

# EHPi

## Electric HydroPulse, Industrial Design

Electric-actuated HydroPulse® Spray Nozzles assure precision volumes of expensive ingredients and compounds are sprayed directly onto the processing target, with overspray waste virtually eliminated. The HydroPulse® Electric Industrial Design spray nozzles can be paired with the FlexFlow™ Precision Spray Control system which provides ultimate timing control, achieving uniform coverage even if conveyor speed is adjusted. Suitable for industrial applications such as engineered wood production.



### Key product features

Electric HydroPulse® - Industrial Design	
Liquid inlet connection	1/8", NPT or BSPT
Maximum liquid flow rate	3.8 LPM
Maximum rated pressure	20.7 bar
Thermal insulation class	F (155°C/311°F)
Power	10.4W @ 24VDC
Maximum cycle frequency	50 cycles/sec
Nozzle construction	Stainless steel wetted components, Viton® (FKM) seals
Interchangeable BJ, BJH and CW nozzle tip options	

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### How it works

Electric HydroPulse Industrial Design (EHPi) spray nozzles do not require a compressed air source and are capable of cycling on/off up to 50 cycles per second. These features afford the option of using high-frequency cycling known as Pulse Width Modulation (PWM) to vary the liquid spray flow rate at constant supply pressure with little change in spray performance by adjusting the duty cycle. When the spray cycles at a high enough frequency, coverage uniformity is maintained because the duration between pulses of spray is short enough to ensure there are no gaps in the spray coverage.



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### Applications

#### ENGINEERED WOOD PRODUCTION (example of industrial application)

- Apply PMDI or LPF resin in the blender
- Apply slack wax, tallow wax or e-wax in the blender
- Add surface moisture before pressing boards
- Apply mixed release agent on mats, cauls, or press belts when using PMDI resins
- Mark nail lines on oriented strand board (OSB)

#### BENEFITS

- Ensure precise application and reduce waste
- Integrate tonnage or line speed to maintain uniform coverage when variables change
- Reduce the use of expensive resins, waxes, or release agents by applying the exact volume required
- Apply the optimal amount of surface moisture to increase production by decreasing time in the press
- Confidently transition to running full polymeric MDI products with non-stick press protection
- Eliminate compressed air from most pre-press and wax operations

### Flow data

#### Flat fan tips

Tip	K Factor	Litres per minute @ BAR								
		0.3	0.5	0.7	1	2	5	10	15	20
BJ0039	0.089	0.049	0.063	0.074	0.089	0.126	0.199	0.281	0.345	0.398
BJ005	0.114	0.062	0.081	0.095	0.114	0.161	0.255	0.360	0.442	0.510
BJ0067	0.153	0.084	0.108	0.128	0.153	0.216	0.342	0.484	0.593	0.684
BJ0077	0.175	0.096	0.124	0.146	0.175	0.247	0.391	0.553	0.678	0.783
BJ01	0.228	0.125	0.161	0.191	0.228	0.322	0.510	0.721	0.883	1.020
BJ0116	0.264	0.145	0.187	0.221	0.264	0.373	0.590	0.835	1.022	1.181
BJ015	0.342	0.187	0.242	0.286	0.342	0.484	0.765	1.081	1.325	1.529
BJ0154	0.351	0.192	0.248	0.294	0.351	0.496	0.785	1.110	1.359	1.570
BJ02	0.456	0.250	0.322	0.382	0.456	0.645	1.020	1.442	1.766	2.039
BJ0231	0.526	0.288	0.372	0.440	0.526	0.744	1.176	1.663	2.037	2.352
BJ03	0.684	0.375	0.484	0.572	0.684	0.967	1.529	2.163	2.649	3.059
BJ0308	0.702	0.385	0.496	0.587	0.702	0.993	1.570	2.220	2.719	3.139
BJ0385	0.877	0.480	0.620	0.734	0.877	1.240	1.961	2.773	3.397	3.922
BJ04	0.912	0.500	0.645	0.763	0.912	1.290	2.039	2.884	3.532	4.079
BJ0462	1.053	0.577	0.745	0.881	1.053	1.489	2.355	3.330	4.078	4.709
BJ05	1.139	0.624	0.805	0.953	1.139	1.611	2.547	3.602	4.411	5.094

#### Full cone tips

Tip	K factor	Litres per minute @ BAR							
		0.5	0.7	1	2	3	5	10	20
CW25-F	0.587	0.42	0.50	0.59	0.81	0.98	1.25	1.73	2.40
CW50-F	1.17	0.84	0.99	1.17	1.62	1.96	2.49	3.45	4.78
CW75-F	1.76	1.27	1.49	1.76	2.44	2.95	3.75	5.19	7.19
CW100-F	2.35	1.70	1.99	2.35	3.26	3.94	5.01	6.94	9.61

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