CP cooling tower

MARLEY®

The CP is a unique cooling tower design

Corrosion resistant fiberglass and stainless steel construction makes it an excellent alternative to other cooling towers. Fill choices including high performance, low-clog or splash-fill ensure product flexibility to meet your exact water conditions at the maximum efficiency possible.

For decades, SPX Cooling Technologies has been a leading producer of counterflow cooling towers for large industrial installations.
The redesigned CP cooling tower is the ideal solution for space-sensitive industrial and HVAC applications.

The CP cooling tower is factory-fabricated and ships fully assembled or in modules for quick field assembly.

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The CP counterflow cooling tower: the right answer for many applications

MODE OF OPERATION

The CP cooling tower is a mechanical-draft counterflow cooling tower. Hot water flows into the cooling tower through inlet piping to spray nozzles and is distributed uniformly above the cooling tower fill. The required cooling air is delivered by an induced-draft axial fan. The air absorbs the heat from the water by evaporation and convection.

DISTRIBUTION SYSTEM

The water distribution system is located above the fill and consists of PVC (polyvinyl chloride) or PP (polypropylene) piping. PP spray nozzles are designed to distribute the hot water uniformly in fine droplets over the fill.

FILL

The standard fill for clean water consists of glued PVC film-fill packs. Polypropylene film-fill packs are available for high temperature applications. For dirty water applications with higher suspended solids content, PP or PE (polyethylene) trickle-grid type splash fill is available in different configurations.

MECHANICAL EQUIPMENT

The cooling tower fan consists of FRP (fiber reinforced polyester) or aluminum axial fan blades with a steel fan hub mounted directly on the geared motor shaft. The fan blade pitch is adjustable at standstill to accommodate process conditions. The geared motor, designed specifically for cooling tower operation (100% humid hot air), is a low noise design and suitable for continuous operation with variable frequency drives (VFD). Geared motor and fan are mounted on an HDG (hot-dip galvanized) or optional stainless steel support frame structure above the fan.

MULTIPLE CELLS CONFIGURATION

The CP cooling tower can be installed as a multicell in-line configuration. Each two adjacent cells have a one joint center wall. Back to back configurations are also available.

SUPERIOR STRUCTURE DESIGN

The CP cooling tower is designed to meet the high quality requirements of the industrial market and meets the Eurocode 3 design of steel structures.*

*Eurocode 3 replaced the former German Standard DIN 18800 for steel structure.

Inert, noncorroding construction ensures long service life

STANDARD FEATURES

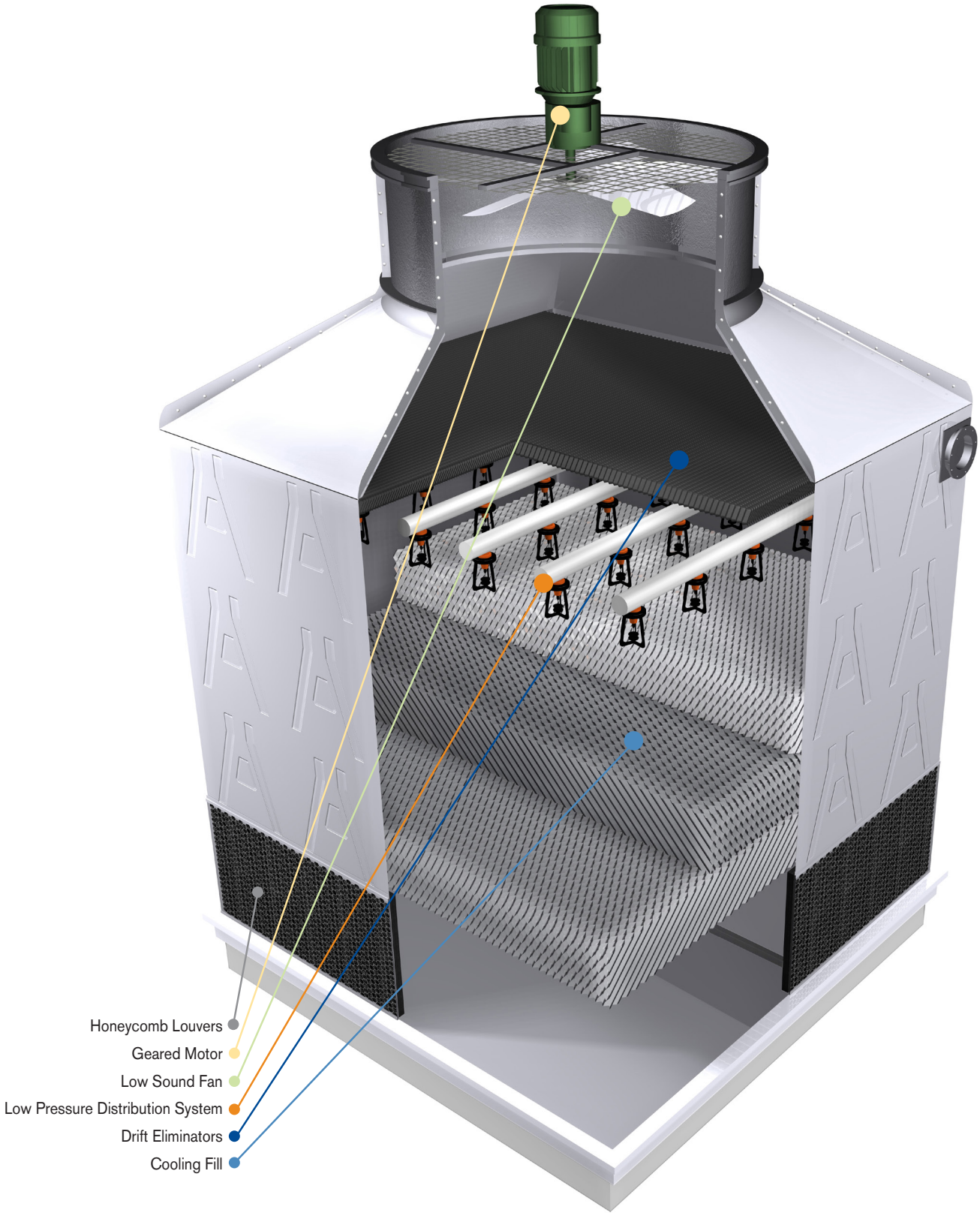
The side casing consists of a stainless steel support structure with integrated FRP casing panels that offer chemical and corrosion resistance. The air inlets at the side-walls are fitted with honeycomb louvers to prevent water splash out and reduce icing in winter operation.

OPERATION AND MAINTENANCE CONSIDERATIONS

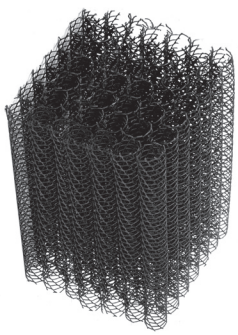
Louvers limit the sunlight entering the collection basin, reducing the potential for algae growth. Counterflow towers offer easy access to the collection basin from all sides. The wet surface is totally enclosed providing protection from environmental elements, and the tower utilizes a corrosion-resistant self-draining spray system. The tower is designed to prevent any water accumulation, minimizing microbial growth.

VALUE-ADDED OPTIONS

- **FRP water collection basin**: Available with either bottom or side suction outlet piping, including an HDG basin support structure and outlet flange.
- **Electric basin heater**: This electric immersion heater helps prevent freezing during cold weather.
- **Electric oil level switch**: Allows gearbox oil level to be remotely monitored.
- **External lube line**: Allows user to facilitate changing the gearbox oil.
- **Maintenance platform**: An HDG steel platform provides a stable work surface from which routine maintenance of the mechanical equipment can be performed even during operation.
- **HDG safety cage and ladder**: Provides safe, convenient access to the mechanical equipment and maintenance platform.
- **Vibration switch**: This option protects against mechanical failure by automatically shutting down the motor should the tower experience high vibration levels. Manual reset ensures inspection to correct root cause. Several models are available.
- **Ultra quiet fan**: Wide-chord acoustic geometry fan design maximizes efficiency while significantly reducing sound levels.

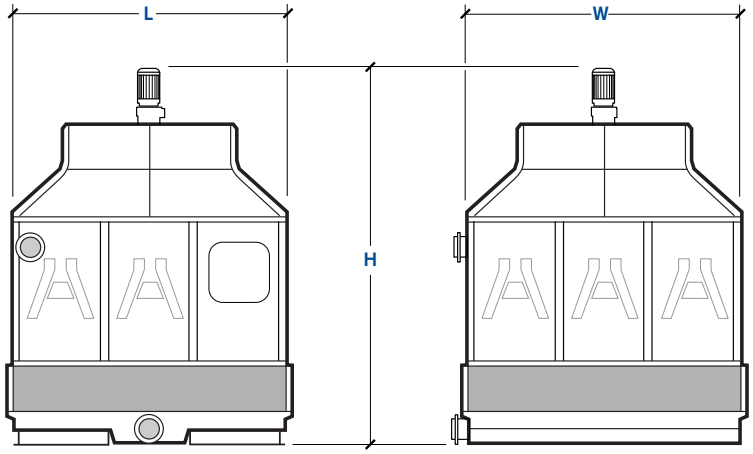


- high-efficiency PVC/PP film-fill
- clog-resistant PE/PP splash-fill



Induced-draft counterflow design.

The perfect fit makes all the difference.



Face A Face B

Models	L mm	W mm	H mm	Footprint m²	Fan Diameter mm
CP060	2441	2441	5032	5.95	1830
CP080	2841	2841	5230	8.07	1830
CP100	3240	3240	5361	10.50	2135
CP130	3639	3639	5828	13.25	2135
CP160	4042	4042	5956	16.32	2440
CP200	4042	4840	5956	19.55	2745
CP241	4840	4840	5831	23.43	3350
CP281	5240	5240	6379	27.46	3350
CP320	5639	5639	7041	31.81	3960
CP360	6041	6041	7242	36.48	3960
CP420	6440	6440	7489	41.47	4270
CP470	6840	6831	7687	46.79	4270
CP520	7239	7239	7888	52.42	4270

Tower height varies depending on configuration and cell quantity.

CTI Certified models

Models	Nominal Capacity kW
CP0600	619 - 738
CP0800	730 - 1124
CP1000	871 - 1382
CP1300	1015 - 1965
CP1600	1198 - 2257
CP2000	1286 - 2813
CP2410	1760 - 3386
CP2810	1944 - 3872
CP3200	2517 - 4561
CP3600	2705 - 4994
CP4200	3098 - 5304
CP4700	3400 - 6309
CP5200	3752 - 6664

Nominal capacity based on 35°C HW, 29.5°C CW, 25.5°C WB and 0.155m³/hr per kW, varies depending on configuration.

What makes the CP counterflow cooling tower stand out as the logical choice?

- The structural components of the CP cooling tower are designed in accordance to Eurocode 3 (DIN EN 1993 together with its German National Annex).
- Completely assembled without field welding.
- Open profiles reduce the risk of microbial growth. The CP Cooling Tower complies with Health and Safety Guidance HSG 274 Part 1 (UK) and 42.BImSchV (Germany).
- Preassembled modular design.
- Hoisting of completed tower after assembly.
- Variability – able to adapt to your conditions and requirements.
- The SPX Cooling Technologies product portfolio – the single solution provider for a broad range of cooling towers and fluid coolers.
- The SPX / Marley reputation. Our brand promise. Our service commitment.

The bottom line

As a leading producer…we are committed to product quality, innovation and customer satisfaction. Our high standards are reflected in the advanced CP line of cooling towers.

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