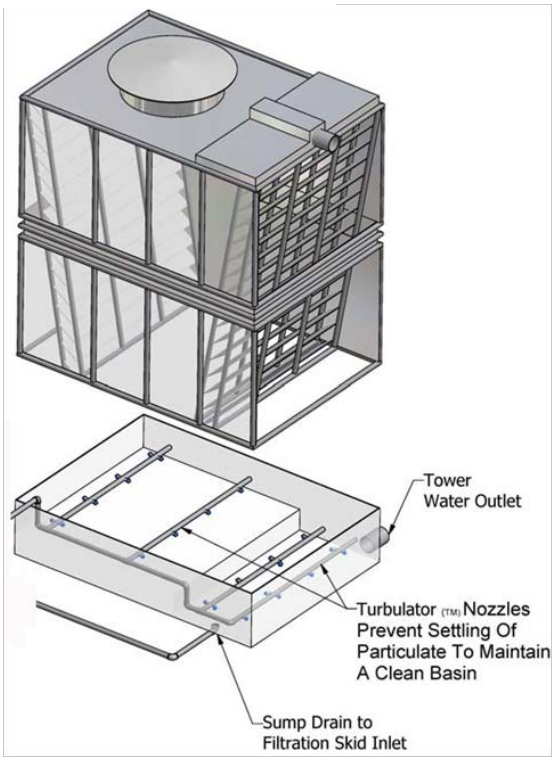
Turbulator™ System

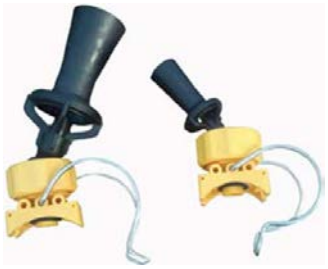
Ensure your cooling tower basin water is clean and clear with VAF's Turbulator™ Basin Agitation System.

Strategically placed specially designed Eductor Nozzles agitate the water keeping solids suspended for removal, therefore increasing the life cycle of your tower and reducing blowdown cycles and waste.

Typical Installation



Eductor Nozzles



Specifications	
Component	**Material of Construction**
Turbulator Nozzle	Polypropylene
Clamp Base	Fiberglass Reinforced Polypropylene
Clamp Cap	Fiberglass Reinforced Polypropylene
Swivel Ball	Polypropylene
Clamp Spring	Hardened 304 SS
Clamp O-Ring	Buna-N

Ordering Information									
Part Number	Inlet Connection (Male NPT)	Performance (m3/hr)	Inlet pressure (kPa)						
			70	105	140	175	205	240	275	345
			Pump Head (m)							
			7	11	14	18	21	25	28	35
TN-25	1/4	Inlet Flow Rate	0.8	1.0	1.1	1.3	1.4	1.5	1.6	1.8
TN-38	3/8		2.0	2.5	2.8	3.2	3.6	3.9	4.1	4.5
TN-25	1/4	Outlet Flow Rate	3.7	4.4	5.2	5.7	6.4	7.0	7.5	8.4
TN-38	3/8		2.7	5.0	7.4	15.9	18.2	19.3	20.5	22.7
TN-25	1/4	Effective Flow Path (M)	0.9	1.5	2.1	2.6	3.0	3.7	4.3	5.2
TN-38	3/8		1.2	1.8	2.4	3.0	3.7	4.3	4.9	6.7

Typical VAF Skid Operating Range

TM-25-150 includes quick connect clamp for 1.5"pipe & swivel ball for adjustment of nozzle direction

TM-35-200 includes quick connect clamp for 2"pipe & swivel ball for adjustment of nozzle direction

Turbulator Nozzle Installation and Usage Notes

VAF's Turbulator nozzles aid in maintaining a clean cooling tower basin thereby reducing the need for costly shut downs and manual maintenance.

The Turbulator nozzles are installed using a common manifold in the tower basin. This manifold is connected to the outlet of the VAF filtration skid. Properly installed Turbulator nozzles create backpressure that allows the filtration skid to maintain the minimum system operating pressure conditions of 40-50 psi at the filtration skid outlet.

Turbulator nozzles are available with quick installation saddles. ¼" Turbulator nozzle assemblies are supplied with saddles for use with 1.5" manifolds. 3/8" Turbulator nozzle assemblies are supplied with saddles for use with 2" manifolds. Typically PVC (SCH40 or CL200) piping is well sued for the manifolds. 9/16" holes should be drilled into the pipe at locations where a Turbulator nozzle is required.

The following guidelines ensure maximum performance:

- Nozzles should be evenly spaced and at submerged at least 50mm below the water level
- For manifolds near basin walls, locate piping 2' from wall with 5-10% of the nozzles pointing towards the wall and corner to prevent settling
- Nozzles must be fully submerged for proper operation
    - Manifolds can lie on the floor of the basin
- The majority of nozzles should point towards skid intake location to promote movement
- of material toward the intake, enhancing removal rates
- Pipes must be capped with no leaks or outlets other than through the Turbulator nozzles
- The nozzle swivel allows for adjustment of nozzle direction to promote thorough basin agitation
    - To adjust nozzle, loosen saddle collar and tilt nozzle. Secure collar when
- direction has been set
- Maximum distance between nozzles should not exceed 75% of "Effective Flow Path" (see ordering information on page 1.)

Adherence to these guidelines will help to ensure maximum performance from your Filtration System and Turbulator nozzles.