ilmed IMPIANTI

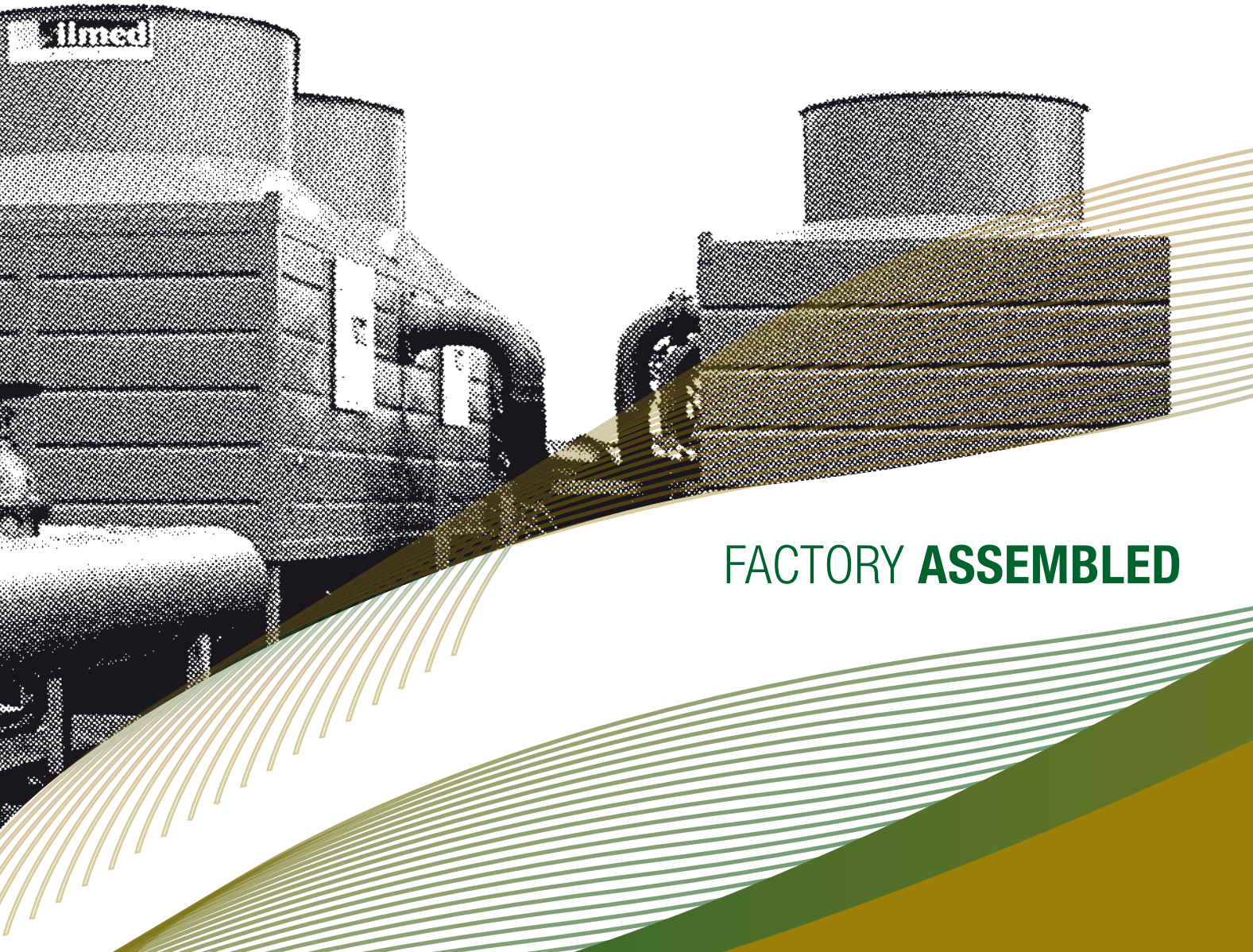
40 cooling towers since 1981

Since 1981

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

FROM 200 TO 1000 KW	FROM 1000 TO 4000 KW	FROM 1000 TO 4500 KW	FROM 1000 TO 5000 KW
T SERIES	**GTP** SERIES	**NC/ST** SERIES	**GT** SERIES

FILM FILLING



FACTORY **ASSEMBLED**

WATER COOLING **TOWERS**

> DESIGN FEATURES

The T water cooling towers are specially conceived for small-medium thermal capability.
They follow a specific standard and are supplied completely pre-assembled, since their dimensions are compatible with transportation by road, avoiding the separation between the cooling tower body from the ventilation group.

> STRUCTURE

Each module is composed by the refrigerating unit and the ventilation unit, totally pre-assembled and joined through bolts. The module can be completed with the air inlet section and with the cooled water collection basin. The structure, designed on enbloc concept, made of welded metal sheets and sections, is simple, strong and light.

> FAN UNITS

The ventilation is operated by induced draught, characterized by fans in drawing position.
The electric motors are equipped with all the special protections for the operation in presence of water droplets and high humidity; the fan is assembled directly on the motor shaft and the whole group is assembled on a monolithic structure which can be easily disassembled.
The fans have an high efficiency wing profile .The ventilation duct is protected by a safety metal grid.

> DISTRIBUTION SYSTEM

The water to be cooled enters into the module through a single flanged connection.
The nozzles are assembled through a threaded connection and their dimensions are factory selected to suit the design water flow and guarantee the best performances.
The passages size are large, in order to avoid any risk of blockage.

> FILLING

The filling system, which works on the “film” principle, is made of many layers of PVC/PP elements with cross-fluted or vertical ducts, in order to form a thermal exchange system characterized by a high surface – volume ratio. Depending on the working conditions, different configurations of the elements with different geometrical shapes can be supplied.

ILMED IMPIANTI designed and developed new film PVC filling; now the cooling towers are supplied with these special fillings as original equipment.

> DRIFT ELIMINATORS

The drift eliminators are made of PVC/PP sheet modular elements.
The efficiency of the eliminator is very high and it limits the water leaks due to dragging to less than 0.005% of the circulating range.

> ENVIRONMENTAL IMPACT - LOW NOISE MODELS

The sound power level generated by the TT cooling towers is suitable for the installation in most environments.
In case of very strict requirements, special models and execution are available, which are characterized by differentiated and very low level of sound emissions. ILMED is in position to propose many technical solutions, and to combine them together in order to attain the best result through a low noise ventilation groups, attenuation system splash in basin and installation of silencers in the suction / ejection section

> OPTIONAL EQUIPMENT

Every cooling towers can be equipped with several optionals,
selected according to ILMED IMPIANTI experience.

> VIBRASWITCH

The vibration switch is available, to monitoring the anomalous vibrations of the fan units. The device, operating on a on/off control, when the vibration reaches such a level as to become dangerous for good operation, the vibraswitch automatically disconnects the electrical circuit of the unit. The vibraswitch is provided with a reset button and a reset coil remote control switch.

> ELECTRIC HEATERS

Electric immersion heaters are available factory installed into the basin of the cooling tower. The heaters are sized to keep at + 4-5°C the basin water temperature with an ambient air temperature of - 15°C and with the fans switched off. They are supplied complete of thermostat in weatherproof enclosure for outdoor use.

> CAGED LADDER

For the inspection and maintenance of the fan units a caged ladder can be supplied, to climb over the fan deck. The caged ladder will be manufactured in HDGS.

> FAN DECK HANDRAIL

In case of supply of caged ladder, the safety handrail all around the fan deck is strongly recommended. The handrail is manufactured in HDGS, according to the most common international regulations. In any case the access to the fan deck has to be restricted to authorized and skilled personnel.

> MAKE-UP VALVE

A mechanical valve an float assembly is available for a simple water level control and make-up. Float valve is plugged in the water make-up manifold. It allows to automatically make-up the water consumed for evaporation and other reasons. It is made by a copper or plastic floating sphere and a cast iron floating tap.

> WATER LEVEL CONTROL

The electric water level control is also available, for an accurate control of the basin level. It is a liquid point level switch based on the technology of the vibrating fork, to be assembled inside the basin of the cooling tower.

> TEMPERATURE SENSOR

An electric temperature sensor is available, to be assembled in the basin of the cooling tower, or preferably on the outlet piping. The sensor is made by an electric probe of the PT100 type, complete of signal transmitter 0-20 mA.

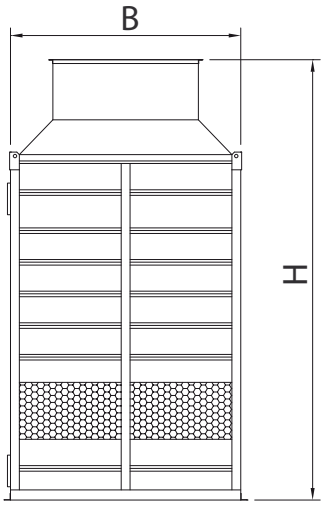
> SNOW EXECUTION

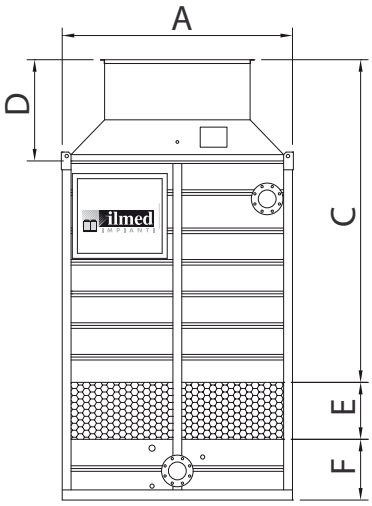
This special execution is available, when the cooling tower has to be operated in very cold conditions with fans switched on, and/or for installation on snow-making systems, to avoid the freezing of drifted droplets on the fan duct.
The fan stack is externally provided with heating cables system that prevent ice formation in the fan assembly. Heating cable are powered by single-phase 220V voltage. The system is completely connected to a junction box, and it is operated with a thermostat. The assembly is thermally insulated, and further protected by a metal lining.

> SPECIAL EXECUTION

In the case of shipments by container Ilmed Impianti is able to supply special versions with perfectly compatible measures. We are also fully available for studies and customized according to specific customer requirements.

> TECHNICAL DATA





		C1/10	C1/10/S	D1/10	D1/10 S	E1/10	E1/10/S
MODULE SIZE	Lenght A (mm)	1.220	1.220	1.520	1.520	1.520	1.520
	Widht B (mm)	1.220	1.220	1.520	1.520	1.820	1.820
AIR INLET	Height E (mm)	300	300	300	300	450	450
BASIN	Height F (mm)	380	1.000	380	1.000	480	1.000
COMPLETE CT	Height H (mm)	3.030	3.650	3.080	3.700	3.480	4.000
NOMINAL WATER FLOW RATE	mc/h	28	28	46	46	56	56
NOMINAL CAPABILITY	kCal/h	168.000	168.000	276.000	276.000	336.000	336.000
	kW	195	195	321	321	390	390
MOTOR	N	1	1	1	1	1	1
	kW	2,2	2,2	3	3	3	3

		F1/10	F1/10/S	F1/13	F1/11	G1/10	G1/10/S	G1/13	G1/11
MODULE SIZE	Lenght A (mm)	1.820	1.820	1.820	1.820	1.820	1.820	1.820	1.820
	Widht B (mm)	1.820	1.820	1.820	1.820	2.220	2.220	2.220	2.220
AIR INLET	Height E (mm)	450	450	450		550	550	550	
BASIN	Height F (mm)	480	1.000			480	1.000		
COMPLETE CT	Height H (mm)	3.480	4.000	3.000	2.550	3.630	4.150	3.150	2600
NOMINAL WATER FLOW RATE	mc/h	67	67	67	67	84	84	84	84
NOMINAL CAPABILITY	kCal/h	402.000	402.000	402.000	402.000	504.000	504.000	504.000	504.000
	kW	467	467	467	467	586	586	586	586
MOTOR	N	1	1	1	1	1	1	1	1
	kW	4	4	4	4	5,5	5,5	5,5	5,5

		H1/10	H1/10/S	H1/13	H1/11
MODULE SIZE	Lenght A (mm)	2.220	2.220	2.220	2.220
	Widht B (mm)	2.420	2.420	2.420	2.420
AIR INLET	Height E (mm)	550	550	550	
BASIN	Height F (mm)	480	1.000		
COMPLETE CT	Height H (mm)	3.730	4.150	3.250	2.700
NOMINAL WATER FLOW RATE	mc/h	110	110	110	110
NOMINAL CAPABILITY	kCal/h	660.000	660.000	660.000	660.000
	kW	767	767	767	767
MOTOR	N	1	1	1	1
	kW	7,5	7,5	7,5	7,5

(*) Nominal performances are referred to the following conditions:

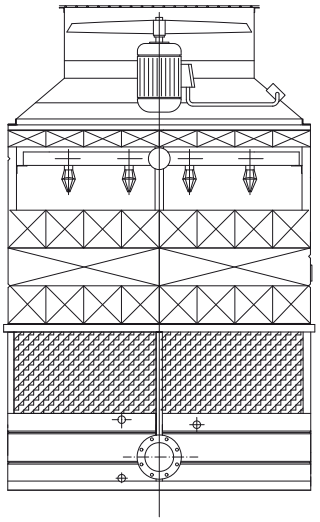
- Inlet water 35°C
- Outlet water 29°C
- Wet bulb air 24°C

> OVERSEA SHIPMENT BY CONTAINER

A special production range of cooling towers is available, with dimensions suitable for the transportation by container.

> MATERIALS

The production range considers different interchangeable and compatible materials to answer every customer requirements and specifications.



	TT					TG				
	COMPOSITION OF THE SUPPLY									
ITEM	STANDARD	OPTIONAL				STANDARD	OPTIONAL			
COOLING BODY										
MAIN FRAME	Painted steel					Galvanized steel				
CASING	Painted steel					FRP	Aluminium			
FAN STACK	Painted steel					Galvanized steel				
SAFETY GRID	Galvanized steel					Galvanized steel				
FAN	PP	Aluminium				PP	Aluminium			
FAN UNIT BRIDGE	Painted steel					Galvanized steel				
BOLTS	AISI 304					AISI 304				
PIPING	Painted steel					Galvanized steel				
SPRAYING NOZZLES	PPG					PPG				
FILLING	Filmed 15 - PVC	Onda 13 - PP	Filmed 20 - PVC	Onda 20 - PP	TRUST	Filmed 15 - PVC	Onda 13 - PP	Filmed 20 - PVC	Onda 20 - PP	TRUST
DRIFT ELIMINATORS	PVC	PP				PVC	PP			
LOWER BODY										
AIR INLET FRAME	Painted steel					Galvanized steel	Painted steel			
LOUVERS	PVC	Galvanized steel	PP			PVC	Galvanized steel	PP		
BASIN	Painted steel					Galvanized steel	Painted steel			
BOLTS	AISI 304					AISI 304				

Available upon request the following models with structural materials in stainless steel AISI 304 / AISI 316:
TX : as model TT where "AISI 304/316" instead of "painted steel"
TZ: as model TG where "AISI 304/316" instead of "galvanized steel"

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*UNI ISO **45001:2023***

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