

PMS PMD

Non-corroding cooling towers

PMS series
PMD



PMS - PMD Non-corroding cooling towers



■ PMS, PMD series cooling towers

The PMS and PMD cooling towers are built entirely in fibreglass (orthophthalic polyester resin, reinforced with several layers of glass fibre matting) in order to avoid the problems linked to corrosion frequently encountered with this type of product, since the tower is constantly in contact with water and exposed to the elements.

The structure is self-supporting and strengthened at the points of the greatest dynamic and static stress.

Moreover, the surface of the fibreglass is protected by a gelcoat that is resistant to UV rays, hot and cold water and abrasion due to weathering and chemical agents. The fill pack material inside is made from self-extinguishing PVC with 20 mm wide flute, especially suited to industrial applications. The multi-blade axial fan made in plastic material offers high performance with low electric power and low noise level.

With 17 different versions, all available with or without a water collection basin, for capacities approx. between 18 and 860 kW (indicative cooling capacity referred to a 5°C water temperature range).



■ Special versions

- **ATT** - for high temperature inlet water, with max peak temperature of 80°C
- **N** - for water containing modest quantities of suspended solids
- **N-ATT** - for water containing modest quantities of suspended solids and having high inlet temperature, with max peak temperature of 80 °C
- **GS** - for water containing large quantities of suspended solids

■ Accessories and construction variants

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

- non-clogging spray nozzles
- three-phase heater element with control thermostat
- minimum level cut-out switch
- two-speed motor with graduated thermostat, automatic cascade control panel, or control system with inverter



Construction details



1 Main casing, basin (optional) and top cap

Construction Materials:

- orthophthalic polyester resin, reinforced with several layers of glass fibre matting

Characteristics:

- self-supporting structure reinforced at points subject to greatest static and dynamic loads
- external surface protection via gelcoat resistant to UV rays, cold and hot water, abrasion due to weathering and chemical agents
- internal waterproofing with an impermeable, water repellent, paraffin-containing orthophthalic gelcoat (for basin)
- light-weight
- non-corroding

2 Fill pack material (or heat exchange surface)

Construction Materials:

- self-extinguishing PVC

Characteristics:

- 20 mm wide flute (air/water passage), especially suitable for industrial applications
- reinforced top surface for the better absorbing of dynamic stress created by the water sprayed by the nozzles under pressure

3 Multi-blade axial fan

Construction Materials:

- hot-galvanized steel (support), electric motor, fibreglass (fan blades), stainless steel (fan safety guard)

Characteristics:

- high performance, low electric power input
- directly driven by the electric motor
- constant safety, unaltered over time thanks to the protective safety grille

4 Visual inspection window

Construction Materials:

- nylon body, polycarbonate transparent window

5 Hot water distribution system

Construction Materials:

- unified PN 10 PVC pipes, polypropylene nozzles

Characteristics:

- non-corroding
- uniform and total spraying of the heat exchange - fill pack
- exclusive nozzle design, with large passages to guarantee non-clogging and a full cone spray

6 Hydrometer/bleed-off tap assembly

Construction Materials:

- PVC and AISI 304

Characteristics:

- hydrometer in glycerine bath with AISI 304 casing
- in the absence of a flow rate meter, this device offers immediate control and a good approximation of the flowrate of the circulating water, on the basis of the flow resistance offered by the nozzles (equal to the pressure indicated on the hydrometer)
- plastic bleed-off tap to control water hardness

7 Fan screen grille

Construction Materials:

- AISI 304/316

Characteristics:

- non-corroding
- unaltered, long-lasting protection/safety properties

8 Bolts, nuts and washers

Construction Materials:

- AISI 304 (no self-tappers used)

Characteristics:

- non-corroding
- easy to dismantle, even after many years of use



WATER FLOW / THERMAL CAPACITY

MODEL	WATER FLOW / THERMAL CAPACITY							
	Water ranges (°C) with wet bulb temperature 23°C							
	33° - 28°		38° - 28°		40° - 30°		50° - 30°	
m³/h	kW	m³/h	kW	m³/h	kW	m³/h	kW	
PMS 6/65	7	40,7	4,5	52,3	6	69,8	4	93,0
PMS 6/85	13	75,6	8	93,0	11	127,9	7,5	174,4
PMS 9/85	16	93,0	10	116,3	13,5	157,0	9,5	220,9
PMS 6/110	20	116,3	12,5	145,3	17	197,7	12	279,1
PMS 9/110	24	139,5	16	186,0	21	244,2	15	348,8
PMS 6/130	29	168,6	18,5	215,1	24,5	284,9	17	395,3
PMS 9/130	35	203,5	23	267,4	30,5	354,7	22	511,6
PMS 8/180	55	319,8	36,5	424,4	47,5	552,3	34,5	802,3
PMS 10/180	58,5	340,1	39,5	459,3	51,5	598,8	37,5	872,1
PMS 8/240	70	407,0	46,5	540,7	61	709,3	44	1.023,3
PMS 10/240	75	436,0	50,5	587,2	66	767,4	48	1.116,3
PMS 8/260	88	511,6	58	674,4	76,5	889,5	55	1.279,1
PMS 10/260	94	546,5	63	732,6	82,5	959,3	60	1.395,3
PMD 8/280	105,5	613,4	70	814,0	91,5	1.064,0	66	1.534,9
PMD 10/280	113	657,0	76	883,7	99	1.151,2	72,5	1.686,0
PMD 8/360	140,5	816,9	93	1.081,4	122,5	1.424,4	88,5	2.058,1
PMD 10/360	150,5	875,0	101	1.174,4	132	1.534,9	96,5	2.244,2

MODEL	WATER FLOW / THERMAL CAPACITY							
	Water ranges (°C) with wet bulb temperature 24°C							
	34° - 29°		38° - 28°		40° - 30°		50° - 30°	
m³/h	kW	m³/h	kW	m³/h	kW	m³/h	kW	
PMS 6/65	7,5	43,6	4	46,5	5,5	64,0	4	93,0
PMS 6/85	13,5	78,5	7	81,4	10	116,3	7	162,8
PMS 9/85	16	93,0	9	104,7	12,5	145,3	9	209,3
PMS 6/110	21	122,1	11	127,9	15,5	180,2	11	255,8
PMS 9/110	25,5	148,3	14	162,8	19,5	226,7	14	325,6
PMS 6/130	30	174,4	16	186,0	22,5	261,6	16	372,1
PMS 9/130	36,5	212,2	20,5	238,4	28	325,6	20,5	476,7
PMS 8/180	57,5	334,3	32,5	377,9	44	511,6	32	744,2
PMS 10/180	61,5	357,6	35	407,0	47,5	552,3	35	814,0
PMS 8/240	73,5	427,3	41,5	482,6	56	651,2	41	953,5
PMS 10/240	78,5	456,4	45	523,3	61	709,3	45	1.046,5
PMS 8/260	92	534,9	52	604,7	70,5	819,8	51,5	1.197,7
PMS 10/260	98,5	572,7	56,5	657,0	76	883,7	56,5	1.314,0
PMD 8/280	110,5	642,4	62	720,9	84,5	982,6	62	1.441,9
PMD 10/280	118	686,0	68	790,7	91,5	1.064,0	67,5	1.569,8
PMD 8/360	147	854,7	83	965,1	112,5	1.308,1	82,5	1.918,6
PMD 10/360	157,5	915,7	90,5	1.052,3	122	1.418,6	90	2.093,0

MODEL	WATER FLOW / THERMAL CAPACITY							
	Water ranges (°C) with wet bulb temperature 25°C							
	35° - 30°		38° - 28°		40° - 30°		50° - 30°	
m³/h	kW	m³/h	kW	m³/h	kW	m³/h	kW	
PMS 6/65	7,5	43,6	3,5	40,7	5	58,1	3,5	81,4
PMS 6/85	14	81,4	6	69,8	9	104,7	6,5	151,2
PMS 9/85	17	98,8	8	93,0	11	127,9	8	186,0
PMS 6/110	22	127,9	9,5	110,5	14	162,8	10	232,6
PMS 9/110	26,5	154,1	12,5	145,3	17,5	203,5	13	302,3
PMS 6/130	31,5	183,1	14	162,8	20,5	238,4	14,5	337,2
PMS 9/130	38,5	223,8	18	209,3	25,5	296,5	19	441,9
PMS 8/180	60	348,8	28	325,6	40	465,1	29,5	686,0
PMS 10/180	64	372,1	30,5	354,7	43,5	505,8	32,5	755,8
PMS 8/240	77	447,7	36	418,6	51	593,0	38	883,7
PMS 10/240	82	476,7	39,5	459,3	55,5	645,3	41,5	965,1
PMS 8/260	96	558,1	45	523,3	64	744,2	47,5	1.104,7
PMS 10/260	103	598,8	49	569,8	69,5	808,1	52	1.209,3
PMD 8/280	115	668,6	54	627,9	77	895,3	57	1.325,6
PMD 10/280	123	715,1	59	686,0	83,5	970,9	62,5	1.453,5
PMD 8/360	154	895,3	72	837,2	102,5	1.191,9	76	1.767,4
PMD 10/360	164	953,5	79	918,6	111	1.290,7	83,5	1.941,9

TECHNICAL CHARACTERISTICS

**PMS series
PMD**

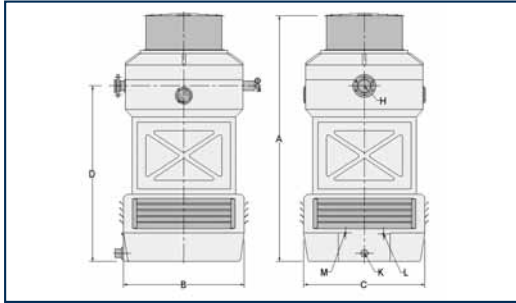
MODEL	NUMBER OF FAN	FAN DIAMETER	AIR VOLUME PER FAN		ELECTRIC MOTOR CHARACTERISTICS			
					INSTALLED POWER		POLES	R.P.M.
	no.	mm	m ³ /h	kg/h	kW	HP	no.	no.
PMS 65	1	510	4300	4950	0,55	0,75	4	1500
PMS 85	1	610	7100	8200	0,75	1,1	4	1500
PMS 110	1	800	12000	13800	1,1	1,5	6	1000
PMS 130	1	870	17000	19500	1,5	2,0	6	1000
PMS 180	1	920	26000	30000	2,2	3,0	6	1000
PMS 240	1	1020	36000	41400	4,0	5,5	6	1000
PMS 260	1	1120	45000	54000	4,0	5,5	6	1000
PMD 280	2	920	24000	55200	2,2 x 2	3,0 x 2	6	1000
PMD 360	2	1020	36000	82800	4,0 x 2	5,5 x 2	6	1000

MODEL	SOUND POWER LEVEL	SOUND PRESSURE LEVEL db(A)					
		DISTANCE					
	db(A)	1mt	5mt	10 mt	15mt	20mt	25mt
PMS 65	74	66	52	46	42,5	40	38
PMS 85	75	67	53	47	43,5	41	39
PMS 110	75	67	53	47	43,5	41	39
PMS 130	77	69	55	49	45,5	43	41
PMS 180	80	72	58	52	48,5	46	44
PMS 240	83	75	61	55	51,5	49	47
PMS 260	85	77	63	57	53,5	51	49
PMD 280	83	75	61	55	51,5	49	47
PMD 360	86	78	64	58	54,5	52	50

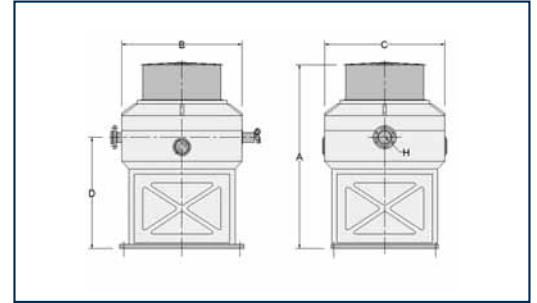


DIMENSIONS AND WEIGHTS

PMS series with basin

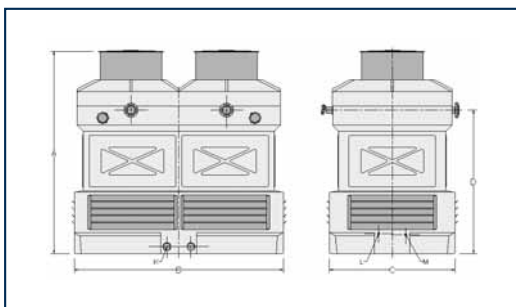


PMS series without basin

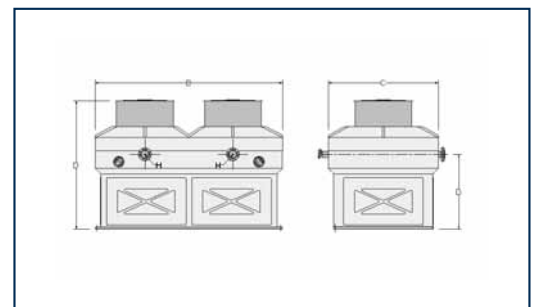


MODEL	DIMENSIONS				WATER CONNECTIONS				Water tank volume	WEIGHTS	
	A	B	C	D	H Ø	K Ø	L Ø	M Ø		empty	in operation
	mm	mm	mm	mm	in	in	in	in	m³	kg	kg
With basin											
PMS 6/65	2110	800	800	1510	2"	2"	3/4"	1/2"	0,1	75	180
PMS 6/85	2595	1000	1000	1940	2 1/2"	2 1/2"	3/4"	1/2"	0,23	85	215
PMS 9/85	2595	1000	1000	1940	2 1/2"	2 1/2"	3/4"	1/2"	0,23	95	285
PMS 6/110	2800	1200	1200	2050	3"	3"	1"	3/4"	0,28	155	470
PMS 9/110	2800	1200	1200	2050	3"	3"	1"	3/4"	0,28	170	485
PMS 6/130	2860	1400	1400	2040	4"	4"	1"	3/4"	0,57	195	755
PMS 9/130	2860	1400	1400	2040	4"	4"	1"	3/4"	0,57	210	780
PMS 8/180	3140	1740	1740	2285	4"	4"	1 1/4"	1"	0,77	380	1380
PMS 10/180	3140	1740	1740	2285	4"	4"	1 1/4"	1"	0,77	410	1410
PMS 8/240	3380	2100	1900	2400	4"	5"	1 1/4"	1 1/4"	1,11	500	1800
PMS 10/240	3380	2100	1900	2400	4"	5"	1 1/4"	1 1/4"	1,11	525	1825
PMS 8/260	3450	2300	2100	2400	5"	6"	1 1/2"	1 1/2"	1,36	555	1955
PMS 10/260	3450	2300	2100	2400	5"	6"	1 1/2"	1 1/2"	1,36	580	1980
Without basin											
PMS 6/65	1560	770	770	960	2"	-	-	-	-	60	80
PMS 6/85	1895	980	980	1240	2 1/2"	-	-	-	-	65	90
PMS 9/85	1895	980	980	1240	2 1/2"	-	-	-	-	75	100
PMS 6/110	2140	1215	1215	1395	3"	-	-	-	-	120	170
PMS 9/110	2140	1215	1215	1395	3"	-	-	-	-	135	185
PMS 6/130	2080	1360	1360	1260	4"	-	-	-	-	150	210
PMS 9/130	2080	1360	1360	1260	4"	-	-	-	-	165	225
PMS 8/180	2275	1710	1710	1425	4"	-	-	-	-	295	410
PMS 10/180	2275	1710	1710	1425	4"	-	-	-	-	325	440
PMS 8/240	2330	2010	1810	1355	4"	-	-	-	-	405	510
PMS 10/240	2330	2010	1810	1355	4"	-	-	-	-	430	535
PMS 8/260	2400	2210	2010	1355	5"	-	-	-	-	465	575
PMS 10/260	2400	2210	2010	1355	5"	-	-	-	-	490	600

PMD series with basin



PMD series without basin



MODEL	DIMENSIONS				WATER CONNECTIONS				Water tank volume	WEIGHTS	
	A	B	C	D	H Ø	K Ø	L Ø	M Ø		empty	in operation
	mm	mm	mm	mm	in	in	in	in	m³	kg	kg
With basin											
PMD 8/280	3390	2700	2100	2400	2 x 4"	2 x 4"	1 1/4"	1"	1,5	600	2050
PMD 10/280	3390	2700	2100	2400	2 x 4"	2 x 4"	1 1/4"	1"	1,5	630	2130
PMD 8/360	3380	3500	2100	2400	2 x 4"	2 x 5"	1 1/4"	1"	2,0	810	2820
PMD 10/360	3380	3500	2100	2400	2 x 4"	2 x 5"	1 1/4"	1"	2,0	850	2900
Without basin											
PMD 8/280	2340	2710	2110	1360	2 x 4"	-	-	-	-	475	655
PMD 10/280	2340	2710	2110	1360	2 x 4"	-	-	-	-	505	685
PMD 8/360	2330	3410	2000	1360	2 x 4"	-	-	-	-	660	910
PMD 10/360	2330	3410	2000	1360	2 x 4"	-	-	-	-	700	950

Technical data not binding - please contact MITA Technical Dept. for full details.



Via Antonio M. Fontana, 1
Tel. +39 0382.67.599
www.mita-tech.it

I - 27010 Siziano (PV)
Fax +39 0382.617.640
e-mail: info@mita-tech.it

