



# BDVA

*Chilled Water Air Handling Units  
6,000-20,000 CFM (2.83-9.44CMS)  
238-660 MBH (70-247 kW)*

TRANE  
TECHNOLOGIES



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## Presenting the BD Series compact air handlers...

A system engineered with your costs in mind, the BD Series of compact air handlers offer:-

1.Easy and versatile installation	<ul style="list-style-type: none"> <li>• Small footprint to save space.</li> <li>• Fully factory packaged to quicken installation (filters, drives, motors)</li> </ul>
2.Built to last	<ul style="list-style-type: none"> <li>• Attractive, high gloss durable finish on baked polyester powder painted GI panels removes corrosion concerns.</li> </ul>
3.Wide capacity range	<ul style="list-style-type: none"> <li>• Meets most application needs with a CFM range of 6,000-20,000 CFM covering 5 modules.</li> </ul>
4.Flexible fan arrangement	<ul style="list-style-type: none"> <li>• BDVAs offer added flexibility of fan arrangement for horizontal or vertical discharge.</li> <li>• Flush mounted to walls save expensive floorspace.</li> </ul>

### UNIT CASING

The unit framework shall be GI steel. Exterior panels shall be fabricated from galvanized steel. All panels shall be cleaned and coated with a baked polyester powder paint. The base frame shall be welded galvanized steel.

All panels in contact with air stream shall be insulated with Polyethylene foam. All panels shall be removable to ensure proper access for servicing and maintenance. Removable panels shall be secured with bolts.

### FOOTPRINT

To save building space all models shall be placed against wall with return air from the front and general service from the sides.

### COOLING COIL

The cooling coil shall be 9.5 mm (3/8") OD (Except for BDVA150&180 cooling coil shall be 12.7 mm (1/2") OD) internally grooved, seamless copper tubes mechanically expanded into aluminium corrugated fins for BDVA.

6 - Row coil option is available for higher cooling capacity model.

Coils shall be leak tested at 380 psig. The drain pan shall be fabricated of galvanized steel, insulated to prevent any condensation, and baked polyester powder paint to prevent corrosion.

### FILTER

1 inch or 2 inch washable filters shall be provided with side loading filter for ducted return.

### FAN

Supply fans shall be of double width double inlet forward curved centrifugal fans statically and dynamically balanced. The drive components shall include fixed pitch drives and multiple V-belts. The drives shall be factory run tested and balanced. The supply fan motor shall be totally enclosed fan cooled. Fan and motor bearings shall be permanently lubricated.

### OPTIONAL ACCESSORIES:

#### STARTERS

Unit mounted DOL fan motor starters are available as an optional feature.

### HI-STATIC MOTOR

Optional factory mounted oversized fan motor for high external static pressure application.

### RETURNS AIR GRILLES

Return air grilles shall be provided for vertical or horizontal discharge, horizontal return application. Grilles shall be installed in place of the front lower side panels.

### STAINLESS STEEL DRAIN PAN

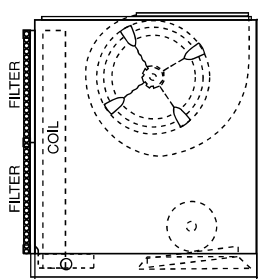
Stainless steel drain pan shall be available as an optional feature for BDVA.

### DISCHARGE PLENUM AND GRILLES

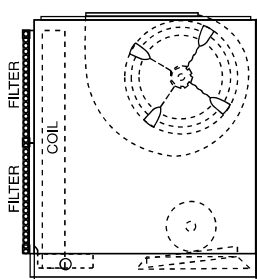
Discharge plenum shall be available for vertical free-blow discharge applications. It shall be constructed of galvanized steel, finished with baked polyester powder paint to match the unit casing. Grilles shall be satin finished aluminium and have double-deflection adjustable louvers. Fan motor tip output will be specially selected to properly match with Free Blow Application.

(This option is available for BDVA075 & BDVA090 only)

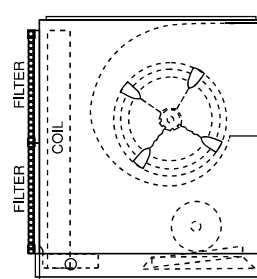
### BDVA-Flexible Fan Arrangement



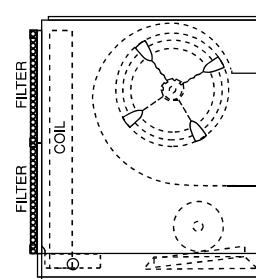
Arrangement 1



Arrangement 2



Arrangement 3



Arrangement 4



#### CORRUGATED FIN COOLING COIL

- Higher heat transfer efficiency.
- Able to handle higher face velocity.

#### FLUSH PANEL AGAINST FRAME

- Offering tighter air control against air leakage
- Easier removal & replacement

#### POLYETHYLENE FOAM INSULATION

- Polyethylene foam fire retard and non-rotting insulation.

#### POLYETHYLENE FOAM INSULATED BASE AND FRAME

- Better resistance to condensation.

#### MALE PIPE THREAD HEADER

- Provided standard for better corrosion resistance.

#### BELT-DRIVEN MOTOR

- For higher-static application and maximum airflow (oversize motor capability).
- Factory installed, minimizes potential field problems.

#### INSULATED GI DRAIN PAN

- Wider pan width and galvanized steel with baked polyester powder paint allows easier cleaning and access.

## STANDARD & FEATURES

FEATURES	BENEFITS
<ul style="list-style-type: none"> <li>• Compact Air Handler</li> </ul>	<ul style="list-style-type: none"> <li>• Small equipment room space requirements.</li> <li>• Greater flexibility in positioning the unit.</li> <li>• More usable (rental/leasing) space.</li> </ul>
<ul style="list-style-type: none"> <li>• Corrugated Fin Cooling Coil</li> <li>• Blue Fin Cooling Coil (Optional in BCVA)</li> <li>• Broad filter selection</li> </ul>	<ul style="list-style-type: none"> <li>• Higher heat transfer efficiency.</li> <li>• To further enhance protection against moisture carry-over and corrosion.</li> </ul>
<ul style="list-style-type: none"> <li>• Powder paint in attractive color</li> <li>• Baked polyester power paint is applied on treated galvanized steel.</li> </ul>	<ul style="list-style-type: none"> <li>• BDVA 075-180 provide 1 inch or 2 inch with side loading filter for ducted return.</li> <li>• Broad filter selection for application flexibility and improved indoor air quality.</li> </ul>
<ul style="list-style-type: none"> <li>• Optional Hi-static motors and drives from factory</li> </ul>	<ul style="list-style-type: none"> <li>• Uniform coverage, no liquid runs.</li> <li>• Highly corrosion resistant gloss finish.</li> </ul>
<ul style="list-style-type: none"> <li>• High CFM/TON</li> <li>• Permanently lubricated ball bearings</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminates need for field modification.</li> <li>• Assures proper airflow.</li> <li>• Increased application flexibility.</li> </ul>
	<ul style="list-style-type: none"> <li>• Better comfort, better air quality.</li> <li>• Longer lasting</li> <li>• No maintenance</li> </ul>

## Standard Product Specifications

Models	Indoor unit		BDVA075	BDVA090	BDVA120	BDVA150	BDVA180
Electrical Data	Power Supply	V/ph/Hz	380-415/3/50				
Performance Data	Nominal Airflow	cfm	7,760	9,240	12,120	15,130	18,080
	Standard Cooling Capacity	MBH	238	280	380	570	660
<b>Cooling Coil</b>							
Standard Coil	Tube & Header Material		Copper				
	Row		3	3	3	4	4
	Fin Per Inch	FPI	12	12	12	12	12
	Water Flow Rate		47.5	56.0	76.0	113.8	131.9
	Water Pressure Drop		9.3	9.1	15.8	8.1	8.9
	Water inlet/outlet Connection	in	1-1/2	1-1/2	1-1/2	2.0	2.0
	Drain Connection Size	in	1	1	1	1	1
<b>Fan &amp; Motor</b>							
Fan	Type		Centrifugal FC				
	Fixed Drive Type		Belt and Pulley				
	Qty		1	1	2	2	2
	Maximum Airflow	cfm	8,900	10,600	13,800	18,310	21,800
	Minimum Airflow	cfm	5,900	7,000	9,100	12,060	14,400
Motor	Type		TEFC				
	Qty		1	1	1	1	1
	Motor Output Power	STD	5.5	7.5	7.5	10.0	15.0
		Option	7.5/10.0	10.0/15.0	10.0/15.0	15.0/20.0	20.0
	Number of Speed		1	1	1	1	1
	RLA	A	8.56	12.0	12.0	15.2	22.0
<b>Unit Dimension and Weight</b>							
Dimensions	Crated (H x W x D)	mm	1,500x2,100x1,290	1,650x2,100x1,290	1,780x2,390x1,290	1,900x2,900x1,520	1,980x2,900x1,520
	Uncrated - Net (H x W x D)	mm	1,219x1,808x1,040	1,372x1,808x1,040	1,520x2,088x1,040	1,653x2,596x1,275	1,777x2,596x1,275
Weight	Crated	kg	402	470	543	768	832
	Uncrated - Net	kg	353	421	487	685	749

Note : 1. Cooling capacity is rated at 80 °FDB/67 °FWB at nominal airflow listed, entering water temperature at 45 °F and water temperature rise of 10 °F.  
2. Product design and specification are subject to change without notice.



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