



OPEN CIRCUIT COOLING TOWERS

For medium-large installations

TORRAVAL
cooling



PME K19 SERIES COOLING TOWER

The PME K19 series cooling towers are manufactured with a high thickness (3-5 mm) steel bearing frame, which is hot-dip galvanized after all works and with fibreglass sandwich panels of 22 mm thickness.

This kind of panel is made by a double laminated layer with supporting expanded material in between. This construction grants, also on large surfaces, a great mechanical strength and a good dropping water noise absorption.

The surface of the fibreglass, moreover, is protected by a gel-coat that is resistant to UV rays, hot and cold water and abrasion due to weather and chemicals.

The filling material is made of self-extinguishing PVC with 19 mm flute (for industrial waters). Other versions and materials are available.

The multi-blade axial fan grants high performances with low electrical power input.

The basin has a sloping bottom with rounded off corners, to enable an easy emptying to simplify its cleaning.

The PME K19 series includes several versions, all available with or without water basin. This series covers a capacity range (approximate cooling capacity referred to temperatures conditions 40°C in, 30°C out, 24°C wet bulb) **between 770 and 4.345 kW.**



ACCESSORIES AND CONSTRUCTION VARIANTS

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

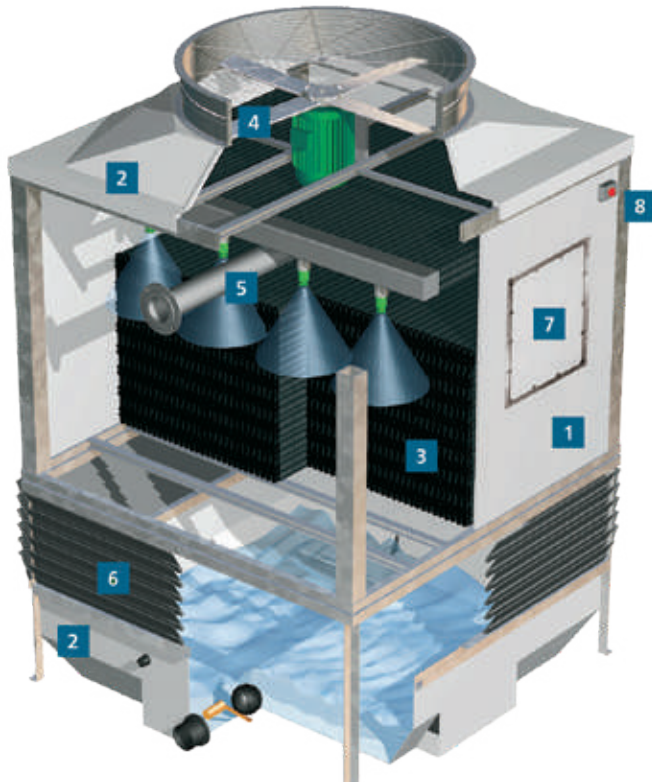
- Three-phase heating element with control thermostat.
- Minimum level cut-out switch.
- Control panel.
- Stainless steel metal parts. (instead of hot-dip galvanized steel)
- Manholes / removable side-walls to allow inspection, easy cleaning and maintenance to the internal components of the cooling tower.



THE PME K19 SERIES IS ALSO AVAILABLE IN OTHER VERSIONS

- **Silent**, to reduce the noise emissions (measured and calculated in compliance with ISO 3744 and EN 13487).
- **Container**, for an easy transportation optimising despatch volumes and reducing costs.
- **CW**, for clean water.
- **NVP**, for water containing moderate quantities of suspended solids.
- **GS**, for water containing high quantities of suspended solids.
- **ATT**, for high temperature water.





CONSTRUCTION DETAILS

1 Structure and casing

Material:

Bearing frame in hot-dip galvanized steel after all works, fibreglass sandwich panels, thickness 22 mm.

Characteristics:

- Great mechanical strength
- External fibreglass gel-coat protection resistant to UV rays, hot and cold water and abrasion due to weather and chemicals.
- Good noise absorption.
- Non-corroding.

2 Water basin (optional) and top cap

Material:

Orthophthalic polyester resin, reinforced with several layers of glass fibre matting.

Characteristics:

- External fibreglass gel-coat protection resistant to UV rays, hot and cold water and abrasion due to weather and chemicals.
- Internal waterproof protection thanks to an impermeable, water repellent, paraffin- containing orthophthalic gelcoat.
- Sloping bottom with rounded off corners, to enable an easy

- emptying to simplify its cleaning.
- Light-weight.
- Non-corroding.

3 Filling material (or heat exchange surface)

Material:

Self-extinguishing PVC or PP.

Characteristics:

- 19 mm flute (air/water passage).

4 Multi-blade axial fan

Material:

Motor support: hot dip galvanized steel (after all works), fan blades: plastic material reinforced with glass fibre, or aluminium, fan screening grid: stainless steel.

Characteristics:

- High performance, low electrical power input.
- Directly coupled to the electric motor.
- Unalterable safety over time thanks to the fan screening grid.
- Non-corroding.

5 Hot water distribution system

Material:

PN 10 unified PVC pipes, polypropylene nozzles.

Characteristics:

- Non-corroding.
- Uniform and total spraying of the heat exchange filling pack.
- TORRAVAL exclusive nozzles design, with non-clogging wide passages for a full cone spray.

6 Anti-splash louvers on air intake openings

Material:

Fibreglass louvers (on request: PP panels in a suitable galvanized steel frame).

Characteristics:

- Non-corroding.
- Easy to remove even after many years of use.

7 Manhole or totally removable side wall (optional)

Material:

Fibreglass sandwich panel, thickness 22 mm, in a suitable hot dip galvanized steel frame.

8 Junction box

Material:

Technopolymer.

Characteristics:

- Easy connection of the electric motor to the stream supply line.

9 Bolts, nuts and washers

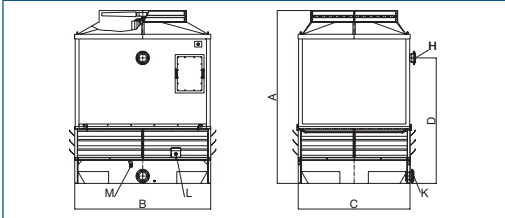
Material:

Acciaio inossidabile 304 (nessun utilizzo di bulloni autofilettanti).

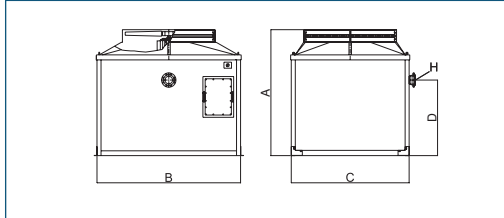
Characteristics:

- Non-corroding.
- Easy to remove even after many years of use.

PME-E K19 series, single fan with water basin



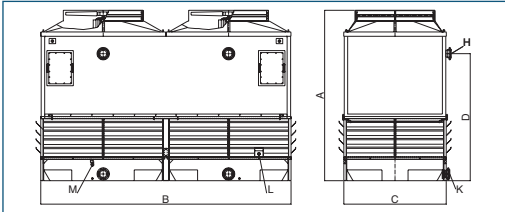
PME-E K19 series, single fan without water basin



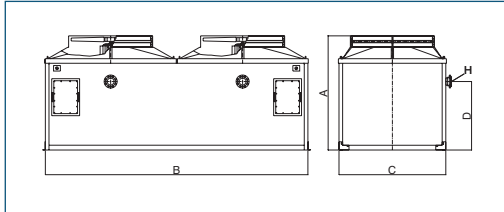
DIMENSIONS AND WEIGHTS

Model	dimensions				Water connections				Total nameplate fan motor power per model. kW	Weights	
	A mm	B mm	C mm	D mm	H Ø in	K Ø in	L Ø in	M Ø in		empty kg	in operation kg
with water basin											
PME 1803 E K19	3450	1865	1865	2150	5"	6"	1 1/2"	2"	5,5	645	1850
PME 1804 E K19	3450	1865	1865	2450	5"	6"	1 1/2"	2"	7,5	675	1880
PME 2053 E K19	3650	2030	2360	2350	5"	6"	1 1/2"	2"	4	930	2835
PME 2054 E K19	3650	2030	2360	2650	5"	6"	1 1/2"	2"	5,5	965	2870
PME 2403 E K19	3650	2360	2360	2350	6"	6"	1 1/2"	2"	5,5	1010	3230
PME 2404 E K19	3650	2360	2360	2650	6"	6"	1 1/2"	2"	7,5	1045	3265
PME 2853 E K19	3650	2870	2360	2350	6"	6"	1 1/2"	2"	7,5	1175	3880
PME 2854 E K19	3650	2870	2360	2650	6"	6"	1 1/2"	2"	11	1225	3930
PME 3103 E K19	3650	3120	2360	2350	6"	8"	1 1/2"	2"	11	1235	4160
PME 3104 E K19	3650	3120	2360	2650	6"	8"	1 1/2"	2"	11	1285	4210
PME 3353 E K19	3650	3370	2360	2350	6"	8"	1 1/2"	2"	11	1295	4490
PME 3354 E K19	3650	3370	2360	2650	6"	8"	1 1/2"	2"	11	1345	4540
PME 3603 E K19	3650	3620	2360	2350	6"	8"	1 1/2"	2"	11	1350	4760
PME 3604 E K19	3650	3620	2360	2650	6"	8"	1 1/2"	2"	15	1410	4820
without water basin											
PME 1803 E K19	2960	1865	1865	1660	5"				5,5	490	540
PME 1804 E K19	2960	1865	1865	1960	5"				7,5	520	570
PME 2053 E K19	2500	2010	2340	1200	5"				4	685	910
PME 2054 E K19	2500	2010	2340	1500	5"				5,5	720	945
PME 2403 E K19	2500	2340	2340	1200	6"				5,5	740	1025
PME 2404 E K19	2500	2340	2340	1500	6"				7,5	775	1060
PME 2853 E K19	2500	2850	2340	1200	6"				7,5	890	1215
PME 2854 E K19	2500	2850	2340	1500	6"				11	940	1265
PME 3103 E K19	3160	3120	2360	1860	6"				11	935	1265
PME 3104 E K19	3160	3120	2360	2160	6"				11	985	1315
PME 3353 E K19	2500	3350	2340	1200	6"				11	980	1360
PME 3354 E K19	2500	3350	2340	1500	6"				11	1030	1410
PME 3603 E K19	3160	3620	2360	1860	6"				11	1015	1390
PME 3604 E K19	3160	3620	2360	2160	6"				15	1075	1450

PME-E K19 series, double fan with water basin



PME-E K19 series, double fan without water basin



Model	Dimensions				Water connections				Total nameplate fan motor power per model kW	Weights	
	A mm	B mm	C mm	D mm	H Ø in	K Ø in	L Ø in	M Ø in		empty kg	in operation kg
with water basin											
PME 4103 E K19	3650	4080	2360	2350	2 x 5"	2 x 6"	2"	2"	8	1775	5580
PME 4104 E K19	3650	4080	2360	2650	2 x 5"	2 x 6"	2"	2"	11	1845	5650
PME 4803 E K19	3650	4750	2360	2350	2 x 6"	2 x 6"	2"	2"	11	1950	6395
PME 4804 E K19	3650	4750	2360	2650	2 x 6"	2 x 6"	2"	2"	15	2020	6465
PME 5703 E K19	3930	5770	2360	2630	2 x 6"	2 x 6"	2"	2"	15	2325	7740
PME 5704 E K19	3930	5770	2360	2930	2 x 6"	2 x 6"	2"	2"	22	2425	7840
PME 6203 E K19	3930	6270	2360	2630	2 x 6"	2 x 8"	2"	2"	22	2415	8270
PME 6204 E K19	3930	6270	2360	2930	2 x 6"	2 x 8"	2"	2"	22	2515	8370
PME 6703 E K19	3930	6770	2360	2630	2 x 6"	2 x 8"	2"	2"	22	2520	8900
PME 6704 E K19	3930	6770	2360	2930	2 x 6"	2 x 8"	2"	2"	22	2620	9000
PME 7203 E K19	3830	7270	2360	2530	2 x 6"	2 x 8"	2"	2"	22	2625	9440
PME 7204 E K19	3830	7270	2360	2830	2 x 6"	2 x 8"	2"	2"	30	2735	9550
without water basin											
PME 4103 E K19	2500	4060	2340	1200	2 x 5"				8	1335	1795
PME 4104 E K19	2500	4060	2340	1500	2 x 5"				11	1405	1865
PME 4803 E K19	2500	4730	2340	1200	2 x 6"				11	1460	2035
PME 4804 E K19	2500	4730	2340	1500	2 x 6"				15	1530	2105
PME 5703 E K19	2500	5750	2340	1200	2 x 6"				15	1755	2415
PME 5704 E K19	2500	5750	2340	1500	2 x 6"				22	1855	2515
PME 6203 E K19	3440	6270	2360	2140	2 x 6"				22	1835	2495
PME 6204 E K19	3440	6270	2360	2440	2 x 6"				22	1935	2595
PME 6703 E K19	2500	6750	2340	1200	2 x 6"				22	1920	2670
PME 6704 E K19	2500	6750	2340	1500	2 x 6"				22	2020	2770
PME 7203 E K19	3440	7270	2360	2140	2 x 6"				22	1990	2740
PME 7204 E K19	3440	7270	2360	2440	2 x 6"				30	2100	2850

For data concerning other versions, please write to info@torraval.com

Technical data not binding



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