

# BD22 (Belt Driven 22) Series

Hot Water/Steam Heated

Model Lengths: 96"–192"

Environmental Separation (up to 24')

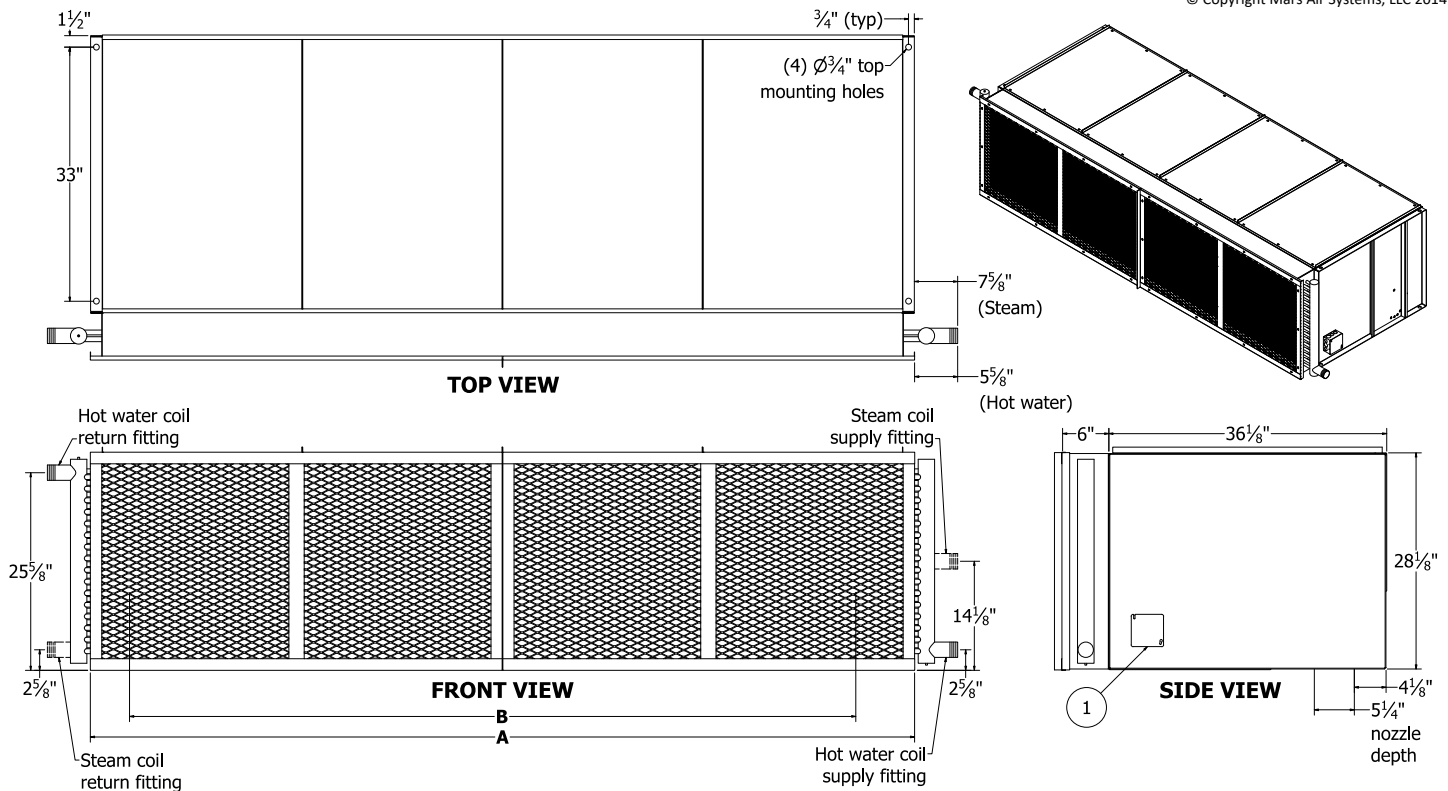
Insect Control (up to 22')



atmosphere is everything

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## Notes:

1. External 4"x4" junction box for electrical wiring provided on right side of unit.
2. Recommended service clearances are 12" to the left and right sides, 24" on top, and 24" in front of the unit.
3. Circuit protection (per NEC) to be installed by others.
4. To prevent accidental damage during operation, unit must be installed so that the bottom of the air curtain does not extend below the door header.
5. Unit can be suspended from overhead on both ends without intermediate support.
6. 2" MPT (hot water) or 3" MPT (steam) coil connections.

Model Number	Mechanical Data					Lab Data	
	Overall Length A (in)	Nozzle Length (in)	Mounting Width	Motor (hp)	Weight (lb)	Max Velocity (fpm)	Max Volume (cfm)
<input type="checkbox"/> BD2296-1**-TS	117	96	105 1/2	10	950	6000	16250
<input type="checkbox"/> BD22120-1**-TS	141	120	129 1/2	15	1100	6000	20300
<input type="checkbox"/> BD22144-1**-TS	165	144	153 1/2	15	1250	6000	24350
<input type="checkbox"/> BD22168-1**-TS	189	168	177 1/2	20	1400	6000	28400
<input type="checkbox"/> BD22192-1**-TS	213	192	201 1/2	20	1550	6000	32500

\* – Use corresponding letters in "Coil Code" and "Voltage Code" column headers (see page 2) to complete the model numbers.

Note: above data is for 60 Hz at 1200 RPM. For 50 Hz, RPM is 1000 with a 17% reduction in performance.

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## Standard Features:

### Air Curtain

- ❖ Designed for indoor/outdoor use
  - ❖ Self-contained one-piece heavy-gauge corrosion-proof paint lock metal design
  - ❖ Rust preventative and fire-retardant electrostatic polyurethane powder coating
    - Standard color is Titanium Silver (TS)
  - ❖ 10 to 20 HP continuous duty Premium Efficiency industrial motors
    - Motor shall be inverter rated Totally Enclosed Fan Cooled (TEFC) suitable for continuous heavy-duty operation
  - ❖ Belt Drive system with adjustable sheaves and pulleys
    - Motor shall be internally mounted in the cabinet to prevent damage and to eliminate the need for a belt guard, complying with OSHA requirements
  - ❖ Adjustable air directional vanes with 40° sweep front to back
  - ❖ Adjustable perforated volume dampers capable of reducing air velocity up to 50%
  - ❖ 12-months parts warranty
  - ❖ Freight not included
- Proudly made in the USA

### Hot Water and Steam Coils

- ❖ Coil casings shall not be less than 16-gauge galvanized steel with tube holes formed with extruded collars
- ❖ Fins are die formed 0.006" aluminum (1 row – 10 FPI, 2 row – 8 FPI)
- ❖ Coil tubes constructed of heavy wall, 5/8" OD seamless copper (Steam – 0.035" & Hot Water – 0.025")
- ❖ Coil tubes arranged in a staggered pattern and mechanically expanded into fins to ensure a uniform pressure bond
- ❖ Manifolds shall be of heavy seamless copper construction
- ❖ All joints shall be brazed with high temperature silver brazing alloy (Steam – 7% & Hot Water – 3%), max steam operating pressure: 30 PSI
- ❖ Fittings shall be of wrought copper or similar construction such that the entire fluid circuit shall be of compatible nonferrous materials
- ❖ Manifold shall be fitted with 1/4" vent or drain fittings
- ❖ Supply fitting is on the right side of coil. Return fitting is on the left side
  - Same end connections available (see Coil Options below)

## Mars Recommended Accessories (see [catalog](#) for complete listing):

- ❖ [Door Limit Switches](#) (\$) ☐ 99-125, Industrial surface mounted magnetic switch (controller required)
- ❖ [Controllers](#)
  - ☐ MCP\*-TV‡, Motor Control Panel, 120V control voltage (\* = HP Code, † = # of Motors, ‡ = Voltage Code) (\$)
  - Note:** possible HP Codes = H (10 HP), I (15 HP), J (20 HP)
  - ☐ MCP-TD, Adjustable time delay, 1sec-100hr (panel required)
  - ☐ MCP-HD, Heat on Demand, Hot water/steam (thermostat included)
  - ☐ MCP-24V, Low voltage control option (panel required)
- ❖ [Thermostats](#) (\$) ☐ 99-063, Thermostat, line voltage up to 250V Max, single stage, single pole
- ❖ [Severe Duty and Finish](#)
  - ☐ HSG-304SS-BD, 304SS Housing Material for BD Series (per foot)
  - ☐ INS-WD-S-BD, Accessory, Wash Down, Drive and Driven Assemblies
  - ☐ INS-WD-L-BD, Accessory, Wash Down, Drive and Driven Assemblies
  - ❖ **Note:** Washdown and explosion proof units draw higher motor amperage. Control panels for these units require OL/MP with higher amperage range (use MCPMWD or MCP-MXP accessory).
- ❖ [Coil Options](#)
  - ☐ HSG-COIL-SD, Accessory, Steam Distributing Coil Conversion (per foot)
  - ❖ (\$) = Shipped loose

## Sound Levels (measured at 10' in a free field):

10 HP Motor Unit = 75 dBA, 15 HP Motor Unit = 76 dBA, 20 HP Motor Unit = 77 dBA

Coil Data	Hot Water			Steam		
	Coil Code (X)	GPM	MBH	Temp Rise (°F)	Coil Code (Y)	Temp Rise (°F)
<input type="checkbox"/> BD2296-1E*-TS	2 Row	50	589	34	1 Row	572
<input type="checkbox"/> BD22120-1E*-TS	2 Row	52	714	33	1 Row	710
<input type="checkbox"/> BD22144-1E*-TS	2 Row	52	828	32	1 Row	847
<input type="checkbox"/> BD22168-1E*-TS	2 Row	50	936	31	1 Row	985
<input type="checkbox"/> BD22192-1E*-TS	2 Row	48	1034	30	1 Row	1123

\* – Use corresponding letters in "Coil Data" then "Electric Data" column headers to complete the model numbers

EAT : 70 F, EWT: 200 F, Steam Pressure: 5 PSI

Electrical Data Full Load Amp (FLA)	Unit Amperage (Voltage Code)		
	208-230V/3Ø (G)	460V/3Ø (H)	575V/3Ø (I)
<input type="checkbox"/> BD2296-1**-TS	28/26	14	10.3
<input type="checkbox"/> BD22120-1**-TS	42/40	20	15.6
<input type="checkbox"/> BD22144-1**-TS	42/40	20	15.6
<input type="checkbox"/> BD22168-1**-TS	55/51	25.5	20.2
<input type="checkbox"/> BD22192-1**-TS	55/51	25.5	20.2

\* – Use corresponding letters in "Coil Code" and "Voltage Code" column headers to complete the model numbers.

Ampacity (MCA) = total FLA x 1.25

### Alternate voltage codes with FLA data:

• 380-415V/3Ø/50Hz (W) – 11.5A per motor (10HP), 15.5A per motor (15HP), 22.5A per motor (20HP)

### EXAMPLE

**BD22 96 - 1 X H - TS**

