

# Atlas Copco

Breathing Air Purifiers

BAP/BAP+ Series (7-145 l/s / 15-307 cfm)



*Sustainable Productivity*

**Atlas Copco**



# Breathing air that complies with International Breathing Air Standards

High quality air is of vital importance to many industries but even more so in breathing air applications. Atlas Copco BAP breathing air purifiers are designed to offer protection against a range of contaminants that may be present in a compressed air fed breathing air system. These include fumes, oil, vapors, gases, solid particles and micro-organisms. Complying with International Breathing Air standards, the BAP breathing air purifier range assures a safe working environment in a wide range of applications.

## THESE INCLUDE:

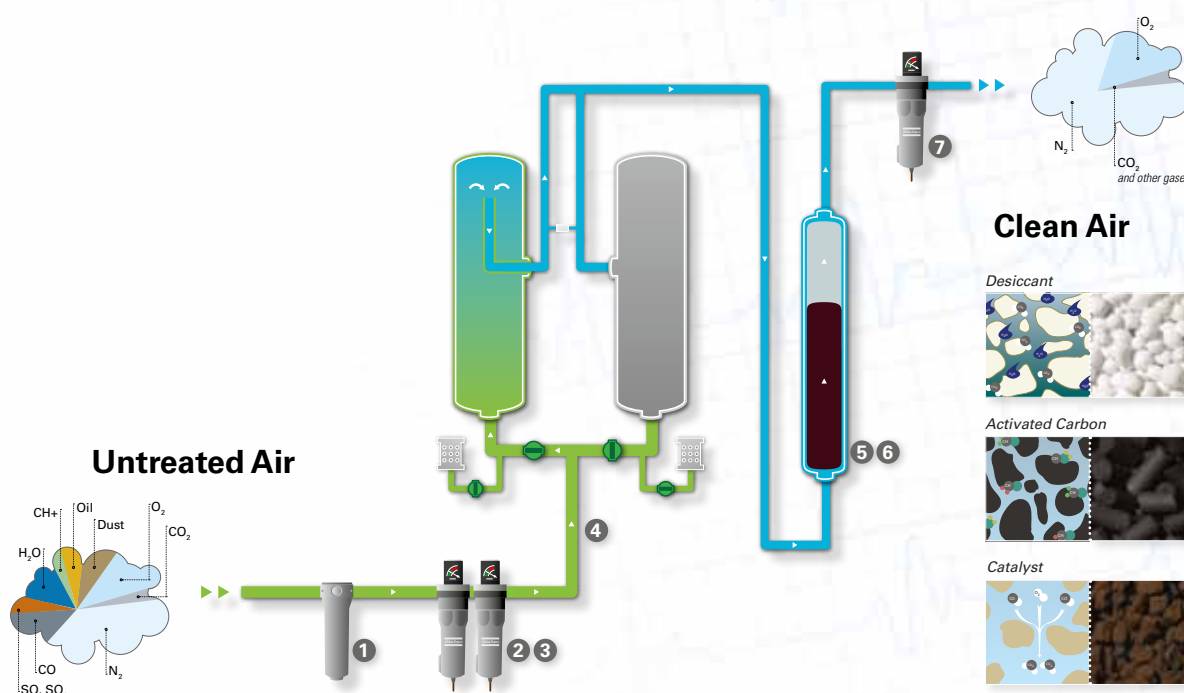
- Shot-blasting
- Tank cleaning
- Tunneling
- Pharmaceutical manufacturing
- Spray painting
- Offshore / marine
- Asbestos removal
- High-pressure cylinder filling

## INTERNATIONAL COMPLIANCE

Atlas Copco's Breathing Air Purifiers comply with OSHA Grade D, NFPA-99, CSA Z180.1-00, CGA G7.1-1997, EN12021, BS 4275, ISO 14971, OHSAS 18001, European Pharmacopoeia and other International Breathing Air Standards.

# High-efficiency filtration

The BAP's multi-stage filtration offers unparalleled air purity.



- 1 2 3** A water separator for free water removal together with fine and coarse coalescing filters, remove oil aerosol to less than 0.01 mg/m<sup>3</sup>.
- 4** A heatless desiccant dryer reduces moisture content to a pressure dew point of -40°C/-40°F, removing any risk of condensation, bacteria and mold growth.
- 5 6** A dual cleaning stage includes activated carbon to eliminate hydrocarbons (oil vapor, smells). A catalyst then converts CO into CO<sub>2</sub>.
- 7** A bacterial filter at the outlet removes bacteria and particles that may have been introduced in the desiccant stages down to 0.01 micron.

## ATLAS COPCO CHALLENGE TEST

Atlas Copco developed the Challenge Test to ensure the BAP series meets international regulations. The test was designed to take into account the impurities in ambient air by subjecting the BAP to the maximum concentrations reported by governments worldwide. Excelling in these 'worst case scenarios' in ambient air quality, the BAP gives you peace of mind in real life conditions.

	EN 12021	European Pharmacopoeia	Breathable Air System air quality
1 CO <sub>2</sub>	< 500 ppm	< 500 ppm	< 375 ppm (1)
2 CO	< 15 ppm	< 5 ppm	< 1 ppm (2)
3 SO <sub>2</sub>	Not specified	< 1 ppm	< 0.01 ppm (3)
4 NOx	Not specified	< 2 ppm	< 1 ppm (4)
Water vapor	5°C below lowest temperature*	ADP -45°C (-49°F) / PDP -31°C (-23°F)	PDP -40°C (-40°F)
Oil vapor	0,5 mg/m <sup>3</sup>	< 0.1 mg/m <sup>3</sup>	< 0.07 mg/m <sup>3</sup>
Dust particles	Not specified	Not specified	< 0.01 ppm
Taste and odor	Without significant odor or taste	Taste and odor free	Free

\* In case the conditions of usage and storage of the compressed air supply are not known, the pressure dewpoint shall not exceed -11°C.

1) When tested with 663 ppm (at inlet)

2) When tested with 70 ppm (at inlet)

3) When tested with 5 ppm (at inlet)

4) When tested with 0.1 ppm (at inlet)

# Assured purity, complete endurance

BAP/BAP+ air purifiers provide the ultra clean air you require. Their innovative filtration system is the definitive medical air solution, while a small footprint allows you to make the most of the space available. The BAP/BAP+ both offer unparalleled air purity through 7 stages of active purification.

1

## ADVANCED CONTROL AND MONITORING SYSTEM

- Timer control variant cycles defined to reach dew point target even at 100% load.
- Auto restart after power failure function with cycle status memory.
- Full status annunciation on display and pressure gauges.
- Remote alarm and remote control.
- Purge Saver contact: the dryer can freeze purge cycle in case of unload/stop signal.
- All controls are protected from water and dust thanks to the IP54 cubicle.



2

## FILTERS

- Pre-filter(s) at the inlet prevents oil contamination, increasing desiccant lifetime.
- After filters protect the network against dust, avoiding network contamination.
- Can be mounted directly on the inlet and outlet of the dryer, for low pressure drop.
- Easy to assemble and maintain as no extra piping or filter connections are required.



3

## HIGH-QUALITY VALVE BLOCK WITH FEW MOVING PARTS

Designed to minimize pressure drop and increase reliability.



4

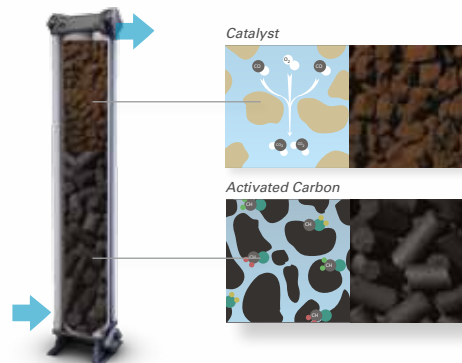
## DIRECT READING GAS SENSORS

- Simple activation.
- Direct reading from the controller screen.
- Adjustable level of warnings.
- Voltage free contact for easy integration.

5

## DEW POINT DEPENDENT SWITCHING (STANDARD ON BAP<sup>+</sup>)

- Real dew point monitoring (hygrometer).
- Dew point display on controller (and alarm).
- The dryer will only switch to the next tower when the desiccant is saturated (based on dew point input). During that period, the dryer consumes no purge.



6

## DUAL CLEANING STAGE

- Activated carbon eliminates hydrocarbons (oil vapor, smells).
- A catalyst converts CO into CO<sub>2</sub>.

7

## ELECTRONIC WATER DRAIN (OPTIONAL)



## SELECT THE BEST SUITED PRODUCT

Atlas Copco offers you the freedom to select the appropriate functionalities to meet your specific demands.

Option	BAP	BAP+
Pharmacopoeia air quality	✓	✓
Seven steps air filtration	✓	✓
Small footprint	✓	✓
Set of alarms on controller	-	✓
Measuring dryer outlet pressure	-	✓
Measuring dewpoint purge control	0	✓
Pressure drop electrical switches over filters	0	✓
Lockable ball valves	-	✓
Graphic service intervals	-	✓
Power supply for sensors from cubicle	-	✓
Gas sensors reading in main controller	-	✓

✓: Standard

- : Not available

0: Optional

## OPTIMIZE YOUR SYSTEM

Some applications may need or may benefit from additional options and more refined control and air treatment systems. To meet these needs, Atlas Copco has developed options and easily integrated compatible equipment.

Option	BAP	BAP+
EWD on filters and water drain	0	0
Inlet solenoid for remote control	-	0
NPT connection	0	0
QDT quality indicator	0	0
Catalyst (CO to CO <sub>2</sub> )	0	0
CO <sub>2</sub> sensor	0	0
O <sub>2</sub> sensor	0	-
Overflow protection (nozzle)	0	0
AirContact and Combox-e with visualization	-	0
Gateway (Profibus, Modbus)	-	0

- : Not available

0: Optional



BAP

BAP+

# Technical specifications BAP 7-145

Type	Inlet pressure		Max. inlet flow			Purge	Pressure drop	
	bar(e)	psig	l/s	m³/h	cfm	%	dP mbar	psi
BAP 7 BAP 7+	7	102	7.0	25.2	14.8	19.0	510	7.4
	10	145	8.4	30.2	17.8	15.8	510	7.4
	13	188	9.4	33.8	19.9	14.1	510	7.4
BAP 13 BAP 13+	7	102	13.0	46.8	27.5	19.0	530	7.7
	10	145	15.6	56.2	33.1	15.8	530	7.7
	13	188	17.5	63.0	37.1	14.1	530	7.7
BAP 25 BAP 25+	7	102	25.0	90.0	53.0	18.0	560	8.1
	10	145	30.0	108.0	63.6	15.0	560	8.1
	13	188	33.8	121.7	71.6	13.3	560	8.1
BAP 35 BAP 35+	7	102	35.0	126.0	74.2	18.0	600	8.7
	10	145	42.0	151.2	89.0	15.0	600	8.7
	13	188	47.3	170.3	100.2	13.3	600	8.7
BAP 50 BAP 50+	7	102	50.0	180.0	106.0	19.0	820	11.9
	10	145	60.0	216.0	127.1	15.8	820	11.9
	13	188	67.5	243.0	143.0	14.1	820	11.9
BAP 70 BAP 70+	7	102	70.0	252.0	148.3	18.0	660	9.6
	10	145	84.0	302.4	178.0	15.0	660	9.6
	13	188	94.5	340.2	200.2	13.3	660	9.6
BAP 80 BAP 80+	7	102	80.0	288.0	169.5	18.0	700	10.2
	10	145	96.0	345.6	203.4	15.0	700	10.2
	13	188	108.0	388.8	228.9	13.3	700	10.2
BAP 100 BAP 100+	7	102	100.0	360.0	211.9	19.0	820	11.9
	10	145	120.0	432.0	254.3	15.8	820	11.9
	13	188	135.0	486.0	286.1	14.1	820	11.9
BAP 145 BAP 145+	7	102	145.0	522.0	307.3	19.0	800	11.6
	10	145	174.0	626.4	368.7	15.8	800	11.6
	13	188	195.8	704.9	414.9	14.1	800	11.6

Type	BAP					BAP+				
	Weight	Length	Width	Height	Connection	Weight	Length	Width	Height	Connection
	kg	mm	mm	mm		kg	mm	mm	mm	
BAP 7 / BAP 7+	184	950	650	885	1/2"	214	950	650	1851	1/2"
BAP 13 / BAP 13+	201	950	650	1075	1/2"	231	950	650	1851	1/2"
BAP 25 / BAP 25+	245	950	650	1300	1/2"	275	950	650	1851	1/2"
BAP 35 / BAP 35+	271	950	650	1545	1/2"	301	950	650	1851	1/2"
BAP 50 / BAP 50+	315	950	650	1915	1"	345	950	650	1858	1"
BAP 70 / BAP 70+	446	1250	850	1545	1"	476	1250	850	1840	1"
BAP 80 / BAP 80+	494	1250	850	1915	1 1/2"	524	1250	850	1840	1"
BAP 100 / BAP 100+	502	1250	850	1915	1 1/2"	532	1250	850	1840	1"
BAP 145 / BAP 145+	620	1250	850	1915	1 1/2"	650	1250	850	1856	1"

\* 50 Hz: G; 60 Hz: NPT

Flow mentioned is the maximum inlet flow to the BAP/BAP+ series.  
Dryer unit performance measured according to ISO 7183, latest edition.  
Quality of air measured according to ISO 8573-2, Ed. 1, 1996, ISO 8573-4, Ed.1, 2001 and ISO 8573-5, Ed.1, 2001 for filter used.

#### Reference conditions:

Compressed air inlet temperature: 35°C/100°F.

Ambient temperature: 25°C/77°F.

Inlet relative humidity: 100%.

Nominal working pressure: 7.5 bar(e)/109 psig, 10 bar(e)/145 psig and 12.5 bar(e)/181 psig respectively.

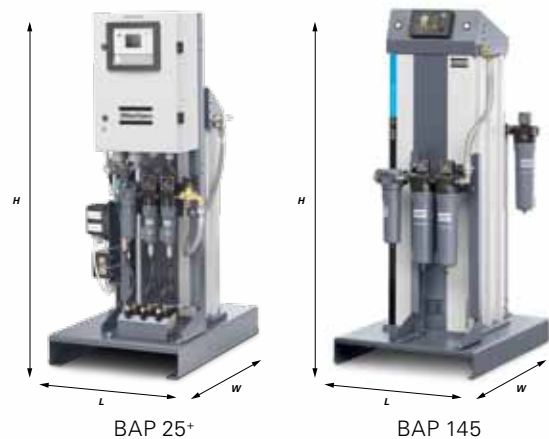
#### Limitations of operation:

Maximum/minimum ambient temperature: 40°C/1°C, 104°F/34°F.

Maximum inlet compressed air temperature: 45°C/113°F.

Maximum inlet pressure: 16 bar(e)/232 psig for 13 bar units.

Maximum pressure: 11 bar(e)/160 psig for 7.5 bar and 10 bar units.





### **Driven by innovation**

With more than 140 years of innovation and experience, Atlas Copco will deliver the products and services to help maximize your company's efficiency and productivity. As an industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous innovation, we strive to safeguard your bottom line and bring you peace of mind.



### **Building on interaction**

As part of our long-term relationship with our customers, we have accumulated extensive knowledge of a wide diversity of processes, needs and objectives. This gives us the flexibility to adapt and efficiently produce customized compressed air solutions that meet and exceed your expectations.



### **A committed business partner**

With a presence in over 170 countries, we will deliver high-quality customer service anywhere, anytime. Our highly skilled technicians are available 24/7 and are supported by an efficient logistics organization, ensuring fast delivery of genuine spare parts when you need them. We are committed to providing the best possible know-how and technology to help your company produce, grow, and succeed. With Atlas Copco you can rest assured that your superior productivity is our first concern!

