Conversions & Equations

Q = Flow rate **P = Pressure** **SG= Specific Gravity**

$$Q = K(P)^x$$

$$P = \left(\frac{Q}{K}\right)^{1/x}$$

$$\left(\frac{Q_2}{Q_1}\right) = \left(\frac{P_2}{P_1}\right)^x$$

$$\left(\frac{Q_2}{Q_1}\right) = \sqrt{\frac{SG_1}{SG_2}}$$

Vessel with internal pressure:

$$l/min = K\left(P_{inlet} - P_{Vessel}\right)^x$$

Nozzle Series	Exponent x	Nozzle Series	Exponent x
BJ	0.50	PJ	0.50
CW	0.47	PSR	0.50
FF	0.50	SC	0.47
IS	0.50	SPN	0.50
L	0.50	ST	0.50
LP	0.50	STXP	0.50
MaxiPass	0.47	TC	0.46
MPL	0.43	TD/TDL	0.50
MicroWhirl	0.50	TF	0.50
N	0.50	TFXP	0.50
NC	0.47	TH, THW	0.50
NCJ	0.47	TW	0.50
NCK	0.47	WL	0.47
NCS	0.47	WT	0.50
NF	0.50	WTX	0.50
P	0.50	WTZ	0.50

Dropsize

$$\left(\frac{D_2}{D_1}\right) = \left(\frac{P_2}{P_1}\right)^{-0.3}$$

System Design

$$P_{Pump} = P_{Nozzle} + P_{Pipe\ Losses} + \rho h / 100000$$

Conversion Data

MULTIPLY	BY	TO OBTAIN
atmospheres	1.013	bar
atmospheres	33.931	feet of water
atmospheres	1.0332	kg/cm^2
atmospheres	101.3	kiloPascals (kPa)
atmospheres	14.696	psi
bar	100	kPa
bar	14.5	psi
barrels (oil)	42	gallons
centimeters	0.3937	inches
centiStokes	Sp. gravity	centiPoise
cm^3	0.061	in^3
cm^3	0.000264	gallons
cm^3	0.001	liters
ft^3	1728	inches
ft^3	0.02832	m^3
ft^3	7.48	gallons
ft^3	28.32	liters
ft^3 (water)	62.43	pounds (water)
in^3	16.39	cm^3
in^3	0.00433	gallons
in^3	0.164	liters
m^3	35.31	ft^3
m^3	61.024	in^3
m^3	264.2	gallons
m^3	1000	liters
degree (angle)	60	minutes
degree (Celsius)	(°C x 1.8) +32	degree (Fahrenheit)
degree (Fahrenheit)	(°F-32) x 5/9	degree (Celsius)
feet	0.3048	meters
feet/sec	30.48	centimeters/sec

Conversion Data

MULTIPLY	BY	TO OBTAIN
feet/sec	18.29	meters/min
feet of water	0.0295	atmospheres
feet of water	0.884	inches of mercury
feet of water	0.433	psi
gallons	3785	cm^3
gallons	0.1337	ft^3
gallons	0.83267	imperial gallons
gallons	3.785	liters
gallons/min	0.06309	liters/sec
imperial gallons	1.2	gallons
horsepower	1.014	horsepower (metric)
horsepower	33,000	foot pounds/min
horsepower	746	Watts
inches	2.54	centimeters
kg/cm^2	14.22	psi
kiloWatts	1.340	horsepower
liters	1000	cm^3
liters	0.264	gallons
liters	0.22	imperial gallons
liters	33.8	ounces (fluid)
meters	3.281	feet
microns (μm)	0.0394	thousandth of an inch
miles/hr	44.7	centimeters/sec
miles/hr	1.467	feet/sec
millimeters	0.0394	inches
psi	0.068	atmospheres
psi	0.06895	bar
psi	2.307	feet of water
psi	0.0703	kg/cm^2
psi	6.895	kPa

Terms and Conditions.

SHIPPING: Same-day shipment or expedited delivery is available from our extensive inventory. We keep thousands of different nozzles in stock. Custom nozzles, fabrications, and spraying systems can be manufactured to meet your precise needs. Prices quoted are FOB Greenfield, MA. Shipping is not included. A $150.00 minimum order is required.

RETURN POLICY: Returns may be accepted within one year from the date of purchase. Please contact Customer Service at sales@bete.com with any return requests. A restocking charge of 30% will apply for standard products accepted for return. No goods may be returned without prior authorization. Non-catalog options are not eligible for return.

Terms are Net 30 days for approved accounts. Please contact sales@bete.com to apply for Net 30 terms. **BETE FOG NOZZLE** reserves the right to charge interest on past-due accounts. **BETE FOG NOZZLE** reserves the right to change specifications or design at any time without notice. Illustrations shown in this catalog are for information only.

Warranty—all goods are warrantied for good workmanship in accordance with industry standards and will perform according to the products' specifications.

Limitation of Liability—BETE's liability shall be limited to the total value of the product under the applicable purchase order.