

HALTON AHU TECHNICAL SPECIFICATION SHEET

Software Version: HALTON-AHU 2.20.01

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PROJECT SUMMARY

Project Reference Chilli Cool	Client Man & Man planning	Unit Reference Pollustop 03	Unit Duty 1.92 m³/s
Project Number 28076	Date 18/05/2017	Unit Model PolluStop	

UNIT CONSTRUCTION

Panel Thickness 47.00 mm	Panel Insulation High Density Infill - 50mm	Aluminium Framework 50mm Aluminium Corner Tube (B-Type)	Unit Location External
Panel External Sheet Solent Blue Plastisol Steel 20g (1.0mm)	Panel Internal Sheet Natural Galvanised Steel 20g (1.0mm)	Base Frame 100mm High Channel Base - 3mm Sheet Steel	Reinforced Floor None
Access Side Right	Unit Size Size 03	Roof Type Single Pitched Roof	

SECTION DIMENSIONS & WEIGHTS

Section No.	Length	Width	Height	Weight
A	1560mm	1330mm	1150mm	357 kg
B	1600mm	1330mm	1150mm	350 kg

OVERALL AHU DIMENSIONS & CENTRE OF GRAVITY

Length	Width	Height	Weight	COG X
3160mm	1330mm	1150mm	708 Kg	1785mm

POLLUSTOP CONTAMINANT REMOVAL

The following table highlights the airborne contamination that the POLLUSTOP AHU is designed to remove from the airstream.

Please note: This table highlights the capability of the AHU only, and does not include for air treatment external to the unit, for example UV-C Equipped Canopies.

SMOKE	GREASE	COOKING ODOURS	SURPLUS OZONE	VAPOUR / MOISTURE

MODULE 001

INLET SECTION (IS)

POLLUSTOP 3

Air Flow 1.92m³/s	Air Velocity 1.64m/s	Pressure Drop 0Pa	Model 0	Dimension 1230 x 950mm
Damper No	Flexible Connection Yes	Louvre No	Actuation Not Supplied	

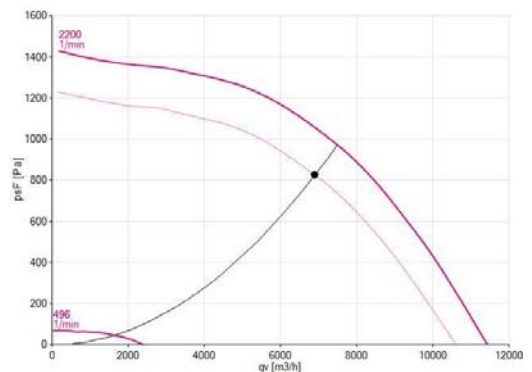
MODULE 002

PLENUM FAN (FS)

POLLUSTOP 3

A high efficiency direct drive fan unit manufactured with first class dynamic balancing (lowest vibrations) for the longest life cycle possible. Fan temperature rating up to 40°C, capable of a total system static pressure up to 2000 Pa. Fan supplied with variable frequency drive controls.

<i>Fan Type</i>	<i>Wheel Type</i>	<i>Drive Type</i>	
Plenum	Backward Curve	DirectDrive	
<i>Model</i>	<i>Impeller Diameter</i>	<i>Absolute Power</i>	
ER45C-4DN.E7.CR-130585/2Z01	450 mm	2.38 kW	
<i>Quantity</i>	<i>Duty % Per Fan</i>	<i>Poles</i>	
1	Single Fan	4	
<i>Air Flow Volume</i>	<i>Outlet Velocity</i>	<i>Motor Speed @ 50Hz</i>	
1.92 m³/s	1.6 m/s	1445 rpm	
<i>External Static Pressure</i>	<i>Fan & Motor Speed</i>	<i>Power</i>	
750 Pa	2000 rpm @ 69Hz	3.00 kW	
<i>Internal Static Pressure</i>	<i>Static Efficiency</i>	<i>Full Load Current</i>	
76 Pa	61.85%	6.36 A	
<i>Fan Total Pressure</i>	<i>VSD</i>	<i>Volts / Ph / Hz</i>	
826 Pa	Inverter	380/3/50	
<i>Frequency</i>	<i>125 Hz</i>	<i>250 Hz</i>	<i>500 Hz</i>
Inlet (1)	65.3	77.8	72.7
Outlet (2)	71.2	82.2	80.1
(1) SWL At The Fan Inlet (dBW)			



(1) SWL At The Fan Inlet (dBW)

(2) SWL At The Fan Outlet (dBW)

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<i>Project Number</i> 28076	<i>Date</i> 18/05/2017	<i>Unit Model</i> PolluStop	

MODULE 002

ACCESS DOOR

<i>Dimension</i> 780 x 950mm	<i>Type</i> Hinged door
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MODULE 003

SOUND ATTENUATOR (SA)

POLLUSTOP 3

Built-in attenuator modules are available for both Pollustop and Aerolys AHU's, with the option of melinex lined splitters for polluted airstreams. The attenuator is intended for the reduction of in-duct noise transmission and is available in standard module lengths of 900mm, 1200mm or 1500mm. For specific sound power level requirements, consider seeking suitably qualified acoustic consultants.

<i>Type</i> AHU Mounted	<i>Splitter Thickness</i> 200mm	<i>Air Velocity</i> 4.96	<i>Length of Splitter</i> 1500
<i>Air Pressure Drop</i> 18.00	<i>Splitter Insulation</i> Mineral Wool	<i>Splitter Face</i> Standard	

ATTENUATOR ACOUSTIC DATA AT OUTLET SPIGOT

<i>Description</i>	<i>125Hz</i>	<i>250Hz</i>	<i>500Hz</i>	<i>1kHz</i>	<i>2kHz</i>	<i>4kHz</i>	<i>8kHz</i>	<i>Combined Level</i>
Fan Sound Power (dBW)	71	82	80	84	74	71	68	
Attenuator Noise Reduction	-19	-30	-46	-55	-51	-50	-36	
Resultant Spectrum At Spigot (dB)	52	52	34	29	23	21	32	

MODULE 004

OUTLET SECTION (OS)

POLLUSTOP 3

<i>Air Flow</i> 1.92 m³/s	<i>Air Velocity</i> 1.64m/s	<i>Pressure Drop</i> 0 Pa	<i>Model</i> 0	<i>Dimension</i> 1230 x 950mm
<i>Damper</i> No	<i>Flexible Connection</i> Yes	<i>Louvre</i> No	<i>Actuation</i> Not Supplied	

AHU CASE BREAKOUT ACOUSTIC DATA

<i>Description</i>	<i>125Hz</i>	<i>250Hz</i>	<i>500Hz</i>	<i>1kHz</i>	<i>2kHz</i>	<i>4kHz</i>	<i>8kHz</i>	<i>Combined Level</i>
Fan Sound Power (dBW)	71	82	80	84	74	71	68	
Casework Attenuation	-10	-13	-17	-31	-32	-33	-36	
Reduction @ 3m Distance (dB)	-14	-14	-14	-14	-14	-14	-14	
Resultant Spectrum (dB)	47	55	49	39	28	24	18	
A-Weighted Resultant Spectrum (dBA)	31	47	46	39	29	25	17	

AHU SPECIFIC FAN POWER (SFP)

Specific Fan Power (SFP) is a parameter that quantifies the energy-efficiency of fan air movement systems. It is a measure of the electric power that is needed to drive a fan (or collection of fans), relative to the amount of air that is circulated through the fan(s). It is not constant for a given fan, but changes with both air flow rate and fan pressure rise.

<i>Filter Conditions</i> Clean	<i>Absorbed Power</i> 2.38 Kw	<i>Drive Efficiency</i> 100%	<i>Inverter Efficiency</i> 98%	<i>Motor Efficiency</i> 100%	<i>Air Volume</i> 1.92 m³/s
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SPECIFIC FAN POWER

1.27 kW/m³/s