THRECOOL SOLUTIONS

FREE COOLING

NCFN-GS-L Series

Dry-Wet Hybrid Forced Draft Closed Type Cooling Tower

Dry-Wet Hybrid Energy Saving Working Mode.

> Minimize the amount of water evaporation in cold season and provide ice water instead of refrigeration system in some working conditions when at dry cooling mode.

Forced Draft Centrifugal Fan Drive System

> Long distance ventilation is available, and suitable the place with poor ventilation.

Fan Drive System External Design

> Installation Solution For Height Limited Space.

1. **Fin Cooler**
Higher heat exchange & Efficient white “smoke” eliminator during cold season.

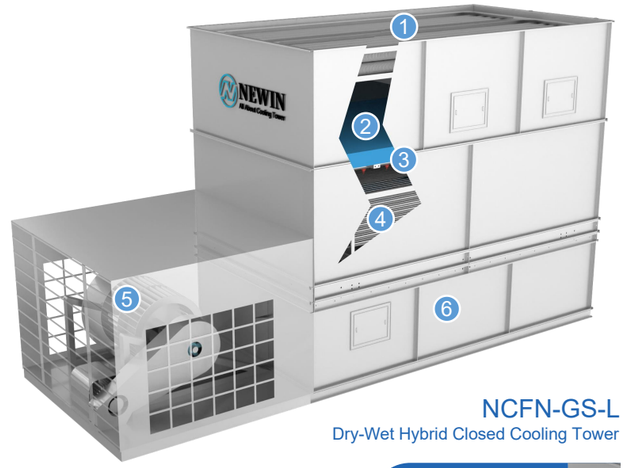
2. **EVD Drift Eliminator**
Low wind resistance, Maximum drift capture and recovery 99.99%.

3. **Evenly Water Distribution**
Water distribution system uses PVC spray pipes and PP SPJT nozzles.

4. **Stainless Steel Heat Exchange Coil**
Corrosion Resistance, keep media clean, save water consumption & miantenance cost.

5. **Centrifugal Fan Drive System**
Forced draft, long distance ventilation is available, and suitable the place with poor ventilation

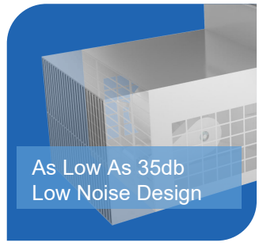
6. **Heavy-duty construction**
Modular structure, use the high quality of Z700 galvanized anti-corrosion plates (304/316 stainless steel for option).

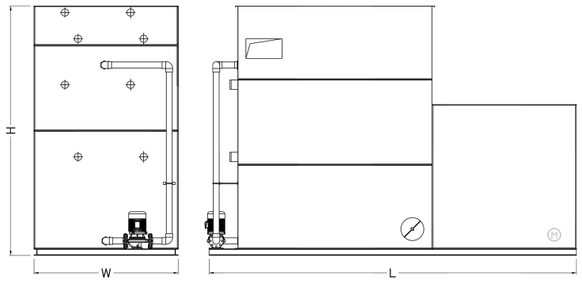


NCFN-GS-L
Dry-Wet Hybrid Closed Cooling Tower

Variety of additional Functions

- Silencer
- Vibration Cut-off Switch
- Basin Heater
- Maintenance Platform





Note:
1. Standard Design Working Condition: Fluid in/out temperature: 35/30℃.
2. Standard design ambient wet/dry bulb temperature: 21/35℃.
3. Above data sheet based on 40% ethylene glycol solution fluid.
4. Please contact NEWIN sales representative if working condition not same as above standard design condition.

Model	Wet Cooling		Free Cooling	Fan motor data				Spray Pump	Total dimension (without silencer)			Weight kgs	
	Fluid flow	Cooling capacity	Capacity 12/7/0℃	Without silencer		With silencer		Power	L	W	H	Shipping	Operation
	m3/h	kw	kw	Motor power (kw)	Noise @ 15m	Motor power (kw)	Noise @ 15m	kw	mm	mm	mm		
NCFN-GS-L-850	149	863	120	11	55	18.5	34	2.2kw	5600	2200	3800	4260	5700
	186	1079	150	15	57	22	38	2.2kw	5600	2200	3800	4670	6100
	223	1295	179	18.5	62	30	40	2.2kw	5600	2200	3800	5000	6500
NCFN-GS-L-1150	183	1063	148	15	57	22	38	2.2kw	6200	2200	3800	5780	7200
	214	1245	172	18.5	60	30	39	2.2kw	6200	2200	3800	6240	7600
	257	1494	208	30	65	37	42	2.2kw	6200	2200	3800	5565	8200
NCFN-GS-L-1300	206	1195	165	18.5	59	22	39	3kw	6800	2200	3800	7570	9000
	257	1494	207	30	65	37	43	3kw	6800	2200	3800	8070	9500
	308	1793	247	37	68	45	47	3kw	6800	2200	3800	8570	9950

THRECOOL SOLUTIONS

EC- TECHNOLOGY

NWN-Eco Series

Eco Type Counter Flow Closed Cooling Tower

EC Centrifugal Fan Drive System

> High Efficient & Low Noise, Electricity Saving & Energy Saving, GreenTech & Maintenance Free, and Ecellent Reliable.

Counter Flow Closed Circuit Cooling System

> Process fluid is circulated through 304 stainless steel coil in closed loop system, reduced water treatment chemicals, reduced water consumption and reduced maintenance.

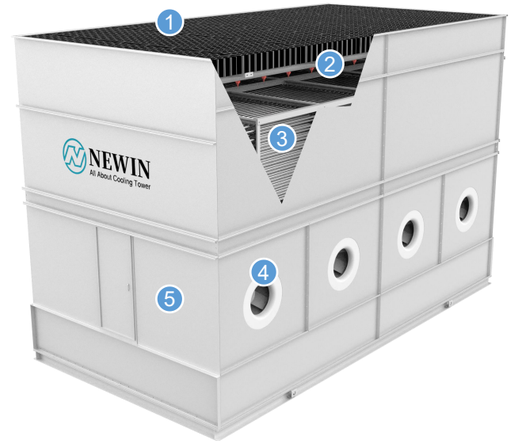
1. **EVD Drift Eliminator**
   Low wind resistance, Maximum drift capture and recovery 99.99%.

2. **Evenly Water Distribution**
   Water distribution system uses PVC spray pipes and PP SPJT nozzles.

3. **Stainless Steel Heat Exchange Coil**
   Corrosion Resistance, keep media clean, save water consumption & miantenance cost.

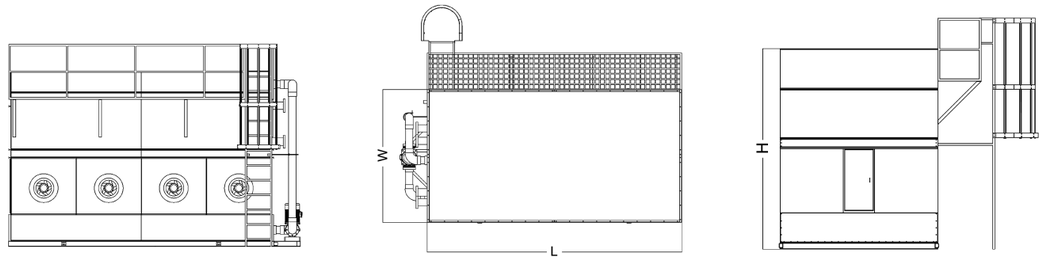
4. **EC Centrifugal Fan Drive System**
   Adopts EC external DC brushless motor and is matched with aluminum airfoil plug impeller, high efficiency, low noise, convenient speed regulation, stable structure and high reliability. The air volume can reach 25000m ³/ h and the static pressure can reach 1600pa.

5. **Heavy-duty construction**
   Modular structure, use the high quality of Z700 galvanized anti-corrosion plates (304/316 stainless steel for option).



NWN-Eco

Eco Type Counter Flow Closed Cooling Tower



Model	Flow Rate	Cooling Capacity	Dimension			Fan Power	Spray Pump Power	Weight kgs	
	m3/h	kw	L	W	H	kw	kw	Dry	Operation
NWN-EC-180-Z7-S	40	208	2500	1100	2830	4.0	1.1	1100	2000
NWN-EC-230-Z7-S	53	278	2800	1100	2830	6.0	1.1	1170	22000
NWN-EC-290-Z7-S	66	347	2800	1100	3560	8.0	1.5	1220	23000
NWN-EC-350-Z7-S	80	417	2800	1200	3560	8.0	1.5	1450	2600
NWN-EC-450-Z7-S	106	555	4600	1450	2980	10.0	2.2	1860	4000
NWN-EC-600-Z7-S	133	694	4600	1450	3080	11.0	3	2150	5200
NWN-EC-750-Z7-S	166	868	4650	1750	3080	13.8	3	2620	6300
NWN-EC-850-Z7-S	199	1041	4650	2200	3980	16.6	3	2880	7500
NWN-EC-1000-Z7-S	232	1215	4650	2200	4040	19.3	3	3010	7750
NWN-EC-1150-Z7-S	265	1389	6200	2200	4040	22.1	4	3850	10000
NWN-EC-1300-Z7-S	298	1562	6200	2200	4040	24.8	4	3900	10500
NWN-EC-1450-Z7-S	332	1736	6250	2200	4240	27.6	4	4010	10800

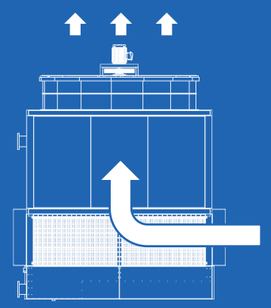
Note:
1. Standard design working condition: Fluid in/out temperature: 35/30℃.
2. Standard design ambient wet/dry bulb temperature: 21/35℃.
3. Above data sheet based on 40% ethylene glycol solution fluid.
4. Please contact threcool sales representative if working condition not same as above standard design condition.

THRECOOL
SOLUTIONS

Meet **FM Requirements**

NSH-FH Series

Full Steel Counter Flow Open Type Cooling Tower



Full Steel Structure

> Corrosion resistant steel materials and great stable steel structure.

Counter Flow Open Loop System

> PVC exchange layer is located in the tower and not easy to be damaged. Air enters the exchange layer from the bottom of the tower, taking away the heat from the spray water by evaporation and heat transfer to achieve efficient cooling.

Special Cooling Tower Solution

> The cooling tower adopts special design which meets FM requirements.

1 Axial Fan Drive System

Siemens IE3 Motor, Variable Frequency Control, maximize energy saving. Air space Heater, prevent the motor from moisture and damage. High- Strength Alumumium Alloy Fan.

2 EVD Drift Eliminator

Low wind resistance, Maximum drift capture and recovery 99.99%.

3 Evenly Water Distribution

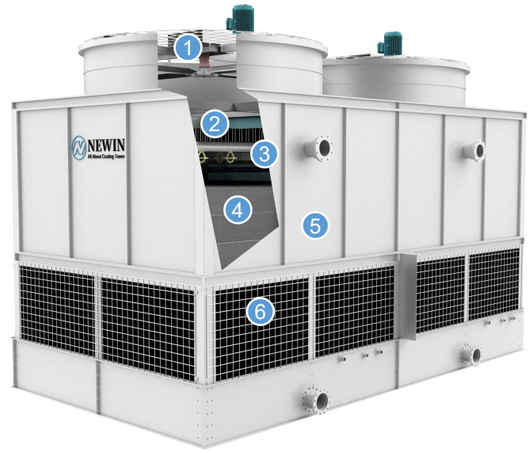
Water distribution system uses PVC spray pipes and three splashed nozzle, evenly distribution under low pressure flow.

4 LAN series Fill Film

Sel-extinguishing PVC materials, specially designed to induce a highly turbulent mix of air and water for superior heat transfer, special drainage tips allow high water loadings without excessive pressure drops.

5 Heavy-duty construction

Modular structure, use the high quality of Z700 galvanized anti-corrosion plates (304/316 stainless steel for option).

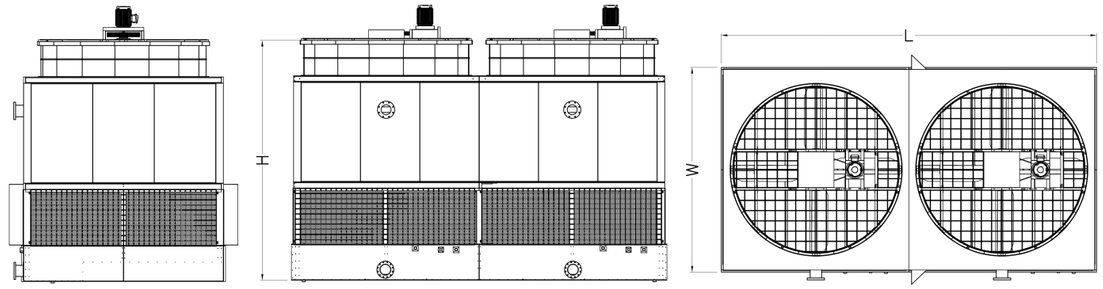


NSH-FH

Full Steel Counter Flow Open Type Cooling Tower

6 Easy disassembled type Inlet Grille

Special 3D sereo 45-degree ventilation channel, greatly improves product rigidity and wind load resistance. Reduce noise and prevent the growth of algae.



Design Conditions

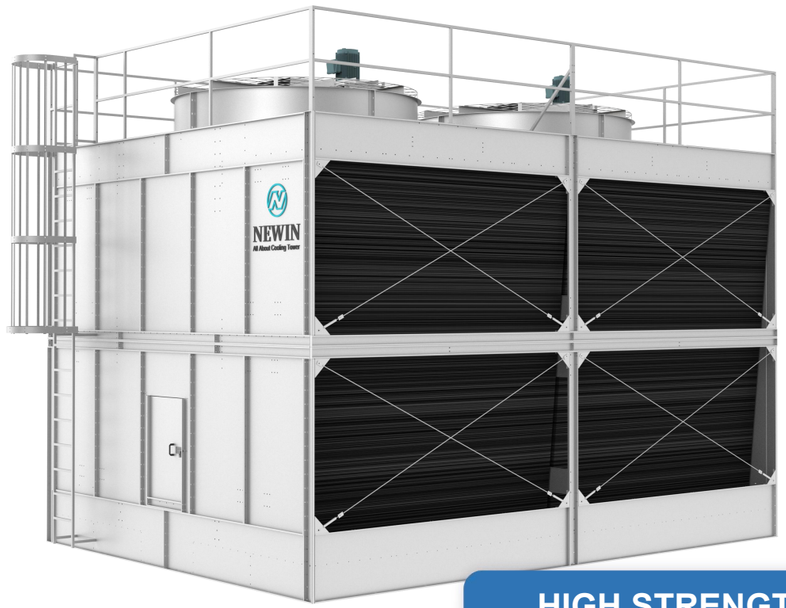
Entrance temp. T1= 37℃
Leaving temp. T2= 32℃

Wet bulb temp. T_{WB}= 28℃
Dry bulb temp. T_{DB}= 31.5℃

Atmospheric pressure P_0= 9.94 x 104 Па

Model	Flow Rate	Dimension			Fan Power	Fan Diameter	Weight kgs	
	m3/h	L	W	H	kw	mm	Dry	Operation
NSH-FH-Z7/SS-88-A16-319-C2	160	4000	2000	3600	3*2	1600	2300	4740
NSH-FH-Z7/SS-99-B18-319-C2	200	4500	2250	3650	4*2	1800	2500	5100
NSH-FH-Z7/SS-1010-B22-319-C2	250	5000	2500	3700	4*2	2200	2900	5960
NSH-FH-Z7/SS-1111-C22-319-C2	300	5500	2750	3800	5.5*2	2200	3240	6600
NSH-FH-Z7/SS-1212-C24-319-C2	350	6000	3000	4100	5.5*2	2400	3600	9380
NSH-FH-Z7/SS-1313-D24-319-C2	400	6500	3250	4350	7.5*2	2400	3900	9030
NSH-FH-Z7/SS-1414-D28-319-C2	500	7000	3500	4350	7.5*2	2800	4700	11370
NSH-FH-Z7/SS-1515-E28-319-C2	600	7500	3750	4750	11*2	2800	5640	12900
NSH-FH-Z7/SS-1616-E34-319-C2	700	8000	4000	4800	11*2	3400	6300	13980
NSH-FH-Z7/SS-1818-F34-319-C2	800	9000	4500	5250	15*2	3400	7440	16500
NSH-FH-Z7/SS-2020-F34-319-C2	900	10000	5000	5400	15*2	3400	7900	16960
NSH-FH-Z7/SS-2020-F38-319-C2	1000	10000	5000	5400	15*2	3800	8700	19160

THRECOOL SOLUTIONS



HIGH STRENGTH STRUCTURE

NST-Z7/SS Series

Full Steel Cross Flow Open Cooling Tower

Full Steel Structure

> Corrosion resistant steel materials and great stable steel structure.

Cross Flow Open Loop System

> Enough air inlet from both sides, ensure efficient cooling.

Efficient Heat Exchange PVC Layers

> Adopts MAH series Fill, the inlet grille and water collector are integrally formed.

1 Axial Fan Drive System

Siemens IE3 Motor, Variable Frequency Control, maximize energy saving. Air space Heater, prevent the motor from moisture and damage. High- Strength Alumumium Alloy Fan.

2 Hot Water Basin

Water distribution plate, nozzles are evenly installed in the basin, make sure large area of water well sprayed.

3 MAH Cross Flow Fill

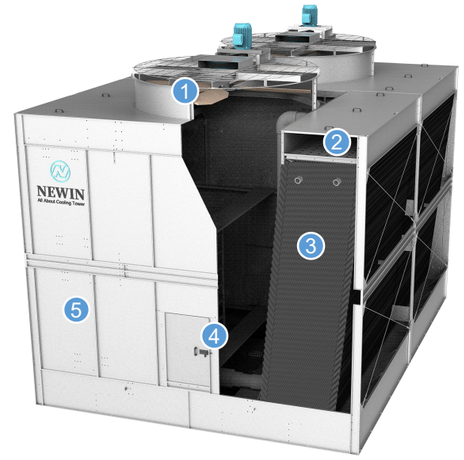
Sel-extinguishing PVC materials, the inlet grille and water collector are integrally formed, ensure heat transfer perfomance.

4 Access Door and Access Platform

Enough space convenient to maintenance.

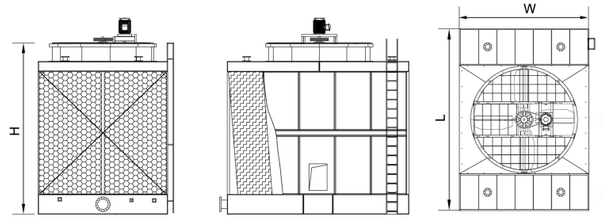
5 Heavy-duty construction

Modular structure, use the high quality of Z700 galvanized anti-corrosion plates (304/316 stainless steel for option).



NST-Z7/SS

Full Steel Cross Flow Open Cooling Tower

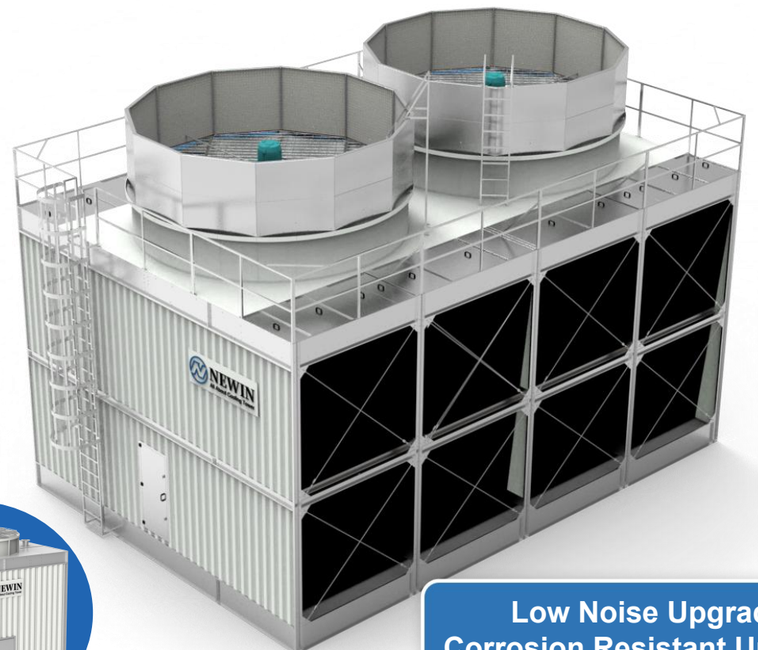


Design Conditions

Entrance temp. T1= 37℃
Leaving temp. T2= 32℃
Wet bulb temp. T_{WB}= 28℃
Dry bulb temp. T_{DB}= 31.5℃
Atmospheric pressure P_0= 9.94 x 10^4 Pa

Model	Fan		Dimension (mm)			Water Inlet (DN)	Water Outlet (DN)	Quick Feed (DN)	Auto Feed (DN)	Weight kgs	
	Diameter mm	Power kw	L	W	H					Dry	Wet
NST-Z7/SS-19-A16-3A12-C1	1600	3(A)	1900	3800	3680	100*2	125	25	40	1250	2650
NST-Z7/SS-22-B16-3A12-C1	1600	4(B)	2200	3800	3680	125*2	150	25	40	1350	2750
NST-Z7/SS-22-B18-3A14-C1	1800	4(B)	2200	4010	4080	125*2	150	25	40	1450	2950
NST-Z7/SS-26-C22-3A14-C1	2200	5.5(C)	2600	4420	4080	125*2	200	25	40	1550	3250
NST-Z7/SS-26-C22-3A15-C1	2200	5.5(C)	2600	4420	4280	150*2	200	25	40	1720	3530
NST-Z7/SS-26-D22-3A16-C1	2200	7.5(D)	2600	4420	4480	150*2	200	25	40	1820	4170
NST-Z7/SS-30-D24-3A16-C1	2400	7.5(D)	3000	4620	4680	150*2	250	32	50	2280	4700
NST-Z7/SS-30-D24-4A14-C1	2400	7.5(D)	3000	5230	4280	150*2	250	32	50	2620	5470
NST-Z7/SS-30-E24-4A16-C1	2400	11(E)	3000	5230	4680	150*2	250	32	50	2750	5700
NST-Z7/SS-33-E28-4B18-C1	2800	11(E)	3300	5640	5130	150*4	300	50	80	3050	6600
NST-Z7/SS-38-E32-4B18C1	2800	15(F)	3300	5640	5530	150*4	300	50	80	3450	7000
NST-Z7/SS-38-F34-4B20-C1	2800	15(F)	3800	5640	5530	150*4	300	50	80	3750	7800
NST-Z7/SS-38-F34-4B20-C1	3400	15(F)	3800	6240	5630	150*4	350	50	80	4250	8600
NST-Z7SS-46-G34-4B20-C1	3400	18.5(G)	4600	6240	5630	150*4	350	50	80	4850	10200
NST-Z7/SS-46-G36-4B22-C1	3600	18.5(G)	4600	6450	6030	150*4	350	50	80	5250	14500
NST-Z7/SS-51-H40-4B22-C1	3600	30(I)	5100	6450	6080	200*4	400	50	80	5650	15500
NST-Z7/SS-53-I42-4B24-C1	4200	30(I)	5300	7060	6530	200*4	400	50	80	6450	17800
NST-Z7/SS-53-I42-4B26-C1	4200	30(I)	5300	7440	6930	200*4	400	50	80	7150	19500

THRECOOL
SOLUTIONS



Normal Type

Low Noise Upgrade
Corrosion Resistant Upgrade

NST-S4L Series

Upgraded Type Cross Flow Open Type Cooling Tower

High Corrosion Resistant Upgrade

> Tower frame adopts 304 stainless steel (SUS 316 for option), higher corrosion resistant and long service life.

Low Noise Upgrade

> Special designed noise reduction equipment adopts pore plate and glass wool, efficiently reduce noise.

Cross Flow Open Loop System

> Enough air inlet from both sides, ensure efficient cooling.

1 Noise Reduction Equipment

Special designed according to low noise requirement, adopts SUS 304 pore plate and glass wool, keeping fan drive system in low noise.

2 Axial Fan Drive System

Siemens IE3 Motor, Variable Frequency Control, maximize energy saving. Gearbox reducer, service factor 2.0; big air flow FRP fan, the windward side of the fan blade was protected with stainless steel, long service life and cost-effective.

NEWIN
All About Cooling Tower

3 Hot Water Basin

Made of full SUS304 plate, higer corrosion resistant; nozzles are evenly installated in the basin, make sure large area of water well sprayed.

4 MAH Cross Flow Fill

Sel-extinguishing PVC materials, the inlet grille and water collector are integrally formed, ensure heat transfer perfomance.

5 FRP Casing

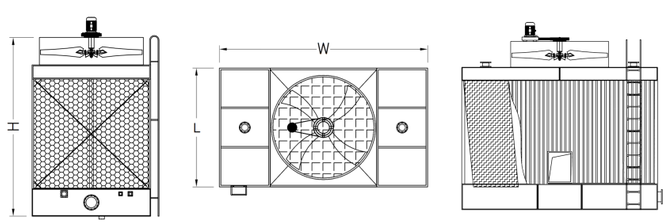
Adopts FRP (Fiber Reinforce Plastic) corrugated plate, light weight and high strength, corrosion resistant and nice appearance.

6 Full Stainless Steel Frame

The main frame material adopts SUS 304, higher corrosion resistant, higher strength and stable structure, makes the tower longer equipment life.

NST-S4L

Upgraded Type Cross Flow Open Cooling Tower

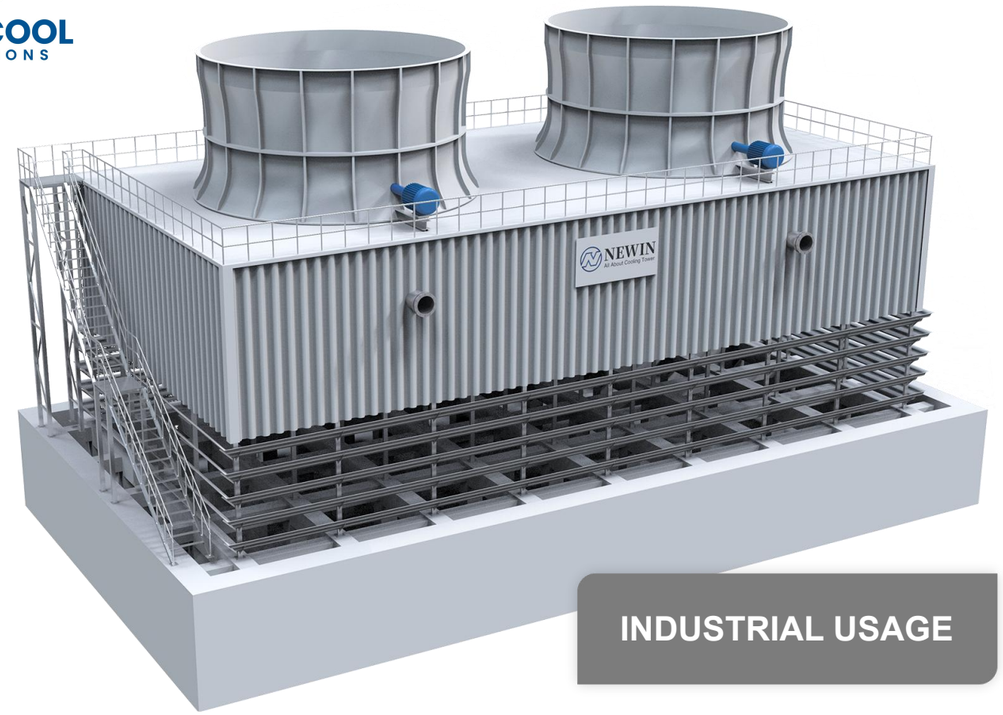


Design Conditions

Entrance temp. T1= 37℃
Leaving temp. T2= 32℃
Wet bulb temp. T_{WB}= 28℃
Dry bulb temp. T_{DB}= 31.5℃
Atmospheric pressure P_0= 9.94 x 10^4 Pa

Model	Fan		Dimension (mm)			Water Inlet (DN)	Water Outlet (DN)	Quick Feed (DN)	Auto Feed (DN)	Weight kgs	
	Diameter mm	Power kw	L	W	H					Dry	Wet
NST-S4-19-A16-3A12-C1	1600	3(A)	1900	3800	3680	100*2	125	25	40	1250	2650
NST-S4-22-B16-3A12-C1	1600	4(B)	2200	3800	3680	125*2	150	25	40	1350	2750
NST-S4-22-B18-3A14-C1	1800	4(B)	2200	4010	4080	125*2	150	25	40	1450	2950
NST-S4-26-C22-3A14-C1	2200	5.5(C)	2600	4420	4080	125*2	200	25	40	1550	3250
NST-S4-26-C22-3A15-C1	2200	5.5(C)	2600	4420	4280	150*2	200	25	40	1720	3530
NST-S4-26-D22-3A16-C1	2200	7.5(D)	2600	4420	4480	150*2	200	25	40	1820	4170
NST-S4-30-D24-3A16-C1	2400	7.5(D)	3000	4620	4680	150*2	250	32	50	2280	4700
NST-S4-30-D24-4A14-C1	2400	7.5(D)	3000	5230	4280	150*2	250	32	50	2620	5470
NST-S4-30-E24-4A16-C1	2400	11(E)	3000	5230	4680	150*2	250	32	50	2750	5700
NST-S4-33-E28-4B18-C1	2800	11(E)	3300	5640	5130	150*4	300	50	80	3050	6600
NST-S4-38-E32-4B18C1	2800	15(F)	3300	5640	5530	150*4	300	50	80	3450	7000
NST-S4-38-F34-4B20-C1	2800	15(F)	3800	5640	5530	150*4	300	50	80	3750	7800
NST-S4-38-F34-4B20-C1	3400	15(F)	3800	6240	5630	150*4	350	50	80	4250	8600
NST-S4-46-G34-4B20-C1	3400	18.5(G)	4600	6240	5630	150*4	350	50	80	4850	10200
NST-S4-46-G36-4B22-C1	3600	18.5(G)	4600	6450	6030	150*4	350	50	80	5250	14500
NST-S4-51-H40-4B22-C1	3600	30(I)	5100	6450	6080	200*4	400	50	80	5650	15500
NST-S4-53-I42-4B24-C1	4200	30(I)	5300	7060	6530	200*4	400	50	80	6450	17800
NST-S4-53-I42-4B26-C1	4200	30(I)	5300	7440	6930	200*4	400	50	80	7150	19500

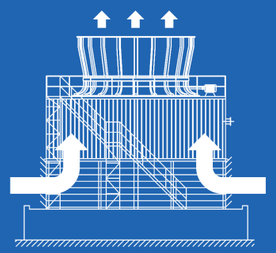
THRECOOL SOLUTIONS



INDUSTRIAL USAGE

NTG Series

Counter Flow Industrial Type Cooling Tower



Special Designed For Heavy Industry Cooling Process

> Single cell water process cooling capacity from 800 to 5000m³/hr.

Multi-cells are available for different space area limited.

Different Frame Structures Design For Meeting The Different Condition Requirements

> Like steel structure, F.R.P corrosion resistant structure and RCC (concrete) structure.

1 SMC Fan Stack

Molded SMC fan stack with hyper bolic structure, low win resistance, low energy consumption and easy to install.

2 Axial Fan Drive System

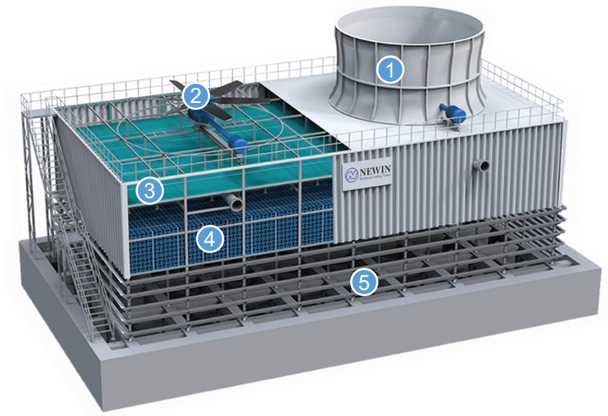
High corrosion resistant FRP fan with IEC motor, driven by gear box; Alumium alloy / Stainless steel fan, Carbon fiber shaft for option.

3 NBD series Blade type Drift Eliminator

Anti-aging, high water-absorption, low airflow resistant and high strength.

4 NTF series Trickle Fills

Made of PP material, high temperature and corrosion resistant; Combined the features of trickle fill and film fill, improving water distribution to achieve higher heat tranfer by further scatter the spray water.

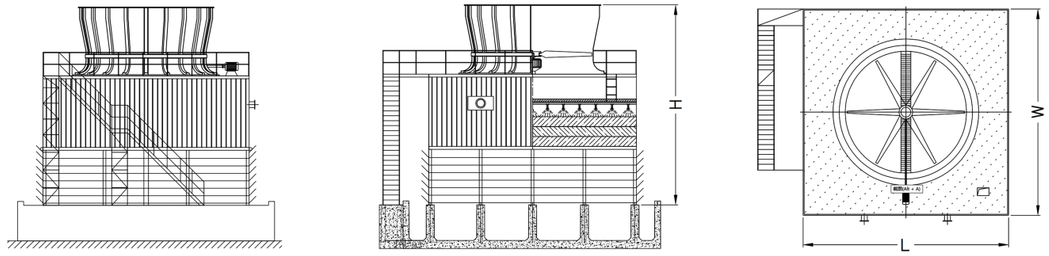


NTG

Counter Flow Industrial Type Cooling Tower

5 NTG series Frame Structure

Steel Structure : Z-700 galvanized anti-corrosion steel 304/316 stainless steel for option.
F.R.P Structure: Fiber Reinforce Plastic construction, higher strength with higher corrosion resistant.
RCC Structure: Reinforced Concrete Construction, durable, anti-freezing and corrosion resistance.



Design Conditions

Entrance temp. T1= 43℃
Leaving temp. T2= 33℃

Wet bulb temp. T_{WB}= 28℃
Dry bulb temp. T_{DB}= 31.5℃

Atmospheric pressure P_0= 9.94 x 104 Па

Model	Flow m3/h	Dimension mm			Fan		Weight kgs	
		L	W	H	Diameter mm	Power kw	Dry	Wet
NTG-800	800	7400	7400	7800	4700	30	11.63	18.45
NTG-1000	1000	9000	9000	8700	5460	45	19.68	31.23
NTG-1500	1500	10500	10500	9500	6000	55	29.34	46.75
NTG-2000	2000	12000	12000	10200	7700	90	45.03	68.69
NTG-2500	2500	13500	13500	10700	8000	132	46.2	75.3
NTG-3000	3000	15000	15000	11400	8530	160	65	99.2
NTG-3500	3500	16000	16000	12100	9140	160	76.05	104.8
NTG-4000	4000	17400	17400	12400	9140	200	78.5	132
NTG-5000	5000	18380	18380	13900	10300	250	85.5	139.5