

# HydroPulse®

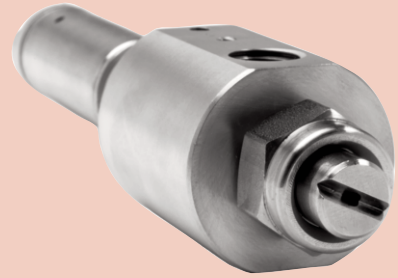
## Pneumatically Actuated - Low Flow Flat Fan

### DESIGN FEATURES

- Interchangeable flat fan spray tips
- Pneumatically actuated for crisp on/off spray
- Straight through porting for in-series set-up
- Variety of mounting brackets available

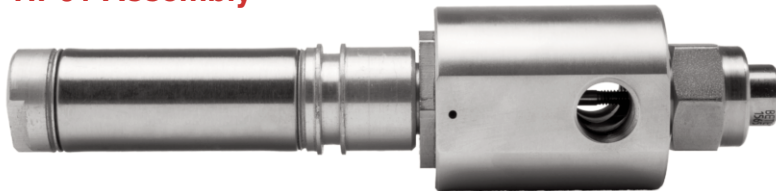
### SPRAY CHARACTERISTICS

- Relatively coarse atomization
  - Uniform distribution with tapered edges for use in overlapping sprays
- Spray pattern:** Flat Fan  
**Spray angles:** 0° to 110°  
**Flow rate:** 0.024 to 24.7 gpm



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### HP01 Assembly



### HP02 Assembly



### Easy to maintain; positive sealing performance!

- **Fluid Connection Size:** 1/8", 1/4", Female, NPT/BSP  
Two fluid ports are standard, allowing for an in-series setup; a plug to seal one port is included.
- **Maximum Fluid Pressure:** 600 psi
- **Air Cylinders:** Single-acting spring extend type. Air pressure retracts the rod and allows flow through the nozzle. Removing air pressure extends the rod and seals the nozzle. Double-acting cylinder available upon request.
- **Air Connection Size:** 1/8" Female NPT; 1/8" Female BSP Adapter automatically included when fluid connection is BSP
- **Air Cylinder Pressure:** Minimum: 30 psi\*; Maximum: 250 psi.  
\*For larger BJ tips, more pressure may be required to break seal.
- **Frequency Rating:** Up to 180 cycles/minute, with an appropriate solenoid valve (Cv=0.08 minimum).
- **Weights:** HP01 Assembly: 1.3 lbs; HP02 Assembly: 1.5 lbs
- **Operating Temperature Range:** -15 °F to 400 °F. Nylon Mounting Hardware: 250 °F MAX
- **Standard Materials:**

*Body:* Nickel-plated Brass or 303 Stainless Steel

*Internals:* PTFE, Viton, 303SS

*Air Cylinder:* Stainless Steel, Anodized Aluminum, PTFE, and Viton®

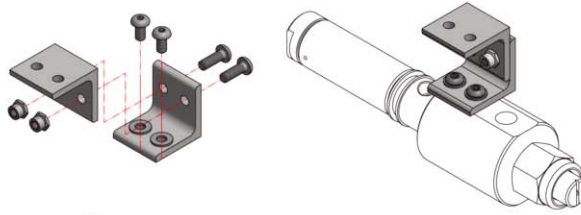
*Fluid Seals:* FDA-compliant Viton®

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

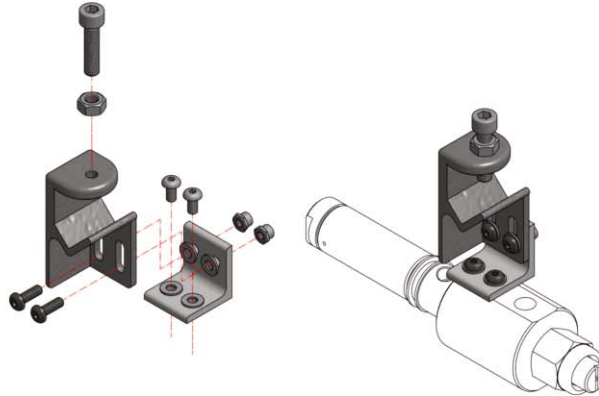
# HydroPulse

## Optional Mounting Bracket Kits

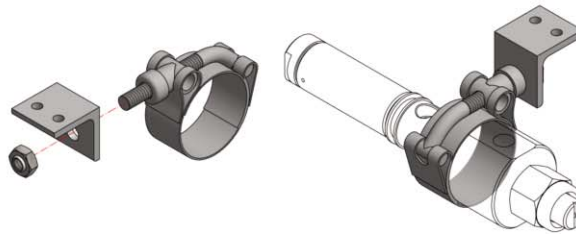
**Kit 01  
Angle Bracket**



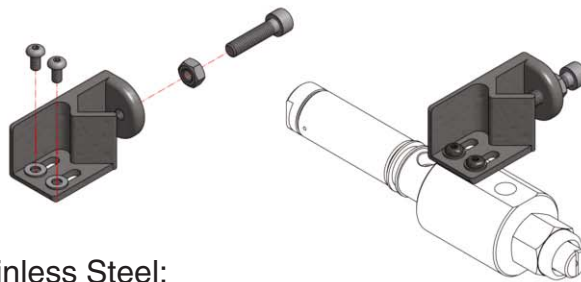
**Kit 02  
V-Block Bracket**



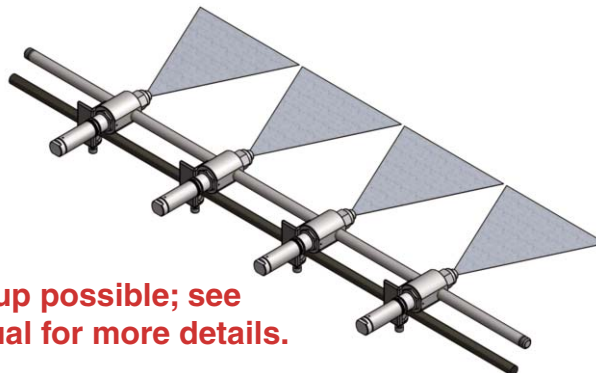
**Kit 03  
Clamp Bracket**



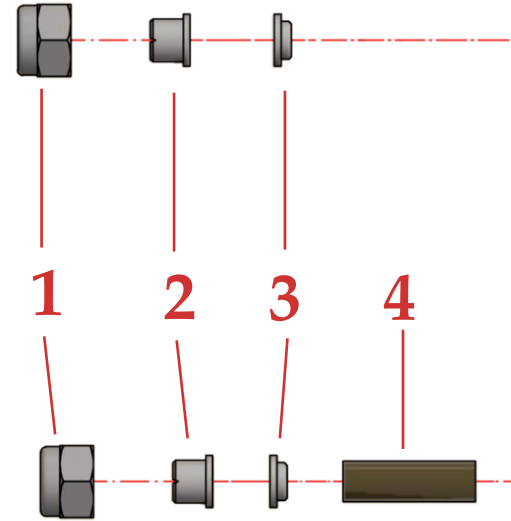
**Kit 04  
Direct Mount  
V-Block Bracket**



Brackets: 316 Stainless Steel;  
Hardware: 18-8SS with Nylon locking insert



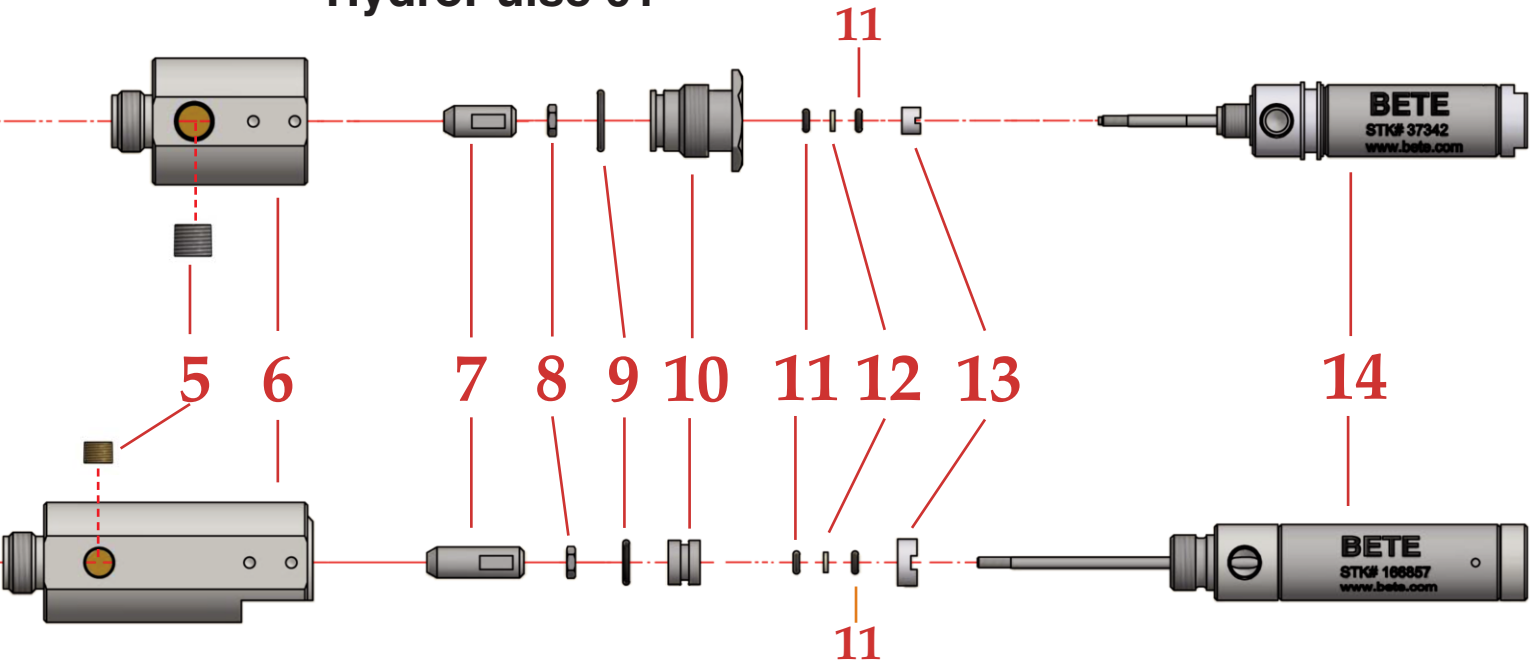
**In-series set-up possible; see  
instruction manual for more details.**



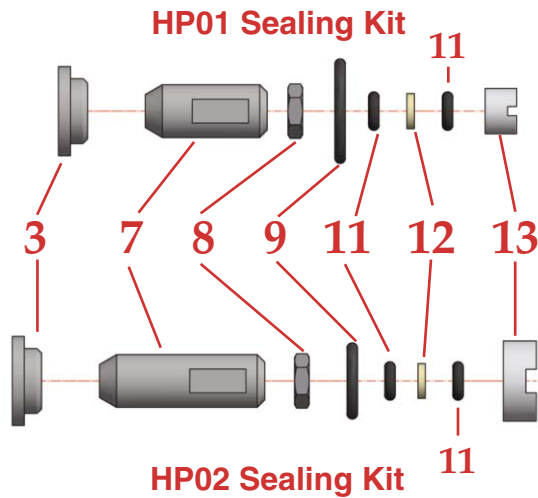
Item Number	Part Name
1	CAP NUT
2	TIP (BJ, BJH, CW, ST)
3	SEALING WASHER
4	FLOW CONDITIONER (HP 02 ONLY)
5	HEX SOCKET PLUG
6	BODY
7	SEALING TIP
8	JAM NUT
9	BUSHING O-RING
10	BUSHING
11	AIR CYLINDER O-RING (x2)
12	BACK-UP RING
13	COMPRESSIBLE BUSHING
14	AIR CYLINDER

# HydroPulse® Components & Options

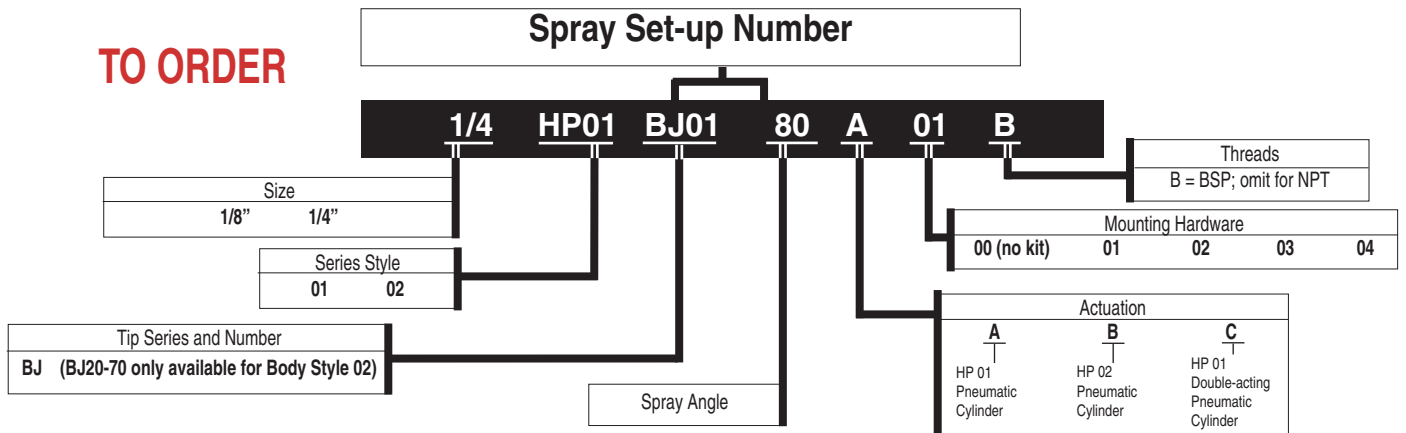
## HydroPulse 01



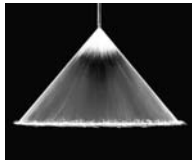
## HydroPulse 02



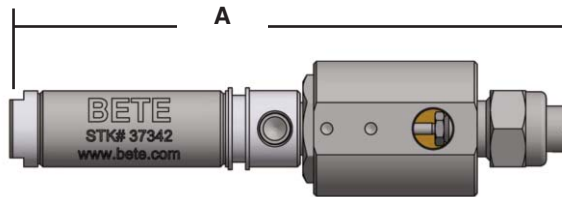
**TO ORDER**



# HydroPulse® Components & Options



Fan 80°



A - Overall Length (inches)	
HP01	HP02
6	7.59

## Flat Fan (BJ) Tip - Flow Rates, Dimensions, and Angles

Nozzle Tip Number	K Factor	GALLONS PER MINUTE @ PSI							Equivalent Orifice Dia. (in.)	Available Spray Angles	
		5 PSI	10 PSI	20 PSI	40 PSI	80 PSI	100 PSI	500 PSI			
BJ 0067	0.0106	0.024	0.034	0.047	<b>0.067</b>	0.095	0.11	0.24	0.023	0, 15, 25, 40, 50, 65, 80	
BJ 0077	0.0122	0.027	0.039	0.054	<b>0.077</b>	0.11	0.12	0.27	0.023	73	
BJ 01	0.0158	0.035	0.050	0.071	<b>0.100</b>	0.14	0.16	0.35	0.028	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 0116	0.0183	0.041	0.058	0.082	<b>0.116</b>	0.164	0.183	0.41	0.036	73	
BJ 015	0.0237	0.053	0.075	0.11	<b>0.15</b>	0.21	0.24	0.53	0.038	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 02	0.0316	0.071	0.10	0.14	<b>0.20</b>	0.28	0.32	0.71	0.039	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 03	0.0474	0.11	0.15	0.21	<b>0.30</b>	0.42	0.47	1.1	0.047	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 04	0.0632	0.14	0.20	0.28	<b>0.40</b>	0.57	0.63	1.4	0.055	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 05	0.0791	0.18	0.25	0.35	<b>0.50</b>	0.71	0.79	1.8	0.061	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 06	0.0949	0.21	0.30	0.42	<b>0.60</b>	0.85	0.95	2.1	0.067	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 08	0.127	0.28	0.40	0.57	<b>0.80</b>	1.1	1.3	2.8	0.074	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 10	0.158	0.35	0.50	0.71	<b>1.0</b>	1.4	1.6	3.5	0.086	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 15	0.237	0.53	0.75	1.1	<b>1.5</b>	2.1	2.4	5.3	0.107	0, 15, 25, 40, 50, 65, 80, 95, 110	
<b>*HP 02 ONLY</b>	BJ 20*	0.316	0.71	1.0	1.4	<b>2.0</b>	2.8	3.2	7.1	0.125	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 30*	0.474	1.1	1.5	2.1	<b>3.0</b>	4.2	4.7	10.6	0.141	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 40*	0.633	1.4	2.0	2.8	<b>4.0</b>	5.7	6.3	14.1	0.156	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 50*	0.791	1.8	2.5	3.5	<b>5.0</b>	7.1	7.9	17.7	0.172	15, 25, 40, 50, 65, 80, 95, 110
	BJ 60*	0.949	2.1	3.0	4.2	<b>6.0</b>	8.5	9.5	21.2	0.188	15, 25, 40, 50, 65, 80, 95, 110
	BJ 70*	1.107	2.5	3.5	4.9	<b>7.0</b>	9.9	11.1	24.7	0.203	15, 25, 40, 50, 65, 80, 95, 110

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

BJ Tip Materials: Brass, 303 Stainless Steel, and 316 Stainless Steel.

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



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CALL 413-772-0846  
Call for the name of your nearest BETE representative.