

# BAS - Breathing Air System

## BAS HL 050 - BAS HL 085

### Engineering Data Sheet



## BAS HL PERFORMANCE

MODELS	DEWPOINT (STANDARD)		ISO8573-1:2010 CLASSIFICATION (STANDARD)
	°C	°F	
BAS HL 050 to BAS HL 085	-40	-40	CLASS 1.2.0 (<0.003mg/m <sup>3</sup> total oil) Class1.2.1

## TECHNICAL DATA

MODELS	MIN OPERATING PRESSURE		MAX OPERATING PRESSURE		MIN OPERATING TEMP		MAX OPERATING TEMP		MAX AMBIENT TEMP		ELECTRICAL SUPPLY (STANDARD)	ELECTRICAL SUPPLY (OPTIONAL)	THREAD TYPE	NOISE LEVEL dB (A)
	BAR G	PSI G	BAR G	PSI G	°C	°F	°C	°F	°C	°F				
BAS HL 050 to BAS HL 085	4	58	16	232	5	41	35	95	55	131	85 - 265V 1ph 50/60Hz	24V DC	BSPP or NPT	<75

## FLOW RATES

MODELS	PIPE SIZE BSPP OR NPT	INLET FLOW RATE			
		L/S	M <sup>3</sup> /MIN	M <sup>3</sup> /HR	CFM
BAS HL 050	½"	15	0.92	55	32
BAS HL 055	½"	19	1.17	70	41
BAS HL 060	½"	25	1.50	90	53
BAS HL 065	½"	31	1.84	110	65
BAS HL 070	¾"	42	2.51	150	88
BAS HL 075	1"	51	3.09	185	109
BAS HL 080	1"	61	3.67	220	129
BAS HL 085	1 ½"	83	5.01	300	177

Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure. For flows at other pressures, 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 MTC (Minimum Treatment Capacity) using the formula below then select a dryer from the flow rate table above with a flow rate equal to or above the MTC.

$$\text{Minimum Treatment Capacity} = \text{System Flow} \times \text{CFIT} \times \text{CFAT} \times \text{CFMIP} \times \text{CFOD}$$

## CFIT - Correction Factor Maximum Inlet Temperature

MAXIMUM INLET TEMPERATURE	°C	25	30	35
	°F	77	86	95
CORRECTION FACTOR		1.00	1.00	1.00

## 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
	PSIG	58	73	87	100	116	131	145	160	174	189	203	218	232
CORRECTION FACTOR		1.60	1.33	1.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

## CFOD - Correction Factor Dewpoint

MAXIMUM INLET TEMPERATURE	°C	-40
	°F	-40
CORRECTION FACTOR		1.00

# CONTROLLER FUNCTIONS

MODELS	CONTROLLER FUNCTION							
	POWER ON INDICATION	VISUAL FAULT INDICATION	DEWPOINT DISPLAY	FILTER SERVICE INDICATOR	CARBON & CATALYST SERVICE INDICATOR	DRYER SERVICE INDICATOR	FAULT RELAY: POWER LOSS DEWPOINT ALARM SENSOR FAILURE	4-20MA DEWPOINT RE-TRANSMISSION
BAS HL 050 - BAS HL 085	•	•	•	•	•	•	•	•

# INCLUDED FILTRATION

MODELS	PIPE SIZE BSPP OR NPT	DRYER INLET		DRYER OUTLET		
		GENERAL PURPOSE PRE-FILTER	HIGH EFFICIENCY FILTER	OIL VAPOUR REDUCTION FILTER & CATALYST STAGE	GENERAL PURPOSE DRY PARTICULATE FILTER	HIGH EFFICIENCY DRY PARTICULATE FILTER
BAS HL 050	½"	AOPX015C	AAPX015C	Included	AOPX015C	AAPX015C
BAS HL 055	½"	AOPX015C	AAPX015C	Included	AOPX015C	AAPX015C
BAS HL 060	½"	AOPX020C	AAPX020C	Included	AOPX020C	AAPX020C
BAS HL 065	½"	AOPX020C	AAPX020C	Included	AOPX020C	AAPX020C
BAS HL 070	¾"	AOPX025D	AAPX025D	Included	AOPX025D	AAPX025D
BAS HL 075	1"	AOPX025E	AAPX025E	Included	AOPX025E	AAPX025E
BAS HL 080	1"	AOPX025E	AAPX025E	Included	AOPX025E	AAPX025E
BAS HL 085	1 ½"	AOPX030G	AAPX030G	Included	AOPX030G	AAPX030G

# FILTRATION PERFORMANCE

FILTRATION GRADE	FILTER TYPE	PARTICLE REDUCTION	MAX REMAINING OIL CONTENT AT 21°C (70°F)	FILTRATION EFFICIENCY	CHANGE ELEMENT EVERY	ELEMENT SHELF LIFE
AO with float drain	Coalescing Filter	Down to 1 micron, including water and oil aerosols	≤0.5 mg/m <sup>3</sup> ≤0.5 ppm(w)	99.925%	12 Months	2 years (extendable to 5 years if elements are stored in original packaging, kept out of direct sunlight in a dry environment with a stable ambient temperature
AO with manual drain	Dry Particulate Filter		Not Applicable			
AA with float drain	Coalescing Filter	Down to 0.01 micron, including water and oil aerosols	≤0.01 mg/m <sup>3</sup> ≤0.01 ppm(w)	99.9999%		
AA with manual drain	Dry Particulate Filter		Not Applicable			
OVR Oil Vapor Reduction	Adsorption	Not Applicable	≤0.003 mg/m <sup>3</sup> ≤0.003 ppm(w)	Not Applicable		

# BAS HL INTERNAL VOLUMES

MODEL	COLUMNS	INTERNAL VOLUME (LITRES)
BAS HL 050	3	32
BAS HL 055	3	38
BAS HL 060	3	45
BAS HL 065	3	55
BAS HL 070	3	68
BAS HL 075	6	88
BAS HL 080	6	101
BAS HL 085	6	133

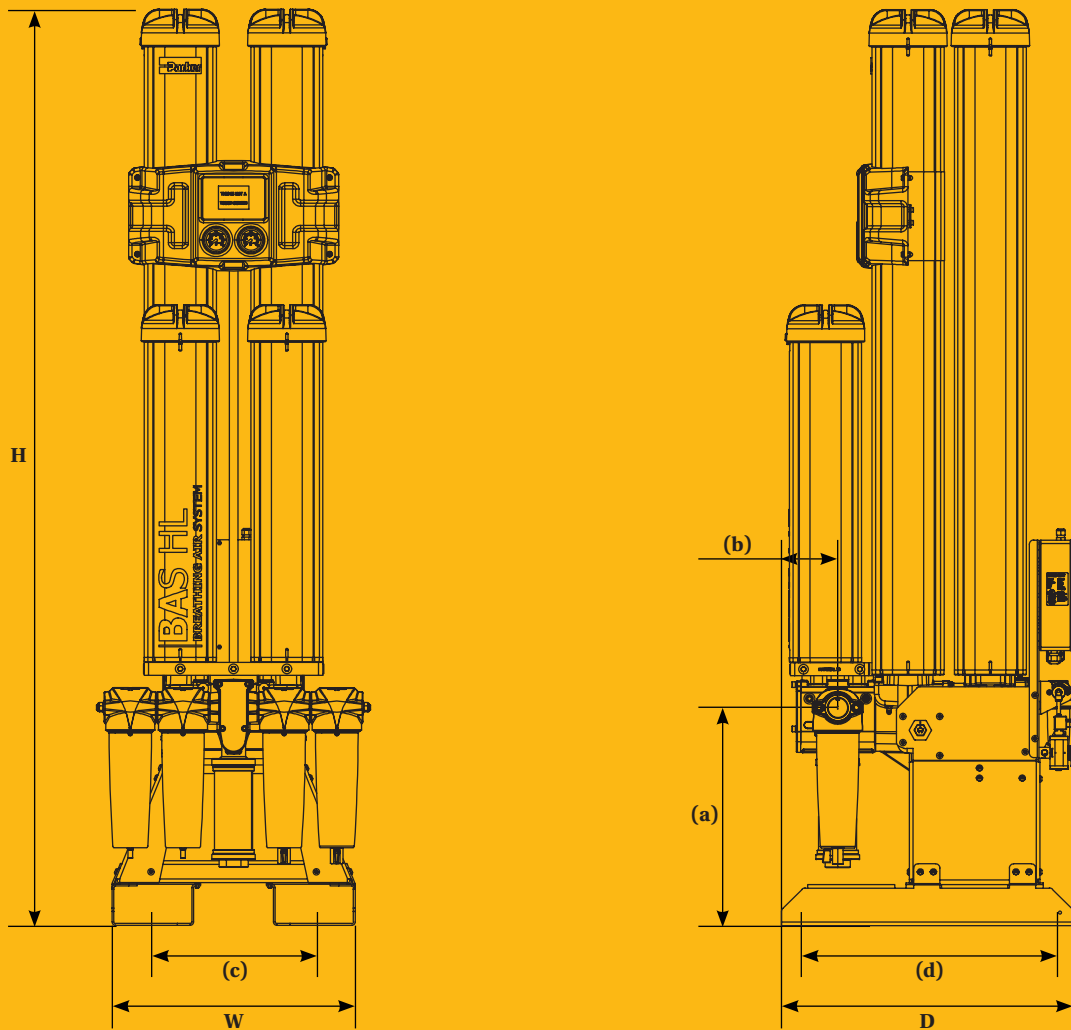
# MATERIALS OF CONSTRUCTION

ITEM	MATERIAL
Columns	Aluminium extrusion EN AW-6063 T6
Column top and bottom caps	Cast aluminium EN AC-46100
Desiccant cartridge	Stainless steel sheet - Grade 430
Valve blocks	Cast aluminium - EN AC-42000ST6
Inlet and exhaust cylinders	Aluminium alloy
Facia	UL90 V0 Rated flame retardant plastic
Facia bracket	Mild steel - Zinc plated
Dryer feet	4mm Mild steel
Rear panel	2mm Electro zinc coated steel
Control box	Polycarbonate
Hygrometer housing	GR316 - BS970
Seals	Nitrile, Viton, EPDM, PTFE (tape)

# QAULTY ASSURANCE / IP RATING / PRESSURE VESSEL APPROVALS

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	IP55 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
For use with Compressed Air only	

# BAS HL WEIGHTS AND DIMENSIONS















DRYER MODEL	DRYER DIMENSIONS														WEIGHT	
	H		W		D		(a)		(b)		(c)		(d)		KG	IBS
	MM	INS	MM	INS	MM	INS	MM	INS	MM	INS	MM	INS	MM	INS		
BAS HL 050	1133	44.6	559	22.0	490	19.3	416	16.4	96.5	3.80	371.3	14.62	410	16.14	92	203
BAS HL 055	1313	51.7	559	22.0	490	19.3	416	16.4	96.5	3.80	371.3	14.62	410	16.14	99	218
BAS HL 060	1510	59.4	559	22.0	490	19.3	416	16.4	96.5	3.80	371.3	14.62	410	16.14	109	240
BAS HL 065	1660	65.4	559	22.0	490	19.3	416	16.4	96.5	3.80	371.3	14.62	410	16.14	115	254
BAS HL 070	2020	79.5	559	22.0	490	19.3	416	16.4	96.5	3.80	371.3	14.62	410	16.14	138	304
BAS HL 075	1595	62.8	559	22.0	682	26.9	501	19.71	129	5.09	371.3	14.62	610	24.02	196	432
BAS HL 080	1745	68.7	559	22.0	682	26.9	501	19.71	129	5.09	371.3	14.62	610	24.02	220	485
BAS HL 085	2105	82.9	559	22.0	682	26.9	501	19.71	129	5.09	371.3	14.62	610	24.02	255	562

# CLEANING

Clean the equipment with a damp cloth only and avoid excessive moisture around any electrical sockets. If required you may use a mild detergent, however do not use abrasives or solvents as they may damage the warning labels on the equipment.

# SERVICE INTERVALS

Description of Service Required		Service Recommended Every:						
Component	Operation	Daily	Weekly	3 Months	6 Months	12 Months	24 Months	60 Months
Breathing Air Purifier	Check POWER ON and STATUS / FAULT indicators.							
Breathing Air Purifier	Check for air leaks.							
Breathing Air Purifier	Check the pressure gauges during purging for excessive back pressure.							
Breathing Air Purifier	Check the condition of electrical supply cables and conduits.							
Breathing Air Purifier	Check for cyclic operation.							
Breathing Air Purifier	<b>Replace the exhaust silencers.</b>							
Filtration	<b>Replace inlet / outlet / control air filter elements. Replace inlet filter / control air filter float drains.</b>							
Breathing Air Purifier	<b>Replace Parker Dewpoint Sensor or Dewpoint Hygrometer transmitter</b>							
Breathing Air Purifier	<b>Replace the outlet check ball</b>							
Breathing Air Purifier	<b>Replace the inlet valves (x 2), exhaust valve (x1) and 5/2 control valves</b>							
Breathing Air Purifier	<b>Replace the Catalyst Cartridges</b>							
Breathing Air Purifier	<b>Replace the Desiccant Cartridges.</b>							
Breathing Air Purifier	<b>Replace the Carbon Cartridges.</b>							

## Key

	Check		Recommended Service
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# PREVENTATIVE MAINTENANCE KITS - BAS HL

CATALOGUE NUMBER	DESCRIPTION	12	24	36	48	60	ORDER QTY
M12.FSK.9001	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 050 - BAS HL 055 (x1)
M12.FSK.9002	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 060 (x1)
M12.FSK.9003	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 065 (x1)
M12.FSK.9004	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 070 (x1)
M12.FSK.9005	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 075 (x1)
M12.FSK.9006	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 080 (x1)
M12.FSK.9007	12 Month Filter Service Kit	✓	✓	✓	✓	✓	BAS HL 085 (x1)
<b>M24.CAT.9001 - M24.CAT.9004</b>							
M24.CAT.9001	24 Month Catalyst Service Kit	✗	✓	✗	✓	✗	BAS HL 050 - BAS HL 060 (x1)
M24.CAT.9002	24 Month Catalyst Service Kit	✗	✓	✗	✓	✗	BAS HL 065 - BAS HL 070 (x1)
M24.CAT.9003	24 Month Catalyst Service Kit	✗	✓	✗	✓	✗	BAS HL 075 (x2)
M24.CAT.9004	24 Month Catalyst Service Kit	✗	✓	✗	✓	✗	BAS HL 080 - BAS HL 085 (x2)
<b>M60.DSK.9001 - M60.DSK.9008</b>							
M60.DSK.9001	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 050 (x1)
M60.DSK.9002	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 055 (x1)
M60.DSK.9003	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 060 (x1)
M60.DSK.9004	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 065 (x1)
M60.DSK.9005	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 070 (x1)
M60.DSK.9006	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 075 (x1)
M60.DSK.9007	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 080 (x1)
M60.DSK.9008	60 Month Desiccant Service Kit	✗	✗	✗	✗	✓	BAS HL 085 (x1)

# PM KIT CONENTS

## Every 12 months



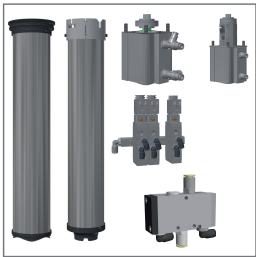
CATALOGUE NO'S	DESCRIPTION	CONTENTS
M12.FSK.9001 M12.FSK.9002 M12.FSK.9003 M12.FSK.9004 M12.FSK.9005 M12.FSK.9006 M12.FSK.9007	Kit: 12 month service	Filter elements (x5) Filter Drains (x3) Silencer element (x1) Dewpoint sensor (x1) Outlet check valve (x1) Carbon Cartridge (x1)

## Every 24 months



CATALOGUE NO'S	DESCRIPTION	CONTENTS
M24.CAT.9001 M24.CAT.9002 M24.CAT.9003 M24.CAT.9004	Kit: 24 month service	Catalyst Cartridge(s) <i>models - BAS HL 050 - BAS HL 070 (x1)</i> <i>models - BAS HL 075 - BAS HL 085 (x2)</i>

## Every 60 months



CATALOGUE NO'S	DESCRIPTION	CONTENTS
M60.DSK.9001 M60.DSK.9002 M60.DSK.9003 M60.DSK.9004 M60.DSK.9005 M60.DSK.9006 M60.DSK.9007 M60.DSK.9008	Kit: 60 month service	Desiccant cartridges Inlet and exhaust valves Control valves QRV valve

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