RCT

Open cooling towers





Key benefits

- Superior construction
- Easy maintenance
- Low height

Configuration

Counter flow

Fans system

Axial fan, induced draft

Capacity range

12 - 202 l/s

Water distribution

Pressurised

Maximum entering water temperature

55°C standard fill
80°C with alternative fill

Typical applications

- Small to medium industrial applications
- Dirty water applications
- Replacement of field erected towers with basinless units

Superior construction

- Superior and corrosion resistant structure strength: pultruded composite construction guarantuees a long service life.

Easy maintenance

- Easy **basin access** from all sides.
- Easy no-tool **removal of side panel** gives access to all internal cooling tower components.
- **Sloped basin** to flush out dirt and debris.
- **Easy removable** fill, spray branch arms, eliminators and combined inlet shields.
- Easy **access to motor and drives** from outside.

Low height

- Counterflow cooling tower with very restricted height, fits **in most enclosures**.

Interested in the RCT cooling tower for cooling your process water? Contact your local BAC representative for more information.

Downloads

- RCT open cooling tower
- Operating and Maintenance RCT
- Rigging and Installation RCT

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Principle of operation

Warm process **water (1)** from the heat source enters the **spray system (2)** at the top of the cooling tower where it is distributed over the **fill** or heat transfer media **(3)**. At the same time the **axial fan (4)**, located at the top of the unit, draws the **air** from the sides of the unit **(5)** over the fill. **Combined inlet shields (6)** protect the tower from debris being drawn into the unit. While the warm process water contacts the cold air the latter heats up and part of the process water is evaporated which removes the heat from the remaining water. The **sloping sump (7)** or basin collects the cooled water after which it returns to the **heat source of the process (8)**. The warm saturated **air (9)** first passes through the **drift eliminators (10)**, which remove water droplets from the air, and then exits the tower at the top.

You want to use the RCT cooling tower to cool your process water?
Contact your local BAC representative for more information.

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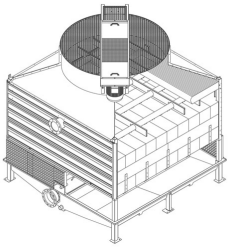
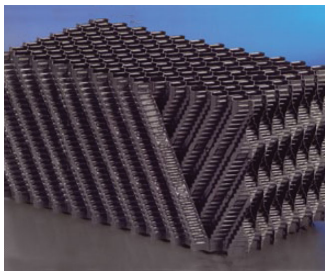
Construction details

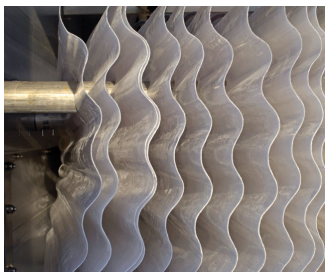
1. Material options



- **High strength** pultruded composite material is used for external unit panels and structural elements.
- Cold water basin & fan cyclinder: Mould formed, hand laid, heavy-duty **fibreglass reinforced polyester** (FRP) with smooth internal finish.
- **Option**: Tower without cold water basin for on-site **assembly on concrete tank**. Triple fan units are always supplied without water basin.

2. Heat transfer media





- Our heat transfer media is cross fluted design in **easy to handle, lift and remove** blocks. Standard offering is a flame-retardant poly-vinyl chloride (PVC) material, with sheet spacing of 12 or 19 mm.
- Use **12 mm sheet spacing** for clear water applications.
- Choose **FRP fill** for dirty water applications: includes individual **waved FRP panels and a telescopic fill support.** Panels are easy to inspect and clean, eliminating the need for frequent fill replacement.
- For operation above 55°C, try our **optional high temperature fill**, usable with intake water up to 60°C.

3. Air movement system

- **RCT fan system** features **low kW and noise axial fan(s)** in corrosion resistant aluminum, encased in FRP fan cylinder with removable fan guard. Together with the stainless steel fan shaft and heavy duty ball bearings and extended lubrication lines, this guarantees optimal and year-round operational efficiency.
- Models RCT-2118 and 2129 use **direct drive motor**. Larger units have the fan motor outside the discharge air stream and use **V-belt drives**. This drive system is encased in type 304 stainless steel.
- **Our drift eliminators** come in UV-resistant plastic, which will not rot, decay or decompose and their performance is tested and **certified by Eurovent**. They are assembled in **easily handled and removable sections**, for optimal internal access.
- Easy removable UV-resistant plastic **combined inlet shields** at air inlet, block sunlight to prevent biological growth in tower, filter air and stop water splash-out.

4. Water distribution system

These consist of:

- **Spray branches** with non-clog plastic **nozzles** secured by rubber grommets. **Tool free branch removal** for easy inspection and flushing.
- **Flanged** inlet and outlet connections are optional.
- Easy accessible **sloped cold water basin**, including anti-vortexing stainless steel strainer, make up and overflow connection**.**
- **Water distribution feed box** is constructed from type 304 stainless steel.

5. Construction

- Easy no-tool **removal of one side panel** gives complete access to drift eliminators, spray system and fill.
- All **water contact** metal components are type 304 stainless steel.

Interested in the RCT cooling tower? Contact your local BAC representative.

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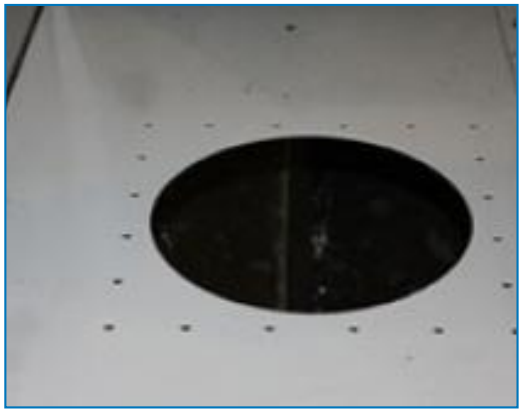
Options and accessories

Below is a listing of the main RCT options and accessories. If your required option or accessory is not listed, look no further than your local BAC representative.

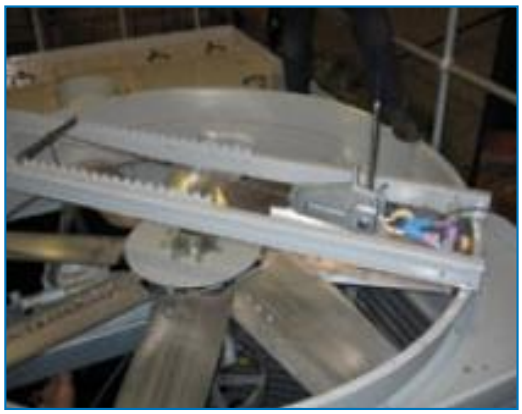
Vibration cut out switch

When excessive vibration occurs, this switch shuts down the fan, ensuring your cooling equipment **operates safely**.



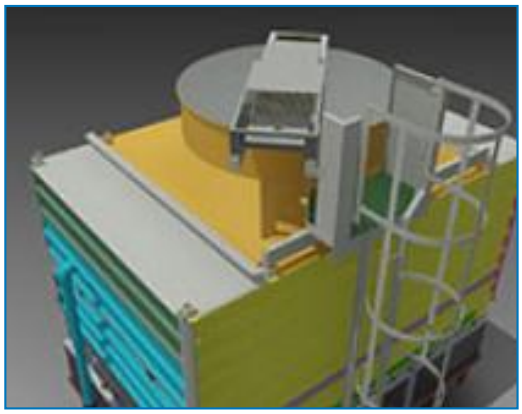
Remote sump connection

The best way to **prevent a sump freezing** is to use the auxiliary remote variety within a heated area. Shutting off the circulating pump allows all the water in the water distribution, as well as that in suspension and the sump to drain freely to the auxiliary sump.



Water treatment equipment

This **helps** you **remove or install** fan motors.



Platforms, ladders, safety cage and handrail

To inspect and maintain from the top of the unit more **easily and safely**, platforms, a ladder, safety cage and handrails can be installed.

Electric water level control package

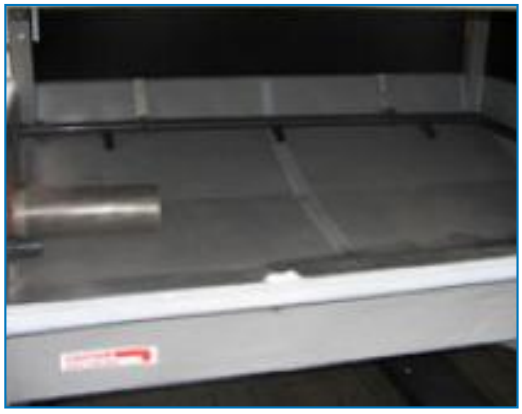
For perfectly precise water level control, replace the standard mechanical valve with our electrical water level controller.

Basin heater package

Thanks to our factory-installed heaters, the water stays at 4°C and **never freezes** , even during equipments downtime and however cold it gets outside.

Water treatment equipment

Devices to control water treatment are needed to ensure proper **cooling tower water care**. Not only does this help protect the components and fill pack, controlling corrosion, scaling and fouling, it also avoids the proliferation of harmful bacteria, including **legionella**, in the recirculating water.

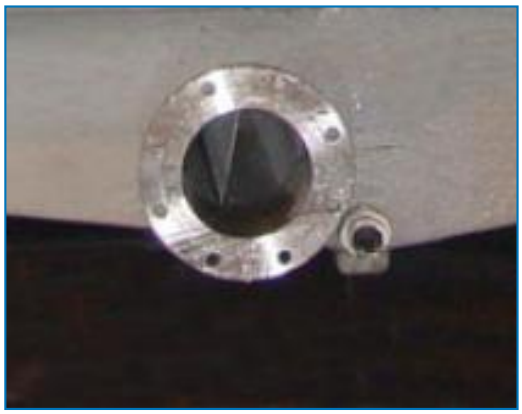


Sump sweeper piping

Sump sweeper piping **prevents sediment collecting in the cold water basin** of the unit. A complete piping system, including nozzles, is installed in the basin of the condenser **for connection to side stream filtration** equipment.

Filter

Separators and media filters efficiently **remove suspended solids** in the recirculating water, reducing system cleaning costs and optimizing water treatment results. Filtration helps you keep the recirculating water clean.



Flanges

Flanges facilitate **piping connections** on-site.

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Engineering data

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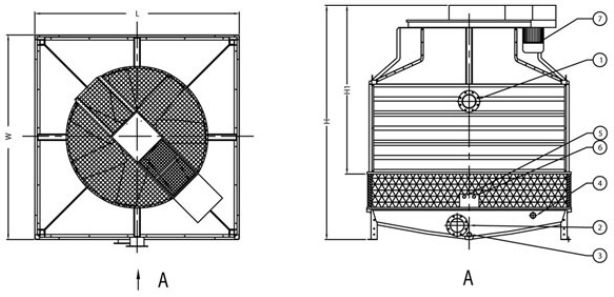
General notes

1. Access door is always opposite to inlet connection end.
2. Alternative inlet/outlet and tower configurations are available.
3. Nominal outlet connection size provided.
4. Actual outlet sized to match flow.
5. Models RCT 2218-1 and 2129-1 have direct drive motors.
6. Models RCT 2218-2 and 2129-2 have direct drive motors.
7. Triple fan units are not available with common FRP basin. Only for installation on concrete basin.

Last update: 23/07/2019

RCT 2063-1 - 2496-1



1. Water inlet; 2. Water outlet; 3. Drain; 4. Overflow; 5. Make up; 6. Quick fill; 7. Fan motor.

Model	Weights (kg)			Dimensions (mm)			Air Flow (m^3/s)	Fan Motor (kW)	Fluid Inlet ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H			
RCT 2063-1	1550	650	650	1674	1674	2905	6.9	(1x) 2.2	(1x) 100
RCT 2074-1	1550	650	650	1674	1674	2905	8.1	(1x) 4.0	(1x) 100
RCT 2071-1	2075	800	800	1979	1979	3062	7.7	(1x) 1.5	(1x) 100
RCT 2089-1	2075	800	800	1979	1979	3062	9.7	(1x) 3.0	(1x) 100
RCT 2096-1	2075	800	800	1979	1979	3062	10.5	(1x) 4.0	(1x) 100
RCT 2109-1	2075	800	800	1979	1979	3062	11.9	(1x) 5.5	(1x) 100
RCT 2120-1	3950	1100	1000	2284	2284	3252	13.1	(1x) 4.0	(1x) 150
RCT 2134-1	3950	1100	1000	2284	2284	3252	14.6	(1x) 5.5	(1x) 150
RCT 2147-1	3950	1100	1000	2284	2284	3252	16.0	(1x) 7.5	(1x) 150
RCT 2172-1	4020	1500	1500	3270	2284	3960	18.7	(1x) 5.5	(1x) 150
RCT 2193-1	4020	1500	1500	3270	2284	3960	20.7	(1x) 7.5	(1x) 150
RCT 2215-1	4020	1500	1500	3270	2284	3960	23.4	(1x) 11.0	(1x) 150
RCT 2145-1	3375	1250	1250	2589	2589	3326	15.8	(1x) 4.0	(1x) 150
RCT 2161-1	3375	1250	1250	2589	2589	3326	17.6	(1x) 5.5	(1x) 150
RCT 2176-1	3375	1250	1250	2589	2589	3326	19.2	(1x) 7.5	(1x) 150
RCT 2200-1	3375	1250	1250	2589	2589	3326	21.8	(1x) 11.0	(1x) 150
RCT 2228-1	5080	1875	1875	3876	2589	3894	24.9	(1x) 7.5	(1x) 150
RCT 2259-1	5080	1875	1875	3876	2589	3894	28.1	(1x) 11.0	(1x) 150
RCT 2285-1	5080	1875	1875	3876	2589	3894	31.1	(1x) 15.0	(1x) 150
RCT 2189-1	4125	1550	1550	2894	2894	3413	20.6	(1x) 5.5	(1x) 200
RCT 2207-1	4125	1550	1550	2894	2894	3413	22.6	(1x) 7.5	(1x) 200
RCT 2236-1	4125	1550	1550	2894	2894	3413	25.7	(1x) 11.0	(1x) 200
RCT 2261-1	4125	1550	1550	2894	2894	3413	28.4	(1x) 15.0	(1x) 200
RCT 2302-1	6200	2400	2400	4335	2894	4270	32.9	(1x) 11.0	(1x) 200
RCT 2334-1	6200	2400	2400	4335	2894	4270	36.4	(1x) 15.0	(1x) 200
RCT 2357-1	6200	2400	2400	4335	2894	4270	38.9	(1x) 18.5	(1x) 200
RCT 2218-1	4850	1800	1800	3198	3198	3646	23.8	(1x) 5.5	(1x) 200
RCT 2239-1	4850	1800	1800	3198	3198	3646	26.1	(1x) 7.5	(1x) 200

RCT 2271-1	4850	1800	1800	3198	3198	3646	29.5	(1x) 11.0	(1x) 200
RCT 2297-1	4850	1800	1800	3198	3198	3646	32.4	(1x) 15.0	(1x) 200
RCT 2318-1	4850	1800	1800	3198	3198	3646	34.7	(1x) 18.5	(1x) 200
RCT 2388-1	7300	2700	2700	4787	3198	4228	42.3	(1x) 15.0	(1x) 200
RCT 2415-1	7300	2700	2700	4787	3198	4228	45.2	(1x) 18.5	(1x) 200
RCT 2439-1	7300	2700	2700	4787	3198	4228	47.9	(1x) 22.0	(1x) 200
RCT 2309-1	5700	2100	2100	3499	3499	3810	33.7	(1x) 11.0	(1x) 200
RCT 2339-1	5700	2100	2100	3499	3499	3810	37.0	(1x) 15.0	(1x) 200
RCT 2363-1	5700	2100	2100	3499	3499	3810	39.6	(1x) 18.5	(1x) 200
RCT 2438-1	8500	3000	3000	5247	3500	4428	47.7	(1x) 15.0	(1x) 200
RCT 2468-1	8500	3000	3000	5247	3500	4428	51.0	(1x) 18.5	(1x) 200
RCT 2496-1	8500	3000	3000	5247	3500	4428	54.1	(1x) 22.0	(1x) 200

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Engineering data

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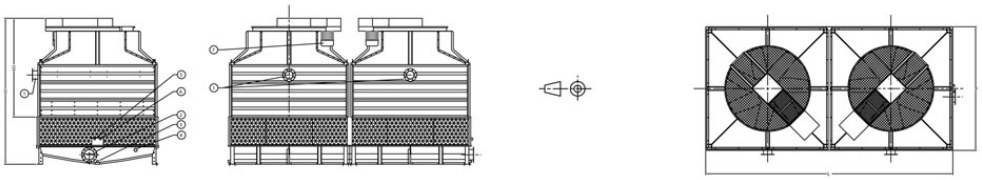
General notes

1. Access door is always opposite to inlet connection end.
2. Alternative inlet/outlet and tower configurations are available.
3. Nominal outlet connection size provided.
4. Actual outlet sized to match flow.
5. Models RCT 2218-1 and 2129-1 have direct drive motors.
6. Models RCT 2218-2 and 2129-2 have direct drive motors.
7. Triple fan units are not available with common FRP basin. Only for installation on concrete basin.

Last update: 23/07/2019

RCT 2071-2 - 2318-2



1. Water inlet; 2. Water outlet; 3. Drain; 4. Overflow; 5. Make up; 6. Quick fill; 7. Fan motor.

Model	Weights (kg)			Dimensions (mm)			Air Flow (m^3/s)	Fan Motor (kW)	Fluid Inlet ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H			
RCT 2071-2	4200	1600	800	3941	1979	3176	15.5	(2x) 1.5	(2x) 100
RCT 2089-2	4200	1600	800	3941	1979	3176	19.4	(2x) 3.0	(2x) 100
RCT 2096-2	4200	1600	800	3941	1979	3176	21.0	(2x) 4.0	(2x) 100
RCT 2109-2	4200	1600	800	3941	1979	3176	23.8	(2x) 5.5	(2x) 100
RCT 2120-2	5400	2000	1000	4551	2284	3385	26.1	(2x) 4.0	(2x) 150
RCT 2134-2	5400	2000	1000	4551	2284	3385	29.3	(2x) 5.5	(2x) 150
RCT 2147-2	5400	2000	1000	4551	2284	3385	32.1	(2x) 7.5	(2x) 150
RCT 2145-2	6800	2500	1250	5160	2589	3479	31.6	(2x) 4.0	(2x) 150
RCT 2161-2	6800	2500	1250	5160	2589	3479	35.1	(2x) 5.5	(2x) 150
RCT 2176-2	6800	2500	1250	5160	2589	3479	38.4	(2x) 7.5	(2x) 150
RCT 2200-2	6800	2500	1250	5160	2589	3479	43.6	(2x) 11.0	(2x) 150
RCT 2071-3	6225	2400	800	5903	1979	3233	23.2	(3x) 1.5	(3x) 100
RCT 2089-3	6225	2400	800	5903	1979	3233	29.2	(3x) 3.0	(3x) 100
RCT 2096-3	6225	2400	800	5903	1979	3233	31.4	(3x) 4.0	(3x) 100
RCT 2109-3	6225	2400	800	5903	1979	3233	35.7	(3x) 5.5	(3x) 100
RCT 2189-2	8300	3100	1550	5770	2894	3585	41.2	(2x) 5.5	(2x) 200
RCT 2207-2	8300	3100	1550	5770	2894	3585	45.1	(2x) 7.5	(2x) 200
RCT 2236-2	8300	3100	1550	5770	2894	3585	51.4	(2x) 11.0	(2x) 200
RCT 2261-2	8300	3100	1550	5770	2894	3585	56.8	(2x) 15.0	(2x) 200
RCT 2218-2	9750	3600	1800	6379	3198	3836	47.6	(2x) 5.5	(2x) 200
RCT 2239-2	9750	3600	1800	6379	3198	3836	52.1	(2x) 7.5	(2x) 200
RCT 2271-2	9750	3600	1800	6379	3198	3836	59.1	(2x) 11.0	(2x) 200
RCT 2297-2	9750	3600	1800	6379	3198	3836	64.8	(2x) 15.0	(2x) 200
RCT 2318-2	9750	3600	1800	6379	3198	3836	69.4	(2x) 18.5	(2x) 200

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General notes

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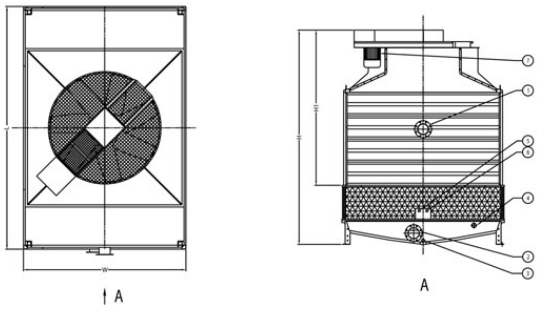
2. Alternative inlet/outlet and tower configurations are available.
3. Nominal outlet connection size provided.
4. Actual outlet sized to match flow.
5. Models RCT 2218-1 and 2129-1 have direct drive motors.
6. Models RCT 2218-2 and 2129-2 have direct drive motors.
7. Triple fan units are not available with common FRP basin. Only for installation on concrete basin.

Last update: 23/07/2019

RCT 2309-2 - 2363-2



1. Water inlet; 2. Water outlet; 3. Drain; 4. Overflow; 5. Make up; 6. Quick fill; 7. Fan motor.

Model	Weights (kg)			Dimensions (mm)			Air Flow (m^3/s)	Fan Motor (kW)	Fluid Inlet ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H			
RCT 2309-2	11450	4200	2100	6985	3499	4019	67.4	(2x) 11.0	(2x) 200
RCT 2339-2	11450	4200	2100	6985	3499	4019	73.9	(2x) 15.0	(2x) 200
RCT 2363-2	11450	4200	2100	6985	3499	4019	79.2	(2x) 18.5	(2x) 200

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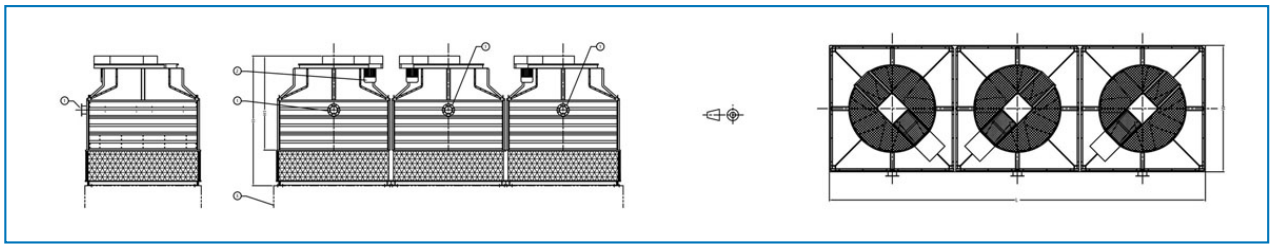
4. Actual outlet sized to match flow.
5. Models RCT 2218-1 and 2129-1 have direct drive motors.
6. Models RCT 2218-2 and 2129-2 have direct drive motors.
7. Triple fan units are not available with common FRP basin. Only for installation on concrete basin.

Last update: 23/07/2019

RCT 2120-3 - 2147-3



1. Water inlet; 2. Fan motor; 3. Concrete basin (by others).

Model	Weights (kg)			Dimensions (mm)			Air Flow (m^3/s)	Fan Motor (kW)	Fluid Inlet ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H			
RCT 2120-3	8025	3000	1000	6817	2284	3452	39.2	(3x) 4.0	(3x) 150
RCT 2134-3	8025	3000	1000	6817	2284	3452	43.9	(3x) 5.5	(3x) 150
RCT 2147-3	8025	3000	1000	6817	2284	3452	48.1	(3x) 7.5	(3x) 150

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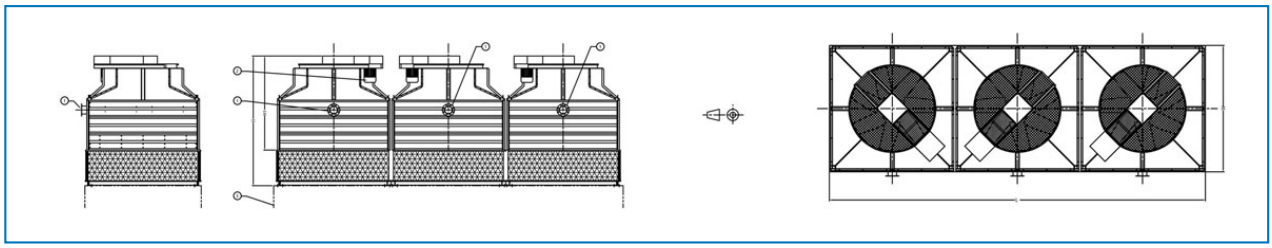
4. Actual outlet sized to match flow.
5. Models RCT 2218-1 and 2129-1 have direct drive motors.
6. Models RCT 2218-2 and 2129-2 have direct drive motors.
7. Triple fan units are not available with common FRP basin. Only for installation on concrete basin.

Last update: 23/07/2019

RCT 2145-3 - 2363-3



1. Water inlet; 2. Fan motor; 3. Concrete basin (by others).

Model	Weights (kg)			Dimensions (mm)			Air Flow (m^3/s)	Fan Motor (kW)	Fluid Inlet ND (mm)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H			
RCT 2145-3	10125	3750	1250	7732	2589	3555	47.4	(3x) 4.0	(3x) 150
RCT 2161-3	10125	3750	1250	7732	2589	3555	62.7	(3x) 5.5	(3x) 150
RCT 2176-3	10125	3750	1250	7732	2589	3555	57.6	(3x) 7.5	(3x) 150
RCT 2200-3	10125	3750	1250	7732	2589	3555	65.4	(3x) 11.0	(3x) 150
RCT 2189-3	12375	4650	1550	8646	2894	3671	61.9	(3x) 5.5	(3x) 200
RCT 2207-3	12375	4650	1550	8646	2894	3671	67.7	(3x) 7.5	(3x) 200
RCT 2236-3	12375	4650	1550	8646	2894	3671	77.2	(3x) 11.0	(3x) 200
RCT 2261-3	12375	4650	1550	8646	2894	3671	85.2	(3x) 15.0	(3x) 200
RCT 2218-3	14550	5400	1800	9560	3198	3931	71.4	(3x) 5.5	(3x) 200
RCT 2239-3	14550	5400	1800	9560	3198	3931	78.2	(3x) 7.5	(3x) 200
RCT 2271-3	14550	5400	1800	9560	3198	3931	88.6	(3x) 11.0	(3x) 200
RCT 2297-3	14550	5400	1800	9560	3198	3931	97.1	(3x) 15.0	(3x) 200
RCT 2318-3	14550	5400	1800	9560	3198	3931	104.1	(3x) 18.5	(3x) 200
RCT 2309-3	17100	6300	2100	10471	3499	4124	101.1	(3x) 11.0	(3x) 200
RCT 2339-3	17100	6300	2100	10471	3499	4124	110.9	(3x) 15.0	(3x) 200
RCT 2363-3	17100	6300	2100	10471	3499	4124	118.8	(3x) 18.5	(3x) 200