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NEWS

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ITC SERIES

Envi-ILMED
TORRI CENTRIFUGHE

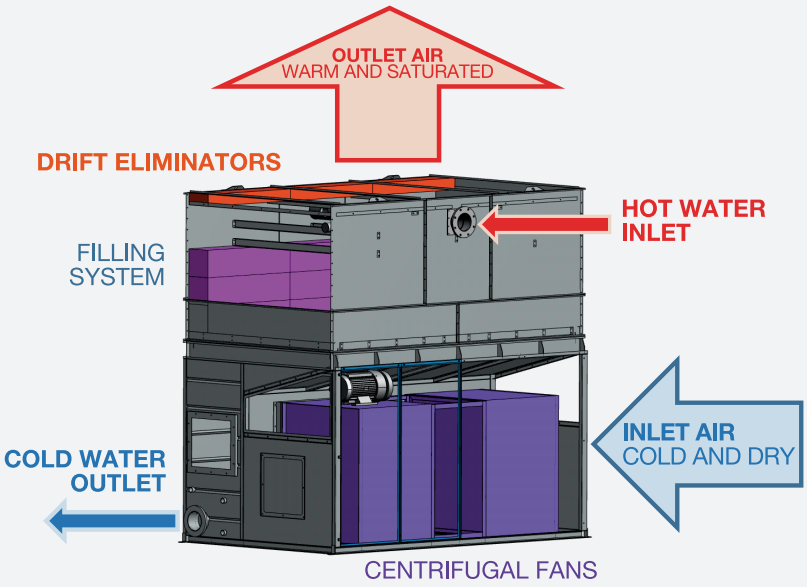
CENTRIFUGAL COOLING TOWER

COOLING
TOWERS

> INTRODUCTION

ITC Centrifugal Cooling Towers developed by Ilmed Impianti are Open Circuit Pre-assembled cooling towers: being in contact with the air, the water is cooled by evaporation inside the filling section. The air is drawn through the cooling tower by centrifugal fans located at the bottom of the machine.

ITC Centrifugal Cooling Towers can manage all type of waters.



ITC Series includes standard sizes ranging from the smallest B10/01/N to the largest D72/09/N unit to cover thermal power from 122 kW to 2920 kW. Several modules can be placed side by side to provide the required total power.
All ITC models have been designed by ILMED IMPIANTI to be suitable for road or container shipping. Lowered models are also available, in order to meet any customer request.

> ADVANTAGES

- Centrifugal fans have lower sound power levels than axial fans. → **Low noise emissions**

- They are delivered factory assembled for easy shipping and quick assembly. → **Fast installation**

- Mechanical and electrical components are located in the lower part of the machine. → **Easy Maintenance**

> MANUFACTURING FEATURES

> STRUCTURE

The cooling tower structure can be manufactured by steel structural elements welded together or by galvanized steel sheets bolted together. At customer's request, the internal and external surfaces of the cooling tower can be coated or can be manufactured with specific steels.

> FAN GROUP

Centrifugal double-inlet forward-curved blade fans, made of galvanized steel, are statically and dynamically balanced. Fans are mounted on a transmission shaft supported at the ends by self-aligning ball-bearings and cast-iron supports. Fans are protected by a fanguard to prevent the entry of debris into the tower.

Motors are mounted on strong adjustable supports made of galvanized steel and protected from atmospheric agents. The motion is transmitted to the fan by trapezoidal belts.

> WATER COLLECTION BASIN

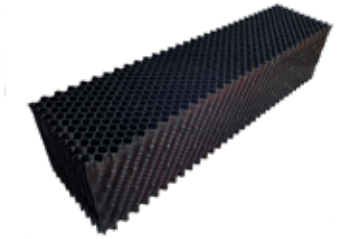
The basin collects the process water which can be directly connected to the utilities through the outlet flanges. At customer's request, each water basin can be equipped with process control instruments, active safety systems (e.g. level controls) and water treatment systems. The basin floor is smooth and inclined allowing for a complete water drainage to empty the basin and to minimize biofouling and proliferation of legionella.

> FILLING SYSTEM

The filling system is made up of several packs to form a section characterized by a high surface/volume ratio in order to improve the heat exchange capacity of the machine.
Depending on the working conditions, the packs can be supplied in different configurations with different geometries.

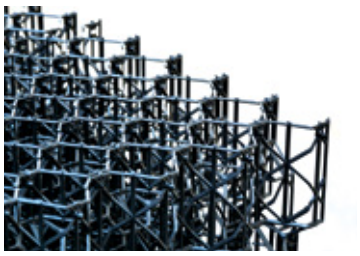
FILM filling

ILMED IMPIANTI has designed and developed new "FILMED" filling packs, with an exclusive and very effective design, which work on the "film" principle. They are manufactured in PVC or PP, with diagonal or vertical channels.



HYBRID filling

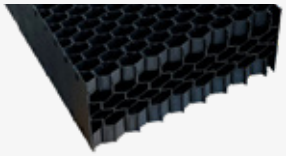
The TR.U.S.T. (Tridimensional Ultimate Splash Type) filling system consists of modular elements, manufactured in high-thickness polypropylene, which work on the "SPLASH" principle. Ilmed Impianti has designed this special filling system for polluted water with high levels of suspended solids. The modular feature facilitates the handling and cleaning during maintenance. The TR.U.S.T. System is the natural evolution of the traditional grid system, thus defining new levels of strength, ease of installation, performance and durability.



> WATER DISTRIBUTION SYSTEM

The water to be cooled enters the module through one or two flanged connections and is uniformly distributed on the filling system through the main pipe and a set of secondary plastic tubes. The nozzles are fixed by means of a threaded connection; their dimensions are factory selected to deliver the design water flow and best performances. The size of the inner diameter prevents any risk of clogging.

> DRIFT ELIMINATORS



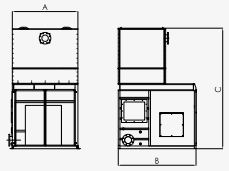
The drift eliminators are made of modular elements in PVC or PP sheets.
Their excellent efficiency reduces drift losses below 0.005% of circulating water.

> OTHER MANUFACTURING FEATURES AND OPTIONALS

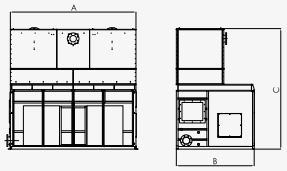
All cooling towers are equipped with inspection doors that ensure easy access to the fan group and to the water collection basin. Upon request, all towers can be provided with options, such as:

- ✓ Vibration switches to monitor excessive vibrations (vibraswitch)
- ✓ Automatic water make-up or purging systems
- ✓ VFD fan control panel
- ✓ Automatic dosing system for biocidal products and algaecides
- ✓ Basin resistance heating elements for low temperature applications
- ✓ Basin level probe/switch
- ✓ Rectangular air inlet and outlet silencers

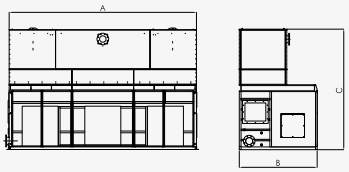
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/B10/01/N	3	1	1	1,5	1280	1600	2260
ITC/B10/02/N	3,4	1	1	2,2	1280	1600	2260
ITC/B10/03/N	3,7	1	1	3	1280	1600	2260
ITC/B11/02/N	3,7	1	1	3	1280	1600	2560



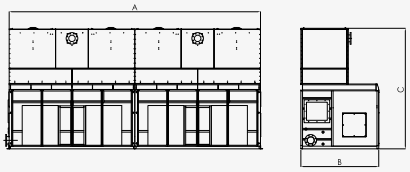
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/B20/03/N	5,9	2	1	3	2480	1600	2260
ITC/B20/04/N	6,5	2	1	4	2480	1600	2260
ITC/B21/04/N	6,4	2	1	4	2480	1600	2560
ITC/B21/05/N	7,1	2	1	5,5	2480	1600	2560



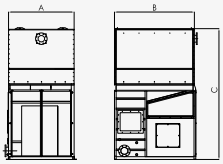
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/B30/04/N	8,7	3	1	4	3680	1600	2260
ITC/B30/05/N	9,6	3	1	5,5	3680	1600	2260
ITC/B31/05/N	9,3	3	1	5,5	3680	1600	2560
ITC/B31/06/N	10,3	3	1	7,5	3680	1600	2560



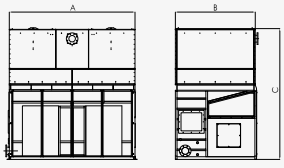
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/B40/03/N	11,8	4	2	3	4880	1600	2260
ITC/B40/04/N	13	4	2	4	4880	1600	2260
ITC/B41/04/N	12,8	4	2	4	4880	1600	2560
ITC/B41/05/N	14,2	4	2	5,5	4880	1600	2560



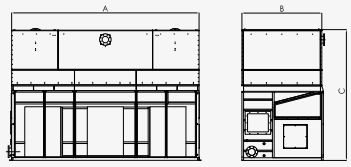
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D21/07/N	14,8	1	1	11	2480	2380	3800
ITC/D21/08/N	16,5	1	1	15	2480	2380	3800
ITC/D22/08/N	16,1	1	1	15	2480	2380	4100
ITC/D22/09/N	17,2	1	1	18,5	2480	2380	4100
ITC/C21/07/N	13	1	1	11	2480	2180	3800
ITC/C21/08/N	14,5	1	1	15	2480	2180	3800
ITC/C22/08/N	14,3	1	1	15	2480	2180	4100
ITC/C22/09/N	15,2	1	1	18,5	2480	2180	4100



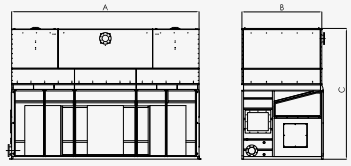
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D31/07/N	22,5	2	1	11	3680	2380	3800
ITC/D31/08/N	25	2	1	15	3680	2380	3800
ITC/D32/08/N	24,5	2	1	15	3680	2380	4100
ITC/D32/09/N	26,1	2	1	18,5	3680	2380	4100
ITC/C31/07/N	19,8	2	1	11	3680	2180	3800
ITC/C31/08/N	22	2	1	15	3680	2180	3800
ITC/C32/08/N	21,6	2	1	15	3680	2180	4100
ITC/C32/09/N	23,3	2	1	18,5	3680	2180	4100



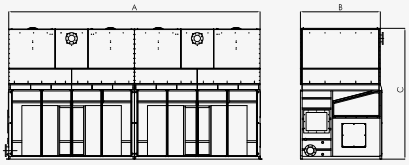
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D41/07/N	23,9	3	1	11	4880	2380	3800
ITC/D41/08/N	26,5	3	1	15	4880	2380	3800
ITC/D42/08/N	27,4	3	1	15	4880	2380	4100
ITC/D42/09/N	28	3	1	18,5	4880	2380	4100
ITC/C41/07/N	23,4	3	1	11	4880	2180	3800
ITC/C41/08/N	26,1	3	1	15	4880	2180	3800
ITC/C42/08/N	25,7	3	1	15	4880	2180	4100
ITC/C42/09/N	27,4	3	1	18,5	4880	2180	4100



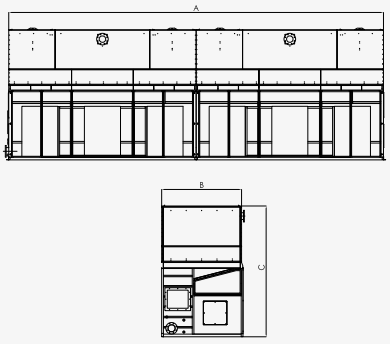
MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D51/07/N	25,5	3	1	11	5480	2380	3800
ITC/D51/08/N	28,4	3	1	15	5480	2380	3800
ITC/D52/08/N	28	3	1	15	5480	2380	4100
ITC/D52/09/N	30	3	1	18,5	5480	2380	4100
ITC/C51/07/N	25,1	3	1	11	5480	2180	3800
ITC/C51/08/N	28,5	3	1	15	5480	2180	3800
ITC/C52/08/N	28	3	1	15	5480	2180	4100
ITC/C52/09/N	29,4	3	1	18,5	5480	2180	4100



MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D61/07/N	45	4	2	11	7360	2380	3800
ITC/D61/08/N	50	4	2	15	7360	2380	3800
ITC/D62/08/N	49	4	2	15	7360	2380	4100
ITC/D62/09/N	52,2	4	2	18,5	7360	2380	4100
ITC/C61/07/N	39,6	4	2	11	7360	2180	3800
ITC/C61/08/N	44	4	2	15	7360	2180	3800
ITC/C62/08/N	43,2	4	2	15	7360	2180	4100
ITC/C62/09/N	46,6	4	2	18,5	7360	2180	4100



MODEL	Air Flowrate	N. of Fans	N. of Motors	Motor Power	Dimensions		
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D71/07/N	51	6	2	11	10960	2380	3800
ITC/D71/08/N	56,8	6	2	15	10960	2380	3800
ITC/D72/08/N	56	6	2	15	10960	2380	4100
ITC/D72/09/N	60	6	2	18,5	10960	2380	4100
ITC/C71/07/N	50,2	6	2	11	10960	2180	3800
ITC/C71/08/N	57	6	2	15	10960	2180	3800
ITC/C72/08/N	56	6	2	15	10960	2180	4100
ITC/C72/09/N	58,8	6	2	18,5	10960	2180	4100



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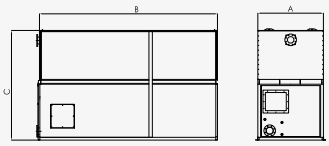
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/A50/06/R	11,6	1	1	7,5	1280	5480	2100
ITC/A50/07/R	13,1	1	1	11	1280	5480	2100
ITC/A51/08/R	14,2	1	1	15	1280	5480	2400
ITC/A51/09/R	15,1	1	1	18,5	1280	5480	2400



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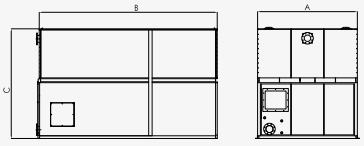
	[m3/s]	*[-]*	*[-]*	*[kW]*	*A [mm]*	*B [mm]*	*C [mm]*
ITC/D50/09/R	24	2	1	18,5	2380	5480	2100
ITC/D50/10/R	25,4	2	1	22	2380	5480	2100
ITC/D51/10/R	24,8	2	1	22	2380	5480	2400
ITC/D51/11/R	27,5	2	1	30	2380	5480	2400



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