

# Spray Jets

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NAE  
series

Aerator Jet



Specification:

Construction shall be cast bronze, machined brass and copper. Jet shall have an integral swivel base and DEFO 'Uniloc' rapid air-to-water ratio adjustment collar.

Options:

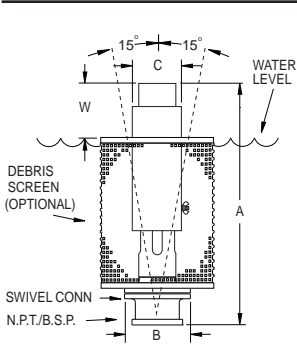
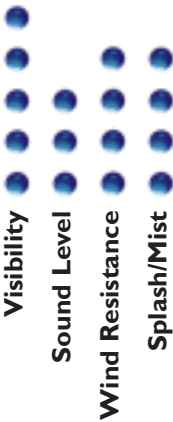
- (Add suffix)
- D - debris screen
- Q - chrome plated

Note:

- (for optimum effect)
- 1. Dimension 'W' (nozzle projection above water level) must be maintained.
- 2. A constant unvarying water level is required.
- 3. Use shaded chart section.

Function

A uniform column of fluffy white water, the Aerator Jet ascends to a crest and descends down its own column when vertically mounted. An integral swivel base permits angled installation. The Aerator Jet is unparalleled for viewing when illuminated. **Water level dependent.**



Dimensions

Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	w dim.	inlet (npt) (bsp)	spray height	3'	5'	8'	10'	15'	20'	30'	35'	40'	50'	60'	80'
NAE-075	.125"	7 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>4</sub> "	gpm head spread	5 16'	6 23'	8 39'									
NAE-100	.200"	9 <sup>1</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	1"	gpm head spread	9 19'	10 23'	12 35'									
NAE-125	.250"	11"	3"	1 <sup>3</sup> / <sub>4</sub> "	2"	1 <sup>1</sup> / <sub>4</sub> "	gpm head spread	13 23'	16 42'	17 44'	20 62'								
NAE-150	.325"	13 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>4</sub> "	2"	1 <sup>1</sup> / <sub>2</sub> "	gpm head spread	23 23'	28 32'	29 37'	33 49'	39 65'							
NAE-200	.500"	15 <sup>3</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>2</sub> "	3"	2"	2"	gpm head spread	40 28'	47 39'	53 49'	62 65'	65 74'	75 98'	82 129'	91 150'				
NAE-300	.625"	21"	6"	3 <sup>1</sup> / <sub>2</sub> "	3"	3"	gpm head spread	117 24'	139 33'	147 42'	170 56'	192 63'	196 74'	209 84'	249 114'				
NAE-400	.750"	25"	8 <sup>3</sup> / <sub>4</sub> "	4"	3"	4"	gpm head spread					263 37'	287 47'	314 51'	332 58'	380 70'	414 93'	467 116'	
NAE-450	.750"	22"	8 <sup>3</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>2</sub> "	6"	4"	gpm head spread					343 35'	374 42'	413 51'	461 63'	501 77'	537 88'	624 116'	



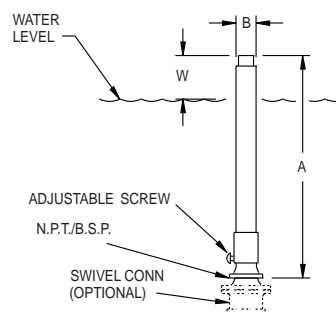
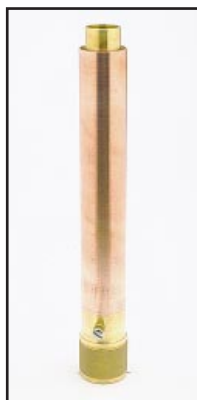
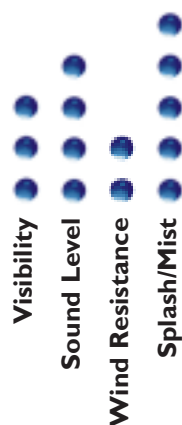


## Bursting Jet

# NBU series

### Function

A fascinating showpiece, the Bursting Jet with its effervescent splashing provides continued interest for the viewer. This jet is best suited for an open area, in a pool with a diameter at least four times the operating height of the jet. **Not water level dependent.**



### Specification:

Construction shall be cast bronze, machined brass and copper with DEFO integral burst ratio adjustment screw.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water level) must be maintained.
  2. Requires fine screening at pump (see performance chart).
  3. Requires non-turbulent water supply. Allow 12" (300 mm) straight pipe under jet.
  4. Use shaded chart section.

### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	inlet (npt) (bsp)	spray height	4'	5'	6'	8'	10'
NBU-050	.063"	5"	7/8"	1 1/4"	1/2"	gpm head spread	3 7' 16"	5 10' 16"			
NBU-075	.063"	8"	1 1/8"	2"	3/4"	gpm head spread		8 11' 20"	11 12' 28"		
NBU-100	.063"	11"	1 1/2"	3 1/2"	1"	gpm head spread		13 8' 40"	15 9' 40"	17 11' 54"	18 13' 70"



# NCA series

## Cascade Jet

### Specification:

Construction shall be cast bronze with machined orifice.

### Options:

- (Add suffix)  
Q - chrome plated  
S - DEFO swivel connection (see ASL/ASU series)  
W - wave suppression device

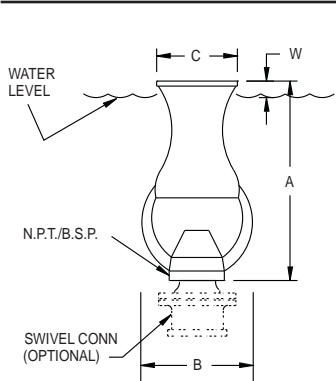
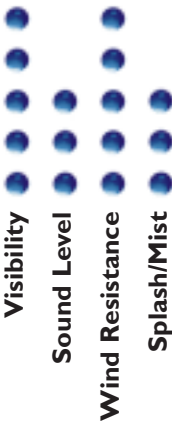
### Note:

- (for optimum effect)  
1. Dimension "W" [nozzle projection above water level] for NCA-125/150/200/300 must be maintained.  
2. Dimension "W" [nozzle projection below water level (-)] for NCA-050/075 must be maintained.  
3. Requires non-turbulent water supply.  
4. Wave suppression device required in small circular pools or confined areas.  
5. A constant unvarying water level is required.  
6. Use shaded chart section.



### Function

A geyser-like eruption of foamy white water, the Cascade Jet bursts from the surface and then falls heavily in a conical pattern. Provides optimum visual and sound effects. Ideal for medium-sized and large displays. **Water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	w dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	5'	6'	8'	10'	12'	15'	20'	25'	30'
NCA-050	.250"	4"	2"	2"	-1 1/4"	1/2"	gpm head spread	7 16' 8"	9 25' 15"	10 35' 22"	11 39' 32"								
NCA-075	.320"	5 1/2"	2 3/4"	2 1/2"	-1"	3/4"	gpm head spread	12 21' 10"	15 23' 11"	16 32' 17"	20 44' 24"	20 51' 30"	23 69' 34"						
NCA-125	.320"	8"	4 1/2"	3 1/2"	1/2"	1 1/4"	gpm head spread	16 12' 9"	21 18' 12"	23 23' 18"	26 28' 24"	29 37' 28"	34 50' 29"	38 58' 36"	40 65' 40"				
NCA-150	.320"	9"	4 3/4"	3 3/4"	1/2"	1 1/2"	gpm head spread	23 11' 10"	29 14' 15"	32 18' 19"	36 23' 24"	42 32' 30"	45 37' 32"	49 46' 36"	53 50' 37"	58 62' 40"			
NCA-200	.675"	10 3/4"	5 1/2"	4 1/2"	1/2"	2"	gpm head spread			42 14' 15"	47 19' 20"	50 24' 20"	61 33' 36"	67 40' 40"	71 43' 43"	75 49' 50"	92 71' 55"		
NCA-300	.875"	14 1/4"	8"	6 1/2"	3/4"	3"	gpm head spread				88 24' 24"	90 26' 24"	93 35' 26"	112 42' 42"	144 49' 48"	166 63' 60"	187 79' 60"	205 104' 84"	205 116' 96"



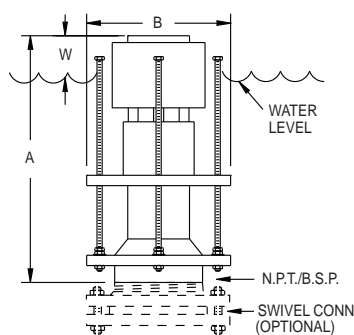
## Lake Cascade Jet

# NCL series

### Function

A massive eruption of foamy white water for large installations which, the Lake Cascade Jet provides a visual presence of grandeur and beauty. Ideal for lakes and large ponds needing heavy aeration. Adjustable air-to-water ratio sleeve facilitates on-site performance enhancement. **Water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

Construction shall be extruded bronze, brass and stainless steel fitted.

### Options:

(Add suffix)  
S - DEFO swivel connection (see ASL/ASU series)

### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water level) must be maintained.
  2. Install in a vertical condition.
  3. Spray effect is adjustable for height and density.
  4. Do not use in small contained areas.
  5. Use shaded chart section.

### Dimensions

### Performance

DEFO no.	a dim.	b dim.	w dim.	inlet (npt) (bsp)	spray height	10'	20'	50'	80'	100'
NCL-600	24"	13"	6"	6"	gpm head spread	410 25' n/a	590 50' n/a	925 125' n/a	1200 200' n/a	1300 250' n/a





# NDH series

## Dandelion Hemisphere

### Specification:

Construction shall be cast bronze, machined brass and copper. DEFO nozzles are easily cleaned, individually adjustable and removable.

### Options:

- (Add suffix)
- B - stand (provide details)
- Q - chrome plated

### Note:

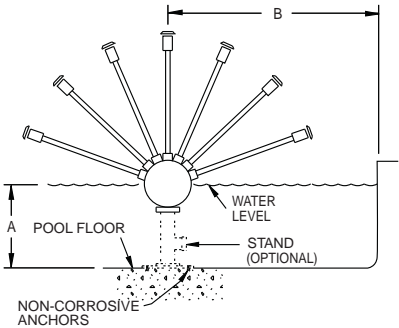
(for optimum effect)  
Requires fine screening at pump 1/6" (.063"/1.5 mm) openings.



### Function

Delicate and floating with a dandelion type of effect, the Dandelion Hemisphere has interconnecting discs of water which shimmer on the surface. Ideal for malls, foyers and areas which are free of wind. **Not water level dependent.**

- Visibility
- Sound Level
- Wind Resistance
- Splash/Mist



### Dimensions

### Performance

DEFO no.	hub dia.	total dia.	no. arms	inlet (npt) (bsp)	gpm	head	recommended installation	
							A	B
NDH-030	8"	36"	21	2"	55	9"	12"	72"
NDH-040	8"	48"	21	2"	55	10"	12"	96"
NDH-045	8"	48"	33	2"	85	10"	12"	96"
NDH-060	8"	72"	33	2"	85	14"	12"	144"
NDH-065	10"	72"	61	3"	154	15"	12"	144"
NDH-080	12"	96"	85	4"	215	19"	12"	192"
NDH-100	12"	120"	125	4"	314	22"	12"	240"

## Dandelion Sphere

# NDS

series

### Function

A pulsating sphere of interconnecting discs of water, the Dandelion Sphere closely resembles a modern sculptured piece when not in use as a water feature. Ideal in enclosed malls, foyers and areas which are free of wind. Breathtaking when illuminated. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

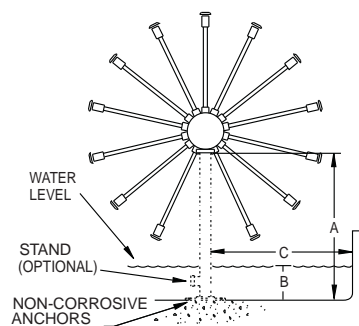
Construction shall be cast bronze, machined brass and copper. DEFO nozzles are easily cleaned, individually adjustable and removable.

### Options:

(Add suffix)  
B - stand (provide details)  
Q - chrome plated

### Note:

(for optimum effect)  
Requires fine screening at pump 1/6" (.063"/1.5 mm) openings.



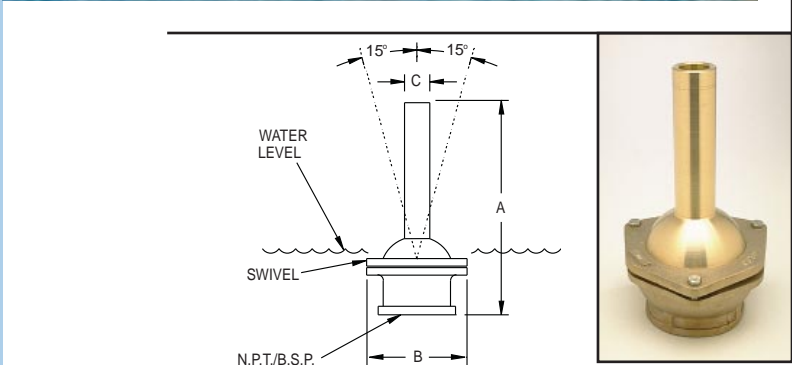
### Dimensions

### Performance

DEFO no.	hub dia.	total dia.	no. arms	inlet (npt) (bsp)	gpm	head	recommended installation		
							A	B	C
NDS-030	8"	36"	29	2"	75	8'	60"	12"	72"
NDS-040	8"	48"	29	2"	75	10'	60"	12"	96"
NDS-045	8"	48"	61	2"	155	12'	72"	12"	96"
NDS-060	10"	72"	61	2"	155	13'	96"	12"	144"
NDS-065	12"	72"	125	3"	317	14'	96"	12"	144"
NDS-080	20"	96"	173	4"	436	16'	120"	12"	192"
NDS-100	20"	120"	253	6" F	634	19'	144"	12"	240"



## Plume Jet



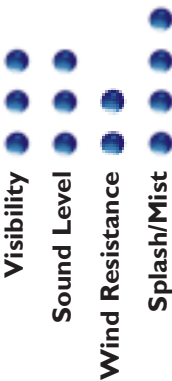
### Dimensions

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim. (id)	inlet (npt) (bsp)	spray height	5'	10'	15'	20'	30'	40'	50'	60'	70'	80'	90'	100'
NEA-012*	.065"	1 7/8"	1/2"	.125"	1/8"	gpm head spread	0.7 8' 1"	1.0 14' 1"										
NEA-025*	.090"	2 1/4"	3/4"	.187"	1/4"	gpm head spread	2.2 8' 6"	2.8 14' 6"	3.3 20' 6"									
NEA-037*	.125"	2 3/4"	1"	.250"	3/8"	gpm head spread	3.6 8' 6"	5.1 14' 6"	6 20' 6"	6.5 27' 6"								
NEA-050*	.190"	3 1/2"	1"	.375"	1/2"	gpm head spread	5.0 8' 6"	7.5 14' 8"	10 20' 20"	12.5 27' 20"								
NEA-075	.125"	4"	2 1/4"	.250"	3/4"	gpm head spread	3 8' 8"	5 15' 8"	6 28' 20"									
NEA-100	.190"	5"	2 1/2"	.375"	1"	gpm head spread	7 8' 8"	9 14' 12"	12 21' 36"	14 44' 40"								
NEA-125	.250"	5 1/2"	3 1/4"	.500"	1 1/4"	gpm head spread	11 7' 8"	16 13' 12"	20 19' 24"	25 33' 40"								
NEA-150	.312"	6"	3 1/4"	.625"	1 1/2"	gpm head spread		24 14' 12"	30 24' 24"	37 28' 40"	45 41' 52"							
NEA-200	.435"	7 1/2"	4 3/8"	.875"	2"	gpm head spread		45 12' 18"	56 19' 26"	67 26' 46"	86 44' 64"	113 69' 76"	117 74' 88"					
NEA-300	.550"	12 3/4"	6"	1.125"	3"	gpm head spread		79 12' n/a	94 19' n/a	116 27' n/a	137 27' n/a	174 58' n/a	197 79' n/a	230 115' n/a				
NEA-400	.750"	16"	8 3/4"	1.5"	4"	gpm head spread				198 24' n/a	259 37' n/a	284 51' n/a	320 61' n/a	393 84' n/a	407 97' n/a	423 104' n/a	496 110' n/a	520 150' n/a

\*Small jets for spray rings and spray bars have male N.P.T. threads.

### Function

A long and slender column of water which displays an attractive “rooster tail” in mild winds, the NEA Plume Jet may also be used for vertical effects, angled spray bars and rings. **Not water level dependent.**





## Plume Jet

# NEF

series



### Specification:

Construction shall be cast bronze with machined inner surface.

### Options:

(Add suffix)

Q - chrome plated

S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

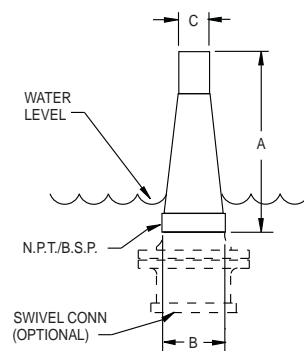
(for optimum effect)

1. Requires fine screening at pump. Screen openings should not exceed 50% of dim. 'C'.
2. Swivel alignment should not exceed 5°.
3. Requires a straight length of pipe to inlet minimum 6X inlet size diameter.
4. Use shaded chart section.
5. Contact factory for customized bore sizes.

### Function

An elongated column of water with impressive vertical effects, the NEF Plume Jet produces an elegant "rooster tail" in gentle winds. Primarily for use in medium-sized and large displays. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim. (id)	inlet (npt) (bsp)	spray height	5'	10'	15'	20'	30'	40'	50'	60'	70'	80'	90'	100'
NEF-100	.250"	4"	2"	1/2"	1"	gpm head spread	12 7' 11"	16 13' 11"	21 19' 36"	23 24' 36"								
NEF-150	.300"	5"	2 1/2"	5/8"	1 1/2"	gpm head spread		34 14' 20"	35 20' 40"	38 24' 46"	46 42' 60"							
NEF-200	.350"	6"	3"	7/8"	2"	gpm head spread		41 14' 32"	61 21' 52"	70 28' 58"	94 40' 72"	113 61' 84"						
NEF-300	.500"	10"	4"	1 1/8"	3"	gpm head spread		71 12' n/a	78 19' n/a	124 26' n/a	149 42' n/a	172 56' n/a	188 65' n/a	214 81' n/a	61 21' n/a			
NEF-400	.500"	11"	5"	1 1/2"	4"	gpm head spread				200 24' n/a	272 42' n/a	301 51' n/a	313 56' n/a	382 81' n/a	422 98' n/a	504 134' n/a	575 145' n/a	600 165' n/a
NEF-500	1.000"	14"	6 1/2"	2"	5"	gpm head spread				410 27' n/a	530 42' n/a	600 55' n/a	650 70' n/a	730 82' n/a	780 97' n/a	840 110' n/a	890 130' n/a	940 150' n/a



NES  
series

## Clear Stream Jet



**Specification:**

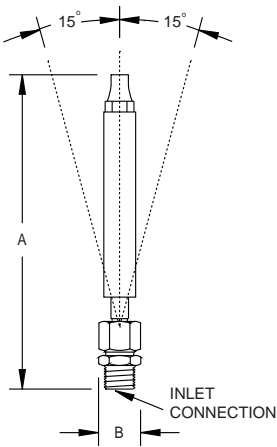
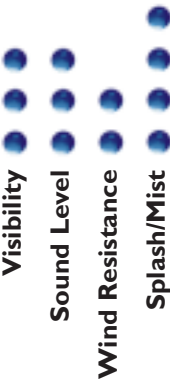
Construction shall be machined brass.

**Note:**

(for optimum effect)  
Angle of adjustment not to exceed 15°

**Function**

The NES jet provides a clear stream performance and pressure regulation on manifolds and spray rings where uniform output is required. **Not water level dependent.**



**Dimensions**

**Performance**

DEFO no.	suction strainer openings required	nozzle orifice	a dim.	b dim.	inlet (npt)	spray height	5'	10'	15'
NES-050	.125"	1/4"	7 1/2"	1"	1/2"	gpm head	4 10'	5 19'	6 22'



## Foam Jet

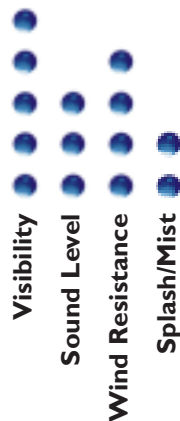
# NFO

series

### Function

A mound of aerated water at low levels, the Foam Jet becomes a splashy, frothy column at high levels. Ideal for medium-sized and large displays. Provides optimum visual and sound effects.

**Water level dependent.**



### Specification:

Construction shall be machined cast bronze and copper.

### Options:

(Add suffix)

A - air ratio valve

N - adjustable nozzle sleeve

(model NFO-300 only)

Q - chrome plated

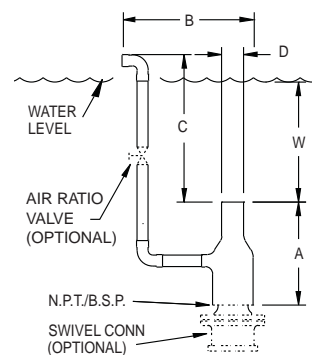
S - DEFO swivel connection (see ASL/ASU series)

W - wave suppression device

### Note:

(for optimum effect)

1. Dimension 'W' must be maintained.
2. A constant unvarying water level is required.
3. Requires non-turbulent water supply.
4. Wave suppression device required in small pools or confined areas.
5. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	d dim.	w dim.	inlet (npt) (bsp)	spray height	1'	2'	3'	4'	5'	6'	8'	10'	15'	20'
NFO-050	.125"	3 1/4"	4 1/4"	3 1/2"	3/4"	2 1/2"	1/2"	gpm head spread	6 8' 7"	7 12' 12"	9 15' 12"							
NFO-075	.187"	3 1/2"	4 1/2"	5"	1"	2 1/2"	3/4"	gpm head spread	5 5' 6"	14 10' 12"	16 12' 20"	18 16' 24"						
NFO-100	.250"	4 1/2"	6"	6 1/4"	1 1/4"	3"	1"	gpm head spread	15 5' 10"	22 7' 12"	24 11' 17"	26 13' 22"	27 15' 24"	29 18' 28"				
NFO-125	.325"	4 1/2"	7"	8"	1 1/2"	4"	1 1/4"	gpm head spread	23 5' 9"	29 8' 16"	34 12' 21"	39 15' 25"	42 16' 28"	43 19' 30"	47 23' 36"			
NFO-150	.375"	5 1/4"	7 1/4"	9 1/4"	1 3/4"	5"	1 1/2"	gpm head spread	37 7' 12"	45 11' 17"	59 16' 24"	62 20' 30"	67 23' 36"	72 28' 40"	77 30' 40"	86 41' 44"		
NFO-200	.500"	7"	7 3/4"	10"	3"	3"	2"	gpm head spread		48 7' 10"	58 10' 16"	62 11' 18"	68 13' 24"	74 16' 32"	82 21' 36"	85 24' 40"	116 39' 50"	
NFO-300	.750"	9 1/4"	13 1/2"	11 1/2"	3 1/2"	3 1/2"	3"	gpm head spread		110 7' 15"	129 9' 26"	139 11' 36"	164 14' 36"	167 15' 48"	188 21' 58"	202 24' 70"	237 33' 82"	290 47' 90"



# NGA series

## Fan Jet



### Specification:

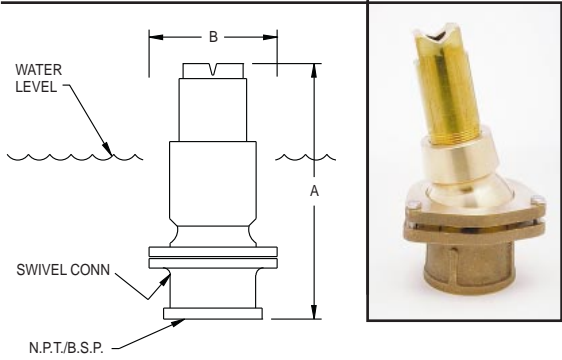
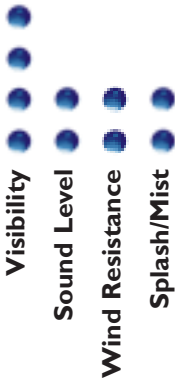
Construction shall be cast bronze, machined brass and copper with DEFO integral swivel base.

### Note:

- (for optimum effect)
- 1. Requires non-turbulent water supply.
  - 2. Use shaded chart section.

### Function

A clear fan-shaped display. Ideal when angled to 45° and used as a peripheral effect in a location free of wind. **Not water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	throw	2'	3'	5'	6'	8'	10'
NGA-100	.125"	4"	2 1/2"	1"	gpm head spread height	3 3' 20" 28"	5 5' 56" 45"	5 7' 101" 64"			
NGA-150	.250"	5 1/2"	3 3/4"	1 1/2"	gpm head spread height	11 3' 6" 28"	14 4' 24" 42"	18 6' 35" 64"	20 8' 79" 75"	23 10' 142" 108"	
NGA-200	.325"	8 3/4"	4 1/2"	2"	gpm head spread height	9 2' 5" 18"	11 3' 11" 24"	14 4' 24" 36"	17 6' 48" 56"	19 7' 48" 56"	21 8' 70" 70"



## Fan Jet

## NGB series

### Function

A clear, widespread, fan-shaped display. Ideal when angled to 45° and used as a peripheral effect in a location free of wind. Most effective used in multiples. **Not water level dependent.**

Visibility  
 Sound Level  
 Wind Resistance  
 Splash/Mist



### Specification:

Construction shall be cast bronze.

### Options:

(Add suffix)

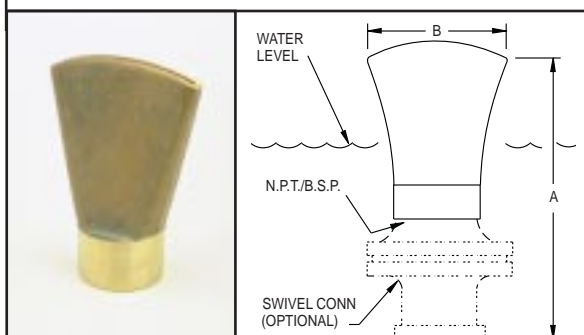
Q - chrome plated

S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

(for optimum effect)

1. Requires non-turbulent water supply.
2. Operate at 3' (1m) throw.
3. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	throw	2'	3'	5'	7'
NGB-100	.125"	4 1/4"	3"	1"	gpm head spread height	9 3' 20"	12 4' 30"	14 6' 65"	19 8' 94"
						20"	24"	45"	52"



NGF  
series

Finger Jet

Specification:

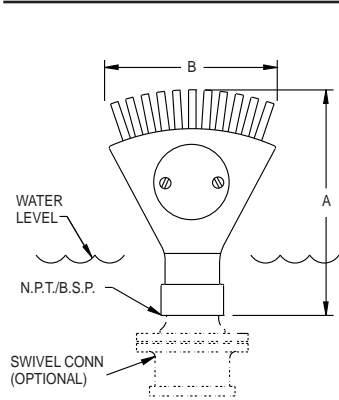
Construction shall be cast bronze, brass and stainless steel.

Options:

- (Add suffix)  
Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

Note:

- (for optimum effect)  
1. Requires fine screening at pump (see performance chart).  
2. Use shaded chart section.



**Function**

A finger-like fan spray which is ideal as a peripheral adornment to vertical central displays in medium-sized installations. Excellent in wall mounted applications. Effective as an evaporative spray in pools and ponds or in water cooling. Large cleanout port. **Not water level dependent.**

●●●

●●●

●●●

Visibility

●●●

●●●

●●●

Sound Level

●●●

●●●

●●●

Wind Resistance

●●●

●●●

●●●

Splash/Mist

Dimensions

Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	throw	spread	height	gpm	head
NGF-100	.125"	7"	6"	1"	2'	58"	18"	13	4'
					3'	86"	28"	17	5'
					4'	102"	35"	19	6'
					5'	120"	48"	23	8'
					6'	156"	52"	25	10'



## Flat Jet

## NGL series

### Function

A clear, horizontal, fan-shaped display. Ideal as a low peripheral effect in a quiet location free of wind. **Not water level dependent.**

Visibility  
 Sound Level  
 Wind Resistance  
 Splash/Mist



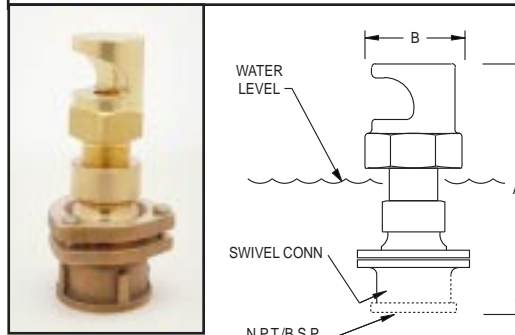
### Specification:

Construction shall be cast bronze and brass with DEFO integral swivel connection.

### Note:

(for optimum effect)

1. Requires fine screening at pump (see performance chart).
2. Requires non-turbulent water supply.
3. Swivel alignment not to exceed 5°.
4. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	throw	2'	3'	4'	6'
NGL-050	.125"	4 1/2"	2 1/2"	1/2"	gpm head spread height	2 3' 36" 5"	3 4' 53" 5"	4 6' 72" 5"	
NGL-075	.187"	5 1/2"	3"	3/4"	gpm head spread height	5 3' 39" 7"	7 4' 57" 7"	9 5' 80" 7"	
NGL-100	.250"	7"	3 1/4"	1"	gpm head spread height	10 3' 36" 9"	12 3' 48" 9"	17 5' 80" 9"	33 8' 120" 9"



# NHC series

## Hollow Column Jet



### Specification:

Construction shall be cast bronze, extruded machined brass, copper and stainless steel. Complete with integral swivel adjustment.

### Options:

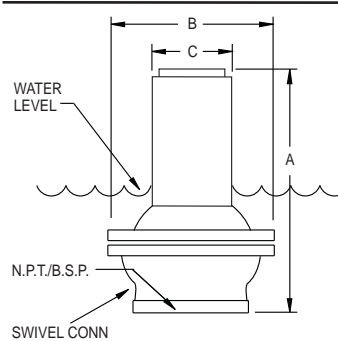
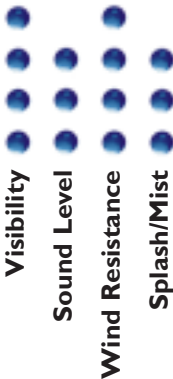
(Add suffix)  
Q - chrome plated

### Note:

- (for optimum effect)
1. Requires non-turbulent water supply.
  2. Requires fine screening at pump (see performance chart).
  3. Use shaded chart section.

### Function

A hollow column of clear water that appears to be an overflowing glass tube. Cresting water creates minimum splash. Spectacular when illuminated. **Not water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	inlet (npt) (bsp)	spray height	1'	2'	3'	4'	5'	8'	10'
NHC-100	.060"	5 1/2"	2 1/2"	1 1/8"	1"	gpm head spread	11 3' 5"	16 4' 9"	20 7' 12"	23 8' 12"	37 10' 14"		
NHC-150	.090"	7"	3 1/4"	1 5/8"	1 1/2"	gpm head spread	22 3' 9"	31 4' 12"	37 6' 14"	43 7' 16"	47 9' 20"	60 13' 27"	67 17' 38"
NHC-200	.125"	7 1/4"	4 1/2"	2 1/8"	2"	gpm head spread	29 2' 9"	38 4' 13"	46 5' 16"	53 7' 18"	58 8' 27"	74 13' 48"	81 15' 48"
NHC-300	.250"	9"	6"	3"	3"	gpm head spread		75 3' 18"	91 5' 24"	108 6' 30"	124 6' 36"	158 10' 42"	182 13' 56"



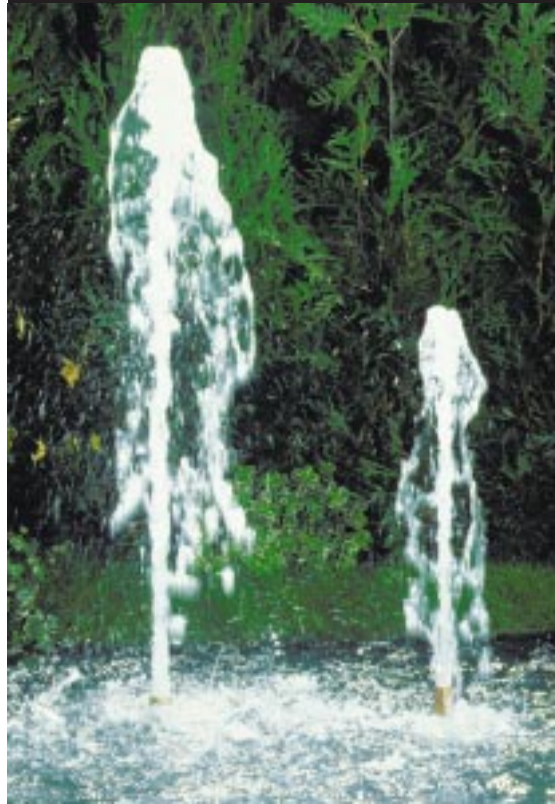
## Aerator Jet

## NIA series water level independent

### Function

This jet operates independently of the water level, yet it provides highly aerated water. Ideal for shallow pools in small and medium-sized displays. Beautiful when illuminated at night. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

Construction shall be cast bronze, brass and copper.

### Option:

(Add suffix)

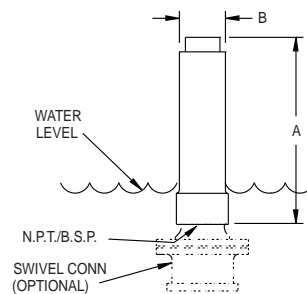
Q - chrome plated

S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

(for optimum effect)

1. Requires fine screening at pump (see performance chart).
2. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	4'	6'	10'	12'	16'	20'
NIA-100	.063"	6"	1 <sup>3</sup> / <sub>8</sub> "	1"	gpm head spread	9 12' 9"	11 18' 16"	14 28' 20"			
NIA-125	.100"	6 <sup>1</sup> / <sub>2</sub> "	1 <sup>5</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>4</sub> "	gpm head spread	15 12' 12"	18 17' 24"	19 28' 26"			
NIA-150	.120"	8 <sup>1</sup> / <sub>2</sub> "	2"	1 <sup>1</sup> / <sub>2</sub> "	gpm head spread	27 10' 20"	34 15' 28"	44 24' 38"	48 28' 42"		
NIA-200	.160"	9"	2 <sup>3</sup> / <sub>4</sub> "	2"	gpm head spread	26 10' 16"	32 14' 18"	47 26' 24"	49 33' 30"	57 30' 48"	113 58' 60"
NIA-300	.200"	11 <sup>1</sup> / <sub>2</sub> "	4"	3"	gpm head spread	47 13' 13"	58 17' 24"	82 30' 36"	90 35' 40"	110 44' 60"	113 58' 60"



# NIC series water level independent

## Funnel Cascade Jet

### Specification:

Construction shall be cast bronze, extruded machined brass and stainless steel fitted.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel  
connections  
(see ASL/ASU series)

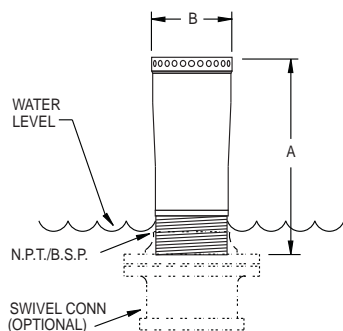
### Note:

(for optimum effect)  
Use shaded chart section.



### Function

A rugged effect that can deliver a highly aerated water spray in less than ideal water conditions. For small and medium-sized displays with shallow water.  
**Not water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	5'	6'	8'
NIC-100	.250"	3 3/4"	1 3/4"	1"	gpm head spread	23 7' 7"	28 9' 12"	32 12' 17"	34 14' 20"	36 15' 24"	42 21' 29"



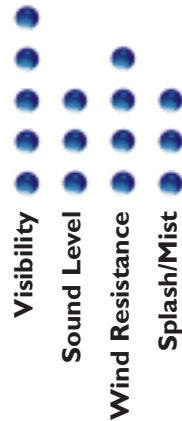
## Foam Jet

# NIL

series  
water level  
independent

### Function

A column of frothy, white, aerated water. Recommended for small and medium-sized displays in shallow pools. Beautiful when illuminated. Optional exterior sleeve permits low profile installation and neat appearance in pools. **Water level independent without exterior sleeve.**



### Specification:

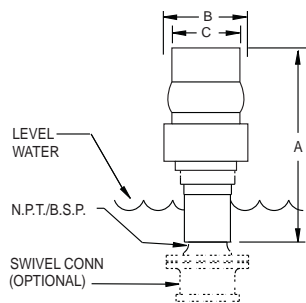
Construction shall be cast bronze and brass with internal air/water ratio adjustments. Optional exterior sleeve shall be copper or brass.

### Options:

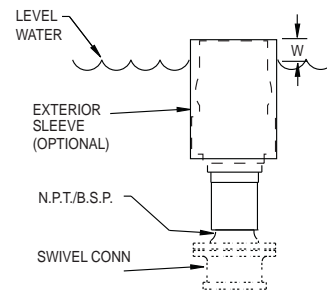
(Add suffix)  
Q - chrome plated  
S - DEFO swivel connections (see ASL/ASU series)  
X - exterior sleeve for low profile installation

### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water level) must be maintained.
  2. Requires fine screening at pump (see performance chart).
  3. Use shaded chart section.



**Standard**



**Option X**  
**Low Profile Application**

### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	w dim.	inlet (npt) (bsp)	spray height	2'	3'	5'	6'	8'	10'	11'
NIL-100	.065"	7"	3"	2 1/2"	1 1/2"	1"	gpm head spread	26 7"	32 11"	40 12"	44 21"	50 28"		
NIL-150	.080"	10"	5"	3 1/2"	2"	1 1/2"	gpm head spread		62 8"	80 14"	85 15"	96 20"	99 24"	110 26"
									13"	26"	33"	48"	53"	61"



# NLC series

## Column Jet



### Specification:

Construction shall be machined bronze and brass. DEFO top shall be removable for easy cleaning.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection (see ASL/ASU series)

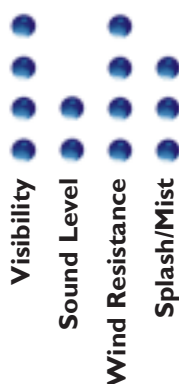
### Note:

(for optimum effect)  
1. Requires fine screening at pump (see performance chart).  
2. Use shaded chart section.

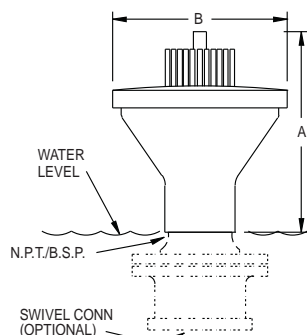
### Function

A simple vertical column of clear water. Ideal as a focal point for small and medium-sized displays. Also appropriate as a peripheral effect for large displays.

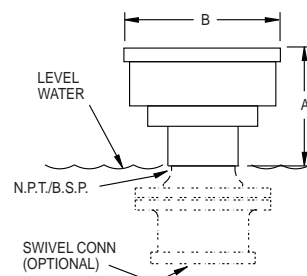
**Not water level dependent.**



**NLC-125**



**NLC-075**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	5'	6'	8'	10'	12'
NLC-075	.040"	2"	2 1/2"	3/4"	gpm head spread	10 4'	12 6' 10"	14 8' 10"	15 9' 10"	16 11' 12"			
NLC-125	.080"	5 3/4"	5"	1 1/4"	gpm head spread		16 5' 12"	20 6' 15"	24 9' 20"	25 10' 24"	30 13' 24"	33 15' 30"	38 20' 36"



## Crown Jet

## NLF series

NLF-075



NLF-076



### Specification:

Construction shall be machined cast bronze. Faceplate shall be removable for easy cleaning with a DEFO security key.

### Options:

(Add suffix)  
K - key (cover removal)  
Q - chrome plated  
S - DEFO swivel connection (see ASL/ASU series)  
W - winter cover

### Note:

(for optimum effect)  
1. Requires fine screening at pump (see performance chart).  
2. Use shaded chart section.  
3. Contact factory for customized hole pattern.

### Function

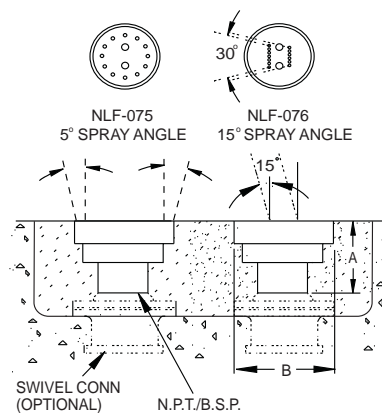
Designed for casting into spray aprons in public playgrounds to ensure vandal resistant installation or used in small and medium sized pools. Gentle spray coverage. Generally installed in a group to form a circle. The angled NLF-076 crown jet can be used as a decorative spray feature for swimming pools and can aid in the cooling of the pool water in a hot climate. **Not water level dependent.**

Visibility

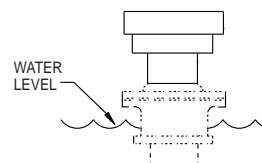
Sound Level

Wind Resistance

Splash/Mist



### In-ground Application



### Above Water Application

NLF-075



NLF-076



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	6'
NLF-075	.040"	2"	2 1/2"	3/4"	gpm head spread	4 3'	5 5'	6 6'	7 10'
NLF-076	.040"	2"	2 1/2"	3/4"	gpm head spread throw	5 4'	5 5'	6 7'	9 11'
						16"	22"	32"	44"
						42"	62"	88"	144"
						23"	32"	41"	80"



# NLG series

## Ground Jet



### Specification:

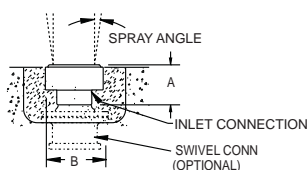
Construction shall be machined cast bronze. Faceplate shall be removable for easy cleaning with a DEFO security key.

### Options:

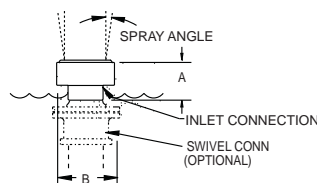
(Add suffix)  
K - key (cover removal)  
Q - chrome plated  
S - DEFO swivel connection (see ASL/ASU series)  
W- winter cover

### Note:

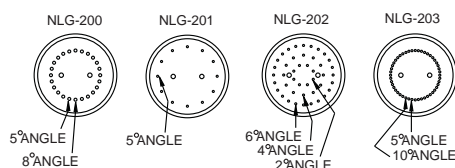
- (for optimum effect)
1. Requires fine screening at pump (see performance chart).
  2. Use shaded chart section.
  3. Contact factory for customized hole patterns.



**In-ground Application**

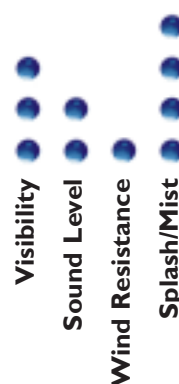


**Above Water Application**



### Function

A multi-purpose spray jet that can be used in small and medium-sized fountains. The jet can also be cast into spray aprons in public playgrounds to ensure vandal resistant installation. Gentle spray coverage. **Not water level dependent.**

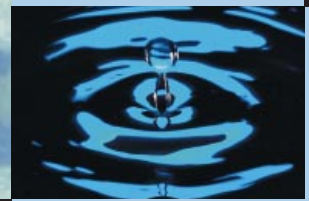


### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	3'	5'	10'
NLG-200	.030"	3"	5"	2"	gpm head spread	30 5' 48"	39 8' 72"	58 18' 132"
NLG-201	.030"	3"	5"	2"	gpm head spread	26 5' 29"	34 8' 50"	50 16' 96"
NLG-202	.030"	3"	5"	2"	gpm head spread	25 5' 36"	32 8' 53"	47 17' 94"
NLG-203	.030"	3"	5"	2"	gpm head spread	26 5' 54"	34 8' 80"	48 15' 132"





## Mushroom/Bell Jet

# NMB

series

### Function

A clear sheet of pulsating water capable of assuming dual forms. The effect can be changed from mushroom to bell by simply reversing the top cone. Quiet and splash-free. Ideal for small areas which are free of wind. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



Bell Pattern



Mushroom Pattern



### Specification:

Construction shall be machined cast bronze and brass with DEFO reversible top cone.

### Options:

(Add suffix)

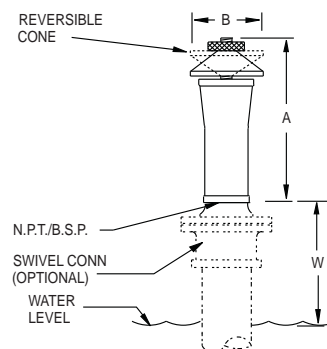
Q - chrome plated

S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

(for optimum effect)

1. Requires fine screening at pump (see performance chart).
2. Requires non-turbulent water supply.
3. Use shaded chart section.



### Dimensions

### Performance

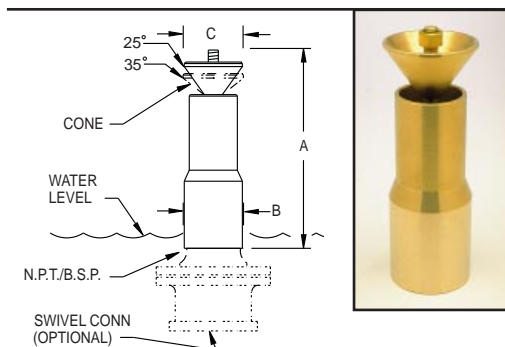
DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	inlet (npt) (bsp)	spray diameter	12"	24"	36"
NMB-075	.063"	4 <sup>3</sup> / <sub>4</sub> "	2"	9"	3/4"	gpm head	4 2'	5 2'	
NMB-100	.063"	5 <sup>3</sup> / <sub>4</sub> "	2 <sup>3</sup> / <sub>8</sub> "	9"	1"	gpm head	5 2'	7 2'	10 3'

# Tulip Jet

Construction shall be machined cast bronze and brass with DEFO adjustable top cone.

Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

1. Bottom of DEFO nozzle must be installed at water level.
2. Adjustable cone available in 20°, 30°, 40° and 45° on request.
3. Water supply must be non-turbulent.
4. Use shaded chart section.



A clear, heavy-duty, sheet of pulsating water in a mushroom-like form. When operated in a full sheet pattern, there is very little sound or splash. Ideal for both serene and windy locations. Effective as a cooling and/or evaporative spray. **Not water level dependent.**



## Performance

[illegible]



## Bell Jet

## NMF series

### Function

A clear sheet of water in the shape of a bell. Minimal sound or splash. Ideal for small and medium-sized displays in locations which are free of wind. Suitable for groupings in varying heights. **Not water level dependent.**



### Specification:

Construction shall be machined cast bronze, copper and brass with DEFO adjustable top cone.

### Options:

(Add suffix)

Q - chrome plated

S - DEFO swivel connection

(see ASL/ASU series)

### Note:

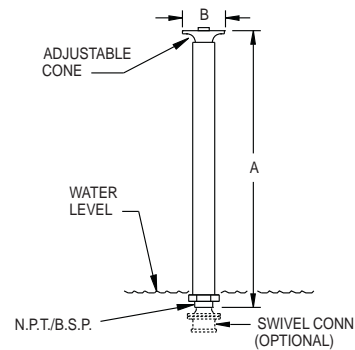
(for optimum effect)

1. Requires non-turbulent water supply.
2. Requires fine screening at pump (see performance chart).
3. Use shaded chart section.



Standard

Option Q  
Chromed



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray diameter	12"	24"	30"	48"
NMF-051		6"	1 1/8"	1/2"	gpm head	6	9	10	
NMF-052	.063"	9"				3'	5'	6'	
NMF-053		12"							
NMF-101		12"	2 1/8"	1'	gpm head	9	11	12	13
NMF-102	.063"	18"				3'	5'	6'	8'
NMF-103		24"							



# NMH series

## Hollow Stream Jet

Mushroom Pattern



Stream Pattern



### Function

A versatile jet which can produce a wide variety of effects, from a mushroom sheet to a vertical hollow coned column, by simply adjusting the outer sleeve. Ideal for small and medium-sized displays. **Not water level dependent.**

### Specification:

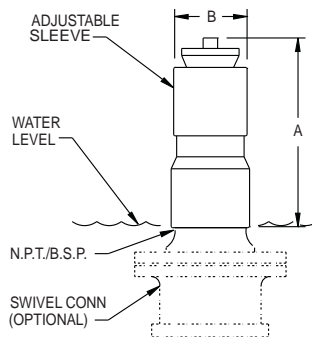
Construction shall be machined cast bronze, brass and copper with lockable DEFO adjustable sleeve.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

- (for optimum effect)  
1. Requires fine screening at pump (see performance chart).  
2. Use shaded chart section.

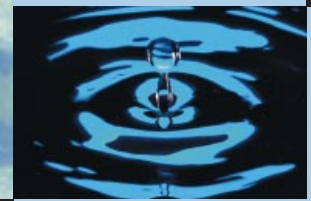


### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	5'	6'	8'	10'	15'
NMH-200	.250"	8 <sup>3</sup> / <sub>4</sub> "	2 <sup>1</sup> / <sub>2</sub> "	2"	gpm head spread	37 3' 33"	45 5' 48"	50 6' 64"	55 8' 84"	61 9' 96"			
NMH-300	.250"	10 <sup>1</sup> / <sub>4</sub> "	3 <sup>5</sup> / <sub>8</sub> "	3"	gpm head spread	47 3' 36"	56 4' 40"	66 5' 60"	71 7' 84"	83 9' 96"	90 10' 120"	100 12' 132"	
NMH-400	.250"	12"	4 <sup>3</sup> / <sub>4</sub> "	4"	gpm head spread	96 4' 53"	111 5' 70"	124 6' 108"	153 7' 132"	164 8' VERTICAL	182 10' VERTICAL	211 12' VERTICAL	260 20' VERTICAL
NMH-600	.250"	17 <sup>3</sup> / <sub>4</sub> "	7 <sup>1</sup> / <sub>4</sub> "	6"	gpm head spread	250 6' 84"	300 8' 96"	350 10' 108"	400 12' 120"	500 14' 132"	600 16' VERTICAL	700 20' VERTICAL	1000 30' VERTICAL



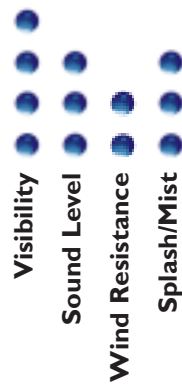


## Picaly Jet

## NMP series

### Function

A tulip-like display with a center vertical stream. Ideal as a peripheral effect in wind protected areas for small to medium-sized fountains. **Not water level dependent.**



### Specification:

Construction shall be machined cast bronze, brass and copper.

### Options:

(Add suffix)

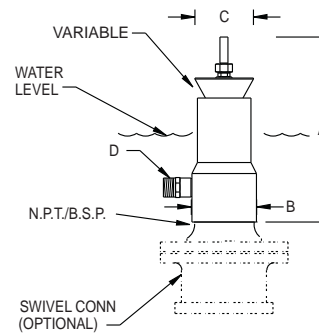
Q - chrome plated

S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

(for optimum effect)

1. Requires fine screening at pump (see performance chart).
2. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	d dim.	inlet (npt) (bsp)	spray height	5'	6'	8'	10'	15'
NMP-200	.125"	10"	2 3/4"	2 3/4"	1/2"	2"	gpm head spread	50 8' 2'	63 10' 4'	80 12' 6'		
NMP-300	.125"	12"	4"	3 3/4"	1"	3"	gpm head spread	85 8' 6'	115 10' 10'	142 12' 12'	170 14' 18'	
NMP-400	.125"	17"	8"	8"	1 1/2"	4"	gpm head spread	148 8' 6'	206 10' 12'	270 12' 17'	325 14' 21'	400 20' 26'



# NMS series

## Mini-Spout Jet

### Specification:

Construction shall be from extruded brass with stainless steel fasteners.

### Options:

(Add suffix)

K - surface flange

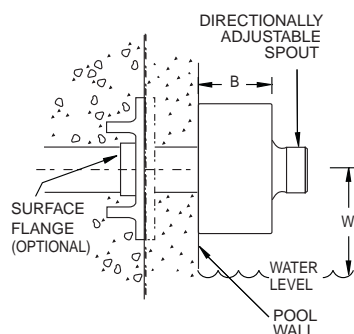
L - membrane clamp

Q - chrome plated

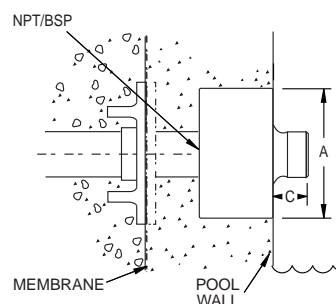


### Function

A clear stream jet that falls gracefully into pools. Used for wall mounted applications either flush or surface mounted. Integral swivel permits directional adjustments to the stream. For use primarily in small architectural pools. **Not water level dependent.**



Surface Mounted Application



Flushwall Application

### Dimensions

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	w dim.	inlet (npt) (bsp)	throw	gpm	head
NMS-050	.250"	2"	1"	3/8"	20"	3/4"	6" 12" 20"	3 4 5	2' 2' 2'

### Performance



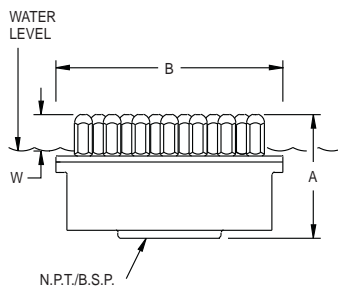
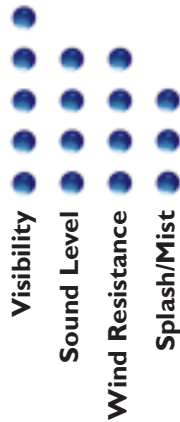


## Column Pod

## NPA series

### Function

A large vertical column consisting of concentric rows of clear stream nozzles. Excellent for viewing at great distances, especially when illuminated. **Not water level dependent.**



### Specification:

Construction shall be cast bronze with DEFO precision clear stream brass nozzles, neoprene gasket and stainless steel fasteners.

### Options:

(Add suffix)  
S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

- (for optimum effect)
1. Requires fine screening at pump (see performance chart).
  2. Dimension 'W' (nozzle projection above water) must be maintained.
  3. Use shaded chart section.

### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim. min.	stream size	no. of jets	inlet (npt) (bsp)	spray height	10'	15'	20'	25'	30'	40'
NPA-100	.125"	6"	10"	2"	9"	51	4"	gpm head spread	212 17' 60"	260 28' 72"	287 33' 84"	309 37' 96"	369 54' 114"	
NPA-200	.187"	9"	12"	3"	10"	36	4"	gpm head spread	290 20' 60"	360 30' 75"	420 40' 96"			
NPA-300	.187"	10½"	16"	3"	12"	36	6"	gpm head spread			420 35' 108"	480 40' 120"	530 45' 132"	630 55' 148"



# NPB series

## Medium Foam Pod

### Specification:

Construction shall be cast bronze, brass and copper with integral brass debris screen and 16 DEFO custom aerating nozzles.

### Options:

(Add suffix)  
S - DEFO swivel connection (see ASL/ASU series)  
W- wave suppression device

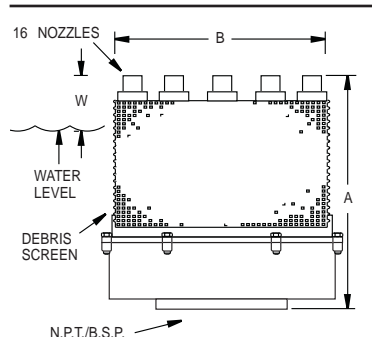
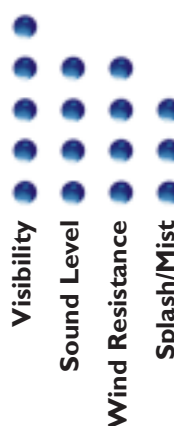
### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water) must be maintained.
  2. A constant unvarying water level is required.
  3. Wave suppression device required when used in small circular pools or confined areas.
  4. Use shaded chart section.



### Function

A foamy column of water which pulsates as it rises in height. A continuously changing pattern creates visual interest. Very little splash. Ideal for medium-sized pools. **Water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	stream size	inlet (npt) (bsp)	spray height	10'	12'	15'	20'
NPB-100	.200"	14"	12"	3"	11"	3"	gpm head spread	209 51' 84"	214 56' N/A	225 72' N/A	261 93' N/A

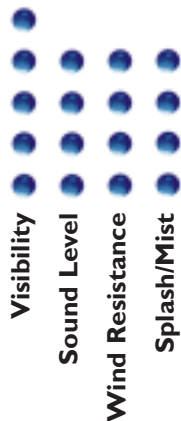


## Crown Pod

NPC  
series

## Function

A versatile two-tiered display of foamy streams. The effect is adjustable to allow for height and pattern changes. **Water level dependent.**



## Specification:

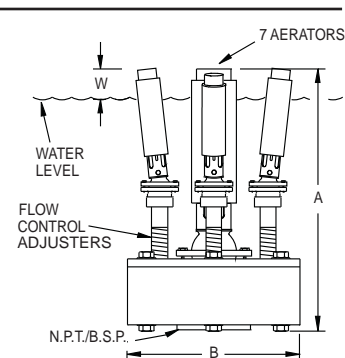
Construction shall be cast bronze and brass with 7 DEFO swivel mounted aerating nozzles complete with adjustable flow regulators.

## Options:

(Add suffix)  
W - wave suppression device

## Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water) must be maintained.
  2. A constant unvarying water level is required.
  3. Wave suppression device required when used in small circular pools or confined areas.
  4. Use shaded chart section.



## Dimensions

## Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	inlet (npt) (bsp)	spray height	5'	8'	10'	15'	20'	25'	30'	35'	40'	50'
NPC-100	.125"	14"	9"	2"	2"	gpm head spread*	45 24'	50 33' 14'	58 65' 16'							
NPC-200	.200"	16 1/2"	12"	2 1/2"	3"	gpm head spread*	64 24' 10'	77 35' 14'	87 42' 20'	104 58' 28'						
NPC-300	.325"	20"	14"	3"	4"	gpm head spread*	93 24' 16'	103 29' 20'	120 40' 26'	127 42' 30'						
NPC-400	.325"	24"	19 1/2"	4"	4"	gpm head spread*		218 35' 20'	248 51' 32'	280 58' 35'	316 70' 44'	344 84' 50'	393 112' 66'			
NPC-500	.500"	25"	19 1/2"	3 1/2"	6"	gpm head spread*				449 37' 24'	518 51' 34'	533 56' 38'	606 67' 42'	653 79' 48'	699 88' 58'	798 109' 72'

\* Spread will vary according to adjustable nozzle setting.



# NPD series

## Mist Column Pod



**Specification:**

Construction shall be machined brass and cast bronze with 16 custom DEFO precision nozzles.

**Options:**

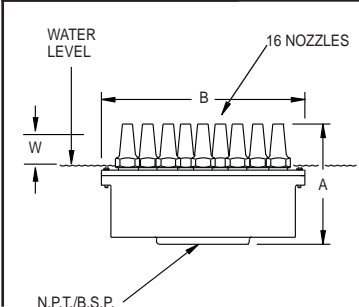
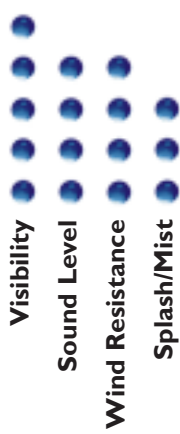
(Add suffix)  
S - DEFO swivel connection  
(see ASL/ASU series)

**Note:**

- (for optimum effect)
- 1. DEFO ECW wind control panel recommended in windy locations.
  - 2. Dimension 'W' (nozzle projection above water) must be maintained.
  - 3. Use shaded chart section.

**Function**

A majestic clear column of water which produces a misty and lacy effect. Ideal for evaporative or cooling ponds. Produces a good visual effect from a distance.  
**Not water level dependent.**



**Dimensions**

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim. min.	stream size	inlet (npt) (bsp)
NPD-100	.125"	8"	10"	3"	9"	3"

**Performance**

spray height	10'	15'	20'	25'	30'	35'	40'
gpm	100	130	147	166	185	203	221
head	13'	24'	30'	41'	46'	56'	65'
spread	48"	60"	72"	84"	96"	108"	120"



## Large Foam Pod

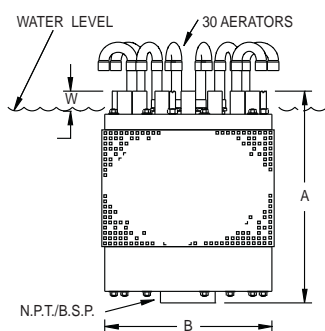
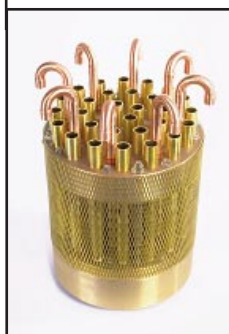
# NPF

series

### Function

A versatile, massive and foamy effect available in two distinctive styles. NPF-100 provides a pyramidal effect which is stable in very windy locations. NPF-200 provides a solid columnar effect with a bulbous crest. Spectacular when illuminated. **Water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

Construction shall be cast bronze, brass and copper with integral brass debris screen and 30 custom DEFO aeration nozzle grouping with built-in air/water ratio adjustment.

### Option:

(Add suffix)  
S - DEFO swivel control (see ASL/ASU series)  
W- wave suppression device

### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water) must be maintained.
  2. A constant unvarying water level is required.
  3. Wave suppression device required when used in small pools or confined areas.
  4. Use shaded chart section.

### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	stream size	inlet (npt) (bsp)	spray height	10'	15'	20'	25'
NPF-100	.200"	18½"	15"	2"	13"	4"	gpm head spread	291 70' 28"	358 107' 36"	401 135' 42"	442 165' 48"
NPF-200	.200"	18½"	15"	2"	13"	4"	gpm head spread	460 58' 72"	576 93' 84"	642 128' 96"	717 168' 108"



# NPW series

## Large Watercastle Pod

### Specification:

Construction shall be cast bronze, brass and copper with 17 DEFO swivel mounted aerating nozzles complete with adjustable flow regulators.

### Options:

(Add suffix)  
W- wave suppression device

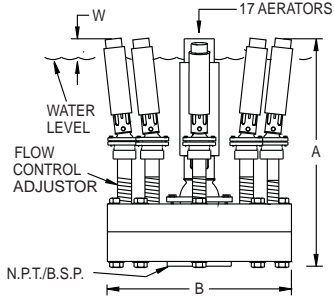
### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water) must be maintained.
  2. A constant unvarying water level is required.
  3. Wave suppression device required when used in small pools or confined areas.
  4. Use shaded chart section.



### Function

A dramatic three-tiered water castle effect with aeration nozzles. Effect is adjustable to allow for height and pattern changes. Ideal for viewing from great distances. **Water level dependent.**



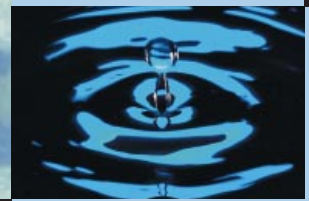
### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim.	inlet (npt) (bsp)	spray height	10'	15'	20'	30'	40'	50'
NPW-100	.250"	24"	19 1/2"	4"	4"	gpm	359	437	502	610		
						head		51'	65'	93'		
NPW-200	.250"	25"	19 1/2"	4"	6"	spread*	20'	28'	36'	46'		
						gpm		574	685	763	869	954
						head		49'	67'	81'	104'	118'
						spread*		24'	38'	44'	60'	76'

\* Spread will vary according to adjustable nozzle setting.





## Rain Curtain

## NRC series

### Function

A spectacular effect of water droplets falling from great heights in slow motion, quietly and without splash.

Laces may be installed up to 20° from vertical without compromising the effectiveness of the rain curtain. Curtain can take many forms. Dazzling when illuminated.



### Specifications:

#### NRC-100, NRC-101

Curtain laces shall be clear Mylar, 0.250" (6 mm) x length to suit. NRC-100 spool length is 100' (30m). NRC-101 spool length is 600' (200m). Specify when ordering.

#### NRC-200

DEFO nozzle assembly shall be hexagonal brass, 0.50" (12 mm) x 2" (50 mm) with brass lock ring, washer, locknut and neoprene gasket.

#### NRC-300

Splash suppressor shall be clear plastic, 0.33" (7 mm) x 2" (50 mm).

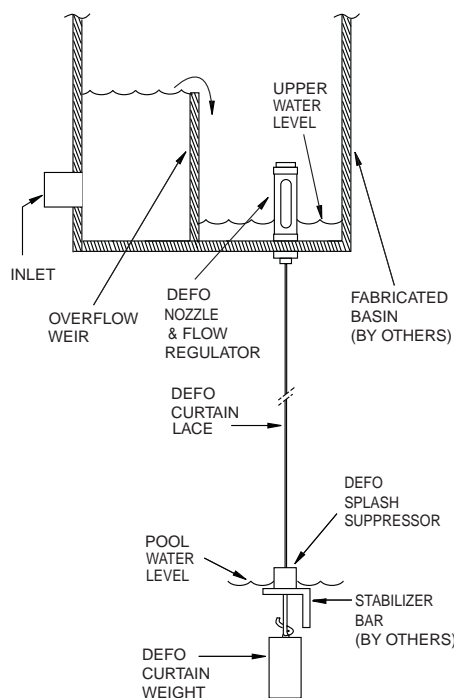
#### NRC-400

DEFO curtain weights shall be lead, 3/4 lbs (450 gm).

### Note:

(for optimum effect)

1. Each nozzle requires 6 gph (0.1 lpm) at a 0.75" (20 mm) water depth at nozzle.
2. Nozzle spacing should be 1.125" (32 mm) minimum.
3. Utilize only filtered and softened water to prevent clogging and discolouring of lace.
4. Contact the factory for design and installation recommendations.





# NSJ series

## Spray Jewel Jet



### Specification:

Construction shall be machined bronze and brass. DEFO top shall be removable for easy cleaning.

### Options:

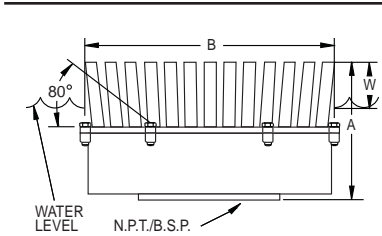
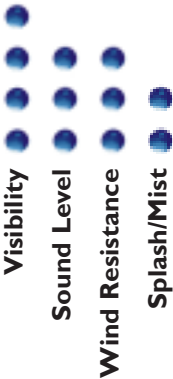
(Add suffix)  
S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

- (for optimum effect)
1. Dimension 'W' (nozzle projection above water level) must be maintained.
  2. Requires fine screening at pump (see performance chart).
  3. Use shaded chart section.

### Function

A graceful spray effect that can be used as a centerpiece for small to large fountains. Individual nozzles produce jewel-like effervescent streams when illuminated at night.  
**Not water level dependent.**

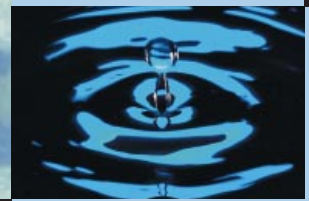


### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	w dim. min.	no. of jets	inlet (npt) (bsp)	spray height	3'	5'	8'	10'	15'
NSJ-100	.125"	5"	4 1/2"	2"	24	1 1/4"	gpm head spread	42 4' 5'	53 7' 8'	62 11' 12'		
NSJ-200	.125"	5"	7"	2"	36	2"	gpm head spread	62 4' 5'	80 7' 8'	93 11' 12'		
NSJ-300	.125"	5 1/4"	9 3/4"	2"	48	3"	gpm head spread	53 4' 4'	73 8' 6'	100 12' 8'	111 14' 11'	
NSJ-400	.125"	7 3/4"	11 1/2"	4"	36	4"	gpm head spread	115 5' 5'	172 8' 8'	248 12' 12'	314 14' 15'	429 20' 22'
NSJ-600	.125"	9 1/2"	14 1/4"	4"	48	6"	gpm head spread	153 5' 6'	279 8' 8'	330 12' 13'	419 14' 15'	570 20' 22'





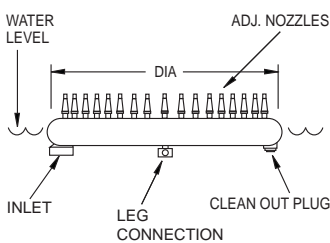
## Spray Ring

# NSR series

### Function

A circular pattern of individual sprays with an outstanding visual effect. The spray appears lacy by day and sparkles when illuminated by night. Adjustable nozzles permit infall, straight or outfall pattern. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

Construction shall be extruded PVC with individually adjustable DEFO brass nozzles with inlet fittings, plugs and leg connections as required.

### Options:

(Add suffix)

B - red brass ring

F - reinforced fibreglass wrapped PVC ring

### Note:

(for optimum effect)

1. Requires fine screening at pump (see performance chart).
2. Custom DEFO rings and bars (all shapes and sizes) available on request.
3. Use shaded chart section.

### Dimensions

### Performance

DEFO no.	suction strainer openings required	dia.	inlet (npt) (bsp)	no. inlet	no. jets	pipe dia.	spray height	2'	3'	4'	5'	6'	8'	10'	12'	14'
							head	6'	8'	10'	12'	15'	20'	25'	30'	35'

Nozzle opening = 0.125"

NSR-122	.09375"	1'	1"	1	16	1"	gpm	7	8	10						
NSR-222	.09375"	2'	1"	2	22	1 1/4"	gpm	9	11	13						
NSR-322	.09375"	3'	1 1/4"	2	47	1 1/4"	gpm	19	24	28	33	38				
NSR-422	.09375"	4'	1 1/4"	2	50	1 1/2"	gpm	20	25	30	35	40				
NSR-522	.09375"	5'	1 1/4"	2	56	1 1/2"	gpm	23	28	34	40	45	56			
NSR-622	.09375"	6'	1 1/4"	3	75	2"	gpm	30	38	45	53	60	75			
NSR-822	.09375"	8'	1 1/4"	4	113	2"	gpm	45	57	68	79	90	113	125		

Nozzle opening = 0.187"

NSR-223	.14025"	2'	1 1/4"	1	24	2"	gpm	25	35	48	52	55				
NSR-323	.14025"	3'	1 1/4"	2	36	2"	gpm	30	50	72	78	86				
NSR-423	.14025"	4'	1 1/2"	2	48	2"	gpm	45	70	96	106	120				
NSR-523	.14025"	5'	1 1/2"	2	60	2"	gpm	53	84	114	122	130	146			
NSR-623	.14025"	6'	1 1/2"	3	72	2"	gpm	60	96	132	144	162	174			
NSR-823	.14025"	8'	1 1/2"	4	84	2 1/2"	gpm	80	124	168	184	200	226	244	260	278



# NTO series

## Twirl Jet

### Specification:

Construction shall be machined cast bronze, brass and copper with DEFO integral angle and rate adjustments.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

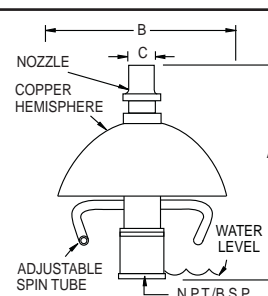
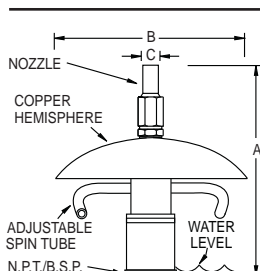
### Note:

- (for optimum effect)
1. Angle and rate of rotation adjustable.
2. Requires fine screening at pump (see performance chart).
3. Use shaded chart section.



### Function

A column of water spirals gracefully upwards to form an encircling lariat of droplets. Ideal as a peripheral effect for medium to large installations with large pool areas. **Not water level dependent.**



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	c dim.	inlet (npt) (bsp)	spray height	3'	4'	5'	8'	10'
NTO-075	.065"	4 1/2"	2"	3/8"	3/4"	gpm head spread*	5 4' N/A	5.5 5' N/A	5.7 7' N/A	7 11' N/A	
NTO-150	.125"	8"	5 1/2"	1 1/4"	1 1/2"	gpm head spread*			26 9' N/A	33 15' N/A	42 24' N/A

\* Spread will vary according to adjustable nozzle setting.

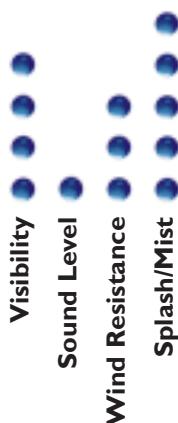


## Watercastle Jet

## NWA series adjustable nozzles

### Function:

A graceful spray effect with adjustable nozzles to allow adaptability to site requirements. Ideal for small and medium sized displays. **Not water level dependent.**



### Specification:

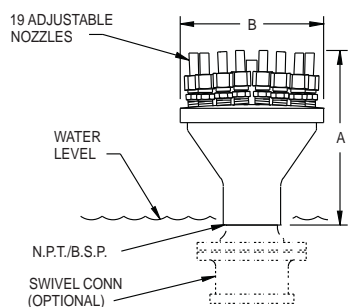
Construction shall be cast bronze, machined brass and copper with DEFO adjustable nozzles and removable cap for easy cleaning.

### Options:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection  
(see ASL/ASU series)

### Note:

(for optimum effect)  
1. Requires fine screening at pump (see performance chart).  
2. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	4'	5'	6'	7'	8'	9'	10'	12'
NWA-125	.125"	5 3/4"	5"	1 1/4"	gpm head spread*	21 6'	22 7'	26 9'	28 10'	31 11'	32 13'	35 16'	38 19'
						64"	72"	100"	108"	128"	130"	144"	192"

\* Spread will vary according to adjustable nozzle setting.



# NWC series

## Watercastle Jet

NWC-075

### Specification:

Construction shall be cast bronze, brass and copper with DEFO removable cap for easy cleaning.

### Option:

(Add suffix)  
Q - chrome plated  
S - DEFO swivel connection (see ASL/ASU series)

### Note:

- (for optimum effect)
1. Requires fine screening at pump (see performance chart).
  2. Install perfectly vertical.
  3. Use shaded chart section.

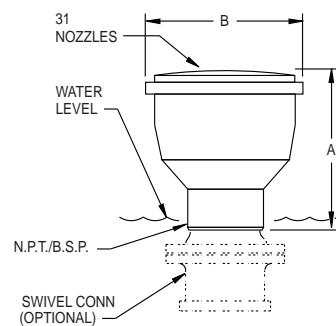


### Function

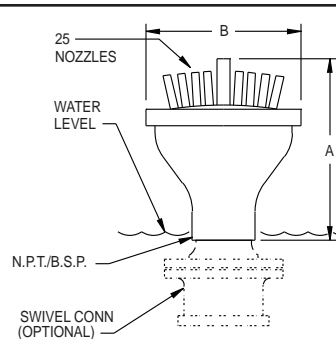
A sparkling and unique triple-tiered effect of clear streams. Ideal for small and medium-sized displays. **Not water level dependent.**



NWC-075



NWC-125



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	2'	3'	4'	5'	6'	7'	8'	9'	10'
NWC-075	.065"	3"	3 1/4"	3/4"	gpm head spread		11 7' 25"	14 10' 36"	18 12' 60"	21 28' 77"				
NWC-125	.125"	5 3/4"	5"	1 1/4"	gpm head spread			19 6' 36"	21 7' 48"	23 8' 60"	25 10' 72"	28 12' 80"	30 14' 96"	33 16' 108"



## Watercastle Jet

## NWD series multi- adjustable

### Function

A versatile three-tiered spray effect with adjustable nozzles which allow for adaptability to site requirements. The intermediate and outer rings of jets are independently height adjustable with controls located on top of the spray head. **Not water level dependent.**

Visibility  
Sound Level  
Wind Resistance  
Splash/Mist



### Specification:

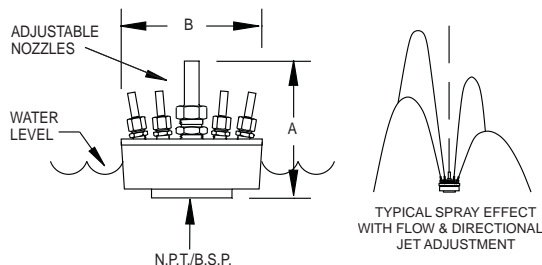
Construction shall be machined cast bronze body and cover. Nozzles and internal parts shall be extruded brass with stainless steel securing screws.

### Options:

(Add suffix)  
Q - chrome plated

### Note:

- (for optimum effect)
1. Requires fine screening at pump (see performance chart).
  2. Use shaded chart section.



### Dimensions

### Performance

DEFO no.	suction strainer openings required	a dim.	b dim.	inlet (npt) (bsp)	spray height	8'	10'	15'	20'	30'	40'	50'
NWD-200	.125"	7"	7"	2"	gpm head spread*	48 14' n/a	53 17' n/a	69 26' n/a	82 32' n/a			
NWD-250	.125"	10"	7"	2½"	gpm head spread*	76 11' n/a	96 17' n/a	119 25' n/a	140 33' n/a	183 49' n/a	220 63' n/a	
NWD-300	.125"	10"	7"	3"	gpm head spread*		150 15' n/a	172 20' n/a	196 26' n/a	341 43' n/a	423 58' n/a	499 70' n/a
NWD-400	.125"	12"	11"	4"	gpm head spread*		281 13' n/a	387 20' n/a	428 26' n/a	496 39' n/a	550 48' n/a	599 65' n/a
NWD-600	.125"	15"	11"	6"	gpm head spread*		514 13' n/a	661 20' n/a	773 26' n/a	992 39' n/a	1100 48' n/a	1220 65' n/a

\* Spread will vary according to adjustable nozzle setting.



## Replacement Parts

### General Information for Spray Jets:

#### Spread:

The measured spread on a spray jet includes the splash zone of the nozzle. This measurement is intended to be used when determining the position of a nozzle in relation to the pool edge.

#### Standard Threading:

Standard threading on DEFO components shall be National Pipe Thread (NPT) unless requested otherwise at the time of order. All thread sizes less than 1" will be NPT.

#### Engineering:

At Crystal Fountains Inc., we are dedicated to engineering accuracy and stand behind our products. The spray jets manufactured by our company have been tested using calibrated instrumentation for flow rate and pressure head at the facilities of the Canadian Hydraulics Centre under the auspices of the National Research Council of Canada (NRC).



Debris Screens



Nozzle Level



Cover Removal Keys



Swivel Connectors



Winter Cover



Finger Jets



Spray Ring Jets

#### Debris Screens

Part #	Use with Item
NAE075D	NAE-075
NAE100D	NAE-100
NAE125D	NAE-125
NAE150D	NAE-150
NAE200D	NAE-200
NAE300D	NAE-300
NAE400D	NAE-400

#### Nozzle Level

Part #	Use with Item
NLA100	All spray jets

#### Cover Removal Keys

Part #	Use with Item
NLF075K	NLF-075/076
NLG200K	NLG-200/201/202/203

#### Swivel Connectors

Part #	Use with Item
ASU/ASL	See page # 90

#### Winter Covers

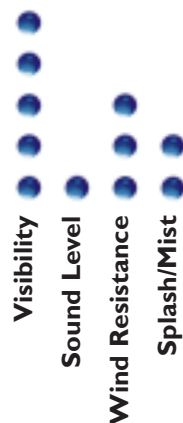
Part #	Use with Item
NLF075W	NLF-075/076
NLG200W	NLG-200/201/202/203

#### Finger Jets

Part #	Use with Item
NGF100C40	NGF/NLC

#### Spray Ring Jets

Part #	Use with Item
NEA012	NSR-122 thru 822
NEA025	NSR-223 thru 823



### Performance Characteristics Rating System

These characteristics are measured on a scale of 1 to 5. 1 is considered low and 5 is considered high.