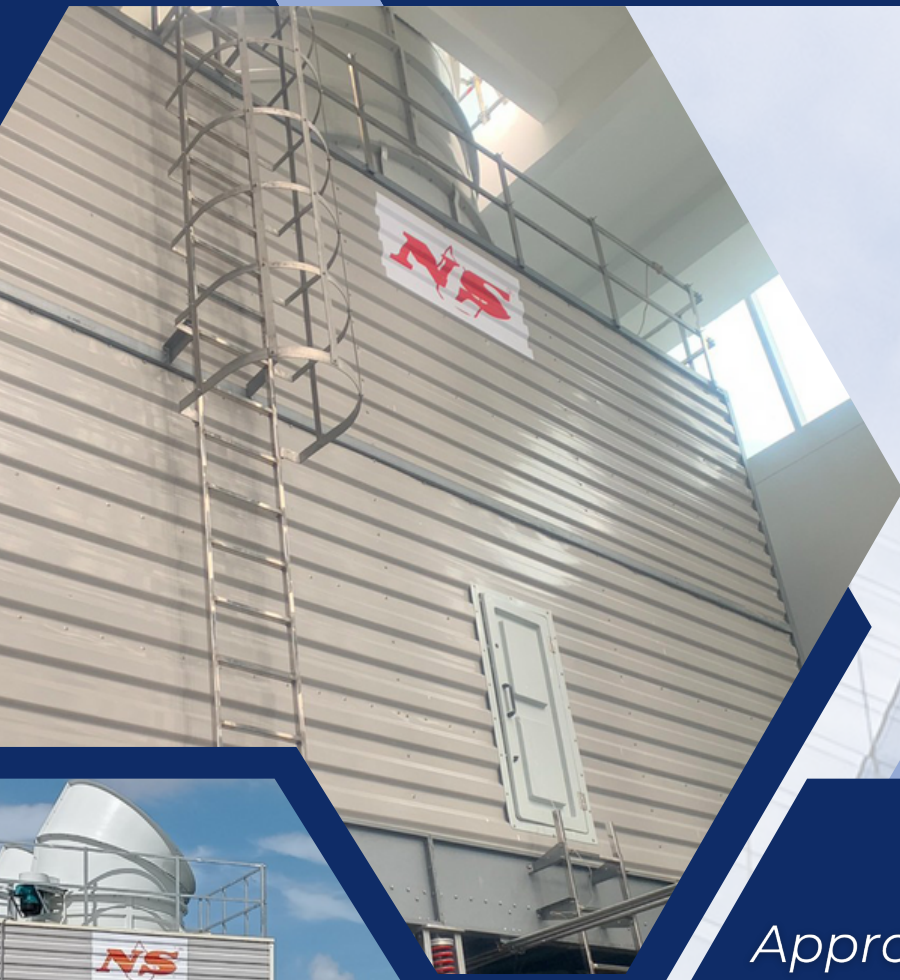




NSA SERIES

HIGH EFFICIENCY & LOW NOISE



Product By
Approach Engineering Co., Ltd.

sales@nscooling.com



508/132 Sukontasawat Rd.,
Ladphrao, Ladphrao, Bangkok
Thailand 10230



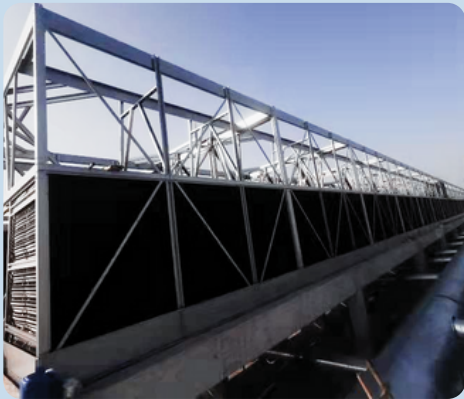
Tel. 02-553-2638-9,41



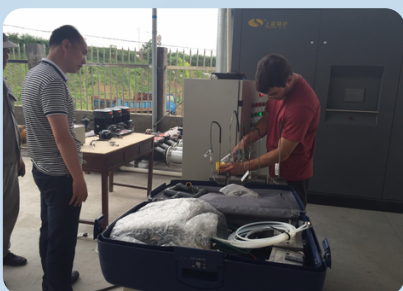
NSA Series

NS[®] COOLING TOWER

Induced-draft, Cross flow open cooling tower



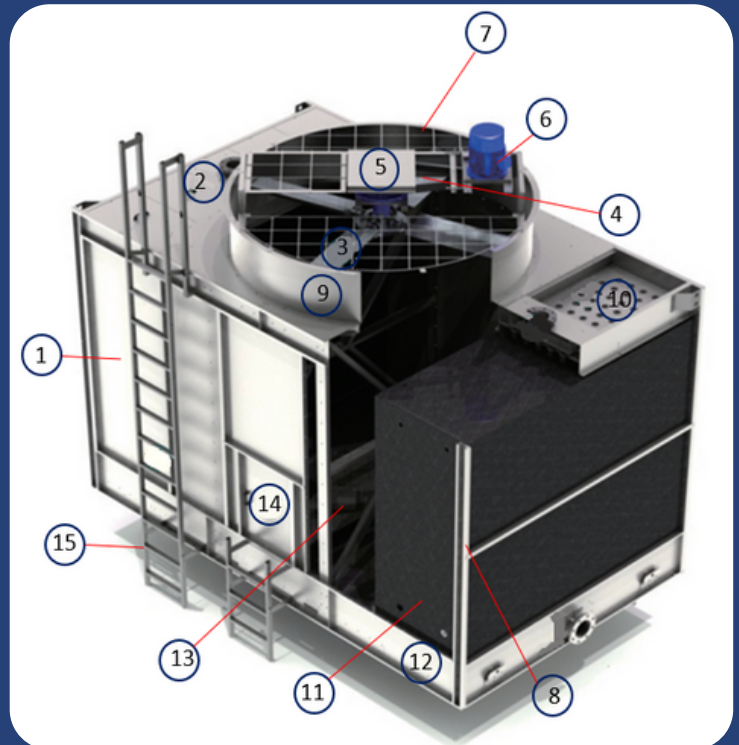
CTI Certification Tested



Induced-draft, Cross flow open cooling tower

**MULTI-CELLS
CROSS FLOW
AIR IN TAKE VERTICAL DISCHARGE
LOW NOISE
EXTERNAL AND INTERNAL PIPE**

1. CASING
2. HOT WATER BASIN
3. FAN BLADE – ALUMINIUM
4. BELT PULLEY - RUBBER
5. PULLEY – CAST IRON
6. MOTOR
7. FAN GUARD - HDGS
8. MECHANICAL SUPPORT - HDGS
9. FAN CYLINDER
10. NOZZEL – POLYPROPYLENE
11. FILL – PVC
12. COLD WATER BASIN
13. WALKWAY – HDGS
14. ACCESS DOOR
15. LADDER



Cooling tower Specification



Structure

- Made from corrosion resistant materials Hot Dip Galvanized Steel
- BOTS & NUTS = SUS304

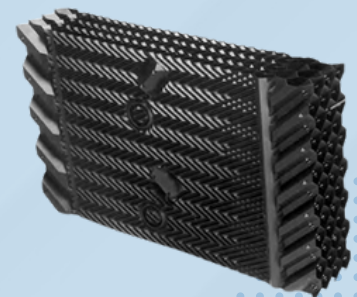
Fan

- AXIAL Fan with adjustable Pith.
- Aerofoil Blade Type.
- Made from Aluminium Alloy
- Low-noise design type.



Filling

- Made from Polyvinyl Chloride (PVC)
- Designed to limit water drift loss to 0.002 -0.005% of water flow rate.
- Maximizes heat transfer area
- (Wetted Surface 167.9m²/m³)
- Minimizes resistance to airflow
- Low Clogging Design
- Drift Loss 0.002 – 0.005%
- Max hot temp 55 degree C



Casing

- Casing is Made from FRP (Fiberglass Reinforced Polyester) or Hot Dip Galvanized Steel
- Designed to withstand Atmospheric corrosion resistance

Water Basin and Nozzle



- Water Basin Made from FRP (Fiberglass Reinforced Polyester) or Hot DIP Galvanized Steel
- Water distribution system have been designed to distribute water all over the filling with metering orifice, which is made from corrosion resistant (PP).
- Hot dip galvanized hot water basin is cover with a hot dip galvanized plate steel to withstand water and sunlight corrosion.

NSA Series



I. Outline of models (Open type, Cross-flow, Low noise and induced-draft)

Tower Model	Water Flow	Dimensions (mm)			Fan Assembly		Drift loss	Noise Value
		Width	Length	Height	Motor	Fan Dia		Standard Point
NSA	(m3/h)	W	L	H	(KW)	φ (mm)	(%)	dB(A)
1018C	90	3780	2080	3170	1.5	1800	0.002	60
1018E	100	3780	2080	3170	2.2	1800	0.002	60
1018D	112	3780	2080	3170	3	1800	0.002	61
1018S	125	3780	2080	3170	4	1800	0.002	61
1018M	136	3780	2080	3170	5.5	1800	0.005	62
1018H	152	3780	2080	3170	7.5	1800	0.005	62
1522C	117	4220	2540	3170	3	2200	0.002	60
1522E	129	4220	2540	3170	4	2200	0.002	61
1522D	143	4220	2540	3170	5.5	2200	0.002	61
1522S	159	4220	2540	3170	7.5	2200	0.002	62
1522M	181	4220	2540	3170	11	2200	0.005	62
2025C	146	4640	2940	3170	4	2500	0.002	61
2025E	162	4640	2940	3170	5.5	2500	0.002	61
2025D	181	4640	2940	3170	7.5	2500	0.002	62
2025S	205	4640	2940	3170	11	2500	0.002	62
2025M	226	4640	2940	3170	15	2500	0.005	63
2525C	162	5240	2940	3170	4	2500	0.002	61
2525E	182	5240	2940	3170	5.5	2500	0.002	61
2525D	199	5240	2940	3170	7.5	2500	0.002	62
2525S	227	5240	2940	3170	11	2500	0.002	62
2525M	250	5240	2940	3170	15	2500	0.005	63
1518C	84	3780	2080	3580	1.5	1800	0.002	61
1518E	96	3780	2080	3580	2.2	1800	0.002	62
1518D	117	3780	2080	3580	3	1800	0.002	62
1518S	122	3780	2080	3580	4	1800	0.002	63
1518M	136	3780	2080	3580	5.5	1800	0.005	63
1518H	147	3780	2080	3580	7.5	1800	0.005	64
1720C	106	3980	2280	3580	2.2	2000	0.002	61
1720E	118	3980	2280	3580	3	2000	0.002	62
1720D	130	3980	2280	3580	4	2000	0.002	62
1720S	144	3980	2280	3580	5.5	2000	0.002	63
1720M	159	3980	2280	3580	7.5	2000	0.005	63
1720H	181	3980	2280	3580	11	2000	0.005	64
2022C	133	4220	2540	3580	3	2200	0.002	62
2022E	147	4220	2540	3580	4	2200	0.002	62
2022D	163	4220	2540	3580	5.5	2200	0.002	63
2022S	181	4220	2540	3580	7.5	2200	0.002	63
2022M	206	4220	2540	3580	11	2200	0.005	64
2022H	228	4220	2540	3580	15	2200	0.005	64
2325C	165	4640	2940	3580	4	2530	0.002	62
2325E	184	4640	2940	3580	5.5	2530	0.002	62
2325D	204	4640	2940	3580	7.5	2530	0.002	63
2325S	232	4640	2940	3580	11	2530	0.002	63
2325M	256	4640	2940	3580	15	2530	0.005	64
2325H	276	4640	2940	3580	18.5	2530	0.005	64

NSA Series



I. Outline of models (Open type, Cross-flow, Low noise and induced-draft)

Tower Model	Water Flow	Dimensions (mm)			Fan Assembly		Drift loss	Noise Value
		Width	Length	Height	Motor	Fan Dia		Standard Point
NSA	(m ³ /h)	W	L	H	(KW)	φ (mm)	(%)	dB(A)
2825C	203	5240	2940	3580	4	2500	0.002	62
2825E	225	5240	2940	3580	5.5	2500	0.002	63
2825D	250	5240	2940	3580	7.5	2500	0.002	63
2825S	284	5240	2940	3580	11	2500	0.002	64
2825M	315	5240	2940	3580	15	2500	0.005	64
2825H	338	5240	2940	3580	18.5	2500	0.005	64
3025C	225	5240	2940	3990	4	2500	0.002	63
3025E	250	5240	2940	3990	5.5	2500	0.002	63
3025D	277	5240	2940	3990	7.5	2500	0.002	63
3025S	316	5240	2940	3990	11	2500	0.002	64
3025M	350	5240	2940	3990	15	2500	0.005	64
3025H	375	5240	2940	3990	18.5	2500	0.005	65
3630C	278	5630	3340	3990	5.5	2950	0.002	63
3630E	308	5630	3340	3990	7.5	2950	0.002	63
3630D	350	5630	3340	3990	11	2950	0.002	64
3630S	388	5630	3340	3990	15	2950	0.002	64
3630M	416	5630	3340	3990	18.5	2950	0.005	64
3630H	441	5630	3340	3990	22	2950	0.005	65
4030C	302	5630	3340	4400	5.5	2950	0.002	63
4030E	335	5630	3340	4400	7.5	2950	0.002	64
4030D	380	5630	3340	4400	11	2950	0.002	64
4030S	422	5630	3340	4400	15	2950	0.002	64
4030M	452	5630	3340	4400	18.5	2950	0.005	65
4030H	479	5630	3340	4400	22	2950	0.005	65
4534C	330	6100	3800	4400	5.5	3430	0.002	64
4534E	366	6100	3800	4400	7.5	3430	0.002	64
4534D	416	6100	3800	4400	11	3430	0.002	64
4534S	461	6100	3800	4400	15	3430	0.002	65
4534M	494	6100	3800	4400	18.5	3430	0.005	65
4534H	524	6100	3800	4400	22	3430	0.005	65
5034C	397	6100	3800	5220	7.5	3430	0.002	64
5034E	451	6100	3800	5220	11	3430	0.002	64
5034D	500	6100	3800	5220	15	3430	0.002	64
5034S	536	6100	3800	5220	18.5	3430	0.002	65
5034M	568	6100	3800	5220	22	3430	0.005	65
5034H	630	6100	3800	5220	30	3430	0.005	65
6036C	519	6920	3990	5220	11	3630	0.002	64
6036E	575	6920	3990	5220	15	3630	0.002	64
6036D	617	6920	3990	5220	18.5	3630	0.002	64
6036S	653	6920	3990	5220	22	3630	0.002	65
6036M	724	6920	3990	5220	30	3630	0.005	65
6036H	777	6920	3990	5220	37	3630	0.005	65

NSA Series



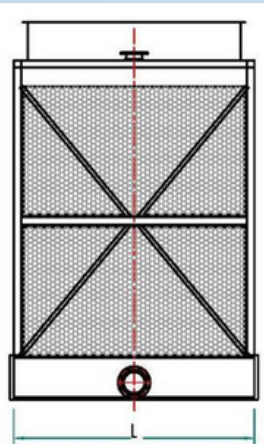
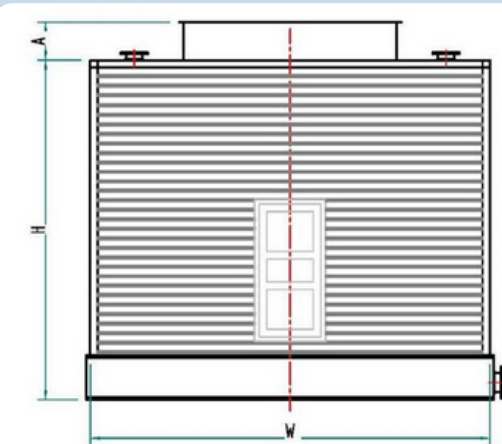
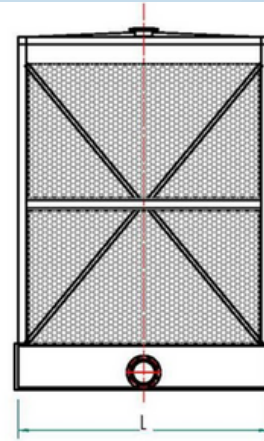
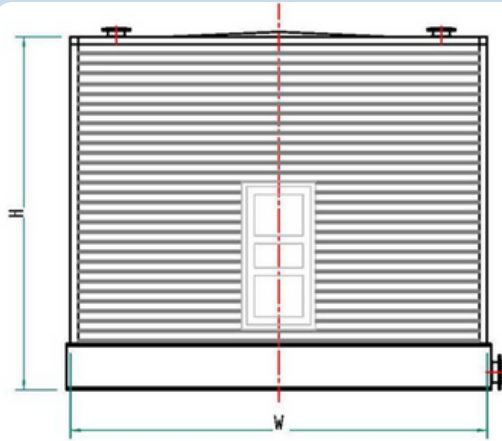
I. Outline of models (Open type, Cross-flow, Low noise and induced-draft)

Tower Model	Water Flow	Dimensions (mm)			Fan Assembly		Drift loss	Noise Value
		Width	Length	Height	Motor	Fan Dia		Standard Point
NSA	(m ³ /h)	W	L	H	(KW)	φ (mm)	(%)	dB(A)
7042C	559	7300	4500	5220	11	4200	0.002	64
7042E	620	7300	4500	5220	15	4200	0.002	64
7042D	665	7300	4500	5220	18.5	4200	0.002	64
7042S	704	7300	4500	5220	22	4200	0.002	65
7042M	781	7300	4500	5220	30	4200	0.005	65
7042H	838	7300	4500	5220	37	4200	0.005	65
7042G	894	7300	4500	5220	45	4200	0.005	65
7542C	601	7300	4500	6040	11	4200	0.002	64
7542E	666	7300	4500	6040	15	4200	0.002	64
7542D	715	7300	4500	6040	18.5	4200	0.002	65
7542S	757	7300	4500	6040	22	4200	0.005	65
7542M	840	7300	4500	6040	30	4200	0.005	65
7542H	900	7300	4500	6040	37	4200	0.002	64
7542G	961	7300	4500	6040	45	4200	0.002	64
8047C	682	7780	5000	5220	15	4700	0.002	64
8047E	731	7780	5000	5220	18.5	4700	0.002	64
8047D	775	7780	5000	5220	22	4700	0.002	65
8047S	859	7780	5000	5220	30	4700	0.005	65
8047M	921	7780	5000	5220	37	4700	0.005	65
8047H	984	7780	5000	5220	45	4700	0.005	65
8047G	1052	7780	5000	5220	55	4700	0.005	65
8547C	812	7780	5000	6450	18.5	4700	0.002	64
8547E	861	7780	5000	6450	22	4700	0.002	64
8547D	955	7780	5000	6450	30	4700	0.002	65
8547S	1023	7780	5000	6450	37	4700	0.005	65
8547M	1092	7780	5000	6450	45	4700	0.005	65
8547H	1169	7780	5000	6450	55	4700	0.005	65
9047C	802	7780	5950	5220	18.5	4700	0.002	64
9047E	850	7780	5950	5220	22	4700	0.002	64
9047D	942	7780	5950	5220	30	4700	0.002	65
9047S	1011	7780	5950	5220	37	4700	0.005	65
9047M	1079	7780	5950	5220	45	4700	0.005	65
9047H	1153	7780	5950	5220	55	4700	0.005	65

NSA Series



II. Drawings (Open type, Cross-flow, Low noise and induced-draft)



CTI Certification



COOLING TECHNOLOGY INSTITUTE

P. O. Box 681807, Houston, Texas 77268 • 3845 Cypress Creek Parkway, Ste 420, Houston, Texas 77068
Phone: 281.583.4087 • Fax: 281.537.1721 • email: vmanser@cti.org • <http://www.cti.org>

January 24, 2024
(Revision 2)

Approach Engineering Co., Ltd.
Attn.: Anuroj Roekwichanan
508/132 Sukontasawat Road, Ladphro Sub-District
Ladphro District
Bangkok 10230, Thailand

Subject: CTI Cooling Tower Certification for the
NSA Series, Induced-draft, Cross-flow, Cooling Towers

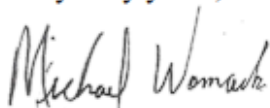
Greetings:

The Approach Engineering Co., Ltd. NSA Series line of crossflow, induced-draft, cooling towers, as described in your original application and subsequent revisions through December 25, 2023, has satisfactorily fulfilled the requirements for certification of thermal performance by the Cooling Technology Institute (CTI), as set forth in the CTI Certification Standard STD-201(21). A listing of the one-hundred-twenty (120) NSA Series models currently encompassed by this certification is included with this letter for reference.

The Approach Engineering Co., Ltd. line of NSA Series cooling towers has been assigned and should use CTI Certification Validation Number C76B-20R02. You are hereby authorized and encouraged to properly display the CTI Certification Logo in all pertinent literature for the line and required to affix the CTI Certification Label to all towers comprising the line, as provided in the CTI STD-201 Certification Standard.

This CTI Certification requires the successful completion of a CTI Annual Reverification Test to remain in effect in subsequent years.

Very truly yours,

A handwritten signature in black ink that reads "Michael Womack".

Michael G. Womack, PE
CTI Thermal Certification Administrator

NSA Series



CTI Certification



COOLING TECHNOLOGY INSTITUTE

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Approach Engineering Co., Ltd.
NSA Series Line of CTI Certified Cooling Towers
CTI Certification Validation Number C76B-20R02
January 24, 2024 (Revision 2)

NSA-1018C	NSA-2025C	NSA-3630C	NSA-7042C
NSA-1018D	NSA-2025D	NSA-3630D	NSA-7042D
NSA-1018E	NSA-2025E	NSA-3630E	NSA-7042E
NSA-1018H	NSA-2025M	NSA-3630H	NSA-7042G
NSA-1018M	NSA-2025S	NSA-3630M	NSA-7042H
NSA-1018S		NSA-3630S	NSA-7042M
	NSA-2325C		NSA-7042S
NSA-1518C	NSA-2325D	NSA-4030C	
NSA-1518D	NSA-2325E	NSA-4030D	NSA-7542C
NSA-1518E	NSA-2325H	NSA-4030E	NSA-7542D
NSA-1518H	NSA-2325M	NSA-4030H	NSA-7542E
NSA-1518M	NSA-2325S	NSA-4030M	NSA-7542G
NSA-1518S		NSA-4030S	NSA-7542H
	NSA-2525C		NSA-7542M
NSA-1522C	NSA-2525D	NSA-4534C	NSA-7542S
NSA-1522D	NSA-2525E	NSA-4534D	
NSA-1522E	NSA-2525M	NSA-4534E	NSA-8047C
NSA-1522M	NSA-2525S	NSA-4534H	NSA-8047D
NSA-1522S		NSA-4534M	NSA-8047E
	NSA-2825C	NSA-4534S	NSA-8047G
NSA-1720C	NSA-2825D		NSA-8047H
NSA-1720D	NSA-2825E	NSA-5034C	NSA-8047M
NSA-1720E	NSA-2825H	NSA-5034D	NSA-8047S
NSA-1720H	NSA-2825M	NSA-5034E	
NSA-1720M	NSA-2825S	NSA-5034H	NSA-8547C
NSA-1720S		NSA-5034M	NSA-8547D
	NSA-3025C	NSA-5034S	NSA-8547E
NSA-2022C	NSA-3025D		NSA-8547H
NSA-2022D	NSA-3025E	NSA-6036C	NSA-8547M
NSA-2022E	NSA-3025H	NSA-6036D	NSA-8547S
NSA-2022H	NSA-3025M	NSA-6036E	
NSA-2022M	NSA-3025S	NSA-6036H	NSA-9047C
NSA-2022S		NSA-6036M	NSA-9047D
		NSA-6036S	NSA-9047E
			NSA-9047H
			NSA-9047M
			NSA-9047S

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