

2900

Double Tube Stationary Shower



Kadant AES 2900 Shower Applications

FORMING SECTION

APPLICATION	FUNCTION	SHOWER TYPE	NOZZLE SPACING	OPERATING PRESSURE	FLOW GPM/in. (LPM/cm)
BREAST ROLL	FILL VOID VOLUME OF FORMING FABRIC	STATIONARY FAN NOZZLE	6 in. (150 mm)	30 — 40 PSI (.20 — .27 MPa)	.167 — .197 (.248 — .293)
HEADBOX SLICE	CLEANING	STATIONARY FAN NOZZLE	6 in. (150 mm)	30 — 40 PSI (.20 — .27 MPa)	.120 — .133 (.178 — .198)
LUMPBREAKER ROLL	CLEANING	STATIONARY FAN NOZZLE	6 — 8 in. (150-200 mm)	20 — 30 PSI (.14 — .20 MPa)	.0285 — .0428 (.042 — .064)
FLOODED NIP	SHEET KNOCK-OFF & CLEANING MULTI-LAYER FABRICS	STATIONARY FAN NOZZLE	3 in. (75 mm)	80 — 150 PSI (.55 — 1.03 MPa)	CALCULATE RUNNING VOID VOLUME
TRIM KNOCK-OFF	TRIM KNOCK-OFF	STATIONARY FAN NOZZLE	3 in. (75 mm)	100 — 250 PSI (.69 — 1.72 MPa)	1.09 — 1.77 (1.6 — 2.63)
SHEET KNOCK-OFF	SHEET KNOCK-OFF FOR SINGLE LAYER FABRICS	STATIONARY FAN NOZZLE	3 in. (75 mm)	200 — 350 PSI (1.38 — 2.41)	.75 — 1.77 (1.12 — 2.628)
WIRE RETURN ROLL	DOCTOR BLADE LUBRICATION	STATIONARY FAN NOZZLE	6 — 8 in. (150-200 mm)	30 — 40 PSI (.20 — .27 MPa)	.15 — .163 (.233 — .242)
WIRE RETURN ROLL	WASH ROLL CLEANING AND LUBRICATION	STATIONARY FAN NOZZLE	6 in. (150 mm)	40 — 60 PSI (.27 — .41 MPa)	.5 — 1.0 (.74 — 1.48)

PRESS SECTION

APPLICATION	FUNCTION	SHOWER TYPE	OSCILLATION	NOZZLE SPACING	OPERATING PRESSURE	FLOW GPM/in. (LPM/cm)
FLOODING	FELT WETTING CHEMICAL APPLICATION	FAN	OPTIONAL	3 — 6 in. (75-100 mm)	40 — 60 PSI (.27 — .41 MPa)	MUST BE CALCULATED
UHLER PIPE LUBE SHOWER	WEAR SURFACE LUBRICATION AND SEALING	FAN	OPTIONAL	6 — 8 in. (150-200 mm)	20 — 30 PSI (.14 — .20 MPa)	.05 — .07 (.075 — .104)
DOCTOR LUBE SHOWER	DOCTOR BLADE LUBRICATION	FAN	NO	6 — 8 in. (150-200 mm)	30 — 40 PSI (.20 — .27 MPa)	.05 — .07 (.075 — .104)

The Papermaker's Choice

Low cost, minimum maintenance and the ability to use clarified white water make Kadant AES 2900 Double Tube Stationary Showers an ideal choice for papermaking applications requiring general purpose stationary showering.

A thorough study of machine conditions determines appropriate nozzle type, orifice size and nozzle spacing. Close quality control of materials and manufacturing procedures ensure high performance for the long run. Each Kadant AES 2900 Shower is designed for top efficiency in a specific application.

Design Features

The shower pipes are 316L stainless steel, schedule 10 or 40 to resist the most corrosive water conditions. Nozzle bases are welded to the pipe. Nozzles are available with a wide range of fan configurations (see back side). The inlet may be located at either end of the shower pipe. Brackets are manufactured from 316 stainless steel and permit supporting or hanging of the shower pipes.

2900 Shower Applications Include:

- Knock-off • Wire Roll • Lump Breaker Roll
- Felt Flooding • Flooded Nip • Breast Roll
- Headbox • Lubricating
- Chemical • Wetting

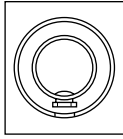
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2900 Double Tube Stationary Showers

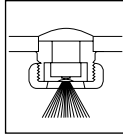
Benefits of the double tube design

The nozzles and internal support bearings are an integral part of the inner pipe. When inserted into the outer pipe, these components are protected from build-up and deposit of stock and other mill debris. For maintenance, the shower's internal pipe can be removed safely and easily, even in confined spaces while the paper machine is operating.

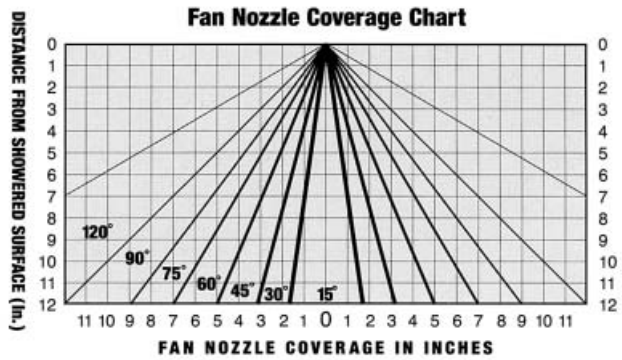


Fan Nozzles

Kadant AES Nozzles are available in a broad range of types for many applications. All are constructed of 316 stainless steel and each is factory tested prior to installation or shipment.



- Replaceable orifice disk • All 316 stainless steel
- Fresh or white water use



Kadant AES 2900 Shower Fan Nozzle Flows

NOZZLE ORIFICE / ANGLE	P R E S S U R E (PSI)															
	20	30	40	50	60	70	80	90	100	120	140	160	180	200	250	300
.028 30°	.078	.096	.111	.124	.136	.147	.157	.166	.175	.192	.207	.222	.235	.248	.277	.304
.028 45°	.080	.098	.114	.127	.139	.150	.161	.170	.180	.197	.213	.227	.241	.254	.284	.311
.028 60°	.083	.101	.117	.131	.143	.155	.165	.175	.185	.202	.219	.234	.248	.261	.292	.320
.028 90°	.099	.121	.140	.157	.172	.185	.198	.210	.222	.243	.262	.280	.297	.313	.350	.384
.033 30°	.109	.133	.154	.172	.189	.204	.218	.231	.244	.267	.288	.308	.327	.344	.385	.422
.033 45°	.112	.137	.158	.176	.193	.209	.223	.237	.250	.273	.295	.316	.335	.353	.395	.432
.033 60°	.115	.141	.162	.181	.199	.215	.230	.243	.257	.281	.304	.325	.344	.363	.406	.444
.033 90°	.138	.169	.195	.218	.239	.258	.275	.292	.308	.337	.364	.389	.413	.435	.487	.533
.040 15°	.157	.192	.222	.248	.272	.293	.314	.333	.351	.384	.415	.443	.470	.496	.554	.607
.040 30°	.160	.196	.226	.253	.277	.299	.320	.340	.358	.392	.423	.453	.480	.506	.566	.620
.040 45°	.164	.201	.232	.259	.284	.307	.328	.348	.367	.402	.434	.464	.492	.519	.580	.635
.040 60°	.169	.206	.238	.267	.292	.315	.337	.358	.377	.413	.446	.477	.506	.533	.596	.653
.040 90°	.202	.248	.286	.320	.350	.378	.405	.429	.452	.496	.535	.572	.607	.640	.715	.784
.055 15°	.296	.363	.419	.469	.513	.555	.593	.629	.663	.726	.784	.838	.889	.937	1.05	1.15
.055 30°	.303	.371	.428	.478	.524	.566	.605	.642	.677	.741	.801	.856	.908	.957	1.07	1.17
.055 45°	.310	.380	.438	.490	.537	.580	.620	.658	.693	.759	.820	.877	.930	.980	1.10	1.20
.055 60°	.319	.390	.451	.504	.552	.596	.638	.676	.713	.781	.843	.902	.956	1.01	1.13	1.23
.055 90°	.383	.468	.541	.605	.663	.716	.765	.811	.855	.937	1.01	1.08	1.15	1.21	1.35	1.48
.070 30°	.490	.600	.693	.775	.849	.917	.980	1.04	1.10	1.20	1.30	1.39	1.47	1.55	1.73	1.90
.070 45°	.502	.615	.710	.794	.870	.940	1.00	1.07	1.12	1.23	1.33	1.42	1.51	1.59	1.78	1.95
.070 60°	.516	.632	.730	.816	.894	.966	1.03	1.10	1.15	1.26	1.37	1.46	1.55	1.63	1.83	2.00
.070 90°	.620	.759	.876	.980	1.07	1.16	1.24	1.31	1.39	1.52	1.64	1.75	1.86	1.96	2.19	2.40
.094 15°	.860	1.05	1.22	1.36	1.49	1.61	1.72	1.83	1.92	2.11	2.28	2.43	2.58	2.72	3.04	3.33
.094 30°	.878	1.08	1.24	1.39	1.52	1.64	1.76	1.86	1.96	2.15	2.32	2.48	2.63	2.78	3.11	3.40
.094 45°	.900	1.10	1.27	1.42	1.56	1.68	1.80	1.91	2.01	2.20	2.38	2.55	2.70	2.85	3.18	3.49
.094 60°	.925	1.13	1.31	1.46	1.60	1.73	1.85	1.96	2.07	2.27	2.45	2.62	2.78	2.93	3.27	3.58
.094 90°	1.11	1.36	1.57	1.76	1.92	2.08	2.22	2.36	2.48	2.72	2.94	3.14	3.33	3.51	3.93	4.30
.125 30°	1.56	1.91	2.21	2.47	2.71	2.92	3.13	3.32	3.50	3.83	4.14	4.42	4.69	4.94	5.53	6.05
.125 45°	1.60	1.96	2.26	2.53	2.77	3.00	3.20	3.40	3.58	3.92	4.24	4.53	4.80	5.06	5.66	6.20
.125 60°	1.65	2.02	2.33	2.60	2.85	3.08	3.29	3.49	3.68	4.03	4.36	4.66	4.94	5.21	5.82	6.38
.125 90°	1.98	2.42	2.79	3.12	3.42	3.70	3.95	4.19	4.42	4.84	5.23	5.59	5.93	6.25	6.99	7.65
.156 15°	2.39	2.93	3.38	3.78	4.14	4.47	4.78	5.07	5.35	5.86	6.33	6.76	7.17	7.56	8.45	9.26
.156 30°	2.44	2.99	3.45	3.86	4.23	4.57	4.88	5.18	5.46	5.98	6.46	6.90	7.32	7.72	8.63	9.45
.156 45°	2.50	3.06	3.54	3.95	4.33	4.68	5.00	5.30	5.59	6.13	6.62	7.07	7.50	7.91	8.84	9.68
.156 60°	2.57	3.15	3.64	4.06	4.45	4.81	5.14	5.45	5.75	6.30	6.80	7.27	7.71	8.13	9.09	9.96
.188 30°	3.52	4.31	4.97	5.56	6.09	6.58	7.03	7.46	7.86	8.61	9.30	9.95	10.55	11.12	12.43	13.62
.188 45°	3.60	4.41	5.10	5.70	6.24	6.74	7.21	7.64	8.06	8.83	9.53	10.19	10.81	11.39	12.74	13.96
.219 30°	4.80	5.88	6.78	7.59	8.31	8.98	9.60	10.18	10.73	11.75	12.69	13.57	14.39	15.17	16.96	18.58
.219 45°	4.92	6.02	6.95	7.77	8.51	9.20	9.83	10.43	10.99	12.04	13.01	13.90	14.75	15.54	17.38	19.04
.250 30°	6.25	7.66	8.84	9.89	10.83	11.70	12.50	13.26	13.98	15.31	16.54	17.68	18.76	19.77	22.10	24.21

KADANT AES CANADA

Pointe Claire, Quebec, Canada
Tel: 514-695-7110 - Fax: 514-695-4836

KADANT UK Ltd.

Bury, Lancashire, England
Tel: 161 7649111 - Fax: 161 7971496

Licensee: **C.B.T.I.**

Valinhos S.P. Brazil
Tel: 1938 710100 - Fax: 1938 710093

KADANT AES MEXICO

Guadalajara, Jalisco, Mexico
Tel: 33 38 12 43 55 - Fax: 33 38 12 43 03

KADANT LAMORT

Vitry-le-Francois, France
Tel: 32 67 48 080 - Fax: 32 67 20 833

Licensee: **Kobayashi Engineering Works**

Fuji-Shi, Shizuoka-ken, Japan
Tel: 545 61 2405 - Fax: 545 63 4570



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KADANT AES

Queensbury, New York 12804 USA
Tel: 518-793-8801 - Fax: 518-793-9392