

## Overview

NCWD is an innovative, patented factory assembled hybrid cooling tower designed specifically for plume reduction.

## Primary Benefits

- Designed to reduce 20-30% more visible plume versus series path design, based on a percentage of year with plume and ASHRAE weather data
- Unique design with high single-cell capacity, allows for the same tonnage as series path cooling towers, but with up to 40% less operating weight and up to 44% lower power consumption
- Factory assembled for easy configuration and installation

## Benefit Detail

### Better Plume Reduction:

- Designed to abate plume at lower temperatures with the same amount of humidity
- Designed for one-third to one-fifth the visible plume versus series path designs based on a percentage of year with plume and ASHRAE weather data
- Up to 20% water savings when running coil section versus standard cooling tower

more 



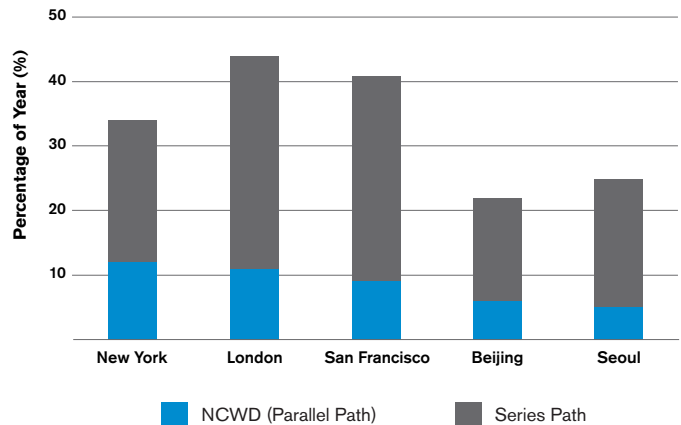
Without Plume Abatement



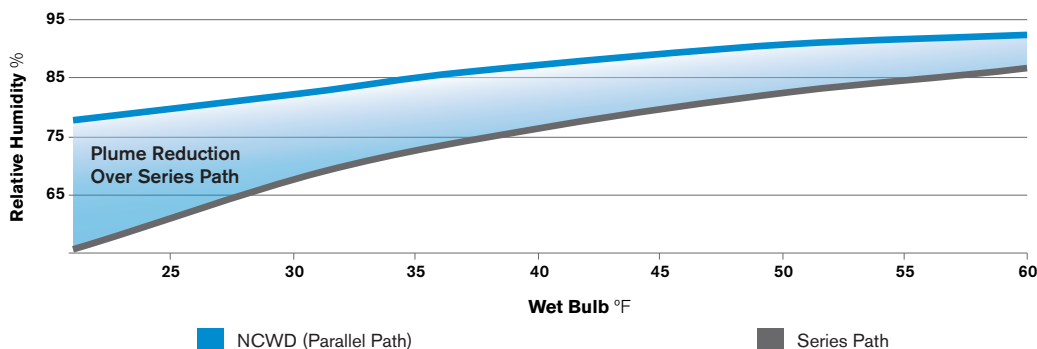
With Plume Abatement

Conditions: Wet Bulb 35.6°F — RH 81.0% — Dry Bulb 37.9°F  
Range 17.8°F — Cold Water 72.1°F — Tangency 98.9%

## Percentage of Year with Visible Plume



## Fogging Occurance



## Benefit Detail

### Unique Design Advantages:

- Lower fan power consumption due to lower static pressure saving up to 60 hp per cell
- Recirculation pump is not required saving up to 7.5 hp per cell
- Up to 60% lower operating weight, saving structural supporting steel costs
- Up to 59% smaller footprint, reducing structural steel cost and site space requirements
- No auxiliary heat source required (e.g. steam boiler or hot water loop)

### Factory Assembled:

- Easier quoting, lower lead-times, lower site installation costs typical of factory assembled versus field erected towers

## Capacity Range

393 to 1033 tons per cell at 95°/85°/78°F  
 1180 – 3100 gpm (268 – 704 m<sup>3</sup>/hr)

## Features / Options

- Geardrive
- Integral Louvers and Eliminators
- Non-Corrosive Copper or Stainless Steel Coil
- Low Sound Capabilities
- Plenum Walkways
- Access Platforms
- Motor Outside Airstream
- Single Inlet Piping

	Parallel Path Single-Cell NCWD	Series Path* Three Cells
<b>Cooling Tons</b>	849	849
<b>Fan</b> hp / kW	75 / 56	135 / 100
<b>Recirculation Pump</b> hp / kW	Not Required	22.5 / 16.5
<b>Operating Weight</b> lb / kg	45,105 / 20,460	114,000 / 51,710
<b>Footprint</b> sq ft / m <sup>2</sup>	270 / 25	648 / 60

\*Source: BAC® HXV published data

## Key Contacts

Engineering / Technical Questions: [fap@spx.com](mailto:fap@spx.com)

## Common Applications

- Airports
- Roadway safety
- Visual pollution concerns
- Urban environments
- Environmentally conscious building
- Low water availability



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