

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
- 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: 0.024 to 24.7 gpm



FAN



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:** 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° 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®

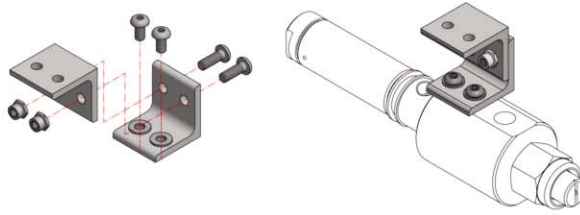
Fluid Seals: FDA-compliant Viton®

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

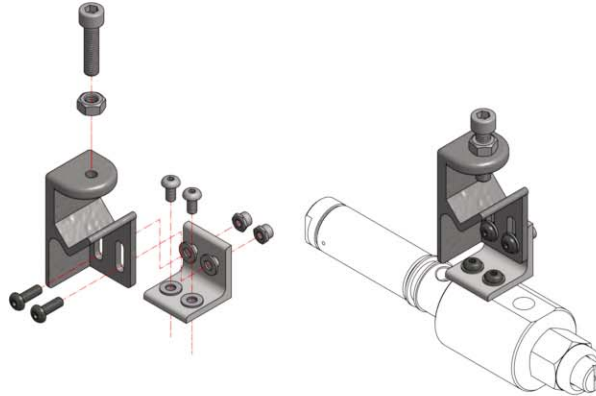
HydroPulse

Optional Mounting Bracket Kits

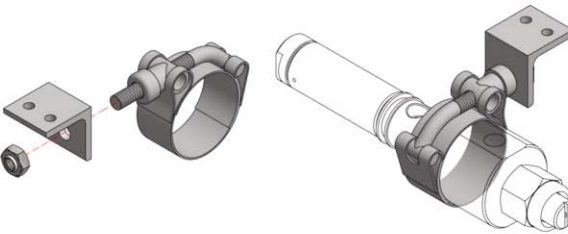
**Kit 01
Angle Bracket**



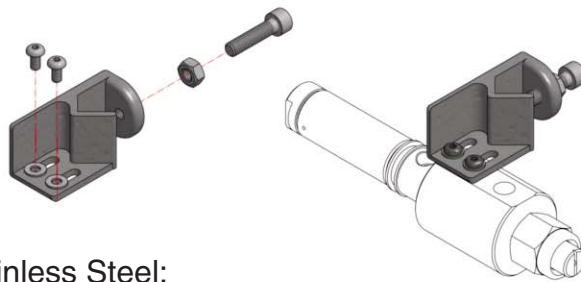
**Kit 02
V-Block Bracket**



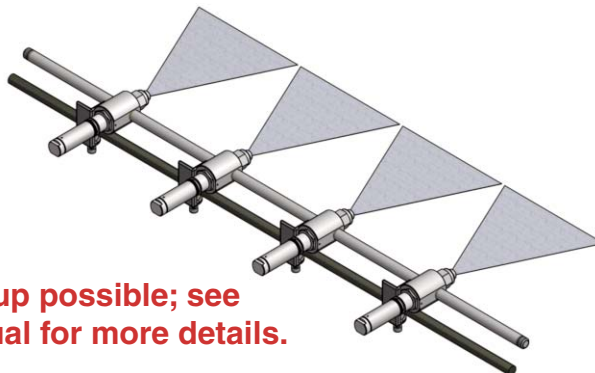
**Kit 03
Clamp Bracket**



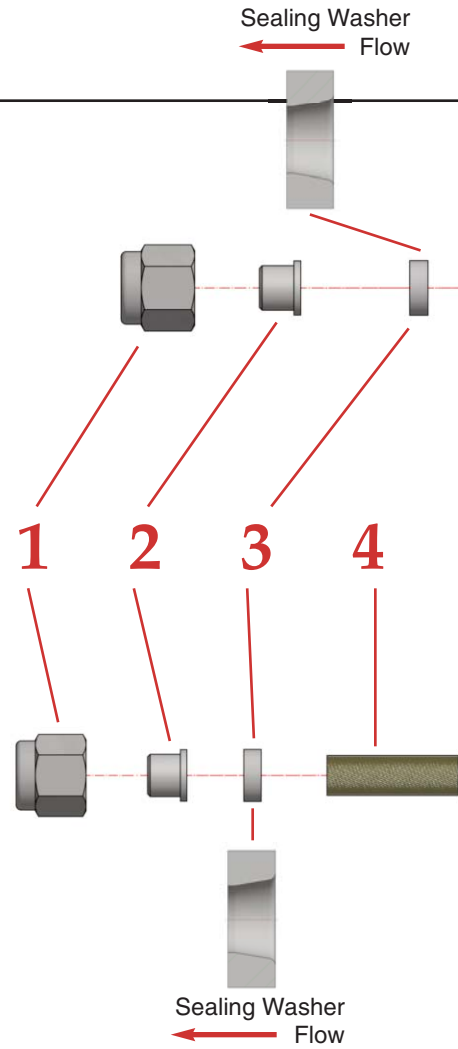
**Kit 04
Direct Mount
V-Block Bracket**



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



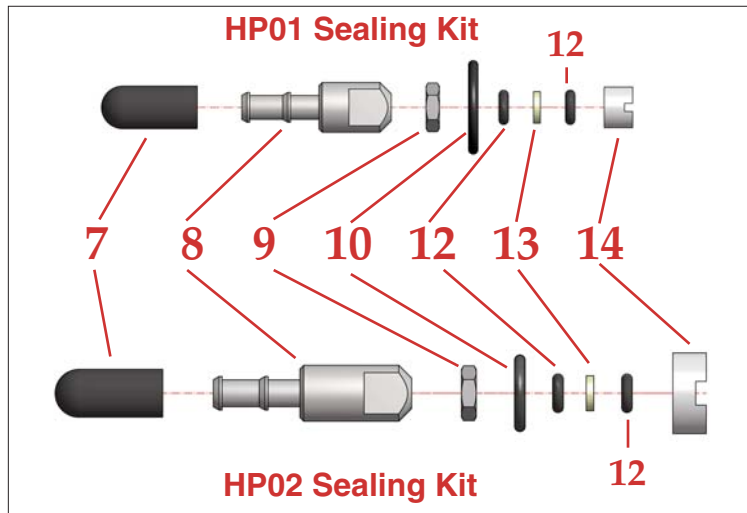
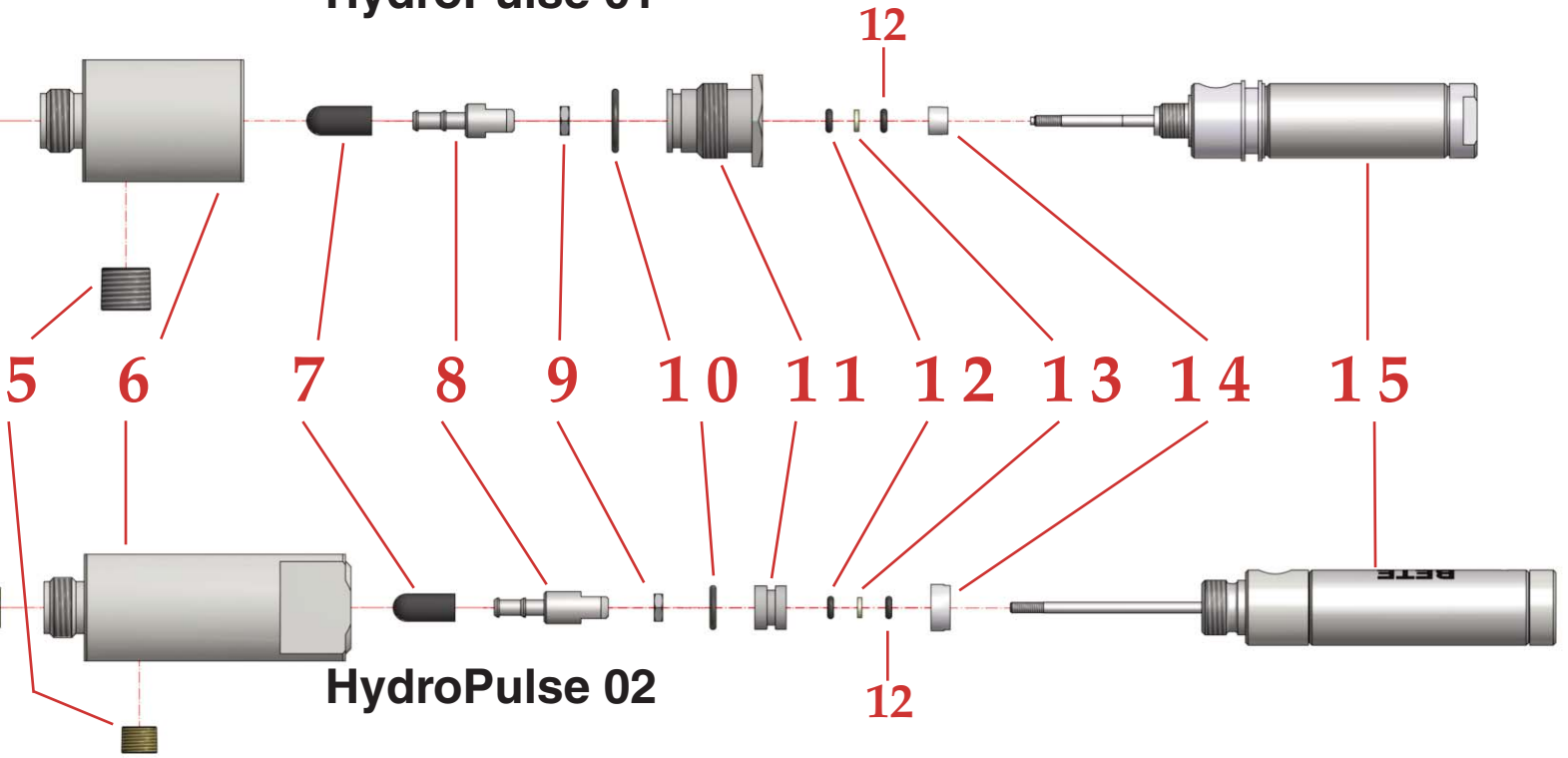
**In-series set-up possible; see
instruction manual for more details.**



Item Number	Part Name
1	CAP NUT
2	TIP
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

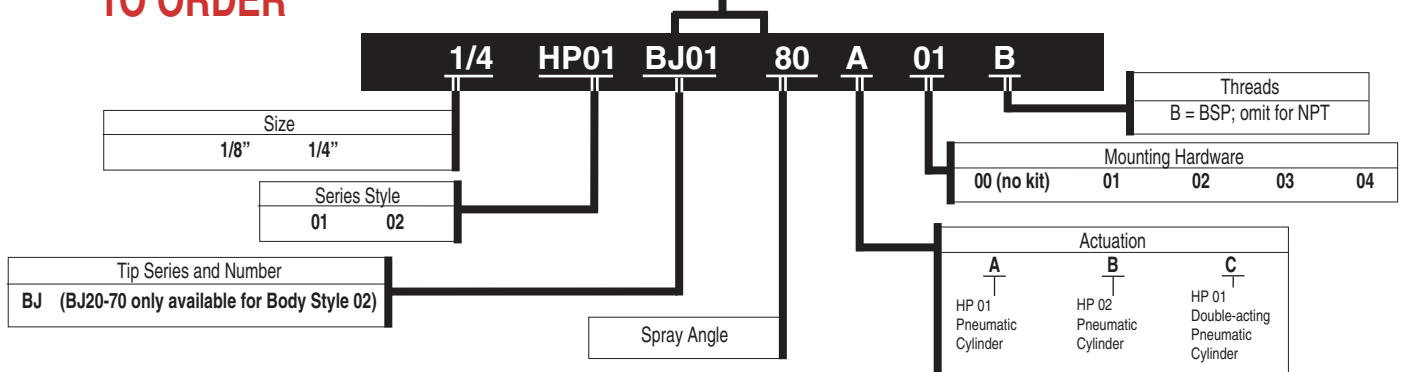
Pneumatically Actuated - Low Flow Flat Fan

HydroPulse 01

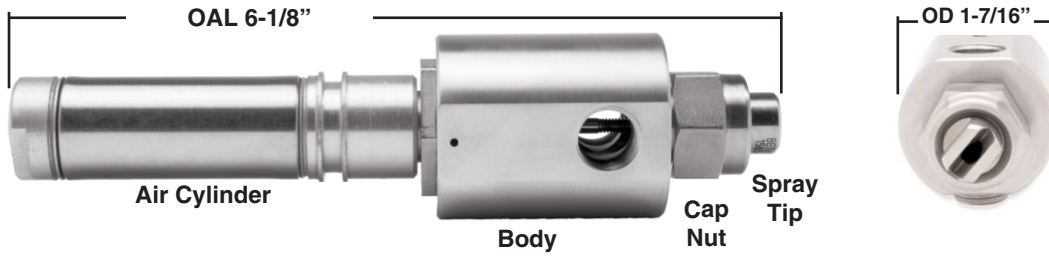


TO ORDER

Spray Set-up Number



HP01 Assembly



HP02 Assembly



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

Flat Fan (BJ) Tip - Flow Rates and Angles

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

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

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

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

