Tower Tech

Sustainable Efficiency™

Why Tower Tech?

A Cooling Tower that

SAVES VALUABLE RESOURCES

What is most important to you and your business when considering the purchase of a Cooling Tower?

Why Tower Tech?

Innovative Cooling Solutions

Our Purpose is to save valuable resources by providing innovative cooling solutions.

Overview

- Why Tower Tech Cooling Towers?
- Brief History
- 3 Recurring problems in CT industry
- How does it work
- Tower Tech Value Proposition
- Return on Investment
- Reliability
- Maintenance Friendly
- Ease of Installation
- Safety
- Longevity
- Sustainability
- Aesthetically Pleasing
- Question and Answer

Parent Organizations

Tower Tech
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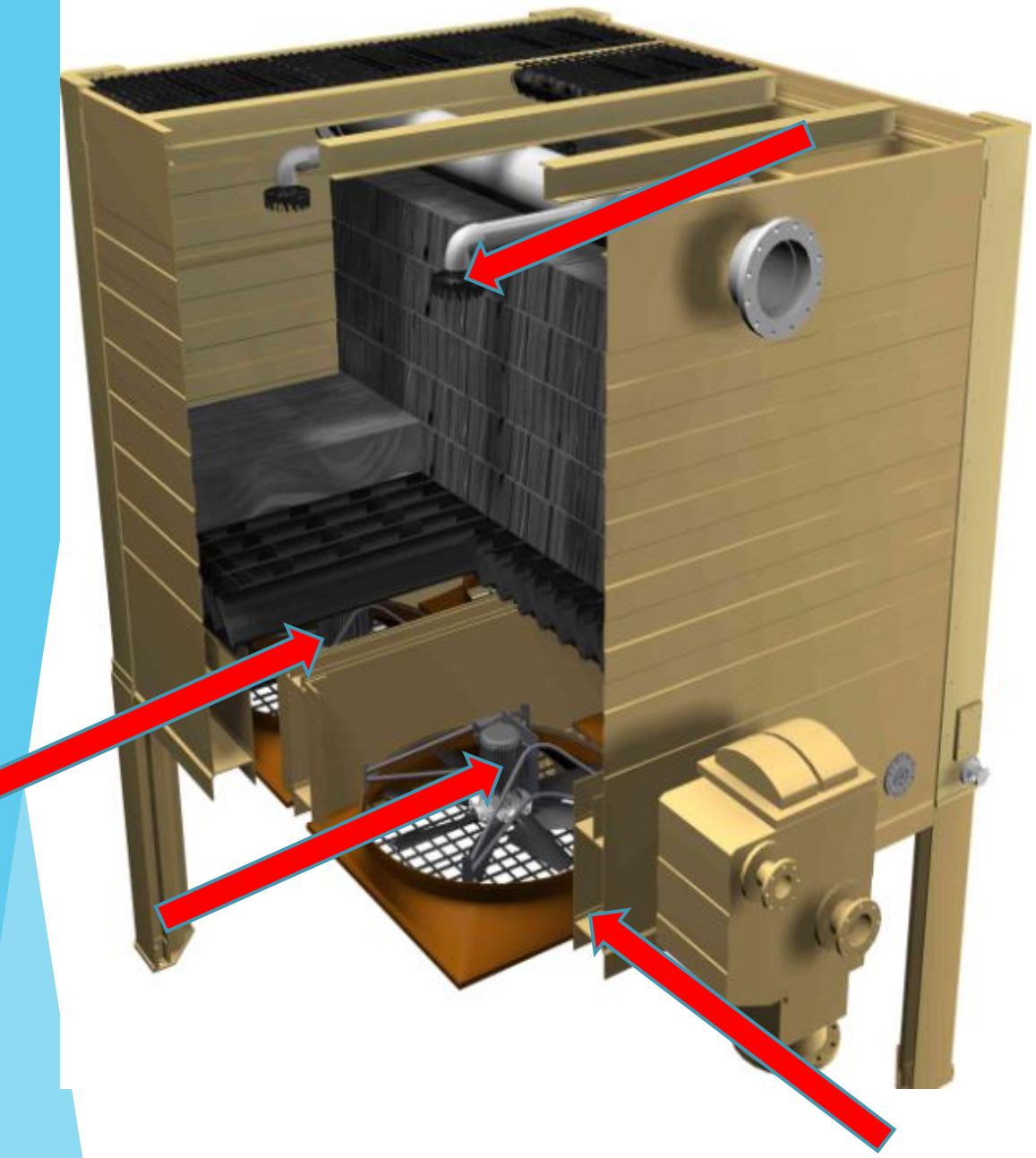
Hill & Smith Holdings PLC

CREATIVE COMPOSITES GROUP



History of Tower Tech's Patented Cooling Tower Design

- Global Patents issued in 1992
- Large Fans on top were replaced with small diameter fans on the bottom with water collection system that collects water but allows air to pass through
- Self cleaning nozzle was introduced that expelled scale, debris, and dirt contaminants automatically
- Sediment Basin was eliminated and replaced with a flow-through basin approach that carried less water volume, moved at high velocity, and was incorporated as integral part of the structure

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History of Tower Tech's Patented Cooling Tower Design

- 1st TT tower sold to industrial clients for a Paper Mill and a Chemical Plant in 1993 still operating today 30 Years later
- Tower Tech became CTI Certified in 1993
- Tower Tech made plastic tower 1998-2001
- Tower Tech went back to FRP tower 2002
- Tower Tech 6th collector design final 2007
- Today over 6,000 operating towers worldwide in industrial/commercial
- Tower Tech acquired by Creative Pultrusions who is owned by Hill & Smith Holdings (London Stock Exchange in 2017)
- Plant moved to PA in 2019

History of Tower Tech's Patented Design

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- Inventor worked in industrial cooling tower sector for 30 years building towers for Marley, Hamon, & Ecodyne
  - After 30 years, noticed all cooling towers have

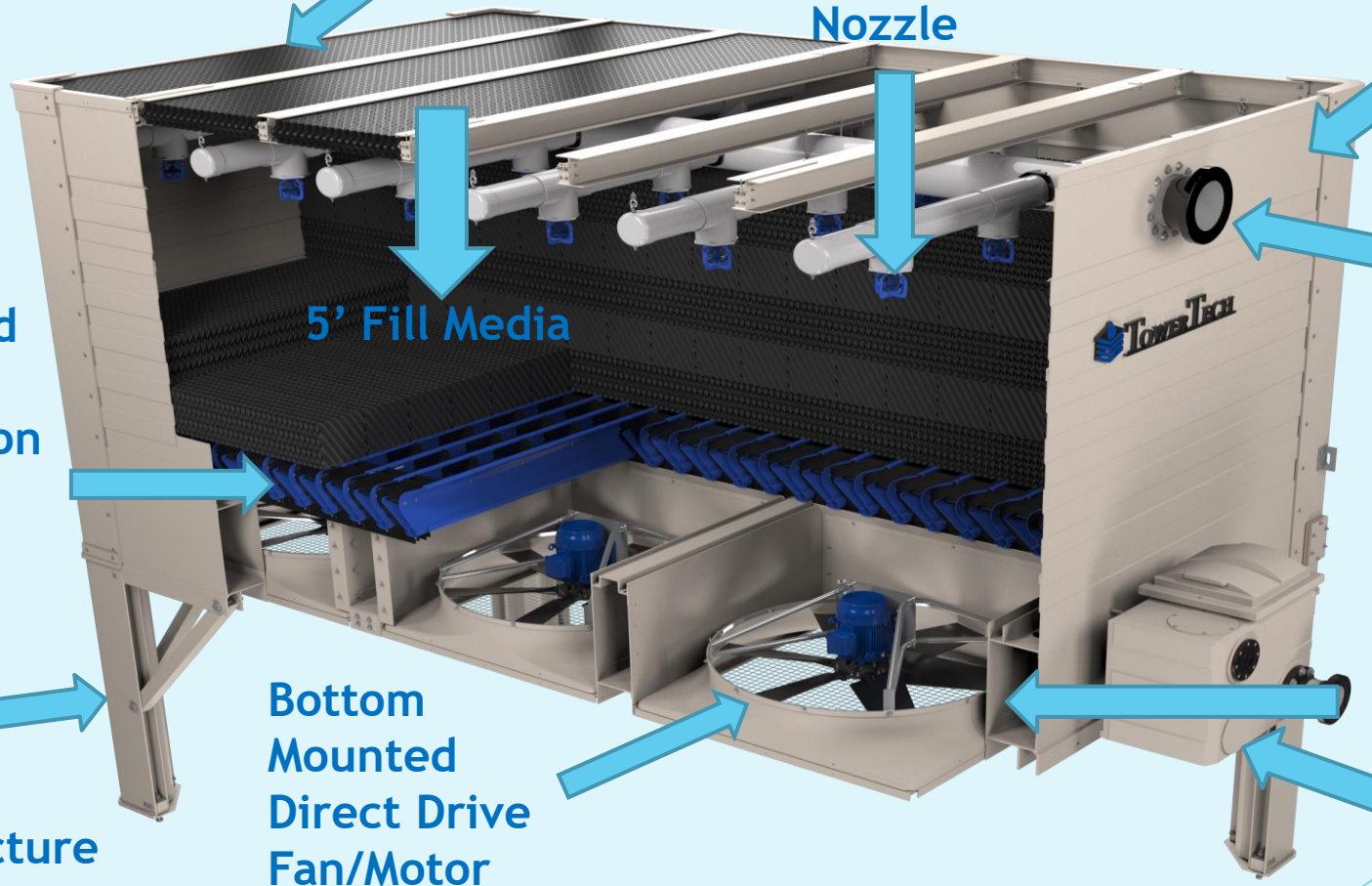
3 Recurring Problems

1. Large Fans and Motors in the air that were unreliable and subject to untimely failure and plant cooling tower downtime

2. Poor Water distribution with fixed-orifice nozzle that plugged with scale/debris equaling poor performance and extreme maintenance

3. Sediment basins that accumulated muck, sand, dirt and debris causing maintenance, environmental & costly chemical expenditures

How Does it Work?



How Tower Tech Saves Valuable Resources Through Innovative Cooling Solutions

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Return On Investment

- Lowest Fan Energy kW At Part Loads
- Lower Pump Head At 12'
- Reduced Water Treatment And Chemical Use
- Qualify For LEED Points And Energy Rebates
- Longest Life Expectancy
- Lowest Maintenance Cost

Reliability

- Multiple Direct Drive Fans
- VFD Operation With Fan Staging Backup
- Zero Downtime Risk Exceeds N+1
- Direct Drive Motor - L10 Sealed Bearings
- Motors Rated For 100,000 Runtime Hours

Maintenance Friendly

- Direct Drive Sealed Bearing Motors
- Flow Thru Basin Keeps Tower Clean
- Self-Cleaning Clog-Free Nozzles
- All Routine Maintenance From Grade-Level
- No Crane Required To Maintain Fan Motors
- Ladder And Handrails Not Required

Ease Of Installation

- Factory Assembled Modular Design
- Pre-Engineered Substructure
- 200mph Wind Load Rating & OSHPD
- Tower Installed In Less Than 30 Minutes
- Fits In Tight Spaces On Roofs Or Ground
- Reduced Operating Weight

Safety

- Highest Mitigation Of Risk From Legionella
- Small Motor's Safely Serviced From Ground
- All Routine Inspections Performed On Ground
- No Entry Into Tower For Routine Maintenance
- No Need To Walk On Top Of Tower Ever

Longevity

- 15 Year Best In Class Warranty
- Pultruded FRP Structure Last 35+ Years
- Enclosed Design Eliminates UV Degradation
- Can Withstand Hurricanes And Earthquakes
- 100% Non-Corrosive Materials

Sustainability

- Highest Energy Savings
- Lowest Drift Rate In The Industry
- 100% Non-Corrosive Materials
- Elimination Of Hazardous Sediment Basin
- 30-50% Less Chemicals Required
- Reduced Water Usage

Aesthetically Pleasing

- No Open Louvers Or Open Basin
- Neutral Beige Colors Blends Easily
- Add Logo Or Graphic Design Wrap To Tower
- No Fan Stacks On Top Of Tower
- No Rust Or Algae Growth

A Smart Tower Through Smart Cooling To A Smart World

TOWER TECH
Sustainable Efficiency

TOWER TECH
Sustainable Efficiency

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How Tower Tech Saves Valuable Resources Through Innovative Cooling Solutions

TOWER TECH™
Sustainable Efficiency

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A Smart Tower Through Smart Cooling To A Smart World

TOWER TECH™
Sustainable Efficiency

ROI

TOWER TECH
Sustainable Efficiency

ROI

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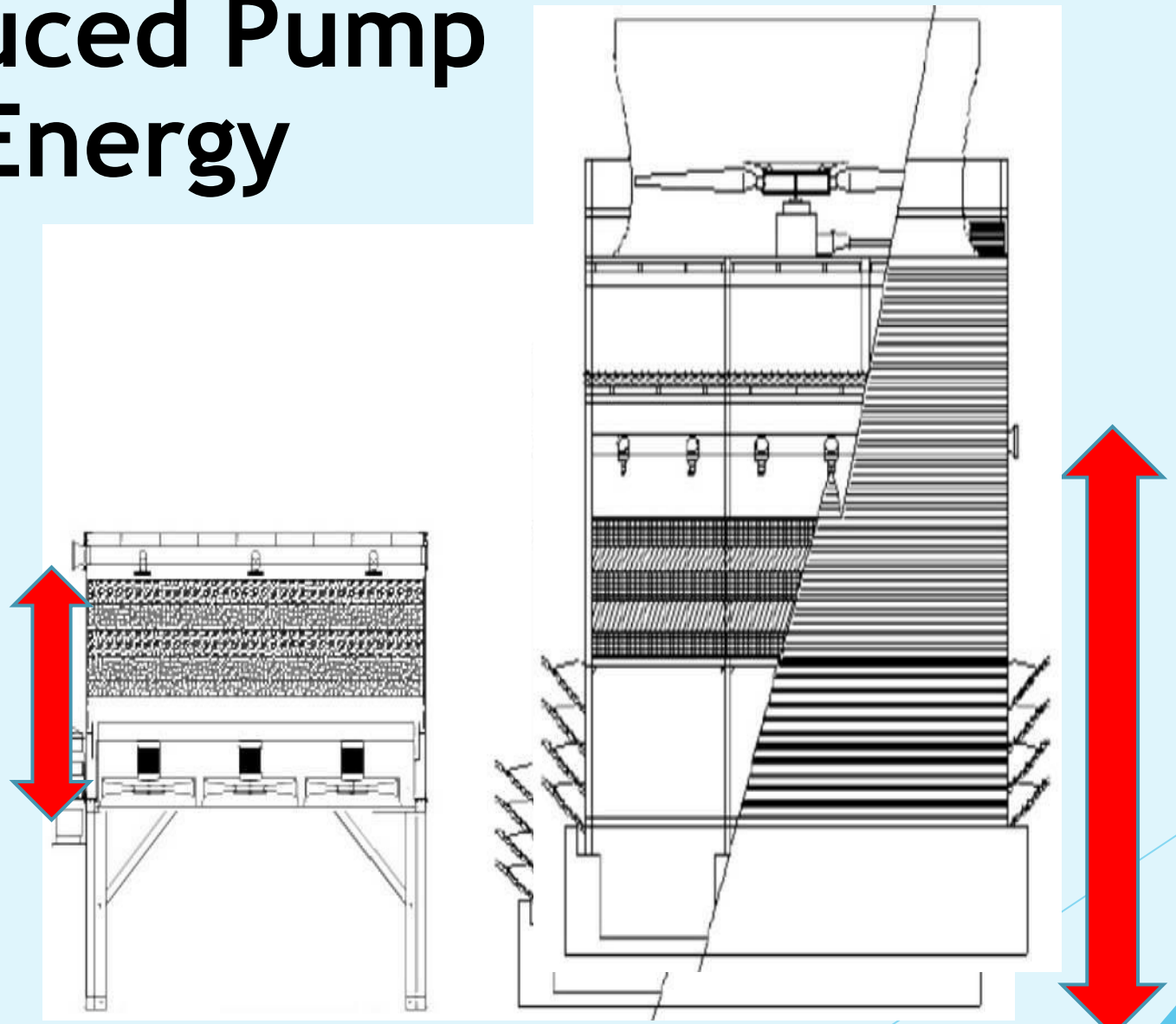
Reduced Pump Energy



Traditional Cooling Tower
Brand “X”

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Reduced Kw usage

- Fan Energy less @ part loads on fan horsepower used
- Variable water flow nozzle allows 3:1 turndown of water to save fan kw in off peak times
- Smaller Pump Selection
- Only 12’ of Tower Pump Head due to bottom mounted fans

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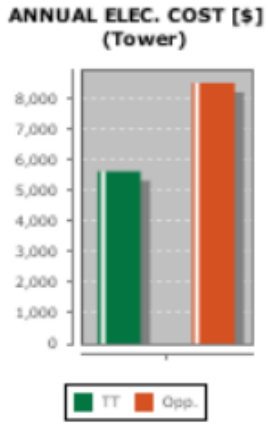
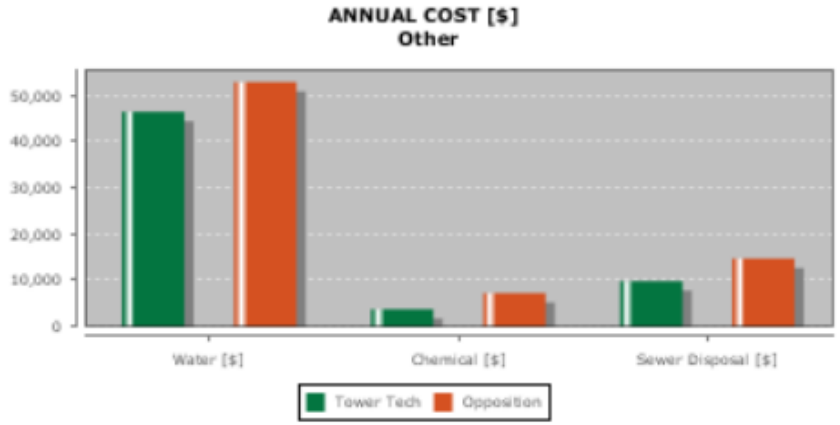
Save Chemicals and Water

ANNUAL OPERATING COST

	Tower Tech	Opposition
Fan Electricity	$2,740	$4,775
Pump Electricity	$2,891	$3,737
Electricity	$5,631	$8,512
Water	$46,390	$52,795
Sewer	$9,803	$14,664
Chemical	$3,746	$7,204
Total (Tower only)	**$65,570**	**$83,175**





1,000 Ton Tower

Competitor @ 3 Cycles

Versus

Tower Tech @ 4 cycles

1,000 Ton Tower saves customer

$17,605

annually

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Conventional Basins are **NASTY**
Accepted as necessary evil
Maintenance & environmental problem

Sand, Dirt, Algae

Legionella & Scale

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Conventional Cooling Towers are Dangerous & Hazardous NASTY…Energy & Water Pigs

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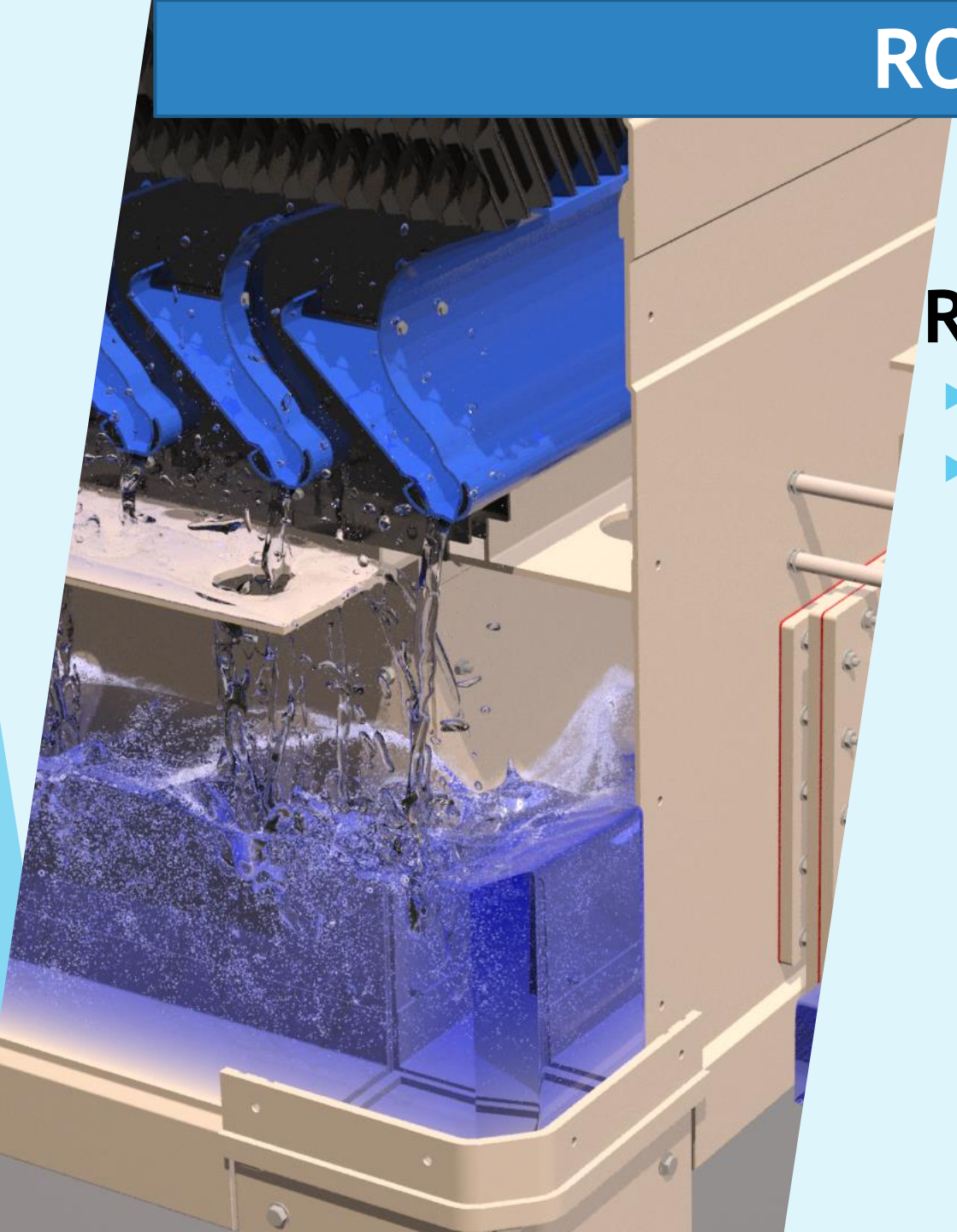

Tower Tech uses an enclosed
Flow-Through Basin

Reduced Chemical Costs

- Chemical Cost reduction by 30-50%
- Low Drift Emissions @ .0004%
  - Higher Cycles Concentration
  - No Algicides
  - Lower Biocides
  - Tower does not entrain sand/dust like a conventional cooling tower
  - Sand and dirt blows underneath TT Tower, not entering process water. CLEANER SYSTEM.
  - Mitigate Legionella Risk

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Get Rid of the Sediment Basin & Louvers

DRIFT

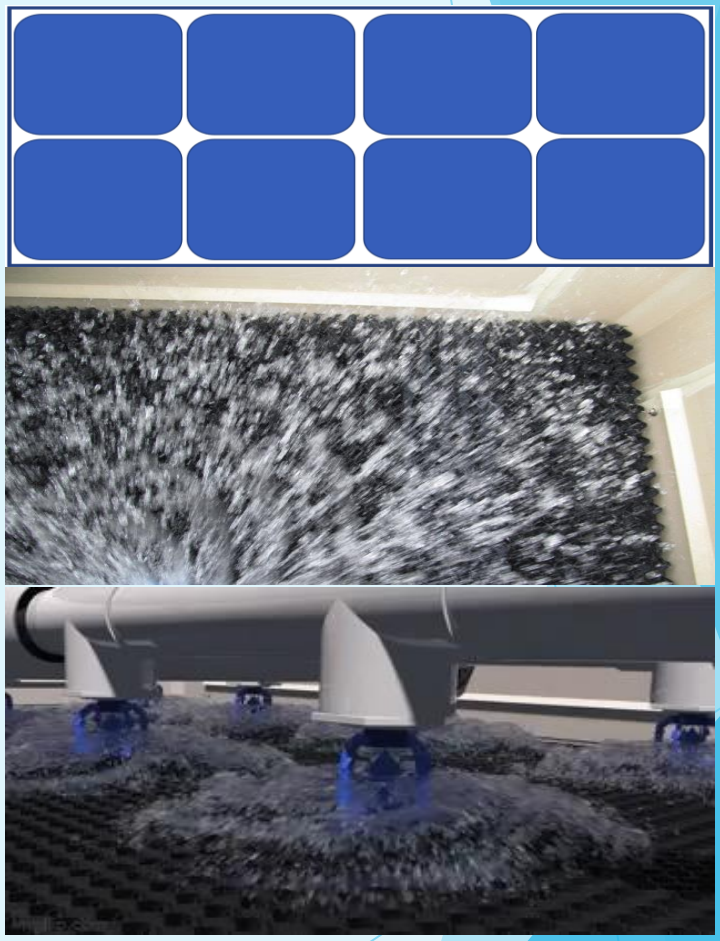
- .0004% of GPM
- Compare to .002%-.005
- 80-92% Reduction in DRIFT
- Lowest in the industry
- No open louvers
- No open basins
- Mitigate Legionella Risk

REDUCED BLOW DOWN

- 1- 2 cycles higher
- Nalco-GE Chemical
- Elevated Basin natural agitation no basin sweepers
- 5-7 fpm from TT Flow-Through Basin keeps water moving and not stagnant.

ROI

- Spray pattern is hydraulically uniform
- Operates on water bearing for long life
- 6’ or 3’ Square spray pattern
- Even water distribution on fill media surface
- TTXL-TTXR
- 3-1 Turn-Down, Variable flow capability
- 300 GPM-100 GPM per Fan Section
- 1.4 PSI
- Superior performance



Self-Cleaning Variable Flow Nozzles

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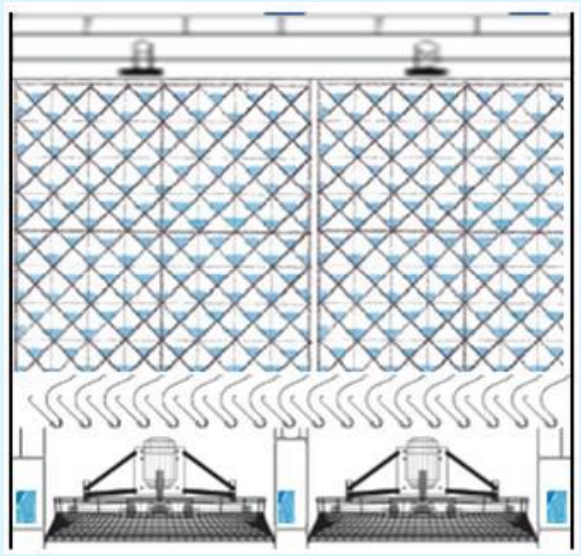
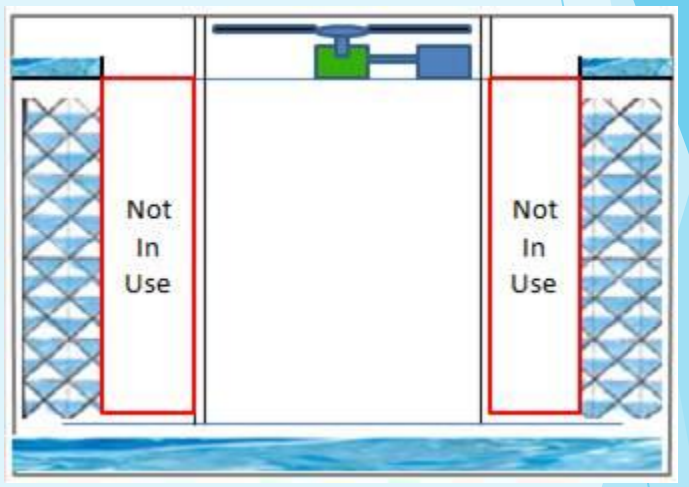
Fill – Example at reduced flow with TT Variable Flow Nozzle



VS



- More efficient liquid-to-gas ratio (l/g)
- Reduced fan HP needed to pull air through less restricted flutes. 50% more surface area is 1/3 less HP
- TT has “True variable flow”

- Less efficient liquid-to-gas (l/g) ratio
- Higher fan HP vs TT in order to pull air through more constricted flutes
- Bio growth & scaling can form on dry flutes

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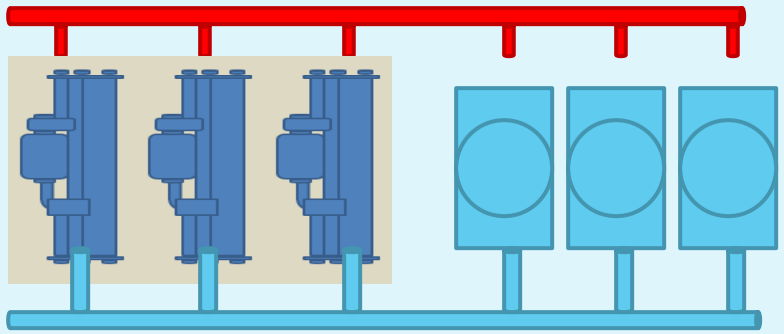
Efficiency Comparison with Variable Flow Nozzles

- 2,700 Ton system operating range example
  - 8,100 gpm - 95°F HWT / 85°F CWT / 78°F WBT
  - 3 x 900 Ton chillers and 3 x 2,700 gpm pumps
  - 7 months of operation
    - 10% @ 2700 Tons; 45% @ 1800 Tons; 45% @ 900 Tons
- Comparison
  - Most popular fixed orifice tower
    - 3 x 900 TR cells
    - 60 HP/cell = 180 HP total
    - Minimum VFD frequency = 20 Hz
    - 19’ pump head
  - Variable flow Tower Tech design
    - 3 x 900 TR cells
    - 60 HP/cell = 180 HP total
    - Minimum VFD frequency = 6 Hz
    - 13’ pump head

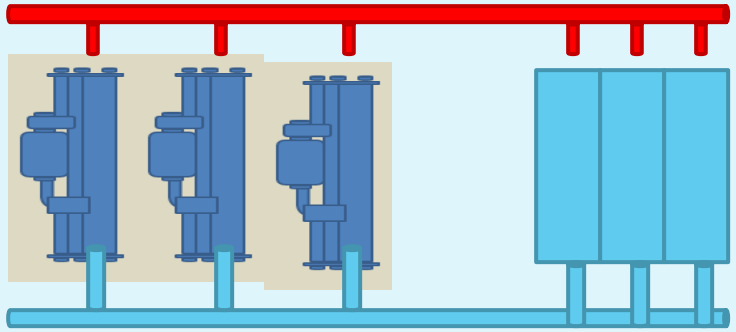
$$\text{Pump HP} = \frac{Q\ (\text{Flow}) * HD\ (\text{Feet})}{3960 * \text{Pump Efficiency}\ (85\%)}$$

ROI



2,700 Tons
8,100 gpm – 95 / 85 / 78

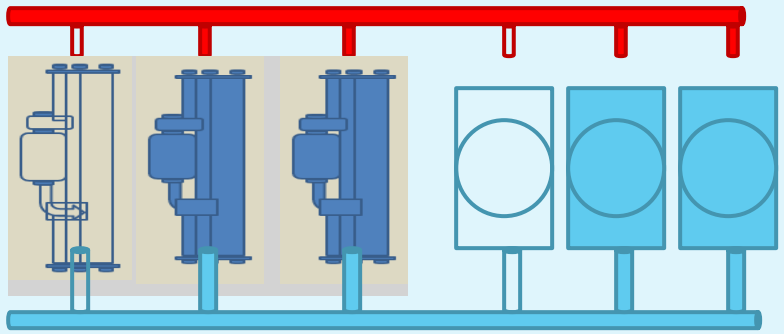
Fan HP – 180
Pump HP – 46
Total HP – 226



Fan HP – 180
Pump HP – 31
Total HP – 211

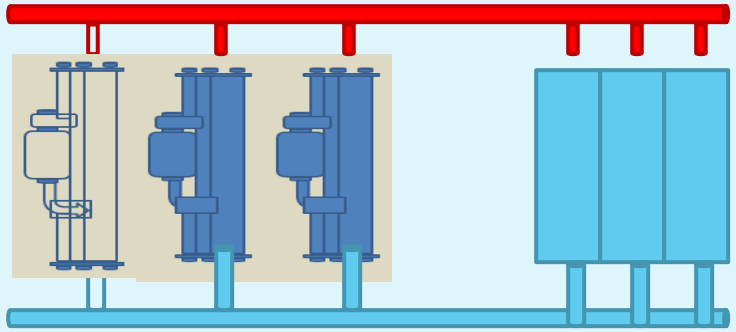
7%
15 HP Saved

ROI



1,800 Tons
5,400 gpm – 85 / 75 / 65

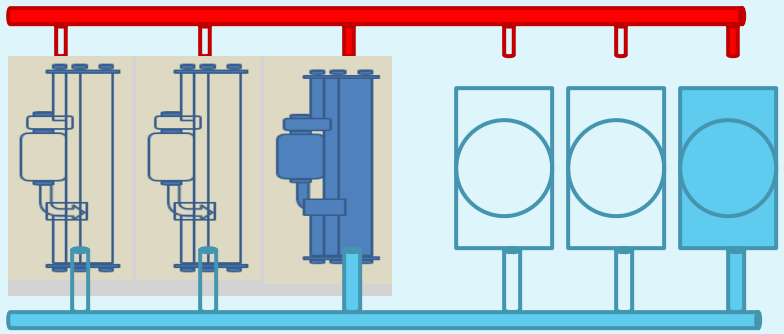
Fan HP – 120
Pump HP – 31
Total HP – 151



Fan HP – 48
Pump HP – 21
Total HP – 69

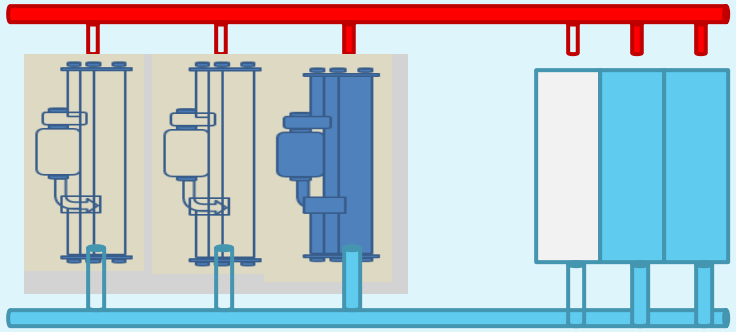
54%
82 HP Saved

ROI



900 Tons
2,700 gpm – 75 / 65 / 50

Fan HP – 60
Pump HP – 16
Total HP – 76



Fan HP – 20
Pump HP – 11
Total HP – 31

59%
45 HP Saved

ROI

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Conventional Tower @ 19' Pump Head and Fixed Nozzles

Capacity (TR)	Flow Rate (GPM)	Wet Bulb (F°)	Hours	kW	Total kW Hours
2,700	8,100	78	504	169	85,176
1,800	5,400	65	2268	113	256,284
900	2,700	50	2268	57	129,276
0	0	0	3720	0	0
			8760		470,736

Tower Tech Tower @ 13' Pump Head and Variable Nozzles

Capacity (TR)	Flow Rate (GPM)	Wet Bulb (F°)	Hours	kW	Total kW Hours
2,700	8,100	78	504	157	79,128
1,800	5,400	65	2268	51	115,668
900	2,700	50	2268	23	52,164
0	0	0	3720	0	0
			8760		246,960

ANNUAL ENERGY SAVINGS

223,776 kWh

48%

TOWER TECH
Sustainable Efficiency

Reliability

- Multiple Direct Drive Fans
- VFD Operation With Fan Staging Backup
- Zero Downtime Risk Exceeds N+1
- Direct Drive Motor - L10 Sealed Bearings
- Motors Rated For 100,000 Runtime Hours

Reliability

Tower Tech
Sustainable Efficiency

Guaranteed Thermal BTU Performance

Forced Draft Cooling Tower Delivers Premium Efficiency and Performance!

Absolute Redundancy in Multi Fan Design

Bottom Mounted Fan Patented Technology

Downtime eliminated

NO Tower Tech tower has every been completely shut down due to unexpected failure

CTI CERTIFIED

Reliability

TOWER TECH
Sustainable Efficiency

PRI Registrar
PERFORMANCE REVIEW INSTITUTE

This Certificate of Registration acknowledges

Creative Pultrusions, Inc. / Tower Tech
Central Function

214 Industrial Lane
Alum Bank, PA 15521
United States

is registered in recognition of a quality management system demonstrated in conformance with

ISO 9001:2015

Scope of Registration:

Overall Scope: Design & Manufacture of FRP Structural Components and Systems

ANAB ACCREDITED MANAGEMENT SYSTEMS CERTIFICATION BODY

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

Randy Daugharthy
Director of PRI Registrar

Number: 15507
Issued: 22-Jun-2021
Re-issued: 21-Jul-2021
Expires: 21-Jun-2024

161 Thorn Hill Road • Warrendale, Pennsylvania 15086-7527, USA

Page 1 of 2

PULTRUSION

Published 11/3/2021 | 1 MINUTE READ

Tower Tech earns ISO 9001:2015 certification

The certification recognizes quality management systems conformance for the design and manufacture of energy-efficient FRP cooling towers with Creative Pultrusions pultruded parts.

EDITED BY GRACE NEHLS
Managing Editor, *CompositesWorld*

SHARE

READ NEXT

- Composites industry continues 2022 upswing
- Refurbishing bridges at half the time, cost versus replacement
- From sailplanes to composites repair: Growing composite training opportunities over the years

Tower Tech FRP cooling towers. Photo Credit: Tower Tech

TOWER TECH
Sustainable Efficiency

Maintenance Friendly

- Direct Drive Sealed Bearing Motors
- Flow Thru Basin Keeps Tower Clean
- Self-Cleaning Clog-Free Nozzles
- All Routine Maintenance From Grade-Level
- No Crane Required To Maintain Fan Motors
- Ladder And Handrails Not Required

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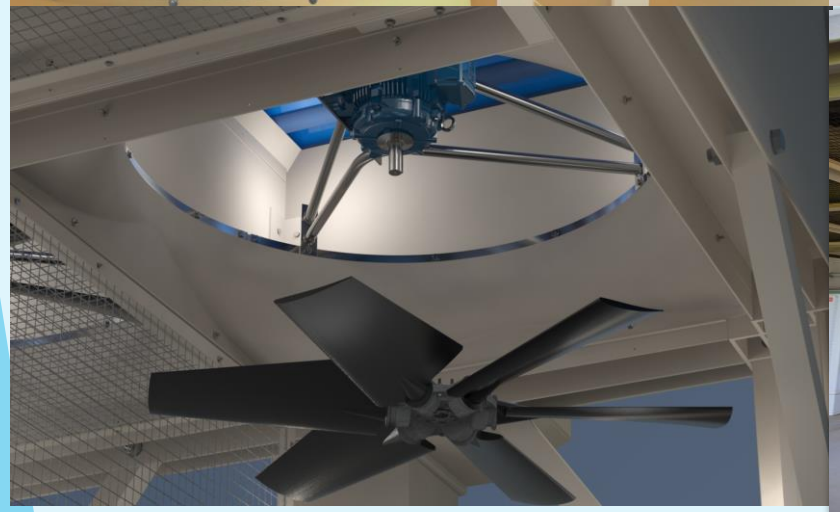

Bottom Fans-
Safety, Longevity
Direct Drive Motors-
Maintenance, Safety
Fan Array-
Redundancy, Reliability, Flexibility, N+1
No Cranes
Grade Level
Simple Slab
No Basin
NO Louvers

Maintenance Friendly

TOWER TECH
Sustainable Efficiency

Direct Drive Baldor® motors are standard on all Tower Tech Modular FRP Cooling Towers, L10 Sealed Bearings, 100,000 hour life.

Maintenance Friendly

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No Gears
No Belts
No Cranes!!

Motors are Direct-Drive.

Maintenance Nightmare

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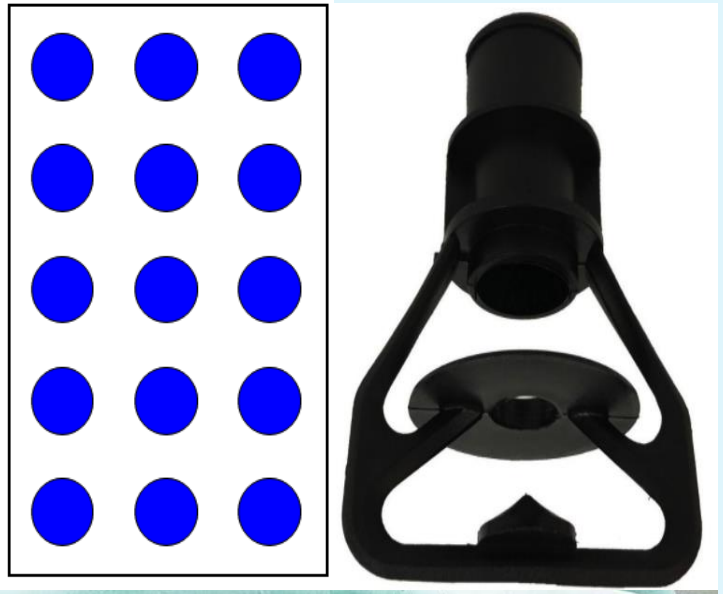
Traditional Cooling Tower Brand “X”



Fixed Orifice Nozzles-Poor Distribution and prone to clogging

Maintenance Nightmare

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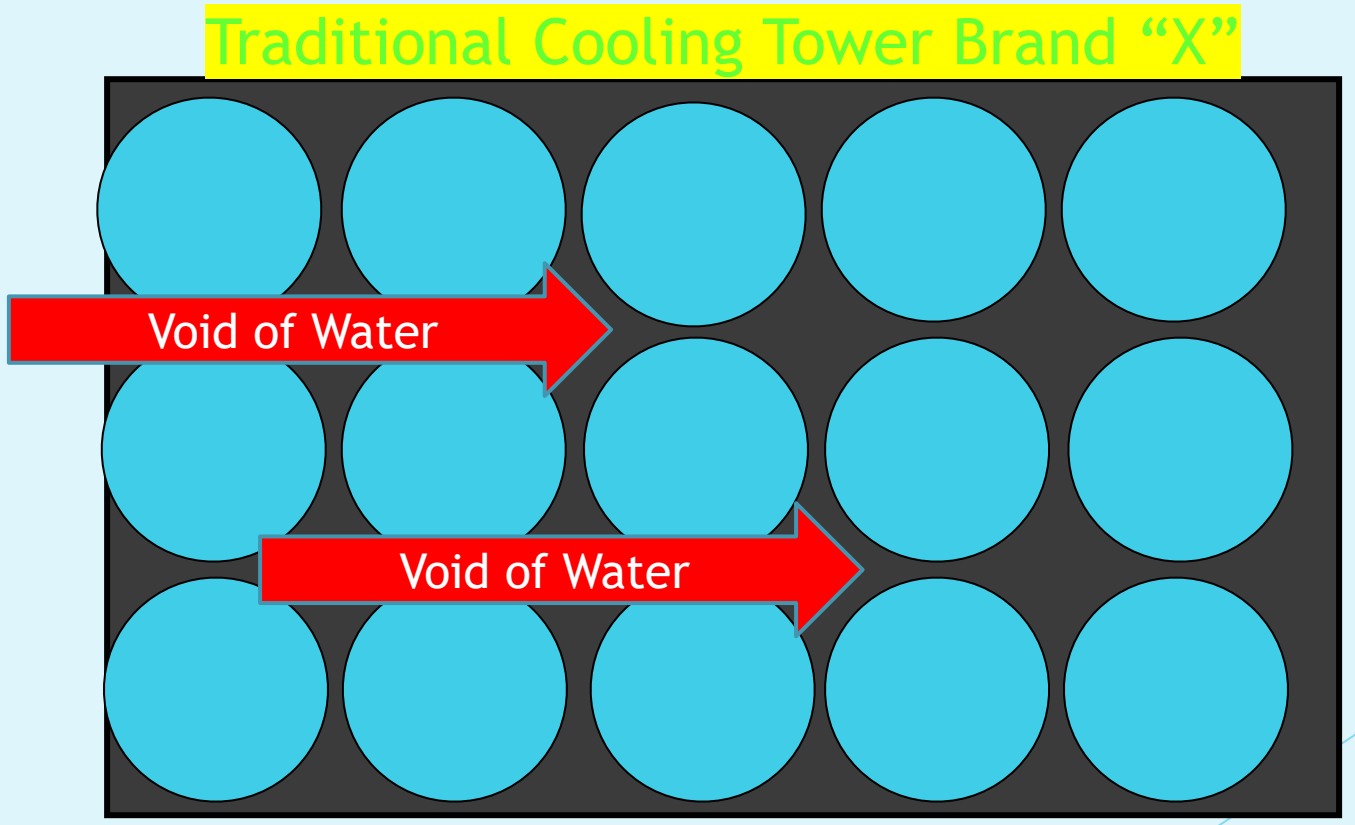
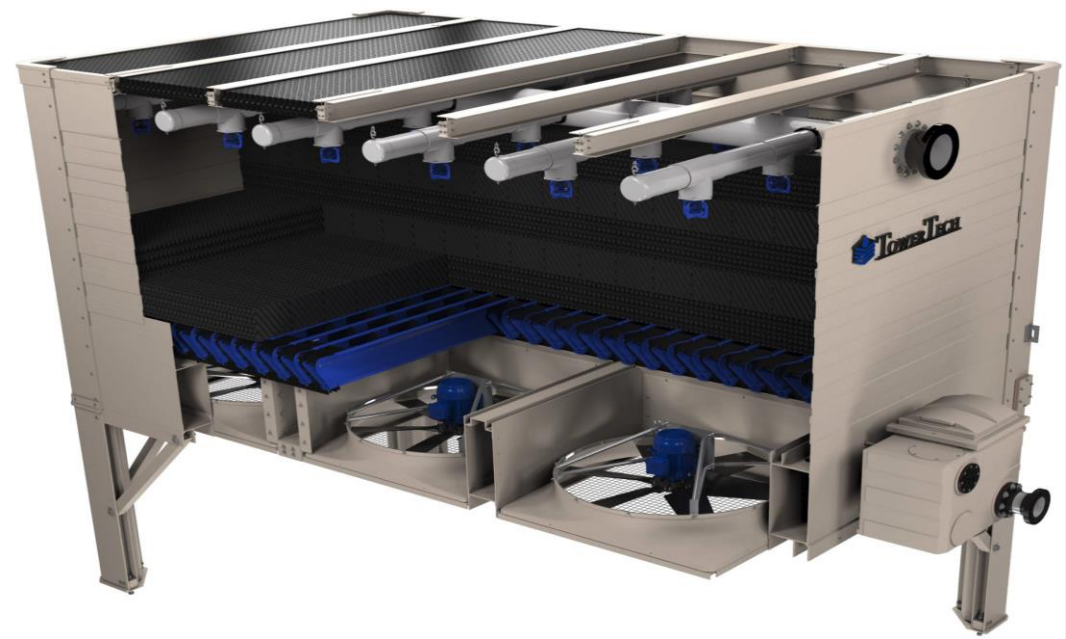
Fixed-orifice spray nozzles reduce fill media coverage by 22%

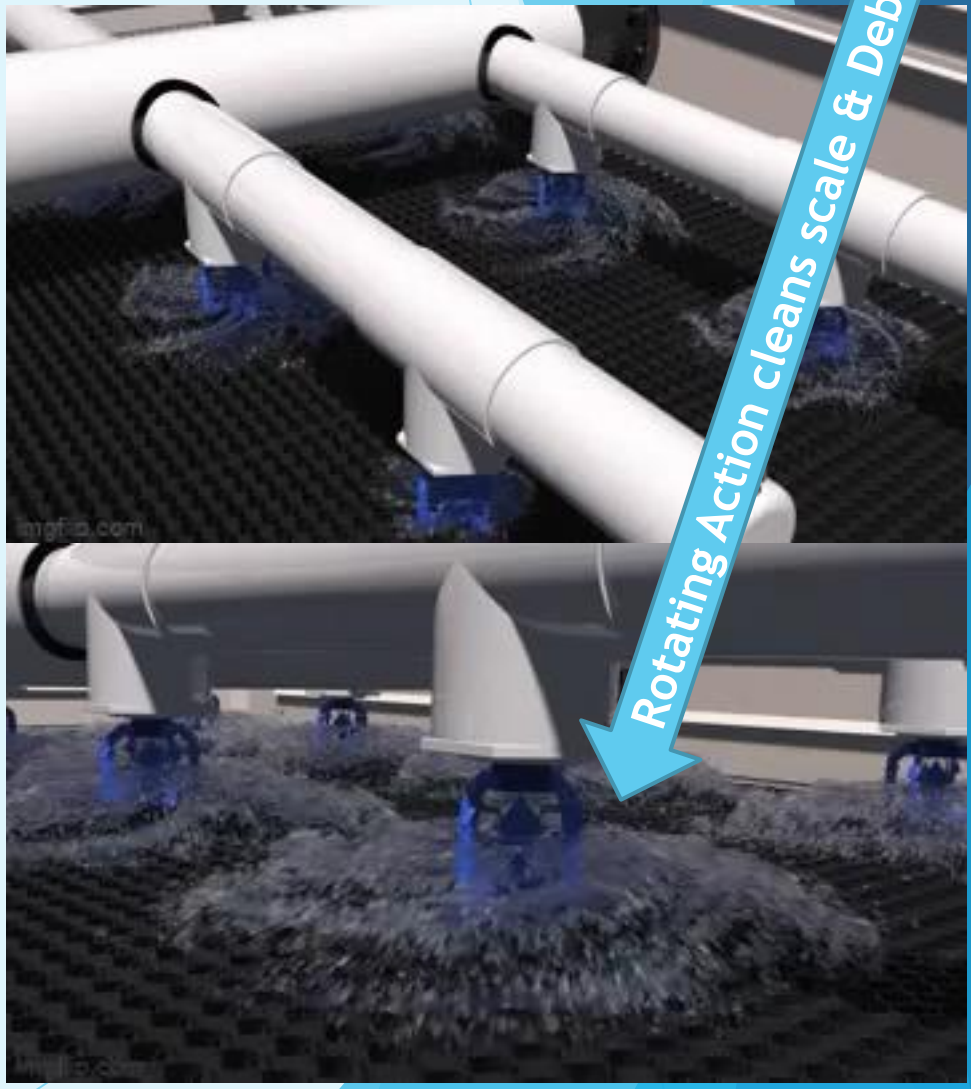


Maintenance Friendly

TOWER TECH
Sustainable Efficiency

Self-Cleaning Variable Flow Nozzles





Maintenance Friendly

TOWER TECH
Sustainable Efficiency

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- 6’ or 3’ SQUARE FOOT PATTERN
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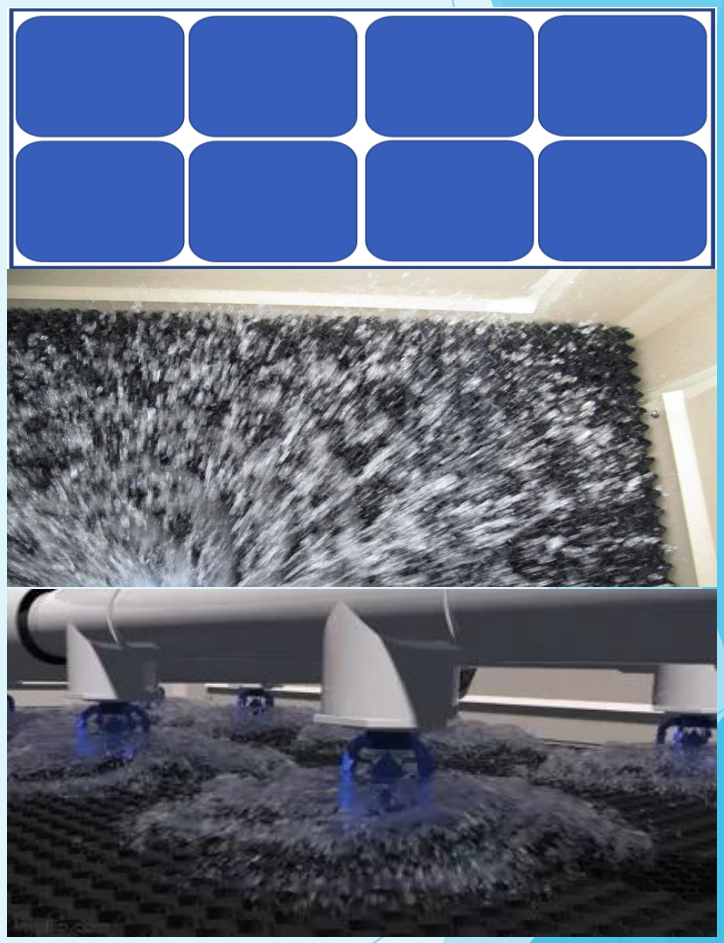

Self-Cleaning Variable Flow Nozzles

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Ease of Installation

TOWER TECH
Sustainable Efficiency

Illustration A

Illustration B

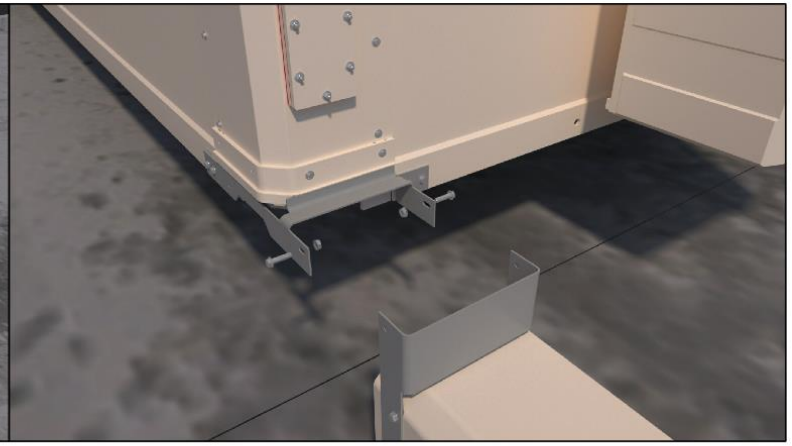


Illustration C

Illustration D

Illustration E

Illustration F

Folding Leg Brackets for easy & safe assembly

Ease of Installation

TOWER TECH
Sustainable Efficiency

Smart Tower
Smart Cooling

Reduced Material Installation materials, labor & Cost

- One Pick
- Installed in 1 hour
- No multi-piece field assembly required

Less Civil Work

- 4- Corner support point
- No Steel Support frame
- No Anti Vibration

Ease of Installation

TOWER TECH
Sustainable Efficiency

Modular Set-up

- Each Module takes only 1 hour to install
- 8-10 Modules can be installed in one day
- After installation Towers are ready for piping hookups & electrical power
- Any sized tower can be constructed by just adding modules
- Tower Module is on 11’ from skirt to top, plus opening
- NO FIELD CONSTRUCTION ON TOWER
- SAVES 80% on Field Labor on Install

TOWER TECH
Sustainable Efficiency

Safety

- Highest Mitigation Of Risk From Legionella
- Small Motor's Safely Serviced From Ground
- All Routine Inspections Performed On Ground
- No Entry Into Tower For Routine Maintenance
- No Need To Walk On Top Of Tower Ever

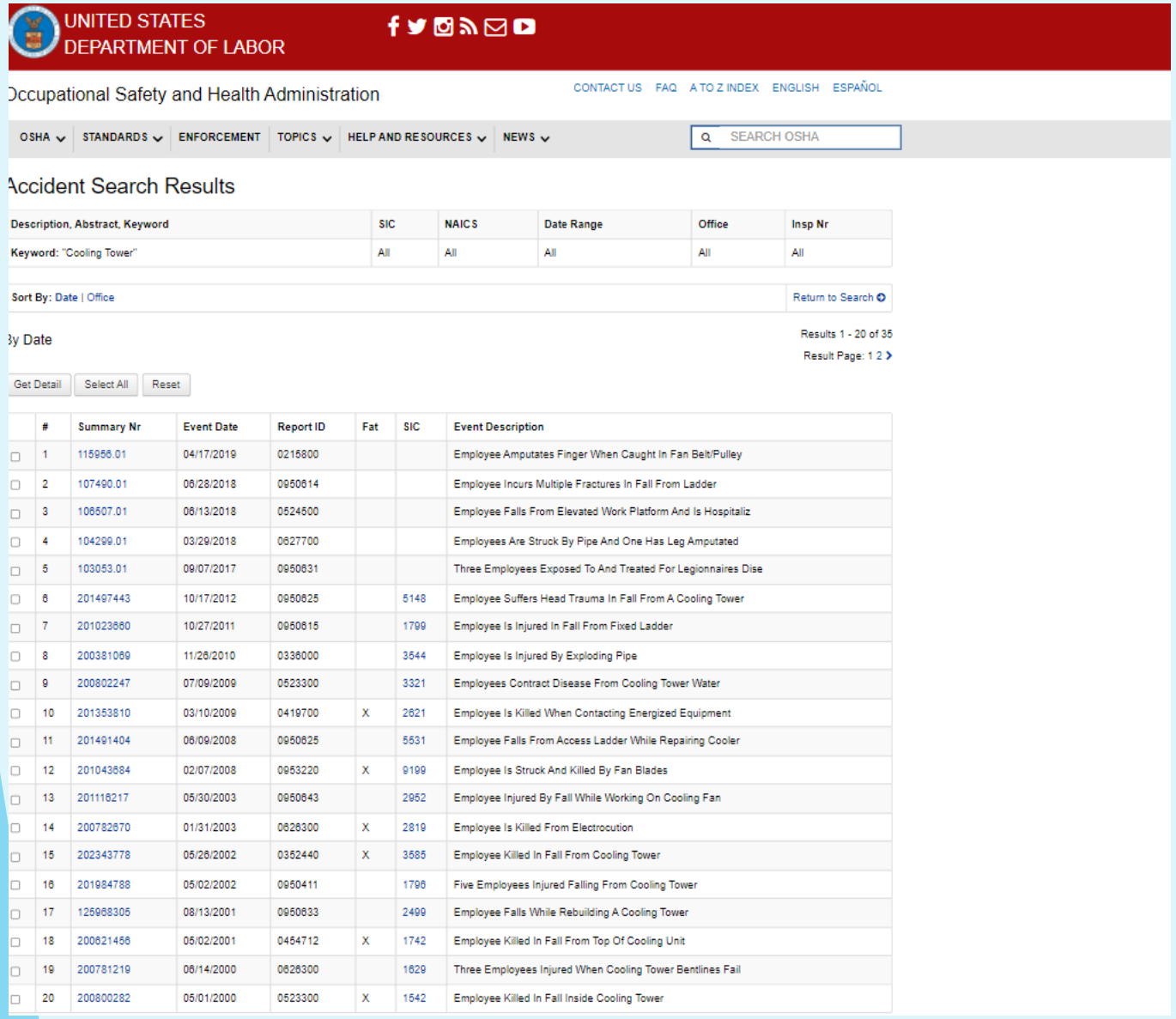
Safety

Ugly truth not discussed in the cooling tower industry is all the horrible accidents associated with conventional cooling tower designs. Most of these accidents are associated with:

- **Large diameter fans in the air**
- **Legionnaires Disease**
- **Working in/on tower structures**

Safety

TOWER TECH
Sustainable Efficiency



UNITED STATES
DEPARTMENT OF LABOR

Occupational Safety and Health Administration

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Accident Search Results

Description, Abstract, Keyword	SIC	NAICS	Date Range	Office	Insp Nr
Keyword: "Cooling Tower"	All	All	All	All	All

Sort By: Date | Office — Return to Search

By Date — Results 1 - 20 of 35 — Result Page: 1 2 >

Get Detail | Select All | Reset

	#	Summary Nr	Event Date	Report ID	Fat	SIC	Event Description
☐	1	115956.01	04/17/2019	0215800			Employee Amputates Finger When Caught In Fan Belt/Pulley
☐	2	107490.01	06/28/2018	0950814			Employee Incurs Multiple Fractures In Fall From Ladder
☐	3	106507.01	06/13/2018	0524500			Employee Falls From Elevated Work Platform And Is Hospitaliz
☐	4	104299.01	03/29/2018	0627700			Employees Are Struck By Pipe And One Has Leg Amputated
☐	5	103053.01	09/07/2017	0950831			Three Employees Exposed To And Treated For Legionnaires Dise
☐	6	201497443	10/17/2012	0950825		5148	Employee Suffers Head Trauma In Fall From A Cooling Tower
☐	7	201023660	10/27/2011	0950815		1799	Employee Is Injured In Fall From Fixed Ladder
☐	8	200381069	11/26/2010	0336000		3544	Employee Is Injured By Exploding Pipe
☐	9	200802247	07/09/2009	0523300		3321	Employees Contract Disease From Cooling Tower Water
☐	10	201353810	03/10/2009	0419700	X	2621	Employee Is Killed When Contacting Energized Equipment
☐	11	201491404	06/09/2008	0950825		5531	Employee Falls From Access Ladder While Repairing Cooler
☐	12	201043684	02/07/2008	0953220	X	9199	Employee Is Struck And Killed By Fan Blades
☐	13	201116217	05/30/2003	0950843		2952	Employee Injured By Fall While Working On Cooling Fan
☐	14	200782670	01/31/2003	0626300	X	2819	Employee Is Killed From Electrocution
☐	15	202343778	05/26/2002	0352440	X	3585	Employee Killed In Fall From Cooling Tower
☐	16	201984788	05/02/2002	0950411		1796	Five Employees Injured Falling From Cooling Tower
☐	17	125968305	08/13/2001	0950833		2499	Employee Falls While Rebuilding A Cooling Tower
☐	18	200621456	05/02/2001	0454712	X	1742	Employee Killed In Fall From Top Of Cooling Unit
☐	19	200781219	06/14/2000	0626300		1629	Three Employees Injured When Cooling Tower Bentlines Fail
☐	20	200800282	05/01/2000	0523300	X	1542	Employee Killed In Fall Inside Cooling Tower

Ugly truth not discussed in the cooling tower industry is all the horrible accidents associated with conventional cooling tower designs. Most of these accidents are associated with:

Large diameter fans in the air

Legionnaires Disease

Working in cooling tower structures

Safety

TOWER TECH
Sustainable Efficiency

Replace large fans in air with small fans at grade level!

Safety

Eliminates open sediment stagnant basins

All routine maintenance done outside tower box-no internal structure

Safety

TOWER TECH
Sustainable Efficiency

TOWER TECH
Sustainable Efficiency

Longevity

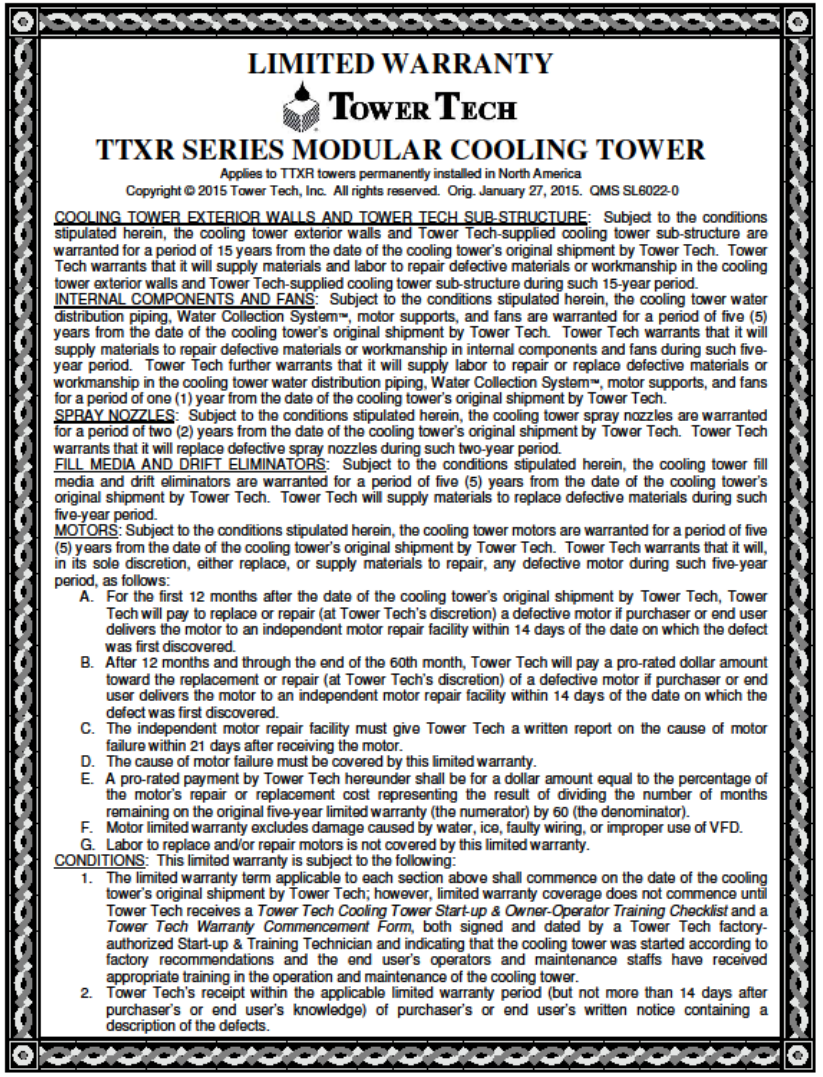
- 15 Year Best In Class Warranty
- Pultruded FRP Structure Last 35+ Years
- Enclosed Design Eliminates UV Degradation
- Can Withstand Hurricanes And Earthquakes
- 100% Non-Corrosive Materials

Longevity

TOWER TECH
Sustainable Efficiency

Smart Tower Smart Cooling Superior Warranty

- Warranty
- 15 Year Labor and Material on FRP includes FRP Shell
- 5 Year materials warranty on internals
  - Motors/Fans
  - Distribution
  - Motor support
  - Fill media
  - Drift eliminators
  - Collector system
  - Superior local service and support



LIMITED WARRANTY

TOWER TECH

TTXR SERIES MODULAR COOLING TOWER

Applies to TTXR towers permanently installed in North America

COOLING TOWER EXTERIOR WALLS AND TOWER TECH SUB-STRUCTURE: Subject to the conditions stipulated herein, the cooling tower exterior walls and Tower Tech-supplied cooling tower sub-structure are warranted for a period of 15 years from the date of the cooling tower's original shipment by Tower Tech. Tower Tech warrants that it will supply materials and labor to repair defective materials or workmanship in the cooling tower exterior walls and Tower Tech-supplied cooling tower sub-structure during such 15-year period.

INTERNAL COMPONENTS AND FANS: Subject to the conditions stipulated herein, the cooling tower water distribution piping, Water Collection System™, motor supports, and fans are warranted for a period of five (5) years from the date of the cooling tower's original shipment by Tower Tech. Tower Tech warrants that it will supply materials to repair defective materials or workmanship in internal components and fans during such five-year period. Tower Tech further warrants that it will supply labor to repair or replace defective materials or workmanship in the cooling tower water distribution piping, Water Collection System™, motor supports, and fans for a period of one (1) year from the date of the cooling tower's original shipment by Tower Tech.

SPRAY NOZZLES: Subject to the conditions stipulated herein, the cooling tower spray nozzles are warranted for a period of two (2) years from the date of the cooling tower's original shipment by Tower Tech. Tower Tech warrants that it will replace defective spray nozzles during such two-year period.

FILL MEDIA AND DRIFT ELIMINATORS: Subject to the conditions stipulated herein, the cooling tower fill media and drift eliminators are warranted for a period of five (5) years from the date of the cooling tower's original shipment by Tower Tech. Tower Tech will supply materials to replace defective materials during such five-year period.

MOTORS: Subject to the conditions stipulated herein, the cooling tower motors are warranted for a period of five (5) years from the date of the cooling tower's original shipment by Tower Tech. Tower Tech warrants that it will, in its sole discretion, either replace, or supply materials to repair, any defective motor during such five-year period, as follows:

A. For the first 12 months after the date of the cooling tower's original shipment by Tower Tech, Tower Tech will pay to replace or repair (at Tower Tech's discretion) a defective motor if purchaser or end user delivers the motor to an independent motor repair facility within 14 days of the date on which the defect was first discovered.
B. After 12 months and through the end of the 60th month, Tower Tech will pay a pro-rated dollar amount toward the replacement or repair (at Tower Tech's discretion) of a defective motor if purchaser or end user delivers the motor to an independent motor repair facility within 14 days of the date on which the defect was first discovered.
C. The independent motor repair facility must give Tower Tech a written report on the cause of motor failure within 21 days after receiving the motor.
D. The cause of motor failure must be covered by this limited warranty.
E. A pro-rated payment by Tower Tech hereunder shall be for a dollar amount equal to the percentage of the motor's repair or replacement cost representing the result of dividing the number of months remaining on the original five-year limited warranty (the numerator) by 60 (the denominator).
F. Motor limited warranty excludes damage caused by water, ice, faulty wiring, or improper use of VFD.
G. Labor to replace and/or repair motors is not covered by this limited warranty.

CONDITIONS: This limited warranty is subject to the following:

1. The limited warranty term applicable to each section above shall commence on the date of the cooling tower's original shipment by Tower Tech; however, limited warranty coverage does not commence until Tower Tech receives a *Tower Tech Cooling Tower Start-up & Owner-Operator Training Checklist* and a *Tower Tech Warranty Commencement Form*, both signed and dated by a Tower Tech factory-authorized Start-up & Training Technician and indicating that the cooling tower was started according to factory recommendations and the end user's operators and maintenance staffs have received appropriate training in the operation and maintenance of the cooling tower.
2. Tower Tech's receipt within the applicable limited warranty period (but not more than 14 days after purchaser's or end user's knowledge) of purchaser's or end user's written notice containing a description of the defects.

Longevity

TOWER TECH
Sustainable Efficiency™

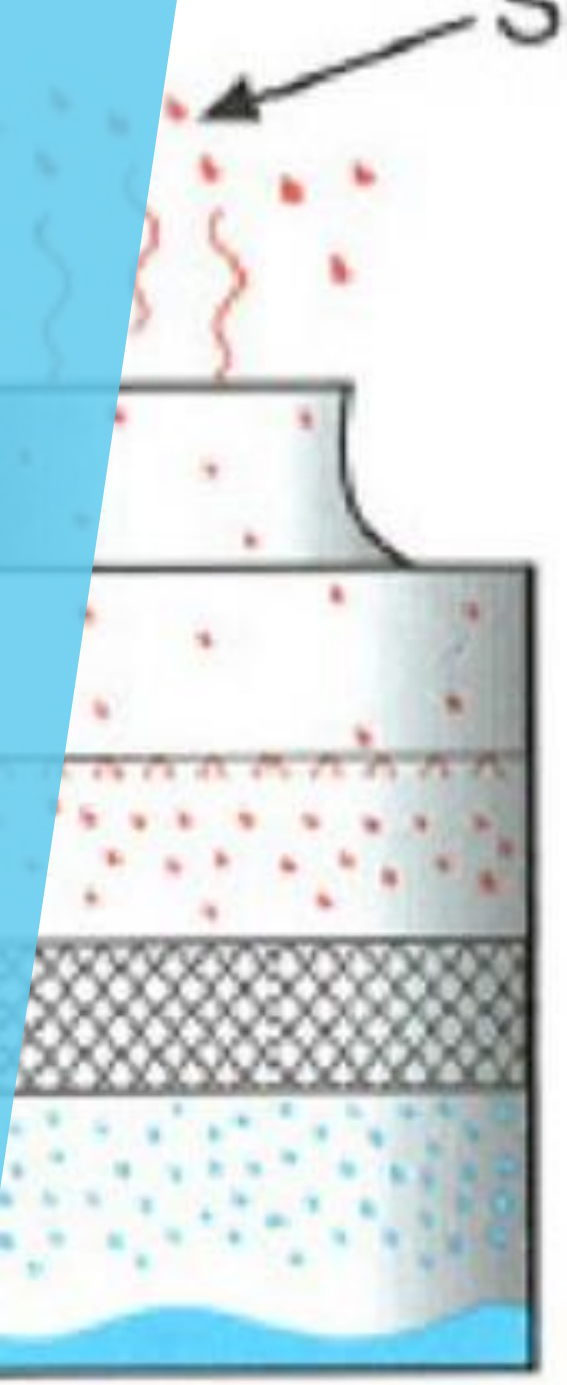
DUKE ENERGY®

Duke Energy, Cayuga, Indiana USA
Installed in 1998
60 Modules, 225,000 gallons per minute
Life Expectancy: 35+ years

TOWER TECH
Sustainable Efficiency

Sustainability

- Highest Energy Savings
- Lowest Drift Rate In The Industry
- 100% Non-Corrosive Materials
- Elimination Of Hazardous Sediment Basin
- 30-50% Less Chemicals Required
- Reduced Water Usage



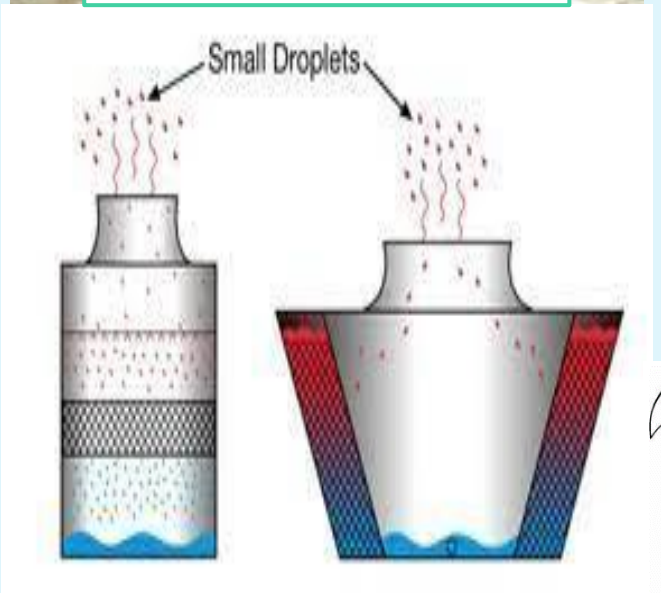
DRIFT In Cooling Towers- Huge Problem

Sustainability

TOWER TECH
Sustainable Efficiency

Lowest Drift Rate in the world @ .0004%

Warning: Don't Spread the Legionella



- **80-92%** less drift than industry standard
- 1000 Ton Tower Tech Tower, 17.28 Gallons a day @.0004%
- Conventional 216- Gallons a Day at .005%

- Annual drift: Tower Tech 6,307 gallons
- Conventional Tower: 78,840 gallons

Sustainability

TOWER TECH
Sustainable Efficiency

Pultruded FRP Basin, Casing & Structure

- Corrosion Free 100%
- ¼ inch minimum thickness
- UV Surface Veil
- MADE IN USA
- Original Manufacturer
- Up to 200 MPH Wind Loading
- Seismic Rated Worse Case USA (OSHPD)
- Missile Impact Certified
- 15 YEAR WARRANTY

CREATIVE COMPOSITES GROUP

TOWER TECH
Sustainable Efficiency

Aesthetically Pleasing

- No Open Louvers Or Open Basin
- Neutral Beige Colors Blends Easily
- Add Logo Or Graphic Design Wrap To Tower
- No Fan Stacks On Top Of Tower
- No Rust Or Algae Growth

Aesthetically Pleasing

TOWER TECH
Sustainable Efficiency

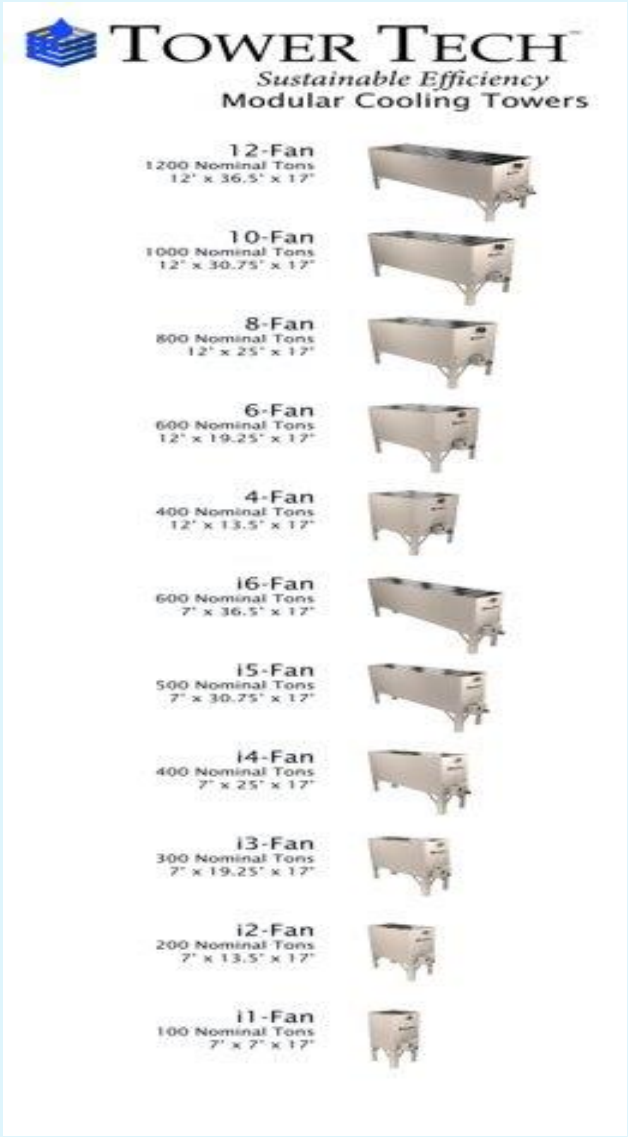
Aesthetically Pleasing

TOWER TECH
Sustainable Efficiency

Aesthetically Pleasing

TOWER TECH
Sustainable Efficiency

TT Fleet Card



Aesthetically Pleasing

TOWER TECH™
Sustainable Efficiency

Modular Cooling Towers

4-Fan
400 Nominal Tons
12' x 13'-6"'
Shipping Weight 3,450 lbs
Operating Weight 6,090 lbs

6-Fan
600 Nominal Tons
12' x 19'-3"'
Shipping Weight 10,775 lbs
Operating Weight 19,587 lbs

8-Fan
800 Nominal Tons
12' x 25'
Shipping Weight 13,750 lbs
Operating Weight 24,780 lbs

10-Fan
1,000 Nominal Tons
12' x 30'-9"
Shipping Weight 16,855 lbs
Operating Weight 29,964 lbs

Smart Tower Smart Cooling Line Card

Aesthetically Pleasing

TOWER TECH
Sustainable Efficiency

TOWER TECH™
Sustainable Efficiency
Modular Cooling Towers

i-1
100 Nominal Tons
7' x 7'
Shipping Weight 3,450 lbs
Operating Weight 6,090 lbs

i-2
200 Nominal Tons
7' x 13'-6"
Shipping Weight 4,360 lbs
Operating Weight 9,470 lbs

i-3
300 Nominal Tons
7' x 19'-3"
Shipping Weight 6,155 lbs
Operating Weight 12,991 lbs

i-4
400 Nominal Tons
7' x 25'
Shipping Weight 7,950 lbs
Operating Weight 16,503 lbs

i-5
500 Nominal Tons
7' x 30'-9"
Shipping Weight 9,745 lbs
Operating Weight 20,024 lbs

i-6
600 Nominal Tons
7' x 36'-6"
Shipping Weight 11,540 lbs
Operating Weight 23,553 lbs

Smart Tower Smart Cooling Line Card

Aesthetically Pleasing

TOWER TECH
Sustainable Efficiency

Baby-Tech in action! A Show-Stopper. Plexiglass will demystify the technology.

How Tower Tech Saves Valuable Resources Through Innovative Cooling Solutions

TOWER TECH
Sustainable Efficiency

Return On Investment

- Lowest Fan Energy kW At Part Loads
- Lower Pump Head At 12'
- Reduced Water Treatment And Chemical Use
- Qualify For LEED Points And Energy Rebates
- Longest Life Expectancy
- Lowest Maintenance Cost

Reliability

- Multiple Direct Drive Fans
- VFD Operation With Fan Staging Backup
- Zero Downtime Risk Exceeds N+1
- Direct Drive Motor - L10 Sealed Bearings
- Motors Rated For 100,000 Runtime Hours

Maintenance Friendly

- Direct Drive Sealed Bearing Motors
- Flow Thru Basin Keeps Tower Clean
- Self-Cleaning Clog-Free Nozzles
- All Routine Maintenance From Grade-Level
- No Crane Required To Maintain Fan Motors
- Ladder And Handrails Not Required

Ease Of Installation

- Factory Assembled Modular Design
- Pre-Engineered Substructure
- 200mph Wind Load Rating & OSHPD
- Tower Installed In Less Than 30 Minutes
- Fits In Tight Spaces On Roofs Or Ground
- Reduced Operating Weight

Safety

- Highest Mitigation Of Risk From Legionella
- Small Motor's Safely Serviced From Ground
- All Routine Inspections Performed On Ground
- No Entry Into Tower For Routine Maintenance
- No Need To Walk On Top Of Tower Ever

Longevity

- 15 Year Best In Class Warranty
- Pultruded FRP Structure Last 35+ Years
- Enclosed Design Eliminates UV Degradation
- Can Withstand Hurricanes And Earthquakes
- 100% Non-Corrosive Materials

Sustainability

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Aesthetically Pleasing

- No Open Louvers Or Open Basin
- Neutral Beige Colors Blends Easily
- Add Logo Or Graphic Design Wrap To Tower
- No Fan Stacks On Top Of Tower
- No Rust Or Algae Growth

A Smart Tower Through Smart Cooling To A Smart World

TOWER TECH
Sustainable Efficiency

Any one of these values alone would make TT worthy of using.

Combing all these value propositions together makes Tower Tech case indisputable.

TOWER TECH
Sustainable Efficiency

Question & Answer

Thank you!