GENIUS
Cooling Tower

MEMBER

FRP Cooling Tower

- Rectangular
- Induced Draft
- Cross Flow
- Modular Series
- Energy Saving
- Space Saving
- Custom Design

Job Reference









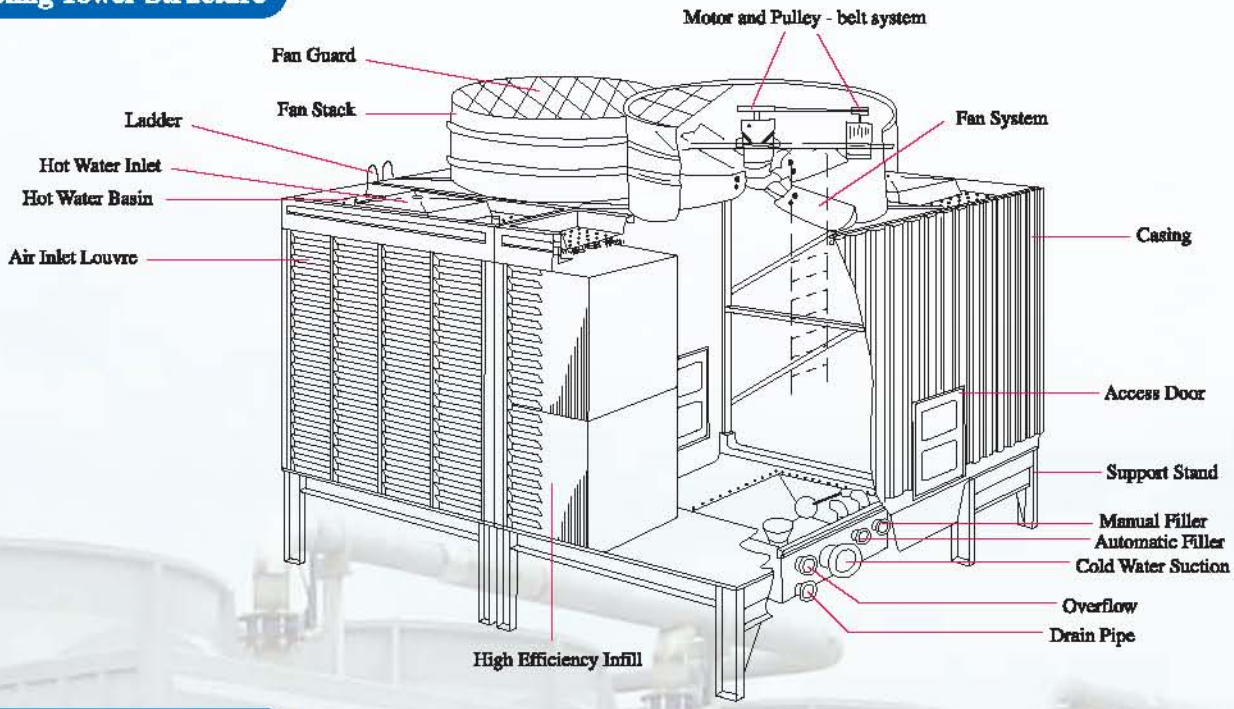








Cooling Tower Structure



Components and Feature

Low Noise Fan

Aerofoil-shaped axial fan blades are constructed from fiberglass reinforced polyester (FRP) by using high-grade chemical and weather resistant material with pre layer epoxy coating for the resistance of ultra vialet ray. The fan hub is constructed from aluminum cast alloy.

All FRP fan sets are completed with factory preset fan pitch, static and dynamic balancing test.

Infill

Filler is vacunm-from PVC film patented with indicate design for higher heat rejection.
The infill is enhanced with UV absorber and antioxidant stabilizer to enhance lifespan and durability and suitable for inlet hot water temperature operation up to 55°C
Infill block are bonded in compact small package design for easier handling and take out cleaning purpose.

Tower Steel Frame

All the cooling tower supporting steel and frames are hot dip galvanized and assembly by using stainless steel bolt and nuts to ensure corrosion resistance for longer life span.

Space saving and light weight

Cross flow type cooling tower is designed with space saving concept with lower drift loss and noise level compare to conventional type (counter-flow) cooling tower.

Casing and Basing

The casing, hot and cold water distribution basin are made of FRP, an excellent non corrosive material.
Slopping cold water basin and depressed water sump provide complete self-leaning during wash-down.

Access Door / Internal walkway

Access door and internal walkway is furnished to provide convenient access into cooling tower for inspection and maintanence.

Technical Data For GPC Series (Low Noise Type)

Item			Single Cell							Two Cells					Three Cells			Four Cells		
			GPC 100	GPC 125	GPC 150	GPC 175	GPC 200	GPC 225	GPC 250	GPC 300	GPC 350	GPC 400	GPC 450	GPC 500	GPC 600	GPC 700	GPC 750	GPC 800	GPC 900	GPC 1000
Capacity	Cooling Capacity	HRT	100	125	150	175	200	225	250	300	350	400	450	500	600	700	750	800	900	1000
	Heat Rejection	Kcal/Hr	390000	487500	585000	682500	780000	877500	975000	1170000	1365000	1560000	1750000	1950000	2340000	2730000	2925000	3120000	3510000	3900000
	Circulation Water	M^3/Hr	78	98	117	137	156	175	195	234	274	312	350	390	468	545	585	624	700	780
Overall Dimension	Width (W)	mm	3300		3700		4000	4400		3700		4000	4400		4000	4400		4000	4400	
	Length (L)	mm	1910		1910		2110	2505		3820		4220	5010		6330	7515		8440	10020	
	Height (H)	mm	3500		3500		3500	3500		3500		3500	3500		3500	3500		3500	3500	
Components Materials	Steel Frame		Hot Dipped Galvanised Steel																	
	Casing		FRP																	
	Filler Media		PVC																	
	Distribution Basin		FRP																	
	Cold Water Basin		FRP																	
	Water Sump		FRP																	
	Fan		Fan Blade: FRP Hub: Aluminium Cast Alloy																	
	Fan Stack		FRP																	
Fan Assembly	Fan: Type		Axial Flow																	
	Fan: Diameter x Nos	mm	1300 x 1		1500 x 1		1800 x 1	2000 x 1		1500 x 2		1800 x 2	2000 x 2		1800 x 3	2000 x 3		1800 x 4	2000 x 4	
	Fan: Number of Blades		4												4					
	Fan: Fan Speed (Approx.)	rpm	480	520	435	510	490	360	410	435	510	490	360	410	490	410	410	490	360	410
	Fan: Drive System		V-belt Drive System																	
	Motor: Power Source		415 V / 3 Ph / 50 Hz																	
	Motor: Type		Totally enclosed fan cooled 3 phase induction motor, 4 pole																	
	Motor: Rated Output x Qty (Kw)		2.2 x 1	3.7 x 1		5.5 x 1		7.5 x 1		3.7 x 2		5.5 x 2		7.5 x 2	5.5 x 3	7.5 x 3		5.5 x 4		7.5 x 4
Inlet Distribution	Open Gravity Type		Open Travity Type																	
Piping Dimension	Inlet, mm		100 x 2				125 x 2			100 x 4		125 x 4			125 x 6			125 x 8		
	Outlet, mm		125 x 1		150 x 1		200 x 1			250 x 1					200 x 2			250 x 2		
	Drain Pipe, mm		50 x 1							50 x 1					50 x 2			50 x 2		
	Overflow, mm		50 x 1							50 x 1					50 x 2			50 x 2		
	Auto Make-up, mm		25 x 1							40 x 1		50 x 1			40 x 2			50 x 2		
	Manual Make-up mm		25 x 1							40 x 1		50 x 1			40 x 2			50 x 2		
Make-up	Evaporation Loss, %		0.98																	
	Drift loss, %		0.02																	
Weight	Dry	Kg	985	995	1250	1270	1300	1500	1550	2400	2430	2510	2900	2940	3800	4320	4330	5200	6000	6200
	Operation	Kg	2150	2160	2630	2680	2850	3720	3770	5100	5140	5600	6900	7200	8500	10900	11000	11400	14500	14800

Note:

1. Norminal cooling capacity is based on 13ℓ / min / RT (1 RT =3,900 Kcal / hr) at 37°C CHW, 32°CCW and 27°CWB.
2. The pump head required is apporoximately the height at the cooling tower.
3. Manufacturer reserve the right to change the technical data for improvement of products without prior notice.

Technical Data For GPC-S Series (Super Low Noise Type)

Item			Single Cell							Two Cells					Three Cells			Four Cells		
			GPC 100S	GPC 125S	GPC 150S	GPC 175S	GPC 200S	GPC 225S	GPC 250S	GPC 300S	GPC 350S	GPC 400S	GPC 450S	GPC 500S	GPC 600S	GPC 700S	GPC 750S	GPC 800S	GPC 900S	GPC 1000S
Capacity	Cooling Capacity	HRT	100	125	150	175	200	225	250	300	350	400	450	500	600	700	750	800	900	1000
	Heat Rejection	Kcal/Hr	390,000	487,500	585,000	682,500	780,000	877,500	975,000	1,170,000	1,365,000	1,560,000	1,750,000	1,950,000	2,340,000	2,730,000	2,925,000	3,120,000	3,510,000	3,900,000
	Circulation Water	M^3/Hr	78	98	117	137	156	175	195	234	274	312	350	390	468	545	585	624	700	780
Overall Dimension	Width (W)	mm	3300		3700		4000	4400		3700		4000	4400		4000	4400		4000	4400	
	Length (L)	mm	1910		1910		2110	2505		3820		4220	5010		6330	7515		8440	10020	
	Height (H)	mm	3850		3850		3850	3850		3850		3850	3850		3850	3850		3850	3850	
Components Materials	Steel Structure		Hot Dipped Galvanised Steel																	
	Casing		FRP																	
	Filler Media		PVC																	
	Distribution Basin		FRP																	
	Cold Water Basin		FRP																	
	Water Sump		FRP																	
	Fan		Fan Blade: FRP ; Fan Hub ; Aluminium Cast Alloy																	
	Fan Stack		FRP																	
Fan Assembly	Fan	Type	Axial Flow																	
		Diameter x Nos mm	1300 x 1		1500 x 1		1700 x 1	2000 x 1		1500 x 2		1700 x 2	2000 x 2		1700 x 3	2000 x 3		1700 x 4	2000 x 4	
		Number of Blades	4												4					
		Fan Speed (Approx.) rpm	390	415	410	430	460	325	360	410	430	460	350	360	460	350	360	460	350	360
		Drive System	V-belt Drive System																	
	Motor	Power Source	415 V / 3 Ph / 50 Hz																	
		Type	Totally Enclosed Fan Cooled (TEFC) 3 Phase Induction Motor, 4 Pole																	
		Rated Output x Qty (Kw)	2.2 x 1	3.7 x 1		5.5 x 1			7.5 x 1	3.7 x 2	5.5 x 2			7.5 x 2	5.5 x 3	7.5 x 3		5.5 x 4		7.5 x 4
Inlet Distribution	Open Gravity Type		Open Travity Type																	
Piping Dimension	Inlet, mm		100 x 2				125 x 2			100 x 4		125 x 4			125 x 6			125 x 8		
	Outlet, mm		125 x 1		150 x 1			200 x 1				250 x 1			200 x 2			250 x 2		
	Drain Pipe, mm		50 x 1							50 x 1					50 x 2			50 x 2		
	Overflow, mm		50 x 1							50 x 1					50 x 2			50 x 2		
	Auto Make-up, mm		25 x 1							40 x 1		50 x 1			40 x 2			50 x 2		
	Manual Make-up mm		25 x 1							40 x 1		50 x 1			40 x 2			50 x 2		
Make-up	Evaporation Loss, %		0.98																	
	Drift loss, %		0.02																	
Weight	Dry	Kg	1100	1150	1280	1300	1520	1550	1550	2390	2450	2900	2930	2950	4480	4980	4980	5980	6100	6200
	Operation	Kg	2380	2400	2780	2790	3500	3720	3770	5320	5380	6900	6930	6950	10900	10980	10990	14500	14500	14800

Note:

1. Norminal cooling capacity is based on 13ℓ / min / RT (1 RT =3,900 Kcal / hr) at 37°C CHW, 32°CCW and 27°CWB.
2. The pump head required is apporoximately the height at the cooling tower.
3. Manufacturer reserve the right to change the technical data for improvement of products without prior notice.

Technical Data For GPC-C Series (Compact Type)

Item			Single Cell		Two Cells		Three Cells		Four Cells		Five Cells		Six Cells		Seven Cells	
			GPC 280 C	GPC 320 C	GPC 560 C	GPC 640 C	GPC 840 C	GPC 960 C	GPC 1120 C	GPC 1280 C	GPC 1400 C	GPC 1600 C	GPC 1680 C	GPC 1920 C	GPC 1960 C	GPC 2240 C
Capacity	Cooling Capacity	HRT	280	320	560	640	840	960	1120	1280	1400	1600	1680	1920	1960	2240
	Heat Rejection	Kcal/Hr	835,000	960,000	1,665,000	1,930,000	2,500,000	2,880,000	3,372,000	3,860,000	4,790,000	4,810,000	5,030,000	5,760,000	5,870,000	6,760,000
	Circulation Water	M^3/Hr	148	165	298	320	420	500	590	675	720	850	880	990	1020	1200
Overall Dimension	Width (W)	mm	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400	4400
	Length (L)	mm	2505	2505	5010	5010	7515	7515	10020	10020	12525	12525	15030	15030	17535	17535
	Height (H)	mm	3500	4500	3500	4500	3500	4500	3500	4500	3500	4500	3500	4500	3500	4500
Components Materials	Steel Frame		Hot Dipped Galvanised Steel													
	Casing		FRP													
	Filler Media		PVC													
	Distribution Basin		FRP													
	Cold Water Basin		FRP													
	Water Sump		FRP													
	Fan		Fan Blade: FRP ; Hub: Aluminium Cast Alloy													
	Fan Stack		FRP													
Fan Assembly	Fan	Type	Axial Flow													
		Diameter x Nos mm	2000 x 1		2000 x 2		2000 x 3		2000 x 4		2000 x 5		2000 x 6		2000 x 7	
		Number of Blades	4										4			
		Fan Speed (Approx.) rpm	428										428			
		Drive System	V-belt Drive System													
	Motor	Power Source	415 V / 3 Ph / 50 Hz													
		Type	Totally enclosed fan cooled (TEFC) 3 phase induction motor, 6 pole													
		Rated Output x Qty (Kw)	11 x 1		11 x 2		11 x 3		11 x 4		11 x 5		11 x 6		11 x 7	
Inlet Distribution	Open Gravity Type		Open Travity Type													
Piping Dimension	Inlet, mm		165 x 2		165 x 4		165 x 6		165 x 8		165 x 10		165 x 12		165 x 14	
	Outlet, mm		200 x 1		250 x 1		200 x 2		250 x 2				250 x 3			250 x 4
	Drain Pipe, mm		50 x 1				50 x 2						50 x 3			50 x 4
	Overflow, mm		50 x 1				50 x 2						50 x 3			50 x 4
	Auto Make-up, mm		40 x 1		50 x 1		50 x 2						50 x 3			50 x 4
	Manual Make-up mm		40 x 1		50 x 1		50 x 2						50 x 3			50 x 4
Make-up	Evaporation Loss, %		0.98													
	Drift loss, %		0.02													
Weight	Dry	Kg	1420	1790	2600	3350	3930	4990	5120	6620	6320	8150	7630	9780	8810	11390
	Operation	Kg	3300	3700	6100	7200	9200	10500	11980	13610	14720	16820	17650	20180	21050	23500

Note:

1. Norminal cooling capacity is based on 13ℓ / min / RT (1 RT =3,900 Kcal / hr) at 37°C CHW, 32°CCW and 27°CWB.
2. The pump head required is apporoximately the height at the cooling tower.
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Noise Level

Measuring method

- The measuring point at 45 degree upper distance, "Df", equal to the fan diameter, away from the top edge of the fan stack. Opposite of motor driven side. If fan diamenter is less than 1.5m, the measuring point should be limited to 1.5m.

Low Noise Type

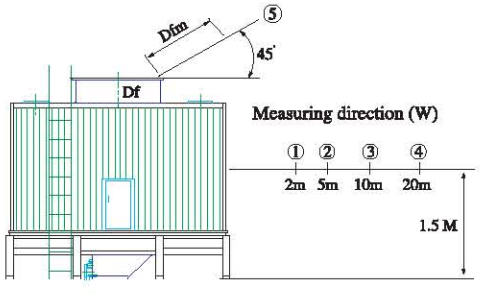
Model / Measuring direction / Measuring point / Measuring distance		1 2 m	2 5 m	3 10 m	4 20 m	Measuring point Dfm
GPC 100	W/L	63.5/60	59/57	55/51.5	50.3/45.5	68
GPC 125	W/L	65/60.5	62.5/57.5	57/54	51/48	68.5
GPC 150	W/L	66.5/61	64/59.5	58/54.5	53/49	69
GPC 175	W/L	67.5/63	65/60	61/57	54/51	69.5
GPC 200	W/L	67.5/64.5	65.5/61	62/57.5	55/51.5	71
GPC 225	W/L	68/65	66/62	62.5/58	55.5/52	72
GPC 250	W/L	68.5/65.5	66/62.5	62.5/59	56/52.5	72.5
GPC 300	W/L	69/64	64.5/60	60/56	55/51.5	72.5
GPC 350	W/L	70/65	66/61	61/58	56/52.5	74
GPC 400	W/L	70.5/66	67/62.5	62/59.5	57/54	74.5
GPC 450	W/L	71/67	67.5/63	63.5/60	57/54.5	74.5
GPC 500	W/L	71/68	69/64.5	64.5/60.5	59.5/55	75.5
GPC 600	W/L	72/67	69.5/65	65/61	60.5/55	76
GPC 700	W/L	73/68	70.5/66	65.5/61	61/55	76.5
GPC 750	W/L	73.5/68.5	70.5/66.5	66/61	62/55.5	77
GPC 800	W/L	73.5/68.5	71.5/66.5	66.5/61.5	62.5/56	77
GPC 900	W/L	73.5/68.5	71.5/66.5	67/61.5	62.5/56	77
GPC 1000	W/L	74/69	71.5/66.5	67.5/61.5	62.5/56.5	78

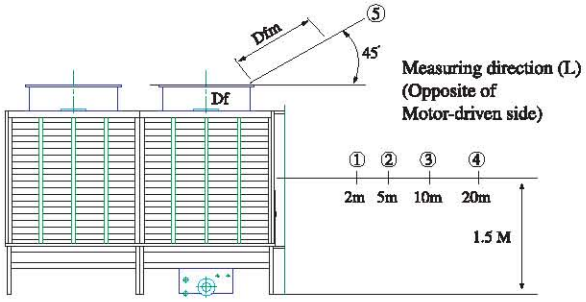
Compact Type

Model / Measuring direction / Measuring point / Measuring distance		1 2 m	2 5 m	3 10 m	4 20 m	Measuring point Dfm
GPC 280 C	W/L	69/66	67/64.5	64.5/61	58.5/54.5	74.5
GPC 320 C	W/L	69.5/66	67/64.5	65/61	59/53	74.5
GPC 560 C	W/L	71.5/68.5	69.5/67	66.5/61.5	61.5/54.5	75
GPC 640 C	W/L	72/68.5	70/67.5	67/61.5	62/54.5	75
GPC 840 C	W/L	74.5/69.5	72/69.5	69.5/63.5	62.5/54.5	76
GPC 960 C	W/L	74.5/70	72/68	70/62.5	62.5/55	76
GPC 1120 C	W/L	75/70.5	72/68.5	70/62.5	62.5/55.5	77
GPC 1280 C	W/L	75.5/70	72.5/68.5	70.5/62.5	63/55.5	77
GPC 1400 C	W/L	75.5/70.5	72.5/69	70.5/62.5	63.5/56	78
GPC 1600 C	W/L	76/70.5	73/69	71/62.5	63.5/56	78
GPC 1680 C	W/L	76.5/71	73.5/69.5	71.5/63	64/56	78.5
GPC 1920 C	W/L	76.5/71	73.5/69.5	71.5/63	64/56	78.5
GPC 1960 C	W/L	77/71	73.5/69.5	72/63.5	64.5/56.5	79.5
GPC 2240 C	W/L	77.5/71.5	73.5/70	72.5/64	65/57	80.5

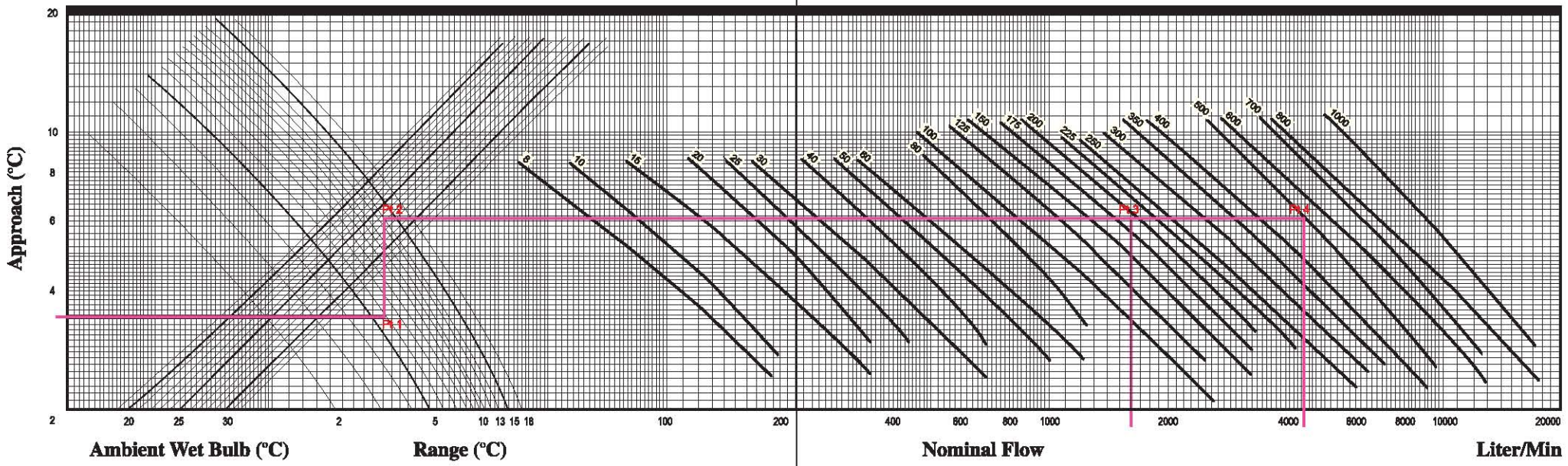
Super Low Noise Type

Model / Measuring direction / Measuring point / Measuring distance		1 2 m	2 5 m	3 10 m	4 20 m	Measuring point Dfm
GPC 100 S	W/L	58.5/54.5	56/51	51/47.5	45/41	63
GPC 125 S	W/L	60.5/55.5	57/52.5	52.5/49	46.5/41.5	63.5
GPC 150 S	W/L	60.5/57	58/54	53/50	47.5/43.5	65
GPC 175 S	W/L	62.5/58	59.5/55	55.5/51	49/45	66
GPC 200 S	W/L	62.5/59	60.5/56	56/51.5	50.5/46	66.5
GPC 225 S	W/L	63/59	61/57	56.5/51.5	51/46	66.5
GPC 250 S	W/L	64/60	61.5/57	56.5/52	51.5/46.5	67.5
GPC 300 S	W/L	64.5/59.5	61.5/57	55/51	50/45	67.5
GPC 350 S	W/L	65/60	62.5/57.5	57.5/53.5	51.5/46	69
GPC 400 S	W/L	66/61	62.5/58	58/54.5	52.5/47	70
GPC 450 S	W/L	66.5/61.5	64/59	58/55	53/47.5	71
GPC 500 S	W/L	67.5/62	64.5/59	61/56	54/48	71.5
GPC 600 S	W/L	68/62	65/59.5	62/56	54.5/48.5	72
GPC 700 S	W/L	68.5/63	65.5/60.5	62/57	55/49.5	72.5
GPC 750 S	W/L	69/63.5	66/60.5	62.5/57	55.5/49.5	73
GPC 800 S	W/L	69/64	66/60.5	62.5/57.5	56/50	73
GPC 900 S	W/L	69/65	66.5/61	63/58	56.5/51	73.5
GPC 1000 S	W/L	70/65	67/61.5	63.5/57	57/51.5	74





GENIUS Cooling Tower Selection Chart



Cooling Tower Selection Procedure

Design Data:

Example 1

Water Inlet Temperature, T_1 : 97 °F (36.1 °C)
Water Outlet Temperature, T_2 : 87 °F (30.5 °C)
Ambient Wet Bulb, T_{WB} : 81 °F (27 °C)

Determine the following parameter:

Range $= T_1 - T_2$
$= 36.1 - 30.5$ °C
$= 5.6$ °C

Approach $= T_2 - T_{WB}$
$= 30.5 - 27.0$ °C
$= 3.5$ °C

Selection Procedure

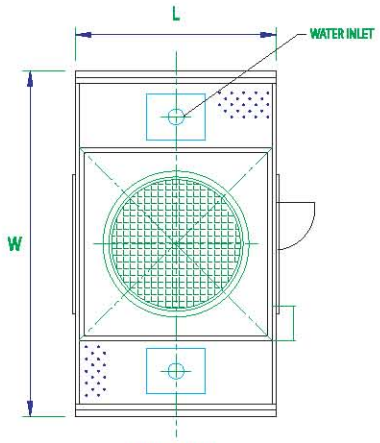
1. Determine the intersection point of **RANGE** and **APPROACH.** (Pt 1)
2. Draw perpendicular line up or down from the intersection point to the **AMBIENT WET BULB** line. (Pt 2)
3. Then, draw a line across the chart to meet the perpendicular line of **NOMINAL FLOW.**
4. For the flow of:

Example 1
1600 L/M : Capacity derived : 200 TR (Pt 3)
Tower Model : GPC 200 or GPT 200

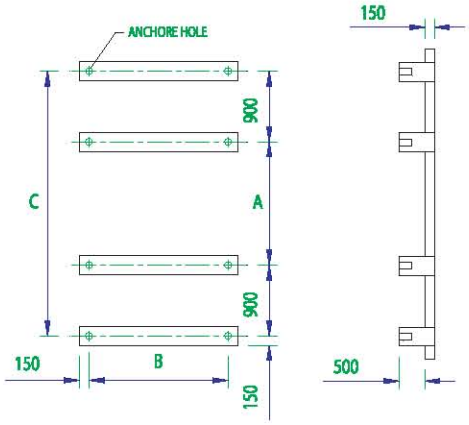
Example 2
4550 L/M : Capacity derived : 500 TR (Pt 4)
Tower Model : GPC 500 or GPT 500

Project Name					
Cooling Tower					
Inlet Water Temp., T_1 °C					
Outlet Water Temp., T_2 °C					
Ambient Wet Bulb, T_{WB} °C					
Flow Rate (L/min)					
Range (T_1-T_2) °C					
Approach (T_2-T_{WB}) °C					
Cooling Tower Model					

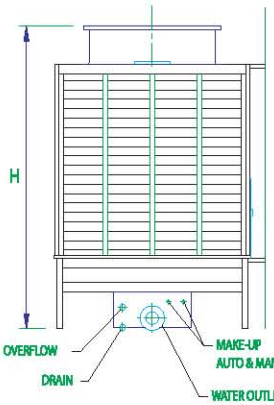
One Cell



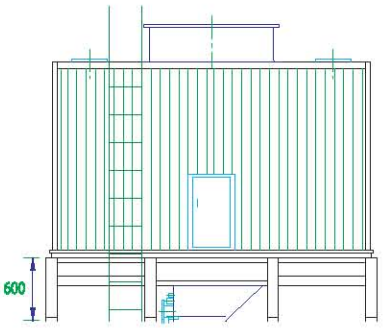
PLAN VIEW



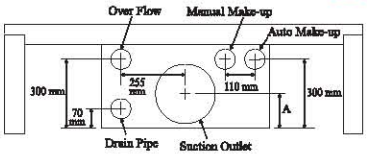
CONCRETE FOUNDATION



FRONT VIEW



SIDE VIEW



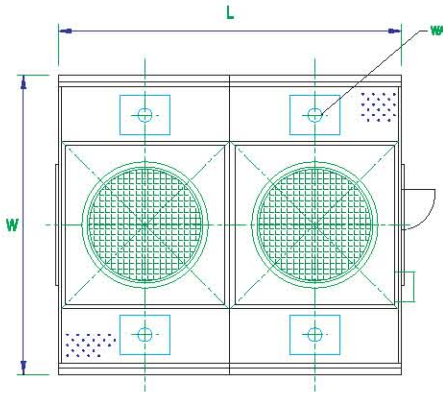
NOTE : ALL DIMENSION IN MM

MODEL	TOWER DIMENSION			FOUNDATION DETALS		
	L	W	H	A	B	C
GPC 100	1910	3300	3500	1380	1800	3180
GPC 125	1910	3300	3500	1380	1800	3180
GPC 150	1910	3700	3500	1680	1800	3480
GPC 175	1910	3700	3500	1680	1800	3480
GPC 200	2110	4000	3500	2000	2000	3800
GPC 225	2505	4400	3500	2400	2400	4200
GPC 250	2505	4400	3500	2400	2400	4200
GPC 280 C	2505	4400	3500	2400	2400	4200
GPC 320 C	2505	4400	4500	2400	2400	4200
GPC 100 S	1910	3300	3850	1380	1800	3180
GPC 125 S	1910	3300	3850	1380	1800	3180
GPC 150 S	1910	3700	3850	1680	1800	3480
GPC 175 S	1910	3700	3850	1680	1800	3480
GPC 200 S	2110	4000	3850	2000	2000	3800
GPC 225 S	2505	4400	3850	2400	2400	4200
GPC 250 S	2505	4400	3850	2400	2400	4200

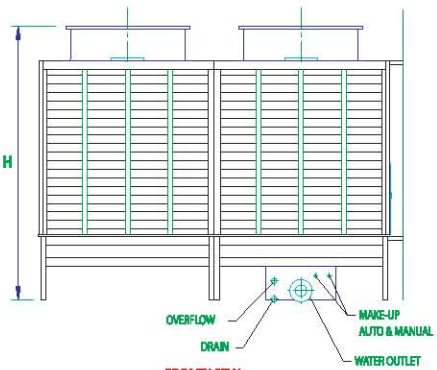
Water Sump Detail

Model	GPC 100	GPC 125	GPC 150	GPC 175	GPC 200	GPC 225	GPC 250
A mm	150	150	165	165	165	190	190

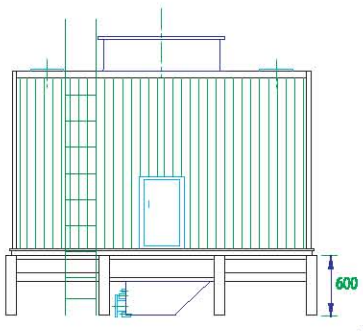
Two Cells



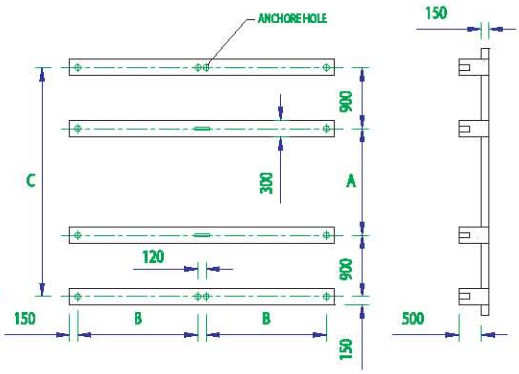
PLAN VIEW



FRONT VIEW



SIDE VIEW



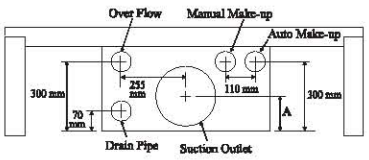
CONCRETE FOUNDATION

NOTE : ALL DIMENSION IN MM

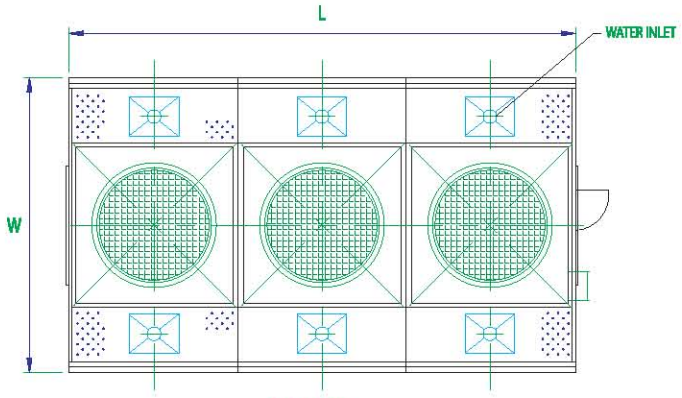
MODEL	TOWER DIMENSION			FOUNDATION DETALS		
	L	W	H	A	B	C
GPC 300	3820	3700	3500	1680	1800	3480
GPC 350	3820	3700	3500	1680	1800	3480
GPC 400	4220	4000	3500	2000	2000	3800
GPC 450	5010	4400	3500	2400	2400	4200
GPC 500	5010	4400	3500	2400	2400	4200
GPC 560 C	5010	4400	3500	2400	2400	4200
GPC 640 C	5010	4400	4500	2400	2400	4200
GPC 300 S	3820	3700	3850	1680	1800	3480
GPC 350 S	3820	3700	3850	1680	1800	3480
GPC 400 S	4220	4000	3850	2000	2000	3800
GPC 450 S	5010	4400	3850	2400	2400	4200
GPC 500 S	5010	4400	3850	2400	2400	4200

Water Sump Detail

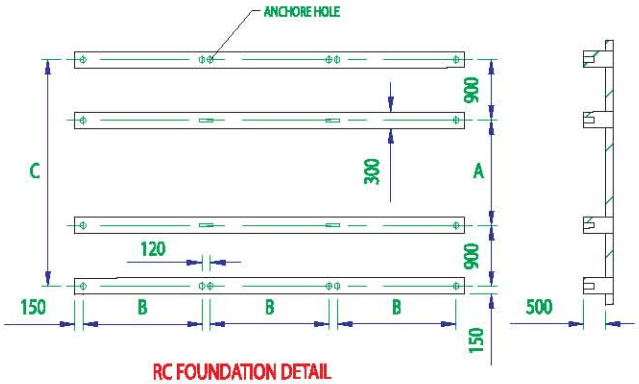
Model	GPC 300	GPC 350	GPC 400	GPC 450	GPC 500
A mm	190	190	215	215	215



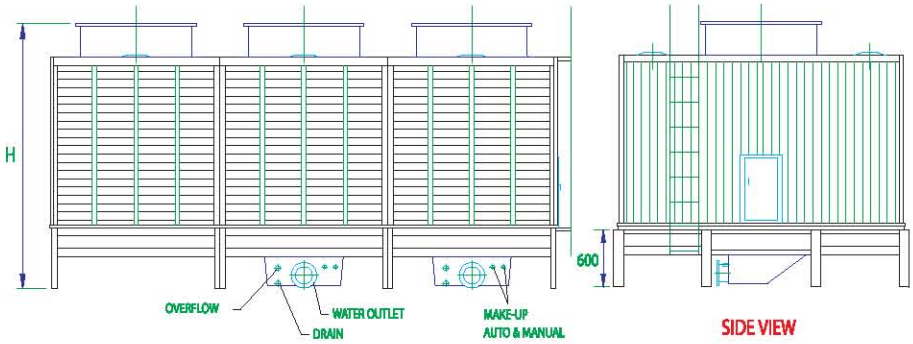
Three Cells



PLAN VIEW

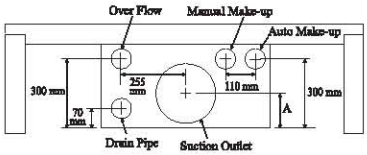


RC FOUNDATION DETAIL



FRONT VIEW

SIDE VIEW



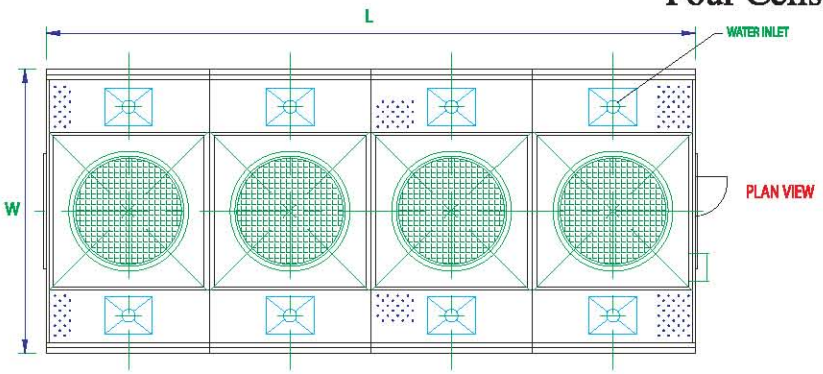
Water Sump Detail

Model	GPC 600	GPC 675	GPC 700	GPC 750
A mm	190	190	190	190

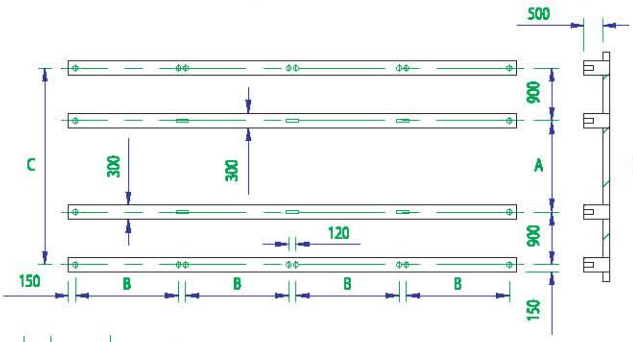
NOTE : ALL DIMENSION IN MM

MODEL	TOWER DIMENSION			FOUNDATION DETALS		
	L	W	H	A	B	C
GPC 600	6330	4000	3500	2000	2000	3800
GPC 675	7515	4400	3500	2400	2400	4200
GPC 700	7515	4400	3500	2400	2400	4200
GPC 750	7515	4400	3500	2400	2400	4200
GPC 840 C	7515	4400	3500	2400	2400	4200
GPC 960 C	7515	4400	4500	2400	2400	4200
GPC 600 S	6330	4000	3850	2000	2000	3800
GPC 700 S	7515	4400	3850	2400	2400	4200
GPC 750 S	7515	4400	3850	2400	2400	4200

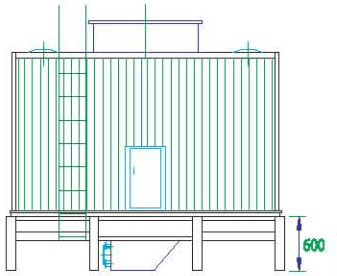
Four Cells



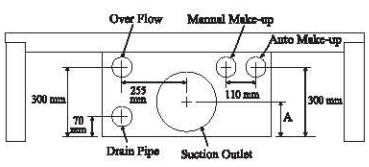
PLAN VIEW



RC FOUNDATION DETAIL



SIDE VIEW

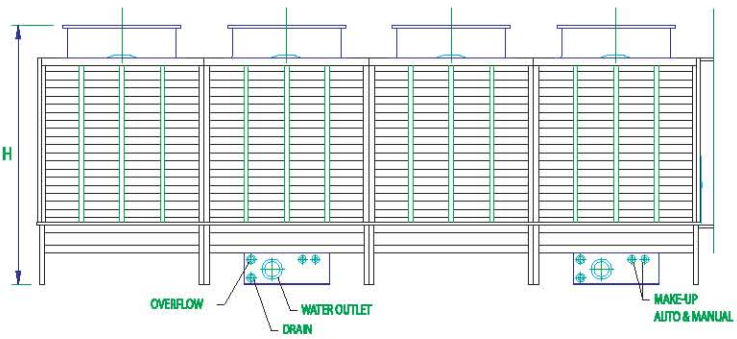


Water Sump Detail

Model	GPC 800	GPC 900	GPC 1000
A mm	215	215	215

NOTE : ALL DIMENSION IN MM

MODEL	TOWER DIMENSION			FOUNDATION DETALS		
	L	W	H	A	B	C
GPC 800	8400	4000	3500	2000	2000	3800
GPC 900	10020	4400	3500	2400	2400	4200
GPC 1000	10020	4400	3500	2400	2400	4200
GPC 1120 C	10020	4400	3500	2400	2400	4200
GPC 1280 C	10020	4400	4500	2400	2400	4200
GPC 800 S	8400	4000	3850	2000	2000	3800
GPC 900 S	10020	4400	3850	2400	2400	4200
GPC 1000 S	10020	4400	3850	2400	2400	4200



FRONT VIEW

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