

KST-N



KS COOLING TOWER

COUNTERFLOW, BOTTLE TYPE
F.R.P. STRUCTURE



MEMBER OF THE CTI

KING SUN INDUSTRY CO.,LTD.

THE FEATURES OF KST-N

VACUUM FORMED FILL

KST-N series cooling towers use vacuum formed film type cellular fill. The heat exchange performance of it is about 30% higher than the hot press winded fill of ordinary round type cooling tower.

The fashion of the vacuum formed fill will always keep constant without changing after being glued. However, the ordinary hot press winded fill always lose it's fashion in the process of winding, pressing and gluing. Because the fashion lose it's constancy, the air flow is obstructed and heat exchange efficiency is reduced. Thus, about 30% performance of the cooling tower is lost.



VACUUM FORMED FILL



CUT TO BE ROUND TYPE FOR KST-N

2" DIA DRAIN SOCKET

In the range KST-N-30 through 125, the drain socket are increased from 1" to 2", so the time required to drain off all the water in the basin is only 1/4 of the original 1" drain socket. This is very much helpful for cooling tower maintenance because of time saving.

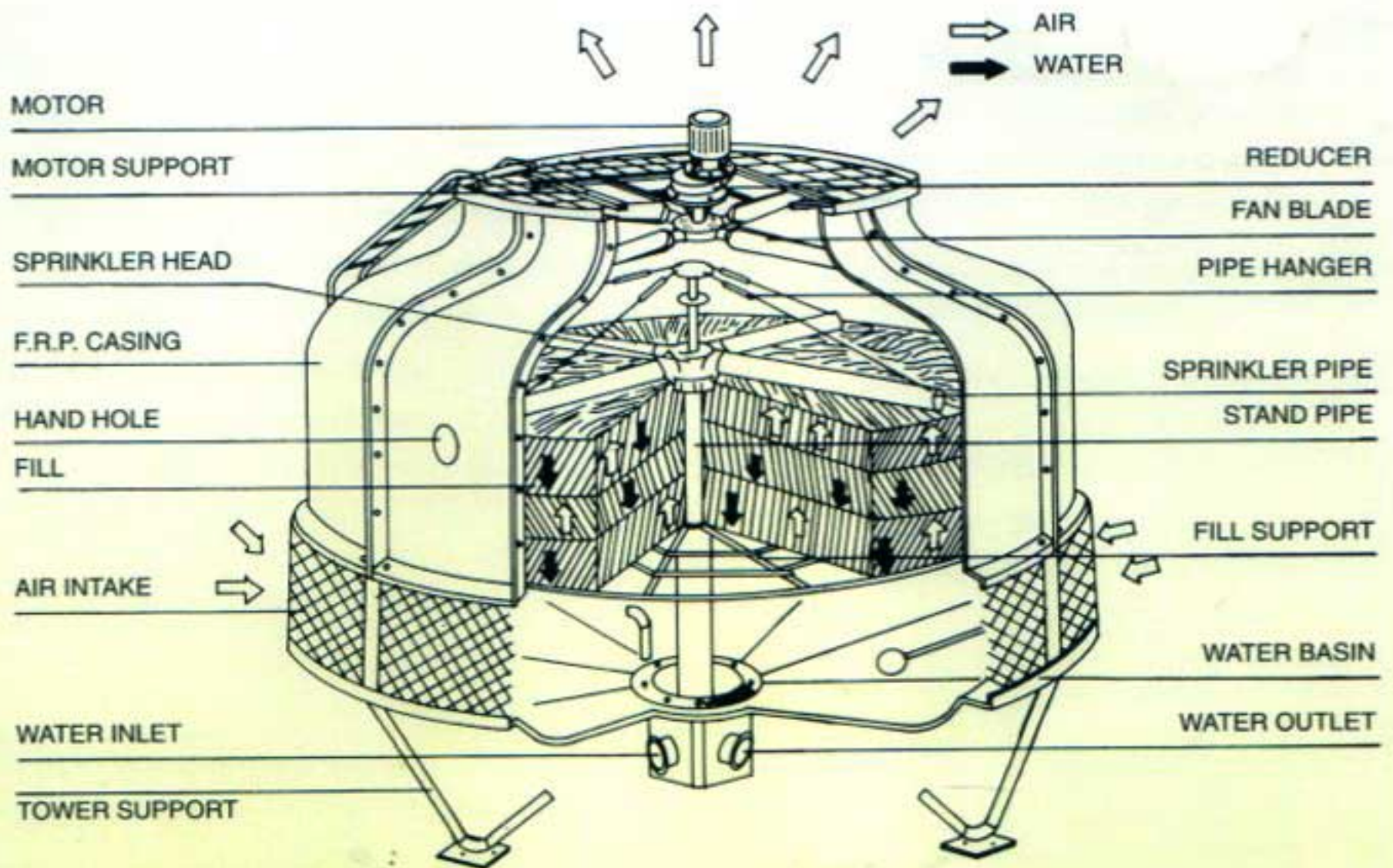
EXTRA DRAIN PLUG

In the range KST-N-8 through 300, in the lowest position of the basin, we install an extra drain plug. After the cleaning work of the basin, the contaminated water could be fully drained off from this drain plug. This is very much helpful for cooling tower maintenance work to get rid of the contaminated water which is lower than drain socket.

OPTIONAL DRIFT ELIMINATOR

In the range KST-N-30 and up, the drift eliminator could be installed as an optional parts. The drift loss after the installation of the drift eliminator would be less than 0.005%.

MATERIAL OF KST-N



MODEL	3	8	10	20	30	60	80	100	225	250	300	500	1500RT
MOTOR	220, 230, 380, 415, 440, 460V (others available)												
FAN DRIVE	DIRECT									225	GEAR or BELT SPEED REDUCER		
FANBLADE	PLASTIC OR ALUMINUM SHEET 10	15	PLASTIC		40	50	ALUMINIUM ALLOY						
CASING	F.R.P.												
WATER BASIN	F.R.P.												
SPRINKLER HEAD	REINFORCED PLASTICS						70	80	ALUMINIUM ALLOY				
FILL	VACUUM FORMING PVC												
AIR MESH	P.V.C.MESH (F.R.P.LOUVER IS OPTIONAL)												
FLOAT VALVE	SINGLE VALVE												
LADDER	NOT FITTED					60	70	H.D.G.STEEL					
TOWER SUPPORT	F.R.P.									300	350	H.D.G STEEL PIPE	
WATER SUMP	NOT FITTED									300	350	F.R.P	

Example:

Design Condition:

Nominal Flow: 3,200 LPM

Water in Temp.: 37°C

Water out Temp.: 32°C

W.B. Temp.: 27°C

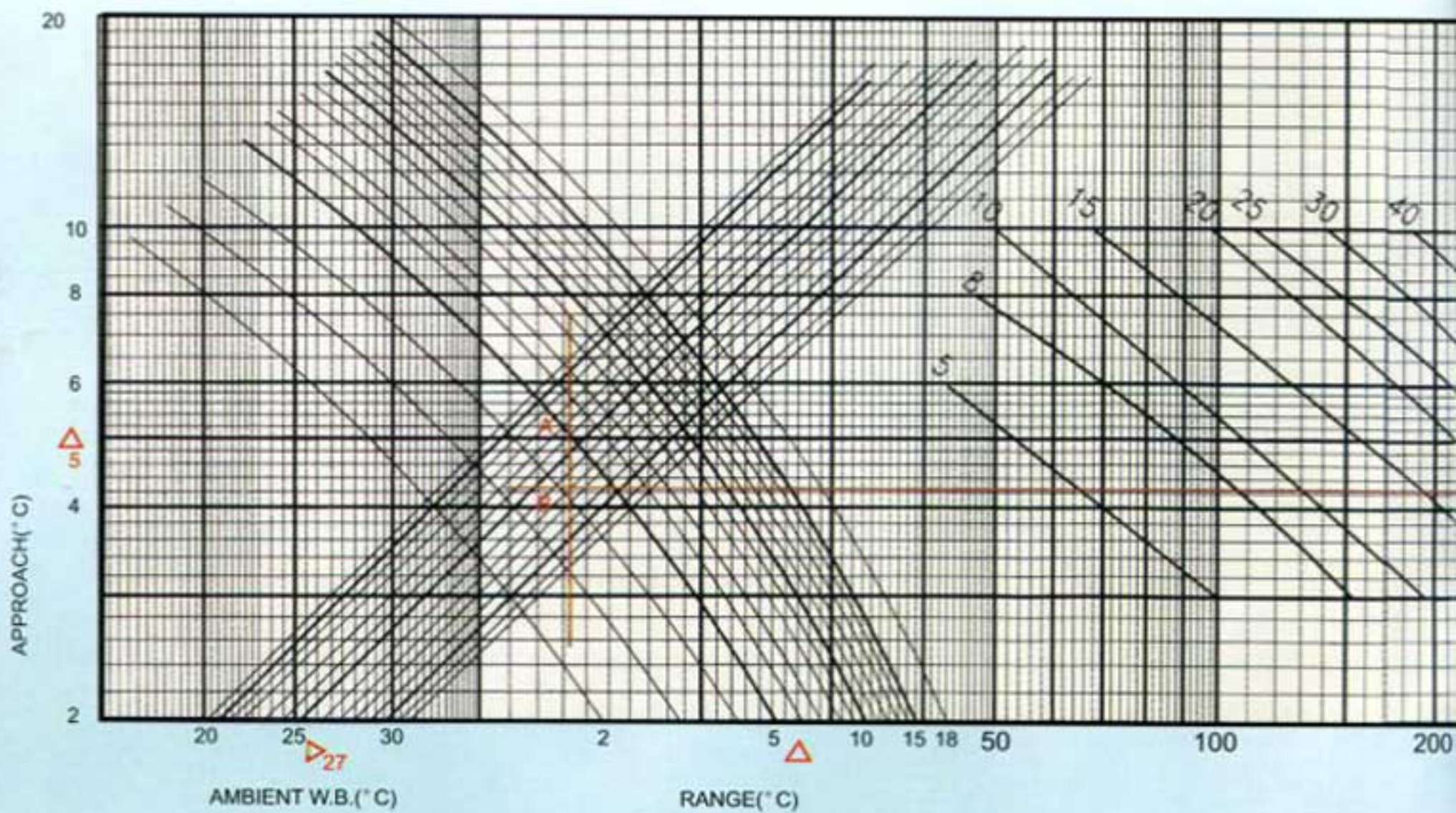
Range: Water in Temp. - Water out Temp. (°C)

$$37^{\circ}\text{C} - 32^{\circ}\text{C} = 5^{\circ}\text{C}$$

Approach: Water out Temp. - W.B. Temp. (°C)

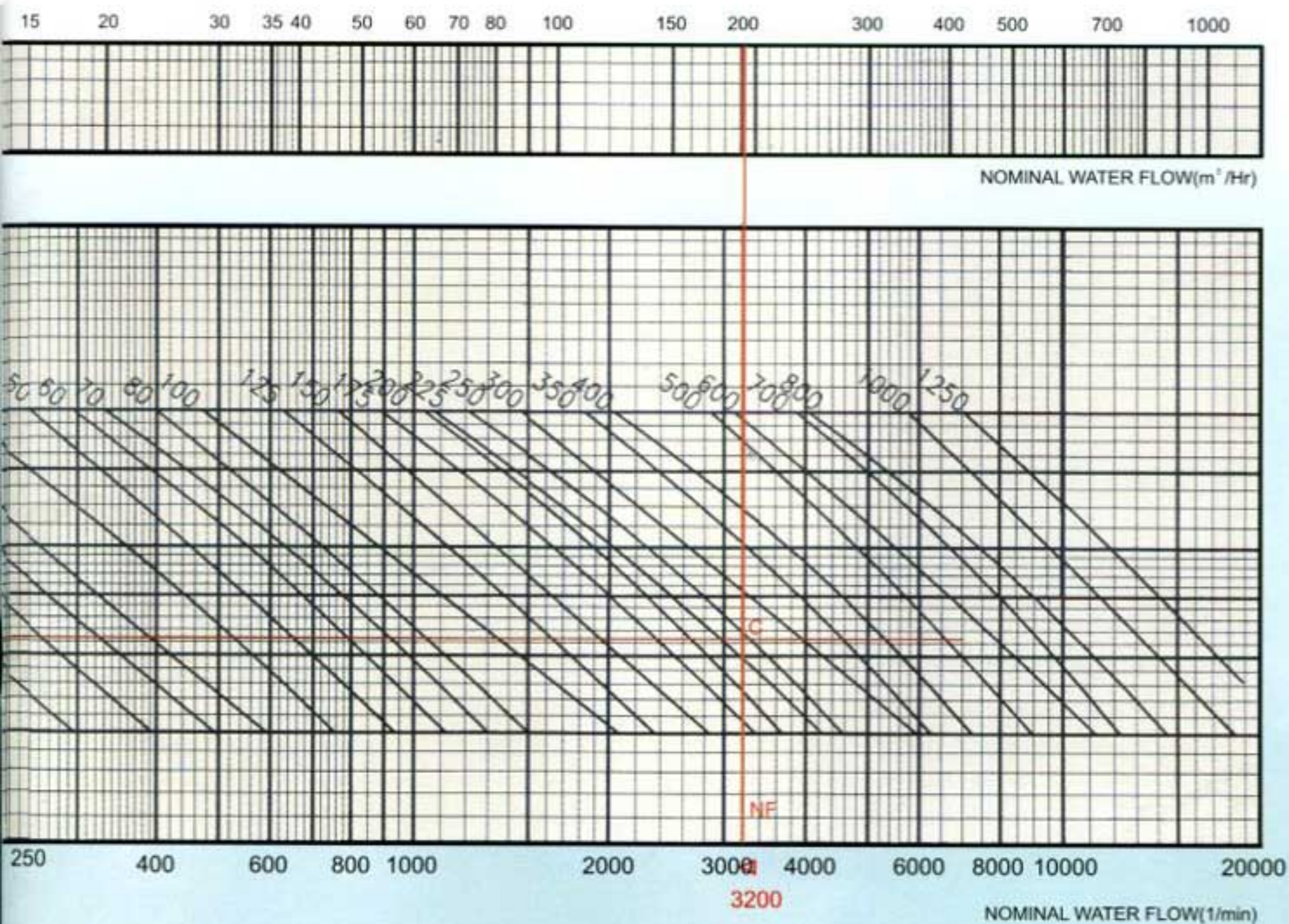
$$32^{\circ}\text{C} - 27^{\circ}\text{C} = 5^{\circ}\text{C}$$

3 4 5 6 7 8 9 10



ER SELECTION CHART

1. Find point A which is the intersection point of range 5 and approach 5.
2. Draw a perpendicular line up or down from point A to the ambient wet bulb curve 27.
We call it point B
3. Draw a horizontal line rightward from point B.
4. Draw a perpendicular line from nominal flow 3200LPM. We call it line NF.
5. There is an intersection point of the line NF and the horizontal line. We call it point C.
6. If point C falls on the curve of a model, the selection is this model. If point C falls between two curves, select the larger model.
7. Because point C falls between the curves of 225&250, the selection is KST-N-250.
8. If It is not possible to select from this chart, please contact our sales representative to select for you.

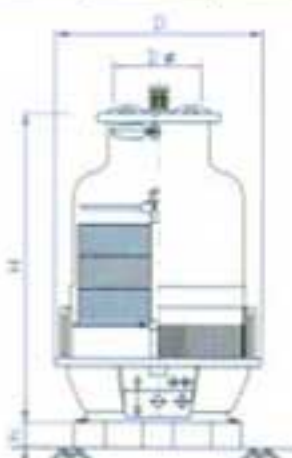


KST-N-3~25

MODEL KST-N	Dimension m/m		Pipe Connection m/m						Fan Motor HP	Fan Dia. m/m	Air Volumn m³/min	Water Flow l/min	Pump Head M	Weight:kg	
	H	D	OUTLET S	INLET De	OVERFLOW O	DRAIN Dr	AUTOMATIC FILLER Ba	QUICK FILLER Q						Dry	Operating
3	1150	670	25	25	25	15	15		1/6	500	45	39	0.9	28	60
5	1150	670	25	25	25	15	15		1/6	500	55	65	1	32	68
8	1310	750	40	40	25	15	15	15	1/6	500	60	104	1.2	43	78
10	1630	860	40	40	25	15	15	15	1/4	500	70	130	1.3	79	150
15	1550	1165	50	50	25	25	15	15	1/4	600	110	195	1.5	109	285
20	1750	1165	50	50	25	25	15	15	1/2	600	130	260	1.7	129	318
25	1750	1165	50	50	25	25	15	15	1	700	150	325	1.9	137	334



KST-N-3-5

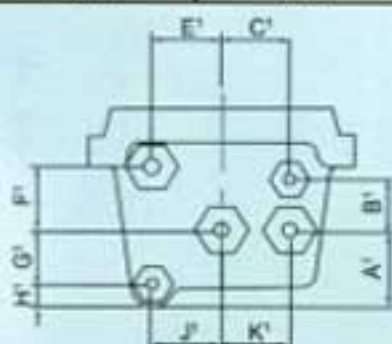


KST-N-8-25

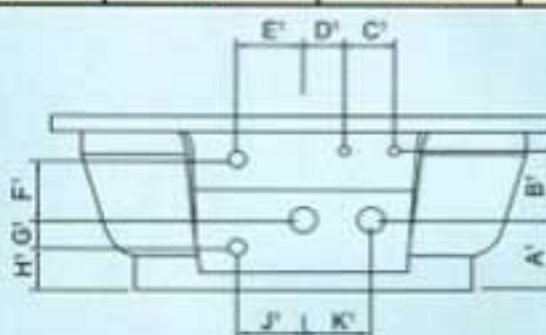


KST-N-3-25

MODEL KST-N	D1 m/m	W m/m	A m/m	B m/m	h m/m	Anchor Bolt		
						Size m/m	Length m/m	Quantity
3	430	372	50	200	150	M12	120	3
5	430	372	50	200	150	M12	120	3
8	560	485	50	200	150	M12	120	3
10	660	572	50	200	150	M12	120	3
15	956	828	50	200	150	M12	120	3
20	956	828	50	200	150	M12	120	3
25	956	828	50	200	150	M12	120	3



KST-N-3-5



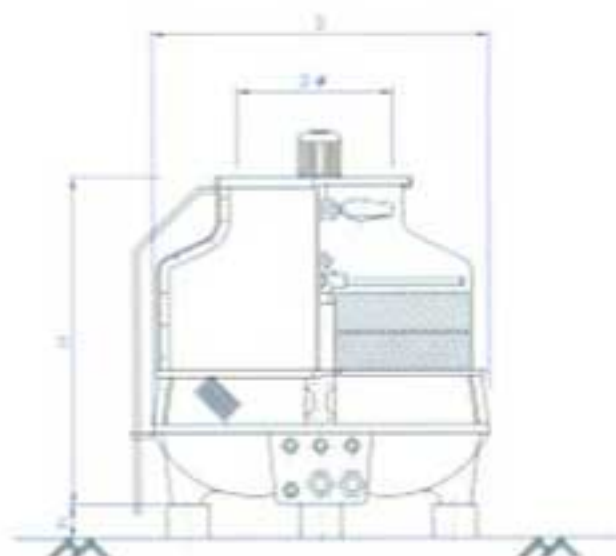
KST-N-8-25

KST-N	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'
3	120	80	100	0	105	100	85	35	105	100
5	120	80	100	0	105	100	85	35	105	100
8	105	109	75	60	100	95	42	63	100	100
10	105	134	75	60	100	124	22	83	100	100
15	118	130	115	70	130	102	43	75	130	130
20	118	130	115	70	130	102	43	75	130	130
25	118	130	115	70	130	102	43	75	130	130

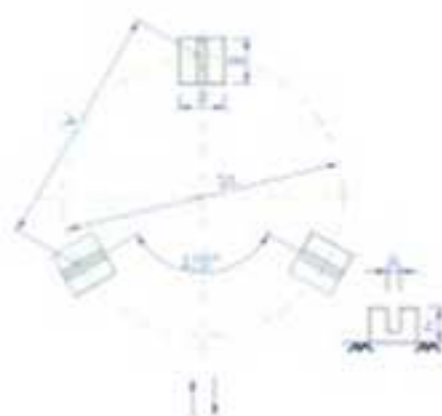
The design condition of KST-N cooling tower is based on 37°C Inlet Water, 32°C Outlet Water and 27°C Wet Bulb temperature. Under these assumptions, 13 LPM Water Flow is regarded as one ton. If we divide the Water Flow figure in this page by 13, the figure we get is the actual tonnage of this model.

KST-N-30~70

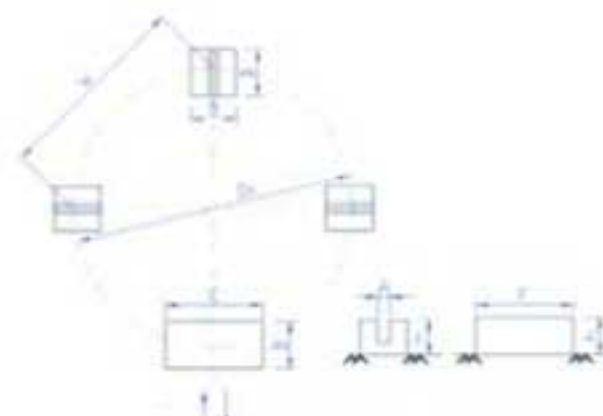
MODEL KST-N	Dimension m/m		Pipe Connection m/m						Fan Motor HP	Fan Dia. m/m	Air Volumn m ³ /min	Water Flow l/min	Pump Head M	Weight:kg	
	H	D	OUTLET S	INLET De	OVERFLOW O	DRAIN Dr	AUTOMATIC FILLER Ba	QUICK FILLER Q						Dry	Operating
30	1705	1560	65	65	25	50	15	15	1	700	195	390	1.9	144	522
40	1825	1560	65	65	25	50	15	15	1	700	210	520	2	185	577
50	2080	1560	80	80	25	50	15	15	2	900	280	650	2.1	228	632
60	1770	1900	80	80	25	50	20	20	2	900	370	780	2.1	277	719
70	2180	1900	80	80	25	50	20	20	2	1200	390	910	2.3	337	798



KST-N-30~70

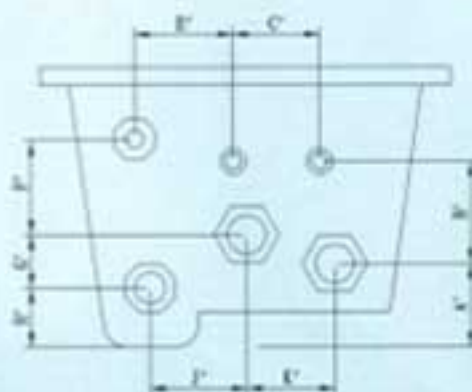


KST-N-30~50



KST-N-60~70

MODEL KST-N	D1 m/m	W m/m	A m/m	B m/m	C m/m	h m/m	h1 m/m	Anchor Bolt		
								Size m/m	Length m/m	Quantity
30	1180	1022	50	200		150		M12	120	3
40	1180	1022	50	200		150		M12	120	3
50	1180	1022	50	200		150		M12	120	3
60	1440	1018	50	250	500	200	200	M12	120	3
70	1440	1018	50	250	500	200	200	M12	120	3



KST-N-30~70

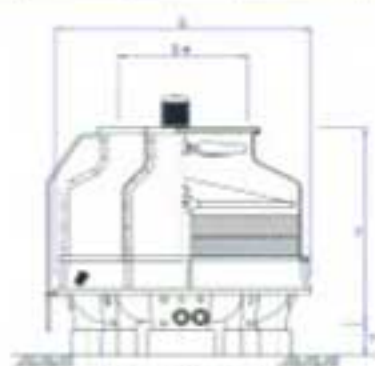
KST-N	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'
30	140	145	165	0	170	132	78	82	145	140
40	140	145	165	0	170	132	78	82	145	140
50	140	145	165	0	170	132	78	82	145	140
60	140	125	120	80	70	123	87	53	148	147
70	140	125	120	80	70	123	87	53	148	147

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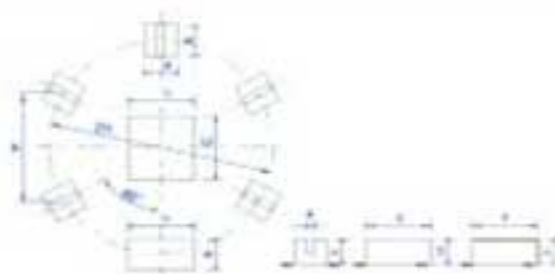
KST-N-80~300

MODEL KST-N	Dimension m/m		Pipe Connection m/m						Fan Motor HP	Fan Dia. m/m	Air Volumn m³/min	Water Flow l/min	Pump Head M	Weight:kg	
	H	D	OUTLET S	INLET De	OVERFLOW O	DRAIN Dr	AUTOMATIC FILLER Ba	QUICK FILLER Q						Dry	Operating
80	1920	2140	100	100	25	50	20	20	2	1200	450	1040	2.5	352	982
100	2370	2410	125	125	25	50	25	25	3	1500	500	1300	2.8	474	1205
125	2230	2730	125	125	25	50	25	25	3	1500	700	1625	3	524	1336
150	2400	2730	125	125	25	50	25	25	5	1800	840	1950	3.2	702	1583
175	2350	3280	125	125	50	50	25	25	5	1800	1100	2275	3.2	855	3415
200	2450	3280	150	150	50	50	32	32	5	1800	1100	2600	3.3	937	3570
225	3000	3280	150	150	50	50	32	32	7 1/2	2400	1300	2925	3.4	1022	3661
250	2790	3760	200	200	50	50	32	32	7 1/2	2400	1580	3250	3.6	1172	3885
300	3130	3760	200	200	50	50	32	32	10	2400	1820	3900	3.8	1331	4125

(KST-N-225~300 with gear reducer.)



KST-N-80~300

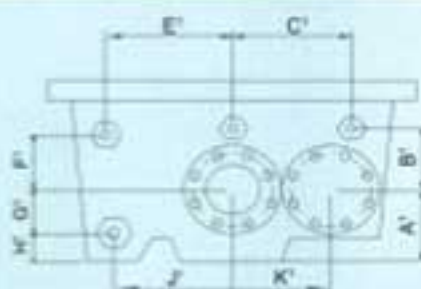


KST-80-150



KST-N-175~300

MODEL KST-N	D1 m/m	W m/m	A m/m	B m/m	C m/m	F m/m	h m/m	h1 m/m	Anchor Bolt		
									Size m/m	Length m/m	Quantity
80	1700	850	50	250	500	500	200	200	M12	120	5
100	2100	1050	50	300	500	1000	300	300	M16	200	5
125	2120	1060	50	300	500	1000	300	300	M16	200	5
150	2120	1060	50	300	500	1000	300	300	M16	200	5
175	2690	1029	50	300	600	900	300	300	M16	200	7
200	2690	1029	50	300	600	900	300	300	M16	200	7
225	2690	1029	50	300	600	900	300	300	M16	200	7
250	3160	1209	100	350	800	1000	400	400	M16	200	7
300	3160	1209	100	350	800	1000	400	400	M16	200	7



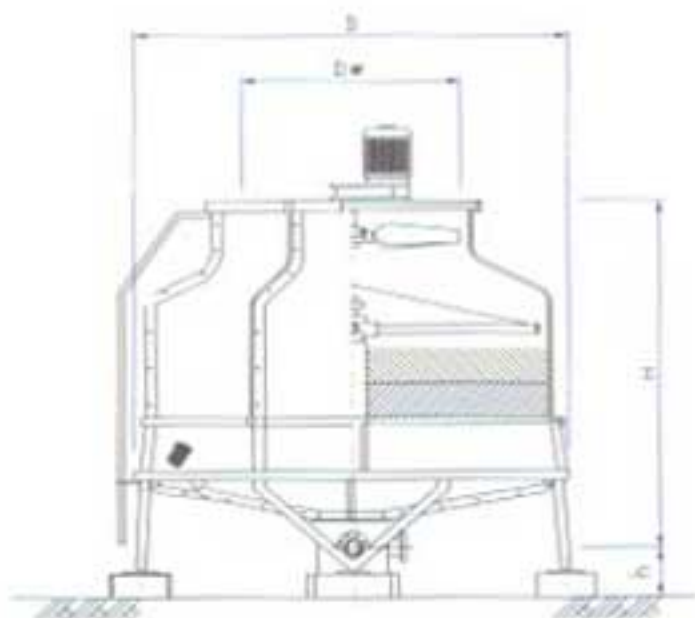
KST-N-80~300

KST-N	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'
80	170	145	258	0	273	130	105	65	255	235
100	180	180	255	0	265	167	118	62	285	265
125	180	198	248	0	250	190	115	65	250	248
150	180	198	248	0	250	190	115	65	250	248
175	205	227	285	0	288	180	115	90	288	285
200	205	227	285	0	288	180	115	90	288	285
225	250	182	285	0	288	135	160	90	288	285
250	230	265	342	0	385	185	150	80	355	342
300	230	265	342	0	385	185	150	80	385	342

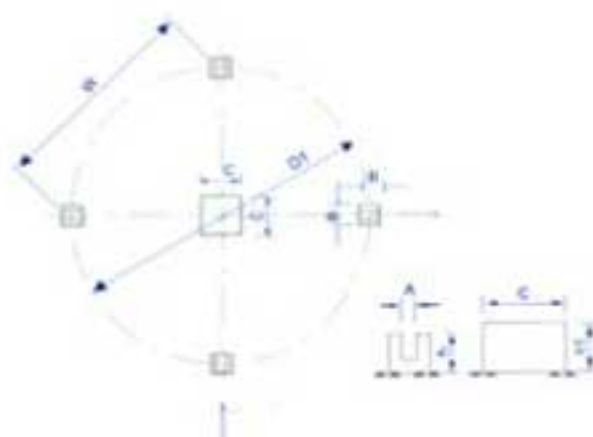
The design condition of KST-N cooling tower is based on 37°C Inlet Water, 32°C Outlet Water and 27°C Wet Bulb temperature. Under these assumptions, 13 LPM Water Flow is regarded as one ton. If we divide the Water Flow figure in this page by 13, the figure we get is the actual tonnage of this model.

KST-N-350~500

MODEL KST-N	Dimension		Pipe Connection						Fan Motor HP	Fan Dia. m/m	Air Volumn m ³ /min	Water Flow l/m	Pump Head M	Weight:kg	
	H	D	OUTLET S	INLET De	OVERFLOW O	DRAIN Dr	AUTOMATIC FILLER Ba	QUICK FILLER Q						Dry	Operating
350	3360	4600	200	200	80	50	32	32	10	2400	2120	4550	4	1560	5690
400	3970	4600	200	200	80	50	32	32	15	3000	2260	5200	4.2	1902	6145
500	4050	4870	250	250	80	50	40	40	15	3000	3250	6500	4.5	2165	6837

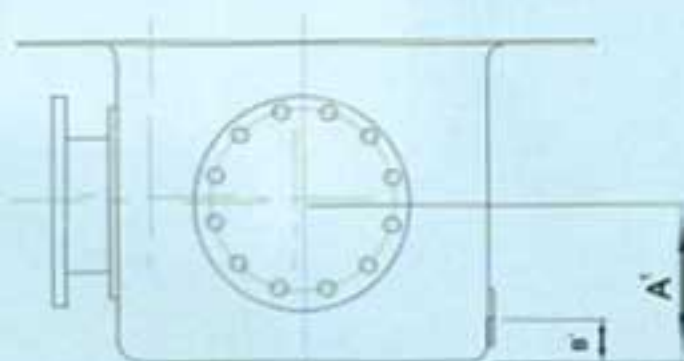


KST-N-350~500



KST-N-350~500

MODEL KST-N	D1 m/m	W m/m	A m/m	B m/m	C m/m	h m/m	h1 m/m	Anchor Bolt		
								Size m/m	Length m/m	Quantity
350	4520	3196	100	300	600	300	380	M16	200	8
400	4520	3196	100	300	600	300	380	M16	200	8
500	4740	3352	100	300	600	300	380	M16	200	8



KST-N-350~500

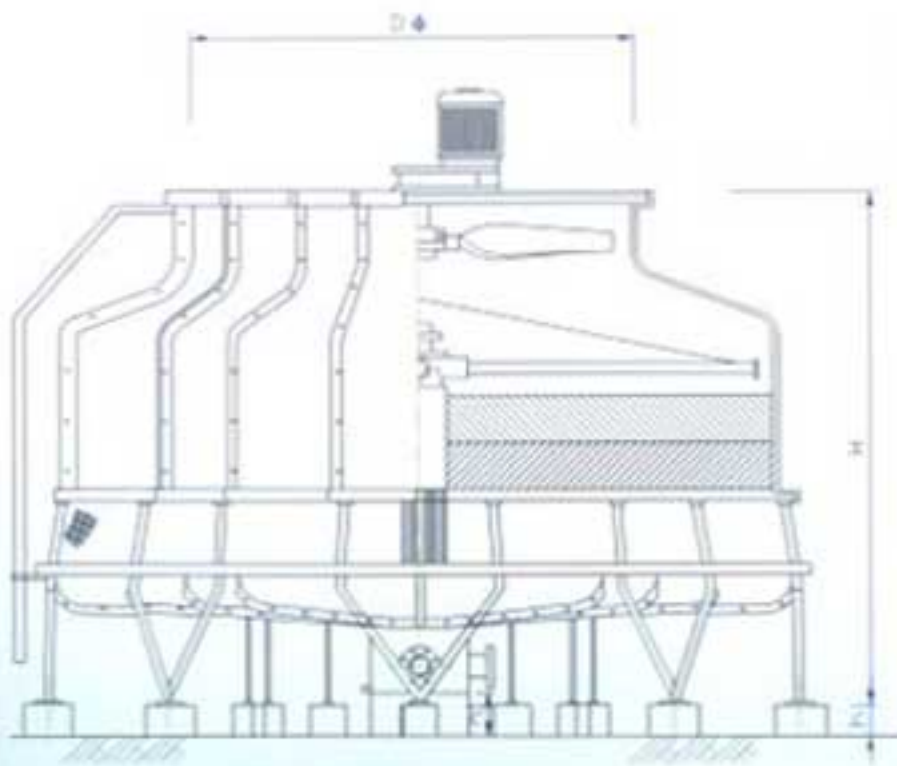
A' : 250

B' : 72

The design condition of KST-N cooling tower is based on 37°C Inlet Water , 32°C Outlet Water and 27°C Wet Bulb temperature. Under these assumptions, 13 LPM Water Flow is regarded as one ton. If we divide the Water Flow figure in this page by 13, the figure we get is the actual tonnage of this model.

KST-N-600~1500

MODEL KST-N	Dimension m/m		Pipe Connection m/m						Fan Motor HP	Fan Dia. m/m	Air Volumn m ³ /min	Water Flow l/min	Pump Head M	Weight:kg	
	H	D	OUTLET S	INLET De	OVERFLOW O	DRAIN Dr	AUTOMATIC FILLER Ba	QUICK FILLER Q						Dry	Operating
600	3940	5580	250	250	80	50	40	40	20	3400	3500	7800	4.5	2909	8052
700	4150	6550	250	250	100	50	50	50	20	3400	4250	9100	5	3411	11734
800	4150	6550	300	300	100	50	50	50	30	3400	4500	10400	5.5	3963	12690
1000	4940	6550	300	300	100	50	50	50	30	3600	4830	13000	5.8	4512	13465
1250	5090	7600	300	300	100	65	65	65	40	4200	6700	16250	6.3	4650	14500
1500	5670	8430	300	300	100	65	65	65	50	4200	7900	19500	7	5500	21500



KST-N-600~1500



KST-N-600

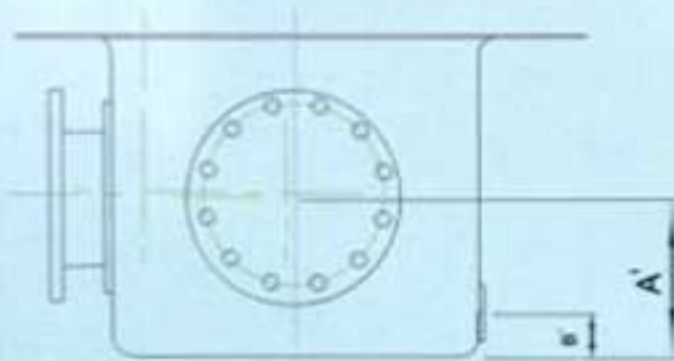


KST-N-700~1250



KST-N-1500

MODEL KST-N	D1 m/m	W m/m	D2 m/m	A m/m	B m/m	C m/m	h m/m	h1 m/m	Anchor Bolt		
									Size m/m	Length m/m	Quantity
600	5460	2730	2900	100	500	600	300	520	M20	200	12
700	6450	2468	3600	100	500	600	300	380	M20	200	16
800	6450	2468	3600	100	500	600	300	380	M20	200	16
1000	6450	2468	3600	100	500	600	300	380	M20	200	16
1250	7630	2920	4155	100	500	900	300	380	M20	200	16
1500	8200	2534	4540	100	500	1000	300	580	M20	200	20



KST-N-600~1500

KST-N	A'	B'
600	250	72
700	250	72
800	250	72
1000	250	72
1250	275	95
1500	275	95

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SERIES OF KING SUN PRODUCTS



KLN LOW NOISE TYPE COOLING TOWER



KSTH HIGH TEMPERATURE WOOD FILL COOLING TOWER



KHT CROSSFLOW INDUSTRIAL COOLING TOWER



KCW COUNTERFLOW INDUSTRIAL COOLING TOWER



KH CROSSFLOW MODULAR TYPE COOLING TOWER



KFT COUNTERFLOW MODULAR TYPE COOLING TOWER

KING SUN COOLING TOWER INSTALLATION



KST COOLING TOWERS IN BROWARD, FL. USA



KLN-1000x3 UNITS, EXHIBITION CENTER, PORT OF SINGAPORE AUTHORITY.



KST-1500x4 KST-1250x2 KST-1000x2
ABOVE 8 UNITS KST COOLING TOWERS ARE
OPERATING IN MIAMI BEACH CONVENTION
CENTER. PICTURE SHOWS ONLY ONE OF
THEM



KST-500 IN CHICAGO



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