



The ideal IAQ & E solution Air Treatment Unit

**OUR OTHER PRODUCTS**

- Fan Coil Unit
- Evaporative Air Cooling Unit
- Air Scrubber
- Pressurisation Unit
- Air Terminal Product
- Smoke & Fire Damper
- Accoustic Door



**Brightflow Technologies Pvt. Ltd.**

Regd. Office & Works:- B-2, Mangol Puri Industrial Area, Phase II, New Delhi, India

Phone:- 011-27033745, Fax : 011-27033746

E-mail:- [brightflow@sify.com](mailto:brightflow@sify.com), [info@brightflow.co.in](mailto:info@brightflow.co.in), Website:- [www.brightflow.co.in](http://www.brightflow.co.in)

## BRIGHTFLOW AIR TREATMENT UNIT

With over three decades of being in the installation line, the experience is proving to be of immense advantages in the manufacturing of AHU's enabling us to cater successfully to the specific demand of the user. It is where people from various quarters prefer to place repeat orders on us because of their unrelenting faith in our professional approach to carryout installation as well as our AIR HANDLING UNITS/ FAN COIL UNITS including other equipments and allied items which have proven performance over the years. We have solutions to all your problems be it selecting the right air quantity, proper fan static pressure, fan type, air filters, safety, service factor and what not.

Air Handling Unit is the ultimate source of heat transfer and is the heart of air-conditioning system. It supplies air including performing various functions of filtration, mixing, air volume control, cooling & dehumidification, heating & humidification, energy recovery, space pressurization, noise & vibration control.

### RANGE

Brightflow manufactures compact, rugged and reliable double skin Air Handling Units in the following capacity ranges:

Horizontal Floor Mounted – 2000 cfm (3400 cmh) to 40000 cfm (68000 cmh)

Vertical Floor Mounted – 1500 cfm (2550 cmh) to 8000 cfm (13600 cmh)

Ceiling Suspended – 3000 cfm (5100 cmh) to 8000 cfm (13600 cmh)

These are furnished with direct expansion coil, chilled water or heating coils. Each component is design for dependability, ease of maintenance and precise performance.

### FEATURES

The modular air handling unit design concept has provided a revolutionizing change to meet the demand of indoor air quality. These are available in various sizes, quality ranges and static pressure as per system requirement

All the aluminium profile sections have internal & external protruding serrations to provide proper gripping between the 3D, Nylon corners and the profile sections as well as between the gasket & the panel. This provides unmatched strength to the body.

Chilled water & DX coils are manufactured from seamless copper tubes with mechanically bonded sine wave design aluminium fins. staggered in direction of air flow for efficient heat transfer.

### IAQ AIR HANDLING UNIT DESIGN

**ROBUST:-** Manufactured from extruded aluminium profile section 3D nylon corners with injected puff insulation provide rigidity to the unit.

**FLEXIBILITY:-** The AHU's can be manufactured as per design requirement with ease and supplied in knocked down conditions for assembly at site.

**AMPLE CHOICE OF BLOWERS:-** You have ample choice of blowers to meet your air quantity as well as whisper sound requirement.

### MODULAR DESIGN

Modular AHU's construction allows easy inspection, cleaning & maintenance. The Puf injected in the panels is CFC free non-hydroscopic and the microbial growth is inhibited.

These units have assumed a very significant and respectful place in HVAC system. People have become much more health conscious than ever before and we not only provide the best in design and construction but also take care of Indoor air quality & environment.

### DRAIN PAN

Drain Pans are provided with a special provision of downside notch for regulating the water towards the slope side provided for the purpose and the chances of microbial growth is reduced.

### AIR LEAKAGE/ TIGHTNESS

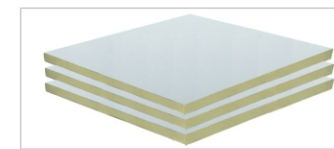
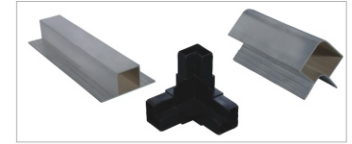
The casing is designed to take care of the maximum operating pressure/ pressure variation in the unit and the system

## CONSTRUCTION

The main components of the double skin Air handling unit's are casing (Framework, panels, and base frame), blower section, cooling coil section condensate drain pan, filter section, accessories & safty devices etc.

### CASING PROFILES (Anticorrosive frame work)

The frame work is fabricated from hollow extruded aluminium profiles joined by 3D peralluman nylon glass fiber corner joints to house all the internals. The 3D joints corners ensure perfect alignment & rigidity to the whole casing. In case the return air is routed through the AHU room, there won't be any chances of condensation on structural frame. However if the return air is connected to the AHU, there will be chances of condensation which is taken care of by the thermal bridge profile panels.

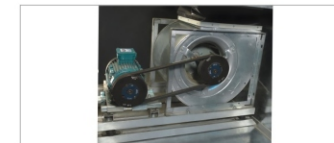


### DOUBLE SKIN PANELS (Ensure additional rigidity)

The body is fabricated out of 23/43mm thick panels, the inner from G.I sheet and the outer one with 24G pre-painted, pre-plasticized G.I. sheets. However the inner & outer sheets can be supplied of the requisite gauge as per requirement. The panels are injected with CFC free environment friendly, self extinguishing 38-40 kg/cum density polyurethane foam. The injected puf provides additional rigidity to the unit as a whole.

### BASE FRAME

The complete unit is mounted on a heavy gauge galvanized sheet channel of the required strength depending upon the weight of the unit and galvanized corner angles including provision of unit lifting.



### BLOWER SECTION (Whisper sound)

#### (For Horizontal / Vertical / Ceiling Suspending unit)

Fan section comprises of double width, double inlet centrifugal blower, TEFC motor, belt / direct driven. The fan & motor assembly is mounted on a common / adjustable base frame & isolated from the main structure by efficient, self-resilient isolators and fire retardant flexible connection at the fan outlet inside the body. In case of vertical unit the blower is mounted on the top and the cooling coil in either vertical or slanted position below the blower section.

In case of ceiling suspended unit twin blowers may be installed if the space between the ceiling & false ceiling is restricted one. These are driven by single phase, 3 speed motors with thermal overload protection.

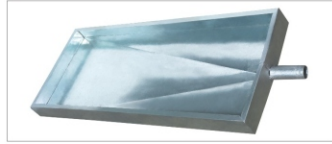
### COIL SECTION (Optimum heat transfer)

The coils are fabricated from copper tubes with mechanically bonded aluminium fins to provide maximum heat transfer area and can be provided for direct expansion, chilled water and heating systems. The coils are available in desired rows deep as per design requirement. We ensure that the copper tubes, aluminium and steel used at our associate's end are of best quality and the fins are checked for full drawn collars without any cracks. The coils during maintenance, once in a year, can be taken out for cleaning / complete overhauling.



#### DRAIN PAN (Inhibit microbial growth)

The drain pan is fabricated from high quality heavy gauge stainless steel insulated with cross-linked closed cell fire-retardant poly-ethylene / Nitrile foam or injected with CFC free polyurethane foam. These are provided with a downside slope for quick draining of condensate to reduce the chances of microbial growth.



#### FILTER SECTION

Single/ multi stage filters are offered as per requirement/ application which comply with ASHRAE & EUROVENT standard. Washable prefilters are supplied with the unit.



#### INSPECTION DOOR ACCESSORIES (Perfect air sealing)

The inspection doors are provided with the best quality of hinges & locks available in the country, made out of self extinguishing nylon for perfect air sealing.



#### SAFETY DEVICES (Where safety is the key point)

Interlock between fan section and inspection door (without wiring), earthing for fan & motor base assembly, nylon capes for all the protruding screws.



#### OPTIONAL

Humidifier section of any type, Mist eliminators, Pan type humidifier, Heat recovery wheel, Face & bypass section, fine & hepa filters, variable frequency drive and mixing chamber etc & **UVC devices** to purify the air by wiping out airborne, biological and chemical contaminants viz. bacteria, mould, viruses, cigarette smoke. Spores, allergies, fungus, body odor, automobile exhaust, bathroom odor, & volatile organic compound etc.



#### DOUBLE SKIN FLOOR MOUNTED UNIT (Single blower- belt driven)



#### TECHNICAL DATA

Model No.	Air Volume (CMH)	Air Volume (CFM)	Fan Dia (mm)	Overall Dimension (mm)			Fan Outlet Velocity (m/s)	Coil Areas (Sq.ft)
				Length	Width	Height		
BFH - 20	3400	2000	250 Ø	1300	850	800	9.87	4
BFH - 30	5100	3000	315 Ø	1400	1050	875	7.44	6
BFH - 40	6800	4000	355 Ø	1400	1350	900	9.93	8
BFH - 45	7650	4500	400 Ø	1500	1350	1100	8.30	9
BFH - 50	8500	5000	400 Ø	1500	1400	1100	7.98	10
BFH - 60	10200	6000	450 Ø	1650	1450	1250	8.78	12
BFH - 75	12750	7500	500 Ø	1750	1675	1450	8.70	15
BFH - 80	13600	8000	500 Ø	1750	1650	1450	9.28	16
BFH - 100	17000	10000	560 Ø	1850	1750	1575	9.26	20
BFH - 110	18700	11000	560 Ø	1900	1850	1775	10.18	22
BFH - 120	20400	12000	630 Ø	2000	1950	1675	8.85	24
BFH - 135	22950	13500	630 Ø	2000	2050	1775	9.96	27
BFH - 150	25500	15000	710 Ø	2200	2150	1850	8.79	30
BFH - 170	28900	17000	710 Ø	2200	2300	1975	9.96	34
BFH - 200	34000	20000	800 Ø	2450	2600	2025	9.33	40
BFH - 215	36550	21500	800 Ø	2450	2600	2125	10.03	43
BFH - 250	42500	25000	900 Ø	2550	2700	2350	9.24	50
BFH - 270	45900	27000	900 Ø	2550	2800	2400	9.98	54
BFH - 300	51000	30000	1000 Ø	2650	3000	2450	8.84	60
BFH - 340	57800	34000	1000 Ø	2650	3100	2650	10.01	68

- Total Height (H) includes 100 mm deep base Channel.
- For 8 row deep coil add 100 mm extra to the length of the unit.
- Above models are with 23 mm thick panels. For 43 mm thick panels add 50 mm extra to all the dimensions of the unit.

DOUBLE SKIN FLOOR MOUNTED VERTICAL UNIT  
(Single / Twins blowers belt driven)

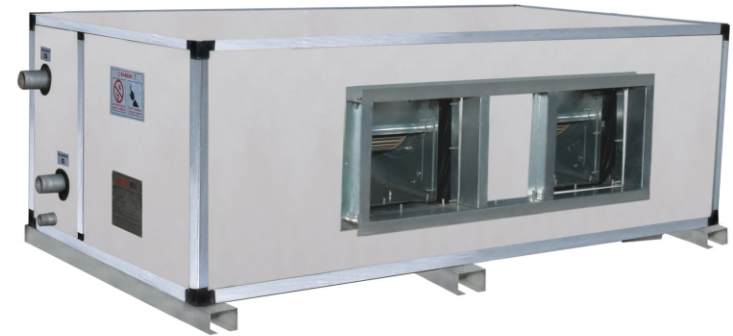


TECHNICAL DATA

Model No.	Air Volume (CMH) (CFM)		Fan Model (Inches)	Overall Dimensions (mm)			Outlet Velocity (m/s)	Coil (Sq.ft)
				Length	Width	Height		
BVH-15	2550	1500	9 x 9 x 1 No.	900	800	1225	9.07	3
BVH-20	3400	2000	10 x 10 x 1 No.	950	1100	1225	9.87	4
BVH-25	4250	2500	12 x 12 x 1 No.	1050	1130	1400	8.76	5
BVH-30	5100	3000	12 x 12 x 1 No.	1050	1100	1500	10.52	6
BVH-40	6800	4000	15 x 15 x 1 No.	1025	1400	1600	9.93	8
BVH-50	8500	5000	18 x 18 x 1 No.	1200	1450	1820	8.87	10
BVH-60	10200	6000	12 x 12 x 2 Nos.	1050	1750	1610	10.52	12
BVH-70	11900	7000	15 x 15 x 2 Nos.	1125	2100	1650	8.68	14
BVH-80	13600	8000	15 x 15 x 2 Nos.	1125	2100	1750	9.93	16

- Total Height (H) includes 100 mm deep base Channel.
- For 8 row deep coil add 100 mm extra to the length of the unit.
- Units from 6000 to 8000 CFM shall have two impellers mounted on common shaft driven by single motor.
- Above models are with 23 mm thick panels. For 43 mm thick panels add 50 mm extra to all the dimensions of the unit.

DOUBLE SKIN CEILING SUSPENDED AIR HANDLING UNIT  
(Twin blowers- belt driven)



TECHNICAL DATA

Model No.	Air Volume (CMH) (CFM)		Fan Model (Inches)	Overall Dimensions (mm)			Outlet Velocity (m/s)	Coil (Sq.ft)
				Length	Width	Height		
BCH-20	3400	2000	7" x 7" x 2 Nos	1150	1685	590	9.07	6
BCH-30	5100	3000	9" x 9" x 2 Nos	1150	1685	590	9.07	6
BCH-30	5950	3500	9" x 9" x 2 Nos	1150	1785	600	10.58	7
BCH-40	6800	4000	10" x 10" x 2 Nos	1200	1800	640	9.87	8
BCH-50	8500	5000	12" x 12" x 2 Nos	1250	1950	720	8.76	10
BCH-60	10200	6000	12" x 12" x 2 Nos	1250	2250	735	10.52	12
BCH-70	11900	7000	15" x 15" x 2 Nos	1350	2350	820	8.68	14
BCH-80	13600	8000	15" x 15" x 2 Nos	1350	2550	820	9.93	16

- Above models are with 23 mm thick panels. For 43 mm thick panels add 50 mm extra to all the dimensions of the unit.
- For more details please contact our technical assistance department.
- **Due to continuous R & D for improvement in the products, we reserve the right to alter dimensions of the units without any prior notice**