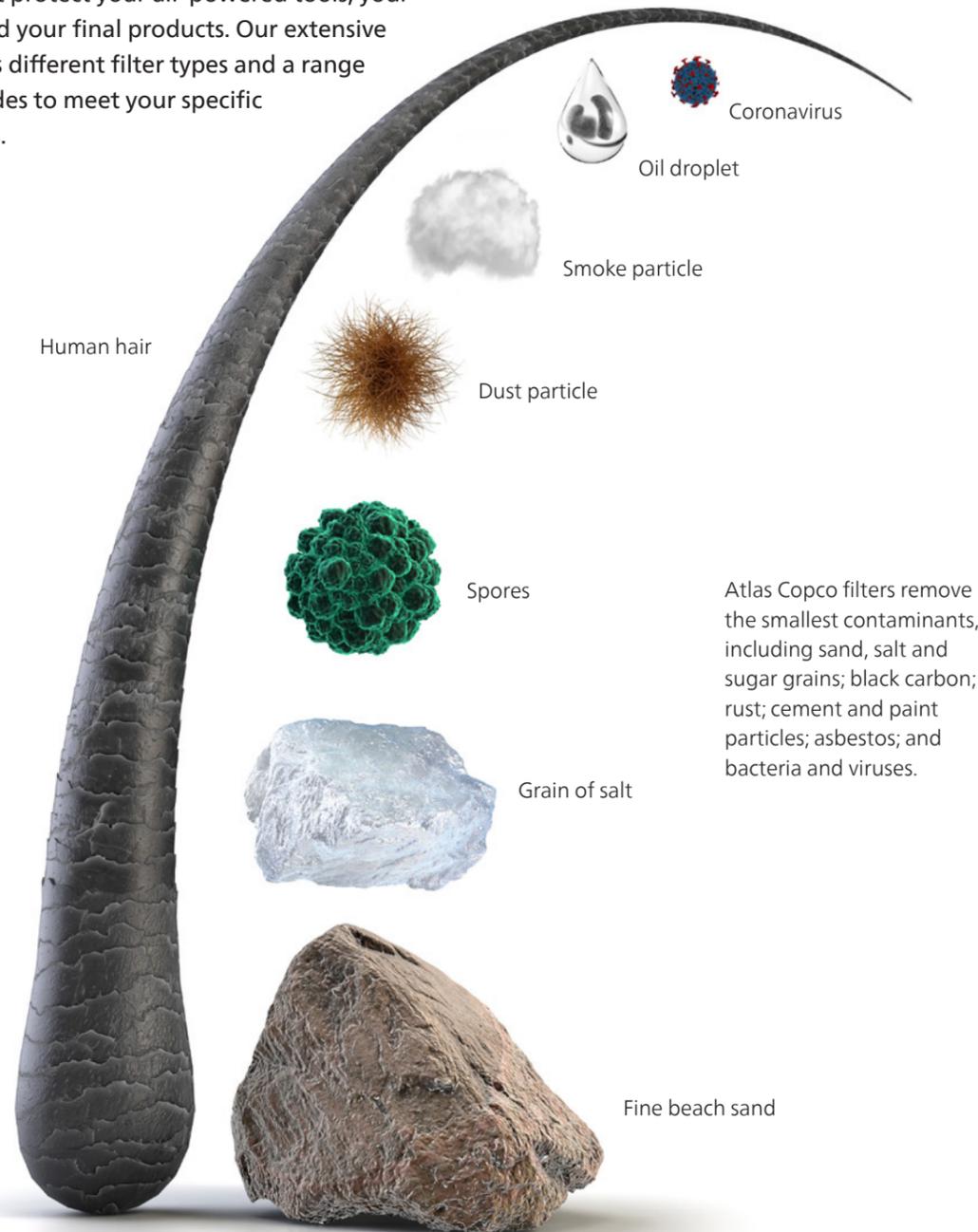




## Committed to superior productivity

Untreated compressed air can be contaminated by dust, water and oil. This makes filtration a crucial component of your air system. Atlas Copco has developed filtration solutions that protect your air-powered tools, your processes, and your final products. Our extensive offer includes different filter types and a range of purity grades to meet your specific requirements.



## Unsurpassed filtration quality

### In-house expertise

Because filtration is so important, Atlas Copco's dedicated engineering team works in close collaboration with universities, regulatory authorities and premium filter material suppliers. Our scientists and engineers are therefore knowledgeable on the latest advances and innovations in the industry. Every step of the engineering process is meticulously executed, from basic research to prototype designs and end-of-life analysis.

### Rigorous quality control

To ensure top performance and reliability, all Atlas Copco filters are subjected to rigorous internal and external certification and quality control. Thanks to our testing facility, we conduct all certification in-house, including testing witnessed by independent parties. Capable of testing filters according to all relevant standards and under real-life conditions, our competence continues to grow with every new development in the filtration business.

#### Certified peace of mind



Atlas Copco's filters are certified to meet the following ISO standards:

- ISO 8573-1:2010: Compressed air - Contaminants and purity classes
- ISO 8573-2:2018: Compressed air - Test method for oil aerosol content
- ISO 8573-4:2019: Compressed air - Test method for particles
- ISO 8573-5: 2001: Compressed air - Test method for oil vapor and organic solvent content
- ISO 12500-1:2007: Filters for compressed air - Test methods - Oil aerosols
- ISO 12500-2:2007: Filters for compressed air - Test methods - Oil vapors
- ISO 12500-3:2009: Filters for compressed air - Test methods - Particulates



### Engineered and built in Europe

Our entire filter range is designed and produced in Atlas Copco's European facilities, using state-of-the-art production lines and quality controls. This geographic proximity allows us to keep R&D, engineering, production, and testing close together and streamline their collaboration.



# Advanced filtration technology

Filtration technology matters if you need constant air quality with low maintenance requirements. Over the years, Atlas Copco has innovated filter types, design, processes and media to give you best-in-class performance, reliability and lifetime.



## Filtration technologies

Choose the best filtration technology for your application to improve your air system performance:

- Wet particles: wrapped media**  
 Wrapped media are known for their durability in wet and oil-contaminated environments. Our patented Nautilus technology combines multiple wrapped layers to offer constant air quality at the lowest pressure drop, even in the harshest working conditions.
- Solid particles: pleated media**  
 Pleating is the optimal technology for capturing dry particulates in compressed air. Pleated media have a large surface area and therefore ensure a longer filter service lifetime and lower pressure drop.
- Oil vapors: macro-structured activated carbon**  
 Macro-structured activated carbon has a larger surface compared to the typical carbon filter media, giving it a superior adsorption capacity and a steady performance over a longer time.
- Water: cyclone**  
 The use of centrifugal forces secures a proper separation of liquid water droplets in the air flow.

**Anodized aluminum housing with powder coating to maximize corrosion protection**

## Element bottom cap (UD+, PD+ & DD+)

A patented drainage system facilitates the removal of oil from the filter element, eliminating the "wet band" at the bottom of the element that can compromise filter performance and lifetime.



## Service indicator

To ensure constant air quality, the service indicator allows for an easy check of the filter's running hours, differential pressure, and maintenance status. It can even send a remote alert.

## Element top cap

The top cap guides the air flow optimally into the cartridge and to the outlet to reduce pressure drop and the overall energy use of the filter.

## inPASS™ bypass

Atlas Copco's revolutionary built-in bypass can be used to reroute the air during filter service to ensure an uninterrupted air flow. It's an invisible invention that will give you big investment and operational savings:

- Service your filters at any time, even during working hours.
- Secured air flow for your production during maintenance.
- Reduced maintenance time as your air system doesn't need to be shut down.
- Eliminates the huge cost of an external piping bypass.
- Lowers the risk of leakages, resulting in lower energy costs.

## Strong and durable stainless-steel cylinders

## Differently colored end caps to easily recognize the filtration grade

## Easy-service float drain

Our non-stick float drain automatically expels all captured oil and water. To save you time and money, our drains can easily be serviced without removing the filter bowl. The threaded drain connection to the bowl also makes it easy to replace the float drain with an external manual or automatic drain.

# Complete filtration

Dirt, water and oil are no match for Atlas Copco's filters. They are designed to remove one or more of the following contaminants:

- DIRT: dust, solid particles, rust particles, micro-organisms.
- WATER: condensed liquid water, water aerosols, acidic condensates.
- OIL: liquid oil, oil aerosol, hydrocarbon vapor.

 <p><b>Flanged design</b> 14 sizes 480 → 9,000 l/s 1,000 → 19,000 cfm</p>	<p><b>Tower design</b> 9 sizes 20 → 1,800 l/s 42 → 3,814 cfm</p> 	<p>20 bar / 290 psi 50 bar / 725 psi 100 bar / 1,450 psi 350 bar / 5,075 psi</p>	<p><b>Flanged design</b> 15 sizes 480 → 9,000 l/s 1,000 → 19,000 cfm</p> 				
 <p><b>Flanged twin filter design</b> 850 → 1,100 l/s 1,805 → 2,331 cfm</p>		<p><b>Threaded design</b> 9 sizes 15 → 944 l/s 32 → 2,000 cfm</p> 	<p><b>Threaded design</b> 11 sizes 9 → 520 l/s 19 → 1,102 cfm</p> 				
 <p><b>Threaded design</b> 14 sizes 7 → 630 l/s 14 → 1,335 cfm</p>							
Name	DDp+ PDp+	DD+ PD+	UD+	QD+ QDT+	H High-pressure	SFA Silicone-free	
Grade	Rough Fine	Rough Fine	Ultimate	Basic Optimal	Rough & fine	Rough & fine Basic	
Contaminant	Dry dust	Oil aerosol/wet dust		Oil vapor			
	General applications				Special applications		



# A solution for every application

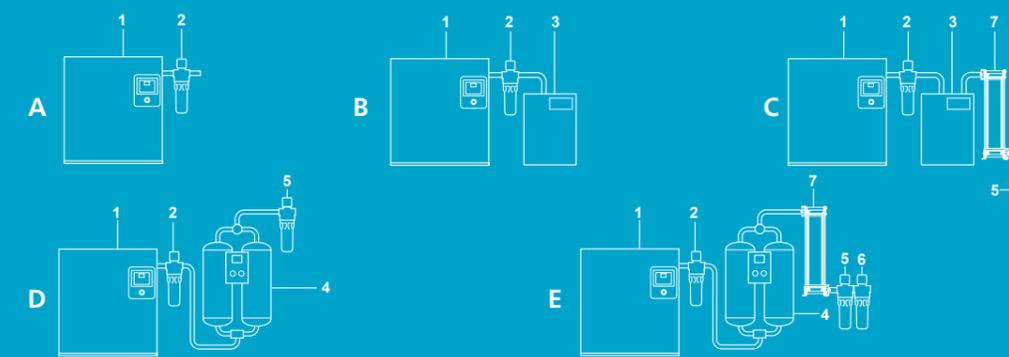
Depending on point of use and application, different compressed air purities might be needed. The table below shows the various ISO 8573-1:2010 air purity classes and the Atlas Copco filter and dryer-combinations that meet these classes.

ISO 8573-1:2010 class	Solid particles		Water	Oil (aerosol, liquid, vapor)	
	Wet conditions	Dry conditions			
0	SMT-G*		As specified by the customer**	Oil-free compressor	
1	DD+ & PD+	DDp+ & PDp+	Desiccant dryer	DD+ & PD+	& QD+/QDT
	UD+			UD+	& QD+/QDT
2	DD+	DDp+	Desiccant dryer, rotary drum dryer	DD+ & PD+	
3	DD+	DDp+	Desiccant dryer, membrane dryer, rotary drum dryer	UD+	
4	DD+	DDp+	Membrane dryer, refrigerant dryer	DD+	
5	DD+	DDp+	Membrane dryer, refrigerant dryer	-	
6	-	-	Membrane dryer, refrigerant dryer	-	

\* For more details, please refer to the Atlas Copco process gas filtration brochure.  
\*\* Please contact your Atlas Copco sales representative.

## Examples of typical installations

A	Compressor - UD+	Air purity class ISO 8573-1:2010 [1:-:2]
B	Compressor - UD+ - Refrigerant dryer	Air purity class ISO 8573-1:2010 [1:4:2]*
C	Compressor - UD+ - Refrigerant dryer - QDT - DDp+	Air purity class ISO 8573-1:2010 [2:4:1]
D	Compressor - UD+ - Desiccant dryer - DDp+	Air purity class ISO 8573-1:2010 [2:2:2]
E	Compressor - UD+ - Desiccant dryer - QDT - DDp+ - PDp+	Air purity class ISO 8573-1:2010 [1:2:1]



- 1. Compressor
- 2. UD+ filter
- 3. Refrigerant dryer
- 4. Desiccant dryer
- 5. DDp+ filter
- 6. PDp+ filter
- 7. QDT filter

\* Particle class 1 is reached directly after UD+. As downstream piping & vessels can add particles, it is advised to install particle filters DDp+ and PDp+ just before the application to reach particle class 1 at point of use.  
The compressor should be equipped with a liquid water separation system such as an aftercooler including a drain or a water separator (WSD). If this is not the case, install a water separator in front of a coalescence filter. For critical applications, install extra air treatment products at the point of use for the removal of pipeline contamination and condensation.

# DD+/PD+/UD+ Series

## Oil coalescence filters with patented Nautilus technology

Compressor element lubrication and your compressor installation itself can release oil aerosols and wet dust in your air system. DD+, PD+ and UD+ filters efficiently remove these contaminants to protect your equipment and your processes. These innovative filtration solutions are engineered to cost-effectively provide the best air purity and meet today's increasingly stringent quality requirements.



### Your benefits:

- **Maximum oil aerosol, wet dust and water droplet filtration and drainage** - High-efficiency glass fiber Nautilus technology ensures a low pressure drop.
- **Patented drainage technology** - A coarse 3D-structured layer/barrier provides efficient oil drainage and prevents re-entry of oil droplets into the air stream.
- **Minimal operating costs** - Optimal design and filter technology allow for low pressure losses.
- **Cost-saving maintenance** - Ribbed housing ensures easy removal of the filter bowl. The push-in element and drain connection were designed for effortless replacement. The service indicator shows (preventive) maintenance alerts.



- DD+
- PD+
- UD+

### Certification

- ISO 8573-2:2018
- ISO 12500-1:2007

### 3 patented innovations

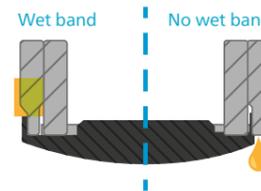


#### 1. Nautilus technology for energy savings

The Nautilus multi-wrap technology was specifically developed to improve the oil aerosol coalescing process. That means you get optimal filtration results at a lower pressure drop to minimize your operational costs.

#### 2. Superior drainage technology for a strong performance & long lifetime

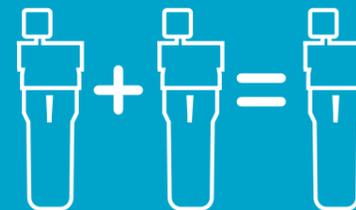
A unique coarse 3D-structured layer/barrier ensures efficient oil drainage and prevents re-entry of oil droplets into the air flow. The 3D structure also offers a service life of 8,000 hours.



#### 3. Enhanced drainage channels for pure air

The bottom cap of the filter is designed to increase the drainage rate of the oil from the barrier by optimizing the contact between the barrier and drainage routes. This ensures no wet band is formed in the barrier and the re-entrainment risk is significantly diminished, resulting in cleaner air.

### UD+ 2-in-1 concept saves money and space



The UD+ combines two filtration steps (DD+ and PD+) into one, a unique technology to meet the quality requirements of diverse applications and offer superior energy savings. The UD+ filter provides the same air purity as a DD+PD+ filter train with a lower pressure drop.

- Save up to 50% in space: The 2-in-1 concept is ideal for applications where space is at a premium, reducing your environmental footprint, system complexity, and installation space.
- Save money: Install UD+ filters to enjoy significant installation and maintenance (cost) savings compared to conventional filters.

### Performance

	DD+	PD+	UD+
Contaminant	Oil aerosol/wet dust		
Filtration technology	Wrapped		
Test method	ISO 8573-2:2018, ISO 12500-1:2007		
Maximum oil carry-over (mg/m <sup>3</sup> )*	0.08*	0.008*	0.001
ISO class 8573-1	[2:-3]	[1:-2]	[1:-2]
Average wet pressure drop (mbar)	119	132	220
Element service	After 8,000 operating hours or 1 year		
Precede with	Water separation	Water separation & DD+	Water separation

\* Inlet oil concentration = 10 mg/m<sup>3</sup>. Oil = oil aerosol and liquid.

# DDp+/PDp+ Series

## Optimal dry dust filtration

DDp+ and PDp+ filters efficiently prevent dust, corrosion particles, micro-organisms, dirt and adsorption material from entering your compressed air stream. These innovative filtration solutions are engineered to cost-effectively provide the best air purity and meet today's strict quality demands.



### Your benefits:

- **Maximum dirt, solid particle, micro-organism and rust particle removal**  
High-efficiency pleated glass fiber media with coarse pre-filter fleece ensure a high dust-holding capacity.
- **Minimal operating costs** - Optimal pleated design and filter technology allow for low pressure losses.
- **Cost-saving maintenance** - Ribbed housing ensures easy removal of the filter bowl. The push-in element and drain connection were designed for effortless replacement. The service indicator shows (preventive) maintenance alerts.



● DDp+  
● PDp+

## Performance

	DDp+	PDp+
Contaminant	Dry dust	
Filtration technology	Pleated	
Test method	ISO 8573-4:2001, ISO 12500-3:2009	
Particle removal efficiency (% at MPPS)	99.92	99.98
ISO class 8573-1	[2:-3]	[1:-2]
Element service	After 8,000 operating hours or 1 year or 350 mbar pressure drop	
Precede with	Dryer	Dryer & DDp+

## Certification

- ISO 8573-4:2019
- ISO 12500-3:2009

# QD+ Series

## High-performance oil vapor filters

QD+ filters efficiently reduce hydrocarbons, odors and oil vapor in your compressed air to protect your investment, equipment and processes. The macro-structured activated carbon will reduce the residual oil content through adsorption to less than 0.003 mg/m<sup>3</sup>. The pressure drop is low and remains constant during the lifetime of the filter.



### Your benefits:

- **Maximum oil vapor removal**  
The macro-structured activated carbon is specifically designed to efficiently and completely remove oil vapors from compressed air with minimal dust release.
- **Minimal operating costs** - Low pressure losses thanks to an optimal flow design.
- **Low-cost maintenance** - Ribbed housing ensures easy removal of the filter bowl. The push-in element and drain connection were designed for effortless replacement. The service indicator shows (preventive) maintenance alerts.



● QD+

## Performance

	QD+
Contaminant	Oil vapor
Filtration technology	Macro-structured activated carbon
Test method	ISO 8573-5:2001
Maximum oil carry-over (mg/m <sup>3</sup> )*	0.003*
ISO class 8573-1	[<:-1]
Average dry pressure drop (mbar)	75
Element service	After 2,000 operating hours or 1 year
Precede with	Water separation UD+ or DD+/PD+ Dryer
Filter train UD+ - QD+	[2:-1]

\* In a typical installation with refrigerant dryer and UD+ filter.

### Options DD+/PD+/UD+/DDp+/PDp+/QD+

- Smart indicator
- External wiring for smart indicator
- Potential-free alarm for gauge
- Filter connection kit
- Wall mounting kit
- Mechanical drain WD 80
- Electronic drain EWD



DD+/ PD+/ UD+			DDp+/ PDp+/ QD+		
Threaded std	Threaded inPASS	Flanged	Threaded std	Threaded inPASS	Flanged

Standard		DD+/ PD+/ UD+			DDp+/ PDp+/ QD+		
		Threaded std	Threaded inPASS	Flanged	Threaded std	Threaded inPASS	Flanged
Drain	Depressurizing valve (for DDp+/ PDp+/ QD+)	x	x	x	x	x	x
	Floater drain (for DD+/ PD+/ UD+)	x	x				
	Electronic drain EWD (for DD+/ PD+/ UD+)			x			
Indicator (excl. QD+)	Pop-up indicator	size 7-25			size 7-25		
	Gauge	size >25			size >25		
	Smart indicator		x	x		x	x
Bypass			x			x	
Options		DD+/ PD+/ UD+			DDp+/ PDp+/ QD+		
Smart indicator		x			x		
External wiring for smart indicator		x	x	x	x	x	x
Potential-free alarm for gauge		size >25			size >25		
Filter connection kit		x	x		x	x	
Wall mounting kit		x	x		x	x	
Mechanical drain WD 80				x			
Electronic drain EWD		x	x				

### Correction factors

When working with other pressures than the nominal pressure, the actual FAD capacity is calculated by multiplying the correction factor with the rated AML capacity. The calculated actual flow capacity corresponds to the AML-stated pressure drop.

Working pressure in bar(g)	1	2	3	4	5	6	7	8	10	12	14	16
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1	1.06	1.20	1.31	1.41	1.50

### Sizing & dimensions DD+/PD+/UD+/DDp+/PDp+/QD+

Filter size with or without inPASS™	Nominal capacity		Reference pressure		Maximum pressure		Connections		Dimensions						Free space for cartridge replacement		Weight	
	l/s	cfm	bar(e)	psig	bar(e)	psig	G	NPT	A		B		C		D		kg	lbs
7+	7	15	7	102	16	232	G 1/2	NPT 1/2	106	4.17	90	3.54	362.6	14.3	90	3.54	1.18	2.60
15+	15	32	7	102	16	232	G 1/2	NPT 1/2	106	4.17	90	3.54	362.6	14.3	90	3.54	1.24	2.73
25+	25	53	7	102	16	232	G 1/2	NPT 1/2	106	4.17	90	3.54	415.1	16.3	90.5	3.56	1.45	3.20
45+	45	95	7	102	16	232	G 3/4	NPT 3/4	135	5.31	110	4.33	442.6	17.4	110	4.33	2.35	5.18
75+	75	159	7	102	16	232	G 1	NPT 1	135	5.31	110	4.33	527.6	20.8	110	4.33	2.8	6.17
110+	110	233	7	102	16	232	G 1 1/2	NPT 1 1/2	175	6.89	143	5.63	559.1	22.0	130.5	5.14	5.4	11.91
145+	145	307	7	102	16	232	G 1 1/2	NPT 1 1/2	175	6.89	143	5.63	629.1	24.8	130.5	5.14	5.93	13.08
180+	180	381	7	102	16	232	G 1 1/2	NPT 1 1/2	175	6.89	143	5.63	699.1	27.5	130.5	5.14	6.45	14.22
240+	240	509	7	102	16	232	G 2	NPT 2	222	8.74	171	6.73	729.6	28.7	175	6.89	9.54	21.04
300+	300	636	7	102	16	232	G 2	NPT 2	222	8.74	171	6.73	822.6	32.4	175	6.89	10.71	23.62
							G 2 1/2	NPT 2 1/2									10.43	23.00

Non-inPASS™ variant: height "C" decreases by 51 mm (2") for sizes 7-25 and by 10 mm (0.4") for sizes 45-300.

With inPASS™																		
380+	380	805	7	102	14	203	G 3	NPT 3	250	9.84	191	7.52	927.1	36.5	200.5	7.89	13.6	29.99
425+	425	901	7	102	14	203	G 3	NPT 3	250	9.84	191	7.52	1043.1	41.1	200.5	7.89	14.95	32.96
510+	630	1081	7	102	14	203	G 3	NPT 3	250	9.84	191	7.52	1281.1	50.4	200.5	7.89	19.6	43.22

Without inPASS™																		
360+	360	763	7	102	16	232	G 2 1/2	NPT 2 1/2	222	8.74	171	6.73	812.7	32.0	175	6.89	10.2	22.49
430+	430	911	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	917.2	36.1	200.5	7.89	13.98	30.83
525+	525	1112	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	1033.2	40.7	200.5	7.89	15.32	33.78
630+	630	1335	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	1271.2	50.0	200.5	7.89	19.24	42.42

Flanged																		
Flanged connection																		
480+	480	1017	7	102	16	232	DN 80		370	15	316	12	1295*	51*	1375	54	76	168
630+	630	1335	7	102	16	232	DN 80		370	15	316	12	1295*	51*	1375	54	78	172
850+ T	850	1801	7	102	16	232	DN 100		510	20	418	17	796*	31*	200	8	35	78
970+	970	2055	7	102	16	232	DN 100		510	20	451	18	1360*	54*	1500	59	141	311
1100+ T	1100	2331	7	102	16	232	DN100		510	20	418	17	796*	31*	200	8	37	82
1260+	1260	2670	7	102	16	232	DN 100		510	20	451	18	1360*	54*	1500	59	143	315
1600+	1600	3390	7	102	16	232	DN 150		620	24	506	20	1480*	58*	1560	61	210	463
2100+	2100	4450	7	102	16	232	DN 150		640	25	541	21	1555*	61*	1640	65	176	388
2500+	2500	5297	7	102	16	232	DN 150		640	25	541	21	1555*	61*	1640	65	178	392
3000+	3000	6357	7	102	16	232	DN 200		820	32	701	28	1745*	69*	1710	67	420	926
3500+	3500	7416	7	102	16	232	DN 200		820	32	701	28	1745*	69*	1710	67	424	935
4000+	4000	8476	7	102	16	232	DN 200		820	32	701	28	1745*	69*	1710	67	428	944
5000+	5000	10594	7	102	16	232	DN 200		820	32	701	28	1745*	69*	1710	67	432	952
6000+	6000	12713	7	102	16	232	DN 250		920	36	815	32	2085*	82*	1625	64	671	1479
7000+	7000	14832	7	102	16	232	DN 250		920	36	815	32	2085*	82*	1625	64	679	1497
8000+	8000	16951	7	102	16	232	DN 300		1040	41	930	37	2070*	81*	1625	64	896	1975
9000+	9000	19070	7	102	16	232	DN 300		1040	41	930	37	2070*	81*	1625	64	900	1984

\* +60 mm/2.36 in for units with an electronic drain & +70 mm/2.76 in for a mechanical float.

### Temperature correction factors QD+

At higher temperatures, more compressor oil evaporates. When the actual working air inlet temperature differs from the reference, divide the filter capacity by the corresponding correction factors to obtain the correct capacity.

Inlet temperature °C	20	25	30	35	40	45	50	55	60
Inlet temperature °F	68	77	96	95	104	113	122	131	140
Correction factor oil-free	1	1	1	1	1	1	1	1	1
Correction factor oil-lubricated	1	1	1	1.2	1.5	1.7	2.1	2.4	2.6

Some environmental or process aspects could cause a higher amount of hydrocarbons or other volatile organic compounds in the compressed air. Contact Atlas Copco when higher concentrations can be expected.