

**SPIG® Wet Cooling Tower
Products and Replacement Parts**

Cool and Clean, Forward



Proven Reliability and Exceptional Performance

As a global leader in cooling system solutions, SPIG® offers comprehensive after-sales services, including operational support, maintenance, upgrades, and replacement parts. Our high-quality components are designed for seamless integration and peak performance, regardless of the original manufacturer. With a worldwide network of service locations, we ensure quick delivery and uninterrupted plant operation.

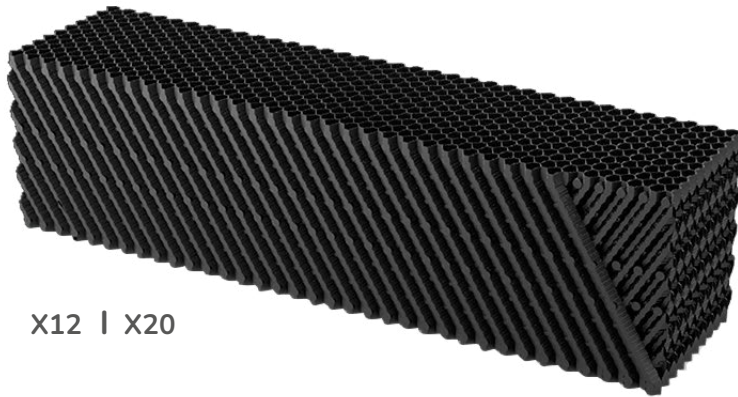
Film Fill

SPIG® film fills transform water into thin films for efficient cooling, creating extensive surfaces for optimal heat transfer. Tailored to meet water quality requirements, our solutions, are designed for high thermal performance even in demanding environments with significant contaminants. For optimal thermal performance and durability, SPIG selects fill components based on circulating water parameters like

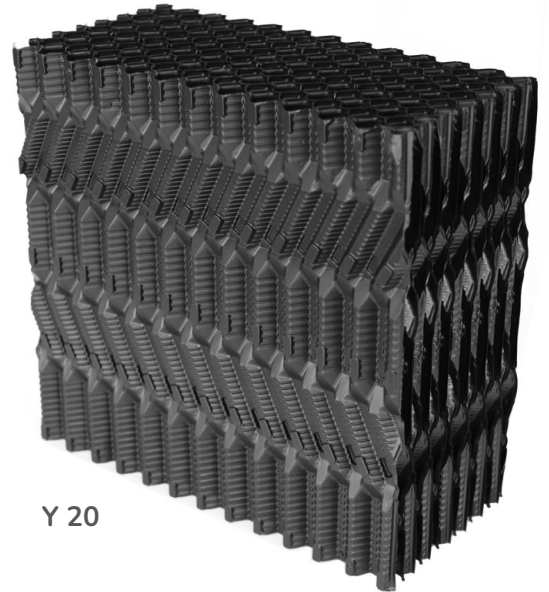
total suspended solids (TSS), water chemistry, cycles of concentration, and contaminants. High-quality materials can extend the cooling tower's life and reduce the need for component replacement. Film fill can be supplied in PVC or PP material (available also in fire-retardant material in accordance to ASTM E84 with FS<=25) and glued or thermo-welded at site with SPIG owned machines on rental basis.

Notes:

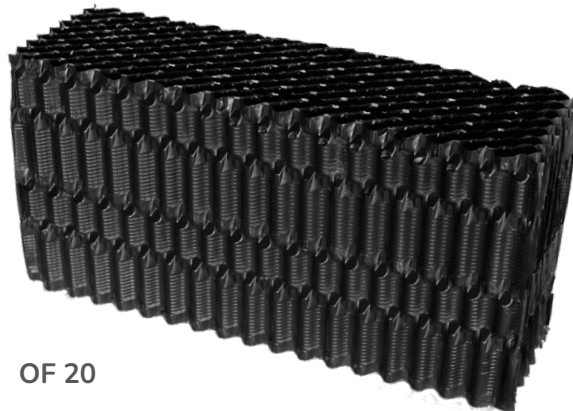
1. Operating temperature range is -20°C to 55°C for PVC and -20°C to 70°C for PP.
2. Minimum ambient temperatures as low as -40°C can be achieved with special additives.
3. Maximum temperatures as high as 70°C for PVC or 80°C for PP can be achieved with special additives.
4. PP can be provided with fire-retardant properties as per ASTM E84 FI<25.
5. All filling on demand CTI 136.



X12 | X20



Y 20



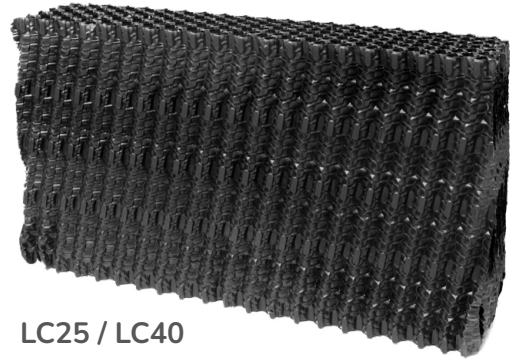
OF 20

Technical Data	X12	X20	Y20	OF20
Material	PVC/PP	PVC/PP	PVC/PP	PVC
Width of channel (mm)	12	19/20	21	20
Slope of channel (°)	30	30	0/25	0
Thickness of material (µm)	260/380	300/400	320/500	300/380
Specific area (m ² /m ³)	240	150	148	150
Typical block Height (mm)	300	300	600	500

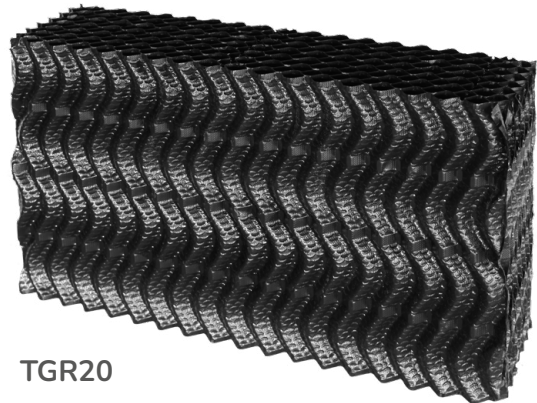
Film Fill



LNR20



LC25 / LC40

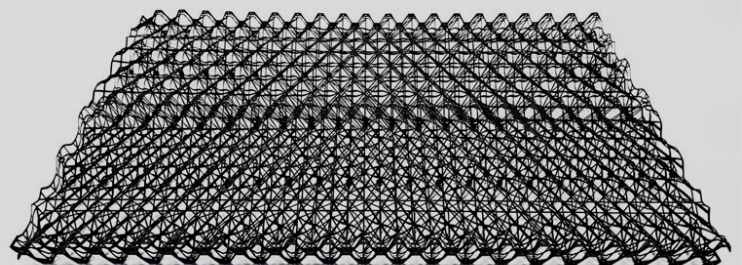
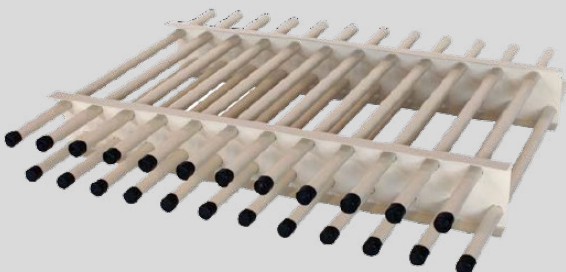


TGR20

Technical Data	LC25	LC40	TGR20	LNR20
Material	PVC	PVC	PVC	PVC
Width of channel (mm)	25	37	20	20
Slope of channel (°)	~10	10	0/25	0
Thickness of material (µm) before form	380/500	420/500	300/500	300/500
Specific area (m ² /m ³)	112	86	142	135
Typical block Height (mm)	600	600	600	900

Film Fill Protection Device

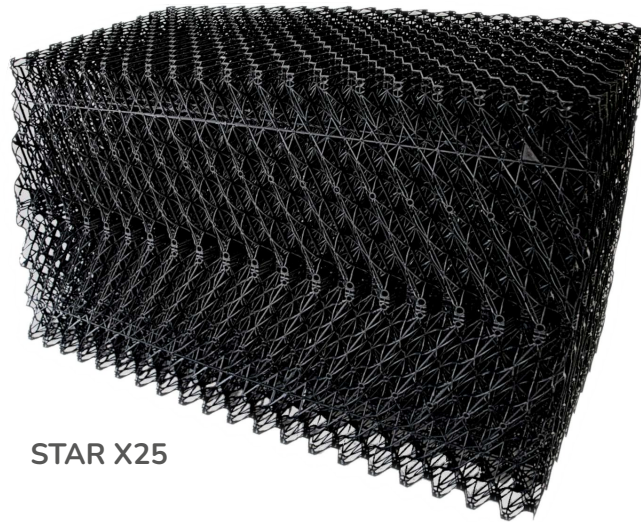
SPIG® film fill protection device is engineered to shield spray nozzles and the upper layer of film fill from damage in environments with high levels of contaminants like sand or debris. Two solutions can be supplied: 1) PVC-extruded pipes and spacers, it is assembled on-site and positioned atop the film fill; 2) PP Injection molded solutions manufactured by four layers of sheets to be fixed at site. These devices are available in various lengths to fit any cooling tower dimensions.



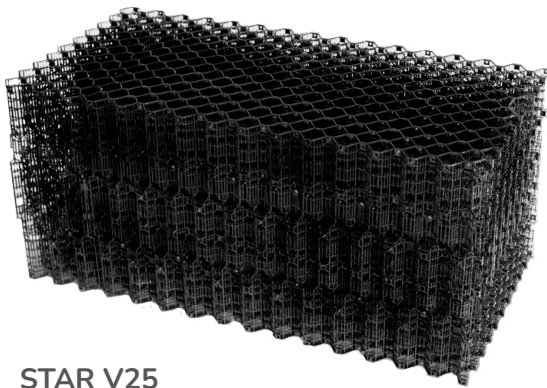
Trickle Fill

SPIG® trickle fills are engineered to optimize water-air interaction, significantly improving cooling efficiency. They represent an intermediate design that balances the characteristics of film fill and splash fills. Ideal for cooling towers with impure water such as geothermal or seawater systems, these options surpass splash fills in thermal performance.

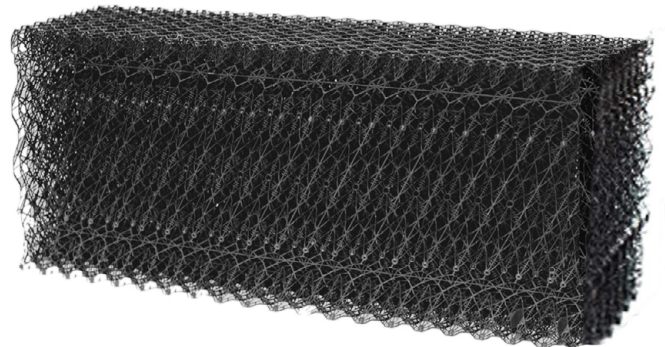
This versatility makes Trickle Fills effective solutions for systems handling higher levels of contaminants Vs film filling. Incorporating fire-retardant properties when necessary, these fills ensure both safety and durability. SPIG has different solutions to assembly products such as manual or pneumatic plugs and press machines available on rental basis.



STAR X25



STAR V25



STAR X20

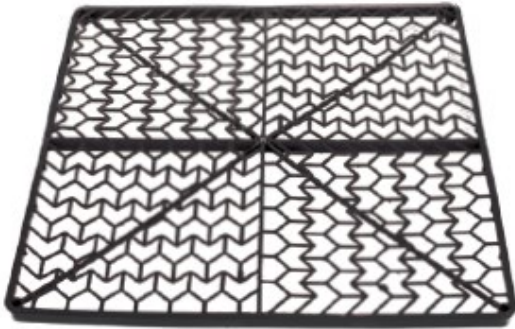
Technical Data

Technical Data	STAR X20	STAR V25	STAR X25
Material	PP	PP	PP
Standard dimensions LxWxH (mm)	1000x500x450	910x600x450	1000x500x600
Unit dry weight (kg / m ³)	37	25	29
Assembly connections	Clips/PP Tie rods	Clips/PP Tie rods	Clips/PP Tie rods
Specific Area (m ² /m ³)	125	100	115
Slope of channel	25°	0°	30°

Splash Fill

SPIG® splash fills are designed for applications prone to fouling and clogging, as they offer reliable performance, even in demanding environments. Constructed from robust PVC or PP materials, these fills can incorporate fire-retardant properties when required, securing safety and long-lasting performance.

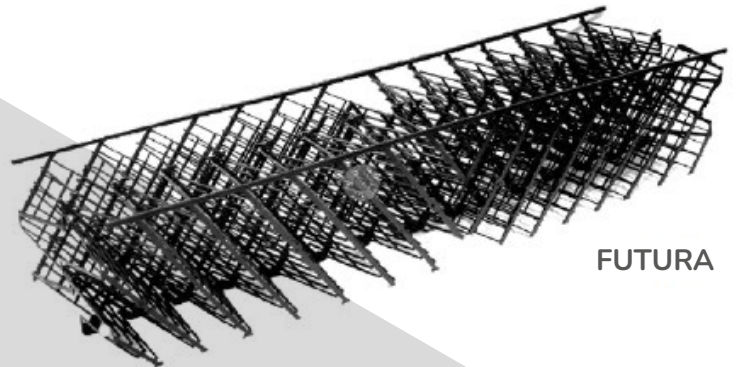
Their structured design promotes superior water distribution and aeration, ensuring the long-term efficiency and stability of cooling tower operations. Grids can be installed with different configurations such as 100, 200, 400 mm distance between each grids layer.



HP 600



HEXA 667



FUTURA

Notes:

1. Operating temperature range is -20C to 70C for PP.
2. Minimum temperatures as low as -40C can be achieved with special additives.
3. Maximum temperatures as high as 80C for PP can be achieved with special additives.
4. PP can be provided with fire-retardant properties as per ASTM E84 FI<25 or V2 on demand.

Technical Data	FUTURA	HP 600 / HEXA 667	
Material	PP	PP	
Standard dimensions LxWxH (mm)	1200x300x300	600x600x22	667x667x22
Unit dry weight (kg each)	4.4	0.5	0.6
Assembly connections	Clips	Wire/Support/Spacer	

Distribution Nozzles

SPIG® distribution nozzles are engineered to deliver precise water distribution over the fill, maximizing thermal performance.

ECOJET 2.0 and NEW STATIC nozzles, developed through rigorous testing, ensure uniform water coverage and adaptability across various operating conditions. Extensive testing guarantees outstanding durability and reliability.

SPIG nozzles can be manufactured with V2 as per UL-94 standards for self-extinguishing properties. SPIG offers a variety of connections for pipes or concrete channels to ensure seamless integration with tubular primary distribution. This is facilitated by our extensive range of pipe adaptors made from PP material: till 1200mm diameter of FRP water collector. Patent application for all nozzles product.



ECOJET S 2.0



ECOJET L 2.0



NEW STATIC

Technical Data	ECOJET S 2.0	ECOJET L 2.0	NEW STATIC
Material	PP	PP	PP
Diameter range (mm)	20-30	32-40	16-40
Weight (g)	220	300	120
Height (mm)	285	325	190



WATER DISTRIBUTION ACCESSORIES



PIPE ADAPTORS

Drift Eliminators

Positioned above the distribution level, SPIG drift eliminators capture water droplets entrapped in the air stream that otherwise would be lost to the atmosphere. Constructed from PVC or polypropylene and assembled into channel-patterned packs, they trap droplets as airflow changes direction. Years of

field application and testing have refined SPIG designs. Full-scale prototype tests and independent lab evaluations confirm their efficiency, aligning modeled predictions with real-world results for reliable performance. For cross flow CT application a special support in ABS can be supplied by SPIG



H-MOON L



CELLULAR 2.0



H-MOON N



DRIFT ELIMINATOR SUPPORT



WAVE

Technical Data	WAVE	CELLULAR 2.0	H-MOON L	H-MOON N
Material	PVC/PP	PVC	PVC/PP	PVC/PP
Spacer materials	PP	N/A	PVC/PP	PVC/PP
Assembly connections	Tie rods	Gluing	Spacers	Spacers
Weight (kg/m ²)	8	6.5	10	14
Profile height (mm)	146	148	180	180
Typical drift panel width (mm)	450	500	450	500
Typical drift loss; %	0.01	0.0004	0.001	0.0005

Notes:

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4. PP can be provided with fire-retardant properties as per ASTM E84 FSI<25.

Noise Attenuation System

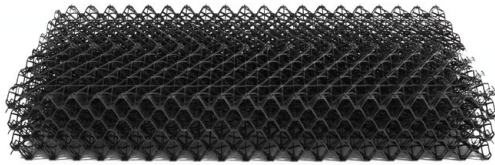
SPIG® offers innovative noise abatement solutions, including our competitive Impact Attenuation Wave (IA-Wave) system, designed to reduce high-frequency noise from falling water. Made with high-quality PVC profiles, the system ensures quick drainage and long-lasting performance, tailored to meet

specific project requirements.

LinX25 provides a PP material option for noise attenuation, delivering superior performance in reducing noise. On demand, Linx25 can also be supplied in self-extinguishing version PP V2 as per UL94.



IA-WAVE



LINX25



Note:

The numbers of layers is defined by the engineering department's noise analysis

Air Inlet Louvers

SPIG® air inlet louvers minimize debris entry and reduce algae and bacteria growth by blocking sunlight. These durable PVC panels are customizable to fit various cooling tower configurations, ensuring efficient and secure operation.



Fan Stacks

SPIG® offers a wide range of fan stack diameters and heights using SPIG proprietary molds. While flanged fan stack connections are standard, we can also provide an overlapped design upon request. The typical materials used are standard polyester resin or fire-retardant FRP with FSI<25, according to ASTM codes.

Additional Accessories

SPIG® offers a variety of exclusive components to streamline installation and cut transportation costs, including spacers for FRP structures and sleeves, FRP main column supports, and basin shims. We can also supply:

- All mechanical components for electric motors, gearboxes, driving shafts, and fans
- Backstop devices, lubrication systems, and sensors to monitor mechanical components
- Firewalls to prevent fire propagation between cells
- Ladders, platforms, and staircases
- FRP risers for water distribution in each cell, valves
- Vacuum systems, dampers, and mixing devices for the dry section of hybrid cooling towers
- Firefighting systems
- Cleaning systems for heat exchangers

Research & Development

At our advanced test chamber in Paruzzaro, Italy, SPIG® drives innovation with extensive testing to enhance product quality and performance, through a dedicated team of experienced engineers conduct research on cooling systems components.

Our R&D team specializes in thermal performance testing, noise reduction, drift eliminator efficiency, nozzle optimization, and multi-row bundle testing. These efforts ensure our solutions meet the highest standards of reliability and dependability of all products offered in the market.



Hybrid Cooling Towers Parts

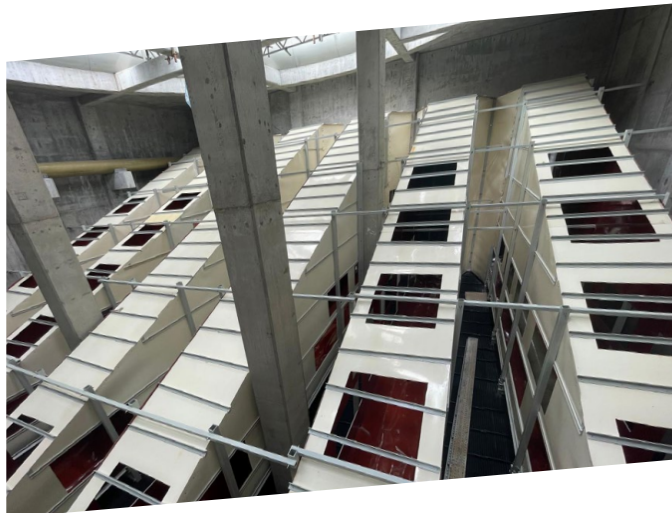
For hybrid cooling towers, we offer heat exchangers featuring a multi-row bundle configuration. Our controlled aluminum finning process supports G or L fin designs, accommodating various FPI and pipe diameters from 1 to over 2 inches. This flexibility ensures suitability for a broad range of applications.



MULTI-ROW BUNDLES



SPIG can supply customized mixing devices to properly mix wet airflow with dry air from multi-row bundles (MRB) and reducing visible plume.





Since 1936, SPIG has globally provided cooling systems. Our expertise spans 85 countries and more than 90 years.



U-Stamp certification available under request



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Quality, Health & Safety, and Environmental Management System is certified by



CTI Member since 1993



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