

VXC

Evaporative Condensers



Evaporative Condensers

Product Detail

VXC Evaporative Condensers	E14
Benefits	E16
Construction Details	E18
Custom Features and Options	E20
Accessories	E22
Engineering Data	E24
Structural Support	E31
Engineering Specifications	E33

VXC Evaporative Condensers

Capacity

Single Model Capacity:

VXC : 60 kW - 6930 kW

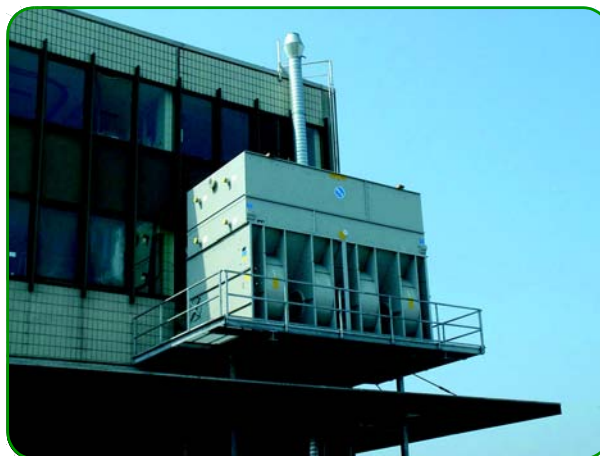
VXC-C : 950 kW - 1840 kW

General Description

VXC Evaporative Condensers deliver fully rated thermal performance over a wide range of heat rejection and temperature requirements for various refrigerants. VXC and VXC-C models can be installed indoors and minimize sound levels. VXC-C models are designed to fit in standard dry van containers to minimize ocean freight costs. The Series VX occupies minimum floor space, provides year-round operating reliability and is ideal for sound sensitive applications.

Key Features

- Suitable for indoor and outdoor installations
- Low sound
- Low ocean freight costs (VXC-C)
- Single side air inlet
- Low energy consumption
- Low installed cost
- Easy maintenance
- Reliable year-round operation
- Long service life
- Wide capacity range
- PED 97/23/EC coil design

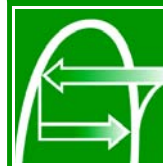




Evaporative Condensers

... because temperature matters





Low Energy Consumption

- **Evaporative Cooling Equipment** minimizes the energy consumption of the entire system because it provides lower operating temperatures. The owner saves money while conserving natural resources and reducing environmental impact.
- **Evaporative Condensers** provide lower condensing temperatures and can offer significant kW savings over conventional air-cooled and water-cooled condensing systems.

Low Installed Cost

- **Support** – All models mount directly on two parallel I-beams (supplied by others) and ship complete with motors and drives factory-installed and aligned.
- **Modular Design** – Large models ship in multiple sections to minimize the size and weight of the heaviest lift, allowing for the use of smaller, less costly cranes.

Easy Maintenance

- **Internal Access** - The interior of the unit is easily accessible for adjusting the float valve, cleaning the strainer or flushing the basin.

Reliable Year-Round Operation

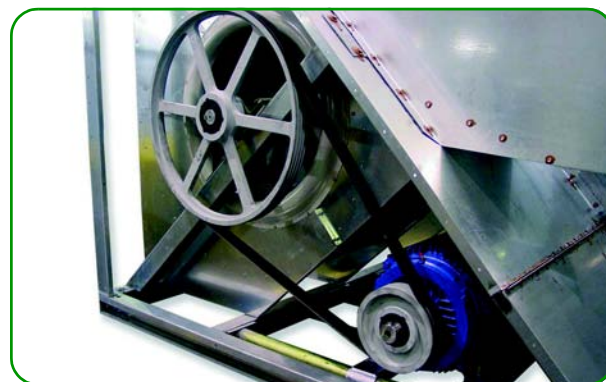
- **V-Belt Drive** – The fans, motor, and drive system are located outside of the moist discharge airstream, protecting them from moisture, condensation and icing hence allowing a safe year-round operation.

Long Service Life

- **Materials of Construction** – Various materials are available to meet the corrosion resistance, unit operating life, and budgetary requirements of any project (See section "Technical Resources, Materials of Construction" for more details)



The water level control is easily reached from the access door.

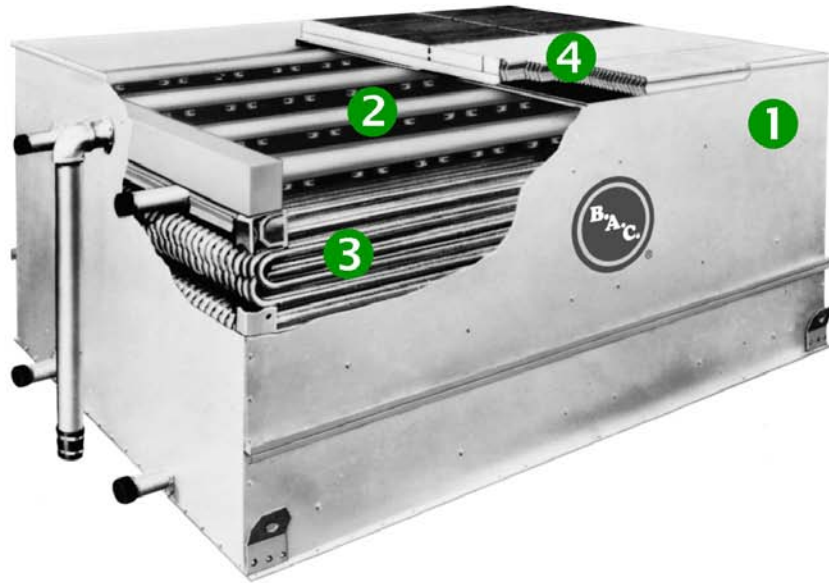


External V-belt drive system (shown here with panel removed)

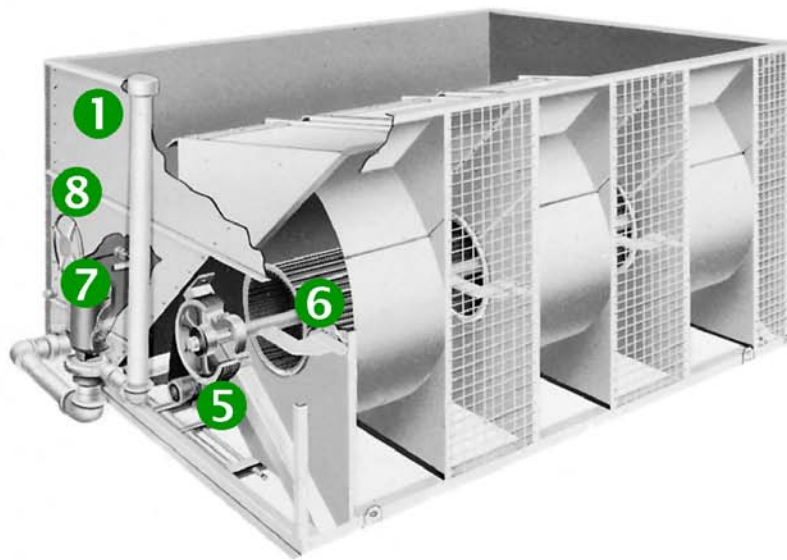
... because temperature matters



Construction Details

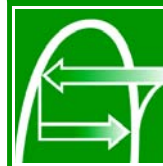


Upper Section



Lower Section





1. Heavy Duty Construction

- Z600 hot-dip galvanized steel panels

2. Water Distribution System

- Plastic spray header and branches
- Large orifice, non-clog nozzles
- Grommetted for easy maintenance

3. Coil

- Coil according to European Pressure Equipment Directive 97/23/EC
- Continuous serpentine, steel tubing
- Hot-dip galvanized after fabrication (HDGAF)
- Pneumatically tested at 34 bar standard coil
- Sloped tubes for free drainage of fluid

4. Drift Eliminators

- UV resistant non-corrosive material, impervious to rot, decay and biological attack
- Three distinct changes in air direction to reduce drift loss significantly
- Assembled in easy to handle sections, which can be removed for access to the equipment interior

5. Fan Drive System

- V-belt drive
- Heavy-duty bearings and fan motor

6. Centrifugal Fan(s)

- Quiet Operation

7. Recirculating Spray Pump

- Close coupled, bronze fitted centrifugal pump
- Totally enclosed fan cooled (TEFC) motor
- Bleed line with metering valve installed from pump discharge to overflow

8. Access Door

- Circular access door

9. Strainer (not shown)

- Anti-vortexing design to prevent air entrainment

Custom Features and Options

Construction Options

- **Standard Construction:**

Steel panels and structural elements are constructed of Z600 heavy-gauge hot-dip galvanized steel protected with the Baltiplus Corrosion Protection on the outside of the unit.

- **Optional BALTIBOND® Corrosion Protection System:**

The BALTIBOND® Corrosion Protection System, a hybrid polymer coating used to extend equipment life, is applied before assembly to all hot-dip galvanized steel components of the unit.

- **Optional Stainless Steel Construction:**

Steel panels and structural elements are constructed of stainless steel either type 304 or 316.

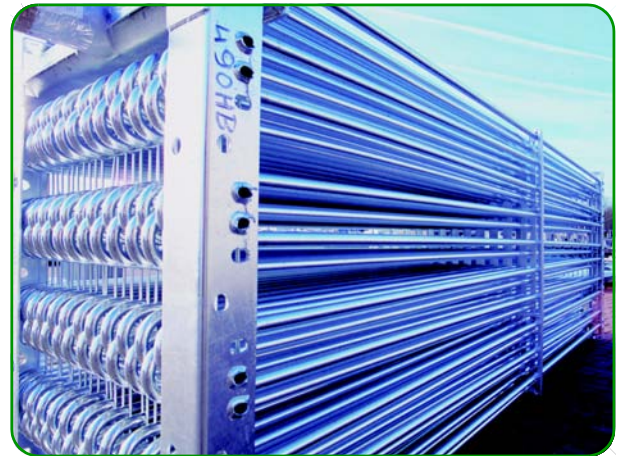
- **Optional Water-Contact Stainless Steel Cold Water Basin:**

A cost-effective alternative to an all stainless steel unit. The critical components in the cold water basin and the cold water basin itself are provided in stainless steel. The remaining components are protected with the BALTIBOND® Corrosion Protection System.

Note: See section Technical Resources, Material Options for more details on the materials described above.

Coil Configurations

Each coil is manufactured according to the European Pressure Equipment Directive (PED) 97/23/EC (For more details, refer to the Evaporative Condenser "Overview" section) BAC condenser coils are standard available at a design pressure of 23 bar, and are pneumatically tested at 34 bar.



Hot Dip Galvanized Coil

- **Standard Serpentine Coil:**

The standard condensing coil is constructed of continuous lengths of all prime surface steel, hot-dip galvanized after fabrication (HDGAF).

- **Multiple Circuit Coils (Split Coils):**

In general, multiple circuit coils are required primarily on halocarbon refrigerant systems where it is common practice to maintain individual compressor systems. Also, a circuit can be isolated to provide cooling of a water or glycol loop for compressor jacket cooling. A wide range of multiple circuit arrangements are available.

- **Optional Extended Surface Coil:**

Coils are available with selected rows finned at 3 to 5 fins per inch for wet/dry applications. The coil is hot-dip galvanized after fabrication (HDGAF).

- **Optional Stainless Steel Coil:**

Coils are available in Type 304L or 316L stainless steel for specialised applications.

- **Optional High Pressure Coil:**

Coils are available with a design pressure of 28 bar and pneumatically tested at 40 bar. The Coil is hot-dip galvanized after fabrication (HDGAF).

All coils are designed for low pressure drop with sloping tubes for free drainage of fluid.





Fan Drive System

The fan drive system provides the cooling air necessary to reject heat from the system to the atmosphere. Centrifugal fans, forwardly curved, are driven by matched V-belts with taper lock sheaves.

The Baltiguard Drive System

The BALTIGUARD® Drive System consists of two standard single-speed fan motors and drive assemblies. One drive assembly is sized for full speed and load, and the other is sized for approximately 2/3 speed and consumes only 1/3 of the design kilowatt power. This configuration allows the system to be operated like a two-speed motor, but with the reserve capacity of a standby motor in the event of failure. As a minimum, approximately 70% capacity will be available from the low kilowatt motor, even on a design wet-bulb day. Controls and wiring are the same, as those required for a two-speed, two-winding motor. Significant energy savings are achieved when operating at low speed during periods of reduced load and/or low wet-bulb temperatures.

Low Sound Operation

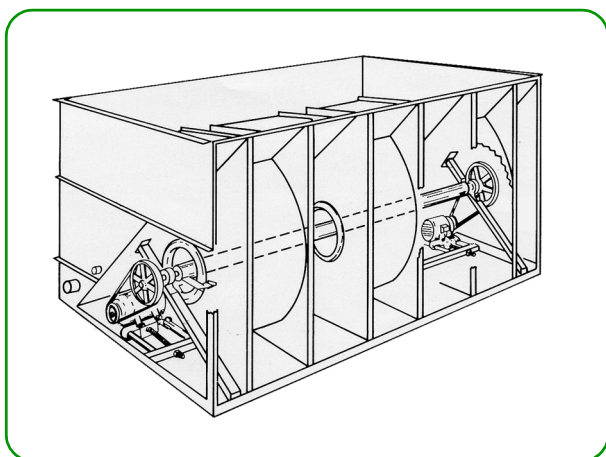
The low sound levels generated by BAC Products with centrifugal fans make them suitable for most installations. For situations when one direction is particularly sound sensitive, the unit can be oriented so that the side opposite the air inlet faces the sound-sensitive direction. Units with centrifugal fans are also available with factory designed, tested and rated sound attenuation for both the air inlet and discharge.



Remote Sump Execution

The use of an auxiliary sump within a heated space is the most satisfactory way to protect sump water from freezing. When the circulating pump is shut off, all the water in the water distribution, in suspension and in the sump will drain freely to the auxiliary sump.

Note: For detailed information on the calculation of the remote sump tank, please refer to the section "Technical Resources, Selection of Remote Sump Tank".



Baltiguard® Drive System



Unit with Intake and Discharge Sound Attenuation

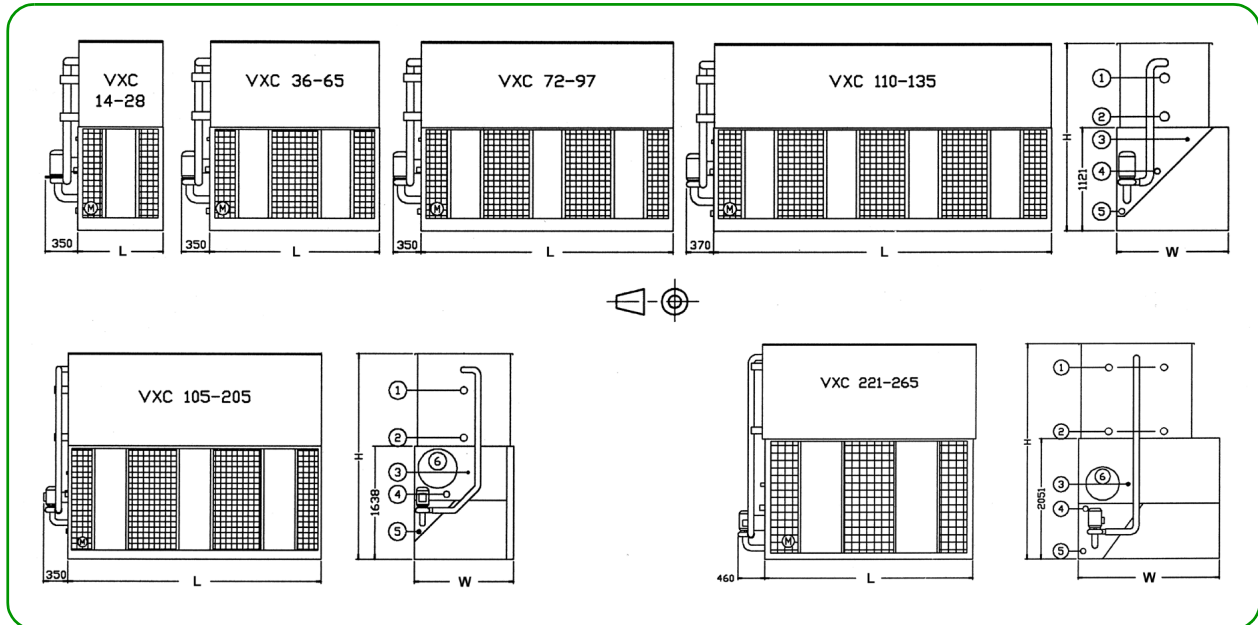
... because temperature matters



Engineering Data

REMARK: Do not use for construction. Refer to factory certified dimensions & weights. This brochure includes data current at time of publication, which should be reconfirmed at the time of purchase. In the interest of product improvement, specifications, weights and dimensions are subject to change without notice. Up-to-date engineering data and more can be found at www.BaltimoreAircoil.com.

VXC 14 - VXC 265



1. Refrigerant in ND 100; 2. Refrigerant out ND 100; 3. Make-up; 4. Overflow; 5. Drain; 6. Access (models 14 through 135 have the access door at the back); For VXC 14 through VXC 135 : make-up ND 25; overflow ND 50; drain ND 50.; For VXC 150 through VXC 265 : make-up ND 50; overflow ND 80; drain ND 50.

Model	Operating Weight (kg)	Shipping Weight (kg)	Heaviest Section Coil (kg)	Air Flow (m ³ /s)	Fan Motor (kW)	Water Flow (l/s)	Pump Motor (kW)	R717 Charge (kg)	L (mm)	W (mm)	H (mm)
VXC 14	660	600	580*	2,3	(1x) 1,5	2,2	(1x) 0,25	9	914	1207	2035
VXC 18	740	670	660*	2,2	(1x) 1,5	2,2	(1x) 0,25	11	914	1207	2245
VXC 25	830	760	480	2,5	(1x) 2,2	2,2	(1x) 0,25	15	914	1207	2467
VXC 28	900	830	540	2,4	(1x) 2,2	2,2	(1x) 0,25	19	914	1207	2683
VXC 36	1050	920	920*	4,6	(1x) 4,0	4,7	(1x) 0,37	16	1829	1207	2035
VXC 45	1170	1030	1030*	5,0	(1x) 4,0	4,7	(1x) 0,37	20	1829	1207	2245
VXC 52	1310	1160	700	4,8	(1x) 4,0	4,7	(1x) 0,37	29	1829	1207	2467
VXC 59	1330	1180	700	5,3	(1x) 5,5	4,7	(1x) 0,37	29	1829	1207	2467
VXC 65	1500	1330	860	5,5	(1x) 5,5	4,7	(1x) 0,37	36	1829	1207	2683
VXC 72	1810	1490	1000	5,8	(1x) 4,0	7,1	(1x) 0,75	41	2737	1207	2578
VXC 86	1820	1500	1000	7,5	(1x) 7,5	7,1	(1x) 0,75	41	2737	1207	2578
VXC 97	2080	1730	1200	7,1	(1x) 7,5	7,1	(1x) 0,75	50	2737	1207	2813
VXC 110	2240	1800	1200	10,4	(1x) 7,5	9,5	(1x) 0,75	59	3658	1207	2578
VXC 125	2510	2050	1440	9,9	(1x) 7,5	9,5	(1x) 0,75	66	3658	1207	2813
VXC 135	2540	2080	1440	10,9	(1x) 11,0	9,5	(1x) 0,75	73	3658	1207	2813
VXC 150	3210	2640	1720	13,3	(1x) 7,5	13,9	(1x) 1,5	77	3645	1438	3093
VXC 166	3240	2670	1720	15,8	(1x) 11,0	13,9	(1x) 1,5	77	3645	1438	3093
VXC 185	3670	2950	1980	15,7	(1x) 11,0	13,9	(1x) 1,5	104	3645	1438	3328
VXC 205	3980	3255	2240	16,9	(1x) 15,0	13,9	(1x) 1,5	111	3645	1438	3563
VXC 221	5860	4250	2630	21,9	(1x) 15,0	19,2	(1x) 2,2	109	3550	2397	3585
VXC 250	6390	4770	3150	21,2	(1x) 15,0	19,2	(1x) 2,2	145	3550	2397	3820
VXC 265	6435	4815	3150	22,7	(1x) 18,5	19,2	(1x) 2,2	145	3550	2397	3820

* Unit normally ships in one piece.



VXC	Unit + Atten. # pieces shipped	# Access doors ⁽²⁾ XA, XB, XC		Dimensions (mm)						Weights (kg)									
				W2		H1	W1		L1	L2	Intake + solid bottom			Discharge			Total		
				XA, XB, XC	Disch. Att.	Int. Att.	XA, XB	XC	XA, XB, XC			XA	XB	XC	XA	XB	XC	XA	XB
14 - 28	4 ⁽¹⁾	1	2	2352	N.A.	1090	1030	914	902	140	160	N.A.	130	150	N.A.	270	310	N.A.	
36 - 65	4 ⁽¹⁾	1	2	2352	N.A.	1090	1030	1829	1816	225	270	N.A.	175	220	N.A.	400	490	N.A.	
72 - 97	4	1	2	2352	N.A.	1090	1030	2737	2731	300	370	N.A.	280	350	N.A.	580	720	N.A.	
110 - 135	4	1	2	2352	N.A.	1090	1030	3658	3645	400	470	N.A.	360	420	N.A.	760	890	N.A.	
150 - 205	4	1	2	2583	3728	1600	1420	3645	3645	500	600	1200	440	520	1070	940	1120	2270	
221 - 265	4	1	2	3542	4687	2070	1955	3550	3645	690	820	1610	530	650	1330	1220	1470	2940	
S288 - S350	4	1	2	3542	4687	2070	2365	3550	3645	690	820	1610	660	800	1640	1350	1620	3250	
S403 - S504	4	2	2	3542	4687	2070	2365	5385	5480	960	1160	2270	830	1090	2240	1790	2250	4510	
S576 - S700	7	2	2	3542	4687	2070	2365	7226	7322	1380	1640	3220	1320	1600	3280	2700	3240	6500	
S806 - S1010	7	4	2	3542	4687	2070	2365	10903	10998	1920	2320	4540	1660	2180	4480	3580	4500	9020	
357 - 454	4	1	2	4145	5290	2560	2965	3550	3645	790	940	1850	710	880	1820	1500	1820	3670	
562 - 680	4	2	2	4145	5290	2560	2965	5388	5480	1080	1330	2590	900	1210	2490	1980	2540	5080	
714 - 908	7	2	2	4145	5290	2560	2965	7226	7322	1580	1880	3700	1420	1760	3640	3000	3640	7340	
1124 - 1360	7	4	2	4145	5290	2560	2965	10903	10994	2160	2660	5180	1800	2420	4980	3960	5080	10160	
495 - 516	4	1	2	4752	5897	2560	3575	3550	3645	840	990	1900	810	1030	2130	1650	2020	4030	
715 - 804	4	2	2	4752	5897	2560	3575	5388	5480	1150	1400	2660	1020	1410	2920	2170	2810	5580	
990 - 1032	7	2	2	4752	5897	2560	3575	7226	7322	1680	1980	3800	1620	2060	4260	3300	4040	8060	
1430 - 1608	7	4	2	4752	5897	2560	3575	10903	10994	2300	2800	5320	2040	2820	5840	4340	5620	11160	

⁽¹⁾ VXC 14, VXC 18, VXC-36 and VXC-45 + Attenuator are shipped in 3 pieces

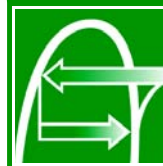
⁽²⁾ Intake Attenuator: Access opening is 775 mm high, 405 mm wide and is located at each end of the unit. Discharge Attenuator : Access opening is 405 mm high, 1170 mm wide and is located at blank off side of the unit (VXC14-28 has 650 mm width)

Remote Sump Data

Refer to the "Technical Resources" section "Selection of Remote Sump" for Remote Sump Data.



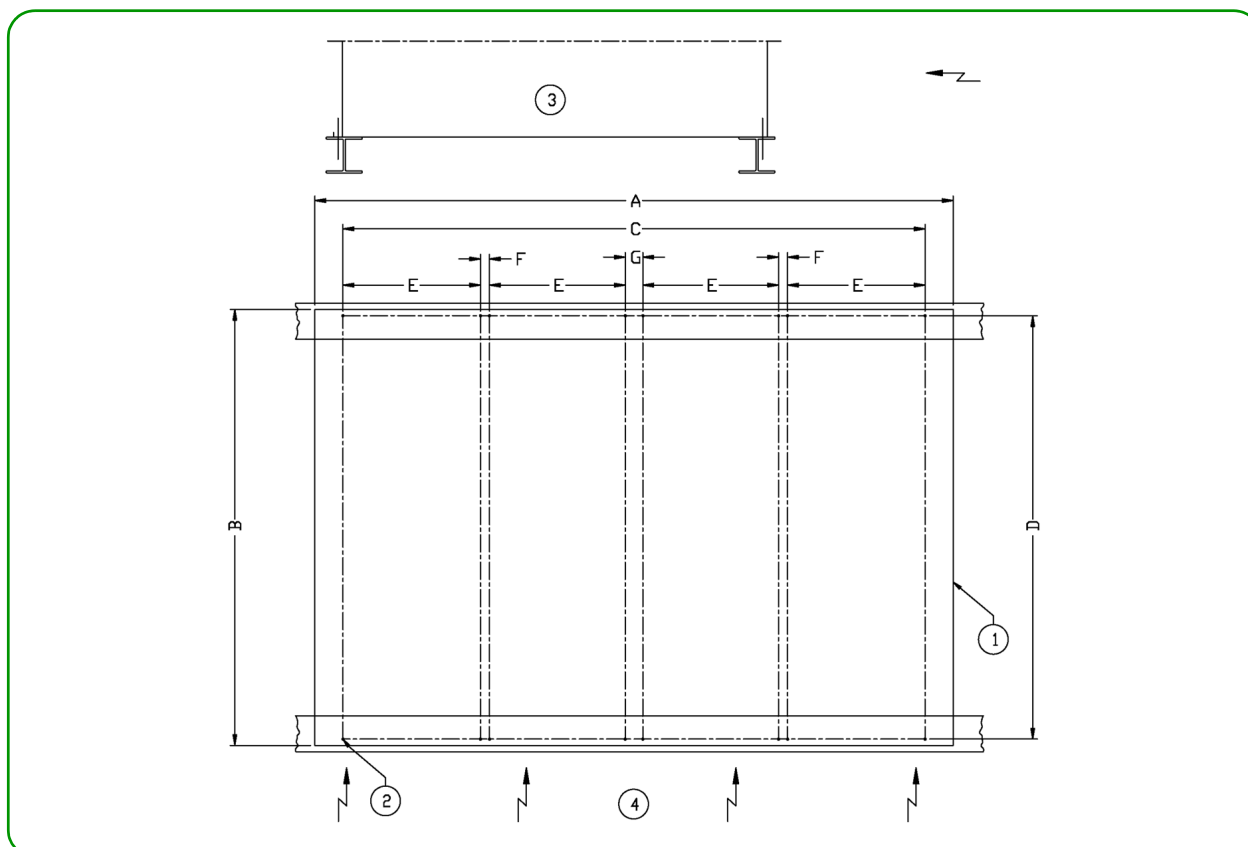
Structural Support



REMARK: Do not use for construction. Refer to factory certified dimensions & weights. This brochure includes data current at time of publication, which should be reconfirmed at the time of purchase. In the interest of product improvement, specifications, weights and dimensions are subject to change without notice. Up-to-date engineering data and more can be found at www.BaltimoreAircoil.com.

The recommended support arrangement for units consists of parallel I-beams running the full length of the unit, spaced as shown in the following drawing. Besides providing adequate support, the steel also serves to raise the unit above any solid foundation to ensure access to the bottom of the unit. To support units in an alternate steel support arrangement, consult your BAC Baltimore Representative.

Units without Sound Attenuation



1. Outline of Unit; 2. Mounting holes \varnothing 22 mm, 3. Unit; 4. Air Intake.

Model	A Unit Length (mm)	B Unit width (mm)	C Center dis. Length (mm)	D Center dis. Width (mm)	E (mm)	F (mm)	G (mm)	X Max. Deflection (mm)	Mounting holes
VXC 14-28	914	1207	750	1153	-	-	-	2	4
VXC 36-65	1829	1207	1664	1153	-	-	-	5	4
VXC 72-97	2737	1207	2572	1153	-	-	-	8	4
VXC 110-135	3658	1207	3492	1153	-	-	-	10	4
VXC 150-205	3645	1438	3492	1378				10	4
VXC 221-265	3550	2397	3238	2397	-	-	-	10	4
VXC S288-S350	3550	2397	3238	2327	-	-	-	10	4
VXC S403-S504	5385	2397	5074	2327	2486	102	-	13	8
VXC S576-S700	7226	2397	6914	2327	3238	438	-	13	8

... because temperature matters

