

COOLING TOWER SOLUTIONS

Single Source
Responsibility
Support Solution

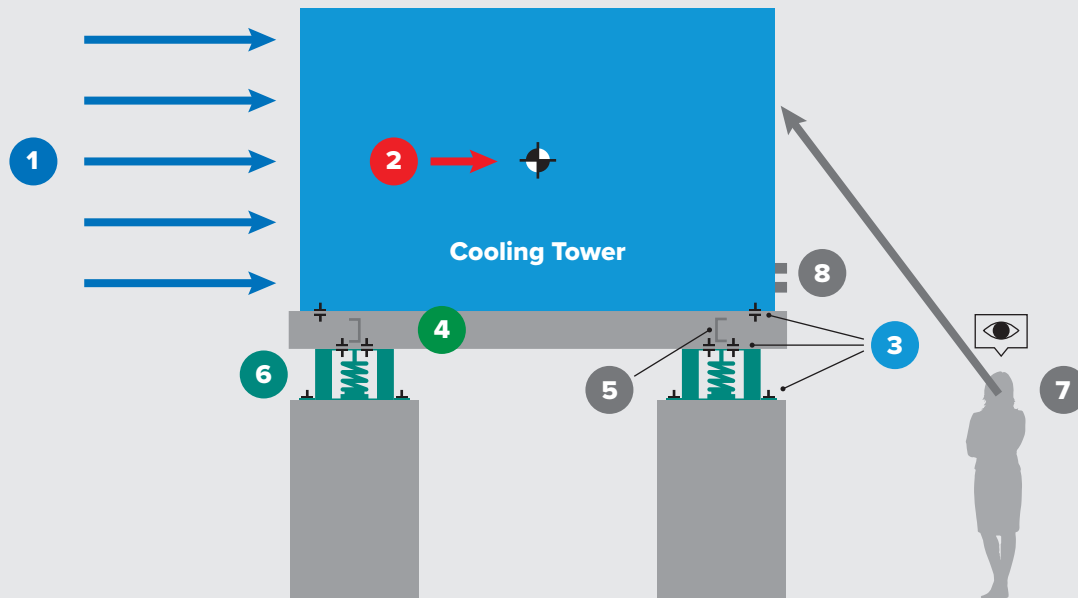
VIBRO-ACOUSTICS[®]
by Swegon



HOW ARE YOU SUPPORTING YOUR COOLING TOWERS?

Overturned cooling tower due
to inadequate wind restraints

HAVE YOU CONSIDERED?



COOLING TOWER INSTALLATION PROBLEMS REQUIRING ENGINEERING SOLUTIONS

- 1 Wind Forces**
As defined by IBC, ASCE and other codes for all outdoor equipment.
- 2 Seismic Forces**
As defined by IBC, ASCE and other codes for non-structural components that require seismic restraint.
- 3 Anchors and Attachments**
Nonstructural components and their supports shall be attached (or anchored) to the building structure or ground to withstand horizontal and vertical forces (wind/seismic) through positive attachment in a continuous load path.
- 4 Support Base**
A cooling tower typically needs a structural steel base engineered to support its weight and overturning forces and to match tower support requirements, including mounting holes and maximum beam deflection between isolators.
- 5 Cross-bracing**
Steel support bases require cross members that stiffen and stabilize point-loaded support base beams against seismic and wind forces. Bracing needs to be located to avoid interference with piping connections to bottom of tower.
- 6 Vibration Isolators**
As required by contract documents to reduce vibration transmission to the building structure, and to provide restraint against wind and seismic forces.
- 7 Architectural Line of Sight**
The lowest possible height is often desired by the building owner and architect. This problem requires special attention, especially for tower replacement projects.
- 8 Retrofit Height Requirements**
Typical retrofits require matching and aligning with existing piping and supports.



SINGLE SOURCE RESPONSIBILITY FOR A TURNKEY COOLING TOWER SUPPORT SOLUTION.

Let Vibro-Acoustics assume the risk and liability for code-compliant supports

Vibro-Acoustics' complete cooling tower support solution is designed to integrate with any new or retrofit cooling tower installation seamlessly. From piping support, vibration isolation for both the cooling tower and associated piping, to a base and structural support (including dunnage), and anchorage and attachments, the solution will help solve wind and seismic loads, vibration isolation and any associated structure-borne noise, and cooling tower integration challenges.

Professional Engineering

1 through 8

WE ENGINEER the optimal labor saving solution while reducing risk and meeting code requirements through wind and seismic calculations and support design. We stamp and seal the drawings and calculations as required by local building codes. Some of the considerations included in Vibro-Acoustics' engineering are:

- > Coordination with building structural supports—new or existing, aligned or offset
- > Accommodating structural capacities of existing buildings through proper distribution of loads
- > Size and configuration of towers requiring high deflection or high capacity isolators

SCSR

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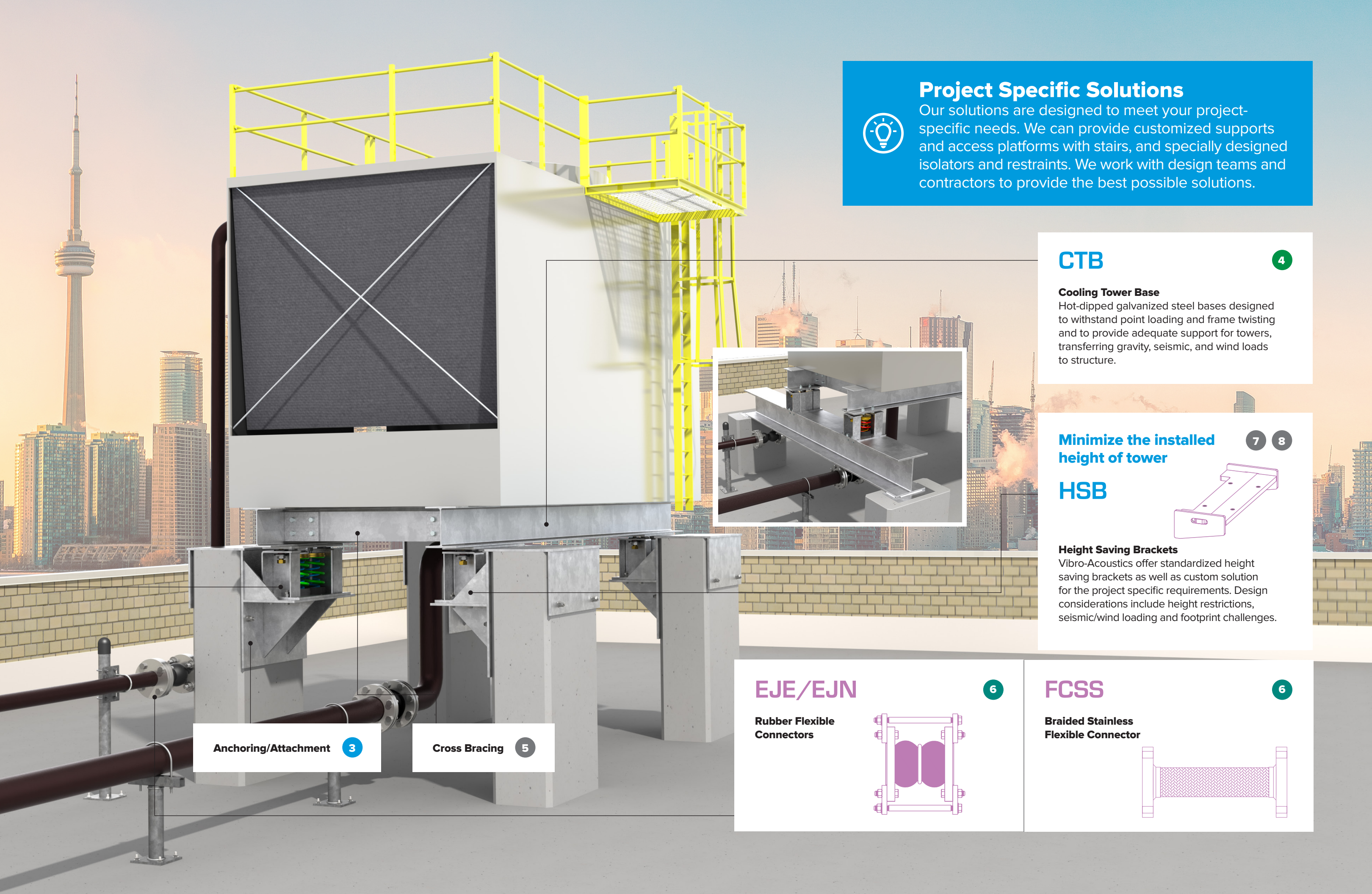
Seismic and Wind Restrained Spring Isolators

Up to 4" deflection and 18,000 lbs standard capacity. Hot-dipped galvanized finish for corrosion protection from the outdoor elements. Pre-compressed spring models available to reduce installation time and provide both vibration isolation and restraint from wind and seismic forces.

SPSA

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Adjustable Pipe Stands, rated for wind and seismic forces, support rooftop equipment piping and allow customizable installation heights and different thicknesses of insulation



Project Specific Solutions

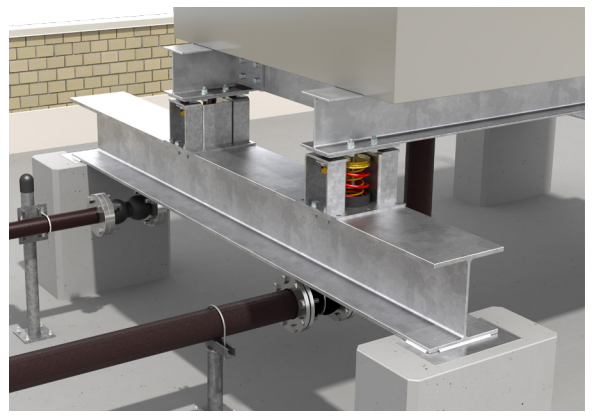
Our solutions are designed to meet your project-specific needs. We can provide customized supports and access platforms with stairs, and specially designed isolators and restraints. We work with design teams and contractors to provide the best possible solutions.

CTB

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Cooling Tower Base

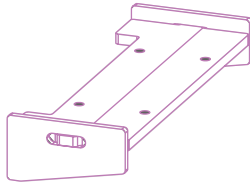
Hot-dipped galvanized steel bases designed to withstand point loading and frame twisting and to provide adequate support for towers, transferring gravity, seismic, and wind loads to structure.



Minimize the installed height of tower

7 8

HSB



Height Saving Brackets

Vibro-Acoustics offer standardized height saving brackets as well as custom solution for the project specific requirements. Design considerations include height restrictions, seismic/wind loading and footprint challenges.

Anchoring/Attachment

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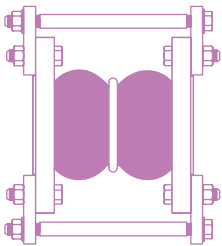
Cross Bracing

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EJE/EJN

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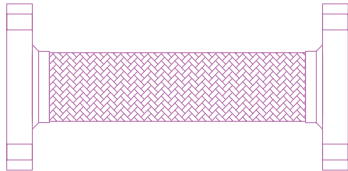
Rubber Flexible Connectors



FCSS

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Braided Stainless Flexible Connector





IT'S NOT WORTH THE RISK



**Contact your local Vibro-Acoustics sales representative at
1-800-565-8401, or email info@vibro-acoustics.com.**

(Contact us for Noise Control Solutions including barrier walls, inlet and discharge silencers and many more!)

The company that saves you time.

LIT-CTB-002

VIBRO-ACOUSTICS

3 Keensford Ct, Unit 1
Ajax, ON L1Z 0K4 Canada

T 416-291-7371

TF 1-800-565-8401

E info@vibro-acoustics.com

vibro-acoustics.com



VIBRATION ISOLATION AND RESTRAINT SYSTEMS