



ACDHUM – D Air Change Dehumidification Unit – DX Packaged



ACDHUM – W Air Change Dehumidification Unit – Chilled Water





ACDHUM Quick Reference Guide

Model No.	Refrigerant Capacity		Airflow Range L/s		Overall Dimensions (mm) (Standard Unit)	Standard Unit Weight	Nominal Running Amps (per phase)	Phase	Electrical Input
	kWr		Min	Max					
Direct Expansion Units									
ACDHUM2-D	51		600	1400	2325 x 2490 x 2100	975	26.9	3	14.1
ACDHUM3-D	67		900	2000	2325 x 2490 x 2750	1315	37.7	3	20.4
ACDHUM4-D	88		1600	2800	2375 x 2490 x 3550	1743	54.8	3	28.5
ACDHUM5-D	114		2400	3600	2375 x 2490 x 4200	2074	63.2	3	35.1
ACDHUM6-D	140		3000	4300	2450 x 2490 x 4850	2536	88.5	3	46.0
ACDHUM7-D	165		3600	5000	2450 x 2490 x 5500	2820	92.7	3	50.2
Water Coil Units									
ACDHUM2-W	NA		600	1400	1990 x 2490 x 1600	682	2.9	3	1.5
ACDHUM3-W	NA		900	2000	1990 x 2490 x 2250	909	4.2	3	2.2
ACDHUM4-W	NA		1600	2800	1990 x 2490 x 2900	1211	7.0	3	4.0
ACDHUM5-W	NA		2400	3600	1990 x 2490 x 3550	1491	9.7	3	5.5
ACDHUM6-W	NA		3000	4300	2040 x 2490 x 4200	1834	13.0	3	11.0
ACDHUM7-W	NA		3600	5000	2040 x 2490 x 4850	2075	13.0	3	11.0
ACDHUM8-W	NA		5000	6000	2040 x 2490 x 5500	2424	26.0	3	15.0



ACDHUM-W

Air Change Dehumidification Chilled Water Unit



The Air Change Dehumidification Unit Chilled Water range features counter flow plate heat exchange technology to efficiently pre condition the temperature and humidity of the building's fresh air supply, used in conjunction with the building's chilled water system.

The system is an ideal solution for situations where exhaust air cannot be recovered or used due to spill air contamination, building pressure requirements or the practical constraint of recovering exhaust air.

Energy Efficient Design

- Plate heat exchanger enables pre-cooling and re-heating
- Higher efficiency and superior humidity control than standard systems
- No return air required – 100% pressurisation
- Chilled Water Unit range up to 6,000 L/s
- Stacked Chilled Water Unit range up to 12,000 L/s
- Multi award winning Australian made, internationally patented technology



ACDHUM-W

Standard Features

- High efficiency sensible only air-to-air counter flow plate heat exchanger
- Chilled water coils (6 rows) feature baked resin coating for corrosion protection
- Weatherproof insulated cabinet of 50 mm, double skin Colorbond coolroom panel
- Fan and motor shafts are directly coupled to create sinuous motion of the two components and are aligned by laser alignment
- Unit offers extremely large access door to ensure parts are easily accessible for servicing and replacement
- Direct coupled backward curved centrifugal supply air fan
- Fully integrated control system that is factory fitted and pre-commissioned. The system works to maintain the supply air at a constant temperature and humidity level during varying ambient conditions.
- Unit is fitted with a proprietary G4 multi-layer washable bag filter

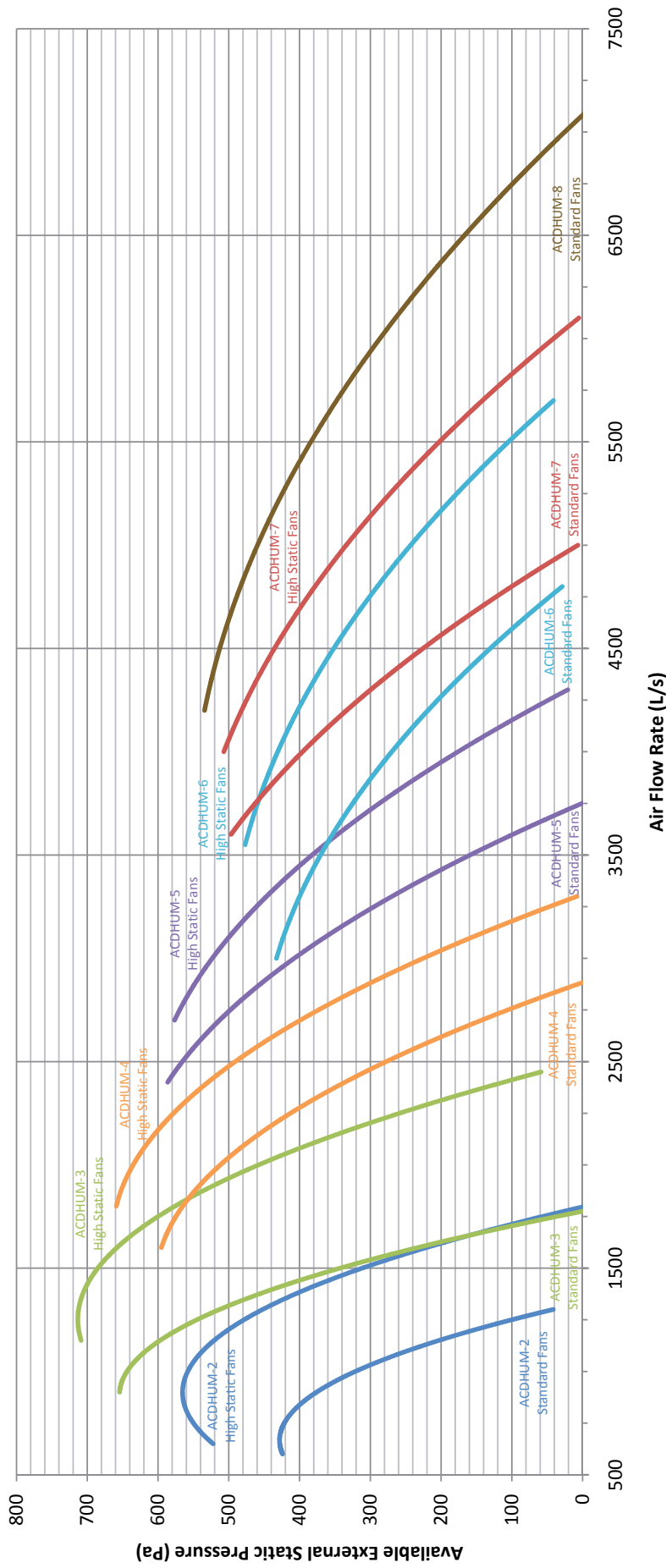
Options

- **HVAC series VSDs**
HVAC series VSD's for high level communication with BMS system (BACnet adapter standard on HVAC VSD's)
- **Hot water coil**
The unit can be fitted with hot water coil to meet heating capacity as scheduled
- **Fan Orientation**
Supply air fan available in horizontal or vertical discharge
- **High Static Fan Upgrade**
Fan upgrades available for high flow or high external static pressure drops
- **Corrosion Resistant**
Corrosion resistant packaging available for harsh and corrosive environments
- **Filter**
Filter can be upgraded to an F7 multi-layer washable bag filter; requires external G4 pre-filter bank

Contact Air Change for assistance with options



ACDHUM-W Range Fan Curves

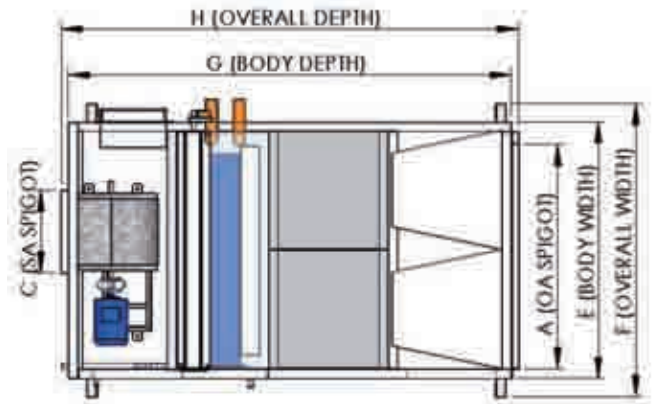


ACDHUM-W – TECHNICAL DATA

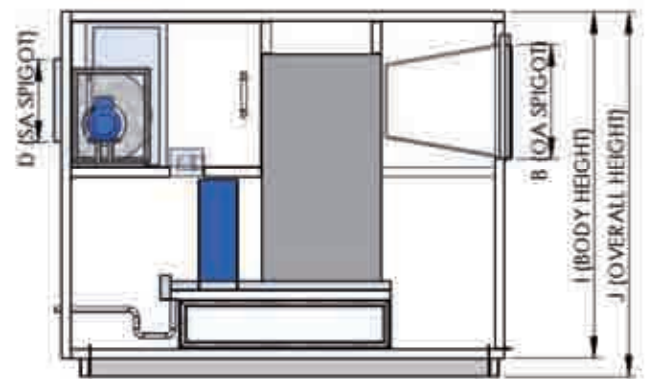


ACDHUM2-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	850
(Max)	L/s	1400
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	123
Pressure Drop Chilled Water Coil	Pa	109
Pressure Drop Filter	Pa	41
External Static Pressure (Nominal)	Pa	150
Total Pressure on Supply Fan	Pa	546
SUPPLY FAN		
Fan Speed (max)	rpm	4000
Motor Power	kW	1.5
Motor Poles		2
COIL SIZE		
Water Coil	mm	1125 x 603.25
Face Velocity Coil (Nominal)	m/s	1.25
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		2
ELECTRICAL POWERING		
Supply Fan (FLA)	A	2.9
Total Full Load Amps	A	2.9
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	82.3
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	1400 / 1600
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 1990
Weight	kg	682
SPIGOT SIZES		
Supply Air (C x D)	mm	440 x 440
Outdoor Air (A x B)	mm	1230 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	800

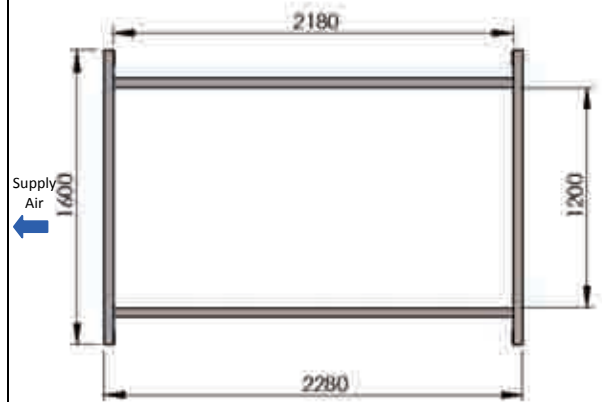
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Plan View



Right Hand Side View



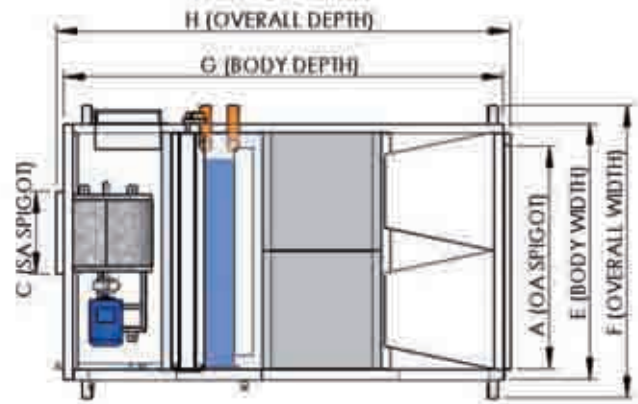
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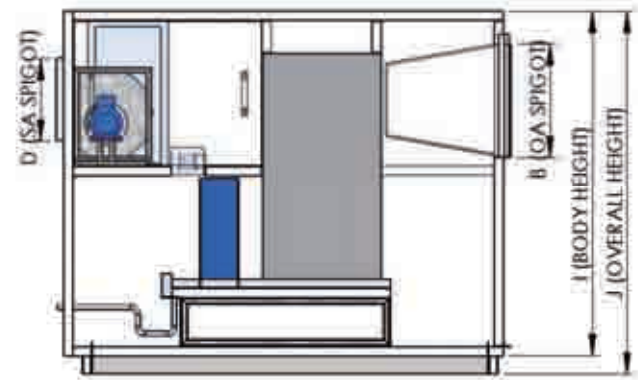


ACDHUM3-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	1100
(Max)	L/s	2000
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	106
Pressure Drop Chilled Water Coil	Pa	83
Pressure Drop Filter	Pa	35
External Static Pressure (Nominal)	Pa	200
Total Pressure on Supply Fan	Pa	530
SUPPLY FAN		
Fan Speed (max)	rpm	3500
Motor Power	kW	2.2
Motor Poles		2
COIL SIZE		
Water Coil	mm	1750 x 603.25
Face Velocity Coil (Nominal)	m/s	1.04
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		3
ELECTRICAL POWERING		
Supply Fan (FLA)	A	4.2
Total Full Load Amps	A	4.2
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	83.4
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	2050 / 2250
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 1990
Weight	kg	909
SPIGOT SIZES		
Supply Air (C x D)	mm	480 x 480
Outdoor Air (A x B)	mm	1840 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	800

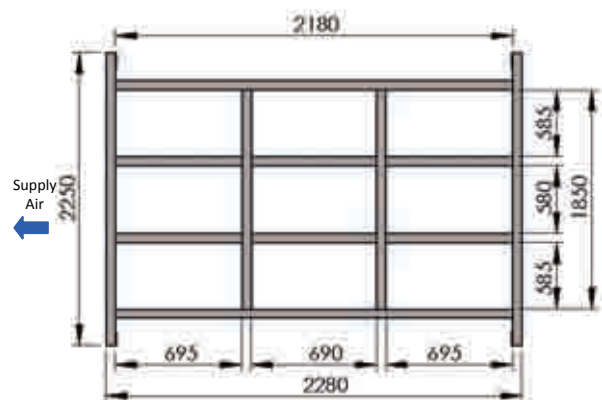
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Plan View



Right Hand Side View



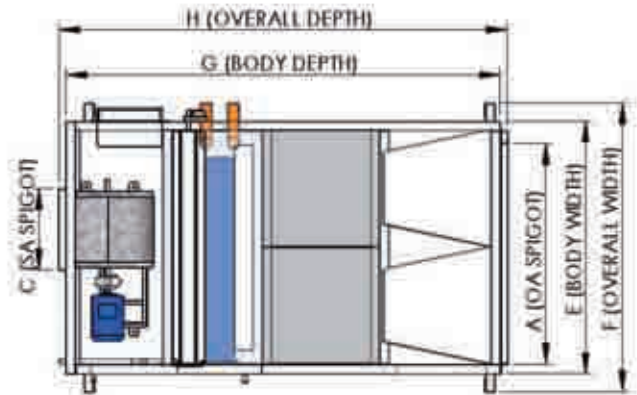
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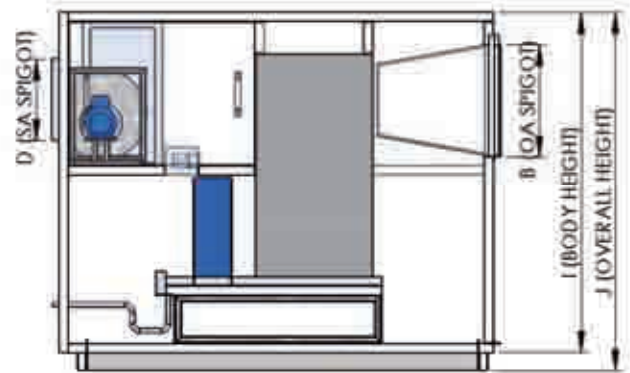


ACDHUM4-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	1700
(Max)	L/s	2700
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	123
Pressure Drop Chilled Water Coil	Pa	91
Pressure Drop Filter	Pa	41
External Static Pressure (Nominal)	Pa	200
Total Pressure on Supply Fan	Pa	578
SUPPLY FAN		
Fan Speed (max)	rpm	3400
Motor Power	kW	4
Motor Poles		2
COIL SIZE		
Water Coil	mm	2400 x 603.25
Face Velocity Coil (Nominal)	m/s	1.17
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		4
ELECTRICAL POWERING		
Supply Fan (FLA)	A	7.0
Total Full Load Amps	A	7.0
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	85.6
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	2700 / 2900
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 1990
Weight	kg	1211
SPIGOT SIZES		
Supply Air (C x D)	mm	1050 x 400
Outdoor Air (A x B)	mm	2450 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	1500

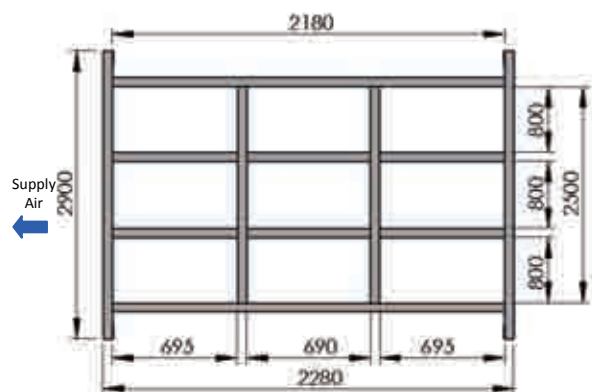
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Plan View



Right Hand Side View



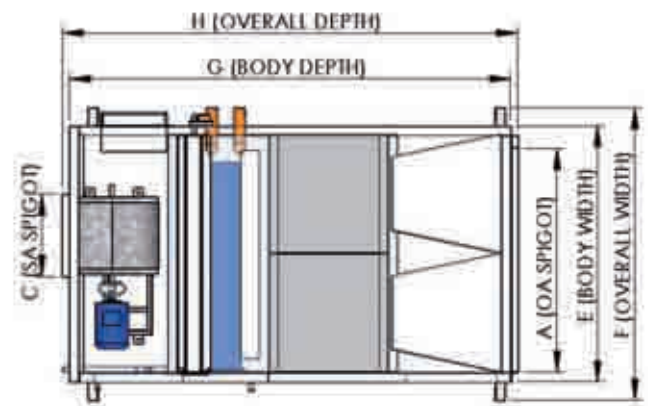
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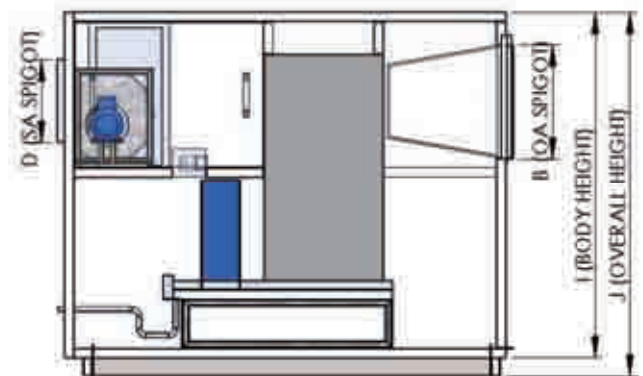


ACDHUM5-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	2400
(Max)	L/s	3600
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	139
Pressure Drop Chilled Water Coil	Pa	107
Pressure Drop Filter	Pa	46
External Static Pressure (Nominal)	Pa	200
Total Pressure on Supply Fan	Pa	631
SUPPLY FAN		
Fan Speed (max)	rpm	3300
Motor Power	kW	5.5
Motor Poles		2
COIL SIZE		
Water Coil	mm	3050 x 603.25
Face Velocity Coil (Nominal)	m/s	1.30
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		5
ELECTRICAL POWERING		
Supply Fan (FLA)	A	9.7
Total Full Load Amps	A	9.7
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	88.9
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	3350 / 3550
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 1990
Weight	kg	1491
SPIGOT SIZES		
Supply Air (C x D)	mm	1170 x 440
Outdoor Air (A x B)	mm	3060 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	1500

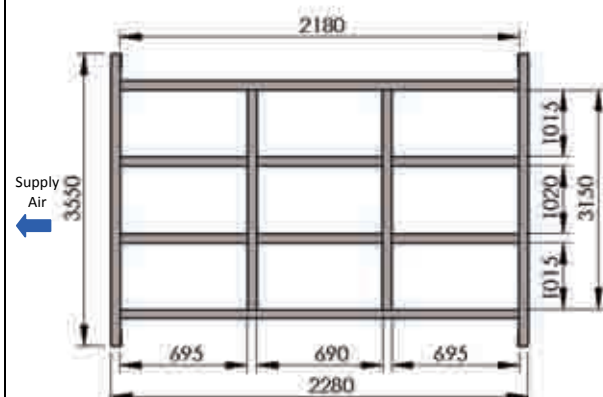
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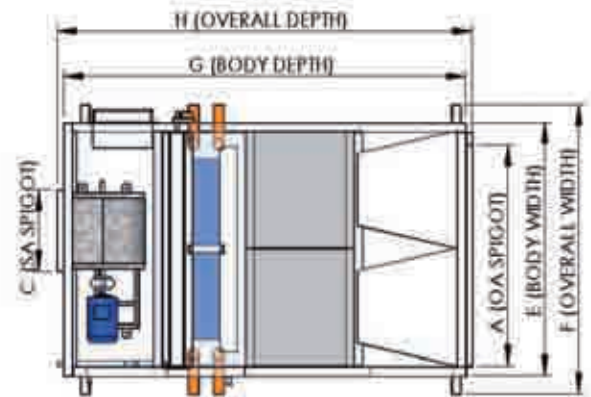
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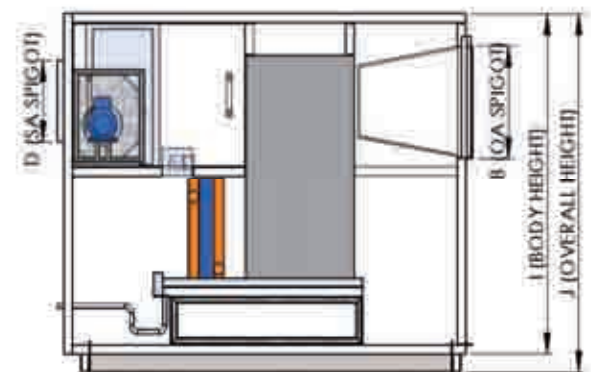


ACDHUM6-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	3500
(Max)	L/s	4300
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	169
Pressure Drop Chilled Water Coil	Pa	130
Pressure Drop Filter	Pa	56
External Static Pressure (Nominal)	Pa	250
Total Pressure on Supply Fan	Pa	774
SUPPLY FAN		
Fan Speed (max)	rpm	3400
Motor Power	kW	7.5
Motor Poles		2
COIL SIZE		
Water Coil	mm	3500 x 603.25
Face Velocity Coil (Nominal)	m/s	1.66
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		6
ELECTRICAL POWERING		
Supply Fan (FLA)	A	13
Total Full Load Amps	A	13
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	88.1
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	4000/4200
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 2040
Weight	kg	1834
SPIGOT SIZES		
Supply Air (C x D)	mm	2370 x 440
Outdoor Air (A x B)	mm	3670 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	1500

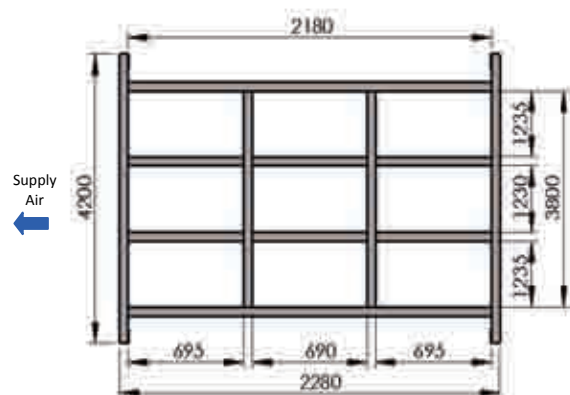
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Plan View



Right Hand Side View



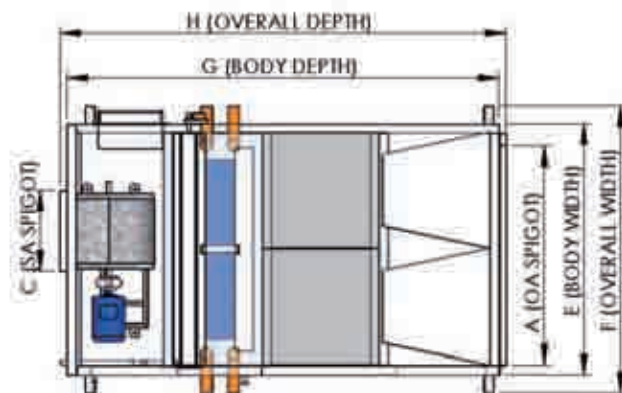
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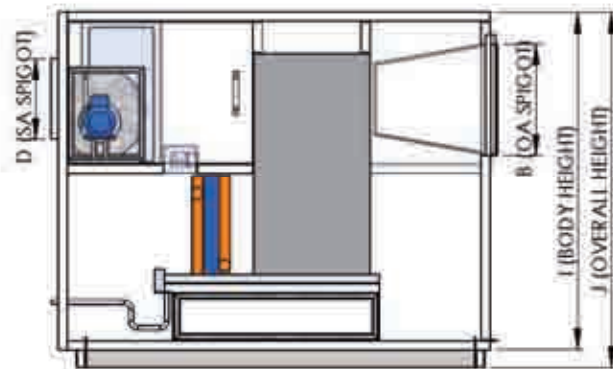


ACDHUM7-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	4000
(Max)	L/s	5000
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	165
Pressure Drop Chilled Water Coil	Pa	120
Pressure Drop Filter	Pa	55
External Static Pressure (Nominal)	Pa	250
Total Pressure on Supply Fan	Pa	755
SUPPLY FAN		
Fan Speed (max)	rpm	3400
Motor Power	kW	7.5
Motor Poles		2
COIL SIZE		
Water Coil	mm	4150 x 603.25
Face Velocity Coil (Nominal)	m/s	1.60
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		7
ELECTRICAL POWERING		
Supply Fan (FLA)	A	13.0
Total Full Load Amps	A	13.0
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	89.3
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	4650 / 4850
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 2040
Weight	kg	2075
SPIGOT SIZES		
Supply Air (C x D)	mm	2370 x 440
Outdoor Air (A x B)	mm	4280 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	1500

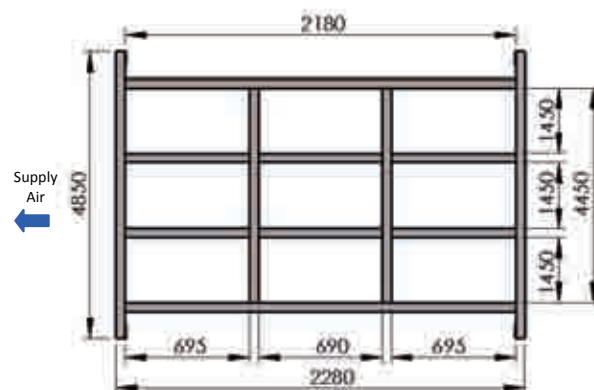
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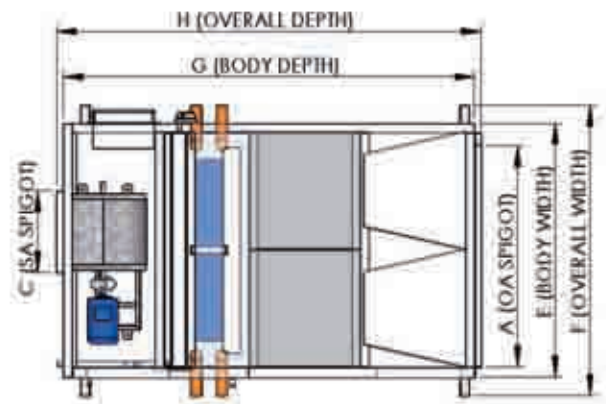
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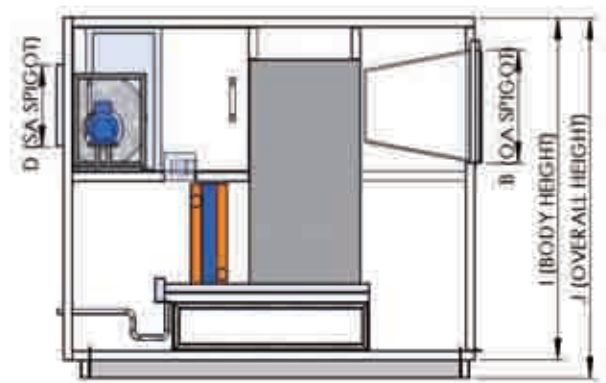


ACDHUM8-W		
TECHNICAL SPECIFICATIONS	UNIT	STANDARD
Supply Air (Nominal)	L/s	5000
(Max)	L/s	6000
Compressor Qty		NA
Total Compressor Capacity	kWr	NA
OUTDOOR AIR TO SUPPLY AIR		
Pressure Drop Heat Exchanger	Pa	181
Pressure Drop Chilled Water Coil	Pa	147
Pressure Drop Filter	Pa	60
External Static Pressure (Nominal)	Pa	250
Total Pressure on Supply Fan	Pa	819
SUPPLY FAN		
Fan Speed (max)	rpm	3400
Motor Power	kW	15
Motor Poles		2
COIL SIZE		
Water Coil	mm	4800 x 603.25
Face Velocity Coil (Nominal)	m/s	1.73
OUTDOOR AIR FILTER		
Type		Multilayer Washable Bag
Class		G4
Size	mm	610 x 610
Quantity		8
ELECTRICAL POWERING		
Supply Fan (FLA)	A	26.0
Total Full Load Amps	A	26.0
SOUND LEVEL		
Sound Power Level In Supply Duct	dB (A)	91.4
UNIT DIMENSION and WEIGHT		
Body Width (E) / Overall Width (F)	mm	5300 / 5500
Body Depth (G) / Overall Depth (H)	mm	2410 / 2490
Body Height (I) / Overall Height (J)	mm	1890 / 2040
Weight	kg	2424
SPIGOT SIZES		
Supply Air (C x D)	mm	2650 x 480
Outdoor Air (A x B)	mm	4890 x 620
CLEARANCE REQUIREMENT		
Minimum LHS Requirement	mm	500
Minimum RHS Requirement	mm	1500

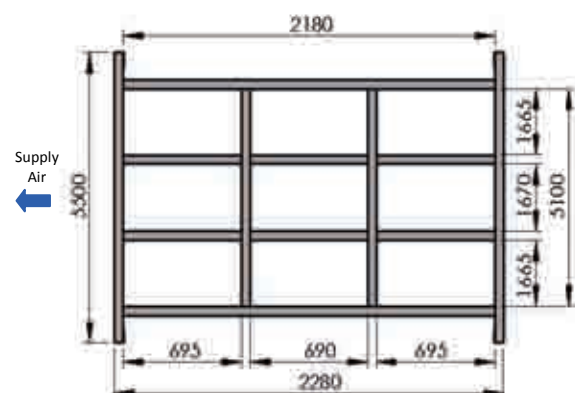
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Plan View



Right Hand Side View



Base Frame