

The logo for Atlantic-Oase features a stylized circular icon on the left, followed by the word "Atlantic" in a bold, sans-serif font, a vertical line separator, and the word "Oase" in a similar font with a decorative flourish above the letter 'e'.

Atlantic® | Oase

OASE PROFESSIONAL FOUNTAIN NOZZLES



www.ATLANTIC-OASE.com

Water is our *element*

The thousand faces of water are formed and shaped through fountain nozzles, sometimes shooting high, splashing and bubbling exuberantly, sometimes foaming soft and gentle. Falling water has a special charm – the movement, the sound and the reflections of light are a balm for the soul.

Whether bringing vitality and movement to sterile urban architecture or furnishing a playful element to stimulate all the senses, fountains invite people to interact with water. They draw and entice, bringing life to public spaces, inviting young and old to tarry awhile and enjoy in amazement. They create quiet zones and help people forget the day-to-day routine. Fountains bring and enhance life.

At Atlantic-OASE, water is our element – the reason for our products, the objective of our research and development, the measure of our actions, the way we shape the spaces we inhabit. We are a single source for everything associated with water features of every size, shape and flavor, inspired by nature, informed by our customers. We strive to provide scope for creative freedom and variation. You determine the level of individualization. OASE offers a solution for every requirement.



Unique nozzles for *extraordinary effect*

A suite of Professional Fountain Nozzles, highly engineered of Stainless Steel and Brass, throwing stunning static and spinning displays up to 40 feet high and wide.

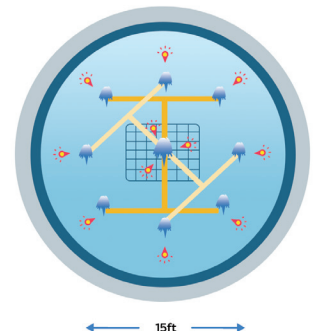
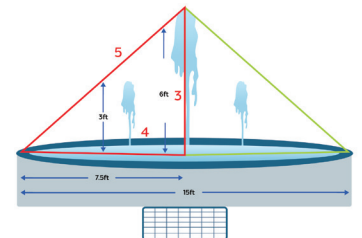
- Air-entraining Nozzles – Cascade, Geyser, & Schaumsprudler – combine air and water to create a thick foamy column that stands out in contrast to surroundings and resists wind
- Vertical Jets – Cluster Eco, Comet – create single or multiple jets of clear water
- Rotating Nozzles create adjustable dancing displays of water
- Speciality Nozzles – Lava, Finger Nozzle, Fan Jet – create specific effects unique to each in fountain installations
- Arching Sprays – Vulcan 43, Grand Vulcan, Vulcan 300, Trumpet Jet – create a variety of fleur de lis patterns that offer horizontal spread as well as vertical height



design considerations

Successful fountain installations depend on more than properly specified pumps and nozzles. Size and scale are critical design parameters. The size of the fountain will affect not only how it appears at a distance, but how much overspray and splash it produces, for which a wind control might prove helpful. The scale of the installation is critical in how it relates to its surroundings. Ratios such as the Golden Rule can be followed to ensure pleasing proportions, from both plan and side views.

For multiple nozzle installations manifold design is a key consideration. Manifolds should be oversized to keep friction losses to a minimum and balanced to deliver equal pressure and flow to nozzles without the need for multiple valves. Manifolds should take into account balanced pump placement also, or the nozzles closest to the pump will receive more water, causing asymmetry. Consider using multiple manifolds to create zones with differing effects; in the example shown, a separate pump can power each of the three zones, the center plus the two balanced four-nozzle zones, to create many captivating effects, with the different pumps playing different patterns of flow, or 'scenes'. Some common balanced manifold designs are: the H pattern shown, octagons made with tees and 22's, even circular manifolds made with Flexible Sch40 PVC.



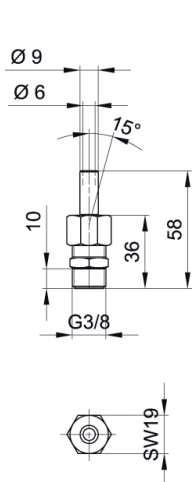


COMET

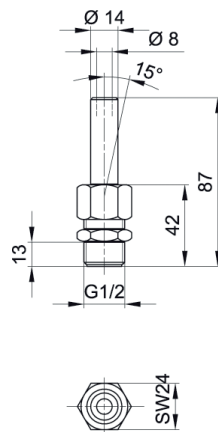
- Comet nozzles generate a single clearwater jet that is stable in wind
- Use singly or in groups, using pivoting ball joint to adjust display up to 15° off vertical
- Small to medium sized nozzles generate fountain jet heights from 20" to 43"
- Fresh water only; water level independent



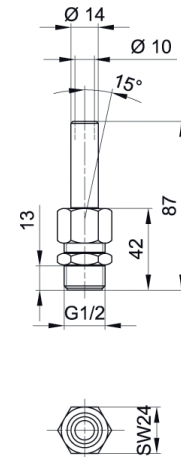
ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	WARRANTY
89012	Comet 3 - 6 T / NPT	3/8" MIPT	0.13 lbs	Fresh water only	7/8"W x 2 1/4"H	Brass	2-year
89013	Comet 5 - 8 T / NPT	1/2" MIPT	0.26 lbs	Fresh water only	1 1/4"W x 3 1/2"H	Brass	2-year
89014	Comet 5 - 10 T / NPT	1/2" MIPT	0.26 lbs	Fresh water only	1 1/4"W x 3 1/2"H	Brass	2-year
89015	Comet 10 - 12 T / NPT	1" MIPT	1.01 lbs	Fresh water only	1 3/4"W x 4 3/4"H	Brass	2-year
89016	Comet 10 - 14 T / NPT	1" MIPT	0.97 lbs	Fresh water only	1 3/4"W x 4 3/4"H	Brass	2-year
89017	Comet 15 - 17 T / NPT	1 1/2" MIPT	2.25 lbs	Fresh water only	2 1/2"W x 6"H	Brass	2-year
89018	Comet 15 - 20 T / NPT	1 1/2" MIPT	2.07 lbs	Fresh water only	2 1/2"W x 6"H	Brass	2-year



COMET 5 - 6 T

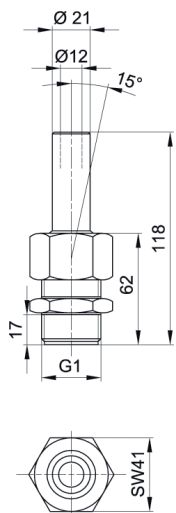


COMET 5 - 8 T

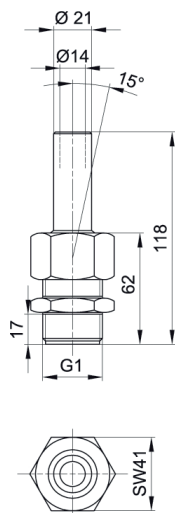


COMET 5 - 10 T

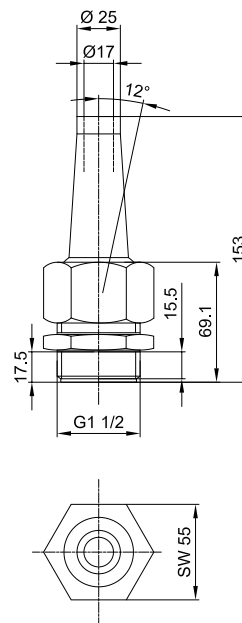
ITEM	89012			89013			89014			89015			89016			89017			89018		
DISPLAY HEIGHT	Comet 3 - 6 T			Comet 5 - 8 T			Comet 5 - 10 T			Comet 10 - 12 T			Comet 10 - 14 T			Comet 15 - 17 T			Comet 15 - 20 T		
	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH
1'-8"	1.3	76	2.0	2.5	150	2.3	3.9	237	2.7	5.5	332	2.0	7.9	474	2.0	11.1	663	2.0	15.5	932	2.0
2'-6"	1.6	98	3.0	3.0	182	3.3	5.0	300	3.7	6.6	395	2.7	9.7	584	3.0	13.7	821	3.0	19.5	1168	2.7
3'-3"	1.9	114	4.0	3.3	199	4.3	5.5	332	4.7	8.2	489	3.7	11.6	695	4.0	16.3	979	3.7	23.2	1389	4.3
4'-1"	2.3	137	5.0	3.9	235	5.3	6.6	395	6.0	9.2	553	4.7	13.2	789	5.3	18.2	1089	4.7	26.1	1563	5.3
4'-11"	2.6	158	6.0	4.5	268	6.0	7.4	442	6.7	10.3	616	5.7	14.5	868	6.0	20.0	1200	5.7	28.9	1737	5.7
5'-9"	2.9	175	7.0	4.9	297	7.0	8.2	489	8.3	11.3	679	7.0	15.8	947	7.0	21.6	1295	6.3	31.3	1879	7.0
6'-7"	3.2	191	8.3	5.4	324	8.0	8.7	521	9.3	12.1	726	7.7	17.1	1026	8.0	23.4	1405	7.3	33.7	2021	7.3
8'-2"	3.7	221	10.7	6.2	369	10.7	9.7	584	12.0	13.9	837	9.7	19.2	1153	10.0	26.3	1579	9.3	37.9	2274	9.3
9'-10"	4.1	246	13.3	6.9	412	13.0	10.8	647	14.7	15.3	916	11.7	21.3	1279	12.3	28.9	1737	11.3	41.6	2495	11.3
11'-6"				7.5	450	15.7	11.8	711	17.3	16.6	995	14.0	22.9	1374	14.3	31.3	1879	13.3	45.0	2700	13.0
13'-1"				8.1	485	18.0	12.9	774	20.0	17.9	1074	16.0	24.7	1484	16.7	33.4	2005	15.3	48.4	2905	15.0
14'-9"							14.5	868	25.3	20.0	1200	20.3	27.6	1658	20.7	37.6	2258	19.3	54.2	3253	19.0
16'-5"							15.8	947	30.7	22.1	1326	24.7	30.5	1832	25.0	41.3	2479	23.3	59.7	3584	23.0
19'-8"										23.9	1437	29.0	32.9	1974	29.3	44.7	2684	27.3	64.5	3868	27.0
23'-0"										25.8	1547	33.4	35.3	2116	33.7	47.9	2874	31.3	69.2	4153	30.7
26'-3"													37.6	2258	38.0	50.8	3047	35.4	73.4	4405	34.7
29'-6"													39.7	2384	42.7	53.7	3221	39.4	77.4	4642	38.7
32'-10"																56.3	3379	43.4	81.3	4879	42.7
36'-1"																58.4	3505	46.7	85.0	5100	46.7
39'-4"																			88.7	5321	50.7
42'-8"																			92.1	5526	54.7



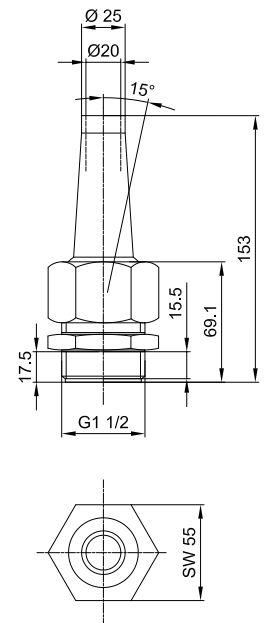
COMET 10 - 12 T



COMET 10 - 14 T



COMET 15 - 17 T



COMET 15 - 20 T



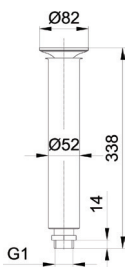
LAVA

- Lava Nozzles create a quiet bell of transparent water
- Attractive, adjustable closed water veil is best used indoors or in areas protected from wind
- Modern stainless steel Lava Nozzles are particularly attractive when illuminated
- Fresh water only; water level independent

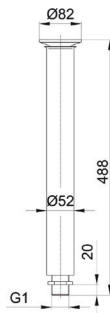


ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50889	Lava 30 - 10 E	1" G	2.87 lbs	Fresh water only	3¼"W x 13¼"H	304 Stainless Steel	51026 - G/NPT Adapter	2-year
50890	Lava 45 - 10 E	1" G	3.53 lbs	Fresh water only	3¼"W x 19"H	304 Stainless Steel	51026 - G/NPT Adapter	2-year
50891	Lava 60 - 10 E	1" G	3.9 lbs	Fresh water only	3¼"W x 25"H	304 Stainless Steel	51026 - G/NPT Adapter	2-year

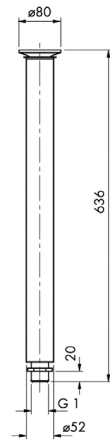
ITEM	50889			50890			50891		
	Lava 30 - 10 E			Lava 45 - 10 E			Lava 60 - 10 E		
DISPLAY HEIGHT	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH
0'-12"	9.2	553	3.7						
1'-4"	11.3	679	4.3	11.3	679	4.7			
1'-8"	13.4	805	5.3	13.4	805	5.7	13.4	805	6.0
1'-12"	15.5	932	6.7	15.5	932	7.0	15.5	932	7.3
2'-4"	17.6	1,058	8.3	17.6	1,058	9.7	17.6	1,058	9.0
2'-11"				19.7	1,184	11.0	19.7	1,184	11.0
3'-7"							21.8	1,311	13.3



LAVA 30 - 10 E



LAVA 45 - 10 E



LAVA 60 - 10 E

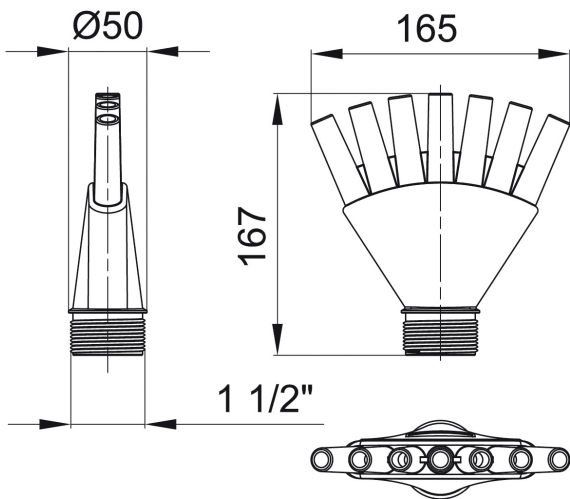
FINGER NOZZLE

- Finger Nozzles generate seven clear single stream jets that are resistant to wind deflection
- Stainless steel multi-jet nozzle achieves a maximum fountain height of 13'
- For fresh, pool and sea water; water level independent



ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
51110	Finger Nozzle 7 - 15 E	1½" G	3.52 lbs	Fresh, pool & sea water	6½"L x 2"W x 6½"H	316 Stainless Steel	51027 - G/NPT Adapter	2-year

ITEM	51110		
DISPLAY HEIGHT	Finger Nozzle 7 - 15 E		
	GPM	GPH	TDH
3'-3"	39.5	2,368	3.3
6'-7"	52.6	3,158	7.0
9'-10"	65.8	3,947	11.7
13'-1"	78.9	4,737	16.0



FINGER NOZZLE 7 - 15 E



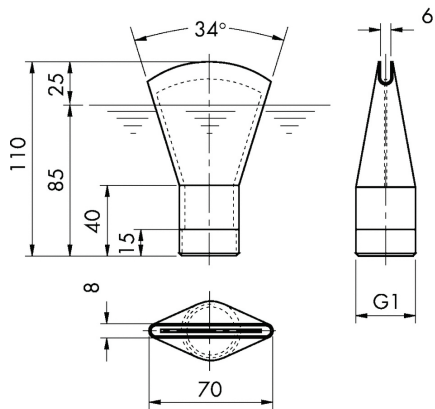
FAN JET

- Fan Jet Nozzles create a thick veil of water useful for concealing unwanted views
- Three sizes create heavy fans of gushing water, 6mm and 8mm thick respectively
- For fresh, pool and sea water; water level independent

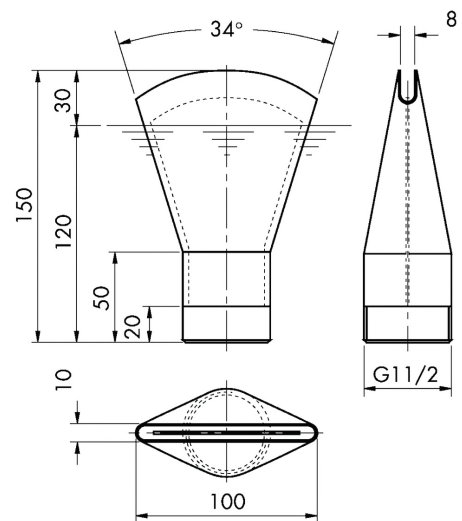


ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
53056	Fan Jet 10 - 6 E	1" G	0.55 lbs	Fresh, pool & sea water	2¾"L x 1¾"W x 4¾"H	316 Stainless Steel	51026 - G/NPT Adapter	2-year
53047	Fan Jet 15 - 8 E	1½" G	1.08 lbs	Fresh, pool & sea water	4"L x 2"W x 6"H	316 Stainless Steel	51027 - G/NPT Adapter	2-year

ITEM	53056			53047		
	Fan Jet 10 - 6 E			Fan Jet 15 - 8 E		
DISPLAY HEIGHT	GPM	GPH	TDH	GPM	GPH	TDH
0'-10"	18.4	1,105	1.3			
1'-8"	24.7	1,484	2.0	37.6	2,258	2.0
2'-6"	30.5	1,832	3.7	45.8	2,747	3.0
3'-3"	35.3	2,116	4.3	52.6	3,158	3.7
4'-1"	39.5	2,368	5.3	58.7	3,521	4.7
4'-11"	43.4	2,605	6.3	64.2	3,853	5.7
5'-9"	47.1	2,826	7.7	69.5	4,168	6.7
6'-7"				74.2	4,453	8.3



LAVA 30 - 10 E



LAVA 45 - 10 E



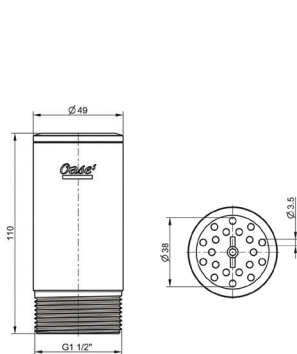
CLUSTER ECO

- Cluster Eco Nozzles generate a single voluminous water jet by combining many smaller jets
- OASE deflecting blade technology stabilizes display; efficient nozzles lower water consumption
- Cluster Eco nozzles with 21 and 64 single jets respectively create single columns up to 33' high
- For fresh, pool and sea water; water level independent

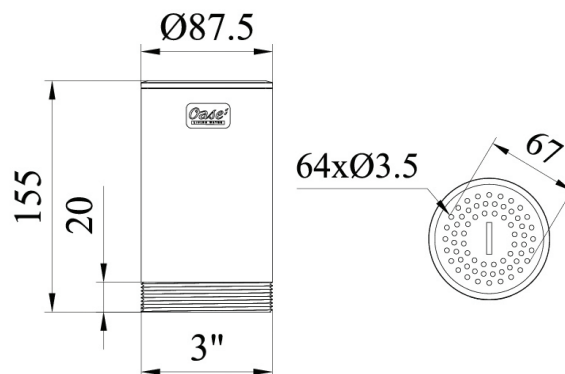


ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
45480	Cluster Eco 15 - 38	1½" G	1.32 lbs	Fresh, pool & sea water	2"W x 4¼"H	304 Stainless Steel	51027 - G/NPT Adapter	2-year
51882	Cluster Eco 30 - 67	3" G	5.07 lbs	Fresh, pool & sea water	3½"W x 6"H	304 Stainless Steel	51029 - G/NPT Adapter	2-year

ITEM	45480			51882		
	Cluster Eco 15 - 38			Cluster Eco 30 - 67		
DISPLAY HEIGHT	GPM	GPH	TDH	GPM	GPH	TDH
3'-3"	14.7	884	4.7	39.5	2,368	4.7
6'-7"	20.8	1,247	8.7	56.8	3,411	8.3
9'-10"	25.0	1,500	12.3	70.8	4,247	11.7
13'-1"	29.2	1,753	16.3	83.2	4,989	15.7
16'-5"	33.2	1,989	20.0	95.3	5,716	20.3
19'-8"	36.3	2,179	24.0	104.7	6,284	24.3
22'-12"	38.9	2,337	28.0	115.3	6,916	28.7
26'-3"	43.7	2,621	30.0	124.7	7,484	32.7
29'-6"	46.8	2,811	33.4	133.4	8,005	37.0
32'-10"	43.7	2,621	36.0	140.5	8,432	41.7



CLUSTER ECO 15 - 38



CLUSTER ECO 30 - 67



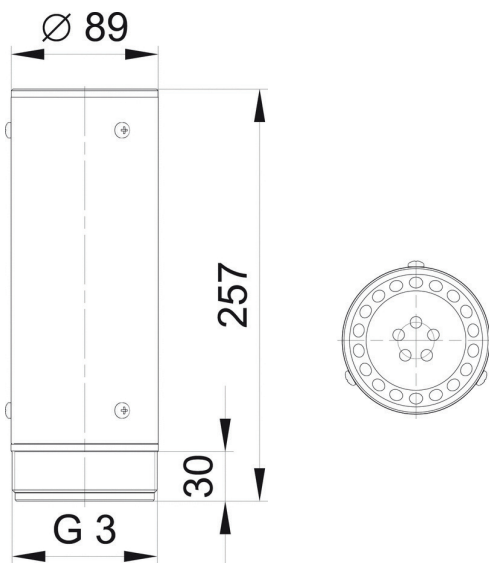
TRUMPET JET

- Trumpet Jet with single tall center column surrounded by arching sprays is wind stable
- Fresh water only; water level independent



ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50378	Trumpet Jet 30	3" G	3.09 lbs	Fresh water only	3½"W x 10½"H	Stainless Steel	51029 - G/ NPT Adapter	2-year

ITEM	50378		
DISPLAY HEIGHT	Trumpet Jet 30		
	GPM	GPH	TDH
16'-5"	95.5	5,732	33.4
19'-8"	104.5	6,268	40.0
22'-12"	112.9	6,774	46.7
26'-3"	120.8	7,247	56.0
29'-6"	128.2	7,689	61.7
32'-10"	135.0	8,100	68.4



TRUMPET JET 30



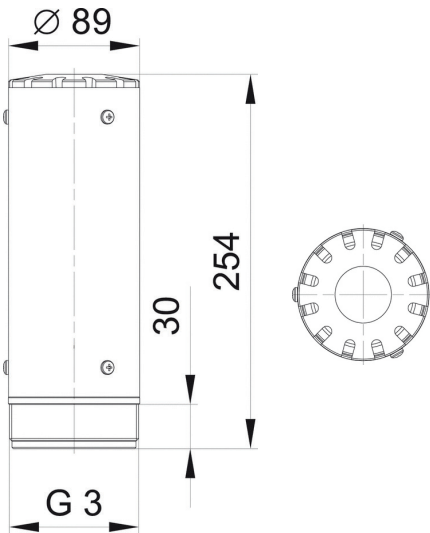
GRAND VULCAN

- Grand Vulcan is a multi jet nozzle whose clear single jets resist wind deflection
- Circular arrangement of jets maintain a consistent height with one another
- Fresh water only; water level independent



ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50376	Grand Vulcan 30	3" G	3.52 lbs	Fresh water only	3½"W x 10"H	Stainless Steel	51029 - G/ NPT Adapter	2-year

ITEM	50376		
DISPLAY HEIGHT	Grand Vulcan 30		
	GPM	GPH	TDH
9'-10"	118.4	7,105	15.0
11'-6"	128.2	7,689	17.7
13'-1"	136.8	8,211	20.3
14'-9"	145.3	8,716	22.7
16'-5"	153.2	9,189	25.3
19'-8"	167.9	10,074	30.7
23'-0"	181.3	10,879	35.7
26'-3"	193.9	11,637	41.0



GRAND VULCAN 30



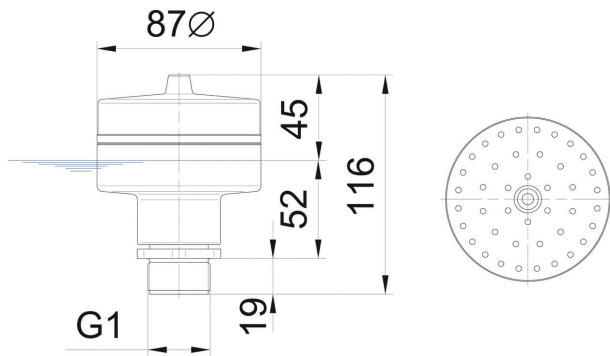
VULCAN 43-3

- Vulcan 43 - 3 Nozzles generate attractive tiered patterns with individual wind stable jets
- Nozzle can be disassembled for easy cleaning
- Fresh and pool water; water level independent



ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50766	Vulcan 43 - 3 Silver	1" G	3.31 lbs	Fresh & pool water	3½"W x 4½"H	Double Coated Brass	51026 - G/ NPT Adapter	2-year

ITEM	50766		
DISPLAY HEIGHT	Vulcan 43-3		
	GPM	GPH	TDH
1'-8"	11.1	663	3.3
2'-6"	13.2	789	5.0
3'-3"	15.8	947	6.7
4'-11"	20.0	1,200	10.0
6'-7"	23.7	1,421	13.3
8'-2"	26.8	1,611	16.7
9'-10"	29.5	1,768	20.0
11'-6"	31.8	1,911	25.3
13'-1"	34.2	2,053	29.3

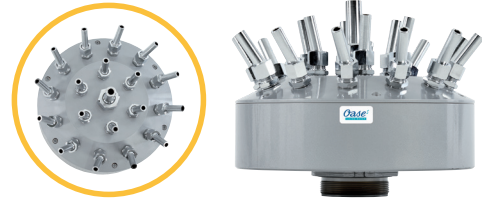


VULCAN 43-3



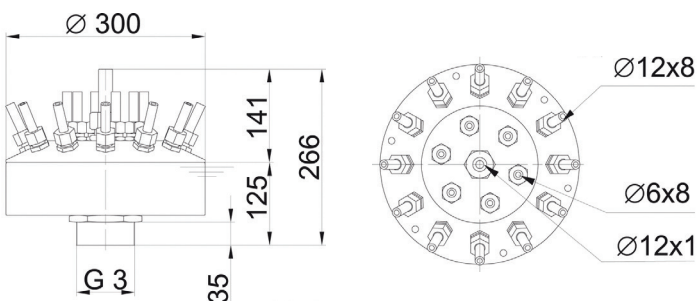
VULCAN 300

- Vulcan 300 generate a bundle of tiered, clear jets that are stable in wind
- 20 Comet nozzles can be adjusted individually as desired or removed for cleaning
- Fresh and pool water; water level independent



ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50977	Vulcan 300 / 19 - 8 Silver	3" G	40.8 lbs	Fresh & pool water	11 1/2"W x 10 1/2"H	Double Coated Brass	51029 - G/ NPT Adapter	2-year

ITEM	50977		
DISPLAY HEIGHT	Vulcan 300		
	GPM	GPH	TDH
9'-10"	89.2	5,353	12.7
11'-6"	96.8	5,811	14.7
13'-1"	103.7	6,221	18.3
16'-5"	116.3	6,979	21.3
19'-8"	127.6	7,658	25.7
23'-0"	138.2	8,289	30.0
26'-3"	147.9	8,874	34.4
29'-6"	157.1	9,426	38.7
32'-10"	165.8	9,947	43.0
36'-1"	174.2	10,453	47.4
39'-4"	182.1	10,926	52.0
42'-8"	189.5	11,368	56.4
45'-11"	197.1	11,826	60.7
49'-3"	204.2	12,253	65.4



VULCAN 300

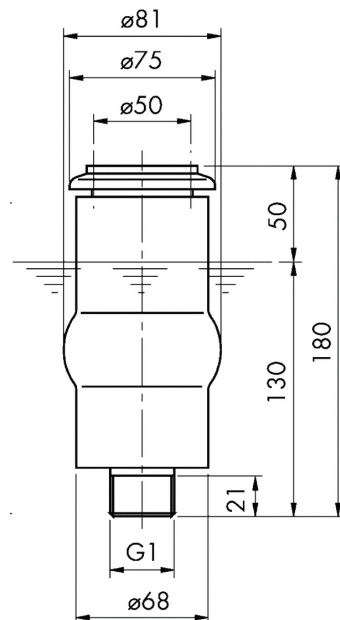
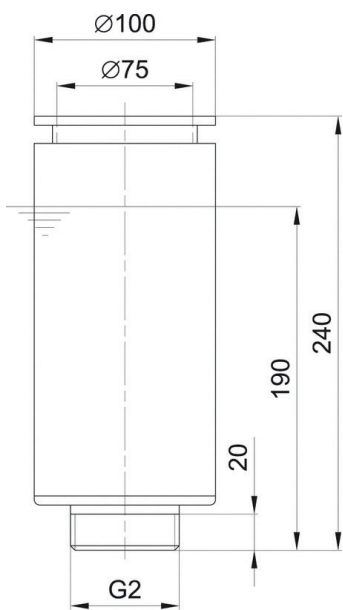


SCHAUMSPRUDLER - FROTHY

- Schaumspudler or Frothy Nozzles generate a thick, wind resistant display that uses little water
- Foamy white water offers a strong contrast to surroundings while enriching oxygen content
- Fresh water only (53224, 50986, 50987), Fresh & pool water (50768); water level independent

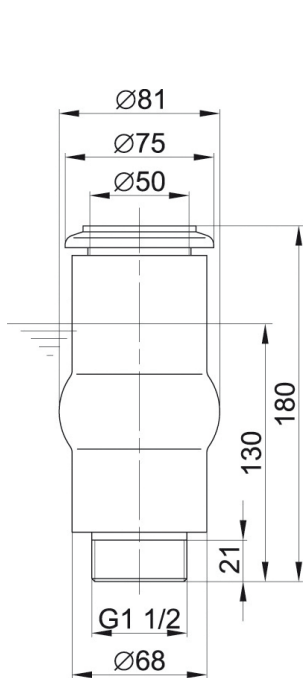


ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
53224	Frothy 35-10 E	1"	1.1 lbs	Fresh water only	2 3/8"W x 6 3/8"H	Stainless & ABS	-	3-year
50986	Schaumspudler 55 - 10 E	1" G	2.6 lbs	Fresh water only	3 1/4"W x 7"H	Stainless & Brass	51026 - G/NPT Adapter	2-year
50987	Schaumspudler 55 - 15 E	1 1/2" G	3.1 lbs	Fresh water only	3 1/4"W x 7"H	Stainless & Brass	51027 - G/NPT Adapter	2-year
50768	Schaumspudler 75 - 20 Silver	2" G	9.5 lbs	Fresh & pool water	4"W x 9 1/2"H	Double Coated Brass	51028 - G/NPT Adapter	2-year

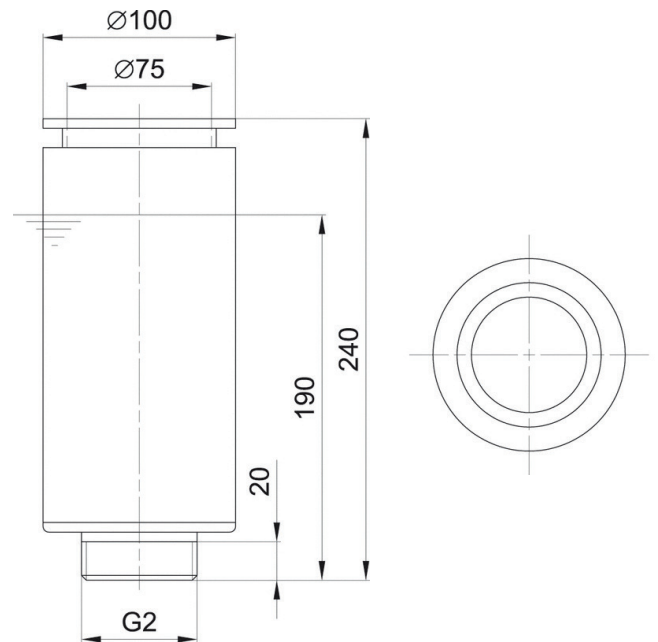


SCHAUMSPRUDLER 55 - 10 E

ITEM	53224			89013			89014			89015		
DISPLAY HEIGHT	Frothy 35-10 E			Schaumsprudler 55 - 10 E			Schaumsprudler 55 - 15 E			Schaumsprudler 75 - 20 Silver		
	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH	GPM	GPH	TDH
0'-10"	12.4	744	3.3	15.8	950	3.7						
1'-8"	14.5	870	4.7	22.3	1,335	7.0	32.9	1,974	3.7			
2'-6"	18.7	1,124	7.3	28.5	1,710	10.7	39.9	2,395	5.0			
3'-3"	21.2	1,275	9.3	32.1	1,927	13.3	46.4	2,786	6.3	86.5	5,191	6.7
4'-1"	23.5	1,410	11.3	35.4	2,122	16.3	52.1	3,129	8.0	96.6	5,797	8.0
4'-11"	25.5	1,533	13.3	38.3	2,300	19.3	57.3	3,438	9.3	105.7	6,345	9.7
5'-9"	27.4	1,647	15.3	41.1	2,466	22.0	62.0	3,722	11.0	114.2	6,850	11.3
6'-7"	29.2	1,753	17.3	43.7	2,622	25.0	66.4	3,985	12.7	122.0	7,320	13.0
8'-2"	32.5	1,949	21.7	48.5	2,908	30.7	74.4	4,467	16.0	136.3	8,181	16.3
9'-10"				52.8	3,169	36.4	81.7	4,902	19.3	149.3	8,961	19.3
11'-6"				56.8	3,411	42.4	88.4	5,302	22.3	161.3	9,679	22.7
13'-1"							94.6	5,674	25.7	172.5	10,348	26.0
14'-9"							100.4	6,024	29.0	183.0	10,977	29.0
16'-5"							105.9	6,355	32.3	192.9	11,574	32.3
19'-8"							116.2	6,972	38.7	211.4	12,685	39.0
23'-0"							125.7	7,540	45.4	228.5	13,709	44.4
26'-3"										244.4	14,664	52.0
29'-6"										254.1	15,248	58.4
32'-10"										273.6	16,416	65.0



SCHAUMSPRUDLER 55 - 15 E



SCHAUMSPRUDLER 75 - 20 SILVER

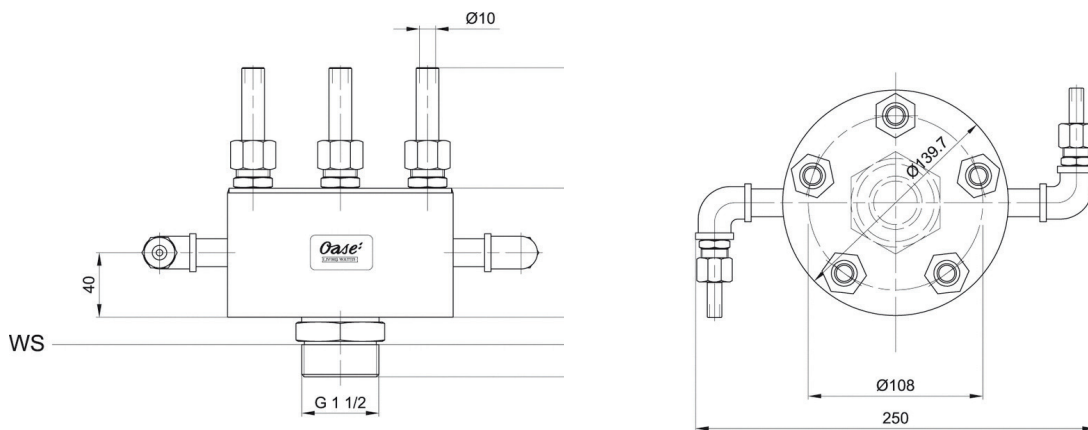


ROTATING NOZZLES

- Rotating Nozzles create gracefully dancing fountains of rotating screw-shaped water patterns
- 5 individual Comet Nozzles adjust for a wide variety of wind-stable water patterns
- Diagonally set nozzles rotate nozzle head on ball bearings
- Fresh water only; water level independent

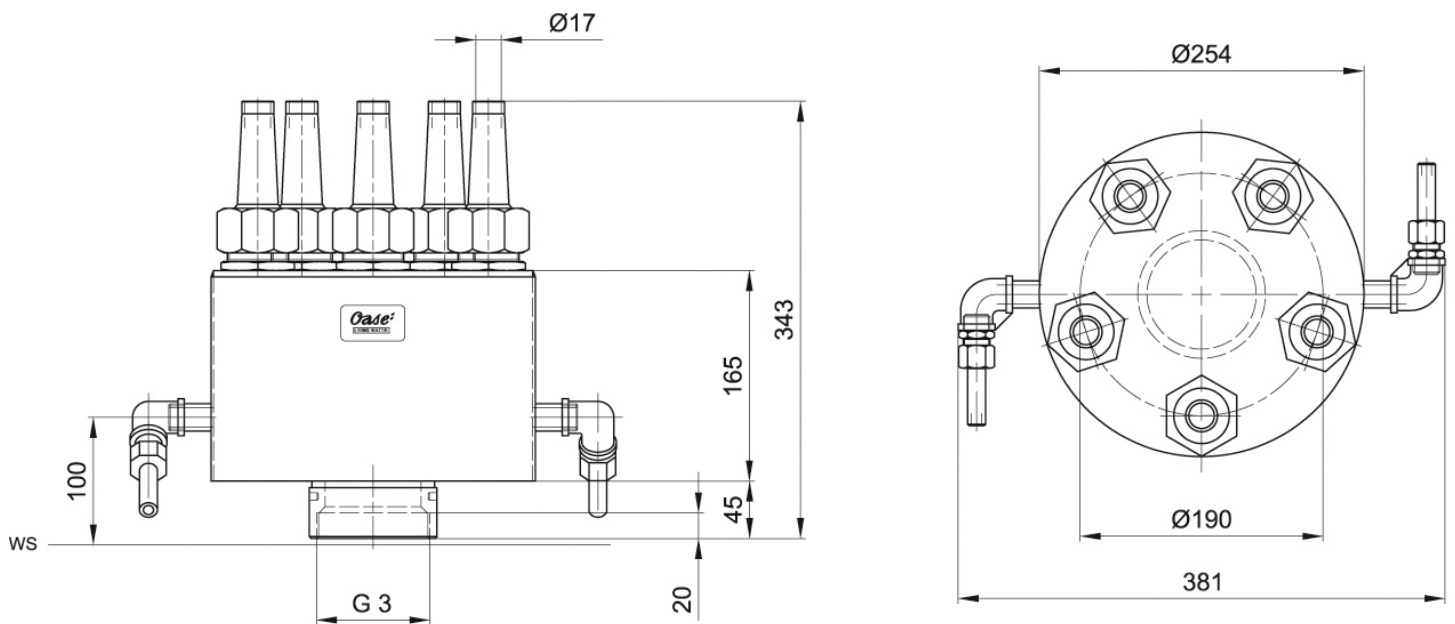


ITEM	DESCRIPTION	INLET	WEIGHT	FOR USE WITH	DIMENSIONS	MATERIAL	REQUIRES	WARRANTY
50967	Rotating Nozzle 5 - 15 E	1½" G	6.35 lbs	Fresh water only	9¾"L x 5¾"W x 8"H	Stainless Steel & Double Coated Brass	51027 - G/ NPT Adapter	2-year
50473	Rotating Nozzle 5 - 30 E	3" G	38.58 lbs	Fresh water only	15"L x 10"W x 13½"H	Stainless Steel & Double Coated Brass	51029 - G/NPT Adapter	2-year



ROTATING NOZZLE 5 - 15 E

ITEM	50967			50473		
DISPLAY HEIGHT	Rotating Nozzle 5 - 15 E			Rotating Nozzle 5 - 30 E		
	GPM	GPH	TDH	GPM	GPH	TDH
3'-3"	37.1	2,226	8.3	86.8	5,211	5.0
4'-1"	41.6	2,495	10.3			
4'-11"	45.5	2,732	12.7			
5'-9"	49.2	2,953	14.7			
6'-7"	52.4	3,142	16.7	131.6	7,895	10.0
8'-2"	58.7	3,521	21.0			
9'-10"	64.2	3,853	25.3	165.8	9,947	16.7
11'-6"	69.5	4,168	29.7			
13'-1"	74.2	4,453	33.7	194.7	11,684	20.0
14'-9"						
16'-5"				207.9	12,474	25.0
18'-1"						
19'-8"				230.3	13,816	30.0
21'-4"						
22'-12"				257.9	15,474	36.7
23'-0"				276.3	16,579	43.4
29'-6"				292.1	17,526	50.0
32'-10"				307.9	18,474	53.4



ROTATING NOZZLE 5 - 30 E

G/NPT ADAPTERS

- G/NPT Adapters convert BSPP/G (British Standard Pipe Parallel) to US standard NPT (National Pipe Thread)
- For use in fresh and pool water



ITEM	DESCRIPTION	INLET/OUTLET	FOR USE WITH	DIMENSIONS	WARRANTY
51026	Adapter G 10 / NPT 10 Silver	1"	Fresh & pool water	1½"W x 1½"H	2-year
51027	Adapter G 15 / NPT 15 Silver	1½"	Fresh & pool water	2"W x 1½"H	2-year
51028	Adapter G 20 / NPT 20 Silver	2"	Fresh & pool water	2½"W x 2½"H	2-year
51029	Adapter G 30 / NPT 30 Silver	3"	Fresh & pool water	3¾"W x 3"H	2-year

WATER QUALITY GUIDE FOR PROFESSIONAL NOZZLES

TYPES	FRESH WATER	POOL WATER	SALT WATER
pH VALUE	7.2 - 7.6	7.2 - 7.6	8.0
HARDNESS	142 - 267 ppm CaCO ₃	142 - 267 ppm CaCO ₃	356 - 534 ppm CaCO ₃
FREE CHLORINE	< 0.3 ppm	0.3 - 0.6 ppm	< 0.3 ppm
CHLORIDE CONCENTRATION	< 250 ppm	< 250 ppm	22,000 ppm
SALINITY	-	-	< 4.0%
TOTAL SUSPENDED SOLIDS	< 50 ppm	< 50 ppm	< 50 ppm
TEMPERATURE	39° - 95° F	39° - 86° F	39° - 68° F

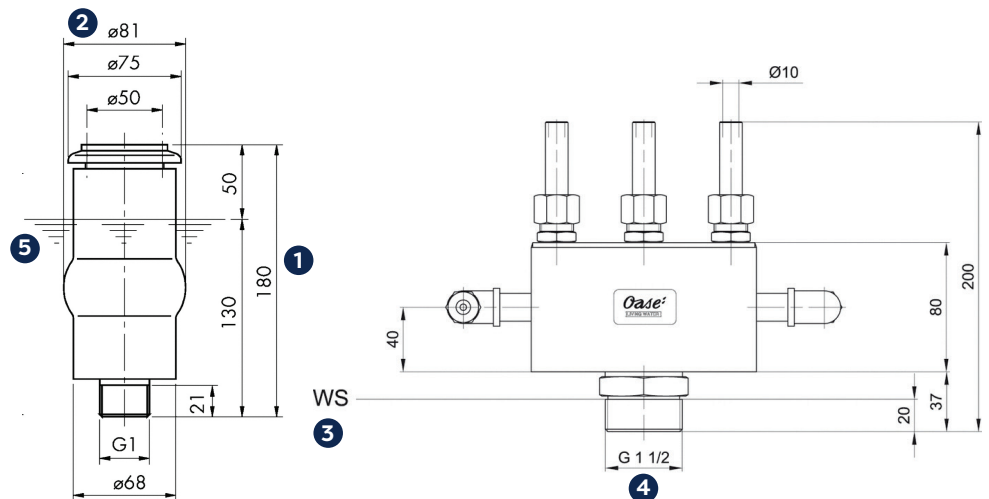
IMPORTANCE OF WATER LEVEL

Depending on the design of the Fountain Nozzle, the water level may either be irrelevant, in the case of "water level independent" nozzles, or may be a critical factor in the performance of "water level dependant" nozzles. For example, the Schaumsprudler is a water level independent nozzle and will operate as long as the top of the nozzle, where air is pulled in and entrained to form the foamy column for which the Frothy Nozzles are named, is above water level. The third nozzle is also water level independent, as long as the water level doesn't submerge the nozzles that cause it to spin.

The second nozzle is water level dependant. The height of the water will directly affect the display, varying both height and spread. Wave action will cause the display to "dance"; wave dampening rings may need to be installed to keep the level immediately around the nozzles static. Level dependent nozzles require the use of an autofill and an overflow to maintain the water level at a set height.

HELPFUL TIPS TO READ NOZZLE DIAGRAMS

- All dimensions are in millimeters
- ∅ = Diameter
- WS - Recommended water level for optimal performance
- Inlet size in British Standard Pipe Thread (G)
- Indicates suggested or max water level
 - For independent water level nozzles, indicates maximum water level and can't be submerged any further than shown
 - For dependent water level nozzles, indicates optimum water level for operating



TERMINOLOGY

FLOW - The volume of water that flows through a pipe in a unit of time. i.e. The average flow over Niagara Falls is 3120 tons of water per day. For water features we use Gallons Per Minute (GPM) and Gallons Per Hour (GPH). "The TT5000 pushes 4255 GPH at 5' of Head."

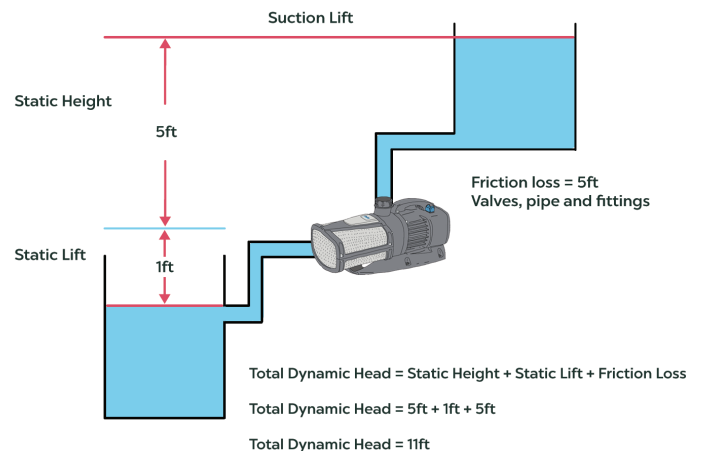
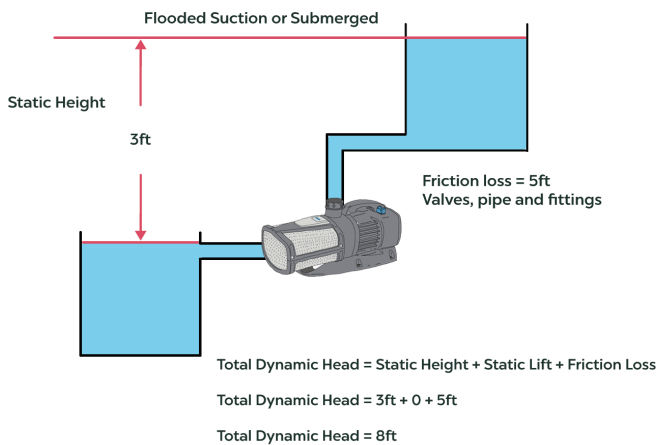
HEAD - The pressure produced by a pump or, in the case of fountain nozzles, the pressure required to produce the desired output. Feet of Head is a convenient way to express pressure because waterfalls and fountain spray heights are typically measured in feet, making calculations easier. The output of both pumps and fountains is expressed by the amount of flow at a certain number of feet, as in "To reach 7', the Fountain Head requires 1200 GPH at 12.5 Feet of Head."

PSI and BAR - Pressure can also be expressed in psi; a column of water 1-inch square and 2.31 feet tall will weigh 1 pound, so 1 Pound per Square Inch is the same as 2.31 Feet of Head (1psi = 2.31' Head). Bar, the weight of the atmosphere at sea level, is also used in some applications. 1 bar is equal to about 33 feet of head.

VERTICAL HEAD is, by definition, the pressure required to lift water one foot vertically, equal to 0.433psi. For systems where the pump is set above water level, the work required by the pump to lift water into the inlet is added to the force required to push the water to its destination, so Vertical Head is equal to Static Height + Static Lift.

FRICITION HEAD or FRICTION LOSS is the additional pressure required to push water through nozzles, pipe and fittings.

TOTAL DYNAMIC HEAD (TDH) - Total Dynamic Head is the Vertical Head plus the Friction Head, the total pressure required to push water to a given height in any given system. "The TDH of the four nozzles at 6' plus the manifold from the pump was 22.6 Feet of Head."



HOW TO LIGHT NOZZLES

USING LIGHT RINGS TO ILLUMINATE NOZZLE DISPLAYS

To illuminate the display from an 1/2" nozzle install an 1/2" adapter at the appropriate height on the 1/2" riser attached to the outlet of the pump. Slip the Ring Light over the male adapter before attaching the nozzle.

To illuminate the display from a 1" nozzle, create a base for an Atlantic Ring Light by installing a 1" x 1/2" reducing adapter on the 1/2" riser attached to the outlet of the pump. Adapter should be set at the height appropriate for the nozzle. Install 1" bushing on Light Ring (included with light) and slip the Light Ring over the 1" adapter before attaching the nozzle.

USING PROFILUX LIGHTS TO ILLUMINATE NOZZLE DISPLAYS

ProfiLux RGB LED Lights include a built in mounting attachment for Fountain Heads or any other tubing or object up to 1" in diameter.



HOW TO SPECIFY NOZZLES

CALCULATING FRICTION LOSS

The amount of additional pressure required to force water through a given plumbing system can be calculated using this Chart, which shows the Friction Loss in Feet of Head per foot of pipe. Select the flow and the size pipe to find the coefficient of loss. Convert fittings to equivalent lengths of straight pipe in the next table and add the equivalent lengths to the actual pipe length. Multiply that combined length by the coefficient of loss to find the Friction Loss in Feet of Head.

CALCULATING PUMP REQUIREMENTS FOR MULTIPLE NOZZLES

For multiple nozzles, add up the volume that each nozzle requires. Determine which nozzle requires the highest pressure. The pump chosen will need to provide the total volume at that highest pressure.

For example, if three nozzles require 1200 gph at 10', 2400 gph at 13' and 3600 gph at 5' respectively, you will need a pump that provides 7200 gph at 13' of TDH.

For best results choose a pump from the Pump Chart that provides the right flow at the right TDH while operating in the middle of its best efficiency range (dark blue).

The specification table for each Fountain Nozzle gives the recommended flow and pressure for each. Overdriving the volume or the pressure will not significantly increase the maximum height or width of the display but will cost more to operate and put more stress on the system. In order to avoid frequent nozzle clogging, the largest particles passing through the pump should be significantly smaller than the smallest orifice on the nozzle. Inlet screening and/or filtration may be required.

CHART A
FRICTION LOSS PER FOOT OF TUBING

FLOW (GPH)	TUBING SIZE						
	½"	¾"	1"	1¼"	1½"	2"	3"
100	0.10	0.01					
200	0.38	0.05	0.01				
300	0.83	0.10	0.02				
400	1.00	0.18	0.04	0.01			
500	2.23	0.27	0.06	0.02			
750		0.50	0.14	0.04	0.02		
1000		0.84	0.21	0.07	0.03		
1250		1.20	0.33	0.10	0.04	0.01	
1500			0.43	0.15	0.06	0.02	
2000			0.94	0.26	0.10	0.03	
3000			2.07	0.52	0.22	0.05	
4000				1.10	0.43	0.09	0.01
5000				1.80	0.67	0.15	0.02
6000					0.96	0.22	0.03
8000					1.77	0.38	0.05
10,000						0.59	0.07
12,000						0.84	0.10
15,000							0.15
18,000							0.25

Example: GPH: 3000 Friction Loss: 0.05 Tubing: 2"

** For flows over 10,000 GPH or lengths over 100 ft. please contact us.

CHART B
FRICTION IN EQUIVALENT FEET OF STRAIGHT PIPE

PVC FITTINGS	FITTING SIZE					
	¾"	1"	1¼"	1½"	2"	3"
Std Elbow, 90 degree	4.5	5.5	7.0	7.5	8.5	11.0
Std Elbow, 45 degree	1.0	1.5	2.0	2.5	3.0	4.0
Male / Female Adapter	1.5	2.0	3.0	3.5	4.5	6.5
Tee (Straight Thru)	2.5	3.0	5.0	6.0	8.0	12.0
Tee (Thru Branch)	5.5	7.0	9.0	10.0	12.0	17.0
Swing Check Valve	9.0	11.0	13.0	15.0	19.0	27.0

Example: 8.5 (90°) + 4.5 (M/FA) + 19.0 (Check Valve) = 32 (Fitting Length in Feet)

ITEM	53224			89015		
	Frothy 35-10 E			Schaumspudler 75 - 20 Silver		
DISPLAY HEIGHT	GPM	GPH	TDH	GPM	GPH	TDH
0'-10"	12.4	744	3.3			
1'-8"	14.5	870	4.7			
2'-6"	18.7	1,124	7.3			
3'-3"	21.2	1,275	9.3	86.5	5,191	6.7
4'-1"	23.5	1,410	11.3	96.6	5,797	8.0
4'-11"	25.5	1,533	13.3	105.7	6,345	9.7
5'-9"	27.4	1,647	15.3	114.2	6,850	11.3
6'-7"	29.2	1,753	17.3	122.0	7,320	13.0
8'-2"	32.5	1,949	21.7	136.3	8,181	16.3
9'-10"				149.3	8,961	19.3
11'-6"				161.3	9,679	22.7
13'-1"				172.5	10,348	26.0
14'-9"				183.0	10,977	29.0
16'-5"				192.9	11,574	32.3
19'-8"				211.4	12,685	39.0
23'-0"				228.5	13,709	44.4
26'-3"				244.4	14,664	52.0
29'-6"				254.1	15,248	58.4
32'-10"				273.6	16,416	65.0

CENTER NOZZLE

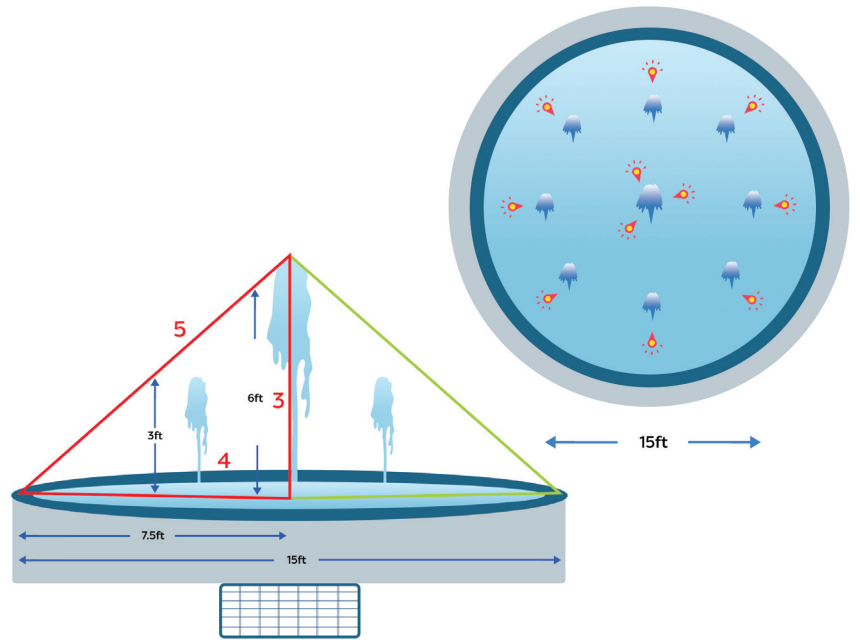
1 Nozzle @ 6'
 (GPH x Qty Nozzles) @ TDH for Nozzle + Friction Loss
 (7,320 GPH x 1) @ 13.0' + 1'
7,320 GPH @ 14.0' - Aquarius Eco Expert 11500

RING SECTION 1 NOZZLES

4 Nozzles @ 3'
 (GPH x Qty Nozzles) @ TDH for Nozzle + Friction Loss
 (1,275 GPH x 4) @ 9.3' + 3'
5,100 GPH @ 12.3' - Aquarius Eco Expert 7300

RING SECTION 2 NOZZLES

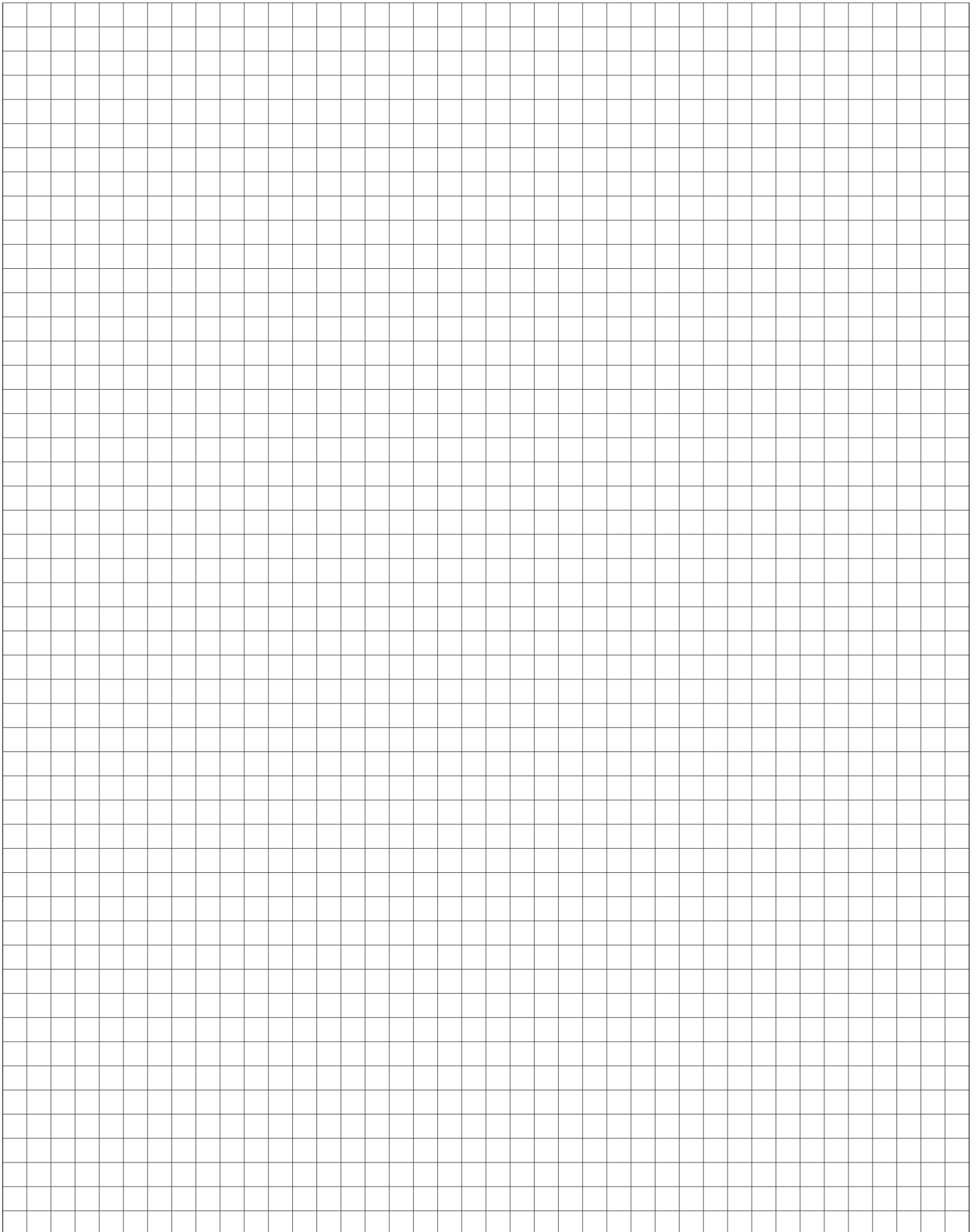
4 Nozzles @ 3'
 (GPH x Qty Nozzles) @ TDH for Nozzle + Friction Loss
 (1,275 GPH x 4) @ 9.3' + 3'
5,100 GPH @ 12.3' - Aquarius Eco Expert 7300

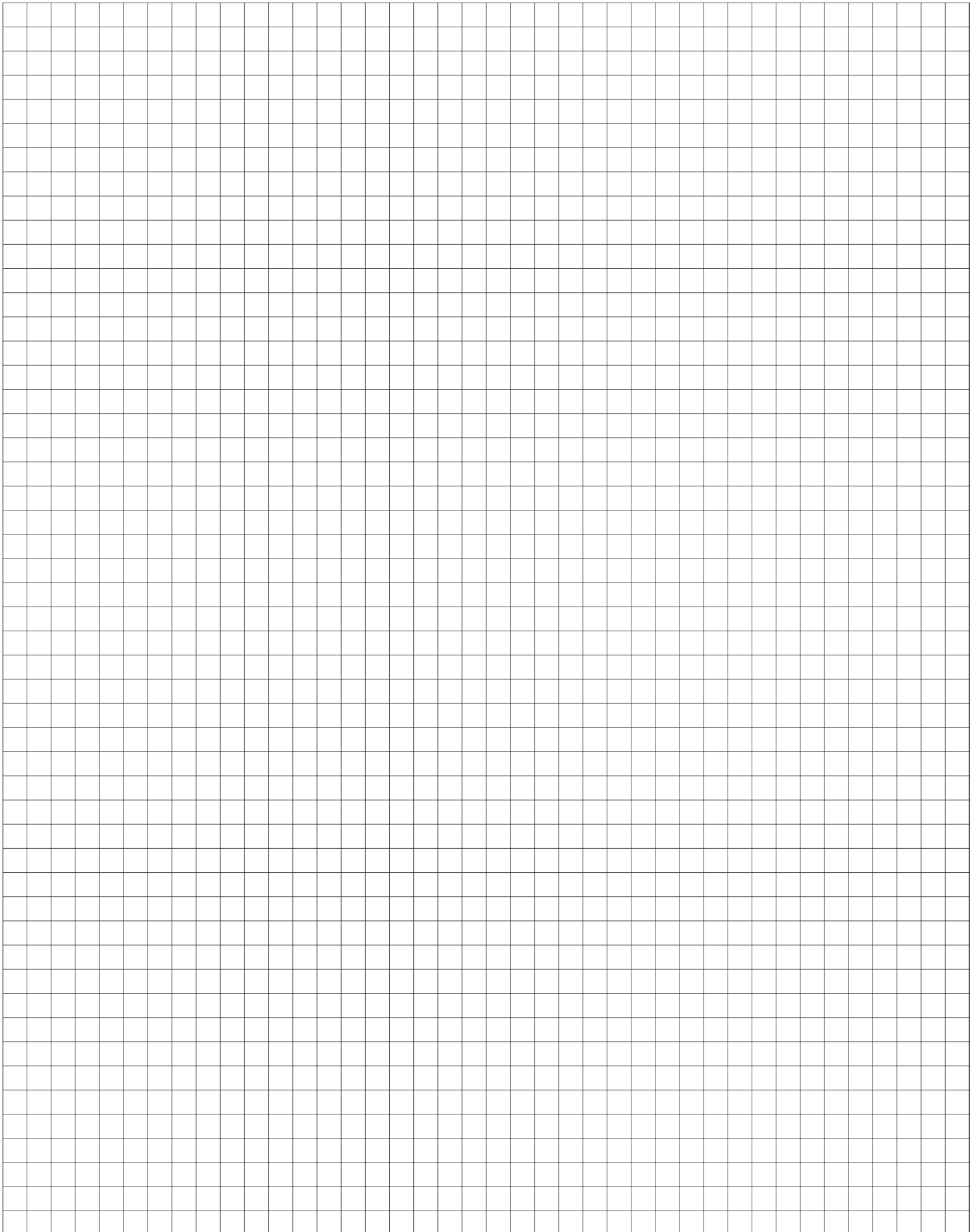


	MODEL	WATTS	MAX FLOW	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	60'
MD-SERIES	MD250	15	300	65											
	MD350	25	370	145											
	MD550	40	650	385											
	MD750	50	790	465											
	MD1000	90	1080	785	275										
	MD1250	120	1330	1040	580										
	MD1500	165	1560	1255	780										
WATERFALL	45421	70	1650	1350	800										
	45422	130	2300	1900	1420	700									
	45423	170	3700	2650	2100	1200									
	45424	230	5150	4200	3300	2280	700								
	45425	460	6600	5600	4500	3150	1720								
	45426	600	8000	6600	5300	3950	2790	1620							
TT-SERIES	TT1500	101	1640	1060	350										
	TT2000	115	2640	1760	715										
	TT3000	173	3000	2180	1215	475									
	TT4000	230	4490	3330	1785	700									
	TT5000	310	5150	4255	3170	1615									
	TT6000	334	6600	4915	3395	1750									
	TT7500	520	7650	6300	4640	2860	1250								
AQUARIUS ECO EXPERT	TT9000	587	8800	7470	5990	4260	2595								
	57964	440	6800	6700	5825	5200	3900	2825	1575						
PAF-SERIES	57978	700	11500	10300	9000	7450	6025	4600	3000						
	PAF-20	360	---	2800	1950	1080									
	PAF-25	545	---	3900	3150	2300									
	PAF-40	650	---		4350	3570	2700								
A-SERIES	PAF-75	900	---			4560	3750	2830							
	A-05	645	---				2500	2155	1875	1455	935				
	A-05L	725	---				4320	3600	2820	1920					
	A-21	1060	---					4335	3770	3140	2400				
	A-31	1160	---						8150	6830	5535	4120	2535		
	A-32	2055	---								8280	7560	6780	5580	4920

*All flows in GPH

Recommended Operating Range Best Efficiency Range Do Not Operate Range





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