



domnick hunter

# OIL-X EVOLUTION

## High Efficiency Compressed Air Filtration DN50 - DN300 Fabricated Carbon Steel Filters



### NEW filtration technology

OIL-X EVOLUTION compressed air filters use very little energy as they have a low resistance to air flow. Pleated media construction and oleophobic coatings have led to a high performance filter element with low energy costs throughout its life. Service is no longer dependent upon differential pressure, but on annual filter element change backed up with a one year air quality guarantee. Most manufacturers recommend a replacement filter element between 500 mbar (7 psi) and 700 mbar (10 psi) differential. This will cost you a massive 5% extra in compressor energy. In fact you are driving your compressor with the brakes on!

### Guarantee a quality future

All domnick hunter OIL-X EVOLUTION filters have two guarantees. The first is a one year compressed air quality guarantee. This ensures that the solid particle, oil aerosol, and vapour content selected conforms to the ISO 8573.1 international standard. This guarantee is automatically extended when service recommendations are followed. The second guarantees the filter housing for ten years under recommended operating conditions.

### Benefits

- Delivered air quality to international standards
- Wide range of grades & models available
- Internally & Externally painted
- Hinged lower body flange for easy maintenance by one person
- Easy to fit element location for quick and simple maintenance
- Design code : ASME VIII Div 1 (non-U)
- PED (Pressure Equipment Directive) compliance Fluid group 2
- Special Requirements

Customer installations can be highly specialised, so domnick hunter regularly undertake the design and manufacture of bespoke filters where the required performance criteria fall outside that of the standard fabricated range. Please contact domnick hunter for further details.

#### GRADE A0

##### High Efficiency General Purpose Protection

Particle removal down to 1 micron, including water and oil aerosols.  
Maximum remaining oil aerosol content : 0.6 mg/m<sup>3</sup> at 21°C / 0.5 ppm(w) at 70°F.

#### GRADE AA

##### High Efficiency Oil Removal Filtration

*(Precede Grade AA with Grade A0 filter)*

Particle removal down to 0.01 micron, including water and oil aerosols.  
Maximum remaining oil aerosol content : 0.01 mg/m<sup>3</sup> at 21°C / 0.01 ppm(w) at 70°F.

#### GRADE AR

##### General Purpose Dust Filtration

Dry particle removal down to 1 micron

#### GRADE AAR

##### High Efficiency Dust Filtration

Dry particle removal down to 0.01 micron

#### GRADE ACS

##### Oil Vapour & Odour Removal

*(Precede Grade ACS with Grade AA filter)*

Maximum remaining oil vapour content : 0.003 mg/m<sup>3</sup> at 21°C / 0.003 ppm(w) at 70°F.

ISO 9001:2000



ISO 14001



INTERNATIONAL APPROVALS



ASME VIII National Board



CRN

AS1210



pneurop



Druckluft  
effizient

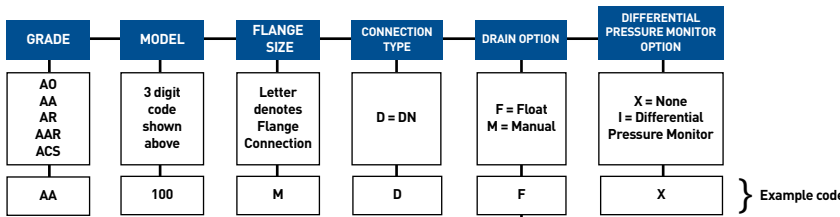
# Product Selection & Technical Data

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.

Model	Flange Size	Flow rates				Replacement Element Kit	No.
		L/S	m³/min	m³/hr	cfm		
100MD	DN50	220	13.2	792	466	100	1
150ND	DN80	430	25.9	1548	911	150	1
200ND	DN80	620	37.3	2232	1314	200	1
2500D	DN100	1000	60	3600	2119	060	3
3000D	DN100	1300	78	4680	2755	060	4
350PD	DN150	1950	117	7020	4132	060	6
400QD	DN200	3250	195	11700	6887	060	10
450RD	DN250	5200	313	18720	11019	060	16
500SD	DN300	7800	469	28080	16528	060	24

Line Pressure bar g	psi g	Correction Factor
2	29	0.53
3	44	0.65
4	58	0.76
5	73	0.85
6	87	0.93
7	100	1.00
8	116	1.07
9	131	1.13
10	145	1.19
11	160	1.25
12	174	1.31
13	189	1.36
14	203	1.41
15	218	1.46
16	232	1.51

## Filter Coding



AO / AA grade filters are supplied with a float drain [F] as standard.  
ACS / AR / AAR grade filters are supplied with a manual drain [M] as standard.

To find the Correction factor for 8.5 bar (g) (122psi g) =

$$\sqrt{\frac{\text{System Operating Pressure}}{\text{Nominal pressure}}} = \sqrt{\frac{8.5 \text{ bar g}}{7 \text{ bar g}}} = 1.10$$

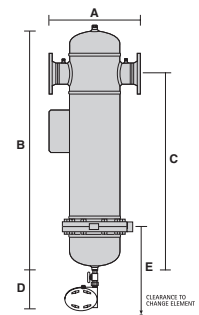
Filter Grade	Filter Models	Max Operating Pressure		Max Recommended Operating Temperature		Min Recommended Operating Temperature	
		bar g	psi g	°C	°F	°C	°F
AO	100MDFX - 500SDFX	16	232	66°C	150°F	1.5°C	35°F
AO	100MDMX - 500SDMX	16	232	100°C	212°F	1.5°C	35°F
AO	100MDFI - 500SDFI	16	232	66°C	150°F	1.5°C	35°F
AO	100MDMI - 500SDMI	16	232	66°C	150°F	1.5°C	35°F
AA	100MDFX - 500SDFX	16	232	66°C	150°F	1.5°C	35°F
AA	100MDMX - 500SDMX	16	232	100°C	212°F	1.5°C	35°F
AA	100MDFI - 500SDFI	16	232	66°C	150°F	1.5°C	35°F
AA	100MDMI - 500SDMI	16	232	66°C	150°F	1.5°C	35°F
AR	100MDMX - 500SDMX	16	232	100°C	212°F	1.5°C	35°F
AR	100MDMI - 500SDMI	16	232	66°C	150°F	1.5°C	35°F
AAR	100MDMX - 500SDMX	16	232	100°C	212°F	1.5°C	35°F
AAR	100MDMI - 500SDMI	16	232	66°C	150°F	1.5°C	35°F
ACS	100MDMX - 500SDMX	16	232	50°C	122°F	1.5°C	35°F

Example: System flow 5000 m³/hr at a pressure of 8.5 bar g

- Obtain pressure correction factor from table or calculate factor using method shown. Correction factor for 8.5 bar g = 1.10
- Divide system flow by correction factor to give equivalent flow rate at 7 bar g  
5000 m³/hr ÷ 1.10 = 4545 m³/hr (at 7 bar g)
- Select a filter model from the above table with a flow rate above or equal to 4545 m³/hr. Fabricated Filter model selected : 300 OD
- Select filtration grade - General purpose filter required, grade AO selected: Model AO 300 OD
- Select drain type and other options. Automatic float drain required, differential pressure monitor not required. Model AO 300 OD F X Final Filter Model Selected - AO300ODFX

## Weights and Dimensions

Filter Grade	Pipe Size	A		B		C		D		E		Weight	
		mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	kg	lbs
100MD	DN50	304	12.0	800	31.5	680	26.8	170	6.7	450	17.7	32.5	72
150ND	DN80	370	14.6	980	38.6	755	29.7	170	6.7	450	17.7	60	132
200ND	DN80	370	14.6	1220	48.0	995	39.2	170	6.7	650	25.6	70	154
2500D	DN100	500	19.7	1325	52.2	1052	41.4	170	6.7	650	25.6	150	330
3000D	DN100	500	19.7	1325	52.2	1052	41.4	170	6.7	650	25.6	150	330
350PD	DN150	580	22.8	1424	56.1	1090	42.9	170	6.7	650	25.6	200	440
400QD	DN200	750	29.5	1687	66.4	1277	50.3	170	6.7	650	25.6	400	880
450RD	DN250	862	33.9	1821	71.7	1352	53.2	170	6.7	800	31.5	540	1188
500SD	DN300	1000	39.4	1910	75.2	1377	54.2	170	6.7	850	33.5	700	1540



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