



# Technical Datasheet

## 1 VXI 215-4

### Main Accessories : XB Intake and Discharge attenuation

#### THERMAL DESIGN DATA

Requested capacity (overall/unitary) .....	3547 kW
Max. capacity (overall/unitary) (@ 100% RPM) .....	3548 / 3548 kW
Fluid type .....	H2O (Freezing point= 0°C; Anti-Freeze necessary for freezing climates)
Requested fluid flow (overall/unitary) .....	29.32 / 29.3 l/s
Max. fluid flow (overall/unitary) (@ 100% RPM) .....	29.33 / 29.3 l/s
Entering wet bulb temp .....	21.0 °C
Entering dry bulb temp .....	31.0 °C
Process fluid inlet temperature .....	59.3 °C
Process fluid outlet temperature .....	30.4 °C
Operating mode .....	Wet

#### PHYSICAL DATA (including accessories) - UNITARY

Overall length .....	5998 mm
Standard unit .....	5388 mm
Pump 1 .....	610 mm
Overall width .....	4752 mm
Standard unit .....	3607 mm
Intake attenuator .....	1145 mm
Overall height .....	7510 mm
Tapered hood with Positive Closure Dampers .....	1700 mm
Discharge attenuator with Plenum .....	1205 mm
Standard unit .....	4545 mm
Solid bottom panel .....	60 mm
Shipping / operating weight .....	17135 / 25390 kg
Standard unit .....	13435 / 21690 kg
Intake attenuator .....	980 / 980 kg
Tapered hood with Positive Closure Dampers .....	890 / 890 kg
Discharge attenuator with Plenum .....	1410 / 1410 kg
Solid bottom panel .....	420 / 420 kg

Heaviest section .....	9710 kg
Material option .....	BALTIBOND HYBRID COATING
Overflow diameter .....	(1x) ND 80 mm
Make up diameter .....	(1x) ND 50 mm
Drain diameter .....	(1x) ND 50 mm
Number of coils per unit .....	2
Exact unit dimensions and weights may be influenced by accessories/option combinations.	

#### EVAPORATIVE COIL DATA - UNITARY

Evaporative coil type .....	Bare / HDG
Evaporative coil arrangement .....	Wet coil - 1pass
Evaporative coil inlet connections .....	(2x) ND 100
Evaporative coil outlet connections .....	(2x) ND 100
Evaporative coil volume .....	(2x) 1521.0 l
Evaporative coil surface .....	(2x) 283.0 m²
Evaporative coil dry weight .....	(2x) 3975.0 kg

#### ELECTRICAL DATA - UNITARY

Fan motor	
General	
Fan motor BHP (Net mech output power at motor shaft) .....	(2 x) 35.5 kW
Fan motor oversized for	
Total ESP .....	142 Pa
Accessories total external static pressure .....	142 Pa
Customer external static pressure .....	0 Pa
Dry operation allowed .....	No
Fan motor voltage .....	400 V
Frequency .....	50 Hz
Protection class .....	IP55
Mounting .....	B3
Single speed	
Fan motor power .....	(2 x) 37.0 kW
Efficiency level fan motor .....	IE3
Fan full load current (Nominal Voltage) .....	(2 x) 66.6 A ( 400 V )



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Fan synchrone speed .....	1500 RPM
Framesize .....	225
Spray pump motor power .....	(1x) 4.0 kW
Efficiency level pump motor .....	IE3
Spray pump motor voltage .....	400 V
Frequency .....	50 Hz
Spray pump full load current .....	(1x) (8.6 A ) 400 V
Spray pump synchrone speed .....	1500 RPM
Protection class	
Mounting	
Framesize .....	132

\* Note: For indicative cable sizing the "Fan Full Load Current" and the corresponding "Nominal Voltage" have to be used.

## AERODYNAMICAL DATA - UNITARY

Air flow (100% RPM/100% RPM).....	60.4 / 60.4 m³/s
Number of fans .....	4
Fan type .....	Centrifugal
Approximate Fan speed .....	461 RPM

## HYDRAULICAL DATA - UNITARY

Total pressure drop (@29.3 / 29.3).....	21.0 / 21.0 kPa
Standard unit .....	21.0 / 21.0 kPa
Spray water flow .....	(1x) 56.8 l/s
Maximum evaporation .....	1.329 / 1.329 l/s
Bleed (cycles of concentration 2.5).....	0.886 / 0.886 l/s
Make-Up (cycles of concentration 2.5).....	2.215 / 2.215 l/s
Pan volume operating .....	2564 l
Pan volume overflow .....	4715 l
Pressure range mechanical make-up valve .....	1 to 4,5 bar

## Acoustical data (Standard unit with XB Intake and Discharge attenuation )

100 % RPM (@ 15.0m ) .....	50 dB(A)
Sound Power Level (@100 %RPM).....	84.0 dB(A)

All acoustical data as sound pressure levels at quietest side of unit at indicated distance. Values are obtained according to CTI ATC-128 (Test Code for Measurement of Sound From Water-Cooling Towers) for small towers with a 2 dB(A) tolerance.

## ACCESSORIES - Sound attenuation - UNITARY

Discharge attenuation includes maintenance plenum .....	Yes
Intake and discharge attenuator package static pressure drop .....	61.0 Pa
Additional discharge screens	
Additional intake screens	
Perforated steel sheet baffle protection (XB)	
Attenuator package .....	XB
XB Intake and Discharge attenuation	

## ACCESSORIES - Construction details UNITARY

Connection - extra in pan

## ACCESSORIES - Motor accessories UNITARY

PTC (only) (for fan motor)

## ACCESSORIES - Winterisation package UNITARY

Pan heater package 2*6 kW (provides freeze protection to -18°C ambient)	
1 stage thermostat	
Temperature range .....	-20..50 °C
Protection class .....	IP 54
Rating (@250VAC) .....	10 A
Contacts .....	NO and NC
Low level cut out switch with integral stilling chamber	
Voltage .....	240 VAC
Contacts .....	NO or NC
Index of protection .....	IP 65
Rating (@240VAC) .....	1 A
Pan heater 6 kW	
Power .....	6 kW
Rating (@400VAC) .....	8.67 A



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## Tapered hood with Positive Closure Dampers

### Actuator (Positive Closure Dampers's)

End switch contact rating .....None A  
 Torque at rated voltage .....min 15 Nm  
 Running time (motor / spring return) ..... 100 or 20 s  
 Number of end switches ..... 0  
 Hazard rating .....None  
 Power .....0.005 (24 VAC; 50hz) kW  
 Voltage ..... 24 VAC  
 Frequency ..... 50 or 60 Hz  
 End switch contacts ..... 0

### Transfo - 24V 50VA

Input voltage ..... 110/220/240/380/415 V  
 Output voltage ..... 24 V  
 Model .....50 VA

### Tapered hood (modulating fan dampers included)

Height ..... 1700 mm  
 Weight ..... 890 kg

## ACCESSORIES - Installation & maintenance package UNITARY

### Ext. platform (with disch. acc.) with ladder/safety cage/railing (optional)

#### External platform

Width .....620 mm

#### Railing

#### Ladder & safety cage (with dish. acc.)

### Extended lubelines

Remark: ... only allowed in combination with an attenuator, or a solid bottom panel or with a discharge accessory

### Flange ND100 on water inlet

Pressure class .....EN 1092-1 type 13 PN 16  
 Size ..... 100 ND  
 Type .....Screw on

### Flange ND100 on water outlet

Pressure class .....EN 1092-1 type 13 PN 16  
 Size ..... 100 ND

Type .....Screw on

### Recommended critical spare parts kit (standard pump)

Set of replacement nozzles and nozzle-grommets  
 Set of replacement belts (for total unit)  
 Float valve and arm kit  
 Pump seal kit  
 Replacement pump without volute

## ACCESSORIES - Export shipments UNITARY

Internal Coil Corrosion protection (flanges,if applicable, are shipped loose)

### note

For safety reasons ladders are only allowed in combination with railing.

When a VT0/VT1/VXI/VXC unit is installed elevated by 30cm or more, a solid bottom is required. (Note: insulated solid bottom is included in intake attenuator)

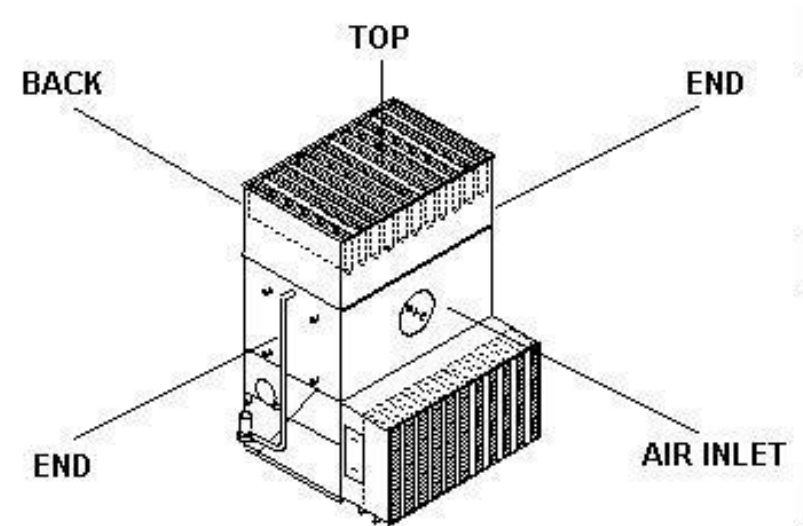


# Sound Rating

Sound Rating					
Hz	Fan End (dB)	Back (dB)	End1 (dB)	End2 (dB)	Discharge (dB)
63	69.0	63.0	66.0	66.0	65.0
125	63.0	57.0	58.0	58.0	60.0
250	54.0	50.0	49.0	49.0	55.0
500	49.0	49.0	46.0	46.0	47.0
1000	45.0	46.0	44.0	44.0	44.0
2000	42.0	43.0	40.0	40.0	45.0
4000	42.0	39.0	40.0	40.0	47.0
8000	39.0	36.0	36.0	36.0	49.0
<b>dB(A)</b>	<b>53.0</b>	<b>51.0</b>	<b>50.0</b>	<b>50.0</b>	<b>54.0</b>

Input Options	
Model	VXI 215-4
Operating mode	Wet
Sound Attenuation	XB Intake and Discharge attenuation
Additional ESP (Pa)	142
Fan Motor Size (kW)	2 x 37.0 kW
Approximate Fan Speed	100.0 %
Distance (m)	15.0

Total Sound Power Level	
Octave Band (Hz)	Total Sound Power Level
63	98.0
125	91.0
250	84.0
500	79.0
1000	76.0
2000	74.0
4000	74.0
8000	75.0
<b>dB(A)</b>	<b>84.0</b>

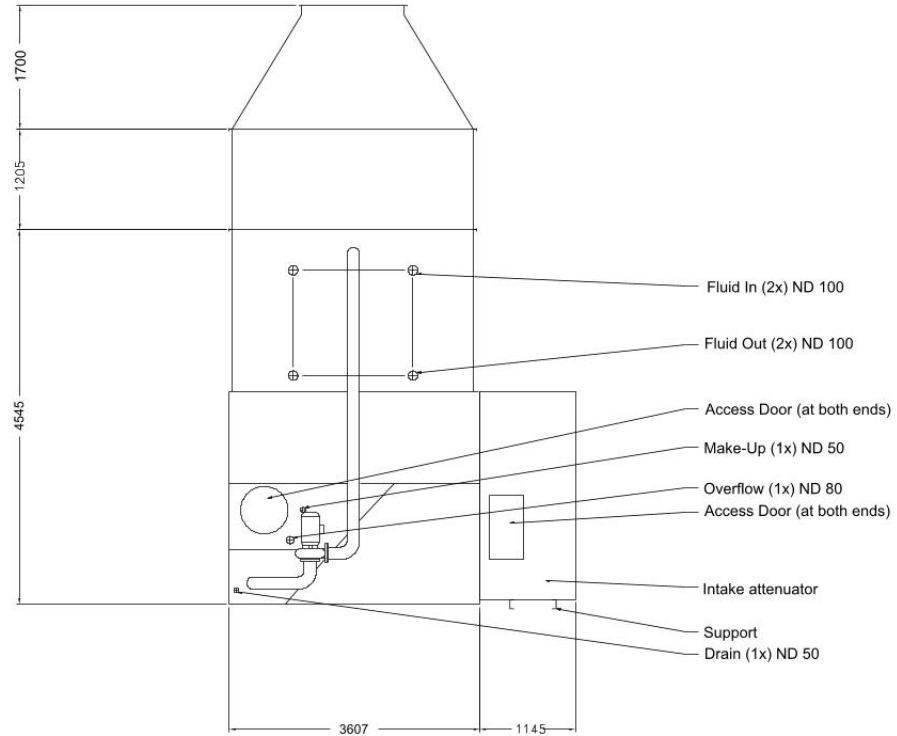
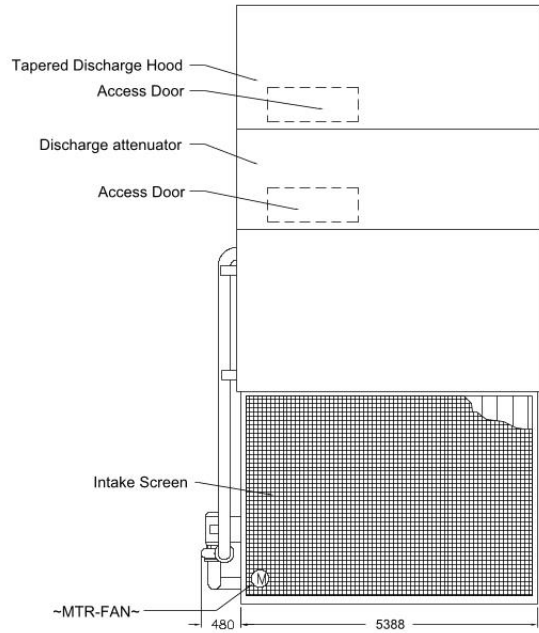


Octave band and A-weighted Sound Pressure Levels (SPL) in dB RE 0.0002 Microbar.

Note: Sound data are free field data valid for unit installation without elevation, not taking into account any reflections. Octave band values are shown for indicative purposes only. Values are obtained according to CTI ATC-128 (Test Code for Measurement of Sound From Water-Cooling Towers) for small towers with a 2 dB(A) tolerance.

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## General Arrangement



### Notes:

- 1) Drawing is not to scale, reflects a typical standard unit arrangement and can only be used for indicative purposes. Exact unit dimensions and weights may be influenced by accessories/option combinations.
- 2) Please refer to the technical datasheet for the specific unit configuration (qty. fans, qty. fan motors, accessories, location of connections and terminal boxes,...).
- 3) The drawing shown is a RIGHT HAND unit.

	Length (mm)	Width (mm)	Height (mm)	Shipp. weight (kg)	Oper. weight (kg)
Total	5998	4752	7510	17135	25390

		DWG. BY.:	DATE:	VXI 215-4
		CHK'D BY.:	DATE:	BAC Ser. no.
NO.	DATE	REVISIONS		CUSTOMER
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