



# CNG Coalescing and Particulate Filters

Models | NG0006 to NG1500

Flow Rates 7.6 SCFM (12.1 Nm<sup>3</sup>/hr) to 1926.7 SCFM (3092.3 Nm<sup>3</sup>/hr)

**Walker Filtration's Alpha Series CNG filters are designed to remove solid, liquid, and gaseous contaminants from compressed natural gas (CNG) flows, and critical industry gases. Delivering high efficiency filtration, this range is suitable for lower flow CNG applications with pressures up to 20.7 barg (300 psig).**

Available in both coalescing and particulate (dust) filtration grades from 25, to 0.01 micron, and offering gaseous vapour removal down to 0.003mg/m<sup>3</sup> when using an Activated Carbon filter, Walker Filtration's CNG filtration solutions deliver the highest degree of cleanliness.

Offered in a range of 19 models with connection sizes ranging from 1/8" to 3", these filters utilise superior quality filtration media to provide ultra-low pressure loss with a saturated differential pressure of <125 mbar across X1 (1 micron) and XA (0.01 micron) grades.

**Differential pressure of <125 mbar across X1 and XA grades**



**Modular Filter**

Low-cost connecting kits and new filter head design enables easy close coupling assembly



**Filtration Technology**

Alpha deep pleated media technology delivers optimum natural gas filtration performance



**Viton seals & O-rings**

For compatibility with natural gas



- **Corrosion Protection** High-grade, cast aluminium filter housing with internal and external electrophoretic paint finished, followed by tough exterior polyester powder coating
- **Flow-Optimised Design** Advanced filter head design for optimised flow performance
- **Market Leading Performance** Custom engineered to protect your natural gas system and sensitive instruments from contamination. Filtration media delivers optimum performance in line with air quality standard ISO 8573-1: 2010
- **Simplified Serviceability** Externally accessible drain, profiled bowl design and unique push fit elements ensure quick and reliable maintenance. No replacement components are required, ensuring cost effectiveness
- **Colour Coded Element End Caps** Easy and accurate grade identification and green viton O-rings to differentiate Natural Gas Compatible elements
- **Conforms with International Standards** Validated according to ISO8573, all filters are CRN registered and comply with EU pressure Equipment Directive 2014/68/EU (PED)



For further information please call: +44 (0) 191 417 7816

# Technical Specification

Filter model	Pipe size inches	Inlet flow rate*		Dimensions mm				Weight Kg	Element model
		Nm/hr	SCFM	A	B	C	D		
NG0006 (grade)	1/8	12.1	7.6	50	17	157	60	0.3	ENG0306 (grade)
NG0015 (grade)	1/4	30.3	18.9	50	17	157	60	0.3	ENG0306 (grade)
NG0025 (grade)	1/4	50.9	31.7	70	23	231	70	0.6	ENG0408 (grade)
NG0032 (grade)	3/8	65.5	40.8	70	23	231	70	0.6	ENG0408 (grade)
NG0050 (grade)	1/2	103.1	64.2	70	23	231	70	0.6	ENG0412 (grade)
NG0070 (grade)	1/2	144.3	89.9	127	32	285	80	1.7	ENG0612 (grade)
NG0085 (grade)	3/4	174.6	108.8	127	32	285	80	1.7	ENG0612 (grade)
NG0105 (grade)	1	215.9	134.0	127	32	285	80	1.7	ENG0612 (grade)
NG0125 (grade)	3/4	257.1	160.2	127	32	370	80	2.0	ENG0621 (grade)
NG0175 (grade)	1	360.2	224.4	127	32	370	80	2.0	ENG0621 (grade)
NG0280 (grade)	1 1/4	577.2	359.7	140	41	476	85	3.0	ENG0731 (grade)
NG0320 (grade)	1 1/2	659.7	411.0	140	41	476	85	3.0	ENG0731 (grade)
NG0400 (grade)	1 1/2	824.6	513.8	170	53	508	100	4.9	ENG0831 (grade)
NG0450 (grade)	2	927.7	578.0	170	53	508	100	4.9	ENG0831 (grade)
NG0700 (grade)	2	1441.9	898.4	170	53	708	100	5.5	ENG0850 (grade)
NG0850 (grade)	2 1/2	1751.1	1091.0	220	70	736	100	10.5	ENG1140 (grade)
NG0900 (grade)	3	1854.2	1155.3	220	70	736	100	10.5	ENG1140 (grade)
NG1250 (grade)	3	2576.9	1605.6	220	70	857	100	11.5	ENG1160 (grade)
NG1500 (grade)	3	3092.3	1926.7	220	70	1005	100	12.5	ENG1175 (grade)

\* Rated flow at 7 barg, reference conditions 1 bar (a) 20°C, calculated using 0.68 Gas Density Factor

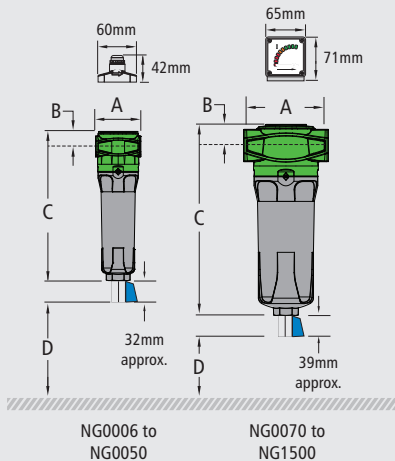
Grade	X25 / RX25		X5 / RX5		X1 / RX1		XA / RXA		AC / RAC	
Particle removal	25 micron		5 micron		1 micron		0.01 micron		0.01 micron	
Max particle size class**	-		4		3		1		1	
Max oil content**	-		4		3		1		1	
Max oil carryover at 20°C (68°F) coalescing	10 mg/m³		5 mg/m³		0.3 mg/m³		0.01 mg/m³		0.003 mg/m³	
Max oil carryover at 20°C (68°F) particulate	N/A		N/A		N/A		N/A		0.003 mg/m³	
Pressure loss - clean & dry coalescing	30 mbar	0.4 psi	40 mbar	0.6 psi	55 mbar	0.8 psi	85 mbar	1.2 psi	115 mbar	1.7 psi
Pressure loss - clean & dry particulate	30 mbar	0.4 psi	40 mbar	0.6 psi	75 mbar	1.1 psi	100 mbar	1.5 psi	75 mbar	1.1 psi
Pressure loss - saturated coalescing	50 mbar	0.7 psi	75 mbar	1.1 psi	125 mbar	1.8 psi	125 mbar	1.8 psi	N/A	N/A
Pressure loss - saturated particulate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pressure loss - element change	12 mths	8000 hrs	12 mths	8000 hrs	12 mths	8000 hrs	12 mths	8000 hrs	At least every 6 mths	
Max temperature	120°C	248°F	120°C	248°F	120°C	248°F	120°C	248°F	50°C***	122°F***
Max working pressure	20.7 barg	300 psig	20.7 barg	300 psig	20.7 barg	300 psig	20.7 barg	300 psig	20.7 barg	300 psig
Element end cap colour	Black		Green		Red		Blue		Black	

\*\* to ISO 8573-1: 2010

Pressure correction factors	For maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure									
	Operating pressure barg (psig)	4 (58)	5 (72)	6 (87)	7 (100)	8 (115)	10 (145)	12 (174)	14 (203)	16 (232)
7 barg - correction factor	0.76	0.84	0.92	1	1.07	1.19	1.31	1.41	1.51	1.73

## Technical Notes

- Direction of flow is inside to out through the filter element for coalescing grades (X25, X5, X1, XA and AC), and outside to in for particulate grades (RX25, RX5, RX1, RXA and RAC) Activated Carbon Filters must not operate in oil saturated conditions and will not remove certain types of gases including carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).
- All CNG Filters are fitted as standard with Manual Drain Valves, VMDV25 on models NG0006 to NG0050, VMDVE25A on models NG0070 to NG0700, and VMDVE25M on models NG0850 to NG1500. Standard filters can operate at 20.7 barg (300 psig) range at 120°C (248°F).
- Pop Up Indicators (65DPUG3V) are fitted to models NG0025 to NG0050 as standard. Differential Pressure Indicators (65DPIG3V) are fitted to models NG0070 to NG1500 as standard. Activated Carbon (AC) grade filters do not include DP equipment.
- Alpha CNG Filters are manufactured from cast aluminium alloy and are PED 2014/68/EU compliant for group 1 and group 2 gases.
- Threaded connections are Rp (BSP Parallel) to ISO 7-1 or NPT to ANSI/ASME B1.20.1 if supplied within North America. Rc (BSP Taper) to ISO 7-1 also available.
- For NPT threads, add the suffix N, e.g. NG0006NWS, and for RC threads add the suffix C. e.g. NG0006CWS.
- Filter elements should be changed every 12 months / 8000 hours (whichever comes first), or at least every 6 months for activated carbon.
- Walker Filtration genuine spare and aftermarket parts must be used, failure to do so will void product warranty. Walker Filtration shall not be held liable for damages suffered by the customer if Walker Filtration genuine spare and aftermarket parts are not used.
- This range of filters is outside of the scope of the ATEX Directive as it is non-electrical equipment with no potential ignition hazards. They are limited to use to Category 2, Zone 1/21 or Category 3, Zone 2/22 applications and do not bear any ATEX marking. For specific requirements please contact your nearest Walker Filtration sales representative.



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