



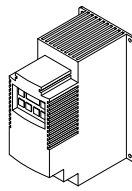
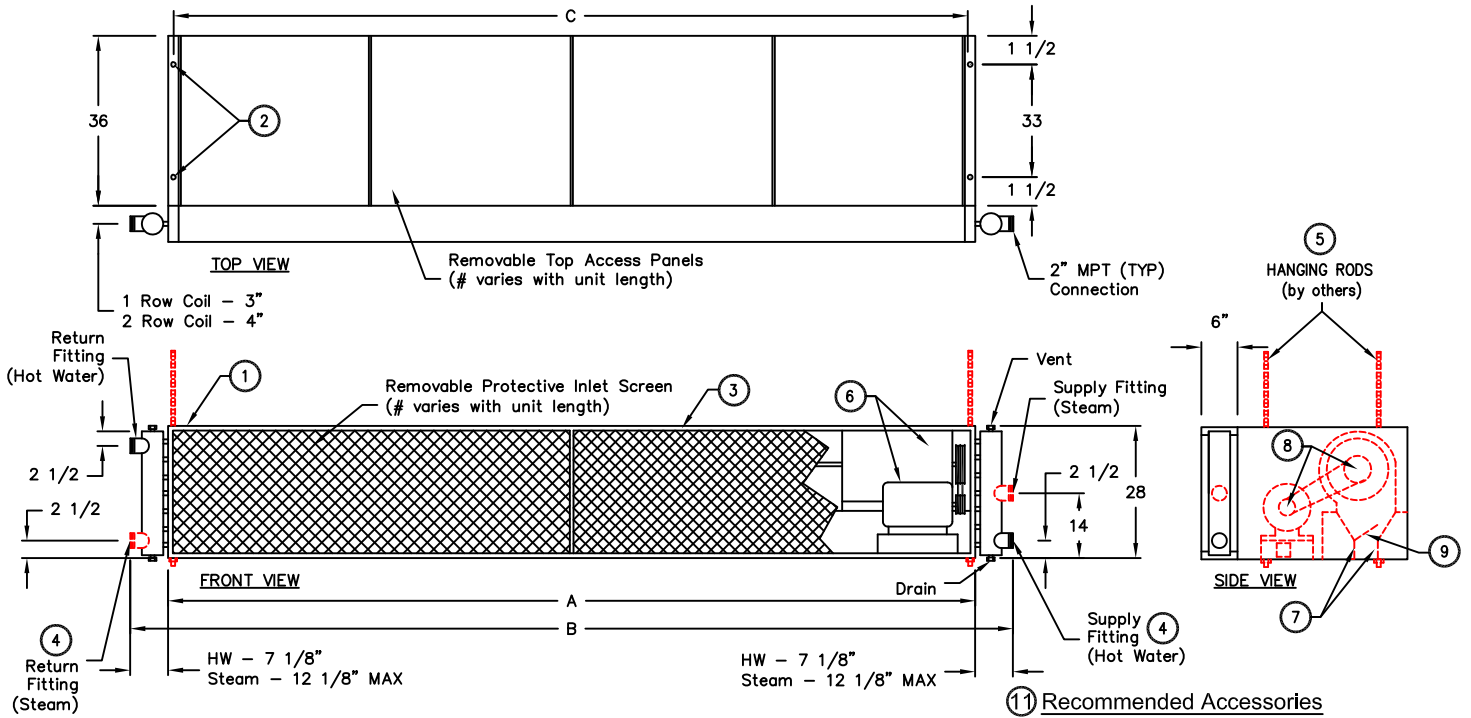
atmosphere is everything

14716 S. Broadway • Gardena, CA 90248 • USA
 TEL:(310) 532-1555 • (800) 421-1266 • FAX:(310) 324-3030
 Web Site: www.marsair.com • E-mail:info@marsair.com

PROJECT		OPTIONS/ITEMS	
TITLE			
COMMENTS		DATE 8/31/16	PAGE
		REV. NO	
MODEL NO. BD22 Series	DRAWING NO BD22HWS-F	DRAWN BY BH	CHECKED BY
		FILE NAME	

Hot Water/Steam Heated Drawing

BD22 (Belt Driven 22) Series



Variable Frequency Drive



Control Panels with Remote T'stat 10



Door Limit Switches

*- Use corresponding letters in "Coil Data" then "Electrical Data" columns to complete the model numbers.

Notes:

- This product is designed to meet the National Electric Code (NEC).
- (4) 3/4" mounting holes provided on for overhead mounting provided, (2) on each end.
- All units have a self contained one piece cabinet, fire retardant and corrosion proof paint lock metal double protected with baked on Titanium Silver color, rust preventative electrostatic polyurethane powder coating.
- Hot Water application shown. For Steam, return fitting is at bottom of manifold and supply is at center of manifold. (2" MPT Typical)
- Cabinet is to be mounted from overhead and has sufficient strength for suspension from both ends without intermediate support.
- High efficiency motor and dynamically balanced forward curved centrifugal blowers.
- Unit is to be installed such that air flow is unobstructed. Unit has a 5" air discharge nozzle containing adjustable air directional vanes with 40° sweep front to back.
- Unit provided with adjustable sheaves and pulleys field adjustable to suit varying conditions. VFD optional.
- Adjustable perforated volume dampers (2). Capable of reducing air velocity up to 50%.
- Circuit protection as per NEC by others.
- Optional motor control panel and door limit switch are field installed and/or wired by others. The door limit switch is to be mounted such that the air curtain turns on as door begins to open. To prevent unit damage, the air curtain must be installed such that the bottom of the air curtain is not below the door header.

MODEL NUMBER	NOZZLE LENGTH (in)	AIR CURTAIN LENGTH A (in)	OVERALL LENGTH B (in)	MOUNTING WIDTH C (in)
BD2296-1**-TS	96	107	117	105 1/2
BD22120-1**-TS	120	131	141	129 1/2
BD22144-1**-TS	144	155	165	153 1/2
BD22168-1**-TS	168	179	189	177 1/2
BD22192-1**-TS	192	203	213	201 1/2

BD22 (Belt Drive) Series

Hot Water/Steam Heated
Model Lengths 96" – 192"



atmosphere is everything

14716 S. BROADWAY, GARDENA, CA 90248 • Ph: (310) 532-1555 Fax: (310) 532-3030 • www.marsair.com
© Copyright Mars Air Systems, LLC 2014

Hot Water/Steam Heated Data Sheet

Applications: Environmental Separation = Max Height 24' / Insect Control = Max Height 22'

BD22 (WindGuard)	Mechanical Data						Lab Data	
Model Number	Nozzle Length (in)	Length (in)	Depth (in)	Height (in)	Motor (hp)	Weight (lbs)	Max Velocity (fpm)	Max Volume (cfm)
BD2296-1**-TS	96	117	44	28	10	950	6000	16250
BD22120-1**-TS	120	141	44	28	15	1100	6000	20300
BD22144-1**-TS	144	165	44	28	15	1250	6000	24350
BD22168-1**-TS	168	189	44	28	20	1400	6000	28400
BD22192-1**-TS	192	213	44	28	20	1550	6000	32500

* - Use corresponding letters in "Coil Data" then "Electrical Data" columns to complete the model numbers. Note: Data above is for 60 Hz, 17% reduction in the performance data with 50 Hz.

Features:

- Air Curtain
- ❖ 10 to 20 HP Heavy Duty Motors
- ❖ Air curtain has a self-contained cabinet with sufficient strength for fastening from overhead on both ends without intermediate support. Top and rear mounting holes provided (4) 3/4"
- ❖ Adjustable air directional nozzle with 40° sweep front to back
- ❖ Standard color is Titanium Silver
- ❖ Rust preventative electrostatic polyurethane powder coating
- ❖ All units are shipped fully assembled ready for installation
- ❖ 12-month parts warranty
- ❖ Freight Not Included (FOB Factory)
- ❖ Proudly Made in the USA

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

* - Use corresponding letters in "Coil Data" then "Electrical Data" columns to complete the model numbers.

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

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 .006" aluminum (1 row – 10 FPI, 2 row – 8 FPI)
- ❖ Coils tubes constructed of heavy wall, 5/8" OD seamless copper (Steam - .035 & Hot Water - .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 – 5% & Hot Water – 2%), 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

Electrical Data (FLA)	Unit Voltage (Voltage Code)		
	208/230v (G)	460v (H)	575v (I)
BD2296-1**-TS	28.0/26.0	14.0	10.3
BD22120-1**-TS	42.0/40.0	20.0	15.6
BD22144-1**-TS	42.0/40.0	20.0	15.6
BD22168-1**-TS	55.0/51.0	25.5	20.2
BD22192-1**-TS	55.0/51.0	25.5	20.2

* - Use corresponding letters in "Coil Data" then "Electrical Data" columns to complete the model numbers.

Alternate voltage codes with FLA (Full Load Amp) data:

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

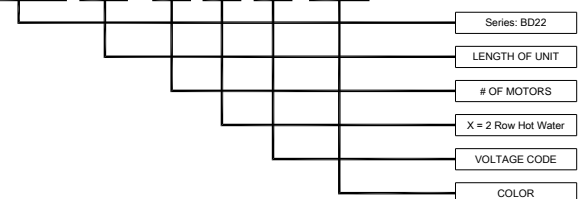
Note: For ampacity, multiply FLA X 1.25

Mars Recommended Accessories (see submittals for additional details):

- ❖ Controllers
 - MCP*-†V‡, 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)
- ❖ Door limit switches
 - 99-125, Industrial surface-mounted door limit switch
- ❖ Thermostats
 - 99-063, Thermostat, 250V Max
- ❖ HSG-304SS-BD, Stainless steel housing
- ❖ INS-WD-S-BD, Washdown motor, 96"-120" units
- ❖ INS-WD-L-BD, Washdown motor, 144"-192" units
- ❖ Steam distribution coils, to prevent freezing

EXAMPLE

BD22 96 - 1 X H - TS



Sound Levels: (measured at 10' in an open field)

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

NOTE: MARS AIR SYSTEMS, LLC reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions, or replacements for previously purchased equipment.