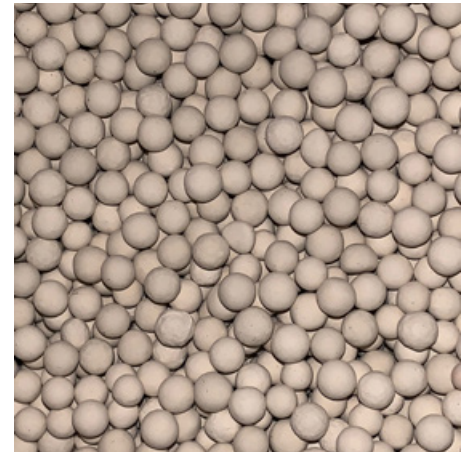


# Breathing Star

## BSP-MT 1 - BSP-MT 8



### Breathable Compressed Air

BSP-MT1-8 breathing air purifiers are designed to treat compressed air reliably and efficiently and deliver breathable quality compressed air that meets or exceeds the air purity requirements shown in European Pharmacopia and other global breathing air specifications.

### BSP-MT Operation

Compressed air entering the breathing air purifier is first passed through a pair of coalescing filters (1 x general purpose filter and 1 x high efficiency filter in series) for the reduction of particulates, water aerosols and oil aerosols.

The air then enters a heatless adsorption dryer where water vapour and Carbon Dioxide (CO<sub>2</sub>) are reduced.

Next the air enters the activated carbon and catalyst stage for treatment of oil vapour, odours and conversion of Carbon Monoxide (CO) into Carbon Dioxide (CO<sub>2</sub>).

Finally the air exits through a dry particulate filter.



### Advantages

- Parker BSP-MT breathing air purifiers provide breathable quality compressed air to meet or exceed European & global breathing air standards

### Limits for breathing air

	Europe		USA	Australia	BSP-MT Breathing Air Purifier Outlet
	EN12021	European Pharmacopia	ANSI/CGA	AS1715	
Carbon Monoxide (CO)	<5 ppm	<5 ppm	<10 ppm	<10 ppm	<5 ppm
Carbon Dioxide (CO <sub>2</sub> )	< 500 ppm	< 500 ppm	< 1000 ppm	< 800 ppm	< 500 ppm
Humidity (H <sub>2</sub> O)	< 5°C	< 67 ppm	< 10°F	< 100 mg/m <sup>3</sup>	< 67 ppm
Oxygen (O <sub>2</sub> )	21% (+/-1%)	20.4% - 21.4%	21.5%	-	No change from inlet
Oil	< 0.5 mg/m <sup>3</sup>	< 0.1 mg/m <sup>3</sup>	< 0.5 mg/m <sup>3</sup>	< 1.0 mg/m <sup>3</sup>	< 0.1 mg/m <sup>3</sup>
Odours / Taste	Odourless / Tasteless	Odourless / Tasteless	Odourless / Tasteless	Odourless / Tasteless	Odourless / Tasteless
Sulphur Dioxide (SO <sub>2</sub> )	-	< 1 ppm	-	-	< 1 ppm
Nitrous Gases (NO/NO <sub>2</sub> )	-	< 2 ppm	-	-	< 2 ppm



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## Performance

Models	Dewpoint (Standard)		ISO8573-1:2010 Classification (Standard)
	°C	°F	
BSP-MT 1-8	-40	-40	Class 2.2.1

## Technical Data

Models	Minimum Operating Pressure		Maximum Operating Pressure		Minimum Operating Temperature		Maximum Operating Temperature		Maximum Ambient Temperature		Electrical Supply (Standard)	Electrical Supply (Option)	Electrical Supply (Option)	Thread Type	Noise Level
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F					dB(A)
BSP-MT 1-8	4	58	16	232	5	41	50	122	50	122	230V / 1ph / 50~60Hz	115V / 1ph / 50~60Hz	24V DC	BSPP	<75

## Flow Rates

Model	Pipe Size	Flow Rate			
		L/s	m³/min	m³/hr	cfm
BSP-MT 1	G¼	4	0.22	13	8
BSP-MT 2	G¼	7	0.40	24	14
BSP-MT 3	G¼	11	0.67	40	24
BSP-MT 4	G¼	16	0.94	56	33
BSP-MT 6	G½	25	1.50	90	53
BSP-MT 7	G½	32	1.94	116	68
BSP-MT 8	G½	39	2.32	139	82

Stated flows are for operation at 13 bar (g) (189 psi g), 35°C (95°F) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

For flows at other conditions, apply the correction factors shown below.

## Product Selection & Correction Factors

For correct operation, compressed air dryers must be sized using for the maximum (summer) inlet temperature, maximum (summer) ambient temperature, minimum inlet pressure, required outlet dewpoint and maximum flow rate of the installation.

To select a dryer, first calculate the MDC (Minimum Drying Capacity) using the formula below then select a dryer from the flow rate table above with a flow rate equal to or above the MDC.

Minimum Drying Capacity = System Flow x CFIT x CFAT x CFMIP

### CFIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		0.95	0.97	1.00	1.20	1.30	1.35

### CFAT - Correction Factor Maximum Ambient Temperature

Maximum Ambient Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		1.00	1.00	1.00	1.00	1.00	1.00

### CFMIP - Correction Factor Minimum Inlet Pressure

Minimum Inlet Pressure	bar g	4	5	6	7	8	9	10	11	12	13	14	15	16
	psi g	58	73	87	100	116	131	145	160	174	189	203	218	232
Correction Factor		2.60	2.24	1.93	1.68	1.46	1.37	1.32	1.29	1.18	1.00	0.95	0.82	0.77

## Controller Functions

Dryer Models	Controller Function							
	Power On Indication	Visual Fault Indication	Dewpoint Display	DDS - Energy Saving Technology	Filter Service Indicator	Dryer Service Indicator	Fault Relay: Power Loss Dewpoint Alarm Sensor Failure	4-20mA Dewpoint Re-transmission
BSP-MT 1 - 8	•					•		
Optional Dewpoint Sensor	•		•	•		•	•	Optional

## Included Filtration

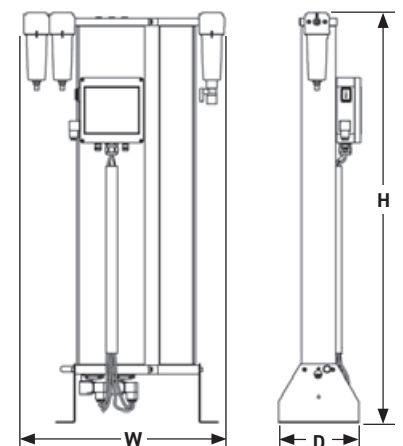
Model	Dryer Inlet		Dryer Outlet	
	High Efficiency Filter 1	High Efficiency Filter 2	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter (Option)
BSP-MT 1	AOPX010A	AAPX010A	AOPX010A	AAPX010A
BSP-MT 2	AOPX010A	AAPX010A	AOPX010A	AAPX010A
BSP-MT 3	AOPX010A	AAPX010A	AOPX010A	AAPX010A
BSP-MT 4	AOPX010A	AAPX010A	AOPX010A	AAPX010A
BSP-MT 6	AOPX015C	AAPX015C	AOPX015C	AAPX015C
BSP-MT 7	AOPX015C	AAPX015C	AOPX015C	AAPX015C
BSP-MT 8	AOPX020D	AAPX020D	AOPX020D	AAPX020D

## Filtration Performance

Filtration Performance	General Purpose Pre-filter	High Efficiency Filter	General Purpose Dry Particulate Filter
Filtration Grade	AO	AA	AO
Filtration Type	Coalescing	Coalescing	Dry Particulate
Particle Reduction (inc water & oil aerosols)	Down to 1 micron	Down to 0.01 micron	Down to 1 micron
Maximum Remaining Oil Aerosol Content at 21°C	≤0.5 mg/m <sup>3</sup> (≤0.5 ppm(w))	≤0.01 mg/m <sup>3</sup> (≤0.01 ppm(w))	N/A
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A	N/A
Filtration Efficiency	99.925%	99.9999%	99.925%

## Weights & Dimensions

Model	Pipe Size	Dimensions						Weight	
		Height (H)		Width (W)		Depth (D)			
		mm	ins	mm	ins	mm	ins	kg	lbs
BSP-MT 1	G ¼	403	16	575	22.68	216	8.5	16.5	36.4
BSP-MT 2	G ¼	578	23	575	22.6	216	8.5	21.5	47.4
BSP-MT 3	G ¼	828	33	575	22.6	216	8.5	29.0	63.9
BSP-MT 4	G ¼	1078	42	575	22.6	216	8.5	36.0	79.4
BSP-MT 6	G ½	1133	45	748	29.4	300	11.8	75.0	165.4
BSP-MT 7	G ½	1358	53	748	29.4	300	11.8	85.0	187.4
BSP-MT 8	G ½	1558	61	748	29.4	300	11.8	97.0	213.9



## Quality Assurance / IP Rating / Pressure Vessel Approvals

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	IP65 Indoor Use Only
EU	Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU
USA	Approval to ASME VIII Div. 1 not required
AUS	Approval to AS1210 not required
RUSSIA	TR (formerly GOST-R)
<b>For use with Compressed Air Only</b>	

# Parker Worldwide

## Europe, Middle East, Africa

### AE – United Arab Emirates,

Dubai

Tel: +971 4 8127100

### AT – Austria, St. Florian

Tel: +43 (0)7224 66201

### AZ – Azerbaijan, Baku

Tel: +994 50 2233 458

### BE/NL/LU – Benelux,

Hendrik Ido Ambacht

Tel: +31 (0)541 585 000

### BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00

### CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00

### CZ – Czech Republic,

Prague

Tel: +420 284 083 111

### DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0

### DK – Denmark, Ballerup

Tel: +45 43 56 04 00

### ES – Spain, Madrid

Tel: +34 902 330 001

### FI – Finland, Vantaa

Tel: +358 (0)20 753 2500

### FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25

### GR – Greece

Tel: +30 69 44 52 78 25

### HU – Hungary, Budaörs

Tel: +36 23 885 470

### IE – Ireland, Dublin

Tel: +353 (0)1 466 6370

### IL – Israel

Tel: +39 02 45 19 21

### IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21

### KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000

### NO – Norway, Asker

Tel: +47 66 75 34 00

### PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00

### PT – Portugal

Tel: +351 22 999 7360

### RO – Romania, Bucharest

Tel: +40 21 252 1382

### RU – Russia, Moscow

Tel: +7 495 645-2156

### SE – Sweden, Borås

Tel: +46 (0)8 59 79 50 00

### SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650

### TR – Turkey, Istanbul

Tel: +90 216 4997081

### UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878

### ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700

## North America

### CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

### US – USA, Cleveland

Tel: +1 216 896 3000

## Asia Pacific

### AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

### CN – China, Shanghai

Tel: +86 21 2899 5000

### HK – Hong Kong

Tel: +852 2428 8008

### IN – India, Mumbai

Tel: +91 22 6513 7081-85

### JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

### KR – South Korea, Seoul

Tel: +82 2 559 0400

### MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

### NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

### SG – Singapore

Tel: +65 6887 6300

### TH – Thailand, Bangkok

Tel: +662 186 7000

### TW – Taiwan, Taipei

Tel: +886 2 2298 8987

## South America

### AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

### BR – Brazil, Sao Jose dos Campos

Tel: +55 080 0727 5374

### CL – Chile, Santiago

Tel: +56 22 303 9640

### MX – Mexico, Toluca

Tel: +52 72 2275 4200



### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

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### US Product Information Centre

Toll-free number: 1-800-27 27 537

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