TDA
Series

AHU Double Skin

EUROVENT CERTIFIED PERFORMANCE
AHU N°: 24.02.005
Range : TDA
www.eurovent-certification.com

AHRI CERTIFIED®
www.ahridirectory.org
Air-Cooling and Air-Heating Coils
AHRI Standard 410

Tasaki

AHU Double Skin

COMPANY PROFILE

Bitwise group of companies were established in 1988 in samutprakarn province by a determined team of engineers who desired to manufacture international standard air conditioner to cater to the needs of OEM and ODM customers.

Some years after very well success in Thailand, the company expanded its factory line to China. These companies are known as Shanghai Bitwise Electric Motor & Appliances, Yongwise (Shanghai) Molding Co., Ltd. And Shanghai Bitwise Freezing Equipment Co., Ltd.

Today, Bitwise Group has its production area of 120,000 square meters, the R&D team, highly qualified and experienced engineers, technicians, over 1,000 workers. The company has successfully developed a complete range of air conditioner products from 1,000 to 2,000,000 Btu/Hr, evaporator and condenser coils for air conditioners, as well as for the frozen food industry, evaporative air cooler and water heater, IQF freezer etc.

Apart from air conditioner industry, Bitwise Group also manufactures various types of different products such as resin packed motors, PCBA, LED bulbs, mould manufacturing and plastic injections, public telephone booths entrusted by government telecommunication authorities.

With over 20 years experience in the air conditioner industry, through all the international standards it had achieved, Bitwise Group has demonstrated that it will continue to develop further innovation and technologies by its own R&D teams. As a result, it is one of the main ODM players in this field and will continue to constantly grow together with its customers.

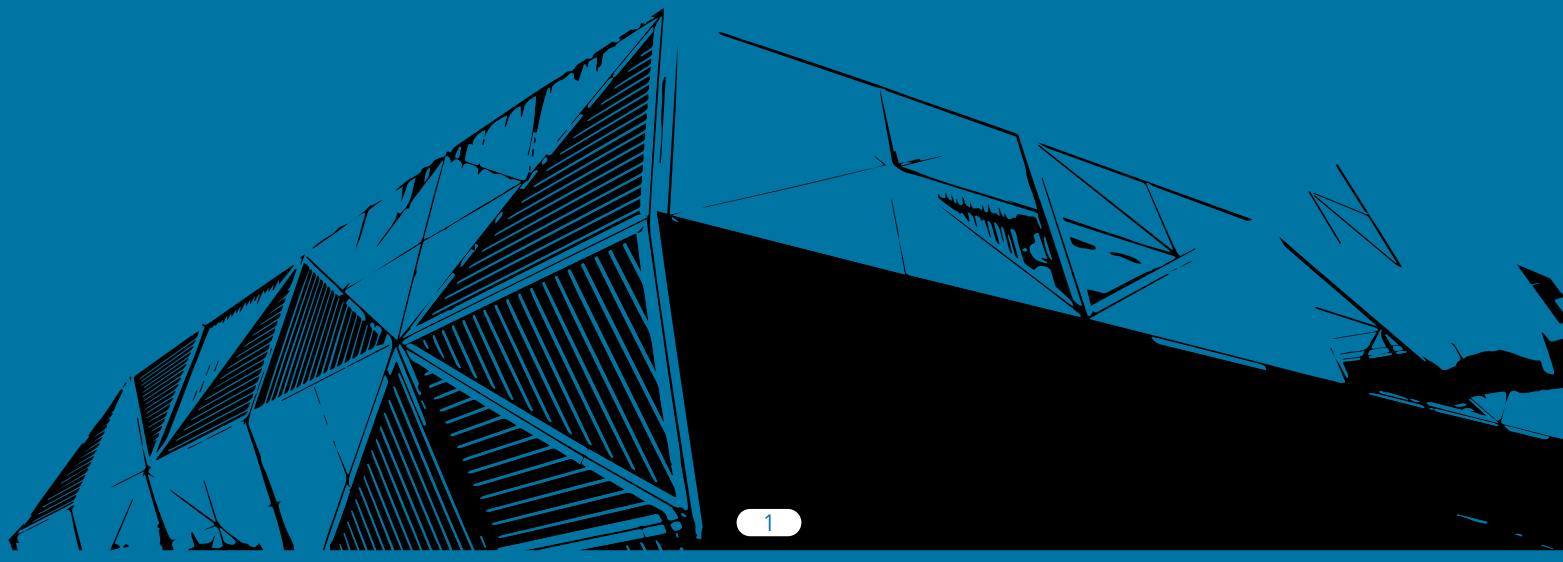

CERTIFICATE

No. SCUK0024670

SOCOTEC

Bitwise (Thailand) Co Ltd

ISO 9001:2015



TDA Series

AHU Double Skin

SPECIFICATIONS STANDARD

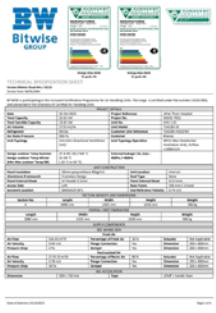
MODEL	DIMENSION		AIR FLOW	Coil Face Area	Coil Face Velocity
	Width(mm)	Height(mm)	(CFM)	(m2)	(m/s)
TDA020-50	1030	930	1,900	0.37	2.41
TDA030-50	1335	930	2,900	0.56	2.45
TDA040-50	1640	930	3,900	0.74	2.47
TDA060-50	1640	1235	5,900	1.12	2.49
TDA080-50	1640	1540	7,900	1.49	2.50
TDA100-50	1945	1540	9,800	1.86	2.49
TDA120-50	2250	1540	11,800	2.23	2.49
TDA150-50	2250	1845	14,800	2.79	2.50
TDA180-50	2250	2150	17,700	3.35	2.49
TDA210-50	2555	2150	20,700	3.91	2.50
TDA240-50	2860	2150	23,700	4.47	2.50
TDA280-50	2860	2455	27,600	5.21	2.50
TDA320-50	2860	2760	31,600	5.95	2.50
TDA360-50	3165	2760	35,500	6.70	2.50
TDA400-50	3470	2760	39,500	7.44	2.50
TDA440-50	3775	2760	43,400	8.19	2.50
TDA480-50	4080	2760	47,400	8.93	2.50

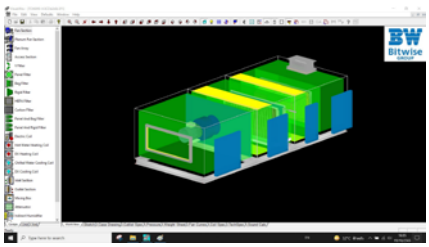
Dimension Calculation

External Dimension AHU Width : Width
External Dimension AHU Height : Height + Base AHU

Example : Model TDA100-50
External Dimension AHU Width : 1945 mm.
External Dimension AHU Height : 1540 + 100 = 1640 mm.

COMPUTER PROGRAM





EUROVENT TEST REPORT

Galvanized/Stainless Steel

Thermal Transmittance	T2/T1
Thermal Bridging of the Casing	TB1/TB2
Mechanical Strength of Casing	D1/D1
Casing Air Leakage @-400 Pa @+700 Pa	 L1/L1 L1/L2
Filter Bypass Leakage	F9/F9

TDA Series

AHU Double Skin

SPECIFICATIONS STANDARD

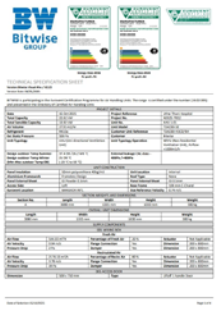
MODEL	DIMENSION		AIR FLOW	Coil Face Area	Coil Face Velocity
	Width(mm)	Height(mm)	(CFM)	(m2)	(m/s)
TDA020-60	1050	950	1,900	0.37	2.41
TDA030-60	1355	950	2,900	0.56	2.45
TDA040-60	1660	950	3,900	0.74	2.47
TDA060-60	1660	1255	5,900	1.12	2.49
TDA080-60	1660	1560	7,900	1.49	2.50
TDA100-60	1965	1560	9,800	1.86	2.49
TDA120-60	2270	1560	11,800	2.23	2.49
TDA150-60	2270	1865	14,800	2.79	2.50
TDA180-60	2270	2170	17,700	3.35	2.49
TDA210-60	2575	2170	20,700	3.91	2.50
TDA240-60	2880	2170	23,700	4.47	2.50
TDA280-60	2880	2475	27,600	5.21	2.50
TDA320-60	2880	2780	31,600	5.95	2.50
TDA360-60	3185	2780	35,500	6.70	2.50
TDA400-60	3490	2780	39,500	7.44	2.50
TDA440-60	3795	2780	43,400	8.19	2.50
TDA480-60	4100	2780	47,400	8.93	2.50

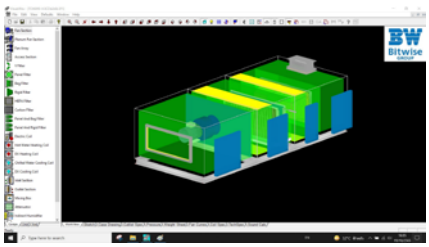
Dimension Calculation

External Dimension AHU Width : Width
External Dimension AHU Height : Height + Base AHU

Example : Model TDA 20-60
External Dimension AHU Width : 1050 mm.
External Dimension AHU Height : 950 + 100 = 1050 mm.

COMPUTER PROGRAM





EUROVENT TEST REPORT

Galvanized/Stainless Steel

Thermal Transmittance	T2/T1
Thermal Bridging of the Casing	TB1/TB2
Mechanical Strength of Casing	D1/D1
Casing Air Leakage @-400 Pa @+700 Pa	 L1/L1 L1/L2
Filter Bypass Leakage	F9/F9

TDA Series

AHU Double Skin

SPECIFICATIONS STANDARD

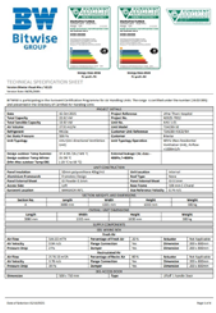
MODEL	DIMENSION		AIR FLOW	Coil Face Area	Coil Face Velocity
	Width(mm)	Height(mm)	(CFM)	(m2)	(m/s)
TDA020-80	1090	990	1,900	0.37	2.41
TDA030-80	1395	990	2,900	0.56	2.45
TDA040-80	1700	990	3,900	0.74	2.47
TDA060-80	1700	1295	5,900	1.12	2.49
TDA080-80	1700	1600	7,900	1.49	2.50
TDA100-80	2005	1600	9,800	1.86	2.49
TDA120-80	2310	1600	11,800	2.23	2.49
TDA150-80	2310	1905	14,800	2.79	2.50
TDA180-80	2310	2210	17,700	3.35	2.49
TDA210-80	2615	2210	20,700	3.91	2.50
TDA240-80	2920	2210	23,700	4.47	2.50
TDA280-80	2920	2515	27,600	5.21	2.50
TDA320-80	2920	2820	31,600	5.95	2.50
TDA360-80	3225	2820	35,500	6.70	2.50
TDA400-80	3530	2820	39,500	7.44	2.50
TDA440-80	3835	2820	43,400	8.19	2.50
TDA480-80	4140	2820	47,400	8.93	2.50

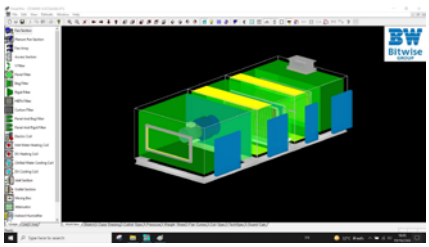
Dimension Calculation

External Dimension AHU Width : Width
External Dimension AHU Height : Height + Base AHU

Example : Model TDA 20-80
External Dimension AHU Width : 1090 mm.
External Dimension AHU Height : 990 + 100 = 1090 mm.

COMPUTER PROGRAM





EUROVENT TEST REPORT

Galvanized/Stainless Steel

Thermal Transmittance	T2/T1
Thermal Bridging of the Casing	TB1/TB2
Mechanical Strength of Casing	D1/D1
Casing Air Leakage @-400 Pa @+700 Pa	 L1/L1 L1/L2
Filter Bypass Leakage	F9/F9

TDA Series

AHU Double Skin

SPECIFICATIONS STANDARD

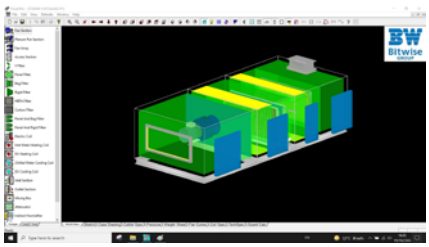
MODEL	DIMENSION		AIR FLOW	Coil Face Area	Coil Face Velocity
	Width(mm)	Height(mm)	(CFM)	(m2)	(m/s)
TDA020-90	1110	1010	1,900	0.37	2.14
TDA030-90	1415	1010	2,900	0.56	2.45
TDA040-90	1720	1010	3,900	0.74	2.47
TDA060-90	1720	1315	5,900	1.12	2.49
TDA080-90	1720	1620	7,900	1.49	2.50
TDA100-90	2025	1620	9,800	1.86	2.49
TDA120-90	2330	1620	11,800	2.23	2.49
TDA150-90	2330	1925	14,800	2.79	2.50
TDA180-90	2330	2230	17,700	3.35	2.49
TDA210-90	2635	2230	20,700	3.91	2.50
TDA240-90	2940	2230	23,700	4.47	2.50
TDA280-90	2940	2230	27,600	5.21	2.50
TDA320-90	2940	2535	31,600	5.95	2.50
TDA360-90	3245	2840	35,500	6.70	2.50
TDA400-90	3550	2840	39,500	7.44	2.50
TDA440-90	3855	2840	43,400	8.19	2.50
TDA480-90	4160	2840	47,400	8.93	2.50

Dimension Calculation

External Dimension AHU Width : Width
External Dimension AHU Height : Height + Base AHU

Example : Model TDA 30-90
External Dimension AHU Width : 1415 mm.
External Dimension AHU Height : 1010 + 100 = 1110 mm.

COMPUTER PROGRAM



EUROVENT TEST REPORT

Galvanized/Stainless Steel

Thermal Transmittance	T2/T1
Thermal Bridging of the Casing	TB1/TB2
Mechanical Strength of Casing	D1/D1
Casing Air Leakage @-400 Pa @+700 Pa	 L1/L1 L1/L2
Filter Bypass Leakage	F9/F9

For addition, please refer to technical data Sheet "Door System of Air Handling Units"

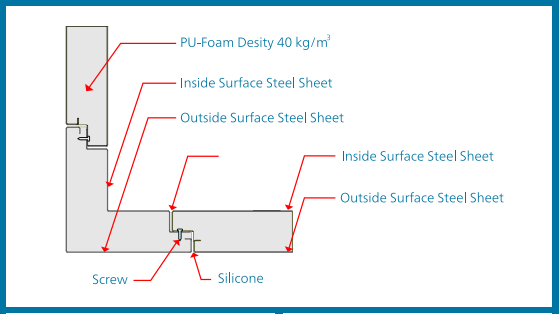
DOUBLE SKIN PANEL 50 MM.

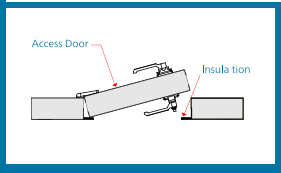
Panel 50 mm.
Standard 50 mm. thick infill panel are of double skin construction from pressure Injected polyurethane foam insulation

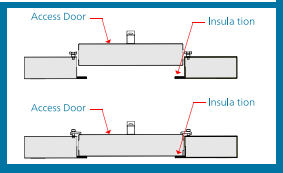
- Thermal conductivity (k) = 0.0204 W/m.K (0.0118 Btu/ft.h.°F)

- Heat transfer coefficient of panel 50 mm thickness (k/L) = 0.408 W/m^2.K (0.0719 Btu/ ft^2.h.°F)

- Density = 40 kg/m^3

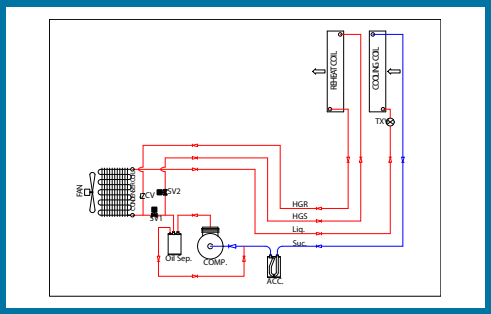






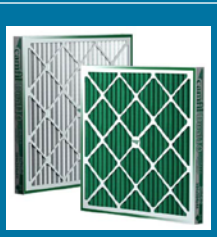
HOT GAS RE HEAT

when the compressor is running to reduce the temperature and when the compressor is running to reduce the temperature and temperature to reduce humidity. In this case, the compressor will send refrigerant flow to the reheat coil to compensate for excessive cooling.



FILTER SECTION

Filters are designed for easy removal and renewal of filter cells. and created for use with any type of Pre-filter, Medium filter and Hepa filter Effective diversity in areas of particular importance


Pre Filter


Med Filter

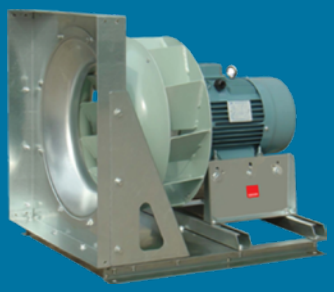

Hepa Filter

COIL SECTION

Bitwise's AHU has its coil constructed with aluminium corrugated fin and copper plain tube 3/8",1/2" and 5/8". Copper fins and hydrophillic fins are anti-corrosive materials which are optional. The fins are designed purposely for better heat transfer efficiency and moisture carry over limit performance. Capacity, pressure drop and selection procedure are designed in according with ARI standard 410.
The design face velocity is 2.5m/s and for higher face velocity must use eliminator to prevent carry over. If the unit has stack coil design as the coil section that Bitwise AHU provide medium drain-pan between upper coil and lower coil, this prevent water flooding the lower coil.

FAN SECTION

Some application, such as cleanroom need to provide clean air. Plenum fan can support about it. Also, plenum fan contribute to lower overall system pressure drop, thereby reducing energy consumption and can use t with inverter control



MOTOR

Normally, we provide 4 poles, 380V-415V/3Ph/50Hz with IP55 class F to standard models and also we have to option motor as

1. 2 & 6 poles motor
2. Economic efficiency motor.
3. Hi efficiency motor
4. 50Hz motor

There are a few components which are able to provide safety, efficiency and flexibility for the operation of AHU. It includes thermistor, Inverter, disconnect switch and other.

ACCESSORIES

VOLUME DAMPER

WATER PROOF SW.

LAMP

INSPECTION WINDOW

Tasaki

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CAT.NO.TS.TDA-24S-01-EUROVENT

ISO 50001 : 2018
ISO 9001 : 2015
ISO 14001 : 2015
ISO 45001 : 2018
ISO/IEC 17025 : 2017

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