

Tower Noise Data

Tower Size	Fan Dia mm		Motor kW/P		Estimated DBA @ 3m	
	M	B	M	B	M	B
6	500	400	1.1/4P	1.1/4P	74	75
9	630	560	1.1/4P	1.5/4P	74	76
12	630	630	1.5/4P	2.2/4P	74	79
16	630	710	3.0/4P	3.0/4P	78	76
20	710	710	3.0/4P	3.0/4P	75	80
24	800	800	4.0/4P	4.0/4P	85	80
30	800	1000	5.5/4P	5.5/4P	83	88
36	965	1000	5.5/4P	5.5/4P	88	89
42	965	1000	5.5/4P	5.5/4P	88	90
48	1100	1100	7.5/4P	7.5/4P	80	83
56	1100	1100	7.5/6P	11.0/6P	81	84
64	1250	1250	7.5/6P	11.0/6P	87	90
72	1250	1250	11.0/6P	11.0/6P	88	91
80	1400	1400	11.0/6P	11.0/6P	89	92
88	1400	1400	11.0/6P	15.0/6P	88	93
90	1530	1530	11.0/6P	15.0/6P	89	92
100	1530	1530	15.0/6P	15.0/6P	90	93
110	1530	1530	15.0/6P	18.5/6P	91	94
120	1530	1530	15.0/6P	18.5/6P	92	95

Options:

- Silencers Available for all fans
- FDC Centrifugal Fanx approx 1.5 x kW data above
- FDC Centrifugal Fans approx 5dBA less than data above

Note:

- All data subject to confirmation
- Noise subject to site conditions
- IPSCO can offer specific motor, kW and noise solutions



Other World-Leading Technology

- Comprehensive range of high-quality cooling towers.
- From single cell forced draft through to multiple cell forced draft using axial or low noise centrifugal fans.
- Replacement high efficiency pack & drift eliminators will suit many towers for upgrade or repairs.
- Consistent high quality fabrication.
- Very low drift levels obtained using the latest design of drift eliminator.
- Robust steel construction outlasts brittle fibreglass under NZ high UV conditions.
- Backed up in New Zealand by high levels of experience and product expertise.
- A full range of other world leading products and services are available from IPSCO to fully complement the range of cooling towers.



Cooling Towers for Industry



IPSCO Cooling towers have been manufactured under license in New Zealand by IPSCO since 1972 and are all welded steel plate construction. The finish is shot blast and sprayed zinc silicate all over and a vinyl coating on the exterior. This finish has been used since the very first towers and many of those still in service have never yet had to be repainted.

Details in the internals of the housing and in the internal components have been extensively redesigned in recent years to comply with stringent current hygiene regulations and to achieve higher cooling efficiencies than before.

The heart of any cooling tower is in the heat transfer packing. Carter [UK] claims to have developed the most efficient pack available today and performance in the field bears this out. In addition they have optional high temperature pack for industrial duties up to 95°C.

The most troublesome component of traditional cooling towers is the fan motor which in traditional designs is in the moist warm air-stream being sucked from the tower. This problem has been solved by putting the fan on the inlet side and blowing cool dry air into the tower.

The most unsightly aspect of traditional cooling towers is the mess and deterioration of the immediate surroundings cause by water splash-out at the air inlet area. IPSCO Cooling Towers have a completely enclosed water basin with no possibility of splash out which means there that the maintenance and cleaning costs around the tower are vastly reduced.

The most hazardous aspect of all towers is the organisms such as legionella disease which can grow in the water and then be transmitted to humans. The most efficient transmission to humans is via inhalation of atomised infected water.

Suitable chemical treatment and proper maintenance reduces the risks to a minimum but the traditional tower allows relatively large quantities of atomised drift to be broadcast from the tower outlet. This atomised drift remains dangerous over quite a large area around the tower.

IPSCO Cooling Towers have reduced this risk by using mist eliminators which are guaranteed to remove all drift up to 0.0006%. Current regulations in New Zealand have been written around general industry capabilities of 0.002%.



High Efficiency Heat Transfer Pack

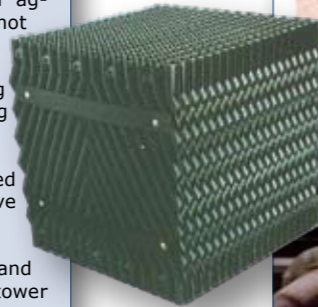
The unique DP17 Durapacks are fully demountable film flow packings assembled from individual plastic plates. They are durable, virtually resistant to clogging and normal atmospheric contaminants or aggressive water. Leaching with a subsequent loss of material cannot occur.

These packs are frequently used to replace less efficient existing designs and in particular bonded packs which are prone to fouling and clogging.

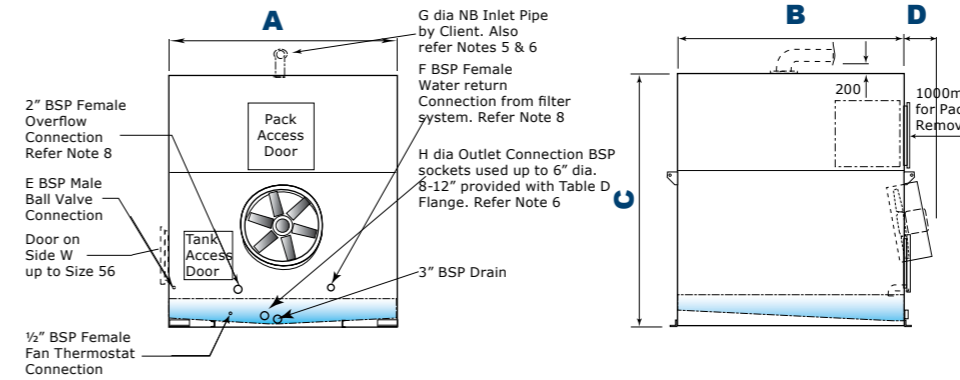
The packings have major corrugations either vertically or inclined with minor corrugations horizontally which create very effective re-distributions of water and air throughout the pack heights.

The DP17 pack is easily disassembled to allow for easy cleaning and maintenance. Pack modules can be modified to suit existing tower applications for upgrading purposes.

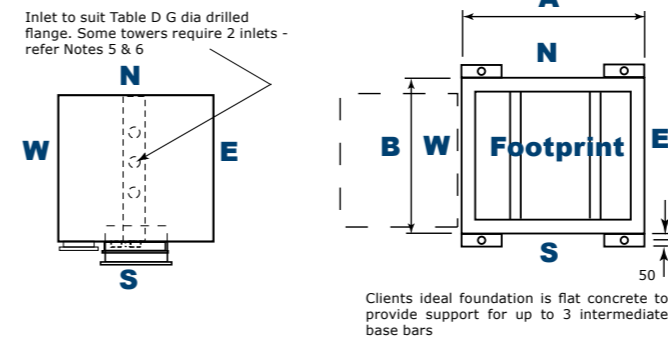
DP17 Pack



FDA Tower Dimensions



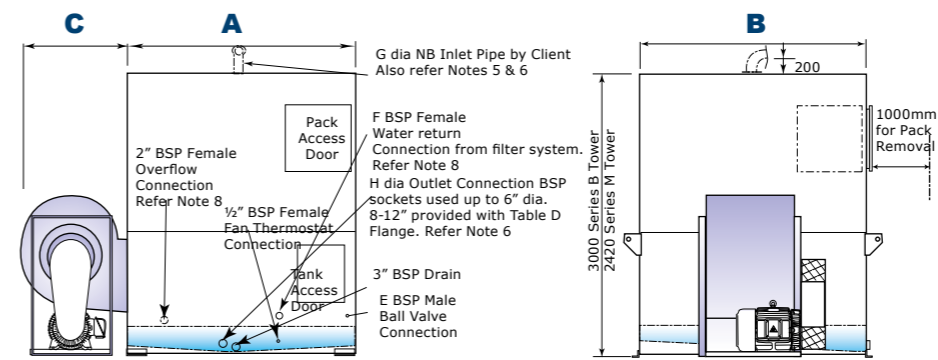
- Notes:
- Sales drawing only - NTS indicative of over all size only.
 - Recommended clearance in front of fan 1500mm to allow for good airflow into fan.
 - Access ladders and platforms for servicing not included.
 - At ordering access doors, fan & pipe connections can be requested on any other side at some additional cost. Specify N, E, S, W
 - Client supply G dia inlet pipe and long radius bend may approach from 360° but should clear top of tower by minimum 200mm to allow for servicing of eliminators.
 - Inlet & Outlet sizes shown are maximum and may be reduced to suit flow and site requirements.
 - Clients connection to overflow must include venting to prevent siphoning from tower basin.
 - Alternatively this connection can be modified to suit manual dosing.



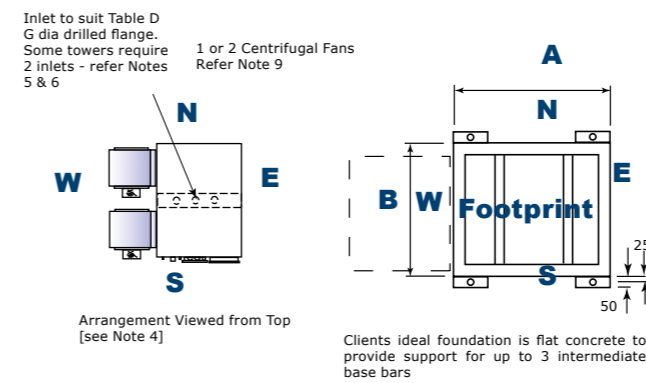
Size	A	B	C Tower Type		D	E	F	G	H	M Series Weight kg		B Series Weight kg	
			M	B						Dry	Wet	Dry	Wet
12	1220	920	2490	3030	350	1/2	1 1/2	4	4	490	740	570	820
16	1220	1220	2490	3070	350	1/2	1 1/2	4	5	575	895	675	995
20	1220	1520	2590	3170	350	1/2	1 1/2	4	5	650	1030	760	1140
24	1220	1820	2690	3270	350	1/2	2	5	6	710	1220	835	1340
30	1520	1820	2890	3270	350	1/2	2	5	8	830	1455	975	1600
36	1820	1820	2890	3470	350	1/2	2	6	8	905	1650	1075	1820
42	1820	2120	3170	3470	350	1/2	2	6	8	1005	1865	1205	2065
48	1820	2420	3170	3750	650	3/4	2	8	8	1235	2130	1450	2350
56	2120	2420	3170	3750	650	3/4	2 1/2	8	10	1360	2410	1605	2650
64	2420	2420	3170	3750	650	3/4	2 1/2	8	10	1470	2670	1740	2940
72	2420	2720	3170	3750	650	3/4	2 1/2	8	10	1760	3105	2055	3400
80	2420	3020	3450	4030	650	3/4	2 1/2	8	10	1935	3440	2290	3800
88	2420	3320	3450	4030	650	1	2 1/2	2 x 6	12	2085	3770	2465	4150
90	2720	3020	3450	4030	650	1	2 1/2	2 x 6	12	2100	3860	2480	4250
100	3020	3020	3450	4030	650	1	3	2 x 8	12	2240	4210	2480	4630
110	3020	3320	3500	4080	650	1	3	2 x 8	12	2400	4550	2715	4790
120	3020	3620	3500	4080	650	1	3	2 x 8	12	2540	4890	2875	5150

IPSCO FDA Cooling Towers Series M & B General Arrangement - NTS

FDC Tower Dimensions



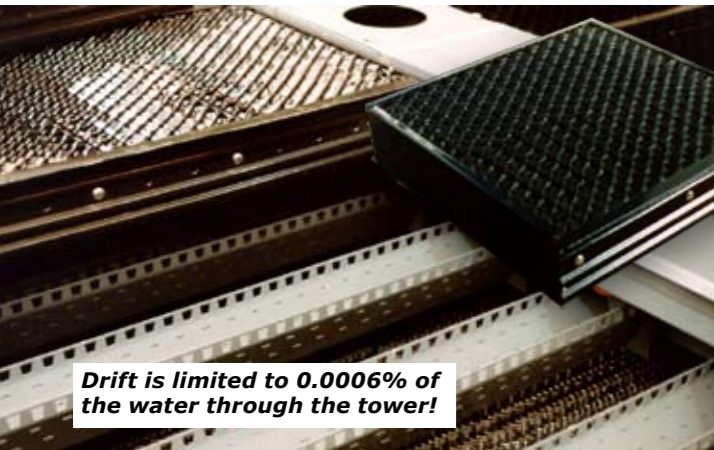
- Notes:
- Sales drawing only - NTS indicative of over all size only.
 - Recommended clearance in front of fan 1500mm to allow for good airflow into fan.
 - Access ladders and platforms for servicing not included.
 - At ordering access doors, fan & pipe connections can be requested on any other side at some additional cost. Specify N, E, S, W
 - Client supply G dia inlet pipe and long radius bend may approach from 360° but should clear top of tower by minimum 200mm to allow for servicing of eliminators.
 - Inlet & Outlet sizes shown are maximum and may be reduced to suit flow and site requirements.
 - Clients connection to overflow must include venting to prevent siphoning from tower basin.
 - Alternatively this connection can be modified to suit manual dosing.
 - Sizes 72 and above have 2 fans. All other towers have 1 fan.



Size	A	B	C Tower Type		D	E	F	G	H	M Series Weight kg		B Series Weight kg	
			M	B						Dry	Wet	Dry	Wet
12	1220	920	1100	1100	350	1/2	1 1/2	4	4	400	640	470	710
16	1220	1220	1100	1100	350	1/2	1 1/2	4	5	485	805	585	905
20	1220	1520	1100	1100	350	1/2	1 1/2	4	5	540	920	650	1035
24	1220	1820	1100	1100	350	1/2	2	5	6	580	1085	710	1215
30	1520	1820	1275	1275	350	1/2	2	5	8	720	1350	870	1500
36	1820	1820	1400	1400	350	1/2	2	6	8	825	1570	995	1740
42	1820	2120	1400	1400	350	1/2	2	6	8	905	1770	1105	1965
48	1820	2420	1400	1400	650	3/4	2	8	8	1065	1960	1280	2180
56	2120	2420	1400	1400	650	3/4	2 1/2	8	10	1270	2315	1415	2460
64	2420	2420	1530	1530	650	3/4	2 1/2	8	10	1300	2495	1565	2765
72	2420	2720	1800	1800	650	3/4	2 1/2	8	10	1540	2885	1835	3180
80	2420	3020	1800	1800	650	3/4	2 1/2	8	10	1690	3200	2045	3550
88	2420	3320	1800	1800	650	1	2 1/2	2 x 6	12	1810	3490	2190	3875
90	2720	3020	1800	1800	650	1	2 1/2	2 x 6	12	1820	3585	2210	3970
100	3020	3020	1800	1800	650	1	3	2 x 8	12	1935	3900	2360	4325
110	3020	3320	1800	1800	650	1	3	2 x 8	12	2140	4290	2610	4750
120	3020	3620	1800	1800	650	1	3	2 x 8	12	2245	4595	2730	5080

IPSCO FDC Cooling Towers Series M & B General Arrangement - NTS

Ultra High Efficient (UHE) Drift Eliminators



Drift is limited to 0.0006% of the water through the tower!

The efficiency of the UHE eliminator results from its physical capacity to cause fine aerosols of water to agglomerate together to create large size droplets of sufficient mass that they will fall by gravity against the upward airflow and not become entrained in the exit air.

Discharge mist containing fine aerosols is physically compelled to alter direction several times within the depth of the eliminator. This causes a turbulent air flow which forces the fine aerosols to collide within the airstream to produce larger droplets by agglomeration.

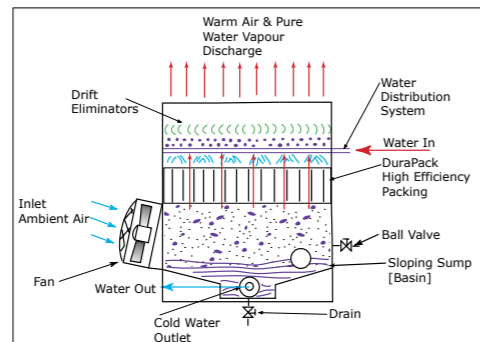
The eliminator blades are formed with strategically positioned flow deflectors that create turbulent zones for the agglomeration to take place.

The larger droplets impact onto the eliminator blades and coalesce into a film. This film then discharges as continuous streams of water from the underside of the eliminator back into the tower distribution area.

Tower Construction Type FDA



Single Cell Type FDA



Type FDC



Multi-cell Type FDC

