



# TX-S SERIES COOLING TOWER

MULTI-CELL 100-2000 HRT COOLING CAPACITY

**Modular Design Crossflow Type**



LOW NOISE • SUPER LOW NOISE • ENERGY SAVING SUPER LOW NOISE



Member

TX-S Series is an induced draft cross-flow, film filled, FRP multi-cell rectangular cooling tower designed for the equipment cooling, industrial process cooling and air conditioning applications.

The TX-S Series Cooling Tower is designed in accordance to CTI & JCI standards. Its design saves space, light weight, blends easily with architectural designs and offers low operating costs.

The thermal performance of TX-S Series is backed by full written guarantee. Field performance test to CTI standards can be carried out and witnessed by the owners appointed inspection engineer to ensure the supplied cooling tower meets the thermal performance.

Truwater TX-S Series Cooling Tower meets most design criteria in terms of economy, extra low noise and space saving.



:: Flextronics, Shah Alam, 1250HRT



:: MPKJ, Kajang, 1350HRT



:: JST Electronics, Johore, 1400HRT



:: Soletron, Penang, 500HRT, FM Compliance

## Advantages

- **Space Saving & Light Weight**

Incorporating the high performance fill, the installation space and operating weight are greatly reduced.

- **Energy Saving**

The low speed, high efficiency fan and low pressure drop fill design optimize the energy consumption.

- **Low Noise level**

The noise level is lowered by the specifically designed low noise fan.

- **Proven Corrosion Protection**

Tower components are made of anti-corrosive material suitable for cooling water application.

- **Easy Hoisting or Crane Placement**

The tower can be preassembled in the factory for easy transport, lifting and site installation.



:: Capital Square, Kuala Lumpur, 3900HRT



:: Nippon Denso, Bangi, 1000HRT

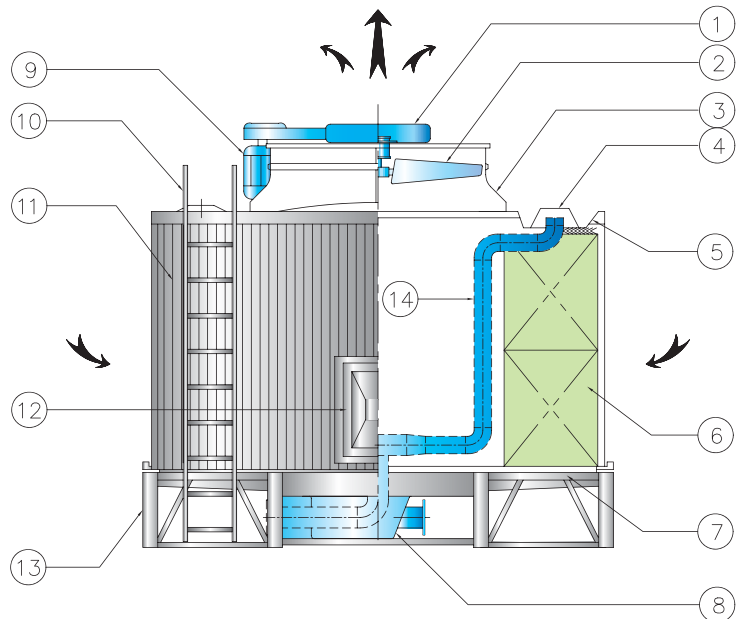


:: Nusajaya, Johore, 3000HRT



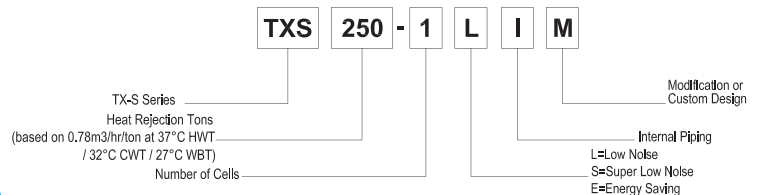
:: National Civilization Musuem, Singapore, 1500HRT, Side Discharge

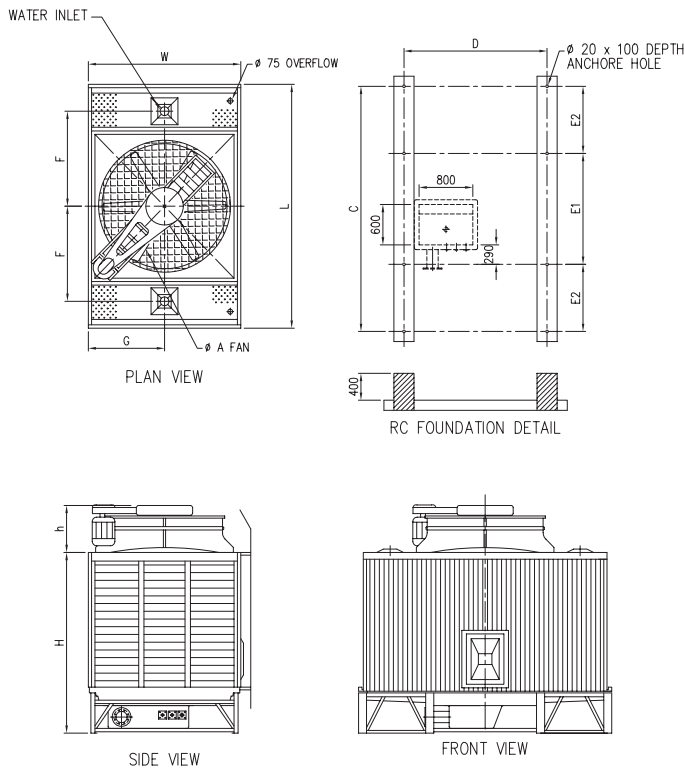
## Features



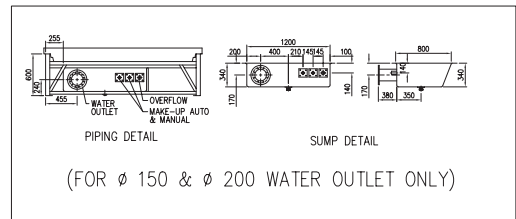
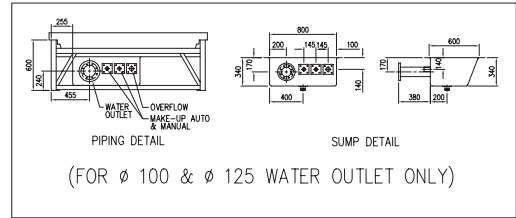
| No | Description                     | Material / Specification |
|----|---------------------------------|--------------------------|
| 1  | V-Belt and Pulley System        | FRP Pulley Cover         |
| 2  | Fan Assembly                    | Alluminium Alloy         |
| 3  | Fan Stack                       | FRP                      |
| 4  | Hot Water Distribution Box      | FRP                      |
| 5  | Hot Water Basin                 | FRP                      |
| 6  | High Performance Film Fill Pack | PVC                      |
| 7  | Cold Water Basin Floor          | FRP                      |
| 8  | Suction Sump                    | FRP                      |
| 9  | Motor                           | Weather Proof TEFC type  |
| 10 | Ladder                          | HDG Steel                |
| 11 | Casing                          | FRP                      |
| 12 | Inspection Door                 | FRP                      |
| 13 | Cold Water Basin Frame          | HDG Steel                |
| 14 | Internal Piping                 | Optional                 |

### Model Definition Example





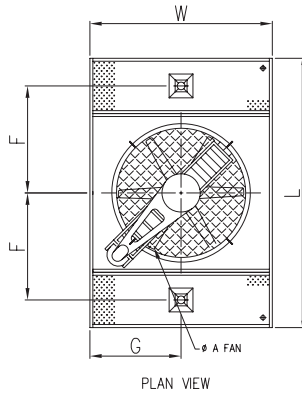
- |            |            |            |
|------------|------------|------------|
| TXS 100-1L | TXS 125-1L | TXS 150-1L |
| TXS 175-1L | TXS 200-1L | TXS 225-1L |
| TXS 250-1L | TXS 300-1L | TXS 100-1S |
| TXS 125-1S | TXS 150-1S | TXS 175-1S |
| TXS 200-1S | TXS 225-1S | TXS 250-1S |
| TXS 300-1S | TXS 100-1E | TXS 125-1E |
| TXS 150-1E | TXS 175-1E |            |



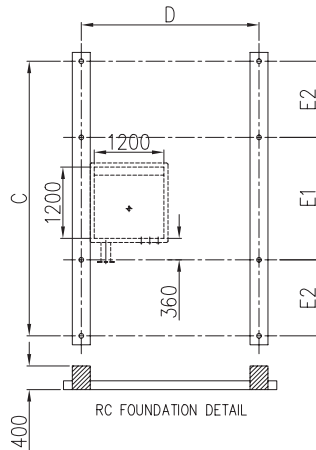
### TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | OVERALL DIMENSION |      |      |     |      | MOTOR           |                           |                                                 |                                | AXIAL FLOW FAN |           |                     |                   |
|-------------|-------------------|------|------|-----|------|-----------------|---------------------------|-------------------------------------------------|--------------------------------|----------------|-----------|---------------------|-------------------|
|             | L                 | W    | H    | h   | A    | Rated Output kW | Rated Current (A 50/60Hz) | Type                                            | Power Source                   | Diameter (mm)  | Fan Speed | No of blades        | Drive System      |
| TXS - 1     |                   |      |      |     |      |                 |                           |                                                 |                                |                |           |                     |                   |
| 100-1L      | 3090              | 1670 | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               | TEFC, outdoor, 3 phase, induction motor, 4 pole | 3ph/380V/50Hz or 3ph/415V/50Hz | 1400           | 450       | Four (4) to Six (6) | V Belt and Pulley |
| 100-1S      | 3090              | 1670 | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1400           | 400       |                     |                   |
| 100-1E      | 3090              | 1670 | 2690 | 700 | 1400 | 1.5             | 3.35 / 3.06               |                                                 |                                | 1400           | 397       |                     |                   |
| 125-1L      | 3290              | 1870 | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 125-1S      | 3290              | 1870 | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 125-1E      | 3290              | 1870 | 2690 | 700 | 1600 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1600           | 402       |                     |                   |
| 150-1L      | 3290              | 1870 | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 150-1S      | 3290              | 1870 | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 150-1E      | 3490              | 2070 | 2690 | 700 | 1830 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1830           | 360       |                     |                   |
| 175-1L      | 3290              | 1870 | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 480       |                     |                   |
| 175-1S      | 3290              | 1870 | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 430       |                     |                   |
| 175-1E      | 3690              | 2270 | 2690 | 700 | 2000 | 3.7             | 7.35 / 6.95               |                                                 |                                | 2000           | 320       |                     |                   |
| 200-1L      | 3490              | 2070 | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 440       |                     |                   |
| 200-1S      | 3490              | 2070 | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 355       |                     |                   |
| 225-1L      | 3690              | 2270 | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 360       |                     |                   |
| 225-1S      | 3690              | 2270 | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 315       |                     |                   |
| 250-1L      | 3690              | 2270 | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 250-1S      | 3690              | 2270 | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 345       |                     |                   |
| 300-1L      | 3690              | 2270 | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 300-1S      | 3690              | 2270 | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 380       |                     |                   |
| 350-1L      | 4530              | 3070 | 3400 | 700 | 2135 | 11.0            | 20.1 / 18.56              | 2135                                            | 384                            |                |           |                     |                   |
| 400-1L      | 4530              | 3070 | 3400 | 700 | 2135 | 15.0            | 26.8 / 24.05              | 2135                                            | 428                            |                |           |                     |                   |
| 450-1L      | 4930              | 3470 | 3400 | 700 | 2745 | 11.0            | 20.1 / 18.56              | 2745                                            | 309                            |                |           |                     |                   |
| 500-1L      | 4930              | 3470 | 3400 | 700 | 2745 | 15.0            | 26.8 / 24.05              | 2745                                            | 344                            |                |           |                     |                   |

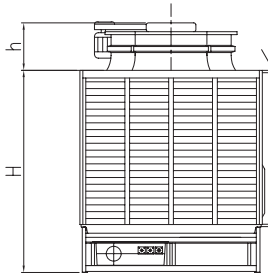
# Outline And Foundation Drawing (Single Cell)



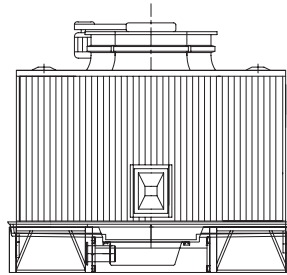
PLAN VIEW



RC FOUNDATION DETAIL

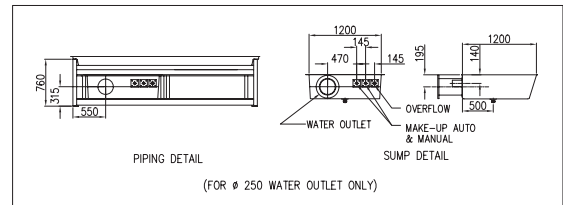


SIDE VIEW



FRONT VIEW

TXS 350-1L TXS 400-1L  
TXS 450-1L TXS 500-1L



PIPING DETAIL

SUMP DETAIL

(FOR Ø 250 WATER OUTLET ONLY)

## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | ANCHOR BOLTS DATA |      |      |      |      | PIPING DATA |      |   | PIPING SIZE     |                 |              |          |        | WEIGHT (KG)           |            |              |
|-------------|-------------------|------|------|------|------|-------------|------|---|-----------------|-----------------|--------------|----------|--------|-----------------------|------------|--------------|
|             | B                 | C    | D    | E1   | E2   | F           | G    | J | External Piping | Internal Piping | Water Outlet | Overflow | Drain  | Make Up Auto & Manual | Dry Weight | Oper. Weight |
| TXS - 1     |                   |      |      |      |      |             |      |   |                 |                 |              |          |        |                       |            |              |
| 100-1L      | -                 | 3050 | 1530 | 1250 | 900  | 1135        | 835  | - | 100 X 2         | 100 X 1         | 100 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 790        | 1880         |
| 100-1S      | -                 | 3050 | 1530 | 1250 | 900  | 1135        | 835  | - | 100 X 2         | 100 X 1         | 100 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 790        | 1880         |
| 100-1E      | -                 | 3050 | 1530 | 1250 | 900  | 1135        | 835  | - | 100 X 2         | 100 X 1         | 100 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 900        | 1970         |
| 125-1L      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 900        | 2210         |
| 125-1S      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 900        | 2210         |
| 125-1E      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1010       | 2210         |
| 150-1L      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 980        | 2490         |
| 150-1S      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 980        | 2490         |
| 150-1E      | -                 | 3450 | 1930 | 1450 | 900  | 1335        | 1035 | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1010       | 2490         |
| 175-1L      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 990        | 2500         |
| 175-1S      | -                 | 3250 | 1730 | 1450 | 900  | 1235        | 935  | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 990        | 2500         |
| 175-1E      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 100 X 2         | 125 X 1         | 125 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1220       | 2790         |
| 200-1L      | -                 | 3450 | 1930 | 1450 | 1000 | 1335        | 1035 | - | 100 X 2         | 125 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1113       | 2880         |
| 200-1S      | -                 | 3450 | 1930 | 1450 | 1000 | 1335        | 1035 | - | 100 X 2         | 125 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1113       | 2880         |
| 225-1L      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 150 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1180       | 3180         |
| 225-1S      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 150 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1180       | 3180         |
| 250-1L      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 150 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1190       | 3200         |
| 250-1S      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 150 X 1         | 150 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1190       | 3200         |
| 300-1L      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 200 X 1         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1785       | 3900         |
| 300-1S      | -                 | 3650 | 2130 | 1650 | 1000 | 1435        | 1135 | - | 125 X 2         | 200 X 1         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1785       | 3900         |
| 350-1L      | -                 | 4620 | 2990 | 2060 | 1280 | 1800        | 1535 | - | 150 X 2         | 200 X 1         | 250 X 1      | 80 X 1   | 50 X 1 | 50 X 1                | 2150       | 5350         |
| 400-1L      | -                 | 4620 | 2990 | 2060 | 1280 | 1800        | 1535 | - | 150 X 2         | 200 X 1         | 250 X 1      | 80 X 1   | 50 X 1 | 50 X 1                | 2280       | 5800         |
| 450-1L      | -                 | 5120 | 3390 | 2560 | 1280 | 2000        | 1735 | - | 150 X 2         | 250 X 1         | 250 X 1      | 80 X 1   | 50 X 1 | 50 X 1                | 2970       | 6670         |
| 500-1L      | -                 | 5120 | 3390 | 2560 | 1280 | 2000        | 1735 | - | 200 X 2         | 250 X 1         | 250 X 1      | 80 X 1   | 80 X 1 | 50 X 1                | 3130       | 7250         |

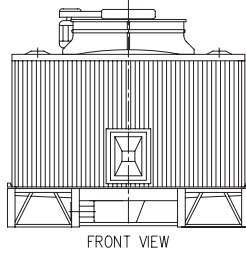
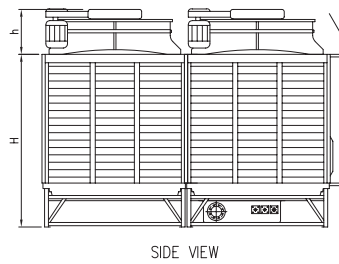
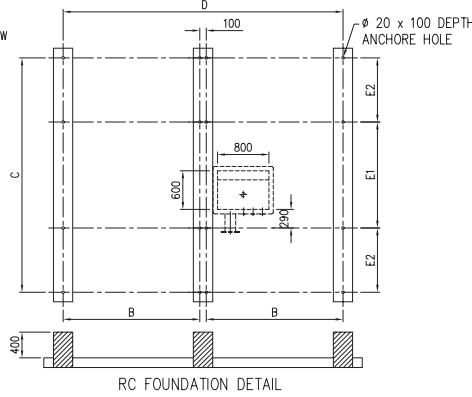
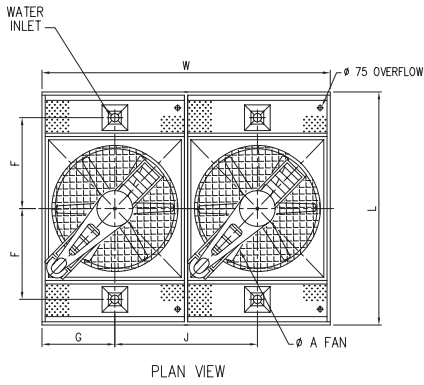
\* Note: 1.) For Internal Piping Detail, Please Contact Truwater's Engineer.

3.) External Piping to Open End. Internal Piping & Water Outlet to JIS10K FF Flange.

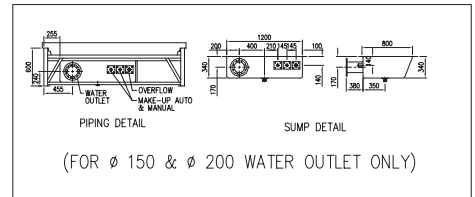
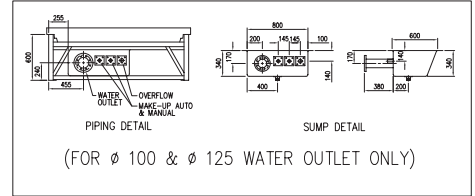
2.) Balancing Pipe Connection Is Available Upon Request.

4.) Overflow, Drain, Make Up Auto & Manual to BSP Male Thread

# Outline And Foundation Drawing (Two Cell)



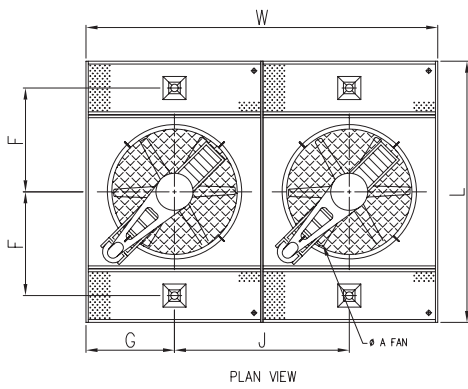
|            |            |            |
|------------|------------|------------|
| TXS 200-2L | TXS 250-2L | TXS 300-2L |
| TXS 325-2L | TXS 400-2L | TXS 450-2L |
| TXS 500-2L | TXS 600-2L | TXS 200-2S |
| TXS 250-2S | TXS 300-2S | TXS 325-2S |
| TXS 400-2S | TXS 450-2S | TXS 500-2S |
| TXS 600-2S | TXS 200-2E | TXS 250-2E |
| TXS 300-2E | TXS 325-2E |            |



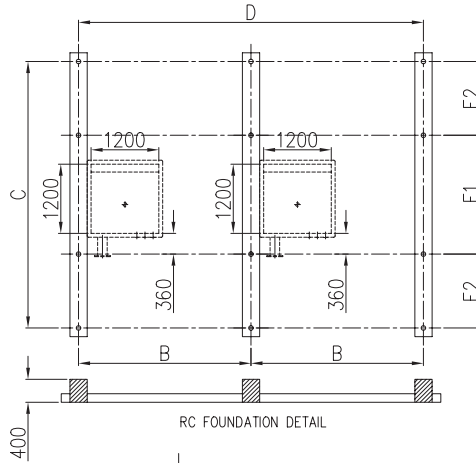
## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | OVERALL DIMENSION |      |      |     |      | MOTOR           |                           |                                                 |                                | AXIAL FLOW FAN |           |                     |                   |
|-------------|-------------------|------|------|-----|------|-----------------|---------------------------|-------------------------------------------------|--------------------------------|----------------|-----------|---------------------|-------------------|
|             | L                 | W    | H    | h   | A    | Rated Output kW | Rated Current (A 50/60Hz) | Type                                            | Power Source                   | Diameter (mm)  | Fan Speed | No of blades        | Drive System      |
| 200-2L      | 3090              | 3300 | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               | TEFC, outdoor, 3 phase, induction motor, 4 pole | 3ph/380V/50Hz or 3ph/415V/50Hz | 1400           | 450       | Four (4) to Six (6) | V Belt and Pulley |
| 200-2S      | 3090              | 3300 | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1400           | 400       |                     |                   |
| 200-2E      | 3090              | 3300 | 2690 | 700 | 1400 | 1.5             | 3.35 / 3.06               |                                                 |                                | 1400           | 397       |                     |                   |
| 250-2L      | 3290              | 3700 | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 250-2S      | 3290              | 3700 | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 250-2E      | 3290              | 3700 | 2690 | 700 | 1600 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1600           | 402       |                     |                   |
| 300-2L      | 3290              | 3700 | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 300-2S      | 3290              | 3700 | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 300-2E      | 3490              | 4100 | 2690 | 700 | 1830 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1830           | 360       |                     |                   |
| 350-2L      | 3290              | 3700 | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 480       |                     |                   |
| 350-2S      | 3290              | 3700 | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 430       |                     |                   |
| 350-2E      | 3690              | 4500 | 2690 | 700 | 2000 | 3.7             | 7.35 / 6.95               |                                                 |                                | 2000           | 320       |                     |                   |
| 400-2L      | 3490              | 4100 | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 440       |                     |                   |
| 400-2S      | 3490              | 4100 | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 355       |                     |                   |
| 450-2L      | 3690              | 4500 | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 360       |                     |                   |
| 450-2S      | 3690              | 4500 | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 315       |                     |                   |
| 500-2L      | 3690              | 4500 | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 500-2S      | 3690              | 4500 | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 345       |                     |                   |
| 600-2L      | 3690              | 4500 | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 600-2S      | 3690              | 4500 | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 380       |                     |                   |
| 700-2L      | 4530              | 6100 | 3400 | 700 | 2135 | 11.0            | 20.1 / 18.56              | 2135                                            | 384                            |                |           |                     |                   |
| 800-2L      | 4530              | 6100 | 3400 | 700 | 2135 | 15.0            | 26.8 / 24.05              | 2135                                            | 428                            |                |           |                     |                   |
| 900-2L      | 4930              | 6900 | 3400 | 700 | 2745 | 11.0            | 20.1 / 18.56              | 2745                                            | 309                            |                |           |                     |                   |
| 1000-2L     | 4930              | 6900 | 3400 | 700 | 2745 | 15.0            | 26.8 / 24.05              | 2745                                            | 344                            |                |           |                     |                   |

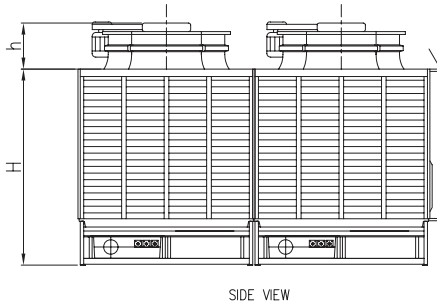
# Outline And Foundation Drawing (Two Cell)



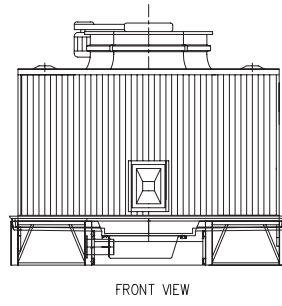
PLAN VIEW



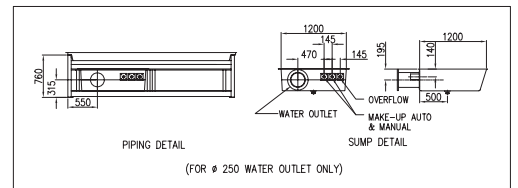
RC FOUNDATION DETAIL



SIDE VIEW



FRONT VIEW



PIPING DETAIL

(FOR Ø 250 WATER OUTLET ONLY)

TXS 700-2L  
TXS 800-2L  
TXS 900-2L  
TXS 1000-2L

## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | ANCHOR BOLTS DATA |      |      |      |      | PIPING DATA |      |      | PIPING SIZE     |                 |              |          |        | WEIGHT (KG)           |            |              |
|-------------|-------------------|------|------|------|------|-------------|------|------|-----------------|-----------------|--------------|----------|--------|-----------------------|------------|--------------|
|             | B                 | C    | D    | E1   | E2   | F           | G    | J    | External Piping | Internal Piping | Water Outlet | Overflow | Drain  | Make Up Auto & Manual | Dry Weight | Oper. Weight |
| 200-2L      | 1530              | 3050 | 3160 | 1250 | 900  | 1135        | 835  | 1630 | 100 X 4         | 100 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1580       | 3760         |
| 200-2S      | 1530              | 3050 | 3160 | 1250 | 900  | 1135        | 835  | 1630 | 100 X 4         | 100 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1580       | 3760         |
| 200-2E      | 1530              | 3050 | 3160 | 1250 | 900  | 1135        | 835  | 1630 | 100 X 4         | 100 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 25 X 1                | 1800       | 3940         |
| 250-2L      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1800       | 4420         |
| 250-2S      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1800       | 4420         |
| 250-2E      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 150 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 2020       | 4420         |
| 300-2L      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1960       | 4980         |
| 300-2S      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1960       | 4980         |
| 300-2E      | 1930              | 3450 | 3960 | 1450 | 900  | 1335        | 1035 | 2030 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 2020       | 4980         |
| 350-2L      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1980       | 5000         |
| 350-2S      | 1730              | 3250 | 3560 | 1450 | 900  | 1235        | 935  | 1830 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 1980       | 5000         |
| 350-2E      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 100 X 4         | 125 x 2         | 200 X 1      | 50 X 1   | 50 X 1 | 32 X 1                | 2440       | 5580         |
| 400-2L      | 1930              | 3450 | 3960 | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 4         | 125 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2226       | 5760         |
| 400-2S      | 1930              | 3450 | 3960 | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 4         | 125 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2226       | 5760         |
| 450-2L      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 150 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2360       | 6360         |
| 450-2S      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 150 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2360       | 6360         |
| 500-2L      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 150 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2380       | 6400         |
| 500-2S      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 150 x 2         | 250 X 1      | 50 X 1   | 50 X 1 | 50 X 1                | 2380       | 6400         |
| 600-2L      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 200 x 2         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3570       | 7800         |
| 600-2S      | 2130              | 3650 | 4360 | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 4         | 200 x 2         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3570       | 7800         |
| 700-2L      | 2990              | 4620 | 5980 | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 4         | 200 x 2         | 250 X 2      | 80 X 2   | 50 X 2 | 50 X 2                | 4300       | 10700        |
| 800-2L      | 2990              | 4620 | 5980 | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 4         | 200 x 2         | 250 X 2      | 80 X 2   | 50 X 2 | 50 X 2                | 4560       | 11600        |
| 900-2L      | 3390              | 5120 | 6780 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 4         | 250 x 2         | 250 X 2      | 80 X 2   | 50 X 2 | 50 X 2                | 5940       | 13340        |
| 1000-2L     | 3390              | 5120 | 6780 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 4         | 250 x 2         | 250 X 2      | 80 X 2   | 80 X 2 | 50 X 2                | 6260       | 14500        |

\* Note: 1.) For Internal Piping Detail, Please Contact Truwater's Engineer.

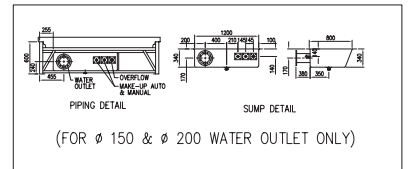
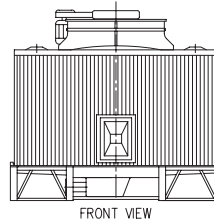
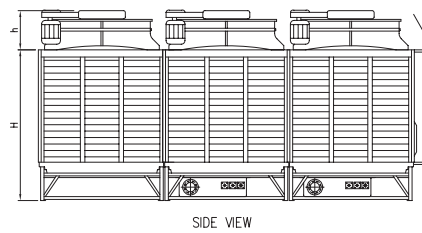
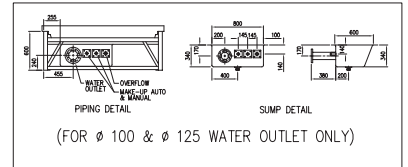
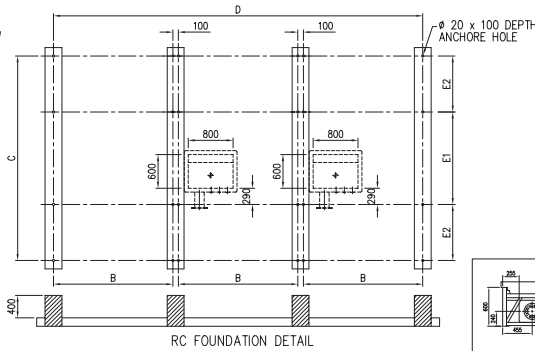
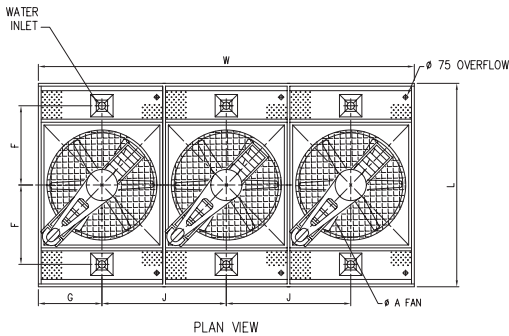
3.) External Piping to Open End. Internal Piping & Water Outlet to JIS10K FF Flange.

2.) Balancing Pipe Connection Is Available Upon Request.

4.) Overflow, Drain, Make Up Auto & Manual to BSP Male Thread

# Outline And Foundation Drawing (Three Cell)

- TXS 300-3L TXS 375-3L
- TXS 450-3L TXS 525-3L
- TXS 600-3L TXS 700-3L
- TXS 750-3L TXS 900-3L
- TXS 300-3S TXS 375-3S
- TXS 450-3S TXS 525-3S
- TXS 600-3S TXS 700-3S
- TXS 750-3S TXS 900-3S
- TXS 300-3E TXS 375-3E
- TXS 450-3E TXS 525-3E

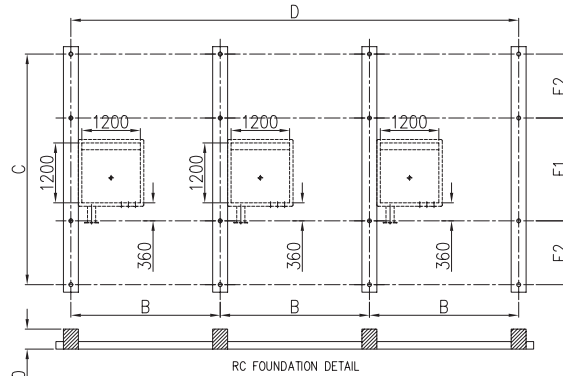
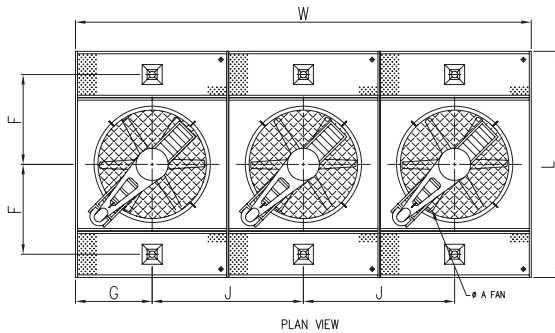


## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

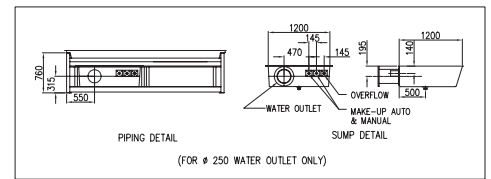
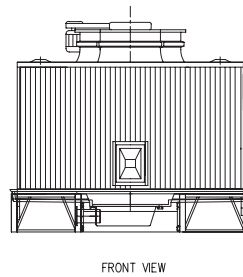
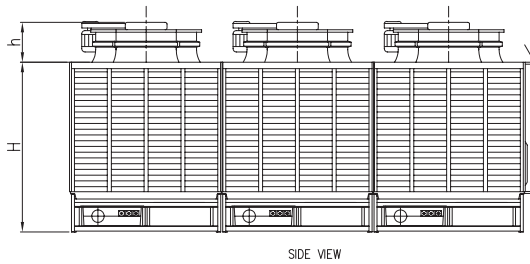
| Tower Model | OVERALL DIMENSION |       |      |     |      | MOTOR           |                           |                                                 |                                | AXIAL FLOW FAN |           |                     |                   |
|-------------|-------------------|-------|------|-----|------|-----------------|---------------------------|-------------------------------------------------|--------------------------------|----------------|-----------|---------------------|-------------------|
|             | L                 | W     | H    | h   | A    | Rated Output kW | Rated Current (A 50/60Hz) | Type                                            | Power Source                   | Diameter (mm)  | Fan Speed | No of blades        | Drive System      |
| TXS - 3     |                   |       |      |     |      |                 |                           |                                                 |                                |                |           |                     |                   |
| 300-3L      | 3090              | 4930  | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               | TEFC, outdoor, 3 phase, induction motor, 4 pole | 3ph/380V/50Hz or 3ph/415V/50Hz | 1400           | 450       | Four (4) to Six (6) | V Belt and Pulley |
| 300-3S      | 3090              | 4930  | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1400           | 400       |                     |                   |
| 300-3E      | 3090              | 4930  | 2690 | 700 | 1400 | 1.5             | 3.35 / 3.06               |                                                 |                                | 1400           | 397       |                     |                   |
| 375-3L      | 3290              | 5530  | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 375-3S      | 3290              | 5530  | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 375-3E      | 3290              | 5530  | 2690 | 700 | 1600 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1600           | 402       |                     |                   |
| 450-3L      | 3290              | 5530  | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 450-3S      | 3290              | 5530  | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 450-3E      | 3490              | 6130  | 2690 | 700 | 1830 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1830           | 360       |                     |                   |
| 525-3L      | 3290              | 5530  | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 480       |                     |                   |
| 525-3S      | 3290              | 5530  | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 430       |                     |                   |
| 525-3E      | 3690              | 6730  | 2690 | 700 | 2000 | 3.7             | 7.35 / 6.95               |                                                 |                                | 2000           | 320       |                     |                   |
| 600-3L      | 3490              | 6130  | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 440       |                     |                   |
| 600-3S      | 3490              | 6130  | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 355       |                     |                   |
| 700-3L      | 3690              | 6730  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 360       |                     |                   |
| 700-3S      | 3690              | 6730  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 315       |                     |                   |
| 750-3L      | 3690              | 6730  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 750-3S      | 3690              | 6730  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 345       |                     |                   |
| 900-3L      | 3690              | 6730  | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 900-3S      | 3690              | 6730  | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 380       |                     |                   |
| 1050-3L     | 4530              | 9130  | 3400 | 700 | 2135 | 11.0            | 20.1 / 18.56              | 2135                                            | 384                            |                |           |                     |                   |
| 1200-3L     | 4530              | 9130  | 3400 | 700 | 2135 | 15.0            | 26.8 / 24.05              | 2135                                            | 428                            |                |           |                     |                   |
| 1350-3L     | 4930              | 10330 | 3400 | 700 | 2745 | 11.0            | 20.1 / 18.56              | 2745                                            | 309                            |                |           |                     |                   |
| 1500-3L     | 4930              | 10330 | 3400 | 700 | 2745 | 15.0            | 26.8 / 24.05              | 2745                                            | 344                            |                |           |                     |                   |



# Outline And Foundation Drawing (Three Cell)



TXS 1050-3L  
TXS 1200-3L  
TXS 1350-3L  
TXS 1500-3L



## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | ANCHOR BOLTS DATA |      |       |      |      | PIPING DATA |      |      | PIPING SIZE     |                 |              |          |        | WEIGHT (KG)           |            |              |
|-------------|-------------------|------|-------|------|------|-------------|------|------|-----------------|-----------------|--------------|----------|--------|-----------------------|------------|--------------|
|             | B                 | C    | D     | E1   | E2   | F           | G    | J    | External Piping | Internal Piping | Water Outlet | Overflow | Drain  | Make Up Auto & Manual | Dry Weight | Oper. Weight |
| TXS - 3     |                   |      |       |      |      |             |      |      |                 |                 |              |          |        |                       |            |              |
| 300-3L      | 1530              | 3050 | 4790  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 6         | 100 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2370       | 5640         |
| 300-3S      | 1530              | 3050 | 4790  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 6         | 100 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2370       | 5640         |
| 300-3E      | 1530              | 3050 | 4790  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 6         | 100 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2700       | 5910         |
| 375-3L      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2700       | 6630         |
| 375-3S      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2700       | 6630         |
| 375-3E      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 3030       | 6630         |
| 450-3L      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2940       | 7470         |
| 450-3S      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 2940       | 7470         |
| 450-3E      | 1930              | 3450 | 5990  | 1450 | 900  | 1335        | 1035 | 2030 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 25 X 2                | 3030       | 7470         |
| 525-3L      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 2970       | 7500         |
| 525-3S      | 1730              | 3250 | 5390  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 2970       | 7500         |
| 525-3E      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 100 X 6         | 125 X 3         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3660       | 8370         |
| 600-3L      | 1930              | 3450 | 5990  | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 6         | 125 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3339       | 8640         |
| 600-3S      | 1930              | 3450 | 5990  | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 6         | 125 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3339       | 8640         |
| 700-3L      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 150 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3540       | 9540         |
| 700-3S      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 150 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3540       | 9540         |
| 750-3L      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 150 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3570       | 9600         |
| 750-3S      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 150 X 3         | 200 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 3570       | 9600         |
| 900-3L      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 200 X 3         | 200 X 3      | 50 X 3   | 50 X 3 | 50 X 3                | 5355       | 11700        |
| 900-3S      | 2130              | 3650 | 6590  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 6         | 200 X 3         | 200 X 3      | 50 X 3   | 50 X 3 | 50 X 3                | 5355       | 11700        |
| 1050-3L     | 2990              | 4620 | 8970  | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 6         | 200 X 3         | 250 X 3      | 80 X 3   | 50 X 3 | 50 X 3                | 6450       | 16050        |
| 1200-3L     | 2990              | 4620 | 8970  | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 6         | 200 X 3         | 250 X 3      | 80 X 3   | 50 X 3 | 50 X 3                | 6840       | 17400        |
| 1350-3L     | 3390              | 5120 | 10170 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 6         | 250 X 3         | 250 X 3      | 80 X 3   | 50 X 3 | 50 X 3                | 8910       | 20010        |
| 1500-3L     | 3390              | 5120 | 10170 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 6         | 250 X 3         | 250 X 3      | 80 X 3   | 80 X 3 | 50 X 3                | 9390       | 21750        |

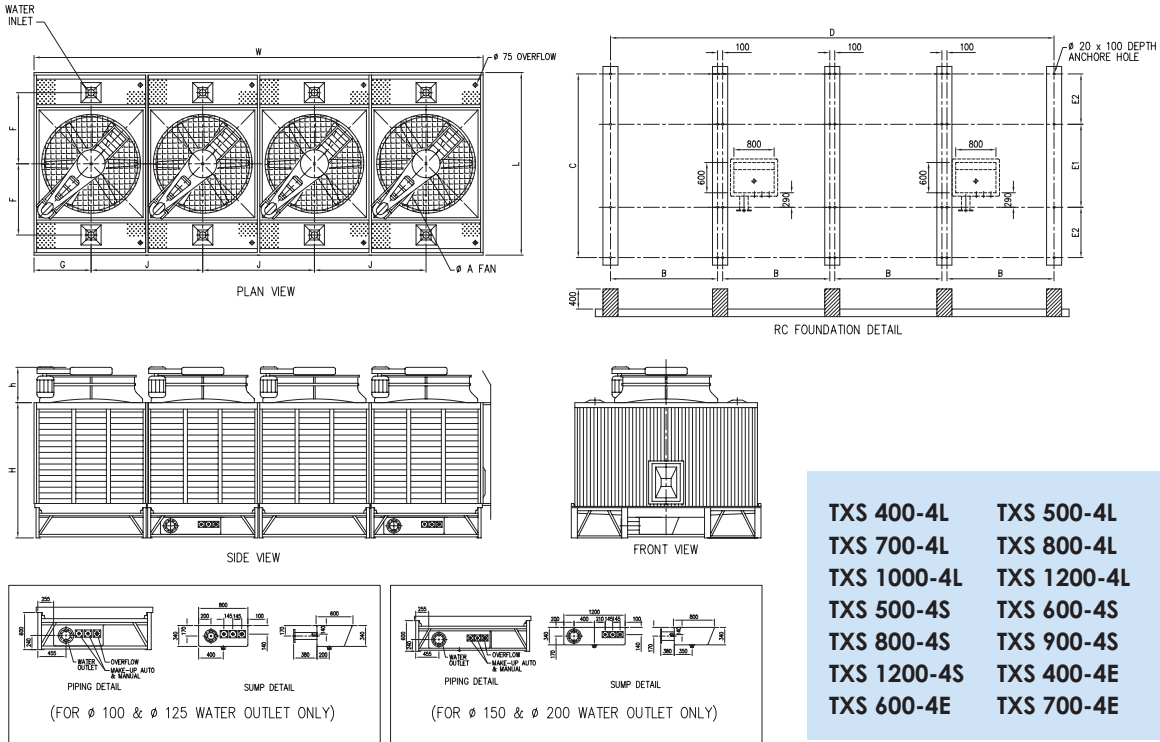
\* Note: 1.) For Internal Piping Detail, Please Contact Truwater's Engineer.

3.) External Piping to Open End. Internal Piping & Water Outlet to JIS10K FF Flange.

2.) Balancing Pipe Connection Is Available Upon Request.

4.) Overflow, Drain, Make Up Auto & Manual to BSP Male Thread

# Outline And Foundation Drawing (Four Cell)

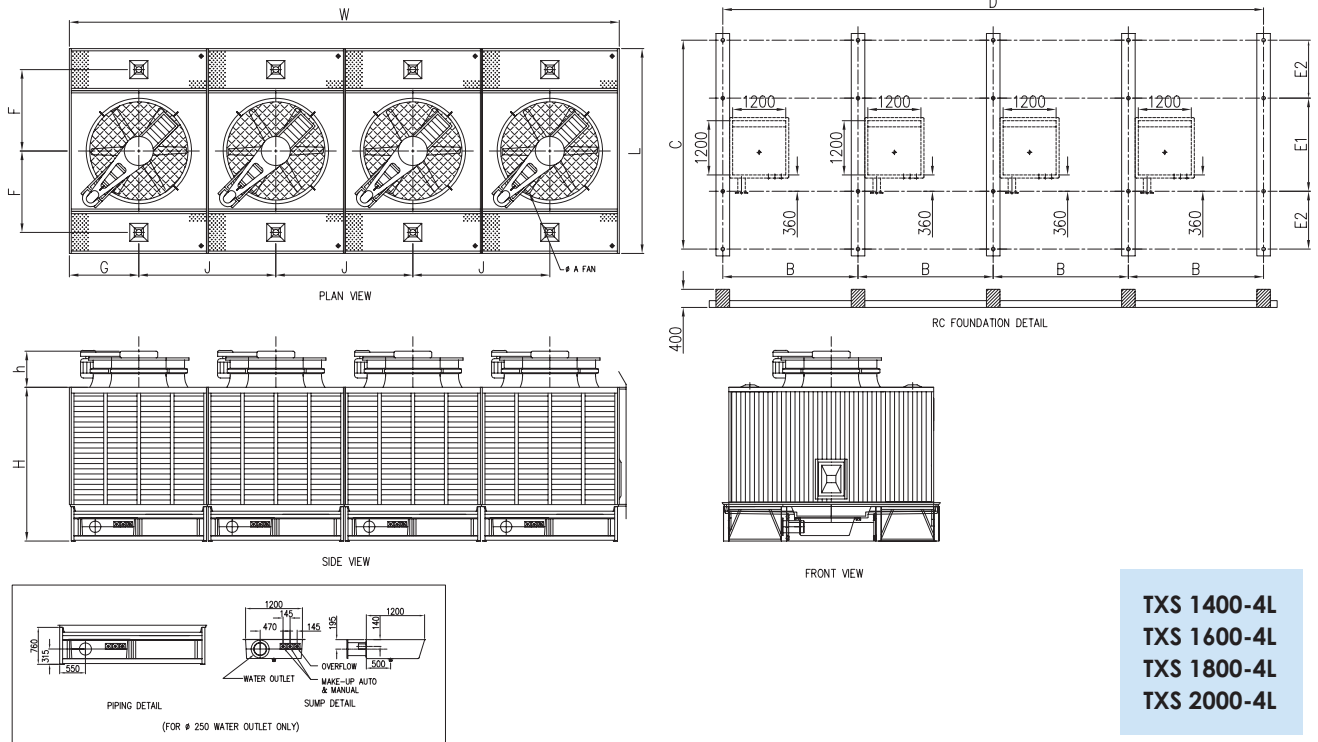


- TXS 400-4L      TXS 500-4L      TXS 600-4L
- TXS 700-4L      TXS 800-4L      TXS 900-4L
- TXS 1000-4L    TXS 1200-4L    TXS 400-4S
- TXS 500-4S      TXS 600-4S      TXS 700-4S
- TXS 800-4S      TXS 900-4S      TXS 1000-4S
- TXS 1200-4S    TXS 400-4E      TXS 500-4E
- TXS 600-4E      TXS 700-4E

## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | OVERALL DIMENSION |       |      |     |      | MOTOR           |                           |                                                 |                                | AXIAL FLOW FAN |           |                     |                   |
|-------------|-------------------|-------|------|-----|------|-----------------|---------------------------|-------------------------------------------------|--------------------------------|----------------|-----------|---------------------|-------------------|
|             | L                 | W     | H    | h   | A    | Rated Output kW | Rated Current (A 50/60Hz) | Type                                            | Power Source                   | Diameter (mm)  | Fan Speed | No of blades        | Drive System      |
| TXS - 4     |                   |       |      |     |      |                 |                           |                                                 |                                |                |           |                     |                   |
| 400-4L      | 3090              | 6560  | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               | TEFC, outdoor, 3 phase, induction motor, 4 pole | 3ph/380V/50Hz or 3ph/415V/50Hz | 1400           | 450       | Four (4) to Six (6) | V Belt and Pulley |
| 400-4S      | 3090              | 6560  | 2290 | 700 | 1400 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1400           | 400       |                     |                   |
| 400-4E      | 3090              | 6560  | 2690 | 700 | 1400 | 1.5             | 3.35 / 3.06               |                                                 |                                | 1400           | 397       |                     |                   |
| 500-4L      | 3290              | 6560  | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 500-4S      | 3290              | 7360  | 2290 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 500-4E      | 3290              | 7360  | 2690 | 700 | 1600 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1600           | 402       |                     |                   |
| 600-4L      | 3290              | 7360  | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 430       |                     |                   |
| 600-4S      | 3290              | 7360  | 2690 | 700 | 1600 | 3.7             | 7.35 / 6.95               |                                                 |                                | 1600           | 380       |                     |                   |
| 600-4E      | 3490              | 7360  | 2690 | 700 | 1830 | 2.2             | 4.66 / 4.17               |                                                 |                                | 1830           | 360       |                     |                   |
| 700-4L      | 3290              | 8160  | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 480       |                     |                   |
| 700-4S      | 3290              | 7360  | 2690 | 700 | 1600 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1600           | 430       |                     |                   |
| 700-4E      | 3690              | 7360  | 2690 | 700 | 2000 | 3.7             | 7.35 / 6.95               |                                                 |                                | 2000           | 320       |                     |                   |
| 800-4L      | 3490              | 8960  | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 440       |                     |                   |
| 800-4S      | 3490              | 8160  | 2690 | 700 | 1830 | 5.5             | 11.0 / 9.93               |                                                 |                                | 1830           | 355       |                     |                   |
| 900-4L      | 3690              | 8160  | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 360       |                     |                   |
| 900-4S      | 3690              | 8960  | 2690 | 700 | 2000 | 5.5             | 11.0 / 9.93               |                                                 |                                | 2000           | 315       |                     |                   |
| 1000-4L     | 3690              | 8960  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 1000-4S     | 3690              | 8960  | 2690 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 345       |                     |                   |
| 1200-4L     | 3690              | 8960  | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 395       |                     |                   |
| 1200-4S     | 3690              | 8960  | 3400 | 700 | 2000 | 7.5             | 13.9 / 12.44              |                                                 |                                | 2000           | 380       |                     |                   |
| 1400-4L     | 4530              | 8960  | 3400 | 700 | 2135 | 11.0            | 20.1 / 18.56              | 2135                                            | 384                            |                |           |                     |                   |
| 1600-4L     | 4530              | 12160 | 3400 | 700 | 2135 | 15.0            | 26.8 / 24.05              | 2135                                            | 428                            |                |           |                     |                   |
| 1800-4L     | 4930              | 12160 | 3400 | 700 | 2745 | 11.0            | 20.1 / 18.56              | 2745                                            | 309                            |                |           |                     |                   |
| 2000-4L     | 4930              | 13760 | 3400 | 700 | 2745 | 15.0            | 26.8 / 24.05              | 2745                                            | 344                            |                |           |                     |                   |

# Outline And Foundation Drawing (Four Cell)



**TXS 1400-4L**  
**TXS 1600-4L**  
**TXS 1800-4L**  
**TXS 2000-4L**

## TX-S SERIES LOW NOISE, SUPER LOW NOISE & ENERGY SAVING SUPER LOW NOISE RANGE

| Tower Model | ANCHOR BOLTS DATA |      |       |      |      | PIPING DATA |      |      | PIPING SIZE     |                 |              |          |        | WEIGHT (KG)           |            |              |
|-------------|-------------------|------|-------|------|------|-------------|------|------|-----------------|-----------------|--------------|----------|--------|-----------------------|------------|--------------|
|             | B                 | C    | D     | E1   | E2   | F           | G    | J    | External Piping | Internal Piping | Water Outlet | Overflow | Drain  | Make Up Auto & Manual | Dry Weight | Oper. Weight |
| TXS - 4     |                   |      |       |      |      |             |      |      |                 |                 |              |          |        |                       |            |              |
| 400-4L      | 1530              | 3050 | 6420  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 8         | 100 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3160       | 7520         |
| 400-4S      | 1530              | 3050 | 6420  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 8         | 100 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3160       | 7520         |
| 400-4E      | 1530              | 3050 | 6420  | 1250 | 900  | 1135        | 835  | 1630 | 100 X 8         | 100 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3600       | 7880         |
| 500-4L      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3600       | 8840         |
| 500-4S      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3600       | 8840         |
| 500-4E      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 150 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 4040       | 8840         |
| 600-4L      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3920       | 9960         |
| 600-4S      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3920       | 9960         |
| 600-4E      | 1930              | 3450 | 8020  | 1450 | 900  | 1335        | 1035 | 2030 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 4040       | 9960         |
| 700-4L      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3960       | 10000        |
| 700-4S      | 1730              | 3250 | 7220  | 1450 | 900  | 1235        | 935  | 1830 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 3960       | 10000        |
| 700-4E      | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 100 X 8         | 125 X 4         | 200 X 2      | 50 X 2   | 50 X 2 | 32 X 2                | 4880       | 11160        |
| 800-4L      | 1930              | 3450 | 8020  | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 8         | 125 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4452       | 11520        |
| 800-4S      | 1930              | 3450 | 8020  | 1450 | 1000 | 1335        | 1035 | 2030 | 100 X 8         | 125 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4452       | 11520        |
| 900-4L      | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 150 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4720       | 12720        |
| 900-4S      | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 150 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4720       | 12720        |
| 1000-4L     | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 150 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4760       | 12800        |
| 1000-4S     | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 150 X 4         | 250 X 2      | 50 X 2   | 50 X 2 | 50 X 2                | 4760       | 12800        |
| 1200-4L     | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 200 X 4         | 200 X 4      | 50 X 4   | 50 X 4 | 50 X 4                | 7140       | 15600        |
| 1200-4S     | 2130              | 3650 | 8820  | 1650 | 1000 | 1435        | 1135 | 2230 | 125 X 8         | 200 X 4         | 200 X 4      | 50 X 4   | 50 X 4 | 50 X 4                | 7140       | 15600        |
| 1400-4L     | 2990              | 4620 | 11960 | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 8         | 200 X 4         | 250 X 4      | 80 X 4   | 50 X 4 | 50 X 4                | 8600       | 21400        |
| 1600-4L     | 2990              | 4620 | 11960 | 2060 | 1280 | 1800        | 1535 | 3030 | 150 X 8         | 200 X 4         | 250 X 4      | 80 X 4   | 50 X 4 | 50 X 4                | 9120       | 23200        |
| 1800-4L     | 3390              | 5120 | 13560 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 8         | 250 X 4         | 250 X 4      | 80 X 4   | 50 X 4 | 50 X 4                | 11880      | 26680        |
| 2000-4L     | 3390              | 5120 | 13560 | 2560 | 1280 | 2000        | 1735 | 3430 | 200 X 8         | 250 X 4         | 250 X 4      | 80 X 4   | 80 X 4 | 50 X 4                | 12520      | 29000        |

\* Note: 1.) For Internal Piping Detail, Please Contact Truwater's Engineer.  
 3.) External Piping to Open End. Internal Piping & Water Outlet to JIS10K FF Flange.

2.) Balancing Pipe Connection Is Available Upon Request.  
 4.) Overflow, Drain, Make Up Auto & Manual to BSP Male Thread

## TX-S Series Quick Selection Table

The diagrams below show the common combinations of various cold water, hot water, wet bulb temperature. However, if there is a difference in temperature combination, please contact the company for a selection of the cooling tower by our computer software

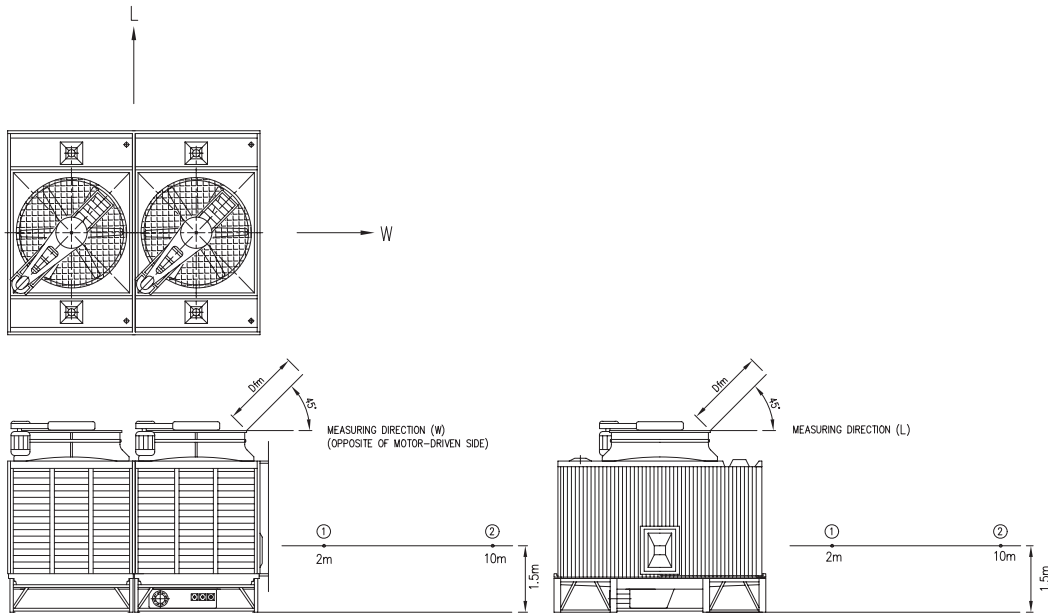
| Deg F | In  | 95   | 98.6 | 95 | 97 | 98 | 98.6 | 97 | 100 | 98.6 | 100 | 100 |
|-------|-----|------|------|----|----|----|------|----|-----|------|-----|-----|
|       | Out | 85.1 | 89.6 | 86 | 87 | 88 | 89.6 | 87 | 90  | 89.6 | 90  | 90  |
|       | WB  | 80.6 | 80.6 | 81 | 81 | 82 | 81.5 | 82 | 82  | 82.4 | 83  | 84  |

| Deg C | In  | 35   | 37 | 35   | 36.1 | 36.7 | 37   | 36.1 | 37.8 | 37 | 37.8 | 37.8 |
|-------|-----|------|----|------|------|------|------|------|------|----|------|------|
|       | Out | 29.5 | 32 | 30   | 30.6 | 31.1 | 32   | 30.6 | 32.2 | 32 | 32.2 | 32.2 |
|       | WB  | 27   | 27 | 27.2 | 27.2 | 27.8 | 27.5 | 27.8 | 27.8 | 28 | 28.3 | 28.3 |

| Model<br>TXS | HRT  | Motor<br>kW | m3/hr |     |     |     |     |     |     |     |     |     |     |
|--------------|------|-------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|              |      |             |       |     |     |     |     |     |     |     |     |     |     |
| 100          | 100  | 2.2         | 47.3  | 78  | 52  | 55  | 52  | 73  | 50  | 69  | 68  | 64  | 59  |
| 125          | 125  | 3.7         | 58.6  | 98  | 65  | 69  | 65  | 91  | 62  | 85  | 84  | 79  | 74  |
| 150          | 150  | 3.7         | 71.9  | 117 | 77  | 83  | 79  | 110 | 75  | 103 | 102 | 95  | 88  |
| 175          | 175  | 5.5         | 79.4  | 137 | 91  | 97  | 93  | 128 | 88  | 121 | 120 | 112 | 103 |
| 200          | 200  | 5.5         | 89.9  | 156 | 103 | 110 | 105 | 146 | 101 | 138 | 137 | 128 | 118 |
| 225          | 225  | 5.5         | 98.4  | 176 | 116 | 125 | 118 | 165 | 114 | 155 | 154 | 144 | 133 |
| 250          | 250  | 7.5         | 105.7 | 195 | 131 | 138 | 130 | 182 | 124 | 171 | 170 | 159 | 148 |
| 300          | 300  | 7.5         | 143.8 | 234 | 154 | 166 | 158 | 220 | 150 | 206 | 205 | 191 | 176 |
| 350          | 350  | 11          | 158.8 | 273 | 181 | 195 | 186 | 256 | 177 | 242 | 240 | 225 | 207 |
| 400          | 400  | 15          | 179.8 | 312 | 207 | 223 | 210 | 293 | 203 | 276 | 275 | 257 | 236 |
| 450          | 450  | 11          | 196.8 | 351 | 233 | 251 | 236 | 330 | 228 | 311 | 309 | 289 | 266 |
| 500          | 500  | 15          | 215.2 | 390 | 263 | 280 | 263 | 364 | 258 | 342 | 340 | 319 | 296 |
| 550          | 550  | 7.5x2       | 251.8 | 429 | 284 | 308 | 289 | 403 | 278 | 378 | 377 | 352 | 324 |
| 600          | 600  | 7.5x2       | 269.7 | 468 | 308 | 335 | 316 | 440 | 300 | 412 | 411 | 383 | 352 |
| 650          | 650  | 11x2        | 299   | 507 | 330 | 358 | 342 | 475 | 320 | 445 | 442 | 412 | 376 |
| 700          | 700  | 11x2        | 322.8 | 546 | 363 | 395 | 372 | 512 | 355 | 484 | 480 | 450 | 414 |
| 750          | 750  | 15x2        | 337   | 585 | 390 | 424 | 390 | 550 | 382 | 518 | 516 | 483 | 445 |
| 800          | 800  | 15x2        | 359.6 | 624 | 414 | 450 | 420 | 586 | 406 | 552 | 550 | 514 | 472 |
| 850          | 850  | 15x2        | 372.3 | 663 | 448 | 485 | 447 | 625 | 438 | 590 | 586 | 550 | 508 |
| 900          | 900  | 11x2        | 393.6 | 702 | 467 | 506 | 472 | 661 | 456 | 622 | 618 | 578 | 532 |
| 950          | 950  | 15x2        | 416   | 741 | 494 | 536 | 499 | 698 | 482 | 656 | 654 | 610 | 562 |
| 1000         | 1000 | 15x2        | 438   | 780 | 527 | 557 | 526 | 728 | 516 | 684 | 680 | 638 | 592 |

# SOUND LEVEL CHART (FROM 100~2000 TON)

The measuring point at 45 degrees is diagonally above the top edge of the fan stack, opposite of motor driver side. If fan diameter is less than 1.5m, the measuring distance should be limited to 1.5m standard.



**SOUND LEVEL dB(A) - SINGLE CELL (100~500 TON)**

|        | Louver |      | Panel |      | Fan    |
|--------|--------|------|-------|------|--------|
|        | 2m     | 10m  | 2m    | 10m  | 45 deg |
|        | 100-1L | 63.5 | 55.0  | 57.5 | 53.0   |
| 100-1S | 58.5   | 51.0 | 55.0  | 49.5 | 66.0   |
| 100-1E | 56.0   | 49.0 | 53.0  | 46.0 | 63.0   |
| 125-1L | 65.0   | 57.0 | 61.0  | 54.5 | 70.0   |
| 125-1S | 60.5   | 52.5 | 57.0  | 51.0 | 68.0   |
| 125-1E | 57.0   | 50.0 | 54.0  | 47.0 | 65.0   |
| 150-1L | 66.0   | 57.0 | 62.0  | 54.5 | 70.0   |
| 150-1S | 60.5   | 52.5 | 57.0  | 50.5 | 68.0   |
| 150-1E | 59.0   | 51.0 | 56.0  | 49.0 | 65.0   |
| 175-1L | 67.0   | 58.0 | 63.0  | 56.0 | 71.5   |
| 175-1S | 62.0   | 53.0 | 58.5  | 52.0 | 69.0   |
| 175-1E | 61.0   | 52.0 | 58.0  | 51.0 | 68.0   |
| 200-1L | 67.0   | 58.0 | 62.0  | 55.5 | 71.0   |
| 200-1S | 62.0   | 53.0 | 58.0  | 52.0 | 69.0   |
| 225-1L | 67.0   | 58.0 | 62.0  | 54.0 | 71.0   |
| 225-1S | 63.0   | 54.0 | 57.5  | 52.0 | 69.0   |
| 250-1L | 68.0   | 59.0 | 62.5  | 56.5 | 72.0   |
| 250-1S | 63.0   | 54.0 | 60.0  | 53.5 | 70.0   |
| 300-1L | 68.0   | 59.0 | 64.0  | 57.0 | 72.0   |
| 300-1S | 65.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 350-1L | 69.0   | 60.0 | 65.0  | 58.0 | 73.0   |
| 400-1L | 71.0   | 62.0 | 67.0  | 59.0 | 73.5   |
| 450-1L | 69.0   | 60.0 | 65.0  | 58.0 | 73.0   |
| 500-1L | 71.0   | 62.0 | 67.0  | 59.0 | 73.5   |

**SOUND LEVEL dB(A) - 2 CELLS (200~1000 TON)**

|         | Louver |      | Panel |      | Fan    |
|---------|--------|------|-------|------|--------|
|         | 2m     | 10m  | 2m    | 10m  | 45 deg |
|         | 200-2L | 66.0 | 57.0  | 61.0 | 55.0   |
| 200-2S  | 61.5   | 53.0 | 57.0  | 51.0 | 68.0   |
| 200-2E  | 59.0   | 52.0 | 55.0  | 49.0 | 66.0   |
| 250-2L  | 68.0   | 58.0 | 62.0  | 56.0 | 72.0   |
| 250-2S  | 64.0   | 54.0 | 59.0  | 51.0 | 70.0   |
| 250-2E  | 61.0   | 52.0 | 56.0  | 51.0 | 68.0   |
| 300-2L  | 69.0   | 60.0 | 64.0  | 56.0 | 72.0   |
| 300-2S  | 64.0   | 54.0 | 59.0  | 53.0 | 70.0   |
| 300-2E  | 62.0   | 53.0 | 57.0  | 52.0 | 68.0   |
| 350-2L  | 70.0   | 60.0 | 65.0  | 58.0 | 73.0   |
| 350-2S  | 65.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 350-2E  | 64.0   | 54.0 | 59.0  | 53.0 | 69.0   |
| 400-2L  | 70.0   | 60.0 | 65.0  | 58.0 | 73.0   |
| 400-2S  | 65.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 450-2L  | 70.0   | 60.0 | 65.0  | 58.0 | 73.0   |
| 450-2S  | 66.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 500-2L  | 70.0   | 60.0 | 65.0  | 58.5 | 74.0   |
| 500-2S  | 67.0   | 57.0 | 61.0  | 55.0 | 73.0   |
| 600-2L  | 71.0   | 61.0 | 67.0  | 60.0 | 73.0   |
| 600-2S  | 68.0   | 58.0 | 62.0  | 56.0 | 73.0   |
| 700-2L  | 72.0   | 62.0 | 68.0  | 61.0 | 74.0   |
| 800-2L  | 74.0   | 64.0 | 69.0  | 62.0 | 75.0   |
| 900-2L  | 72.0   | 62.0 | 68.0  | 61.0 | 74.0   |
| 1000-2L | 74.0   | 62.0 | 69.0  | 62.0 | 75.0   |

**SOUND LEVEL dB(A) - 3 CELLS (300~1500 TON)**

|         | Louver |      | Panel |      | Fan    |
|---------|--------|------|-------|------|--------|
|         | 2m     | 10m  | 2m    | 10m  | 45 deg |
|         | 300-3L | 69.0 | 60.0  | 64.0 | 56.0   |
| 300-3S  | 64.0   | 54.0 | 59.0  | 51.0 | 70.0   |
| 300-3E  | 62.0   | 53.0 | 57.0  | 52.0 | 68.0   |
| 375-3L  | 70.0   | 61.0 | 65.0  | 58.0 | 73.0   |
| 375-3S  | 64.0   | 54.0 | 59.0  | 51.0 | 70.0   |
| 375-3E  | 62.0   | 53.0 | 57.0  | 52.0 | 68.0   |
| 450-3L  | 70.0   | 61.0 | 65.0  | 58.0 | 73.0   |
| 450-3S  | 66.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 450-3E  | 63.0   | 54.0 | 58.0  | 53.0 | 69.0   |
| 525-3L  | 70.0   | 61.0 | 65.0  | 58.0 | 73.0   |
| 525-3S  | 66.0   | 56.0 | 60.0  | 54.0 | 72.0   |
| 525-3E  | 63.0   | 54.0 | 58.0  | 53.0 | 69.0   |
| 600-3L  | 72.0   | 62.0 | 67.0  | 60.0 | 74.0   |
| 600-3S  | 66.0   | 56.0 | 60.0  | 54.0 | 72.0   |
| 650-3L  | 72.0   | 62.0 | 67.0  | 60.0 | 74.0   |
| 650-3S  | 66.0   | 56.0 | 60.0  | 54.0 | 72.0   |
| 750-3L  | 72.5   | 62.5 | 68.0  | 62.0 | 74.0   |
| 750-3S  | 68.0   | 57.0 | 61.0  | 55.0 | 72.0   |
| 900-3L  | 74.0   | 64.0 | 69.0  | 62.0 | 75.0   |
| 900-3S  | 71.0   | 61.0 | 67.0  | 60.0 | 73.0   |
| 1050-3L | 75.0   | 65.0 | 70.0  | 63.0 | 76.0   |
| 1200-3L | 76.0   | 67.0 | 72.0  | 64.0 | 78.0   |
| 1350-3L | 75.0   | 65.0 | 70.0  | 63.0 | 76.0   |
| 1500-3L | 76.0   | 67.0 | 72.0  | 64.0 | 78.0   |

**SOUND LEVEL dB(A) - 4 CELLS (400~2000 TON)**

|         | Louver |      | Panel |      | Fan    |
|---------|--------|------|-------|------|--------|
|         | 2m     | 10m  | 2m    | 10m  | 45 deg |
|         | 400-4L | 70.0 | 61.0  | 65.0 | 58.0   |
| 400-4S  | 65.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 400-4E  | 63.0   | 54.0 | 58.0  | 53.0 | 69.0   |
| 500-4L  | 70.0   | 61.0 | 65.0  | 58.0 | 73.0   |
| 500-4S  | 65.0   | 56.0 | 60.0  | 54.0 | 71.0   |
| 500-4E  | 63.0   | 54.0 | 58.0  | 53.0 | 69.0   |
| 600-4L  | 71.0   | 62.0 | 66.0  | 59.0 | 73.5   |
| 600-4S  | 67.0   | 57.0 | 61.0  | 55.0 | 73.0   |
| 600-4E  | 65.0   | 55.0 | 60.0  | 54.0 | 71.0   |
| 700-4L  | 71.0   | 62.0 | 66.0  | 59.0 | 73.5   |
| 700-4S  | 67.0   | 57.0 | 61.0  | 55.0 | 73.0   |
| 700-4E  | 65.0   | 55.0 | 60.0  | 54.0 | 71.0   |
| 800-4L  | 72.0   | 62.0 | 66.0  | 59.0 | 74.0   |
| 800-4S  | 68.0   | 58.0 | 62.0  | 56.0 | 73.0   |
| 900-4L  | 72.0   | 62.0 | 67.0  | 60.0 | 75.0   |
| 900-4S  | 69.0   | 59.0 | 66.0  | 59.0 | 73.0   |
| 1000-4L | 73.0   | 63.0 | 69.0  | 62.0 | 75.0   |
| 1000-4S | 71.0   | 61.0 | 67.0  | 60.0 | 74.0   |
| 1200-4L | 75.0   | 65.0 | 70.0  | 63.0 | 76.0   |
| 1200-4S | 73.0   | 63.0 | 69.0  | 62.0 | 74.0   |
| 1400-4L | 76.0   | 67.0 | 72.0  | 64.0 | 77.0   |
| 1600-4L | 77.0   | 69.0 | 73.0  | 66.0 | 79.0   |
| 1800-4L | 76.0   | 67.0 | 72.0  | 64.0 | 77.0   |
| 2000-4L | 77.0   | 69.0 | 73.0  | 66.0 | 79.0   |

# RECOMMENDED UNIT LAYOUT

It is advisable to select and design the best layout or location to avoid air recirculation. Recirculation occurs when some of the hot moist discharge air leaving the cooling tower flows back into the fresh air inlet. The following guidelines will provide the best location or layout which will minimize recirculation, maximize fresh air flow and allow adequate maintenance accessibility.

## A. SINGLE UNIT INSTALLATIONS

The best place for TX-S Series Cooling Tower is in an open space. However, when this is not possible, correct layout guidelines must be followed to provide satisfactory installation.

Ensure that the top of the cooling tower is higher than any adjacent walls, buildings or other structures.

Figure 1(a) and 1(b) are examples of incorrect installation. These conditions can be corrected by elevating the unit on structural steel/concrete plinths so that the top is higher than the wall as shown in Figure 1(c).

**INCORRECT** : Wind effect with top of unit lower than top of wall

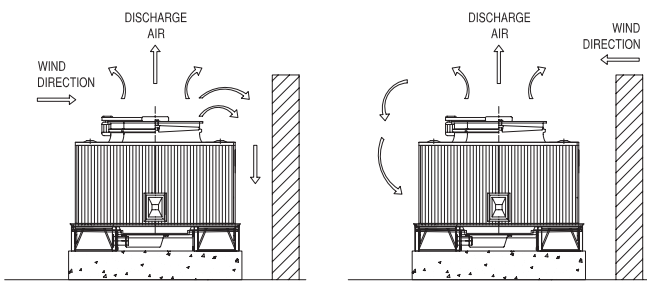


FIGURE: 1(a)

FIGURE: 1(b)

**CORRECT** : Installation elevated so that top of unit is higher than top of wall

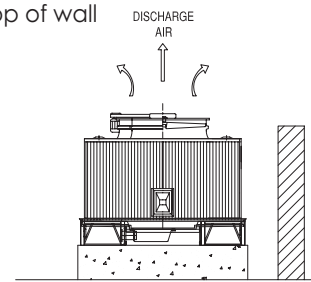


FIGURE: 1(c)

When a cooling tower is located near a wall, consideration must be given to the clearance distance between the air inlets of the tower and the wall structure(s). See Figure 2, Recommended Dimensions D1 and D2.

The minimum dimensions, D1 and D2, as shown in Table 1 must be maintained to ensure that the unit is provided adequate air flow. In some installation, consideration must also be given to access to the unit for maintenance. Room must be provided for piping, removals of access panels, etc.

Sometimes other pieces of equipment such as pumps, filters, piping etc are placed in front of the air inlets. These obstructions should not be located any closer than the minimum dimensions in Table 1.

FIGURE 2 :  
Installation next  
to a wall.

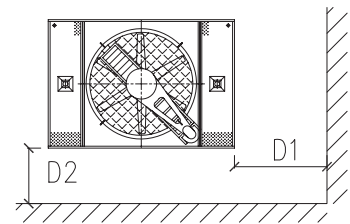


TABLE 1

| Tower Model                 | Minimum Dimension (mm) |                    |
|-----------------------------|------------------------|--------------------|
|                             | D1 (At Louver Side)    | D2 (At Panel Side) |
| TXS                         |                        |                    |
| 100-1,125-1,<br>150-1,175-1 | 1500                   | 1500               |
| 200-1,225-1,<br>250-1,300-1 | 2000                   | 1500               |
| 350-1,400-1,<br>450-1,500-1 | 2500                   | 1500               |

TABLE 2

| Tower Model TXS                                                              | End Wall Length, L mm | Minimum Dimension, mm D3 (End-to-End)   |
|------------------------------------------------------------------------------|-----------------------|-----------------------------------------|
| All models                                                                   | All sizes             | 1000                                    |
| Tower Model TXS                                                              | Louver Width, W mm    | Minimum Dimension, mm D4 (Side-by-Side) |
| 200-2L ~ 600-2L                                                              | Below 4500            | 3000                                    |
| 700-2L ~ 1000-2L<br>400-3E ~ 550-3E<br>600-3L ~ 700-3L<br>600-3S ~ 700-3S    | Below 7000            | 3500                                    |
| 1050-3L ~ 1200-3L<br>600-4E ~ 700-4E<br>800-4L ~ 1000-4L<br>800-4S ~ 1000-4S | Below 10000           | 5000                                    |
| 1350-3L ~ 1500-3L<br>1400-4L ~ 2000-4L                                       | Below 14000           | 6000                                    |

The minimum dimensions are as listed in Table 2

## B. MULTIPLE UNIT INSTALLATIONS

When more than one cooling tower is installed at the same location, recirculation becomes a bigger problem.

With the installations of two cooling towers, they should be placed end to end with the narrow ends adjacent as shown in Figure 3. Another method is to locate the units side-by-side with the longer sides parallel to each other as shown in Figure 4. In either configuration, the distance between the units must provide adequate airflow as well as room for piping to the unit and access for maintenance.

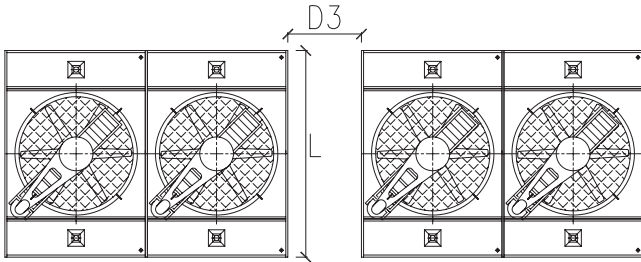


FIGURE 3: MULTIPLE UNITS PLACED END TO END

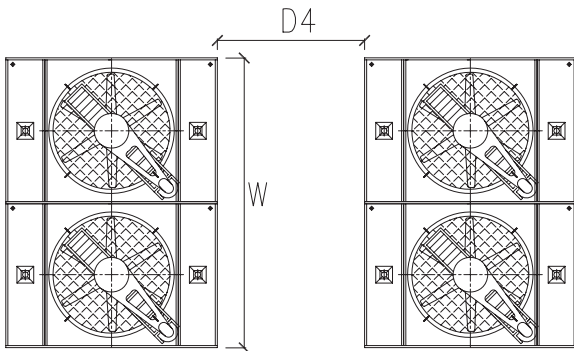


FIGURE 4: MULTIPLE UNITS PLACED SIDE-BY-SIDE

## SPECIAL ENCLOSURE INSTALLATION

### 1) Solid Wall Enclosures or Wells

Figure 5 shown a cooling tower is installed in a well. When considering a multiple-cell unit located in a well, the D5 and D6 dimensions, found in Table 3, must be used as absolute minimums.

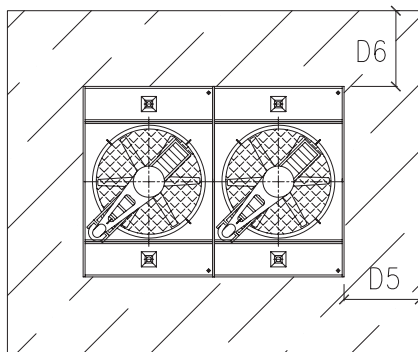


FIGURE 4: MULTIPLE UNITS PLACED SIDE-BY-SIDE

The unit should be oriented so that the air flow uniformly to the air inlets on all louver sides of the unit. The air discharge of the unit must be level with or higher than surrounding walls.

TABLE 3

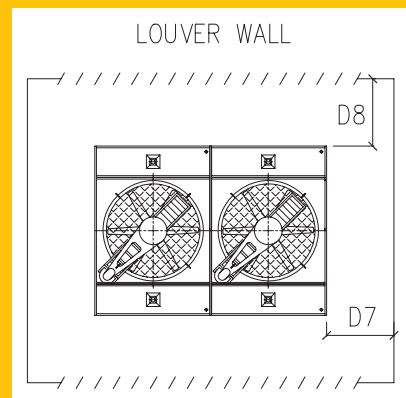
| Tower Model TXS                                                              | End Wall Length, L mm | Minimum Dimension, mm D5 (End Wall Panel Side)       |
|------------------------------------------------------------------------------|-----------------------|------------------------------------------------------|
| All models                                                                   | All sizes             | 1000                                                 |
| Tower Model TXS                                                              | Louver Width, W mm    | Minimum Dimension, mm D6 (Louver Side to Solid wall) |
| 200-2L ~ 600-2L                                                              | Below 4500            | 3500                                                 |
| 700-2L ~ 1000-2L<br>400-3E ~ 550-3E<br>600-3L ~ 700-3L<br>600-3S ~ 700-3S    | Below 7000            | 4000                                                 |
| 1050-3L ~ 1200-3L<br>600-4E ~ 700-4E<br>800-4L ~ 1000-4L<br>800-4S ~ 1000-4S | Below 10000           | 6000                                                 |
| 1350-3L ~ 1500-3L<br>1400-4L ~ 2000-4L                                       | Below 14000           | 6000                                                 |

## Louvered Wall Enclosures

TX-S Series Cooling Tower can also be installed in enclosures with louvered or slotted walls and an open top (Figure 6) with this type of enclosure, the air flow patterns will be a mixture of the open type and well installation. The inlet air will be drawn from the top as well as through the louvers or slots.

When considering a multiple-cell unit located in a louvered wall enclosures, the D7 and D8 dimensions, found in Table 4, must be used as absolute minimums.

FIGURE 6: LOUVERED WALL ENCLOSURE



| Tower Model TXS | End Wall Length, L mm | Minimum Dimension, mm D7 (End Wall Panel Side)          |
|-----------------|-----------------------|---------------------------------------------------------|
| All models      | All sizes             | 1000                                                    |
| Tower Model TXS | Louver Width, W mm    | Minimum Dimension, mm D8 (Louver Side to Louvered wall) |
| All models      | All sizes             | 2500                                                    |

# TX-S SERIES CROSSFLOW COOLING TOWER SPECIFICATION

## 1.0 GENERAL

The cooling tower shall be induced-draft, crossflow, rectangular, film filled, FRP Cooling Tower. Cooling tower shall be Truwater TX-S Series or approved equivalent.

## 2.0 CAPACITY

Cooling Tower shall be capable of providing the thermal performance scheduled.

## 3.0 PERFORMANCE WARRANTY

The cooling tower manufacturer shall guarantee that the tower supplied will meet the specified performance conditions when the tower is installed according to plans.

## 4.0 CONSTRUCTION

The cooling tower main frame structure shall be hot dip galvanized steel (HDG). The casing shall be made of fiberglass reinforced polyester (FRP).

## 5.0 MECHANICAL EQUIPMENT

5.1 Fan(s) shall be propeller-type, incorporating heavy-duty blades of aluminum alloy. Blades shall be individually adjustable. Fan blades shall be factory balanced and assembled. Pitch angle should be variable to allow flexibility.

5.2 The V-belts shall be of rubber with fabric impregnated able to withstand the adverse ambient conditions of 50°C and 100% R.H. The pulleys shall be cast iron with the grooves of standard dimensions. The entire V-belt & pulley set must be fully enclosed in a FRP molded case to protect the v-belts from in contact with the humid discharge air.

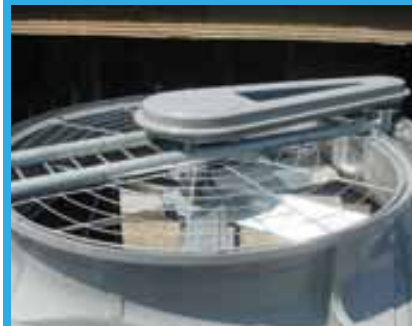
5.3 Motor(s) shall be TEFC, weatherproof sq. caged induction type suitable for 3ph /50Hz/415V power supply and with 1450 rpm. Motor shall be installed outside the discharge air stream.



FRP Casing



HDG Steel Structure



Mechanical Equipment



HW Basin

## 6.0 INFILL

6.1 Infill shall be Vacuum-formed film-type, rigid, corrugated PVC sheets. The infill shall be bonded with specially formulated glue in blocks. The infill modules shall be resistant to rot, fungi, bacteria and organic/inorganic acids and alkali as commonly found in cooling towers. The design shall meet 0.02% drift loss of the circulation water flow.

## 7.0 HOT WATER DISTRIBUTION SYSTEM

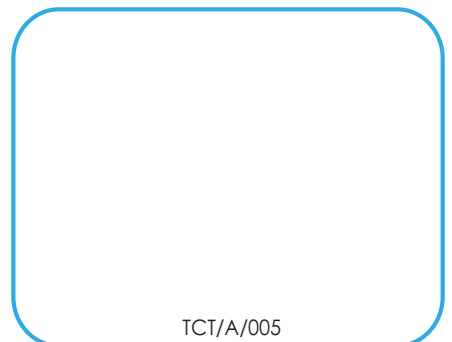
The hot water distribution shall be of open gravity type basin. It shall be made of FRP material. It shall be light weight and non-corrosive to maintain stable water sprinkling effect.

## 8.0 COLD WATER BASIN

The cold water basin shall be of FRP and supported on HDG steel framework. The basin shall be designed with sufficient water capacity to avoid air entrainment in the outlet during operating conditions. The basin shall be equipped with suction strainer, make-up ball valve, overflow and drain. For multiple tower arrangement, equalizing pipes between basins shall be provided to maintain the same level of water in each basin.

## 9.0 ACCESS AND SAFETY

Ladder shall be provided for inspection & maintenance purposes. HDG steel fan guard shall be provided over each fan cylinder.



TCT/A/005

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