

# FRP-steel cooling tower

counter flow design 50 TR to 1500 TR  
series – Y

- › Single cell and multi cell
- › Balarka high efficient FRP fan
- › Provide maximum cooling
- › Field erected tower
- › Medium to high capacity

# feature

Anti-clogging nozzle

Both side accesses for high air entry

Cost effective superior quality

Energy saving

Easy to erect and handle

High efficient fills

Bright & quiet operation

Long life

Long service

Low drift loss

Integrated counter flow design

Space saving

Standard geared motor and bely pulley system

Structured frame construction

## material of construction

### Design Overview

The induced-draft tower shall be furnished and install with counter flow-type, field-erected, **FRP-Steel structure**, efficient Film fill, and standard utilities. Counter flow tower in which well supported fill, wide indented louvers, and stable FRP fan deck enabled the evolution of multi flow shape. The tower has also established a high standard for ease of maintenance.

Single cell design compliance is match aimed at medium to large industrial need. **Single cell (50-300TR) and multi cell (350 to 1500TR)**

### Fans (Balarka Fans Up to 85% efficient)

PCT designed and manufactured Balarka fans are used on all PCT towers. The fan selection and fan speed for a given tower are based on tower cell size, and horsepower requirements. Blade material is FRP, Fan hubs are heavy-duty steel plate and, hot dip galvanized after fabrication and either epoxy-coated. All fans are assembled with stainless steel or galvanized hardware. Fan designs applied at flow and pressure conditions for which they are ill suited. Fans are statically balance by G6.3 code.

### Fan Stack

FRP stack combine with close blade tip clearances to produce optimum fan performance. PCT Fan stack have exceptionally large entrance diameters, which give good fan performance. PCT fan stack are through-bolted to the fan deck and supporting framework.

### Motor (With Direct Drive System)

The totally enclosed construction to suit moist conditions, a special long shaft

Construction with threaded end to directly mounted to fan hub with supported structure. This helps directly to cool the motor and compact shape facilitated to enable easy maintenance. Special cooling tower purpose motors design with 3 phase, 415V, 50Hz, ambient temperature up to 50deg C, IP55 protection, class F insulation.

### Motor (With Belt and Pulley Drive System)

The totally enclosed construction to suit moist conditions, Special cooling tower purpose motors design with 3 phase, 415V, 50Hz, ambient temperature up to 50deg C, IP55 protection, class F insulation.

The drive system sheaves that are located outside the fan stack. Pulley construct with alloy steel. The power band belt is a banded multi-groove belt constructed from premium quality rubber compounds. This is the most efficient type of belt for cooling tower applications.

### Fill

The cooling tower fill shall be PVC (Polyvinyl Chloride) film type and of cross-fluted design for optimum heat transfer efficiency. The cross fluted sheets shall be bonded together for strength and durability. The PVC fill shall be resistant to rot, decay and biological attack. The fill shall be able to withstand a water temperature of 55° C.

### Piping

Although inlet piping is provided as standard. This is an economical method requiring only one riser for hot water and ISI mark PVC branch pipe supported with internal steel structure and fastening with stainless steel or galvanized hardware. End cap shall be PVC.

### Nozzles

PCT Nozzle's metering orifices used in the hot water branch pipe are specially designed to deliver the required water rate and are highly resistant to temperature. This nozzle's provide uniform water distribution throughout the fill area.

### Drift Eliminators

Drift eliminators are extruded PVC profile into easily handled. These packs are supported to branch pipe or steel structure. The eliminator design shall incorporate three changes in air direction to assure removal of all entrained moisture from the discharge air stream. Maximum drift rate shall be less than 0.05% of the circulating water rate.

### Tower Structure

Tower structure is design with suitable codes and internal standard's. All the transverse bents, column, top support, bottom support, sectional supports are suitable grade. Stainless steel or galvanized steel fasteners where used to gather the structure.

### Casing

The end walls or tower casing are instance from the fan deck level to below the top of the basin with corrugated FRP sheets. FRP is waterproof and corrosion proof, is immune to biological deterioration, and requires no maintenance. The casing is attached to structural members with stainless steel screw shank fasteners, complete with neoprene-bonded washers. Corner trim pieces are FRP.

### Louvers

Louvers are corrugated FRP sheets to prevent splash out from the cooling tower. These supports are rigidly framed into posts by through bolting. Louvers are supported on centers by structural columns. This scheme provides more than twice the bending strength.

### Additional Accessories

Access ladder, fan cover, basin fittings,

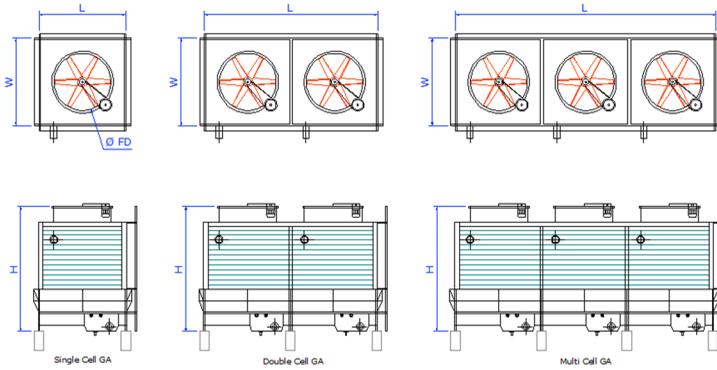
### Additional Services

Application / Sizing / Layout Services  
Construction Service | Parts Service  
Maintenance Service | Condition Inspection Service  
Reconstruction Service  
Performance Improvement Service  
Tower Replacement Service

# model designation

10YS-1B-1G	Y Series	S-Steel structure	1-Motor kw D-Direct drive B-Belt drive C-Gear box	1-No of cell G-FRP basin R-RCC basin
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# model drawing



# technical data

SI No.	TOWER MODEL	CAPACITY	MOTOR X QTY	TOWER DIMENSIONS			FAN X QTY
				L	W	H	FD
				m	m	m	m
1	10YS-1B-1G	50	1.5 x 1	1.60	1.60	2.90	1.22 x 1
2	12YS-1B-1G	60	1.5 x 1	1.60	1.60	3.00	1.22 x 1
3	14YS-2B-1G	70	2.2 x 1	1.60	1.60	3.00	1.22 x 1
4	16YS-3B-1G	80	3.0 x 1	1.60	1.60	3.00	1.22 x 1
5	20YS-3B-1G	100	3.0 x 1	1.90	1.90	3.00	1.52 x 1
6	25YS-4B-1G	125	3.7 x 1	1.90	1.90	3.30	1.52 x 1
7	30YS-4B-1G	150	3.7 x 1	2.50	2.50	3.50	1.52 x 1
8	35YS-5B-1G	175	5.5 x 1	2.50	2.50	3.50	1.52 x 1
9	40YS-5B-1G	200	5.5 x 1	2.50	2.50	3.90	1.83 x 1
10	45YS-5B-1G	225	5.5 x 1	2.80	2.80	3.90	1.83 x 1
11	50YS-7B-1G	250	7.5 x 1	2.80	2.80	3.90	1.83 x 1
12	55YS-7B-1G	275	7.5 x 1	2.50	3.40	4.10	1.83 x 1
13	60YS-7B-1G	300	7.5 x 1	3.00	3.00	4.10	2.44 x 1
14	70YS-5B-2G	350	5.5 x 2	5.00	2.50	3.70	1.52 x 2
15	80YS-5B-2G	400	5.5 x 2	5.00	2.50	4.10	1.83 x 2
16	90YS-5B-2G	450	5.5 x 2	5.60	2.80	4.10	1.83 x 2
17	100YS-7B-2G	500	7.5 x 2	5.60	2.80	4.10	1.83 x 2
18	110YS-7B-2G	550	7.5 x 2	5.00	3.40	4.10	1.83 x 2

19	120YS-7B-2G	600	7.5 x 2	6.00	3.00	4.10	2.44 x 2
20	130YS-5B-2G	650	9.3 x 2	6.00	3.00	4.10	2.44 x 2
21	140YS-5B-3G	700	5.5 x 3	8.40	2.80	4.30	1.83 x 3
22	150YS-7B-3G	750	7.5 x 3	8.40	2.80	4.30	1.83 x 3
23	160YS-7B-3G	800	7.5 x 3	7.50	3.40	4.30	1.83 x 3
24	170YS-7B-3G	850	7.5 x 3	9.00	3.00	4.30	1.83 x 3
25	180YS-7B-2G	900	7.5 x 3	9.00	3.00	4.30	2.44 x 3
26	200YS-7B-4G	1000	7.5 x 4	11.20	2.80	4.30	1.83 x 4
27	240YS-7B-4G	1200	7.5 x 4	12.00	3.00	4.30	2.44 x 4
28	300YS-7B-5G	1500	7.5 x 5	15.00	3.00	4.30	2.44 x 5

Note:

- To get complete detail please drop a mail to us we will select you best product at right worth.
- Single cell from 50-300 TR and multiple cells from above 350 TR.
- Above towers are design for 37 HWT, 32 CWT and, 27 WBT.



our products are known for their advanced design  
and premium quality

your water, power, time and cost saving solutions