

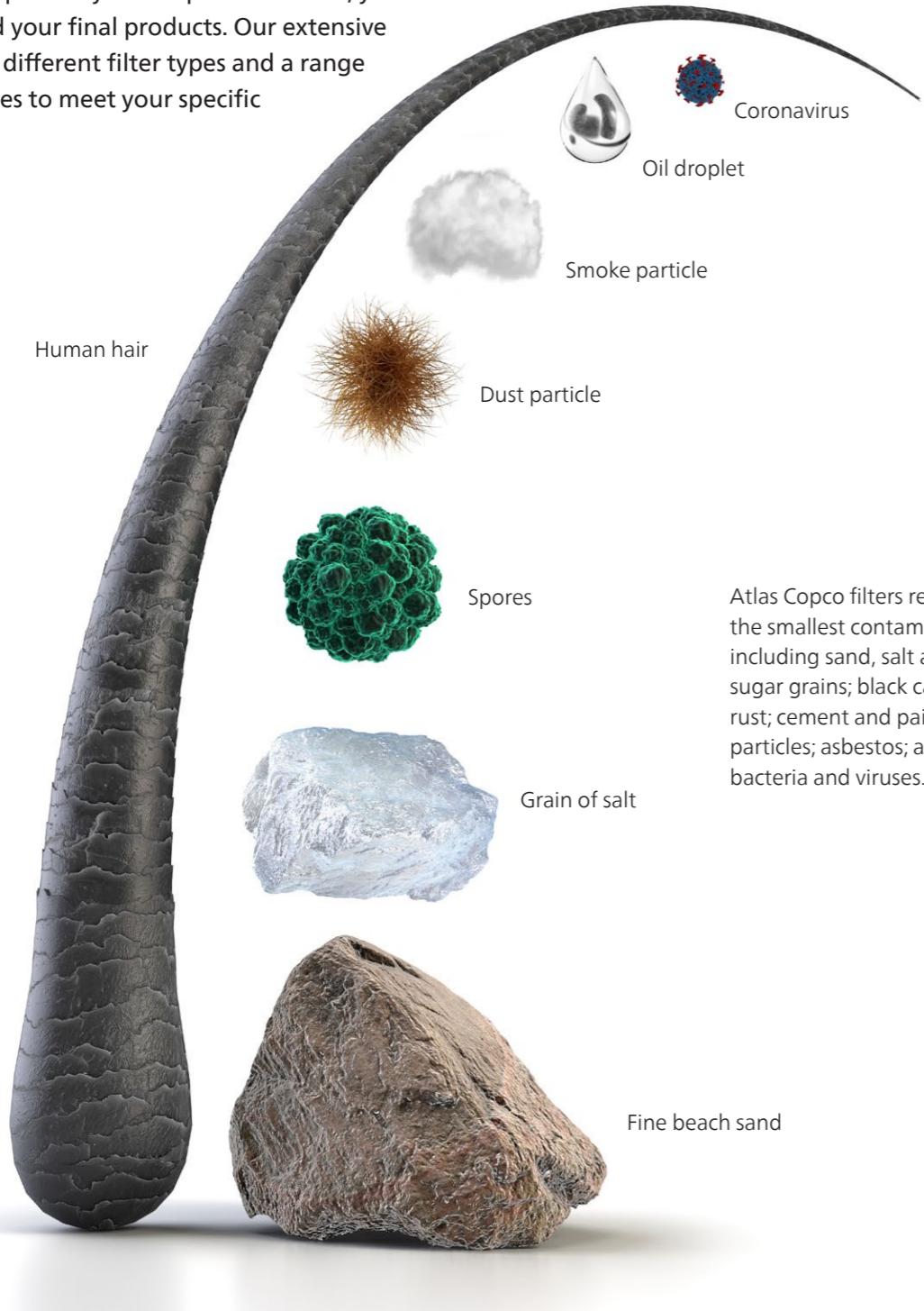
Atlas Copco



## Compressed air filters

## 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

FILTER APPROVALS	COMPANY CERTIFICATION
CE ASME CRN	ISO 9001 ISO 14001 ISO 45001
ACTIVE MEMBER OF	
ISO pneurop CAGI bcas VDMA	

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

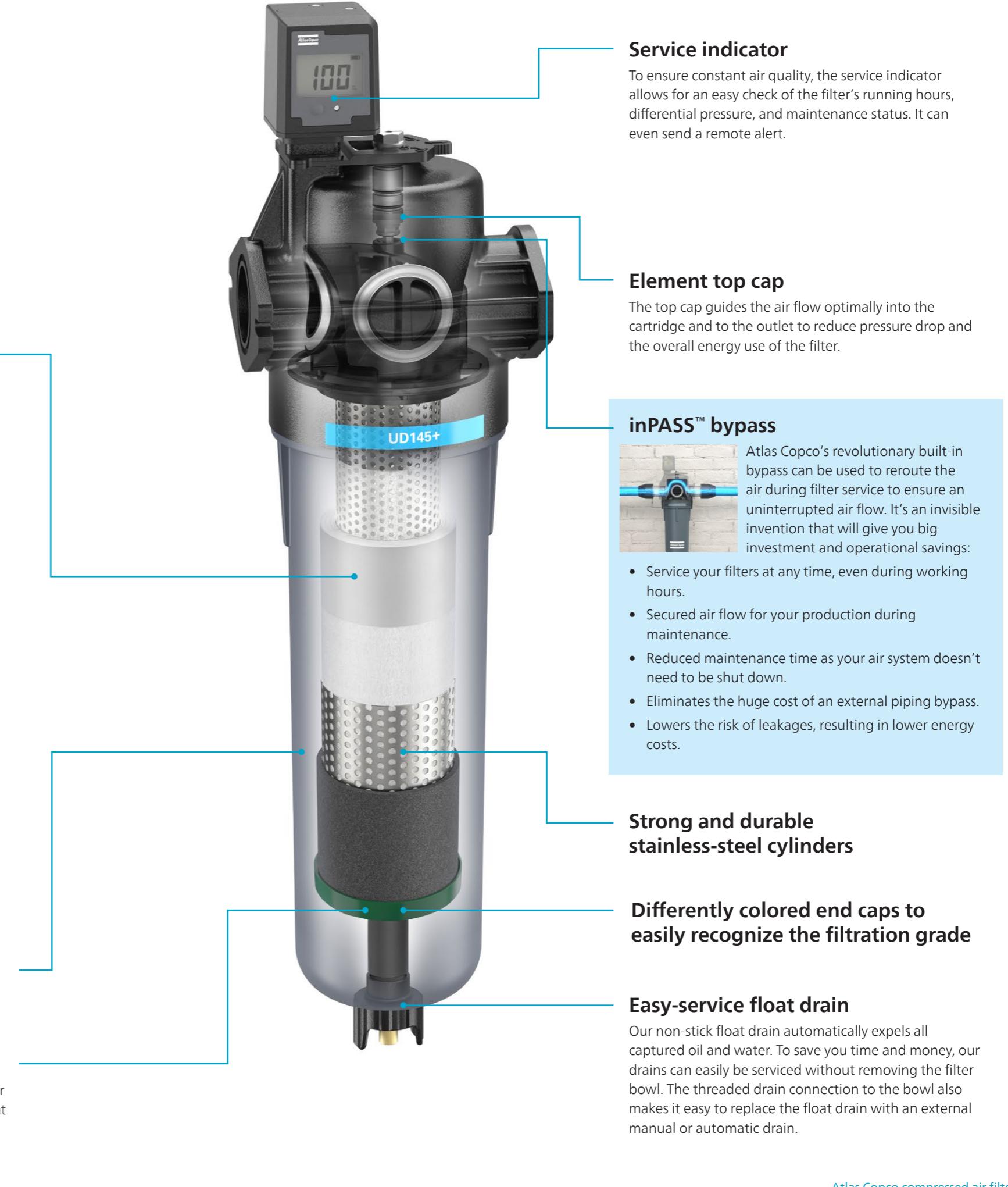
Choose the best filtration technology for your application to improve your air system performance:

- **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.

	<b>Flanged design</b> 6 grades 12 sizes 550 → 8,000 l/s 1,200 → 17,000 cfm	<b>Tower design</b> 1 grade 9 sizes 20 → 1,800 l/s 42 → 3,814 cfm	<b>20 bar / 290 psi</b> <b>50 bar / 725 psi</b> <b>100 bar / 1,450 psi</b> <b>350 bar / 5,075 psi</b>		<b>Threaded design</b> 5 grades 11 sizes 9 → 520 l/s 19 → 1,102 cfm						
	<b>Threaded design</b> 7 grades 14 sizes 7 → 630 l/s 14 → 1,335 cfm		<b>5 grades</b> 9 sizes 15 → 944 l/s 32 → 2,000 cfm		<b>Flanged design</b> 850 → 1,100 l/s 1,801 → 2,331 cfm						
Name	DDp+	PDp+	DD+	PD+	UD+	QD+	QDT+	<b>H</b> High-pressure		<b>SFA</b> Silicone-free	
Grade	Rough	Fine	Rough	Fine	Ultimate	Basic	Optimal	DDp+ & PDp+	Rough & fine	Rough & fine	Basic
Contaminant	Dry dust		Oil aerosol/wet dust			Oil vapor		Rough & fine	Rough & fine	Rough & fine	Basic
General applications						Special applications					
											
											
											
Dry dust						Micro-organisms					
Oil aerosol						Wet dust					
Oil vapor						Water drops					

## A solution for every application

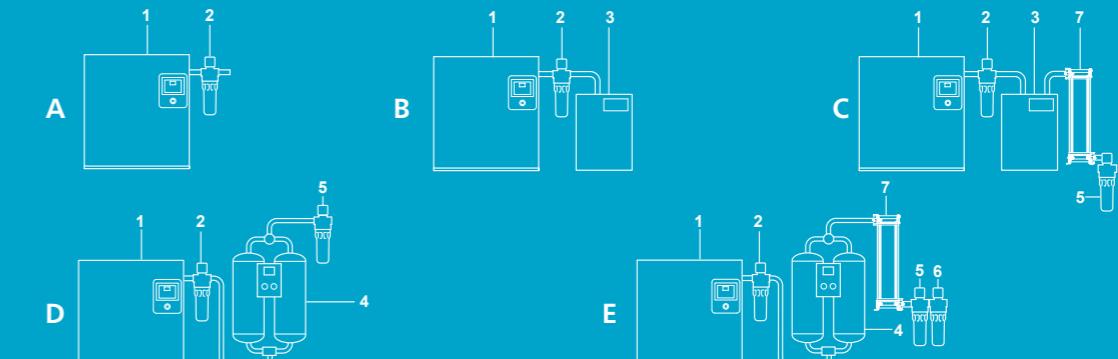
Depending on point of use and application, different compressed air purities might be needed. The table below shows the various ISO 8573-1:2010 air purity classes and the Atlas Copco filter and dryer-combinations that meet these classes.

ISO 8573-1:2010 class	Solid particles		Water	Oil (aerosol, liquid, vapor)
	Wet conditions	Dry conditions		
0		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+
				UD+
3	DD+	DDp+	Desiccant dryer, membrane dryer, rotary drum dryer	DD+
4	DD+	DDp+	Membrane dryer, refrigerant dryer	DD+
5	DD+	DDp+	Membrane dryer, refrigerant dryer	-
6	-	-	Membrane dryer, refrigerant dryer	-

\* Please contact your Atlas Copco sales representative.

### Examples of typical installations

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



\* 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.



### Certification

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

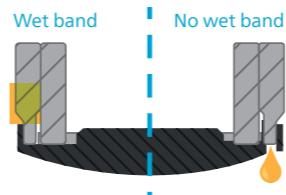
### 3 patented innovations

#### 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. Enhanced drainage channels for pure air

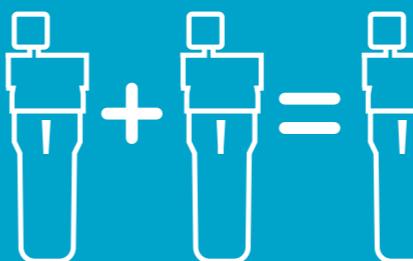
The bottom cap of the filter is designed to increase the drainage rate of the oil from the barrier by optimizing the contact between the barrier and drainage routes. This ensures no wet band is formed in the barrier and the re-entrainment risk is significantly diminished, resulting in cleaner air.



#### 3. 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.

### 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 For flanged filters: after 4,000 operating hours or 1 year or 350 mbar pressure drop		
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.



## 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.



### Performance

	DDp+	PDp+
Contaminant		
Filtration technology	Dry dust	Pleated
Test method		
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 For flanged filters: after 4,000 operating hours or 1 year or 350 mbar pressure drop	
Precede with	Dryer	Dryer & DDp+

### Certification

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

### 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	[2:-1]
Average dry pressure drop (mbar)	75
Element service	After 2,000 operating hours or 1 year For flanged filters: after 1,000 operating hours or 1 year
Precede with	Water separation UD+ or DD+/PD+ Dryer

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

## Options

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

- Potential-free alarm contact for gauge.
- Smart indicator.
- External wiring kit for smart indicator (alarm/power supply).
- Interconnection kit.
- Wall mounting kit.
- EWD including connection kit.



## 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	
	I/s	cfm	bar(e)	psig	bar(e)	psig	G	NPT	mm	inch	mm	inch	mm	inch	mm	inch	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.

	DD+/PD+/UD+		DDp+/PDp+		QD+	
	Standard	inPASS™	Standard	inPASS™	Standard	inPASS™
<b>Standard</b>						
Drain	X	X	X	X	X	X
Manual drain						
Indicator	size 7-25		size 7-25			
Gauge	> size 25		> size 25			
Smart indicator		X		X		
<b>Bypass</b>		X		X		X
<b>Options</b>						
Smart indicator	X		X		X	X
External wiring kit (for smart indicator)	X	X	X	X	X	X
Potential-free alarm for gauge	X		X			
Filter connection kit	X	X	X	X	X	X
Wall mounting kit	X	X	X	X	X	X
EWD drain with connection kit	X	X				

With inPASS™		Without inPASS™																		
Filter size	Filter size	380+	380	805	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	927.1	36.5	200.5	7.89	13.6	29.99
380+	380	380	380	805	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	927.1	36.5	200.5	7.89	13.6	29.99
425+	425	425	425	901	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	1043.1	41.1	200.5	7.89	14.95	32.96
510+	510	630	630	1081	7	102	16	232	G 3	NPT 3	250	9.84	191	7.52	1281.1	50.4	200.5	7.89	19.6	43.22
Flanged		Flanged connection																		
550+F/630+F	550	1165	7	102	16	232		DN 80		370	14.6	280	11.0	1295	51.0	1375	54.1	76.0	167.6	
850+F/970+F	850	1801	7	102	16	232		DN 100		510	20.1	410	16.1	1360	53.5	1500	59.1	141.0	310.9	
850+T	850	1801	7	102	16	232		DN 100		510	20.1	418	16.5	796	31.3	200	7.9	35.2	77.6	
1100+F/1260+F	1100	2331	7	102	16	232		DN 100		510	20.1	410	16.1	1360	53.5	1500	59.1	143.0	315.3	
1100+T	1100	2331	7	102	16	232		DN 100		510	20.1	418	16.5	966	38.0	200	7.9	37.4	82.4	
1400+F/1600+F	1400	2967	7	102	16	232		DN 150		620	24.4	485	19.1	1480	58.3	1560	61.4	210.0	463.0	
1800+F/2200+F	1800	3814	7	102	16	232		DN 150		640	25.2	490	19.3	1555	61.2	1640	64.6	176.0	388.0	
2200+F/2400+F	2200	4662	7	102	16	232		DN 150		640	25.2	490	19.3	1555	61.2	1640	64.6	178.0	392.4	
3000+F/3600+F	3000	6357	7	102	16	232		DN 200		820	32.3	650	17.7	1745	68.7	1710	67.3	420.0	925.9	
4000+F	4000	8476	7	102	16	232		DN 200		820	32.3	650	17.7	1745	68.7	1710	67.3	428.0	943.6	
5000+F	5000	10595	7	102	16	232		DN 200		820	32.3	650	17.7	1745	68.7	1710	67.3	432.0	952.4	
6000+F	6000	12714	7	102	16	232		DN 250		920	36.2	815	32.1	2085	82.1	1625	64.0	671.0	1479.3	
7000+F	7000	14833	7	102	16	232		DN 250		920	36.2	815	32.1	20						

# QDT Series

## Activated carbon towers for optimal oil vapor filtration

The high-efficiency activated carbon tower is capable of removing hydrocarbons, odors and oil vapor from compressed air. The activated carbon will, through adsorption, reduce the residual oil content to lower than 0.003 mg/m<sup>3</sup>. The pressure drop is low and stays minimal during the filter's lifetime.



QDT 20-310



QDT 425-1800

### Your benefits:

- Maximum oil vapor removal**  
Superb activated carbon material.
- Low pressure drop** - Optimal internal flow path.
- High reliability** - The QDT's robust design and rigorous quality control of the activated carbon optimize filter reliability.
- Long service intervals** - The high volume of activated carbon material ensures a long lifetime, even in very harsh working conditions.

### Options

- Oil indicator ensures pure air.
- Wall mounting kit for easy installation (20-185 l/s).

### Performance

	QDT
Contaminant	Oil vapor
Test method	ISO 8573-5:2001, ISO 12500-2:2007
Maximum oil carry-over (mg/m <sup>3</sup> )*	0.003
Average dry pressure drop (mbar)	125 (QDT 20-310) 72 (QDT 425-1800)
Element service	After 4,000 operating hours or 1 year (up to QDT 310) After 8,000 operating hours or 1 year (from QDT 425)
Precede with	Water separation UD+ or DD+/PD+ Dryer

\* After UD+ or DD+/PD+.

## Certification

ISO 8573-5:2001

## Sizing & dimensions

Filter size	Nominal capacity		Connections G or NPT	Dimensions								Weight	
	l/s	cfm		in	mm	in	mm	in	mm	in	kg	lbs	
20	20	42	1/2	490	19	223	9	190	7	7	22	22	
45	45	95	1	715	28	223	9	190	7	15	33	33	
60	60	127	1	840	33	223	9	190	7	18	40	40	
95	95	210	1	715	28	387	15	190	7	29	64	64	
125	125	265	1 1/2	840	33	387	15	190	7	34	75	75	
150	150	318	1 1/2	715	28	551	22	190	7	42	93	93	
185	185	392	1 1/2	840	33	551	22	190	7	50	110	110	
245	245	519	1 1/2	840	33	715	28	190	7	67	148	148	
310	310	657	1 1/2	840	33	879	35	190	7	84	185	185	
425	425	901	DN 80 3"	2148	85	710	28	600	24	264	581	581	
550	550	1165	DN 80 3"	2190	86	710	28	670	26	302	664	664	
850	850	1801	DN 100 4"	2320	91	724	29	805	32	391	860	860	
1100	1100	2331	DN 100 4"	2450	97	934	37	820	32	602	1324	1324	
1800	1800	3814	DN 150 6"	2612	103	1046	41	980	39	882	1940	1940	

## Correction factors

For other compressed air inlet temperatures, divide the filter capacity by the following correction factor (K<sub>t</sub>):

Inlet temperature °C	10	15	20	25	30	35	40	45	50	55	60	65	70*	75*	80*
Inlet temperature °F	50	59	68	77	96	95	104	113	122	131	140	149	158	167	176
Correction factor oil-free	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Correction factor oil-lubricated	1	1	1	1	1	1	1.2	1.5	1.7	2.1	2.4	3	3.5	4.1	4.9

\* For QDT flanged only.

For other compressed air inlet pressures, multiply the filter capacity by the following correction factor (K<sub>p</sub>):

Inlet pressure bar	3	4	5	6	7	8	9	10	11	12	13
Inlet pressure psi	44	58	73	87	102	116	131	145	160	174	193
Correction factor	0.57	0.77	0.83	1	1	1	1	1.05	1.05	1.11	1.18



## UD+ & QDT: the winning combination

The Atlas Copco UD+ - QDT filter train meets the requirements of air purity class 1 for total oil, according to ISO 8573-1:2010, in a typical compressed air installation:

UD+	QDT
Liquid oil & oil aerosol removal	Oil vapor removal
Guaranteed 0.0009 mg/m <sup>3</sup> aerosol and liquid	Guaranteed 0.003 mg/m <sup>3</sup> vapor
40% pressure drop reduction compared to DD+/PD+	65% pressure drop reduction compared to previous QDT
50% footprint reduction	Extremely compact compared to vessel designs

## Certified filter trains

Filter train	Purity class according to ISO 8573-1:2010	Certified
UD+ - QDT - DDp+	[2::1]	yes
UD+ - QDT - DDp+ PDp+	[1::1]	yes
UD+ - QD+	[2::1]	yes

## SFA Series

### Silicone-free removal of oil aerosol, dust and oil vapor

Superb air purity is a prerequisite to safeguard your instruments and end products. Our silicone-free SFA filters efficiently prevent dry and wet dust, particulates, oil aerosol and water droplets from entering your compressed air system. The SFA series is manufactured and treated according to the high standards of silicone-free equipment, and certified by the Fraunhofer Institute as guaranteed silicone-free.



## WSD Series

### High-performance water separators

Atlas Copco's WSD prevents condensed water from building up in your air system. The water separator comes as standard with Atlas Copco's aftercoolers and can also be installed at any point in your system. Made entirely of corrosion-proof material, these cyclone-based separators remove water aerosols to protect system components such as dryers and filters. Maintenance-free and without moving parts, they come with an automatic or a manual drain.



### Your benefits:

- Maximum contaminant removal** - Removal of dry and wet dust, particulates, oil aerosol and water droplets with high-efficiency glass fiber and fleece media.
- Significant energy savings & limited system operating costs** - Optimal design and filter media allow for a low pressure drop.
- High reliability** - Stainless-steel cores, double O-rings, epoxy-sealed caps and filter housing with anti-corrosive coating.
- Easy maintenance** - External ribbing on the threaded housing and push-on elements.
- Monitoring of energy use** - Differential pressure indication (indicator for sizes 9-32 l/s, gauge for sizes 44-520 l/s – optional).

### Options

Filter connection kit (9-520 l/s).  
Wall mounting kit (9-520 l/s).  
Quick coupling (DD+ & PD+ only).  
EWD no-loss electronic drain (DD+ & PD+ only).  
Voltage-free contact mounted in the differential gauge (not for QD+).

### Certification

Paint compatibility certificate (Fraunhofer Institute)

### Your benefits:

- A reliable air system** - The corrosion-proof drain prevents condensed water from building up in your air system.
- Minimal maintenance** - The water separator does not have moving parts and is thus maintenance-free. It comes with an automatic and a manual drain.
- Energy savings** - The intelligent drain function monitors condensate build-up with liquid level sensors. It drains the condensate only when required to avoid using compressed air inefficiently.
- Flexible installation** - WSD water separators can be installed at any point in your air net.

### Sizing & dimensions

Filter size	Nominal capacity*		Maximal capacity*		Connections G or NPT	Dimensions				Free space for cartridge replacement		Weight	
	l/s	cfm	l/s	cfm		mm	in	mm	in	mm	in	kg	lbs
DD+, DDp+, PD+, PDp+, QD+													
9	9	19	11	23	3/8	90	3.54	61	2.40	268	10.55	75	2.95
17	17	36	21	45	1/2	90	3.54	61	2.40	268	10.55	75	2.95
32	32	68	40	85	1/2	90	3.54	61	2.40	323	12.72	75	2.95
44	44	93	55	117	3/4 & 1	110	4.33	98.5	3.88	374	14.72	75	2.95
60	60	127	75	159	1	110	4.33	98.5	3.88	414	16.3	75	2.95
120	120	254	150	318	1-1/2	140	5.51	105	4.13	520	20.47	100	3.94
150	150	318	188	399	1-1/2	140	5.51	105	4.13	603	23.47	100	3.94
175	175	371	219	464	1-1/2	140	5.51	105	4.13	603	23.47	100	3.94
280	280	594	350	742	2 & 2-1/2	179	7.05	121	4.76	689	27.13	150	5.91
390	390	827	488	1035	3	210	8.27	128	5.04	791	31.14	200	7.87
520	520	1102	650	1378	3	210	8.27	128	5.04	961	37.83	200	7.87



\* Nominal pressure: 7 bar(e)/102 psig; temperature: 20°C/68°F.

### Sizing & dimensions

Type	Capacity range		Maximum working pressure		Connections	Dimensions				Weight	
						l/s	cfm	bar(e)	psi	inlet/outlet	mm
WSD 25	7-60	15-127	20	290	G 1	332	13.0	130	5.1	185	7.3
WSD 80	50-150	106-318	20	290	G 1½	432	17.0	130	5.1	185	7.3
WSD 250	125-350	265-742	20	290	G 2½	532	20.9	160	6.3	230	9.0
WSD 750	300-800	636-1695	20	290	83 mm*	532	20.9	160	6.3	230	9.0
						kg	lbs				

\* Blind flange to be machined up to this diameter.

# H Series

## Guaranteed air purity up to 350 bar

High-pressure filters efficiently reduce oil aerosol, dust and wet dust, particulates, water droplets and oil vapor in your compressed air stream to protect your investment, equipment and processes. Our innovative high-pressure filtration solutions are engineered to cost-effectively provide the best air purity and meet today's increasing quality demands for working pressures of up to 350 bar. All high-pressure filter housings are hydraulically tested to ensure safe and reliable operation at all times. A pressure test certificate accompanies each filter.



### Your benefits:

- Maximum contaminant removal (dry & wet dust, particulates, oil aerosol and water droplets)** - High-efficiency glass fiber and fleece media.
- Significant energy savings & limited system operation costs** Optimal design and filter media allow for low pressure losses.
- High reliability** - Strong and durable stainless-steel cores, double O-rings, epoxy-sealed caps and filter housing with anti-corrosive coating.

### Performance

	DDH <sup>+</sup>	PDH <sup>+</sup>	DDH <sup>+</sup>	PDH <sup>+</sup>	QDH <sup>+</sup>
Contaminant	Dry dust		Oil aerosol/wet dust		Oil vapor
Test method	ISO 8573-4:2019 ISO 12500-3:2009		ISO 8573-2:2018 ISO 12500-1:2007		ISO 8573-5:2001
Maximum oil carry-over (mg/m <sup>3</sup> )	-	-	0.08*	0.007*	0.003**
Particle removal efficiency (% at MPPS)	99.92 (0.1)	99.98 (0.06)	N/A	N/A	N/A
ISO class 8573-1	[2:-:2]	[1:-:2]	[2:-:3]	[1:-:2]	[3:-:1]
Dry pressure drop (mbar)	85	100	N/A	N/A	140
Wet pressure drop (mbar)	N/A	N/A	180	215	N/A
Element service	After 4,000 operating hours or 1 year or 350 mbar pressure drop		After 4,000 operating hours or 1 year		After 1,000 operating hours or 1 year
Precede with	N/A	DDH <sup>+</sup>	N/A	DDH <sup>+</sup>	DDH <sup>+</sup> /PDH <sup>+</sup>

Always install a liquid water separation system in front of a filter. Water separation is not needed in the high-pressure line if there is a sufficiently low PDP in the low-pressure line (e.g. nitrogen skid, low-pressure line with adsorption dryer).

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

\*\* After DD+/PD+ with inlet oil concentration of 10 mg/m<sup>3</sup>.

### Sizing & dimensions

Filter size	Nominal capacity			Connections		Dimensions						Weight		
						m <sup>3</sup> /h	l/s	cfm	in	mm	in	mm	in	kg
<b>20 bar aluminum</b>														
15+	54	15	32	3/8	90	3.5	80	3.1	185	7.3	1.0	2.2		
32+	115	32	68	1/2	90	3.5	80	3.1	185	7.3	1.1	2.4		
55+	198	55	117	1/2	90	3.5	80	3.1	240	9.4	1.3	2.9		
80+	288	80	170	3/4 & 1	110	4.3	100	3.9	260	10.2	1.6	3.5		
110+	396	110	233	1	110	4.3	100	3.9	300	11.8	2.1	4.6		
200+	720	200	424	1 1/2	140	5.5	131	5.2	410	16.1	4.2	9.3		
270+	972	270	572	1 1/2	140	5.5	131	5.2	490	19.3	4.5	9.9		
330+	1188	330	699	1 1/2	140	5.5	131	5.2	490	19.3	4.6	10.1		
490+	1764	490	1038	2 & 2 1/2	179	7	166	6.5	575	22.6	6.9	15.2		
<b>50 bar aluminum</b>														
160+	160	44	94	1/4	63	2.5	63	2.5	150	5.9	0.3	0.7		
250+	250	69	147	3/8	63	2.5	63	2.5	190	7.5	0.3	0.7		
450+	450	125	265	1/2	114	4.5	114	4.5	305	12.0	2.6	5.7		
550+	550	153	324	3/4	114	4.5	114	4.5	305	12.0	2.6	5.7		
835+	835	232	491	1	114	4.5	114	4.5	395	15.6	3.3	7.3		
1250+	1250	347	736	1 1/2	146	5.8	146	5.8	435	17.1	7.5	16.5		
1725+	1725	479	1015	1 1/2	146	5.8	146	5.8	435	17.1	7.5	16.5		
1925+	1925	535	1133	2	146	5.8	146	5.8	435	17.1	7.5	16.5		
3200+	3200	889	1883	2	146	5.8	146	5.8	635	25.0	10	22.0		
<b>50 bar stainless steel</b>														
100+	100	28	59	1/4	85	3.4	85	3.4	202	8.0	1.7	3.7		
200+	200	56	118	3/8	85	3.4	85	3.4	227	8.9	2	4.4		
340+	340	94	200	1/2	85	3.4	85	3.4	257	10.1	2.2	4.8		
500+	500	139	294	3/4	110	4.3	110	4.3	270	10.6	4	8.8		
1000+	1000	278	589	1	110	4.3	110	4.3	422	16.6	5	11.0		
1700+	1700	472	1000	1 1/2	150	5.9	150	5.9	517	20.4	15	33.1		
2040+	2040	567	1200	2	150	5.9	150	5.9	517	20.4	15	33.1		
3400+	3400	944	2000	2	150	5.9	150	5.9	817	32.2	21	46.3		
<b>100 bar stainless steel</b>														
100+	100	28	59	1/4	65	2.6	65	2.6	135	5.3	3.2	7.1		
315+	315	88	185	1/2	65	2.6	65	2.6	250	9.8	5.6	12.3		
460+	460	128	271	3/4	88	3.5	88	3.5	275	10.8	6.1	13.4		
680+	680	189	400	1	135	5.3	135	5.3	265	10.4	10.5	23.1		
1200+	1200	333	706	1	135	5.3	135	5.3	480	18.9	14.7	32.4		
1700+	1700	472	1000	1 1/2	150	5.9	150	5.9	525	20.7	22	48.5		
3400+	3400	944	2000	2	150	5.9	150	5.9	815	32.1	28	61.7		
<b>350 bar stainless steel</b>														
48+	48	13	28	1/4	41	1.6	41	1.6	103	4.0	1.6	3.5		
111+	111	31	65	1/4	65	2.6	65	2.6	135	5.3	3.2	7.1		
255+	255	71	150	1/2	88.5	3.5	88.5	3.5	210	8.2	5.6	12.3		
510+	510	142	300	3/4	88.5	3.5	88.5	3.5	280	10.9	6.1	13.4		
750+	750	208	441	1	150	5.9	150	5.9	330	12.9	14.5	32.0		
1330+	1330	369	783	1	150	5.9	150	5.9	480	18.7	17.4	38.3		

### Correction factors

**20 bar aluminum</b**



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