

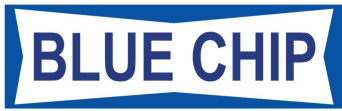


ENGINEERED FOR EFFICIENCY, BUILT FOR RELIABILITY

NATURAL DRAFT COOLING TOWERS



***“GLOBAL LEADER IN DESIGNING, MANUFACTURING & SUPPLY OF COOLING
TOWERS & ALLIED UTILITY SOLUTIONS”***



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BLUE CHIP MAKE Natural Draft Cooling Towers harness the natural buoyancy of warm air to create an upward airflow, eliminating the need for mechanical fans or motors. This passive airflow design makes them exceptionally energy-efficient, significantly reducing operational costs over the long term.

With no moving parts, these towers require minimal maintenance, ensuring a longer lifespan and greater reliability compared to mechanical draft alternatives. Their robust structure is designed to perform optimally in demanding industrial environments.

KEY FEATURES OF BLUE CHIP MAKE NATURAL DRAFT COOLING TOWER:

- ❖ FAN-LESS & FILL-LESS DESIGN
- ❖ LOW AUXILIARY POWER CONSUMPTION
- ❖ ZERO MAINTENANCE
- ❖ NO BREAKDOWN / DOWNTIME
- ❖ LOW INITIAL & OPERATING COST
- ❖ LONGER SERVICE LIFE
- ❖ IDEAL FOR EJECTOR SYSTEMS
- ❖ SUITABLE FOR HIGH TDS AND WIDE pH RANGE WATER
- ❖ IDEAL FOR DIRTY WATER APPLICATION

TECHNICAL SPECIFICATIONS:

SPECIFICATION	DETAILS
Cooling Capacity	Customizable (50 – 1000 TR)
Flow Rate	As Per Customer Requirement (Upto 90 CMH or More)
Material Options	ASCU Treated Timber, Pultruded FRP, Galvanized Steel
Noise Levels	Virtually Silent (Fan-less Operation)
Operating Temperature Range	Designed For Wide Ambient Conditions

IDEAL OPERATING CONDITIONS:

BLUE CHIP MAKE Natural Draft Cooling Towers are best suited for:

- Continuous 24x7 industrial operations
- Large water flow and high heat load applications
- Plants with high power costs or limited electrical infrastructure
- Applications involving dirty, oily, or contaminated water
- Locations where silent operation is essential

WATER QUALITY HANDLING CAPABILITY:

The fill-less and fan-less design enables BLUE CHIP Natural Draft Cooling Towers to efficiently handle:

- High TDS water
- High suspended solids
- Oil-laden and process-contaminated water
- Water with a wide pH range

This design eliminates clogging, scaling, and frequent shutdowns, ensuring uninterrupted operation even in harsh process environments.

ENERGY & LIFE CYCLE COST BENEFITS:

- Zero fan power consumption
- Extremely low auxiliary power requirement
- Minimal spares and manpower dependency
- Reduced maintenance and operating costs
- Faster return on investment

Natural Draft Cooling Towers offer significant long-term OPEX savings compared to conventional mechanical draft cooling towers.

DESIGN STANDARDS & QUALITY ASSURANCE:

- Engineered as per industry best practices
- Designed for site-specific climatic and process conditions
- Material selection based on corrosion resistance and lifecycle performance
- Strict quality checks during fabrication, erection, and commissioning

SAFETY & ENVIRONMENTAL BENEFITS:

- No rotating equipment, ensuring enhanced operational safety
- Silent operation with zero noise pollution
- Lower carbon footprint due to minimal energy usage
- Environment-friendly material options such as ASCU Treated Timber and Pultruded FRP

LONG-TERM SUPPORT & SERVICES:

BLUE CHIP INDUSTRIES offers complete lifecycle support, including:

- System design consultation
- Installation and commissioning assistance
- Performance optimization support
- Long-term spares availability
- Retrofit and upgradation solutions

PROVEN TRACK RECORD:

BLUE CHIP MAKE Natural Draft Cooling Towers are successfully operating across Chemical, Petrochemical, Fertilizer, Pharmaceutical, Metal, Steel, and Power industries, delivering reliable and consistent performance for decades.

SPECIFICATIONS & COMPONENTS OF OUR NATURAL DRAFT COOLING TOWER

1. STRUCTURE:

- PROVIDES THE **PRIMARY SUPPORT** AND FRAMEWORK FOR THE COOLING TOWER, DESIGNED TO WITHSTAND **VARIED ENVIRONMENTAL CONDITIONS**, ENSURING **LONG-TERM STABILITY** AND **MINIMAL MAINTENANCE**.
- **MATERIALS USED FOR THE STRUCTURE: PULTRUDED FRP, ASCU TREATED TIMBER, AND GALVANIZED STEEL.**
- **PULTRUDED FRP** OFFERS A **LIGHTWEIGHT, CORROSION-RESISTANT** DESIGN, ENSURING **LONGEVITY** IN **HARSH ENVIRONMENTS**.
- **ASCU TREATED TIMBER** PROVIDES A **NATURAL, ECO-FRIENDLY** OPTION, IDEAL FOR INDUSTRIES FOCUSED ON **SUSTAINABILITY**.
- **GALVANIZED STEEL** ENSURES **STRENGTH** AND **DURABILITY**, SUITABLE FOR **HEAVY-DUTY INDUSTRIAL APPLICATIONS**.



2. LOUVERS:

- **MATERIAL: FRP (FIBERGLASS REINFORCED PLASTIC)**
- DESIGNED TO CONTROL THE **AIR INTAKE** AND PREVENT **DEBRIS** OR **SUNLIGHT** FROM ENTERING THE COOLING TOWER.
- **CORROSION-RESISTANT** MATERIAL ENSURES **DURABILITY** AND **LONG-TERM PERFORMANCE** IN **VARIOUS ENVIRONMENTAL CONDITIONS**.
- ALLOWS **EFFICIENT AIRFLOW**, IMPROVING **OVERALL COOLING TOWER EFFICIENCY**.
- **LOW-MAINTENANCE** DESIGN, REDUCING THE NEED FOR **FREQUENT REPAIRS** OR **REPLACEMENTS**.



3. NUTS, BOLTS, AND WASHERS:

- **MATERIALS: GI (GALVANIZED IRON) OR SS 304 (STAINLESS STEEL)**
- ENSURES SECURE **ASSEMBLY** AND STRUCTURAL INTEGRITY OF THE COOLING TOWER.
- **GALVANIZED IRON (GI)** OFFERS EXCELLENT **CORROSION RESISTANCE**, MAKING IT IDEAL FOR GENERAL APPLICATIONS.
- **STAINLESS STEEL 304** PROVIDES SUPERIOR **RUST RESISTANCE** FOR USE IN **HARSH ENVIRONMENTS** OR CORROSIVE CONDITIONS.
- **WEATHERPROOF** AND **HIGH TENSILE STRENGTH** ENSURE LONG-TERM STABILITY AND PERFORMANCE UNDER VARYING OPERATIONAL STRESSES.

4. WATER DISTRIBUTION SYSTEM:

- **SPRAY NOZZLES MATERIALS: POLYPROPYLENE OR ABS.**
- **HEADER / BRANCH PIPE MATERIALS: GI, PVC, PP, SS 304, OR OTHERS AS PER SYSTEM REQUIREMENTS.**
- RESPONSIBLE FOR THE **UNIFORM DISTRIBUTION OF WATER** INSIDE THE COOLING TOWER TO MAXIMIZE **EVAPORATIVE COOLING**.
- **SPRAY NOZZLES** ARE BUILT FOR **HIGH FLOW RATES** WITH OPTIONS FOR **CHEMICAL RESISTANCE** (POLYPROPYLENE) OR **IMPACT DURABILITY** (ABS).



- **HEADER AND BRANCH PIPES** SUPPLY WATER TO NOZZLES; MATERIALS ARE SELECTED BASED ON **CORROSION RESISTANCE, TEMPERATURE, AND SYSTEM NEEDS.**
- DESIGNED FOR **LOW CLOGGING**, CONSISTENT **PRESSURE BALANCE**, AND **EASE OF MAINTENANCE.**

5. BASIN

- **MATERIALS:** MS / RCC (REINFORCED CEMENT CONCRETE) BY PURCHASER OR FRP.
- ACTS AS THE **COLLECTION POINT** FOR COOLED WATER BEFORE IT IS RECIRCULATED INTO THE SYSTEM.
- **RCC BASINS** ARE TYPICALLY CONSTRUCTED ON-SITE BY THE PURCHASER, OFFERING **HIGH STRENGTH** AND **LONG-TERM DURABILITY**.
- **FRP BASINS** ARE **LIGHTWEIGHT**, **CORROSION-RESISTANT**, AND IDEAL FOR **MODULAR** OR **PRE-FABRICATED** TOWER SETUPS.
- DESIGNED TO MINIMIZE **WATER LOSS**, ENSURE **CLEAN STORAGE**, AND ALLOW FOR **EASY DRAINAGE AND MAINTENANCE**.



CUSTOMER SUPPORT AND SERVICES

- **CONSULTATION AND DESIGN:** Custom cooling solutions tailored to your specific needs.
- **INSTALLATION ASSISTANCE:** Expert installation and commissioning support.
- **MAINTENANCE PLANS:** Comprehensive service plans to ensure optimal performance.
- **24 / 7 TECHNICAL SUPPORT:** Our team is always ready to assist you.

APPLICATIONS

BLUECHIP Counter Flow Cooling Towers are versatile and ideal for:

Industrial Applications	Commercial Applications	Specialized Industries
Power Plants	HVAC Systems	Food And Beverage
Petrochemical And Refining	Data Centers And IT	Pharmaceutical And Chemical
Metal and Steel	Hospitals And Healthcare	Automotive And Aerospace

LONG TERM ASSOCIATED CUSTOMERS & CONSULTANTS

Aarti Industries Ltd	Inox Air Products Ltd	Alfa Laval India
AWL Agri Business (Adani Wilmar)	Ishan Dyes & Chemical Ltd	JSW Steel
TATA Steel	Congo Oil and Derivatives	Grassland Industries
Deepak Nitrite Ltd	Coromandel International Ltd	Lupin India Ltd
Dorf Ketel India Ltd	Chemie Organics Ltd	UPL
Meghmani Organics Ltd	Sun Pharma Ltd	Zydus Lifesciences Ltd
IFFCO	Tata Steel India Ltd	Cipla Ltd
Pidilite India Ltd	Aditya Birla Group Ltd	Kumar Metal India
Servotech India	Valiant Organics Ltd	Anupam Rasayan Ltd
Valiant Advance Science Pvt Ltd	JRS Pharma	Goenka Group
Surface Wilmer	Alchemie Finchem Pvt. Ltd.	Calcimag Chemicals India
Deepak Phenolics Ltd	Aarti Drugs Ltd	Aarti Surfactants Ltd
Meghmani Finechem Ltd	Songwon India Ltd	ZCL Chemicals Ltd
Lubrizol India	Mitsuchem Plast Ltd	Hindustan Monomers Ltd
Hikal Ltd	Hetero India Ltd	Nath Industries Ltd
Institute of Chemical Technology (ICT), Mumbai	Associated Alcohol and Breweries Ltd (AABL)	Enmax Engineering India
Servotech India	Piramal Glass	Sajjan India Ltd
Kuwait Refinery	Mount Meru Millers	Alembic Pharma
Prasol Chemicals	Krishna Phoschem Ltd	Madhya Bharat Agro Ltd
Excelsource India	Time Technoplast Ltd	Chemie Organics Ltd
Indo Amines Ltd	Bluejet Healthcare Ltd	Echjay Industries Ltd

Toyo Engineering	Shroff Engineers	Lele Consultants
Technophil Consultants	TKT Consultants	Mott MacDonald
L&T Engineering	Jacobs	JNCE Engineering
Enmax Engineering	Universal MEP Projects and Engineering Services Limited (UMPESL)	Ketav Consultants
Zeppelin	Knexir	Aevitas

SITE IMAGES



SPARES

BLUE CHIP MAKE Spares are designed to ensure seamless cooling tower operations with a comprehensive range of high-quality components, including fill media, fans, motors, drift eliminators, nozzles, and water distribution systems. Engineered for compatibility, reliability, & efficiency, **BLUE CHIP** - approved spares minimize downtime and enhance performance, making them an essential choice for effective maintenance and extended service life. Trust **BLUE CHIP MAKE** Spares to deliver unmatched quality and durability for your cooling tower needs.

Casing, Louvers, and Partitions:

- Corrugated and Plain Sheets: Durable FRP and ACB options.
- BLUE CHIP Louvers and Corner Rolls: Optimized airflow, reduced water splash, and structural stability.

Why Choose BLUE CHIP Make Spares?

- **QUALITY ASSURANCE:** Premium materials and components for unmatched performance.
- **EXPERTISE:** Trusted by industries for durable and efficient cooling solutions.
- **TAILORED SOLUTIONS:** Customized for your cooling tower needs.

BLUE CHIP INDUSTRIES OFFERINGS / PRODUCTS



Maximize your cooling efficiency and reduce operational costs with BLUECHIP's Counter Flow Cooling Towers. Let us help you achieve unparalleled performance for your industrial and commercial cooling needs.



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