

Telephone: (973) 838-1780

Title: President

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

OFFICE USE ONLY APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP) APPLICATION #: OSP-0171 **HCAI Special Seismic Certification Preapproval (OSP)** Type: New Renewal **Manufacturer Information** Manufacturer: SPX Cooling Tech, LLC Manufacturer's Technical Representative: Michael Morby Mailing Address: 7401 W. 129 Street, Overland Park, KS 66213 Telephone: (913) 664-7472 Email: michael.morby@spx.com **Product Information** Product Name: Marley NC Cooling Tower Product Model Number(s): NC8401-NC8414, TQ8401-TQ8414 **Product Category:** Cooling Towers Product Sub-Category: NA Marley NC Cooling Towers for AHU, refrigeration and industrial uses. Rigid and vibration isolation General Description: mounted, galvanized carbon or stainless steel. Towers are installed atop engineered dunnage frames. Base Mounted Rigid and Spring Vibration Isolated -Mounting Description: Seismic enhancements made to the test units and/or modifications required to address Tested Seismic Enhancements: anomalies during the tests shall be incorporated into the production units. **Applicant Information** Applicant Company Name: VMC Group Contact Person: John Giuliano Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

"A healthier California where all receive equitable, affordable, and quality health care"





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Email: john.giuliano@thevmcgroup.com



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

""			
California Licensed Structural Engineer Resp	oonsible for the Engine	eering and Test Repo	rt(s)
Company Name: THE VMC GROUP			
Name: Kenneth Tarlow	California Lice	nse Number: S2851	
Mailing Address: 980 9th Street, 16th Floor, Sacrame	ento, CA 95814		
Telephone: (832) 627-2214 E	mail: ken.tarlow@thevmo	cgroup.com	
Certification Method			
GR-63-Core X ICC-ES AC156	IEEE 344	IEEE 693	NEBS 3
Other (Please Specify):			
E	OR CODE CO.		
Testing Laboratory			
Company Name: UNIVERSITY OF CALIFORNIA, BE	ERKELEY (PEER)		
Contact Person: Amarnath Kasalanati	(h.M/M/./././././././	12	
Mailing Address: 325 Davis Hall, Berkeley CA 94720)-1729	m	
Telephone: (510) 642-3437	mail: Amarnath1@berke	ley.edu	
DAT	TE: 05/30/2025	2	

PIVIA PLUS

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STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

Seismic Parameters

Design Basis of Equipment or Components (Fp/Wp) = Rigid (1.00, z/h = 0); Isolated (4.50; z/h = 1)

SDS (Design spectral response acceleration at short period, g) = Rigid (2.00 @ z/h = 0); Vibration Isolated (2.00 @ z/h = 1)

2.5 ap (Amplification factor) =

Rp (Response modification factor) = 3.0 (Rigid); 2.0 (Vibration Isolated)

 Ω_0 (System overstrength factor) = 2.0

1.5 Ip (Importance factor) =

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 05/30/2031

Date: 5/30/2025

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: Sps (g) = 2.0

Condition of Approval (if applicable):

z/h =



STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

Unit Size	Fan, Sound and Certification GLE HAE	Unit Length 6'-6 1/4" 6'-6 1/4"	Unit Width 12'-10" 12'-10"	Unit Height 10'-2 1/2" 10'-2 1/2"	Operating Weight per Cell [lbs] 8,702 8,697	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
NC8401	HLE KAE KLE MAE MLE	6'-6 1/4" 6'-6 1/4" 6'-6 1/4" 6'-6 1/4"	12'-10" 12'-10" 12'-10" 12'-10" 12'-10"	10'-2 1/2" 10'-2 1/2" 10'-2 1/2" 10'-2 1/2" 10'-2 1/2"	8,737 8,660 8,700 8,698 8,738	CN/AD	200 - 575	/ Stainless Steel	Galv. Carbon Steel / Stainless Steel	2.00	Interpolated
TQ8401	NAE NAE	6'-6 1/4" 6'-6 1/4"	12'-10" 12'-10"	10'-2 1/2" 10'-2 1/2"	8,362 8,362	8,362 N/A	200 - 373	Galv. Carbon Steel		2.00	1A Interpolated
	NCE NCE	6'-6 1/4" 6'-6 1/4"	12'-10" 12'-10"	10'-2 1/2" 9'-9"	9,000	9,000		/ Stainless Steel Stainless Steel	/ Stainless Steel Stainless Steel	2.00	3A
	NLE PAE PLE	6'-6 1/4" 6'-6 1/4" 6'-6 1/4"	12'-10" 12'-10" 12'-10"	10'-2 1/2" 10'-2 1/2" 10'-2 1/2"	8,768 8,837 8,897	amma			Galv. Carbon Steel / Stainless Steel	2.00	Interpolated
NC8402 TQ8402	GCE GLE HAE HCE HLE KAE KCE KLE MAE MCE MLE NAE NCE NLE PAE PCE PLE QAE QCE QLE	8'-4 3/4" 8'-4 3/4"	14'-2" 14'-2"	10'-3" 10'-3"	12,152 12,243 12,207 12,139 12,207 12,306 12,165 12,257 12,305 12,283 12,351 12,194 12,311 12,403 12,306 12,284 12,352 12,339 12,339 12,339	05/30/ /ILDI\ N/A	2025 1G CO 200 - 575	Galv. Carbon Steel / Stainless Steel	Galv. Carbon Steel / Stainless Steel	2.00	Interpolated

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
	HAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,774						
	HCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,920						
	HLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,891						
	KAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,892	COD					
	KCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,774	COD	FCOA				
	KLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,865						
	MAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,825						
	MCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,891	MAN WAY		T			
	MLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,959		<u> </u>				
	NAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,825	SP-01	71				
	NCE	8'-4 3/4"	18'-2"	1 <mark>1'-11</mark> 1/4"	18,920						
	NLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,825	ommo	l Karim				
NC8403	PAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,915	N/A	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8403	PCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,892	IN/A	200 - 373	/ Sta <mark>inles</mark> s Steel	/ Stainless Steel	2.00	Interpolated
	PLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,960	05/30/	2025				
	QAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,948	88855388	377377777				
	QCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,925	1		30			
	QLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,971			4. \			
	RAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,057						
	RCE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,034	NI WIN	(0				
	RLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,126	III DII	10				
	SAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,114	TLUI					
	SCE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,068						
	SLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,137						
	TAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,257						
	TLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,280]					

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
	HAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,638						
	HCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,660	1					
	HLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,507						
	KAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,517	COD					
	KCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,272	COD	FCOA				
	KLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,154						
	MAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,301						
	MCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,273	MAN WAY		Y			
	MLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,306		<u> </u>	1/2/			
	NAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,550	SP-01	71				
	NCE	9'-10 3/4"	19'-11"	1 <mark>1'-11</mark> 1/4"	23,581						
	NLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,581	ommo	l Karim				
	PAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,649	ammad	l Karim				
	PCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,680						
NC8405	PLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,712	05/30/	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8405	QAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,555	IN/A	200 - 373	/ Stainless Steel	/ Stainless Steel	2.00	interpolated
	QCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,809	1		30			
	QLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,618			4. \			
	RAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,665		MADO	OV.			
	RCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,852	NI WIN					
	RLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,859	ILDI	10				
	SAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,699	ILDI					
	SCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,914						
	SLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,946						
	TAE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,177						
	TCE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,017						
	TLE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,049						
	UAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,415						
	UCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,550						
	ULE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,449						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
	KAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,779						
	KCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,097	1					
	KLE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,866						
	MAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,969	COD					
	MCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,716	COD	FCOA				
	MLE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,831						
	NAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,501						
	NCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,745	MAN WAY		Y			
	NLE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,983		<u> </u>	1/2/			
	PAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,600	SP-01	71				
	PCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,844			1 111			
	PLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,020	0 100 100 0 0	I Varino				
	QAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,772	ammad	l Karim				
	QCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,887						
NC8407	QLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,125	05/A0/	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8407	RAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,036	IN/A	200 - 575	/ S <mark>tainle</mark> ss Steel	/ Stainless Steel	2.00	interpolated
	RCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,016	1		30			
	RLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,192			4. \			
	SAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,070		MADO				
	SCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,078	NI WIN					
	SLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,254	ILDI	10				
	TAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,213	ILDI					
	TCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,372						
	TLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,275						
	UAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,227						
	UCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,834						
	ULE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,289						
	VAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,573						
	VCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,831						
	VLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,635						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
	MAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,739						
	MCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,864	1					
	MLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,773						
	NAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,916	COD					
	NCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,879	COD	FCOA				
	NLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,777						
	PAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,931						
	PCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,619	MAN WAY		Y			
	PLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,864		\[\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
	QAE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,276	SP-01	71				
	QCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,663			1111			
	QLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,777	ommo	l Karim				
	RAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,739	ammad	Naiiii				
	RCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,791						
NC8409	RLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,879	05/30/	200 - 575		Galv. Carbon Steel	2.00	Interpolated
TQ8409	SAE	13'-10 3/4"	22'-5"	1 <mark>1'-11 3</mark> /4"	34,773		200 - 373	/ Stainless Steel	/ Stainless Steel	2.00	interpolated
	SCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,853			3/2/			
	SLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,783		MANA	4.1			
	TAE	13'-10 3/4"	22'-5"	11'-11 <mark>3/4"</mark>	34,916						
	TCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,147	NI WIN					
	TLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,333	ILDI	10				
	UAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,931	ILDI					
	UCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,230						
	ULE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,415						
	VAE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,276						
	VCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,376						
	VLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,561						
	WAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,783						
	WCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,619						
	WLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,333						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]		Voltage	Primary Structure Material	-	S _{DS} z/h=0 [g]	UUT
	NAE	11'-10 3/4"	22'-5"	18'-10"	47,172						
	NCE	11'-10 3/4"	22'-5"	18'-10"	46,548						
	NLE	11'-10 3/4"	22'-5"	18'-10"	46,419						
	PAE	11'-10 3/4"	22'-5"	18'-10"	47,318	COD					
	PCE	11'-10 3/4"	22'-5"	18'-10"	46,904		- CO1				
	PLE	11'-10 3/4"	22'-5"	18'-10"	46,610						
	QAE	11'-10 3/4"	22'-5"	18'-10"	46,986						
	QCE	11'-10 3/4"	22'-5"	18'-10"	46,401	MAN AXX		Z			
	QLE	11'-10 3/4"	22'-5"	18'-10"	46,430		<u> </u>				
	RAE	11'-10 3/4"	22'-5"	<mark>18'-10</mark> "	47,132	SP-01	71				
	RCE	11'-10 3/4"	22'-5"	18'-10"	46,444						
	RLE	11'-10 3/4"	22'-5"	18'-10"	46,690	amma	l Karim				
NC8411	SAE	11'-10 3/4"	22'-5"	18'-10"	46,580	allilla		Galy Carbon Steel	Galv. Carbon Steel		
TQ8411	SCE	11'-10 3/4"	22'-5"	18'-10"	46,506	N/A	200 - 575	/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
1 00711	SLE	11'-10 3/4"	22'-5"	18'-10"	46,686	05/30/	2025	7 Otalilics 3 Otoci	/ Otalilioss Otoci		
	TAE	11'-10 3/4"	22'-5"	18'-10"	46,580	88888888	3253232333				
	TCE	11'-10 3/4"	22'-5"	18'-10"	46,799	1 1		30			
	TLE	11'-10 3/4"	22'-5"	18'-10"	46,580			4, \			
	UAE	11'-10 3/4"	22'-5"	18'-10 <mark>"</mark>	46,594		MADO				
	UCE	11'-10 3/4"	22'-5"	18'-10"	46,882		O				
	ULE	11'-10 3/4"	22'-5"	18'-10"	47,062	IIDI	10				
	VAE	11'-10 3/4"	22'-5"	18'-10"	47,005	ILDI					
	VCE	11'-10 3/4"	22'-5"	18'-10"	47,028						
	VLE	11'-10 3/4"	22'-5"	18'-10"	47,275						
	WAE	11'-10 3/4"	22'-5"	18'-10"	47,058						
	WCE	11'-10 3/4"	22'-5"	18'-10"	47,076						
	WLE	11'-10 3/4"	22'-5"	18'-10"	47,388						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]		Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=0 [g]	UUT
	PAE	13'-10 3/4"	22'-5"	18'-10"	52,584						
	PCE	13'-10 3/4"	22'-5"	18'-10"	52,480						
	PLE	13'-10 3/4"	22'-5"	18'-10"	52,584						
	QAE	13'-10 3/4"	22'-5"	18'-10"	52,627	COD					
	QCE	13'-10 3/4"	22'-5"	18'-10"	52,523	COD	FCOA				
	QLE	13'-10 3/4"	22'-5"	18'-10"	52,697						
	RAE	13'-10 3/4"	22'-5"	18'-10"	52,599						
	RCE	13'-10 3/4"	22'-5"	18'-10"	52,652			Y			
	RLE	13'-10 3/4"	22'-5"	18'-10"	52,756		<u> </u>				
	SAE	13'-10 3/4"	22'-5"	18'-10"	52,633	SP-01	71				
	SCE	13'-10 3/4"	22'-5"	<mark>18'-1</mark> 0"	52,714						
	SLE	13'-10 3/4"	22'-5"	18'-10"	52,818	ommo/	l Karim				
NC8412	TAE	13'-10 3/4"	22'-5"	18'-10"	52,777	allilla	l Karim	Caly Carbon Stool	Galv. Carbon Steel		
TQ8412	1 T/C	13'-10 3/4"	22'-5"	<mark>18'-</mark> 10"	53,007	N/A	200 - 575	/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
1 Q0412	TLE	13'-10 3/4"	22'-5"	18'-10"	53,112	05/30/	2025	7 Stairliess Steel	/ Stairliess Steel		
	UAE	13'-10 3/4"	22'-5"	18'-10"	52,791	88855388	35553555				
	UCE	13'-10 3/4"	22'-5"	18'-10"	53,090	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		32			
	ULE	13'-10 3/4"	22'-5"	18'-10"	53,264		MAMA	4			
	VAE	13'-10 3/4"	22'-5"	18'-10"	53,136		MANDA				
	VCE	13'-10 3/4"	22'-5"	18'-10"	53,236	NEW WITH					
	VLE	13'-10 3/4"	22'-5"	18'-10"	53,411	IIDII	10				
	WAE	13'-10 3/4"	22'-5"	18'-10"	53,260	ILDI					
	WCE	13'-10 3/4"	22'-5"	18'-10"	53,580						
	WLE	13'-10 3/4"	22'-5"	18'-10"	53,458						
	XAE	13'-10 3/4"	22'-5"	18'-10"	53,955						
	XCE	13'-10 3/4"	22'-5"	18'-10"	53,856						
	XLE	13'-10 3/4"	22'-5"	18'-10"	54,094						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]		Voltage	Primary Structure Material	-	S _{DS} z/h=0 [g]	UUT
	NAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,468						
	NLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,679						
	PAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,632						
	PLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,632	COD					
	QAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,473	COD	FCOA				
	QCE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,580						
	QLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,741						
	RAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,647	MAN WAY		Y			
	RCE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,623		<u> </u>				
	RLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,647	SP-01	71				
	SAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,681			1 1111			
	SCE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,685	ommo	l Karim				
	SLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,866	amma	l Karim				
NC8413	TAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,825	NI/A	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8413	TCE	11'-10 3/4"	22'-5"	22 <mark>'-7 3</mark> /16"	51,979	N/A 05/30/	200-575	/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	Interpolated
	TLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,226	5055>7555	35553555				
	UAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,839			3/2/			
	UCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,062			4.			
	ULE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,839		MANDA				
	VAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,184	NAME OF THE PERSON OF THE PERS					
	VCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,208	IIDII	10				
	VLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,388	ILDI					
	WAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,238						
	WCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,255						
	WLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,502						
	XAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,999						
	XCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,822						
	XLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,999						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	,	S _{DS} z/h=0 [g]	UUT
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,156	53,156		Galv. Carbon Steel	Galv. Carbon Steel	2.00	2A
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,762						
	PAE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,914						
	PLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,065	COD					
	QAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,024	COD					
	QCE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,855						
	QLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,092			O LEW CE			
	RAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,081			Y			
	RCE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,980						
	RLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,149	SP-01					
	SAE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,962			7 / / / /			
	SCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,040	000000					
	SLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,483	ammad					
	TAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,169						
NC8414	TCE	13'-10 3/4"	22'-5"	22 <mark>'-7 3</mark> /16"	54,325	05/30/	200 - 575		Galv. Carbon Steel	2.00	Interpolated
TQ8414	TLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,494	N/A	200 - 373	/ Stainless Steel	/ Stainless Steel	2.00	interpolated
	UAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,183	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		36			
	UCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,405						
	ULE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,642						
	VAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,450						
	VAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,450	III DII					
	VCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,547	ILDI					
	VLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,784						
	WAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,570						
	WAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,570						
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,762						
	XAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	XCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	XLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	WCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880	54,880		Galv. Carbon Steel	Galv. Carbon Steel	2.00	4A

Table 1b: Certified Cooling Tower Models - Isolated Mounting

				,				Mounting			
Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=1 [g]	UUT
	GLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,702						
	HAE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,697						
	HLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,737			Caly Carbon Stool	Galv. Carbon Steel		
	KAE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,660	N/A		/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
	KLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,700	CODI		/ Otalilioss Otoci	/ Otalilioss Otoci		
	MAE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,698	74VVVVXXXXX					
NC8401	MLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,738		200 - 575	0,			
TQ8401	NAE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,362	8,362	200 - 373	Stainless Steel	Stainless Steel	2.00	1B
	NAE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,362	N/A			Galv. Carbon Steel	2.00	Interpolated
	NCE	6'-6 1/4"	12'-10"	10'-2 1/2"	9,000			/ Stainless Steel	/ Stainless Steel	2.00	interpolated
	NCE	6'-6 1/4"	12'-10"	9'-9"	9,000	9,000		Stainless Steel	Stainless Steel	2.00	3B
	NLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,768			Caly Carbon Stool	Galv. Carbon Steel		
	PAE	6'-6 1/4"	12'-10"	10'-2 1/2"		arN/Aad		/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
	PLE	6'-6 1/4"	12'-10"	10'-2 1/2"	8,897			/ Stairliess Steel	/ Stairliess Steel		
	GCE	8'-4 3/4"	14'-2"	10'-3"	12,152						
	GLE	8'-4 3/4"	14'-2"	10'-3"	12,243	05/30/	2025				
	HAE	8'-4 3/4"	14'-2"	10'-3"	12,207		3503555				
	HCE	8'-4 3/4"	14'-2"	10'-3"	12,139			7~/			
	HLE	8'-4 3/4"	14'-2"	10'-3"	12,207		MAND	40/			
	KAE	8'-4 3/4"	14'-2"	10'-3"	12,306			O _Y /			
	KCE	8'-4 3/4"	14'-2"	10'-3"	12,165						
	KLE	8'-4 3/4"	14'-2"	10'-3"	12,257	II DI	19 C				
	MAE	8'-4 3/4"	14'-2"	10'-3"	12,305						
NC8402	MCE	8'-4 3/4"	14'-2"	10'-3"	12,283	N/A	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8402	MLE	8'-4 3/4"	14'-2"	10'-3"	12,351	IN/A	200 - 575	/ Stainless Steel	/ Stainless Steel	2.00	merpolated
	NAE	8'-4 3/4"	14'-2"	10'-3"	12,194						
	NCE	8'-4 3/4"	14'-2"	10'-3"	12,311						
	NLE	8'-4 3/4"	14'-2"	10'-3"	12,403						
	PAE	8'-4 3/4"	14'-2"	10'-3"	12,306						
	PCE	8'-4 3/4"	14'-2"	10'-3"	12,284						
	PLE	8'-4 3/4"	14'-2"	10'-3"	12,352						
	QAE	8'-4 3/4"	14'-2"	10'-3"	12,339						
	QCE	8'-4 3/4"	14'-2"	10'-3"	12,351						
	QLE	8'-4 3/4"	14'-2"	10'-3"	12,339						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=1 [g]	UUT
	HAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,774						
	HCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,920						
	HLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,891						
	KAE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,892						
	KCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,774	COD	- 0				
	KLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,865	VALVA VA	CON				
	MAE	8'-4 3/4"	18'-2"	11'-11 1/ <mark>4</mark> "	18,825			0,			
	MCE	8'-4 3/4"	18'-2"	11'-11 <mark>1/4"</mark>	18,891	VanNA					
	MLE	8'-4 3/4"	18'-2"	11'- <mark>11 1/4</mark> "	18,959			7			
	NAE	8'-4 3/4"	18'-2"	11 <mark>'-11 1/4</mark> "	18,825	20.04	7 4				
	NCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,920	5P-01	/ 1				
	NLE	8'-4 3/4"	18'-2"	1 <mark>1'-11</mark> 1/4"	18,825						
NC8403	PAE	8'-4 3/4"	18'-2"	<mark>11'-11</mark> 1/4"	□ 18,915	amma	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8403	PCE	8'-4 3/4"	18'-2"	<mark>11'-11</mark> 1/4"	18,892	ar N/Aac	200-010	/ Sta <mark>inless</mark> Steel	/ Stainless Steel	2.00	interpolated
	PLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,960						
	QAE	8'-4 3/4"	18'-2"	1 <mark>1-11</mark> 1/4"	18,948	05/30/	2025				
	QCE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,925	5555> <u>755</u> 5					
	QLE	8'-4 3/4"	18'-2"	11'-11 1/4"	18,971			72/			
	RAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,057			4.3/			
	RCE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,034			O			
	RLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,126						
	SAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,114	ILDI	10				
	SCE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,068	1					
	SLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,137						
	TAE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,257						
	TLE	8'-4 3/4"	18'-2"	11'-11 1/4"	19,280						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material		S _{DS} z/h=1 [g]	UUT
	HAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,638						
	HCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,660						
	HLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,507						
	KAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,517						
	KCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,272	COD					
	KLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,154		100				
	MAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,301			0,			
	MCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,273	Validya					
	MLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,306			Z			
	NAE	9'-10 3/4"	19'-11"	11 <mark>'-11 1</mark> /4"	23,550		**************************************				
	NCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,581	5P-01	/1				
	NLE	9'-10 3/4"	19'-11"	1 <mark>1'-1</mark> 1 1/4"	23,581						
	PAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,649	amma	l Karim				
	PCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,680	annina	i Kallili				
NC8405	PLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,712	N/A	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8405	QAE	9'-10 3/4"	19'-11"	11-11 1/4"	23,555	05/30/	20025	/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	interpolated
	QCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,809	3222232	3353355				
	QLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,618			32/			
	RAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,665			4.1			
	RCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,852			0			
	RLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,859						
	SAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,699	II DI	10				
	SCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,914						
	SLE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,946						
	TAE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,177						
	TCE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,017						
	TLE	9'-10 3/4"	19'-11"	11'-11 1/4"	24,049						
	UAE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,415						
	UCE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,550						
	ULE	9'-10 3/4"	19'-11"	11'-11 1/4"	23,449						

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material		S _{DS} z/h=1 [g]	UUT
	KAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,779						
	KCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,097						
	KLE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,866						
	MAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,969						
	MCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,716	COD					
	MLE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,831	7VVVVVVVXXXXX	100				
	NAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,501			0,			
	NCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,745	Vandy's					
	NLE	11'-10 3/4"	21'-0"	11'- <mark>11 3/4</mark> "	28,983			Z			
	PAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,600	D 04					
	PCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,844	5P-01	/ 1				
	PLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,020						
	QAE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,772	amma	l Karim				
	QCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,887		i Kallili				
NC8407	QLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,125	N/A	200 - 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8407	RAE	11'-10 3/4"	21'-0"	11-11 3/4"	29,036	05/30/	2025	/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	interpolated
	RCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,016						
	RLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,192			7~/			
	SAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,070		MANAD	4.5/			
	SCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,078			0			
	SLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,254						
	TAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,213	II DI	10				
	TCE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,372						
	TLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,275						
	UAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,227						
	UCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,834						
	ULE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,289						
	VAE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,573						
	VCE	11'-10 3/4"	21'-0"	11'-11 3/4"	28,831						
	VLE	11'-10 3/4"	21'-0"	11'-11 3/4"	29,635						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material		S _{DS} z/h=1 [g]	UUT
	MAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,739						
	MCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,864						
	MLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,773						
	NAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,916						
	NCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,879	COD	- 0				
	NLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,777	74VVVVXXXXX	CON				
	PAE	13'-10 3/4"	22'-5"	11'-11 3/ <mark>4</mark> "	34,931			0,			
	PCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,619	Vandy's					
	PLE	13'-10 3/4"	22'-5"	11'- <mark>11 3/4</mark> "	34,864			7			
	QAE	13'-10 3/4"	22'-5"	11 <mark>'-11 3/4</mark> "	35,276	D 04	7 4				
	QCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,663	5P-01	/ 1				
	QLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,777						
	RAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,739	ammad	l Karim				
	RCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,791		i Kallili				
NC8409		13'-10 3/4"	22'-5"	11'-11 3/4"	34,879	N/A	200 575	Galv. Carbon Steel	Galv. Carbon Steel	2.00	Interpolated
TQ8409	SAE	13'-10 3/4"	22'-5"	11-11 3/4"	34,773	05/30/	200 - 575	/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	interpolated
	SCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,853						
	SLE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,783			72/			
	TAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,916		MAND	4.5/			
	TCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,147			O			
	TLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,333						
	UAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,931	ILDI	10				
	UCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,230						
	ULE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,415						
	VAE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,276						
	VCE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,376						
	VLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,561						
	WAE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,783						
	WCE	13'-10 3/4"	22'-5"	11'-11 3/4"	34,619						
	WLE	13'-10 3/4"	22'-5"	11'-11 3/4"	35,333						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=1 [g]	UUT
	NAE	11'-10 3/4"	22'-5"	18'-10"	47,172						
	NCE	11'-10 3/4"	22'-5"	18'-10"	46,548						
	NLE	11'-10 3/4"	22'-5"	18'-10"	46,419						
	PAE	11'-10 3/4"	22'-5"	18'-10"	47,318						
	PCE	11'-10 3/4"	22'-5"	18'-10"	46,904	CODI					
	PLE	11'-10 3/4"	22'-5"	18'-10"	46,610	74VVVVVVXXXXX	On				
	QAE	11'-10 3/4"	22'-5"	18'-10"	46,986			0,			
	QCE	11'-10 3/4"	22'-5"	18'-10"	46,401	YanN'A'					
	QLE	11'-10 3/4"	22'-5"	18'-10"	46,430			Z			
	RAE	11'-10 3/4"	22'-5"	18'-10"	47,132	D 04	7.4				
	RCE	11'-10 3/4"	22'-5"	18'-10"	46,444	5P-01	/ 1				
	RLE	11'-10 3/4"	22'-5"	18'-10"	46,690						
NC8411	SAE	11'-10 3/4"	22'-5"	18'-10"	46,580	ammad	Karim	Galy Carbon Stool	Galv. Carbon Steel		
TQ8411	SCE	11'-10 3/4"	22'-5"	18'-10"	46,506	N/A	200 - 575	/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
1 00411	SLE	11'-10 3/4"	22'-5"	18'-10"	46,686			7 Otaliless Steel	/ Otalilless Oteel		
	TAE	11'-10 3/4"	22'-5"	18'-10"	46,580	05/30/	2025				
	TCE	11'-10 3/4"	22'-5"	18'-10"	46,799	3222232					
	TLE	11'-10 3/4"	22'-5"	18'-10"	46,580						
	UAE	11'-10 3/4"	22'-5"	18'-10"	46,594		HHHHD	4.1			
	UCE	11'-10 3/4"	22'-5"	18'-10"	46,882			0			
	ULE	11'-10 3/4"	22'-5"	18'-10"	47,062	ZIZWWZIZ					
	VAE	11'-10 3/4"	22'-5"	18'-10"	47,005	ILDI	10				
	VCE	11'-10 3/4"	22'-5"	18'-10"	47,028						
	VLE	11'-10 3/4"	22'-5"	18'-10"	47,275						
	WAE	11'-10 3/4"	22'-5"	18'-10"	47,058						
	WCE	11'-10 3/4"	22'-5"	18'-10"	47,076						
	WLE	11'-10 3/4"	22'-5"	18'-10"	47,388						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=1 [g]	UUT
	PAE	13'-10 3/4"	22'-5"	18'-10"	52,584						
	PCE	13'-10 3/4"	22'-5"	18'-10"	52,480						
	PLE	13'-10 3/4"	22'-5"	18'-10"	52,584						
	QAE	13'-10 3/4"	22'-5"	18'-10"	52,627						
	QCE	13'-10 3/4"	22'-5"	18'-10"	52,523	CODI					
	QLE	13'-10 3/4"	22'-5"	18'-10"	52,697	74VVVVXXXXX	On				
	RAE	13'-10 3/4"	22'-5"	18'-10"	52,599			0,			
	RCE	13'-10 3/4"	22'-5"	18'-10"	52,652	Yannya'					
	RLE	13'-10 3/4"	22'-5"	18'-10"	52,756			Z			
	SAE	13'-10 3/4"	22'-5"	18'-10"	52,633	D 04	7.4				
	SCE	13'-10 3/4"	22'-5"	18'-10"	52,714	SP-01	/ 1				
	SLE	13'-10 3/4"	22'-5"	18'-10"	52,818						
NC8412	TAE	13'-10 3/4"	22'-5"	18'-10"	⊃ 52,777	ammad	Karim	Galy Carbon Stool	Galv. Carbon Steel		
TQ8412	TCE	13'-10 3/4"	22'-5"	18 <mark>'-</mark> 10"	53,007	N/A	200 - 575	/ Stainless Steel	/ Stainless Steel	2.00	Interpolated
1 Q0412	TLE	13'-10 3/4"	22'-5"	18'-10"	53,112			7 Stairliess Steel	/ Stairliess Steel		
	UAE	13'-10 3/4"	22'-5"	18'-10"	52,791	05/30/	2025				
	UCE	13'-10 3/4"	22'-5"	18'-10"	53,090						
	ULE	13'-10 3/4"	22'-5"	18'-10"	53,264						
	VAE	13'-10 3/4"	22'-5"	18'-10"	53,136		HHHHD	4.1			
	VCE	13'-10 3/4"	22'-5"	18'-10"	53,236						
	VLE	13'-10 3/4"	22'-5"	18'-10"	53,411	ZIZWWY ZIZ					
	WAE	13'-10 3/4"	22'-5"	18'-10"	53,260	ILDI	10				
	WCE	13'-10 3/4"	22'-5"	18'-10"	53,580						
	WLE	13'-10 3/4"	22'-5"	18'-10"	53,458						
	XAE	13'-10 3/4"	22'-5"	18'-10"	53,955						
	XCE	13'-10 3/4"	22'-5"	18'-10"	53,856						
	XLE	13'-10 3/4"	22'-5"	18'-10"	54,094						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material		S _{DS} z/h=1 [g]	UUT
	NAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,468						
	NLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,679						
	PAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,632						
	PLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,632						
	QAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,473	COD	E Ca				
	QCE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,580		CON				
	QLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,741			0,			
	RAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,647	Y MIN A					
	RCE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,623			7			
	RLE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,647	D 04	71				
	SAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,681	DP-01	/ 1	Min I			
	SCE	11'-10 3/4"	22'-5"	2 <mark>2'-7 3</mark> /16"	51,685						
	SLE	11'-10 3/4"	22'-5"	22'-7 3/16"	□ 51,866	ammad	l Karim				
NC8413		11'-10 3/4"	22'-5"	<mark>22'-7</mark> 3/16"	51,825	N/A	200 - 575		Galv. Carbon Steel	2.00	Interpolated
TQ8413		11'-10 3/4"	22'-5"	22'-7 3/16"	51,979	- SARREESS		/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	interpolated
	TLE	11'-10 3/4"	22'-5"	2 <mark>2'-7 3</mark> /16"	52,226	05/30/	2025				
	UAE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,839		377737777				
	UCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,062						
	ULE	11'-10 3/4"	22'-5"	22'-7 3/16"	51,839			4.1			
	VAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,184			O Y			
	VCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,208	ZIZWWWZIZ	10.00				
	VLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,388	ILDI	10				
	WAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,238						
	WCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,255						
	WLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,502						
	XAE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,999						
	XCE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,822						
	XLE	11'-10 3/4"	22'-5"	22'-7 3/16"	52,999						

Table 1b: Certified Cooling Tower Models - Isolated Mounting (Continued)

			· · · · · ·	,				nounting (o			
Unit Size	Fan, Sound and Certification	Unit Length	Unit Width	Unit Height	Operating Weight per Cell [lbs]	Tested Weight [lbs]	Voltage	Primary Structure Material	Hot / Cold Water Basin Material	S _{DS} z/h=1 [g]	UUT
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,156	53,156		Galv. Carbon Steel	Galv. Carbon Steel	2.00	2B
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,762						
	PAE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,914						
	PLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,065						
	QAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,024	COD					
	QCE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,855	/AVV/V/V/V/V/X/X/X/X/X/X/X/X/X/X/X/X/X/X					
	QLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,092			O LEW CE			
	RAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,081	Vally's					
	RCE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,980			Z			
	RLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,149	D 04					
	SAE	13'-10 3/4"	22'-5"	22'-7 3/16"	53,962	SP-01					
	SCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,040						
	SLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,483	ammad					
	TAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,169						
NC8414		13'-10 3/4"	22'-5"	22'-7 3/16"	54,325	Ν/Δ	200 - 575		Galv. Carbon Steel	2.00	Interpolated
TQ8414	TLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,494	05/30/	200 - 373	/ St <mark>ainles</mark> s Steel	/ Stainless Steel	2.00	interpolated
	UAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,183						
	UCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,405						
	ULE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,642			4.5/			
	VAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,450						
	VAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,450	ZIZWWW <u>ZIZ</u>					
	VCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,547	ILDI					
	VLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,784						
	WAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,570						
	WAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,570						
	WLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,762						
	XAE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	XCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	XLE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880						
	WCE	13'-10 3/4"	22'-5"	22'-7 3/16"	54,880	54,880		Galv. Carbon Steel	Galv. Carbon Steel	2.00	4B

XX	xxxx	Х	x	E	x	X	G	F
Unit Size, Prefix	Unit Size, Suffix	Fan Horsepower	Sound Designator	Certification Designator	Number Units in Order	Material	Drive	Assembly Type
NC - Standard	8401	G - 2 HP	A - Low Sound	E - OSHPD	Any Integer	G - Galvanized Steel		
TQ - Trane Quiet	8402	H - 3 HP	L - Quiet	WE H	CAi	H - Galvanized Steel Structure and Cold Water Basin Stainless Steel Hot Water Basin		
	8403	K - 5 HP	C - Ultra Quiet	OS	P-0171	C - Galvanized Steel Structure and Hot Water Basin Stainless Steel Cold Water Basin	G - Gear	F - Factory Built
TQ models are branded	8405	M - 7.5 HP	0	BY: Moha	mna Kari	B - Galvanized Steel Structure Stainless Steel Hot and Cold Water Basin		
and identical to the NC product	8407	N - 10 HP	\C	DAIL	05/30/2025	S - Stainless Steel	1	
	8409	P - 15 HP					•	
	8411	Q - 20 HP		O-MANN		K.		
	8412	R - 25 HP						
	8413	S - 30 HP		RIII	DING			

8414

T - 40 HP U - 50 HP V - 60 HP W - 75 HP X - 100 HP

Table 2: TEFC Fan Motors

WEG Model	Model	Rating [HP]	Motor Speed	Input Voltage	Motor Housing Material	Max Weight [lbs]	Test Unit	MFR	Branded Marley Model
		002				141	Extrapolated		
		003				159	Extrapolated		
		005				232	Extrapolated		
		007				276	Extrapolated		
		010				373	1A, 1B, 3A, 3B		
		015	Cinala Chaad	200/208-230/460/575 VAC		423	Interpolated		
		020	Single Speed 1800 rpm	3 Phase		537	Interpolated		
		025	1000 10111	3 Filase		616	Interpolated		
		030				926	Interpolated		
		040				998	Interpolated		
		050				1227	Interpolated		
		060				1558	Interpolated		
		075				1558	Interpolated		
ET3	W22 CT Duty				Cast Iron	1811	Interpolated	WEG	MCT
		002				141	Interpolated		
		003				159	Interpolated		
		005				232	Interpolated		
		007				276	Interpolated		
		010				373	Interpolated		
		015				423	Interpolated		
		020	Dual Speed	200/460/575 VAC		537	Interpolated		
		025	1800/900 rpm	3 Phase		616	Interpolated		
		030 040 050				926	Interpolated		
						998	Interpolated	d d	
						1227	Interpolated		
	060				1558	Interpolated			
		075				1558	2A, 2B, 4A, 4B		

Table 3: Fans

			Bla	ade Dia	amete	r (Inc	:h)		Blade Material	Hub Material	Sound Designator	Max Weight	Test Unit	MFR
		66	72	84	108	120	132	144	Diade Material	Tidb Material	Courid Designator	[lbs]	TOST OTHE	IVII TX
	4	X	X	Х	Х	Х	Х	X	Aluminum Alloy	Aluminum Alloy	Ultra Quiet Series	355	3A, 3B, 4A, 4B	
Blade Count			Calvanized Dustile	X7 Series	419	1A, 1B	Marley							
		Aluminum Alloy Galvanized Ductile	(Quiet and Low	485	2A, 2B									
	8 X X X X	Χ	Х	Х		11011	Sound Options)	617	Extrapolated					

Table 4: Single Reduction Geareducer

Model	Power Rating Range (HP)	Gear Ratios	Material	Test Unit	MFR
5, 2000	27 - 50	2.71 - 4.8		1A, 1B, 3A, 3B	
5, 2200	29 - 70	3. <mark>45 - 8</mark> .67	Cast Iron	Interpolated	Marley
5, 2400	31 - 143	3.45 - 8.67		2A, 2B, 4A, 4B	

Note: Power rating is for sizing the model to the system (no input electrical power)

Table 5: VFD

Table 5. VI D			DATE	· 05/30/20)25
Model	Power (HP)	Voltage	Test Unit	MFR	
ACH550-01-XXXA-4	1-10		Extrapolated		
ACH550-01-015A-4	10	208-575	3A, 3B	ABB	
ACH550-01-XXXA-4	10-75	200-373	Interpolated	ADD	M
ACH550-01-097A-4	75		4A, 4B		- (

Table 6A: Marley Water Level Sensor probe assembly

Model	System Components	Test Unit	MFR
E2	(2) B/W probes with stilling chamber	1A, 1B	
E3	(3) B/W probes with stilling chamber	Interpolated	
E4	(4) B/W probes with stilling chamber	Interpolated	Marley
E5	(5) B/W probes with stilling chamber	Interpolated	iviality
E6	(6) B/W probes with stilling chamber	Interpolated	
E7	(7) B/W probes with stilling chamber	4A, 4B	

Table 6B: Marley LLC Water Level Control Panel

Mode	el	Card Configuration		Voltage		Enclosure Type	Test Unit	MFR			
	1	MU		_			Extrapolated				
	2	HA					Extrapolated				
	3	LA					1A, 1B				
	4	HCO					Interpolated				
	5	LCO					Interpolated				
	6	MU+HA					Interpolated				
	7	MU+LA					Interpolated				
		MU+HCO					Interpolated				
	9	MU+LCO					Interpolated				
	10	HA+LA					Interpolated				
		HA+HCO					Interpolated				
							Interpolated				
		LA+HCO									
	14			120 VAC NEMA Type 4X		Interpolated					
		HCO+LCO				NEMA Type 4X	Interpolated				
LLC		MU+HA+LA	120	120	120	1 1 2 0 1	50/60 HZ	E5	FIBERGLASS	3A, 3B	Marley
		MU+HA+HCO					Interpolated				
		MU+HA+LCO					Interpolated				
		MU+LA+HCO					Interpolated				
		MU+LA+LCO					Interpolated				
	21	MU+HCO+LCO					Interpolated				
	22	HA+LA+HCO					Interpolated				
		HA+LA+LCO					Interpolated				
	24	HA+HCO+LCO					Interpolated				
	25	LA+HCO+LCO MU+HA+LA+HCO					Interpolated				
		MU+HA+LA+LCO					Interpolated				
	28	MU+HA+HCO+LCO					Interpolated Interpolated				
		MU+LA+HCO+LCO	-				Interpolated				
		HA+LA+HCO+LCO					Interpolated				
		MU+HA+LA+HCO+LCO					4A, 4B				

Table 7A: Cold Water Basin Heating System

Model	System Components	Test Unit	MFR
	Heater Element	1A, 1B, 2A, 2B,	
7131 Immersion	Temperature Probe	3A, 3B, 4A, 4B	INDEECO
	Control Panel	1A, 1B, 4A, 4B	

Note: Temp Probe and Control Panel same no matter the heater rating.

Table 7B: Cold Water Basin Heater Element

Basin Heater Element	Max. Weight [lbs]	Test Unit	MFR
1 - 6 KW	10	Extrapolated	
7.5 KW	11	1A, 1B, 2A, 2B	
8 - 12 KW	13	Interpolated	INDEECO
15 KW	18	3A, 3B, 4A, 4B	
18 - 20 KW	18	Extrapolated	

Note: Maximum of Two Elements Allowed per unit

Table 8: Marley M5 Vibration Switch Components

Model	Test Unit	MFR
M5	1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B	Marley

Table 9: Terminal Box Enclosures

Model	W	Н	D		Enclosure Type	Voltage	Test Unit	MFR
T-Box - Small	18"	20"	8.23"				1A, 1B, 3A, 3B	
T-Box - Med Small	21.59"	25.59"	9.75"	E5	FIBERGLASS	480/3/60	Interpolated	Marley
T-Box - Med Large	25.59"	25.59"	9.75"		NEMA Type 4X	460/3/00	✓ Interpolated	Mariey
T-Box - Large	25.59"	31.59"	9.75"				2A, 2B, 4A, 4B	

Table 10: SPPC Power Panel Enclosure

Model	W	Н	D		Enclosure Type	Voltage	Status Option	Test Unit	MFR
SPPC - Small	25.59"	31.59"	9.75"	E5	FIBERGLASS	480/3/60	LLCSTAT	3A, 3B	Marley
SPPC - Large	35.85"	31.30"	12.04"	23	NEMA Type 4X	400/3/00	BHSTAT	4A, 4B	iviariey

LLCSTAT = Water Level Lights and Status

BHSTAT = Basin Heater Lights and Status

Table 11A - Inlet Components

Unit Size		Inlet	Positio	on				
Offit Size	Dual		Singl	le	Test Unit	Material	MFR	
No.	Тор	Тор	Side	Bottom				
8401	Х	Х	Х	Х	1A, 1B, 3A, 3B			
8402	Х	Х	Х	Х	Interpolated			
8403	Х	Х	Х	Х	Interpolated			
8405	Х	Х	Х	Х	Interpolated			
8407	Х	Х	Х	Х	Interpolated	PVC Pipe	Marley	
8409	Х	Х	Х	Х	Interpolated	r v C Fipe	Mariey	
8411	Х	Х	Х	Х	Interpolated			
8412	Х	Х	Х	Х	Interpolated			
8413	Х	Х	Х	Х	Interpolated			
8414	Χ	Χ	Х	Х	2A, 2B, 4A, 4B			

Table 11B - Inlet Options

	Option/Size	Test Unit	MFR	
Material	PVC	3A, 3B, 4A, 4B		
Pranch Dine Naminal Size	6"	3A, 3B		
Branch Pipe Nominal Size (Inch)	8"	Interpolated		
(IIICII)	10"	4A, 4B	Marley	
	6"	3A, 3B	Mariey	
Riser Pipe Nominal Size (Inch)	8"	Interpolated		
Riser Fipe Northinal Size (Ilich)	10"	Interpolated		
	12"	4A, 4B		

UUT-1A/1B and UUT-2A/2B had dual top inlet option. . UUT-3A/3B and UU-4A/UUT-4B had single bottom inlet option

Table 12A - Fan Stack

Dimensions			Sta	ack Dia	mete	r (Inc	h)		Test Unit	MFR	
Difficitsion	5	66	72	84	108	120	132	144	Test Offic	IVIFIX	
	12	Χ	Х	Χ	Х	Х	Χ	Χ	Extrapolated		
Stock Hoight	24	Χ	Х	Х	Х	Х	Χ	Χ	Extrapolated		
Stack Height (Inch)	36	Χ	Х	Χ	Х	Х	Χ	Χ	3A, 3B	Marley	
(IIICII)	48	Χ	Χ	Χ	Х	Х	Χ	Χ	Interpolated		
	60	Χ	Χ	Χ	Х	Х	Χ	Χ	4A, 4B		

BY: Mohammad Kari Table 12B - Fan Stack Material

Group	Stack Material	Test Unit	MFR
Stack Material	Galvanized Steel	3A, 3B	Marley
Stack Waterial	Stainless Steel	4A, 4B	Mariey

Table 13 - Fan Guard

Dimension	ıs	Material	Test Unit	MFR
	66	Stainless Steel / Galv. Steel	Extrapolated	
	72	Stainless Steel Galv. Steel	1A, 1B 3A, 3B	
Blade	84		Interpolated	
Diameter	108	Stainless Steel / Galv. Steel	Interpolated	Marley
(Inch)	120	Stailliess Steel / Galv. Steel	Interpolated	Interpolated
	132		Interpolated	
	144	Galv. Steel Stainless Steel	2A, 2B 4A, 4B	

Rod Sizes: Major 5/16", Minor 7 Gauge. Welded Construction.



UUT-01A

PEER-STI 2010-14; UUT1

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8401NAE	Marley

Product Construction Summary

Stainless Steel Structure; Stainless Steel Hot Water Basin; Stainless Steel Cold Water Basin

Options / Subcomponent Summary

5 72" Blades Low Sound Fan: SPX Marley; 10 HP 200-575 V Fan Motor: WEG

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 8362 78.25 154 -(122.5 9.3 8.6 6.3 **UUT Highest Passed Seismic Run Information Building Code** Test Criteria SDS z/h A_{FLX-H} A_{RIG-H} A_{FLX-V} A_{RIG-V} arlem CBC 2022 ICC-ES AC156 2.00 2.00 0.80 1.34 0.54 0.00 1.5

Test Mounting Details

Unit attached to shake table interface fixture via (4) 3/4" diameter A325 bolts.





UUT-01B

PEER-STI 2010-14: UUT1

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8401NAE	Marley

Product Construction Summary

Stainless Steel Structure; Stainless Steel Hot Water Basin; Stainless Steel Cold Water Basin

Options / Subcomponent Summary

5 72" Blades Low Sound Fan: SPX Marley; 10 HP 200-575 V Fan Motor: WEG

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 154 8362 78.25 122.5 1.9 2.3 3.9 **UUT Highest Passed Seismic Run Information Building Code Test Criteria** SDS z/h A_{FLX-H} $\mathbf{A}_{\mathsf{RIG-H}}$ A_{FLX-V} A_{RIG-V} a rlem CBC 2022 ICC-ES AC156 2.00 1.00 1.5 3.20 2.40 1.34 0.54

Test Mounting Details

Unit attached to dunnage frame via (4) 3/4" diameter A325 bolts. Dunnage frame attached to shake table interface fixture using (8) MSSH-1E-1400 VMC isolators. DCRs: The cross bracing members' thickness increased to 11 gauge material.





UUT-02A

PEER-STI 2010-14; UUT2

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8414WLE	Marley

Product Construction Summary

Galv. Steel Structure; Galv. Steel Hot Water Basin; Galv. Steel Cold Water Basin

Options / Subcomponent Summary

6 144" Blades Quiet Fan: SPX Marley; 75 HP 200-575 V Fan Motor: WEG

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 53156 166.75 269 271.19 5.9 6.2 7.8 **UUT Highest Passed Seismic Run Information Building Code** Test Criteria SDS z/h A_{FLX-H} A_{RIG-H} A_{FLX-V} A_{RIG-V} arlim CBC 2022 ICC-ES AC156 0.80 1.34 0.54 2.00 0.00 1.5 2.00

Test Mounting Details

Unit attached to dunnage frame via (8) 3/4" diameter A325 bolts.





UUT-02B

PEER-STI 2010-14; UUT2

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8414WLE	Marley

Product Construction Summary

Galv. Steel Structure; Galv. Steel Hot Water Basin; Galv. Steel Cold Water Basin

Options / Subcomponent Summary

6 144" Blades Quiet Fan: SPX Marley; 75 HP 200-575 V Fan Motor: WEG

		EOR	CODE	CO				
		UI	UT Propertie	s V				
Weight		Dimension	ons [in]			Lowe	st Nat. Freq.	. [Hz]
[lbs]	Length	Wic	dth	Hei	ight	F-B	S-S	V
53156	166.75	269 271.19		1.19	1.6	1.9	3.6	
	Q UUT I	Highest Pass	sed Seismic	Run Inforn	nation			
Building Code	Te <mark>st Crit</mark> eria	S _{DS}	z/h	l _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2022	ICC-ES AC156	2.00 h	amnooad k	Kanisn	3.20	2.40	1.34	0.54
	· V//////	Test	Mounting De	etails				

Unit attached to dunnage frame via (8) 3/4" diameter A325 bolts. Dunnage frame attached to shake table interface fixture using (12) M6SH VMC isolators. DCRs: Splice at the flanges of the interior cross braces was redesigned with longer flange length and to use 6-3/8" dia bolts instead of sheet metal screws.





[lbs]

9000

UNIT UNDER TEST (UUT) Summary Sheet

UUT-03A

PEER-STI 2012-04; UUT3A

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8401NCE	Marley

Product Construction Summary

Stainless Steel Structure; Stainless Steel Hot Water Basin; Stainless Steel Cold Water Basin

Options / Subcomponent Summary

4 72" Blades Ultra Quiet Fan: SPX Marley; 10 HP 200-575 V Fan Motor: WEG; 10 HP VFD: ABB

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight Length Width Height F-B S-S 154 - (78 117 6.7 5.5 8.1 **UUT Highest Passed Seismic Run Information**

Building Code Test Criteria SDS z/h A_{FLX-H} A_{RIG-H} A_{FLX-V} A_{RIG-V} arlem CBC 2022 ICC-ES AC156 2.00 2.00 0.80 1.34 0.54 0.00 1.5

Test Mounting Details

Unit attached to shake table interface fixture frame via (4) 3/4" diameter Grade 8 bolts.





UUT-03B

PEER-STI 2012-04; UUT3B

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8401NCE	Marley

Product Construction Summary

Stainless Steel Structure; Stainless Steel Hot Water Basin; Stainless Steel Cold Water Basin

Options / Subcomponent Summary

4 72" Blades Ultra Quiet Fan: SPX Marley; 10 HP 200-575 V Fan Motor: WEG; 10 HP VFD: ABB

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 9000 154 78 117 2.2 1.9 5.4 **UUT Highest Passed Seismic Run Information Building Code** Test Criteria SDS z/h A_{FLX-H} $\mathbf{A}_{\mathsf{RIG-H}}$ A_{FLX-V} A_{RIG-V} arlem CBC 2022 ICC-ES AC156 2.00 3.20 0.54 1.00 1.5 2.40 1.34

Test Mounting Details

Unit attached to dunnage frame via (8) 3/4" diameter Grade 8 bolts. Dunnage frame attached to shake table interface fixture using (8) MSSH-1E-1400 VMC isolators.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



UUT-04A

PEER-STI 2012-04; UUT4A

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8414WCE	Marley

Product Construction Summary

Galv. Steel Structure; Galv. Steel Hot Water Basin; Galv. Steel Cold Water Basin

Options / Subcomponent Summary

4 144" Blades Quiet Fan: SPX Marley; 75 HP 200-575 V Fan Motor: WEG; 75 HP VFD: ABB

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 54880 167 -269 265 6.2 4.7 5.5 **UUT Highest Passed Seismic Run Information Building Code** Test Criteria SDS z/h A_{FLX-H} $\mathbf{A}_{\mathsf{RIG-H}}$ A_{FLX-V} A_{RIG-V} arlem CBC 2022 ICC-ES AC156 2.00 2.00 0.80 0.54 0.00 1.5 1.34 **Test Mounting Details**

Unit attached to dunnage frame via (12) 3/4" diameter Grade 8 bolts. Dunnage frame attached to shake table interface fixture via (16) 3/4" diameter Grade 8 bolts.





CBC 2022

UNIT UNDER TEST (UUT) Summary Sheet

UUT-04B

PEER-STI 2012-04; UUT4B

Model Line	Model Number	Manufacturer
NC8401-NC8414	NC8414WCE	Marley

Product Construction Summary

Galv. Steel Structure; Galv. Steel Hot Water Basin; Galv. Steel Cold Water Basin

ICC-ES AC156

Options / Subcomponent Summary

4 144" Blades Quiet Fan: SPX Marley; 75 HP 200-575 V Fan Motor: WEG; 75 HP VFD: ABB

UUT Properties Dimensions [in] Lowest Nat. Freq. [Hz] Weight [lbs] Length Width Height F-B S-S 54880 269 265 167 1.7 1.8 4.4 **UUT Highest Passed Seismic Run Information Building Code Test Criteria** z/h SDS A_{FLX-H} A_{RIG-H} A_{FLX-V} A_{RIG-V}

1.00 **Test Mounting Details**

a1.5

3.20

2.40

1.34

0.54

2.00

Unit attached to dunnage frame via (12) 3/4" diameter Grade 8 bolts. Dunnage frame attached to shake table interface fixture using (12) M6SH-1E-6000 VMC isolators. DCRs: Added 1.5 x 6 x 1/8in. plate double hole washer at each side of the corner double bolt connections to top and bottom UUT interface. Added two horizontal braces for the SIO Tee Bracing at the top of the 'Tee' point.

