

## Atlas Copco Compressed Air Filters

DDx, PDx, DDxp, PDxp, QDx

Keep dust  
particles  
out from  
your air  
net

Clean Air Package

The Atlas Copco logo consists of the company name in a blue, italicized sans-serif font, centered between two horizontal blue bars.

# You need pure compressed air

If compressed air is the energy source behind your production, you depend on its economic and efficient operation.

Every cubic meter of air contains 140 million particles of dirt. These particles, mixed with water vapour and hydrocarbon vapours from unburnt fuels and industrial processes, are drawn into the compressor and concentrated under compression.

After compression, all these contaminants can combine in the piping system with condensed moisture, pipe scale and rust, creating a damaging abrasive emulsion.

Atlas Copco has developed a perfectly matched filter system, which reduces all types of contamination right from the source according to your individual requirements.

Atlas Copco range to meet your compressed air quality needs.

Atlas copco offers you 4 ranges of filters:

**-DDx range :** Coalescing filters for general purpose protection, removing liquid water and oil aerosol to 0.1 mg/m (0.1 ppm) and particles down to 1 micron.

**-DDxp range:** Particulate filters for dust protection, removing particles down to 1 micron.

**-PDx range:** High efficiency coalescing filters, removing liquid water & oil aerosol to 0.01 mg/m (0.01 ppm) and particles down to 0.01 micron.

**-PDxp range:** High effective particles filters particles down to 0.01micron.

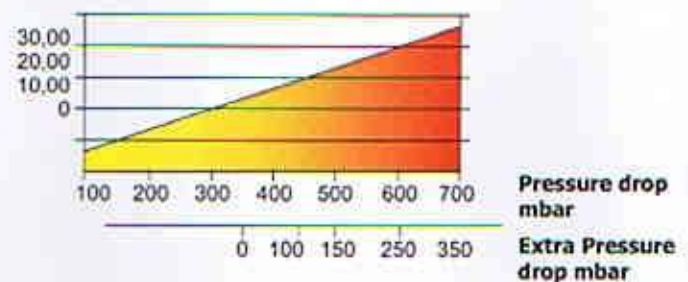
**-QDx range :** Active carbon filter for removal of oil vapours and hydrocarbon odours with a maximum remaining oil content of 0.003 mg/m (0.003 ppm) should be installed after a PD filter.



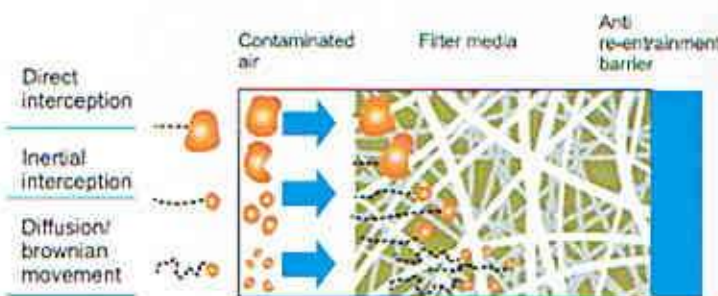
## Energy costs of high pressure drop

Atlas Copco's filters are designed to combine maximum contaminated removal efficiency with minimum pressure drop, resulting in a low energy consumption in your compressed air system. Keep in mind, that 150 mbar extra pressure drop will cost you, 10,000 KWh extra energy per year in a 500 l/s compressed air system operating at 7 bar, 6,000hours per year.

High pressure drop cost



## How they work?



**DDx, PDx, DDxp and PDxp** filters are coalescing and particulate filters. The key to effective filtration is to optimize the filtration mechanisms through the filter media of borosilicate microfibrils:

**Direct interception:** The large particles are intercepted because the distance between two fibres is smaller than their size.

**Inertial Impaction:** The heavy particles cannot follow the curved path developed because of the large numbers of fibres. They collide against a fibre and remain suspended in it.

**Diffusion (Brownian movement):** The smallest particles are in random motion due to the thermal agitation of the air molecules. Eventually, these particles run into fibres to which they adhere.

**QDx Filters** are active carbon filters. The filtration medium is impregnated with active carbon to remove hydrocarbons vapours by adsorption.

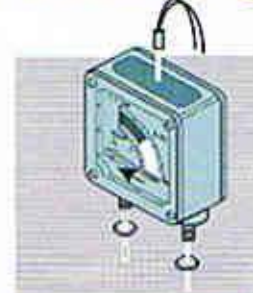
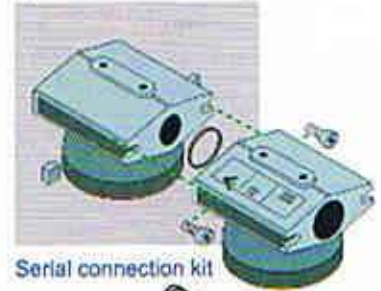
**Adsorption:** Active carbon presents large specified area and affinity for oil vapours. Oil molecules accumulate in the active carbon surface.

# A complete filter range to protect your equipment and process from particles and oil

## Atlas Copco filters - Simple, effective, dependable



### Option to meet all requirements



Potential free contact to signal high ΔP



Differential pressure indicator or gauge

## Technical data, Selection and sizing

Filtersize (DDx, PDx DDxp, PDxp, QDx)	Nominal Capacity		Connections (Gor NPT)	Dimensions								Free space cartridge replacement		Weight
				A		B		C		D		E		
	l/s	cfm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	kg
11	11	23	1/2	90	3.5	228	9.0	268	10.6	299	11.8	75	3.0	1
21	21	45	1/2	90	3.5	228	9.0	268	10.6	299	11.8	75	3.0	1.1
40	40	85	1/2	90	3.5	283	11.1	323	12.7	354	13.9	75	3.0	1.3
55	55	117	3/4	110	4.3	303	11.9	343	13.5	374	14.7	75	3.0	1.9
75	75	159	1	110	4.3	343	13.5	383	15.1	414	16.3	75	3.0	2.1
145	145	307	1 1/2	140	5.5	449	17.7	489	19.3	520	20.5	100	3.9	4.2
190	190	403	1 1/2	140	5.5	532	20.9	572	22.5	603	23.7	100	3.9	4.5
220	220	466	1 1/2	140	5.5	532	20.9	572	22.5	603	23.7	100	3.9	4.6
325	325	689	2 1/2	179	7.0	618	24.3	658	25.9	689	27.1	150	5.9	6.9
480	480	1018	3	210	8.3	720	28.3	760	29.3	791	31.1	200	7.9	11
650	650	1378	3	210	8.3	890	35	930	36.6	961	37.8	200	7.9	12.6

Referred to 7 bar (e) 102 psig / Temperature 20°C  
 Maximum pressure: 16 bar (e) / 232 psi  
 Maximum air inlet temperature  
 DDx/DDxp/PDx: 66°C (150°F)  
 QDx: 35°C (95°F)

### Pressure drop

	DDx	DDxp	PDx	PDxp	QDx					
Initial pressure drop at nominal conditions (dry)	0.05	0.05	0.08	0.08	0.07					
Initial pressure drop at nominal conditions (wet)	0.12	NA	0.2	NA	NA					
Inlet pressure	Bar(g)	2	4	6	7	8	10	12	14	16
Inlet pressure	psig	29	58	87	102	115	145	174	203	232
Correction factor		0.53	0.75	0.82	1	1.06	1.2	1.31	1.41	1.5



Dimension A: Width  
 Dimension B: Height without indicator or gauge  
 Dimension C: Height with indicator  
 Dimension D: Height with gauge  
 Dimension E: Free space requirement



# Atlas Copco

- Global industrial group, headquartered in Stockholm, Sweden.
- More than 130 years of experience.
- World leader in Compressed Air technology.
- More than 26,000 employees worldwide, with sales turnover, over US\$ 6 billion.
- Manufacturing facilities in 17 countries across 4 continents.
- From design to production and delivery of compressors, Atlas Copco adheres to the ISO 9001 management system.
- Atlas Copco's Environmental Management System forms an integral part of each business process.
- State-of-the-art manufacturing facility in India.
- Sales, Service & Dealer network in 150 countries.



ISO 9001  
Atlas Copco's Environmental Management System forms an integral part of each business process.



ISO 9001  
From design to production and delivery, Atlas Copco compressors adhere to the ISO 9001 Management Systems requirements.

## Atlas Copco Compressor Sales

(A Division of Atlas Copco (India) Ltd.)

**HEAD OFFICE & WORKS:** Sveanagar, Dapodi, Pune 411012.

Phone: 020-27146416/27146417 Fax: 020-27145948

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

[www.ac-littlemaster.com](http://www.ac-littlemaster.com)

Email: [info.compressor@in.atlascopco.com](mailto:info.compressor@in.atlascopco.com)

[littlemaster@in.atlascopco.com](mailto:littlemaster@in.atlascopco.com)

### CUSTOMER CARE CENTRES

	PHONE	MOBILE	FAX
405, 2nd Floor, West Minster, Cunningham Road, <b>BANGALORE</b> 560 052	(080) 22352940	(0) 9342509239	(080) 22352940
310 "Arundeeep", Race Course Circle, <b>BARODA</b> 390 015.	(0265) 2339772	(0) 9376216533	(0265) 2341772
Race Course Road, Guindy, <b>CHENNAI</b> 600 032.	(044) 30949090	(0) 9380572236	(044) 22452047
6-3-1191, 2nd floor, Brij Tarang, Greenland, Begumpet, <b>HYDERABAD</b> 500016.	(040) 30949090	(0) 9391370561	(040) 27762004
Trinity Plaza, 2nd floor, West Wing, 84/1A, Topasia Road (South), <b>KOLKATA</b> 700 014.	(033) 30949090	(0) 9331050993	(033) 22469710
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Mahatma Gandhi Memorial Building, Netaji Subhash Road, <b>MUMBAI</b> 400 002.	(022) 30949090	(0) 9324255309	(022) 22811463
401-406, Vishwa Sadan, 9, District Centre, Janakpur, <b>NEW DELHI</b> 110 058.	(011) 30949090	(0) 9350250421	(011) 25505644
Sveanagar, Dapodi, <b>PUNE</b> 411012.	(020) 30949090	(0) 9823014158	(020) 27145778
401, Atma House, Ashram Road, <b>AHMEDABAD</b> 380 009.	—	(0) 9327548191	—

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