



# MCT

## COOLING TOWERS

Open circuit with centrifugal fan

**TORRAVAL**  
cooling



## MCT SERIES COOLING TOWERS



The MCT series cooling towers, the construction of which is based upon the concept of complete corrosion resistance characteristic of the whole TORRAVAL product range, offer a solution principally featuring high material quality and low sound levels, which can be further reduced by installing sound attenuators.

The MCT series covers a small-medium cooling capacity range approx. between 28 kw and 1500 kw (inlet 34°C, outlet 29°C, wet bulb 24°C).



### FIELDS OF APPLICATION

The MCT series cooling towers, unique in their capacity category for being manufactured using predominantly corrosion-free plastic materials, find main application in all those situations in which noise criteria are particularly important owing to the location of the installation.

Some examples:

- Building air conditioning.
- Plants, even if industrial, installed in the proximity of residential areas.

### SPECIAL VERSIONS FOR MCT SERIES

As outlined above, the evaporative cooling towers of this series are predominantly employed in air conditioning and refrigeration installations, but also industrial applications with significant low noise criteria are not to be excluded. Just as for all the other TORRAVAL series

produced for industrial use, it is therefore possible to have MCT towers in the high temperature (ATT) version, that for partially dirty water (n) and that for very dirty water (gs), as well as combined versions.

### CONSTRUCTION CHARACTERISTICS

MCT models are characterised by the casing, which also includes in its single-piece structure the cold water collection basin, entirely manufactured from fibreglass and produced by lamination on a specially prepared mould.

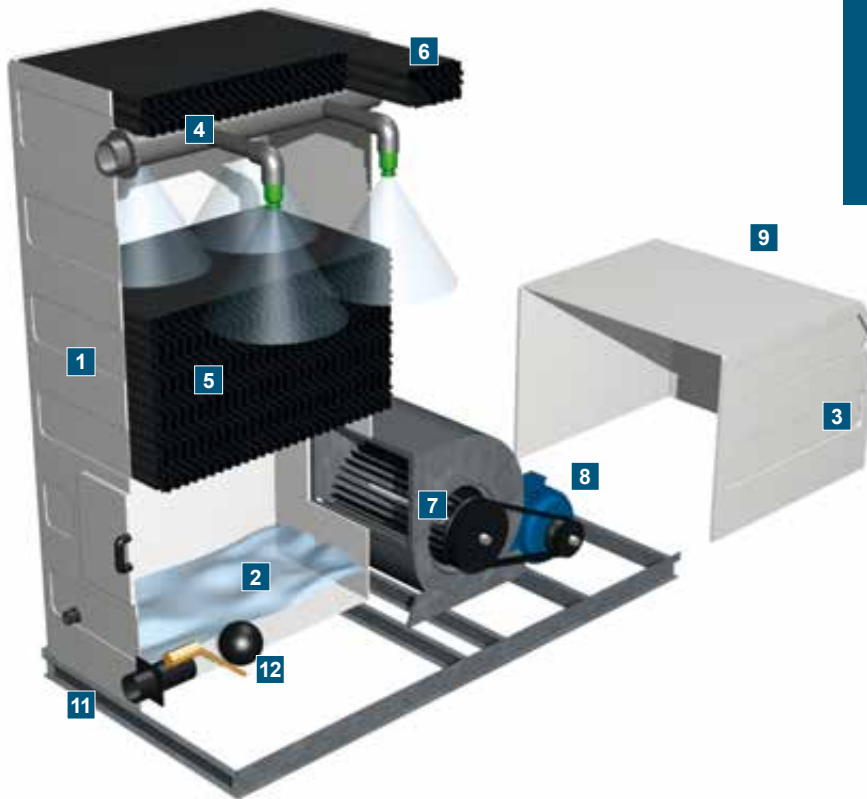
The tower casing, the protective cover and the motor-fan assembly are anchored to a robust steel framework, hot-dip galvanized after fabrication, using exclusively stainless steel nuts and bolts.

### OPTIONAL ACCESSORIES AND CONSTRUCTION VARIANTS

The following optional accessories and construction variants are available on request for all models:

- Three-phase electrical basin-heater with regulating thermostat.
- Minimum level cut-out switch.
- Two-speed motor (usually 4/8 pole) or capacity control system with inverter.
- Air intake and discharge sound attenuators with baffles.
- Electric control and regulating panel.

# CONSTRUCTION DETAILS



## 1 Casing

*Material:*

Fibreglass.

*Characteristics:*

- Non-corroding.
- Self-supporting single-piece structure, including the water collection basin.
- External protection against u.v. radiation, with orthophthalic gel-coat.

## 2 Water collection basin

*Material:*

Fibreglass.

*Characteristics:*

- Non-corroding.
- Integrated within the tower as a single piece.
- External protection against u.v. radiation, with orthophthalic gel-coat.

## 3 Fan protection cover

*Material:*

Fibreglass.

*Characteristics:*

- Non-corroding.
- External protection against u.v. radiation, with orthophthalic gel-coat.

## 4 Hot water distribution system

*Material:*

PVC pipes, polypropylene nozzles.

*Characteristics:*

- Non-corroding.
- Uniform and complete spraying of the heat exchange surface / fill pack.
- Non-clogging nozzles with large openings and full cone spray.

## 5 Fill pack

(or heat exchange surface)

*Material:*

Not-rotting, self-extinguishing PVC.

*Characteristics:*

- Air/water channel /flute size of 12 mm, with high heat exchange efficiency.

## 6 Drift eliminator panels

*Material:*

Not-rotting, self-extinguishing PP.

*Characteristics:*

- High efficiency of separation of the water droplets entrained in the air discharged from the cooling tower.

## 7 Centrifugal fan and belt drive

*Material:*

Steel drive shaft, casing and blades in galvanized sheet steel, cast-iron pulleys, v-belts.

*Characteristics:*

- High efficiency.
- Low noise.

## 8 electric motor

*Characteristics:*

- IP55 protection, tropicalized winding.
- Multiple-voltage, multiple-frequency supply flexibility.
- B3 construction form.

## 9 Fan screen grille on the air intake

*Material:*

Aisi 304.

*Characteristics:*

- Non-corroding.
- Unaltered, long-lasting safety properties.

## 10 Hydrometer - bleed-off tap

*Material:*

PVC and Aisi 304.

*Characteristics:*

- Hydrometer in glycerine bath with Aisi 304 casing.
- In the absence of a flow rate meter this device offers an immediate check on, with a good approximation of the flow rate of the circulating water, on the basis of the nozzle pressure drop (equivalent to the pressure indicated by the hydrometer needle).
- Plastic bleed-off tap to control water hardness.

## 11 Drain and overflow connection

*Material:*

PVC.

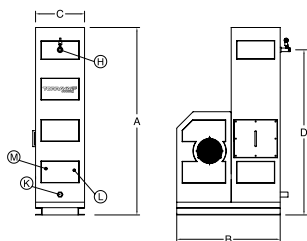
## 12 Make-up with float-valve

*Material:*

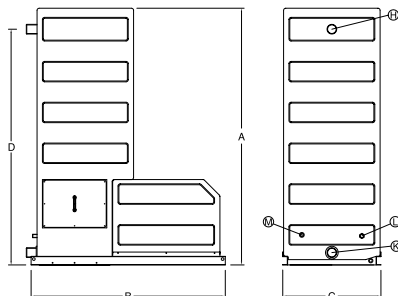
Brass.

# DIMENSIONS AND WEIGHTS

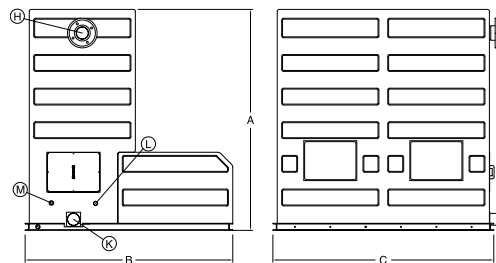
## MCT 25 - 45 SERIES



## MCT 300 - 400 SERIES



## MCT 800 - 1200 SERIES



Model	Dimensions				Water connections				Water tank m <sup>3</sup>	Weights	
	A mm	B mm	C mm	D mm	H Ø in	K Ø in	L Ø in	M Ø in		Empty kg	Operating kg
MCT 25	1720	950	450	1515	1 ¼"	1 ¼"	½"	¾"	0,08	103	178
MCT 45	1850	1200	600	1610	1 ½"	1 ½"	½"	1"	0,18	135	275
MCT 345	2390	1810	915	2195	2"	3"	1"	¾"	0,17	140	365
MCT 350	2390	1810	915	2195	2 ½"	3"	1"	¾"	0,17	142	367
MCT 360	2390	1810	915	2195	3"	3"	1"	¾"	0,17	147	372
MCT 365	2390	1810	915	2195	3"	3"	1"	¾"	0,17	149	374
MCT 375	2390	1810	915	2195	3"	3"	1"	¾"	0,17	154	379
MCT 380	2390	1810	915	2195	3"	3"	1"	¾"	0,17	157	382
MCT 460	2490	2240	1200	2280	2"	4"	1 ¼"	1"	0,36	198	606
MCT 465	2490	2240	1200	2280	2 ½"	4"	1 ¼"	1"	0,36	201	611
MCT 470	2490	2240	1200	2280	2 ½"	4"	1 ¼"	1"	0,36	205	615
MCT 475	2490	2240	1200	2280	2 ½"	4"	1 ¼"	1"	0,36	214	624
MCT 480	2490	2240	1200	2280	2 ½"	4"	1 ¼"	1"	0,36	220	630
MCT 860/1	2500	2350	2500	2230	2 ½"	5"	1 ¼"	1"	0,72	406	1226
MCT 865/1	2500	2350	2500	2230	2 ½"	5"	1 ¼"	1"	0,72	412	1232
MCT 870/1	2500	2350	2500	2230	2 ½"	5"	1 ¼"	1"	0,72	420	1240
MCT 875/1	2500	2350	2500	2230	2 ½"	5"	1 ¼"	1"	0,72	438	1258
MCT 880/1	2500	2350	2500	2230	2 ½"	5"	1 ¼"	1"	0,72	450	1270
MCT 1260	2500	2350	3700	2230	2"	5"	1 ½"	1 ½"	1,08	650	1970
MCT 1265	2500	2350	3700	2230	2"	5"	1 ½"	1 ½"	1,08	660	1975
MCT 1270	2500	2350	3700	2230	2 ½"	5"	1 ½"	1 ½"	1,08	665	1985
MCT 1275	2500	2350	3700	2230	2 ½"	5"	1 ½"	1 ½"	1,08	700	2010
MCT 1280	2500	2350	3700	2230	3"	5"	1 ½"	1 ½"	1,08	720	2030

Technical data not binding

For data concerning other versions, please write to [info@torraval.com](mailto:info@torraval.com)



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