

32 HIGH PRESSURE OSCILLATING SHOWER SYSTEM

Benefits for Papermakers

Rugged and simple, **32** High Pressure Oscillating Showers are designed and tested to operate at very high pressures and are ideal for many papermaking applications.

Kadant AES **32** Showers offer the benefits of low cost, dependable long-term performance and minimal maintenance. Each shower is built to meet specific application requirements and precisely engineered to deliver maximum cleaning and conditioning.

Construction Features

Shower piping is 316L stainless steel, schedule 10 or 40, to resist the most corrosive water conditions. The pipe may be rotated to achieve the most effective spray.

Nozzle type, orifice size and spacing are carefully matched to the shower's specified application. Nozzle bases are welded to the pipe and a wide range of orifice sizes are available in stainless steel or with wear-resistant inserts.

A flexible, high pressure reinforced hose functions as the feed line and the inlet connection may be to either end of the shower pipe.

Concentric bearings, engineered with surface areas designed to surpass maximum loads, support the shower pipe and are lined with replaceable, self-lubricating, high density poly-ethylene liners. The bearings ride on polished stainless steel wear sleeves. If the wear sleeve surface or liner is damaged, either is easily replaced, preventing damage to the shower pipe.

Easy Installation

Universal mounting brackets allow easy installation of the shower at any angle on the paper machine. The brackets prevent any binding in the bearings or oscillator due to shower pipe deflection. Installation is extremely simple, requiring only two bolts at each end. Quick release pivot pins allow fast shower removal and replacement during machine clothing changes.

Applications

- **Forming, Press and Dryer**
- **Fabric Cleaning and Conditioning**
- **Suction, Dandy and Grooved Roll Cleaning**
- **Cylinder, Decker, Saveall and Washer Wire Applications**

Oscillation choice

Kadant AES electro-mechanical or hydraulic oscillators provide dependable oscillation and assure complete coverage with uniform fluid distribution. With stroke lengths up to 12", fewer nozzles are required, significantly reducing water consumption.

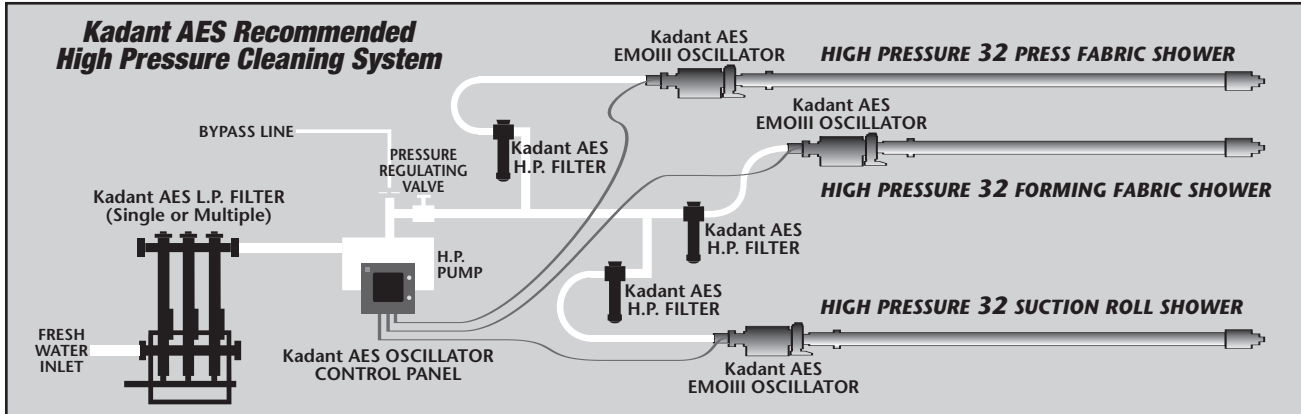
Safety Shut-Off

Kadant AES oscillators are equipped with a motion failure alarm and terminals for connection to a pump or solenoid valve shut-off system. If oscillation unexpectedly stops, a signal is provided to shut the system down and an alarm is activated. This avoids damage to the process.

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Nozzles Kadant AES nozzles are precisely engineered to produce extremely well defined concentrations of high pressure water. Rigid quality control guarantees highly effective high pressure shower cleaning systems.

Applications include forming, press and dryer fabric cleaning and conditioning; suction, dandy and grooved roll cleaning; cylinder, decker, saveall and washer wire applications.

Size Code	NEEDLE JET NOZZLE FLOW				FAN NOZZLE FLOW						
	.033 in. .8 mm		.040 in. 1 mm		.05 in. 1.4 mm		15° .040 in. 1 mm		30° .040 in. 1 mm		
PSI	MPa	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM
20	.138	.120	.454	.150	.568	.300	1.135	.157	.594	.160	.606
30	.207	.140	.530	.200	.757	.360	1.363	.192	.727	.196	.742
40	.276	.162	.613	.225	.852	.400	1.514	.222	.840	.226	.855
50	.345	.180	.681	.252	.954	.450	1.703	.258	.939	.253	.958
60	.414	.197	.746	.279	1.056	.480	1.817	.272	1.029	.277	1.048
70	.483	.215	.814	.300	1.135	.530	2.006	.293	1.109	.299	1.132
80	.552	.220	.833	.320	1.211	.580	2.195	.314	1.188	.320	1.211
90	.621	.240	.908	.339	1.283	.630	2.384	.333	1.260	.340	1.287
100	.690	.252	.954	.358	1.355	.670	2.536	.351	1.328	.358	1.355
120	.828	.280	1.060	.390	1.476	.710	2.687	.384	1.453	.392	1.484
140	.966	.300	1.135	.421	1.593	.740	2.801	.415	1.571	.423	1.601
160	1.104	.322	1.219	.450	1.703	.810	3.066	.443	1.677	.453	1.715
180	1.242	.340	1.287	.475	1.798	.860	3.255	.470	1.779	.480	1.817
200	1.38	.359	1.359	.500	1.892	.910	3.444	.496	1.877	.506	1.915
220	1.518	.372	1.408	.530	2.006	.960	3.633				
300	2.07	.461	1.745	.594	2.248	1.15	4.353	.607	2.297	.620	2.347
400	2.76	.523	1.979	.680	2.574	1.30	4.920				
500	3.45	.594	2.248	.750	2.839	1.40	5.299				
600	4.14	.625	2.366	.875	3.312	1.50	5.677				
700	4.83	.695	2.630	.938	3.550	1.67	6.321				

Other Nozzle Sizes
Also Available

SHOWER APPLICATION	FUNCTION	SHOWER TYPE	OSC	NOZZLE SPACING in. mm	OPERATING PRESSURE PSI MPa	FLOW GPM/in LPM/cm
FORMING SECTION SHOWERS						
Dandy Roll	Cleaning	Needle Jet	Yes	1.5" 37.5 mm	100 - 200 PSI .69 - 1.37 MPa	.13 - .29 .19 - .43
Couch Roll	Cleaning	Needle Jet	Yes	3" 75 mm	350 - 700 PSI 2.4 - 4.8 MPa	.18 - .250 .27 - .373
Inside High Pressure	Fabric Cleaning	Needle Jet	Yes	3" 75 mm	200 - 450 PSI 1.4 - 3.1 MPa	.135 - .238 .20 - .355
Sheet Side High Pressure	Fabric Cleaning	Needle Jet	Yes	3" 75 mm	200 - 450 PSI 1.4 - 3.1 MPa	.135 - .238 .20 - .355
Grooved Roll	Cleaning	Needle Jet	Yes	3" 75 mm	150 - 350 PSI 1.0 - 2.4 MPa	.145 - .212 .216 - .316
PRESS SECTION SHOWERS						
Inside High Pressure	Void Volume Cleaning	Needle Jet	Yes	6" 150 mm	200 - 350 PSI 1.4 - 2.4 MPa	.083 - .106 .124 - .158
Sheet Side High Pressure	Sheet Side Cleaning	Needle Jet	Yes	6" 150 mm	150 - 300 PSI 1.0 - 2.1 MPa	.073 - .099 .108 - .148
Suction Roll	Cleaning	Needle Jet	Yes	3" 75 mm	350 - 500 PSI 2.4 - 3.4 MPa	.212 - .250 .316 - .373
Grooved Roll	Clean Grooves	Needle /Fan	Yes	3" 75 mm	200 - 500 PSI 1.4 - 3.4 MPa	.167 - .250 .248 - .373
DRYER SECTION SHOWERS						
High Pressure Fabric Cleaning	Restore Permeability Remove Surface Contaminants	Needle /Fan	Yes	3" 75 mm	250 - 500 PSI 1.7 - 3.4 MPa	.182 - .250 .272 - .373

For further information and expert recommendations, consult your Kadant AES Sales or Application Engineer

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