



domnick hunter

FILTRATION - the clear liquid or gas obtained after filtration.  
verb (filtrated, filtrating) to filter to filter, filtration noun.  
ETYMOLOGY: 17c. from Latin filtrare to filter.

FILTRATION - PURIFICATION

PURIFICATION - 1. to make or become pure. 2. to cleanse  
something of contaminating or harmful substances. 3. to rid  
something of intrusive elements.

SEPARATION - the act of separating or  
the state of being separated.  
ETYMOLOGY: from Latin purificare, from purus pure.



## Food & Beverage Sterile Compressed Air

For the food and beverage  
industries worldwide

**ARA**<sup>®</sup>

PNEUMATIK

53-012 Wrocław tel. 71 364 72 82  
ul. Wyścigowa 38 fax 71 364 72 83

[www.arapneumatik.pl](http://www.arapneumatik.pl)



[www.domnickhunter.com](http://www.domnickhunter.com)

## Product Spoilage: Eliminate it from the food & beverage production process

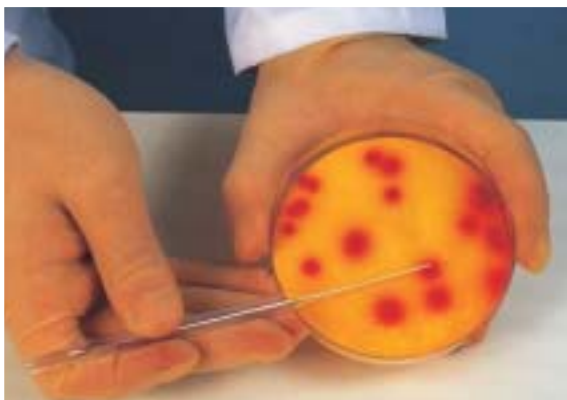
Guaranteed sterile compressed air is vital for many applications in food and beverage production. These include:

- Motive force applications
- Sparging
- Inlet air
- Blanketing of produce
- Venting
- Carbonation of liquids

Unless pre-filtered air is further treated with a sterile filter element that maintains absolute integrity over its entire life span, that air will not be sterile. The remaining micro-organisms will in normal conditions, multiply exponentially, but even a few will lead to diminished product quality, reduced shelf life and ultimately cause complete and costly batch spoilage.

## Features

- Supplied as a complete filter, no need to order filter housings and elements separately
- Low pressure drops for economic filtration
- Fast maintenance with click-lock positive element location
- Double 'O' ring seal on all elements giving absolute integrity
- Long element life, fully steam sterilisable
- Compact filter housing with exceptionally high flow rates
- Full range of inlet/outlet connections
- Validated by bacterial challenge



The problem: bacteria

## The Economic Solution

These costly problems can easily be avoided with this new range of air sterilisation filters developed to combine the simplicity of traditional steam sterilisable filtration and the latest technology employed in the high-flow BIO-X range of domnick hunter products.

Aimed specifically at applications within the dairy food and beverage sectors, the range provides a cost effective solution to air sterilisation problems.

Comprising a highly polished, crevice free, stainless steel filter housing and a pleated high flow BIO-X filter element rated at 0.01 micron, the complete filter guarantees the highest level of biological security whilst optimising flow rate and filter element life.

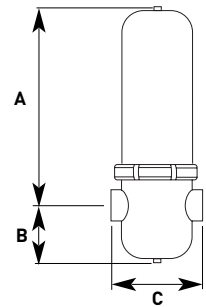


# Technical Specifications

<b>Filter Housing</b> <b>Maximum Operating Pressure:</b> 16 bar g (232 psi g) <b>Maximum Recommended Operating Temperature:</b> 200°C (392°F)		<b>Filter Element Materials of Construction</b> <b>Filter Media:</b> Pleated PTFE impregnated borosilicate microfibre (hydrophobic) <b>Outer Cage:</b> Heat stabilised polypropylene <b>Inner Core:</b> Heat stabilised polypropylene for 2.5" & 5" cartridges Stainless Steel Grade 316 L for 10", 20" and 30" cartridges <b>End Caps:</b> Heat stabilised polypropylene <b>Rating:</b> 0.01 micron <b>'O' Rings:</b> Silicone	
<b>Filter Element</b> <b>Maximum Continuous Operating Temperature:</b> 70°C (158°F) <b>Maximum Steam Sterilisation Temperature:</b> 142°C (288°F) <b>Steam Life:</b> 75 cycles @ 142°C (288°F)		<b>Filter Housing Materials of Construction</b> <b>Housing Material:</b> Stainless Steel Grade 304 <b>Surface Finish:</b> Internal: Electropolished Ra 0.8 External: Mechanical Polish (commercial bright) <b>Vent Drain:</b> ¼" BSPP female thread (supplied with plug) <b>Seal Material:</b> EPDM aseptic seal	
<b>Validation</b> Fully validated using the aerosol challenge test. A full validation guide is available upon request.			

Filter Type	***Connection Size	*Capacity @ 7 bar g (100 psi g) 20°C (68°F) initial Δp 100 mbar (1.4 psi)		**Dimensions mm (ins)			Element Code
		m³/hr	cfm	A	B	C	
VBA-2B-BE-HB	¼" BSPP	90	53	200 (7.9)	52 (2.05)	128 (5.0)	I ZCHB-BT/1
VBA-5B-BE-HB	¾" BSPP	110	64	200 (7.9)	52 (2.05)	140 (5.5)	I ZCHB-BT/1
VBA-7B-BE-HB	½" BSPP	150	88	200 (7.9)	52 (2.05)	153 (6.0)	I ZCHB-BT/1
VBA-9A-BE-HB	¾" BSPP	200	117	258 (10.2)	52 (2.05)	158 (6.2)	I ZCHB-AT/1
VBA-11A-BE-HB	1" BSPP	290	170	258 (10.2)	52 (2.05)	170 (6.7)	I ZCHB-AT/1
VBA-12K-BE-HB	1½" BSPP	380	222	355 (14.0)	98 (3.9)	240 (9.4)	I ZCHB-KC
VBA-13K-BE-HB	1½" BSPP	500	292	355 (14.0)	98 (3.9)	240 (9.4)	I ZCHB-KC
VBA-141-BE-HB	2" BSPP	780	456	515 (20.3)	98 (3.9)	254 (10.0)	I ZCHB-1C
VBA-142-BE-HB	2" BSPP	1150	672	764 (30.1)	98 (3.9)	254 (10.0)	I ZCHB-2C

## Selection

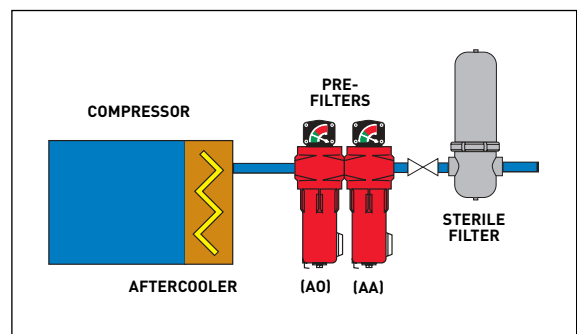


\*\*Dimensions are for filter housings with weld prepared connections.

\*\*\*For different connection types replace BE from the filter code; with a code from the following table:

Code	Inlet/Outlet Connections
NE	NPT Female
TE	Tri-Clamp
AE	Weld Prepared
FE	DIN2655 Flange
ME	Milk Pipe

## High-Efficiency Pre-Filtration



Example: VBA-2B-TE-HB = Filter with ¼" Tri-Clamp connections. domnick hunter OIL-Xplus high-efficiency Grade AO/AA filter(s) must be installed upstream of sterile air filters.

\*For flowrates at other pressures, apply the correction factor shown below:

Line Pressure	bar g	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	psi g	15	29	44	58	73	87	100	116	131	145	160	174	189	203	218	232
Correction Factor		0.4	0.5	0.65	0.75	0.85	0.95	1.0	1.15	1.25	1.4	1.5	1.6	1.75	1.9	2.0	2.15

**For increased reliability and energy efficiency, specify domnick hunter alternative elements:**

Ultrafilter Ltd	domnick hunter
SRF 02/10	MER 2/10
SRF 03/10	MER 3/10
SRF 04/20	MER 4/20
SRF 05/20	MER 5/20
SRF 05/25	MER 5/25
SRF 07/25	MER 7/25
SRF 07/30	MER 7/30
SRF 10/30	MER 10/30
SRF 15/30	MER 15/30
SRF 20/30	MER 20/30
SRF 30/30	MER 30/30
SRF 30/50	MER 30/50

**90's Series - 2 'O'Rings + Thread**

Ultrafilter Ltd	domnick hunter
SRF 3/1	ME 3/1
SRF 3/1.5	ME 3/1.5
SRF 4/1.5	ME 4/1.5
SRF 4/2.5	ME 4/2.5
SRF 5/2.5	ME 5/2.5
SRF 5/3	ME 5/3
SRF 10/3	ME 10/3
SRF 15/3	ME 15/3
SRF 20/3	ME 20/3
SRF 30/3	ME 30/3
SRF 30/5	ME 30/5

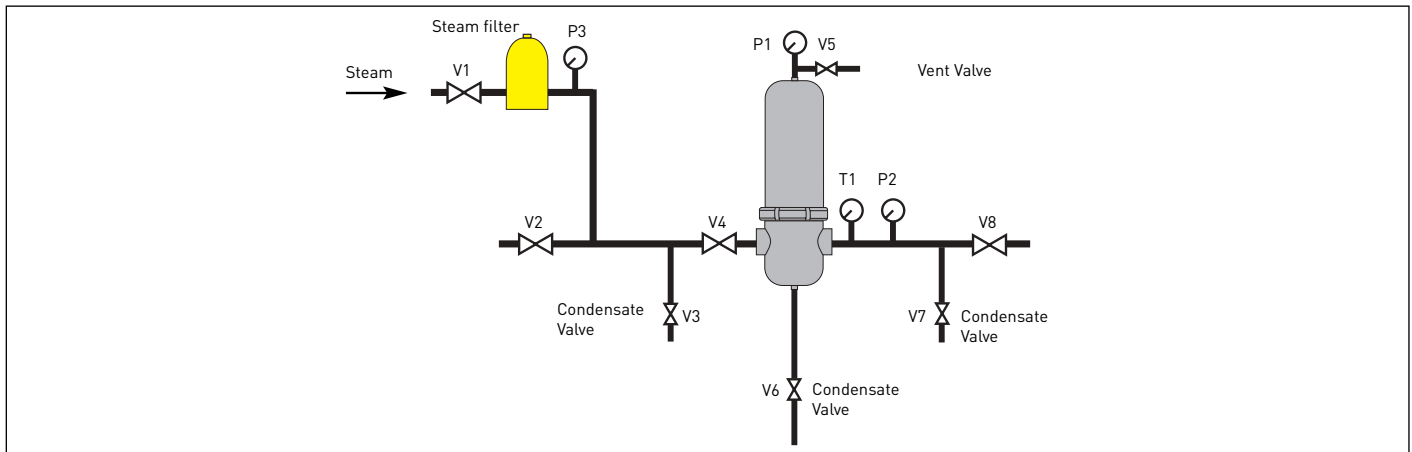
**80's Series - 1 'O'Ring + Thread**

Ultrafilter Ltd	domnick hunter
P-SRF 02/10	ME 2/10
P-SRF 03/10	ME 3/10
P-SRF 04/20	ME 4/20
P-SRF 05/20	ME 5/20
P-SRF 05/25	ME 5/25
P-SRF 07/25	ME 7/25
P-SRF 07/30	ME 7/30
P-SRF 10/30	ME 10/30
P-SRF 15/30	ME 15/30
P-SRF 20/30	ME 20/30
P-SRF 30/30	ME 30/30
P-SRF 30/50	ME 30/50

**90's Series - 2 'O'Rings + Push-Fit**

**Notes on safe sterilisation:**

- Larger filtration systems should only be steamed gradually.
- Any emerging condensate should be drained unrestrictedly via drain valves or condensate valves.
- Sterile filters should never be steamed through with large amounts of steam.
- Measurement of dwell time should only begin when the temperature of the coldest part of the system has been increased to sterilisation temperature.
- During sterilisation the vent valve on the filter housing should be slightly opened so that a sufficient amount of saturated steam can be introduced.
- Before commencing production, ensure that the filter has completely cooled down and that the system is free of condensate.



**ARA®**  
**PNEUMATIK**  
 53-012 Wrocław tel. 71 364 72 82  
 ul. Wyścigowa 38 fax 71 364 72 83  
[www.arapneumatik.pl](http://www.arapneumatik.pl)

dh, domnick hunter, OIL-X and PNEUDRI are registered trademarks of domnick hunter limited.

domnick hunter limited has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Industrial Division Sales Department for detailed information and advice on a products suitability for specific applications. All products are sold subject to the Company's standard conditions of sale.



**dh**  
**domnick hunter limited**  
 Dukesway, Team Valley Trading Estate,  
 Gateshead, Tyne and Wear,  
 England NE11 0PZ  
 Tel: +44 (0)191 402 9000  
 Telefax: +44 (0)191 482 6296  
<http://www.domnickhunter.com>

[www.domnickhunter.com](http://www.domnickhunter.com)

a member of the domnick hunter group plc



Copyright domnick hunter limited 2003  
 Publication Reference: 726 7/03 Rev. 006  
 Stock No: 17 400 4726