

# Easdale International Range

AIR HANDLING UNITS

# Easdale International Infinity

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## GENERAL CHARACTERISTICS

### EASDALE INTERNATIONAL SYSTEM

PRE DEFINED FAMILY OF SIZE

Twenty-seven (27) fixed sizes optimized for the most cost effective selection and manufacturing standardization.

INFINITE VARIABLE

Designed for special applications all over the world. The system is giving the possibility to tailor the unit to the clients need with very small incremental, 5 cm.

Air flow from 1.100 m<sup>3</sup>/h up to 124.000 m<sup>3</sup>/h

All the sizes are modular manufactured to facilitate the transport and the assembly on site.

## EUROVENT CERTIFICATION

McQuay is participating in the EUROVENT CERTIFICATION Programme for Air Handling Units. Easdale International is certified under the number 10.10.502 and presented on [www.eurovent-certification.com](http://www.eurovent-certification.com)



Model Box-SP65	Eurovent Classification according to EN1886 standards				
Casing mechanical strength	<b>D1</b>	<b>Casing mechanical strength</b>			
		Casing Class "Maximum relative deflection mm x m <sup>-1</sup> "	<b>D1</b>	<b>D2</b>	<b>D3</b>
			4,00	10,00	Exceeding10
"Casing air leakage Negative pressure -400 Pa"	<b>L1</b>	<b>Casing air leakage - Negative pressure -400 Pa</b>			
		Leakage Class "Maximum leakage rate (f400) l x s <sup>-1</sup> x m <sup>-2</sup> "	<b>L1</b>	<b>L2</b>	<b>L3</b>
			0,15	0,44	1,32
"Casing air leakage Positive pressure +700 Pa"	<b>L1</b>	<b>Casing air leakage - Positive pressure +700 Pa</b>			
		Leakage Class "Maximum leakage rate (f700) l x s <sup>-1</sup> x m <sup>-2</sup> "	<b>L1</b>	<b>L2</b>	<b>L3</b>
			0,22	0,63	1,90
Filter bypass leakage	<b>F9</b>	<b>Filter bypass leakage</b>			
		Filter Class Maximum filter bypass leakage rate k in % of the volume flow rate	<b>F9</b>	<b>F8</b>	<b>F7</b>
			0,50	1	2
				<b>F6</b>	<b>G1 to F5</b>
				4	6
Thermal transmittance	<b>T2</b>	<b>Thermal transmittance</b>			
		Class "Thermal transmittance (U) W/m <sup>2</sup> x K"	<b>T1</b>	<b>T2</b>	<b>T3</b>
			U <= 0,5	0,5 < U <= 1	1 < U <= 1,4
				<b>T4</b>	<b>T5</b>
				1,4 < U <= 2	No requirements
Thermal bridging of the casing	<b>TB2</b>	<b>Thermal bridging of the casing</b>			
		Class "Thermal bridging facto (kb) W x m <sup>-2</sup> x K <sup>-1</sup> "	<b>TB1</b>	<b>TB2</b>	<b>TB3</b>
			0,75 < kb <= 1	0,6 < kb <= 0,75	0,45 < kb <= 0,6
				<b>TB4</b>	<b>TB5</b>
				0,3 < kb <= 0,45	No requirements

## SOFTWARE

ASTRA is the powerful software that McQuay has developed to offer a quick and comprehensive service for the customer in order to make the technical choice and the economic valorization of each AHU. It is a complete tool that can configure any type of product and respond exactly to the strictest design needs. The result is a comprehensive economic offer including all the technical data and drawings, the psychrometric diagram with the relative air treatment and the fans' performance curves. However McQuay did not stop there, went further.



MECCANO is the other powerful software developed and designed to quickly convert the offer in the executive order. Technical drawings to be sent and approved by the client, executive drawings for the production, bill of material, code generation for each component used are just a few of the many functions of the instrument.

The ASTRA-MECCANO integration has therefore made possible the complete automated management of the process by reducing the time of the offer and of the delivery and improving the service to our customers.



## TECHNICAL DATA

Construction type	SP 65	SP 45	FP 50	FP 25
Profile				
Material				
Aluminium	standard	standard	standard	standard
Anodized aluminium	option	option	option	option
Aluminium with thermal break	option	option	option	option
Anodized aluminium with thermal break	option	option	option	option
Corner				
Material				
Glass fibre reinforced nylon	standard	standard	standard	standard
Panel				
Insulation				
Polyurethane foam density 45 kg/m <sup>3</sup> thermal conductivity 0.020 W/m <sup>2</sup> K fire reaction class 1	standard	standard	standard	standard
Mineral wool density 90 kg/m <sup>3</sup> thermal conductivity 0.037 W/m <sup>2</sup> K (referred to 20°C) fire reaction class 0	option	option	option	option
External sheet material				
Grey Plastisol covered galvanized steel	standard	standard	standard	standard
Pre-coated galvanized steel	option	option	option	option
Galvanized steel	option	option	option	option
Aluminium	option	option	option	option
AISI 304 stainless steel	option	option	option	option
Internal sheet material				
Galvanized steel	standard	standard	standard	standard
Pre-coated galvanized steel	option	option	option	option
Grey Plastisol covered galvanized steel	option	option	option	option
Aluminium	option	option	option	option
AISI 304 stainless steel	option	option	option	option
Base frame				
Material				
Aluminium	standard (from size 1 to size 17)	standard (from size 1 to size 17)	standard (from size 1 to size 17)	standard (from size 1 to size 17)
Galvanized steel	standard (from size 18 to size 27)	standard (from size 18 to size 27)	standard (from size 18 to size 27)	standard (from size 18 to size 27)
Handle				
Material				
Glass fibre reinforced nylon	standard	standard	standard	standard
Type				
Compression type	standard	standard	standard	standard
Hinge function type (possibility to remove door)	option	option	option	option

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## FANS

- Forward bladed fan
- Backward bladed fan
- Backward airfoil blades fan
- Plug fan



## EXCHANGERS

- Water coils
- Steam coils
- Direct expansion coil
- Superheated water coils
- Electric coils



## HUMIDIFIERS

- Evaporative humidifier without pump (loss water)
- Evaporative humidifier with re-circulating pump
- Air washer without pump (loss water)
- Air washer with re-circulating pump
- Steam humidifier with direct steam production
- Steam humidifier with local distributor
- Atomized water spray humidifier



## HEAT RECOVERY SYSTEMS

- Heat wheel, sensible or sorption
- Plate heat exchanger
- Run-around coils

## OTHER SECTION

- Attenuator section
- Mixing box section with actuators or manual controlled dampers
- Empty section
- Gas burner section



## FILTERS

- Synthetic pleated filter
- Flat filter aluminium mesh
- Rigid bag filter
- Soft bag filter
- High efficiency filter
- Carbon absorption filter
- Carbon deodorizing filter



## FILTERS

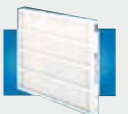
flat synthetic filters  
EN 779 class: G2 - G3



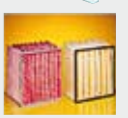
plated synthetic filters  
EN 779 class: G3 - G4



moisture resistant plated synthetic filters  
EN 779 class: G3 - G4



bag filters  
EN 779 class: F6 - F8



deep pleated filters  
EN 779 class: F6 - F8



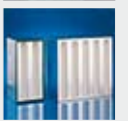
extended surface mini-pleat filters  
EN 779 class: F6 - F8



high capacity rigid pocket filters  
EN 779 class: F6 - F9



absolute mini-pleat filters  
EN 1886 class: H12 - H13

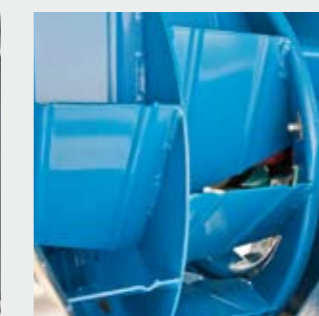
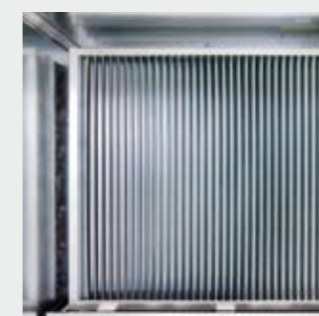


absolute high capacity filters  
EN 1886 class: H12 - H13



## ACCESSORIES

- Frost protection
- Manometers
- Drive guard
- Roof
- ....



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# Easdale International Essential

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## PRE DEFINED SIZES - Overall dimension

Size	Air Flow (m³/h) Speed 2.5 m/s	Width - mm	Height - mm
1	1.105	850	550
2	1.550	900	600
3	1.980	950	650
4	2.600	1.000	780
5	3.170	1.150	780
6	3.550	1.150	800
7	4.000	1.250	800
8	4.800	1.300	850
9	5.560	1.350	900
10	6.600	1.550	900
11	7.950	1.550	1.100
12	9.320	1.650	1.100
13	10.050	1.650	1.150

Size	Air Flow (m³/h) Speed 2.5 m/s	Width - mm	Height - mm
14	13.200	1.850	1.400
15	19.200	2.100	1.500
16	25.300	2.650	1.580
17	31.500	2.750	1.750
18	37.000	3.240	1.800
19	43.400	3.090	2.100
20	51.300	3.340	2.250
21	58.000	3.820	2.250
22	67.500	4.040	2.400
23	78.000	4.490	2.450
24	84.700	4.490	2.700
25	98.000	4.890	2.850
26	111.000	5.490	2.850
27	124.000	5.990	3.000

## INFINITELY VARIABLE SIZES

### FLEXIBLE SIZING FOR AHU OPTIMIZATION

- 5 cm increment for width & height dimensions
- No additional cost for customized unit size
- No additional lead time

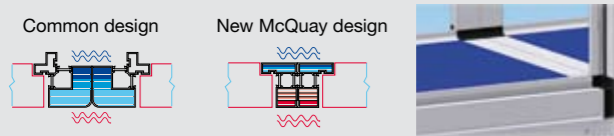
### Example

Air Flow (m³/h)	Unit Size	Width - mm	Height - mm	Face Velocity (m/s)
15.000	STD 15	2.100	1.500	1.95
	1.500 x 1.750	1.750	1.500	2.46



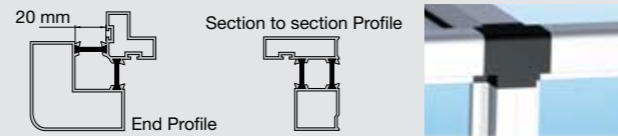
## UNIQUE SECTION TO SECTION THERMAL BREAK PROFILE

- Thermal bridge free for the entire AHU
- Smooth interior surface with improved IAQ (Indoor Air Quality)



## EXCLUSIVE & INNOVATIVE REAL THERMAL BREAK PROFILE

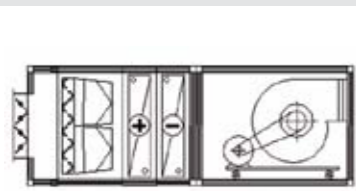
- Real thermal break profile
- Reduce section to section length



## TECHNICAL DATA

Construction type	DS 50	DS 25
Profile		
Material		
Aluminium	standard	standard
Corner		
Material		
Glass fibre reinforced nylon	standard	standard
Panel		
Insulation		
Polyurethane foam thermal conductivity 0.024 W/m²K	standard (density 45 kg/m³)	standard (density 47 kg/m³)
External sheet material		
Pre-coated galvanized steel (RAL 9002)	standard	standard
Internal sheet material		
Galvanized steel	standard	standard
Base frame		
Material		
Aluminium	standard	standard
Handle		
Material		
Glass fibre reinforced nylon	standard	standard
Type		
Compression type	standard	standard

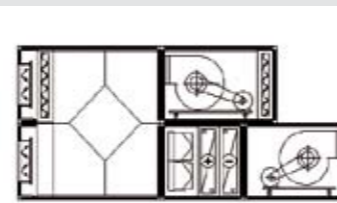
## CONFIGURATIONS



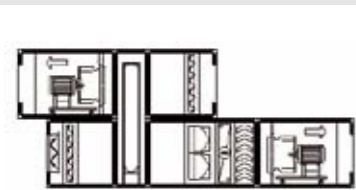
1. Horizontal with one fan



2. Horizontal with return and supply fan



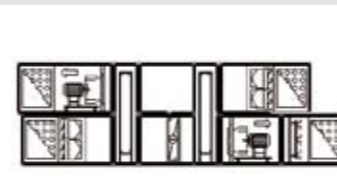
3. Double Deck with Plate heat exchanger and Centrifugal fan



4. Double Deck with Heat wheel and Plug fan

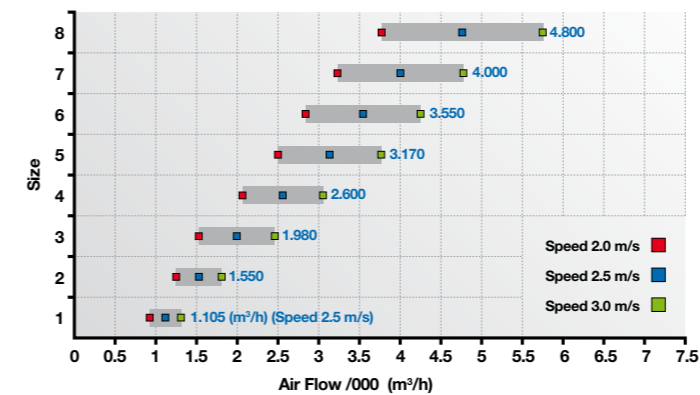


5. Side by side design



6. Customized solution

## EASDALE INTERNATIONAL 1-8



## EASDALE INTERNATIONAL 9-15

