

# HydroPulse

## Pneumatically Actuated - Flat Fan

### DESIGN FEATURES

- Interchangeable flat fan spray tips
- Pneumatically actuated for crisp on/off spray
- Straight through porting for in-series set-up
- 303 SS assembly contains all food-grade materials
- 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:** 0.084 to 101 l/min



HP01 Assembly



HP02 Assembly

### Easy to maintain; drip-free 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:** 41.3 bar
- **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: 2 bar<sup>\*</sup>; Maximum: 17.2 bar.  
<sup>\*</sup>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: 0.59 kg; HP02 Assembly: 0.68 kg
- **Operating Temperature Range:** -26° to 204°C. Nylon Mounting Hardware: 121°C MAX
- **Standard Materials:**

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

*Internals:* PTFE, Viton, 303SS

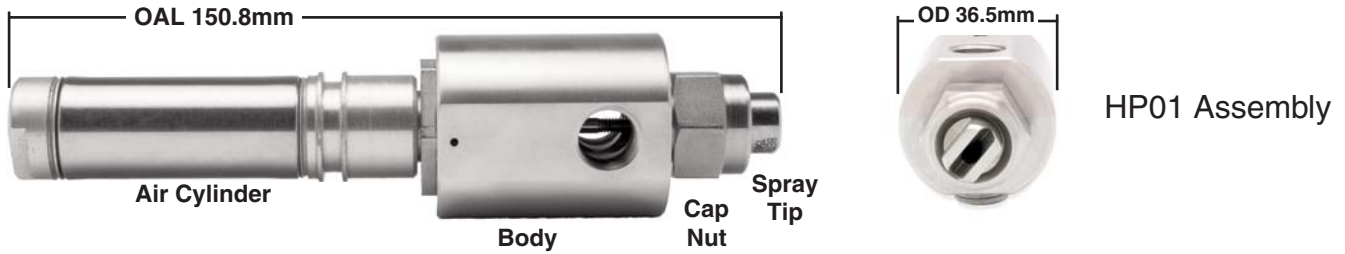
*Air Cylinder:* Stainless Steel, Anodized Aluminum, PTFE, and Viton®

*Fluid Seals:* FDA-compliant Viton®

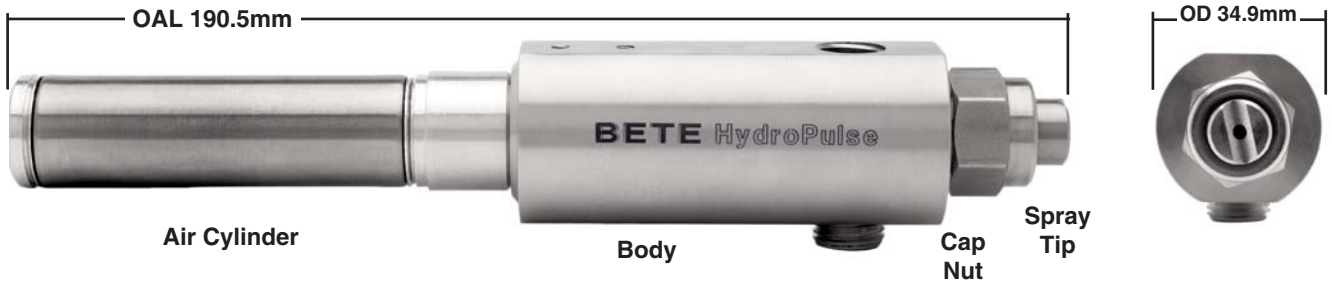
TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.

FAN

## HP01 Assembly



## HP02 Assembly



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

### Flat Fan (BJ) - Fan Tip Dimensions

Nozzle Tip Number	Equiv. Orifice Diameter (mm)	K Factor	LITERS PER MINUTE @ BAR							Standard Available Spray Angles*	
			0.3 bar	1 bar	2 bar	5 bar	10 bar	20 bar	40 bar		
BJ 0067	0.580	0.153	0.084	0.153	0.220	0.340	0.480	0.680	0.970	0, 15, 25, 40, 50, 65, 80	
BJ 0077	0.580	0.175	0.096	0.175	0.250	0.390	0.550	0.780	1.11	73	
BJ 01	0.710	0.228	0.120	0.228	0.320	0.510	0.720	1.02	1.44	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 0116	0.910	0.264	0.140	0.264	0.370	0.590	0.840	1.18	1.67	73	
BJ 015	0.970	0.342	0.190	0.342	0.480	0.760	1.08	1.53	2.16	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 02	0.990	0.456	0.250	0.456	0.640	1.02	1.44	2.04	2.88	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 03	1.19	0.684	0.370	0.684	0.970	1.53	2.16	3.06	4.32	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 04	1.40	0.912	0.500	0.912	1.29	2.04	2.88	4.08	5.77	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 05	1.55	1.14	0.620	1.14	1.61	2.55	3.60	5.10	7.21	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 06	1.70	1.37	0.750	1.37	1.93	3.06	4.32	6.11	8.65	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 08	1.88	1.82	1.00	1.82	2.58	4.08	5.77	8.15	11.5	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 10	2.18	2.28	1.25	2.28	3.22	5.10	7.21	10.2	14.4	0, 15, 25, 40, 50, 65, 80, 95, 110	
BJ 15	2.72	3.42	1.87	3.42	4.83	7.64	10.8	15.3	21.6	0, 15, 25, 40, 50, 65, 80, 95, 110	
*HP 02 ONLY	BJ 20	3.18	4.56	2.5	4.56	6.45	10.2	14.4	20.4	28.8	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 30	3.67	6.84	3.74	6.84	9.67	15.3	21.6	30.6	43.2	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 40	3.97	9.12	4.99	9.12	12.9	20.4	28.8	40.8	57.7	0, 15, 25, 40, 50, 65, 80, 95, 110
	BJ 50	4.37	11.4	6.24	11.4	16.1	25.5	36	51	72.1	15, 25, 40, 50, 65, 80, 95, 110
	BJ 60	4.76	13.7	7.49	13.7	19.3	30.6	43.2	61.1	86.5	15, 25, 40, 50, 65, 80, 95, 110
	BJ 70	5.16	16.0	8.74	16.0	22.6	35.7	50.4	71.3	101	15, 25, 40, 50, 65, 80, 95, 110

$$\text{Flow Rate (L/min)} = K\sqrt{\text{bar}}$$

BJ tip materials: Brass, 303SS, and 316SS

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

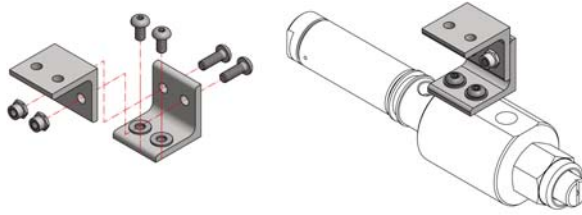


CALL 413-772-0846  
Call for the name of your nearest BETE representative.

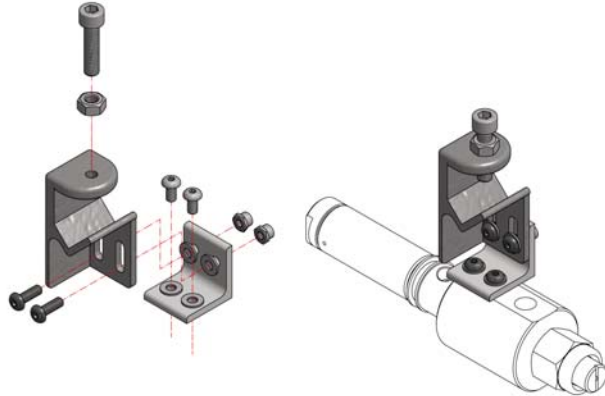
# HydroPulse

## Optional Mounting Bracket Kits

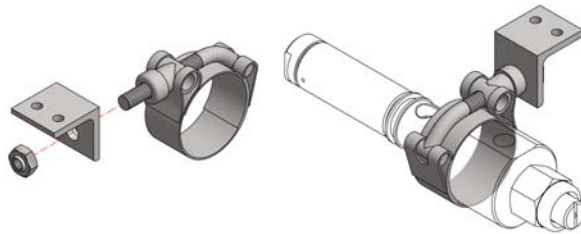
**Kit 01  
Angle Bracket**



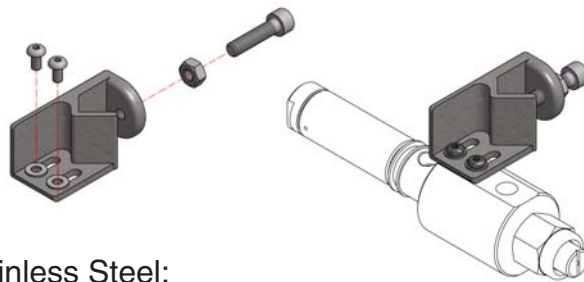
**Kit 02  
V-Block Bracket**



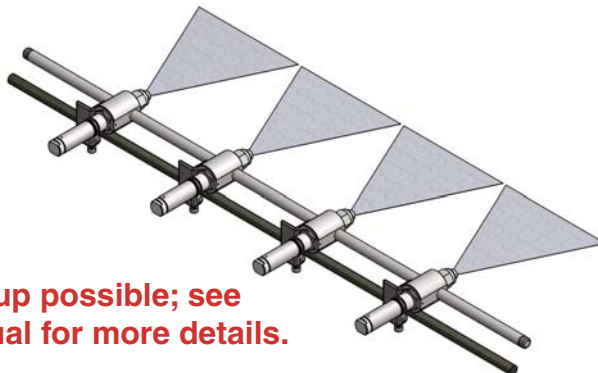
**Kit 03  
Clamp Bracket**



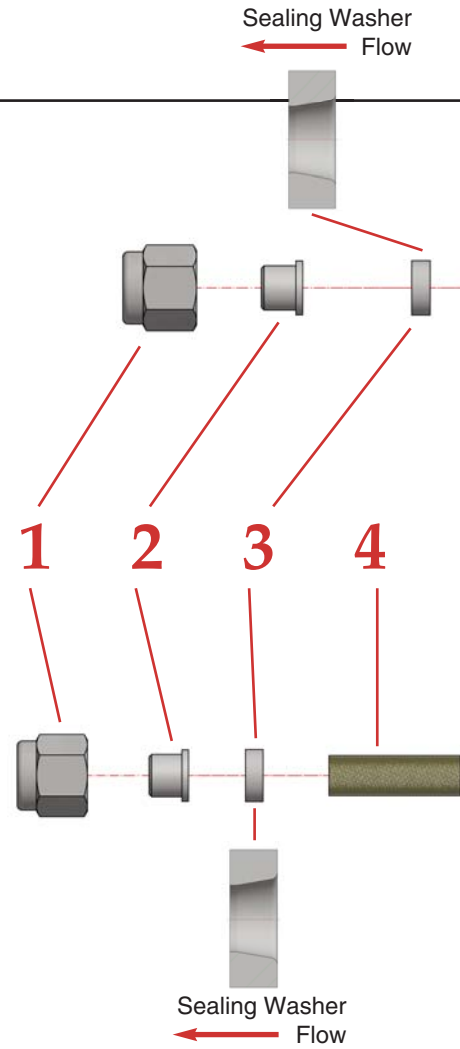
**Kit 04  
Direct Mount  
V-Block Bracket**



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



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



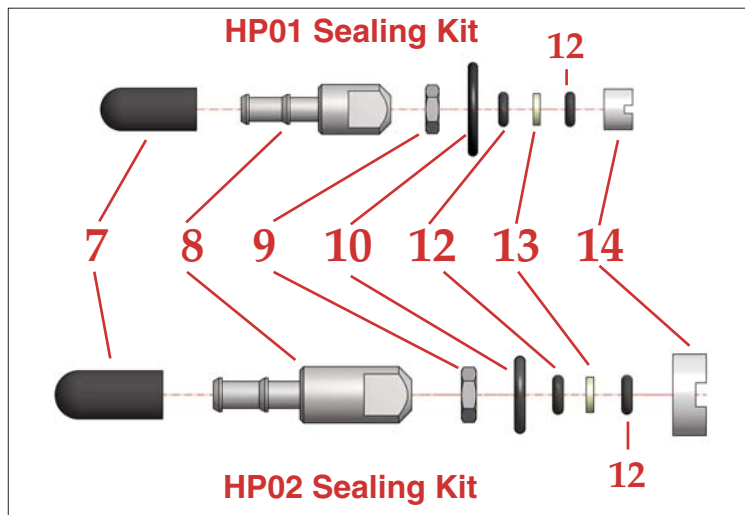
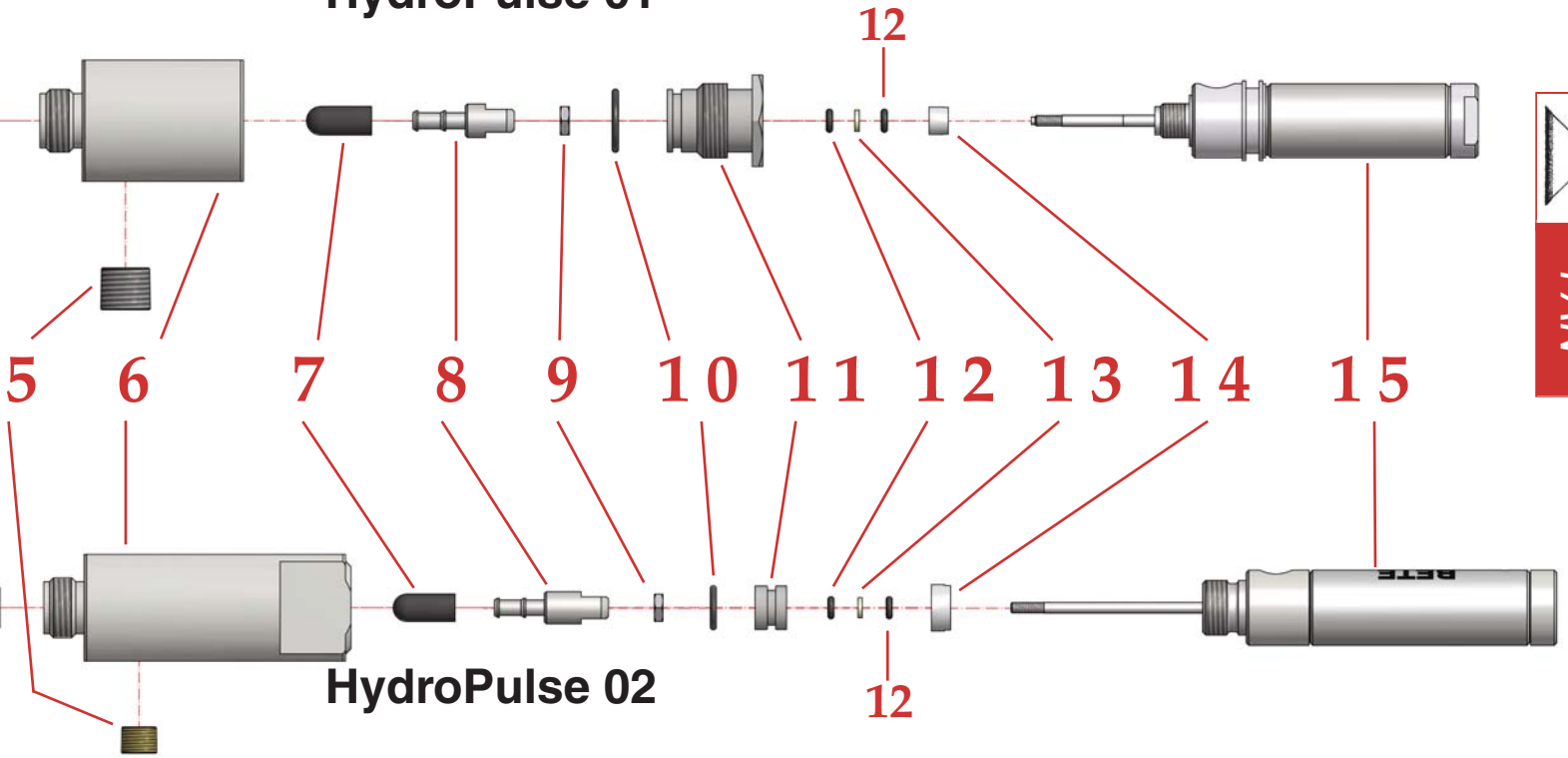
Item Number	Part Name
1	CAP NUT
2	TIP
3	SEALING WASHER
4	FLOW CONDITIONER (HP 02 ONLY)
5	HEX SOCKET PLUG
6	BODY
7	SEALING TIP
8	BARBED BASE
9	JAM NUT
10	BUSHING O-RING
11	BUSHING
12	AIR CYLINDER O-RING (x2)
13	BACK-UP RING
14	COMPRESSIBLE BUSHING
15	AIR CYLINDER

FAN

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

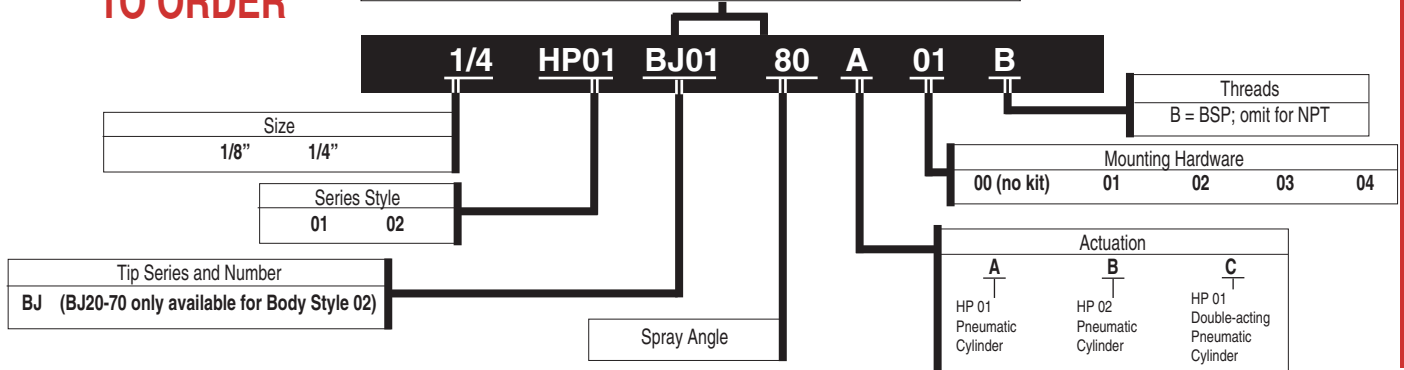
# Pneumatically Actuated - Low Flow Flat Fan

## HydroPulse 01



**TO ORDER**

**Spray Set-up Number**



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