

FRP-steel cooling tower

counter flow design 50-500 TR single cell
series - Z

- › Single cell footprint
- › Balarka high efficient FRP fan
- › Provide maximum cooling
- › Field erected tower
- › Medium to high capacity
- › Heavy duty structure.

- Anti-clogging nozzle
- Both side accesses for high air entry
- Cost effective superior quality
- Energy saving
- Easy to erect and handle
- High efficient fills
- Heavy duty & quiet operation

- Long life
- Long service
- Low drift loss
- Modular counter flow design
- Space saving
- Standard geared motor 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 small to medium industrial need.

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 balanced 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 mount to fan hub with support structure. This helps directly to cool the motor and compact shape facilitated to enable easy maintenance. Special cooling tower purpose motor 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 motor 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 constructs 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. The maximum drift rate shall be less than 0.05% of the circulating water rate.

Tower Structure

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

Casing

The end walls or tower casing are instantiated 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,

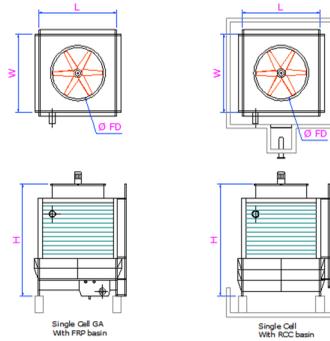
Additional Services

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

model designation

10ZS-2D-1G	Z - Series	S-Steel structure	2-Motor kw D-Direct drive B-Belt drive	1-No of cell G-FRP basin R-RCC basin
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model drawing



technical data

SL. NO.	MODEL NO.	CAPACITY	MOTOR	TOWER DIMENSIONS			AXIAL FAN
				L	W	H	FD
				m	m	m	m
1	10ZS-2D-1G	50	2.2	1.60	1.60	3.55	1.22
2	12ZS-2D-1G	60	2.2	1.60	1.60	3.65	1.22
3	14ZS-2D-1G	70	2.2	1.60	1.60	3.65	1.45
4	16ZS-2D-1G	80	2.2	1.60	1.60	3.65	1.45
5	18ZS-3D-1G	90	3.7	2.15	2.15	3.75	1.45
6	20ZS-3D-1G	100	3.7	2.15	2.15	3.75	1.45
7	25ZS-3D-1G	125	3.7	2.15	2.15	3.75	1.45
8	30ZS-3D-1G	150	3.7	2.55	2.55	3.95	1.80
9	35ZS-5D-1G	175	5.5	2.55	2.55	3.95	1.80
10	40ZS-5D-1G	200	5.5	2.95	2.95	4.05	1.80
11	45ZS-7D-1G	225	7.5	2.95	2.95	4.05	1.80
12	50ZS-7D-1G	250	7.5	3.30	3.30	4.55	2.40
13	60ZS-9D-1G	300	9.3	3.30	3.30	4.55	2.40
14	65ZS-9D-1G	325	9.3	3.75	3.75	4.55	2.40
15	70ZS-11D-1G	350	11.0	3.75	3.75	4.55	2.40
16	80ZS-11D-1G	400	11.0	4.15	4.15	4.95	2.70
17	90ZS-15D-1G	450	15.0	4.15	4.15	4.95	2.70
18	100ZS-15D-1G	500	15.0	5.15	4.40	5.45	2.70

Note:

- Single cell from 50 - 500 TR and multiple cells option.
- Above towers are design for 37 HWT, 32 CWT and, 27 WBT.
- To get complete detail please drop a mail to us we will select best product at right worth.



our products are known for their advanced design
and premium quality

your water, power, time and cost saving solutions