

# CLUMP



WHIRL

## Tank Washing Nozzles

### DESIGN FEATURES

- Each nozzle in the stationary cluster is a BETE clog-resistant full cone nozzle of the MaxiPass™ series
- Can be supplied with various other BETE nozzles for any desired application
- Female connection

### SPRAY CHARACTERISTICS

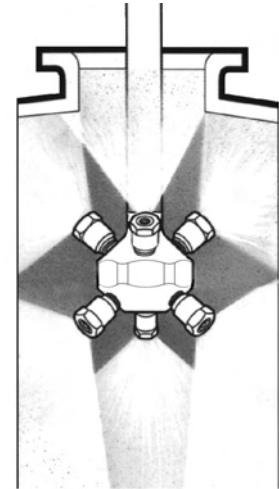
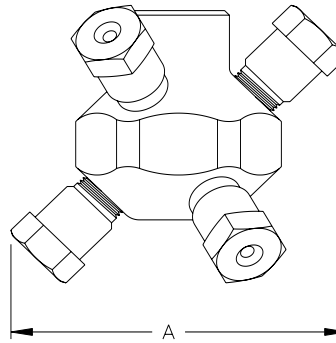
- Spherical omnidirectional coverage
  - Six nozzles arranged in cluster to project spray in all directions
- Flow rates:** 7.52 to 80.6 gpm (Special flow rates available)



### CLUMP Coverage Chart

When spraying at 40-50 psi

Female Pipe Size	Nozzle Number	Scrubbing Diameter (ft.)	Rinsing Diameter (ft.)
3/4"	CLUMP125	4	8
	CLUMP156	4	12
	CLUMP187	6	14
1"	CLUMP187	6	14
	CLUMP218	8	14
	CLUMP250	10	16



Dimensions are approximate. Check with BETE for critical dimension applications.

Typical CLUMP installation

### CLUMP Flow Rates and Dimensions

Spherical, 360° Spray Angle, 3/4" and 1" Pipe Size

Female Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI						Minimum Entrance Opening (in.) A	Weight (oz.)		
			10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI		80 PSI	Metal	Plas.
3/4"	CLUMP125	2.50	7.36	8.91	10.2	12.3	14.1	17.1	19.6	4.75	36.32	4.82
	CLUMP156	3.96	11.7	14.2	16.2	19.6	22.4	27.1	31.1			
	CLUMP187	5.72	16.9	20.4	23.4	28.3	32.4	39.2	44.9			
1"	CLUMP187	5.72	16.9	20.4	23.4	28.3	32.4	39.2	44.9	5.75	69.60	9.26
	CLUMP218	9.10	26.9	32.5	37.2	45.0	51.5	62.3	71.4			
	CLUMP250	10.30	30.3	36.7	42.0	50.8	58.2	70.4	80.6			

$$\text{Flow Rate (GPM)} = K (\text{PSI})^{0.47}$$

Standard Materials: 316 Stainless Steel and Brass. Other materials available on request.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.