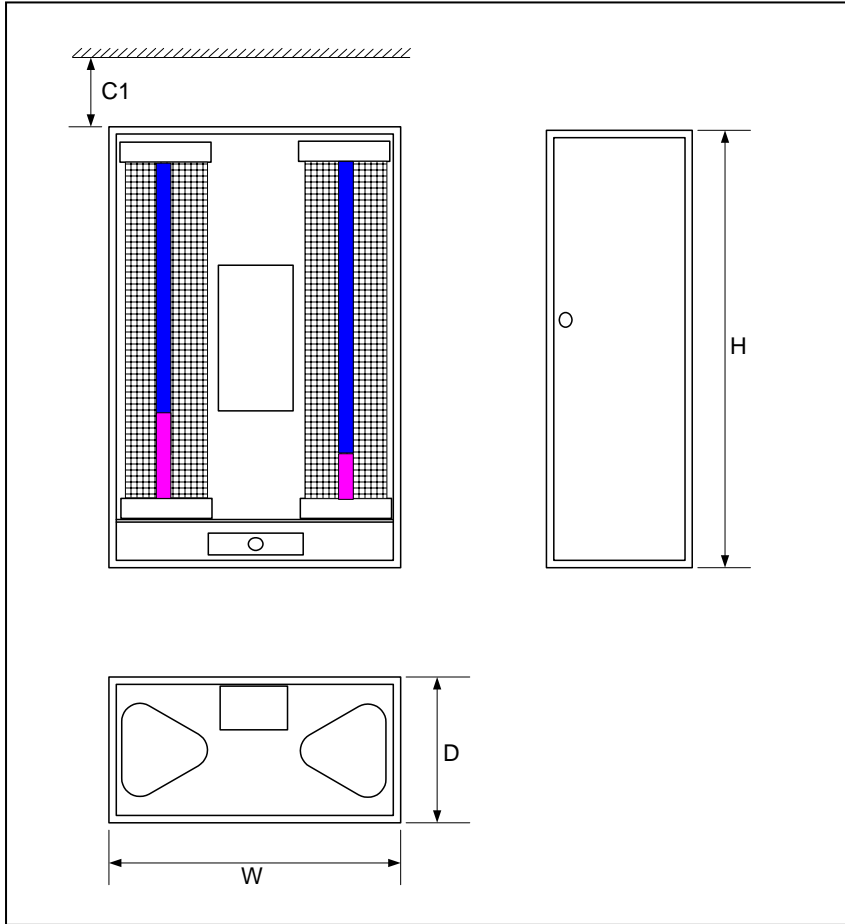
The units come in a cabinet and have a range of options including:- fully pneumatic operation, low pressure alarm and hours run meter.



Removes Carbon Monoxide, Carbon Dioxide, water and oil vapour, smells, dirt and dust – and of course **risk and doubt**.

Easy maintenance – one service interval with easily replaced cartridges and no loose materials.

Niltox Purifiers 24AR, 30AR and 36AR



	24AR	30AR	36AR
FLOW L/M	720	900	1080
HEIGHT	800	1040	1040
WIDTH	600	600	600
DEPTH	300	300	300
PIPE SIZE B.S.P	½"	½"	½"
CLEARANCE	415	595	595
PV RATING	63	80	95
WEIGHT			

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Breathing Air Purifier Range

Niltox Purifiers 18 to 150 HR

This range of six purifiers is designed for larger flow applications where single purifier at source is required.

The HR range units come complete with fully pneumatic operation, low pressure alarm and hours run meter.

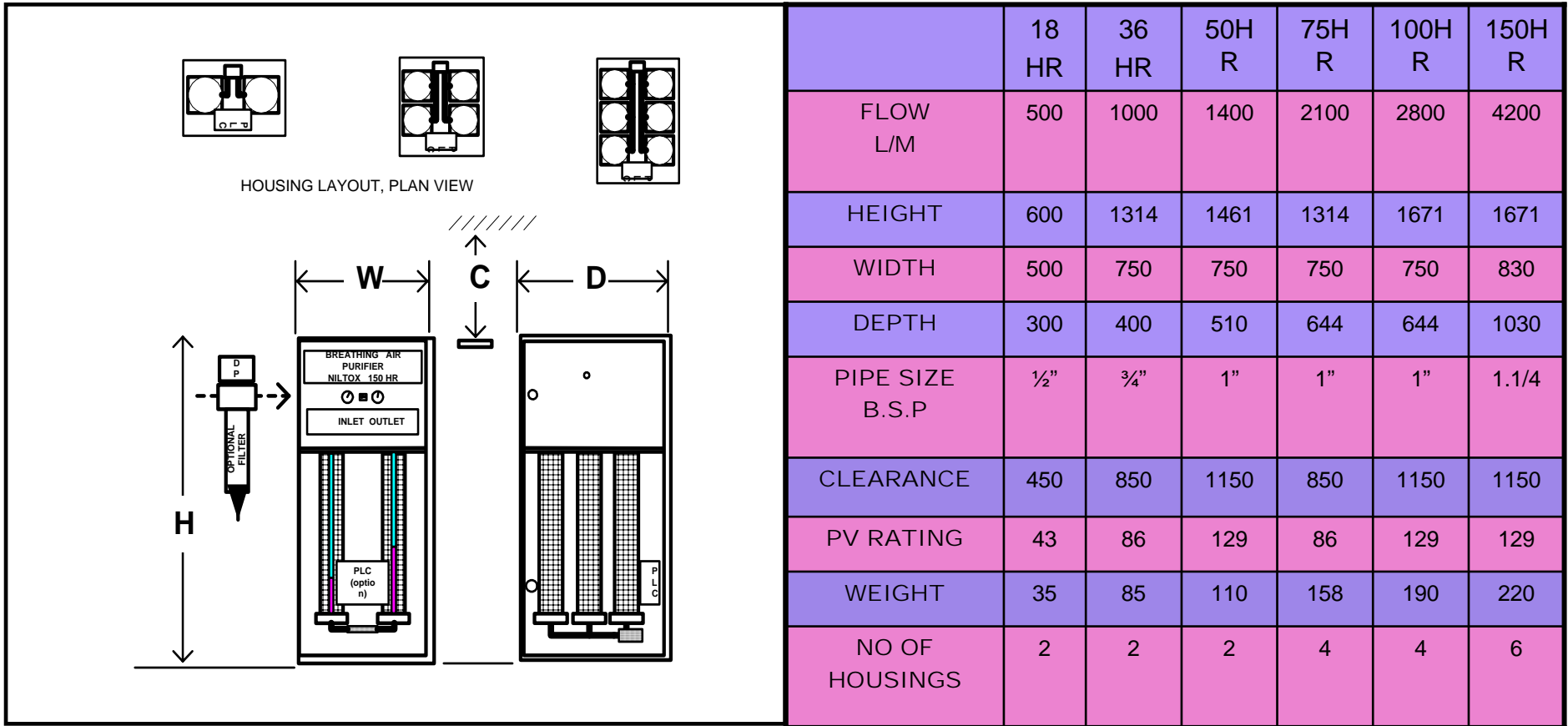
The range provides air for 3 to 23 users and utilises the unique Niltox **colour change monitor**.



Removes Carbon Monoxide, Carbon Dioxide, water and oil vapour, smells, dirt and dust – and of course **risk and doubt**.

Easy maintenance – one service interval with easily replaced cartridges and no loose materials.

Niltox Purifiers 18HR to 150 HR



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SPECIALS

Niltox Purifiers can also be designed to meet specific requirements.

Anything from stainless steel heavy duty models to large systems removing only specific contaminants.

The cartridge design allows the bed construction to be easily changed to allow a whole range of contaminants that have been identified in risk assessments to be removed.

Please contact Willpower Ltd for more details.

