4000 Series Gravity Strainer

KADANT AES

ISO 9001 Registered Queensbury, NY

Proven reliability

AES Engineered Systems' Gravity Strainers have been the industry standard in pulp and paper mills for over 25 years. Over 1,000 of these highly reliable and efficient units are installed worldwide. Ideally suited for a wide range of applications, it is non-pressurized, easy and economical to operate, has few moving parts, and is capable of handling flow rates in excess of 2,800 gallons per minute.

Process advantages

The AES 4000 can effectively remove long and short fibers, felt hair, and granular solids from process water. It can also handle system upsets and slugs, without sacrificing the filtered water quality. In many applications, upsets to equipment or process upstream of the gravity unit will result in a large increase in fibrous contaminants. The 4000 Strainer continues to deliver strained water downstream, with a possible temporary rise in reject flow.

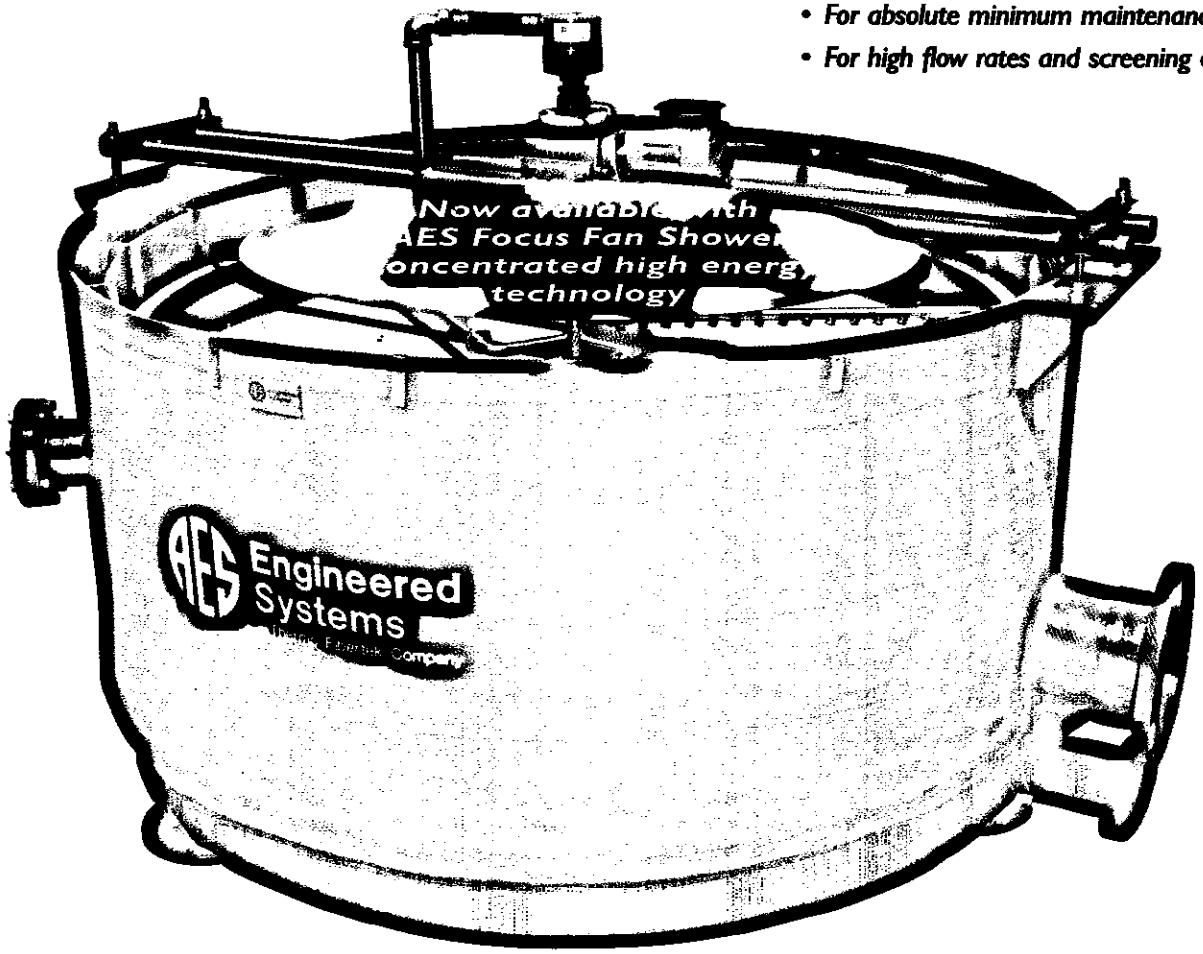
Designed for efficiency

The very high efficiency of the AES 4000 is due to the controlled flow over the media surface and the gentle separation forces. Filtered solids are continuously washed inward to the center of the screen by the strainer's rotating showers and discharged into the center reject port. The screen is returned to full effectiveness without manual attention even after an upset condition is encountered.

Easy performance monitoring

The 4000's low pressure shower and drive are easily accessible from the top of the strainer and its construction allows quick and easy monitoring of media conditions and performance. Removable flow distributors assure an even flow of the influent onto the stationary screen.

- *For increased solids removal*
- *For energy and water conservation*
- *For absolute minimum maintenance*
- *For high flow rates and screening efficiency*



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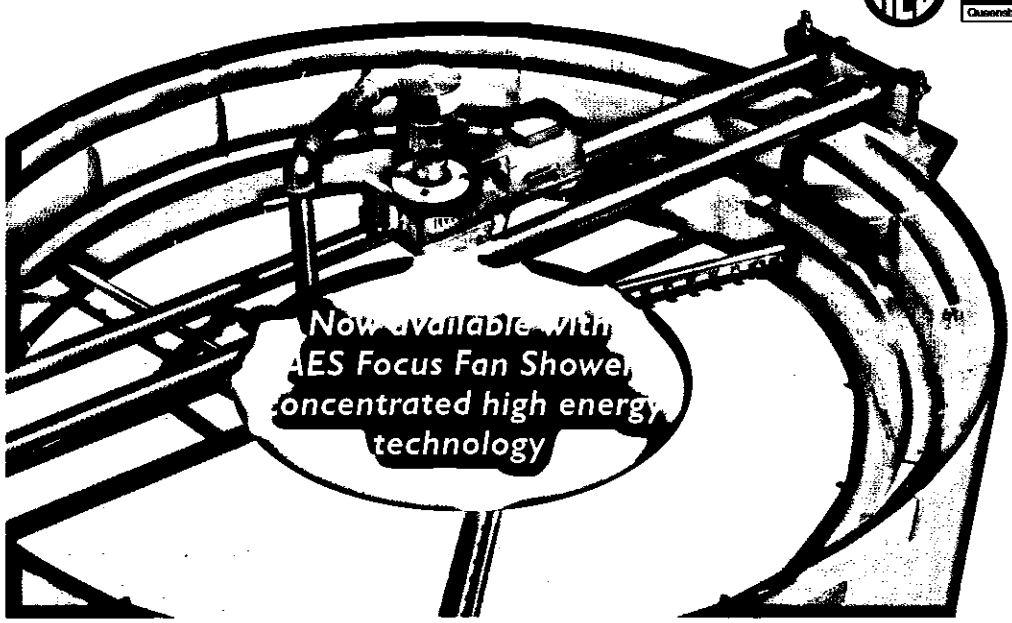
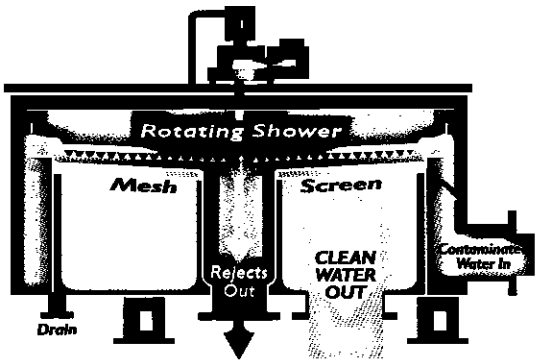
How it works

Water to be filtered is piped into and channeled around the periphery of the tank. It flows upward and through a weir assembly for even distribution over a fine screen mesh (40 to 200 mesh.) The water is filtered here leaving fibers and solids on the screen. Clean water is then collected in the strainer's bottom and flows from the unit. A continually rotating shower above the screen washes the rejects toward the center opening and the reject pipe for discharge.





Gravity Strainer Model	Flow Capacity Range ** GPM / lpm	Nominal Diameter In. / cm	Nominal Height * In. / cm	Inlet/Reject Connection In. / cm	Accept Connection In. / cm	Gross Weight Dry — Wet Lbs. / kg
4005	**96 - 610** 365 - 2310	**61** 155	**59** 150	**6** 15	**10** 25	**800 4500** 363 2040
4015	**163 - 1037** 615 - 3925	**73** 185	**69** 176	**8** 20	**12** 30	**975 7150** 442 3243
4025	**241 - 1537** 910 - 5820	**85** 215	**72** 183	**10** 25	**14** 35	**1300 9000** 590 4082
4035	**338 - 2153** 1280 - 8150	**97** 245	**75** 190	**12** 30	**16** 40	**1425 11050** 646 5011
4045	**511 - 3257** 1935 - 12330	**115** 290	**78** 198	**14** 35	**18** 45	**1760 16500** 798 7483

** Capacity can vary depending on inlet loading and screen mesh

* Height of support legs can vary to suit application

Features / Benefits

Features	Benefits
High flow rates	Lower cost per gallon processed
Relatively high solids loading	Careful sizing, less equipment minimizes "installed cost"
Gravity feed	Eliminates pumping cost—can be gravity fed
Shower rotation by small, fractional 1/2 HP 3-phase motor	Minimal power cost
Continuous media cleaning with rotating multiple showers	Maximum throughput, minimal downtime, high efficiency
Shower utilizes strainer accepts	No fresh water requirements
Completely assembled—can be placed above existing tanks	Inexpensive installation
Wide range of media—easily changed	Adaptable for many applications
Cleaning shower assembly is the only moving part	Minimal maintenance and downtime
Corrosion-free fiberglass standard; stainless steel optional	Optimal cost/life ratio for your particular conditions

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A E S

AN ACCENT ON INNOVATION

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Gravity Strainers

Simple,

efficient,

designed for

economical

results.

Mills worldwide value AES Engineered Systems strainers for their outstanding economical and reliable performance in many papermaking applications.

- AES Gravity Strainers are in use polishing white water for showers, removing felt hairs from recycled press water, on pulp mill applications, on deckers, stock washers and on savealls—even on mill influent systems.
- Benefits include substantial energy and water savings, highly effective fiber and solids removal and reliable operation even when upsets and slugs occur.

Gravity Strainer Capacities at Various Fiber Removal Rates

Gallons/Liters Per Minute with Free Draining Stock

Model	Mesh	0-99 PPM		100-299 PPM		300-499 PPM		500-799 PPM		800-1000 PPM	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	100	470	1780	408	1545	316	1195	250	945	158	600
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	200	285	1080	248	940	191	725	152	575	96	365
4015	60	1037	3925	901	3410	697	2640	553	2095	348	1315
	100	798	3020	694	2625	537	2030	426	1610	268	1015
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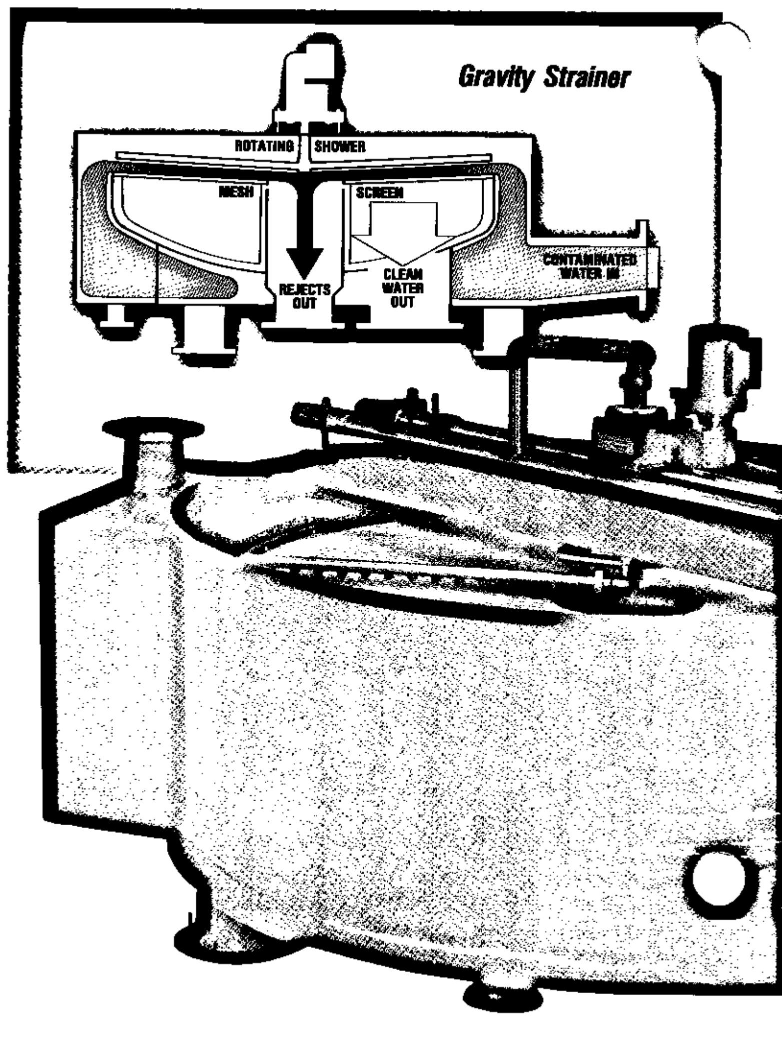
	200	484	1830	421	1595	325	1230	258	975	163	615
4025	60	1537	5820	1336	5055	1033	3910	819	3100	516	1955
	100	1184	4480	1029	3895	795	3010	631	2390	398	1505
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	200	718	2720	624	2360	482	1825	383	1550	241	910
4035	60	2153	8150	1871	7080	1447	5475	1148	4345	724	2740
	100	1658	6275	1441	5455	1114	4215	884	3345	557	2110
	150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	200	1006	3810	874	3310	676	2560	536	2030	338	1280
4045	60	3257	12330	2831	10715	2189	8285	1736	6570	1094	4140
	100	2508	9495	2180	8250	1686	6380	1337	5060	843	3190
	150	2296	8690	1996	7555	1543	5840	1224	4635	772	2920
	200	1521	5755	1322	5005	1022	3870	811	3070	511	1935



Gravity Strainer Design Specifications

Model	Flow Capacity Range** GPM / lpm	Nominal Diameter in / cm	Nominal Height* in / cm	Inlet/Reject Connection in / cm	Accept Connection in / cm	Gross Weight Dry LBS / Kg	Gross Weight Flooded LBS / Kg
4005	96 - 610 365 - 2310	61 155	59 150	6 15	10 25	725 330	2875 1305
4015	163 - 1037 615 - 3925	73 185	66 170	8 20	12 30	825 375	5150 2335
4025	241 - 1537 910 - 5820	85 215	72 185	10 25	14 35	1100 500	7700 3495
4035	338 - 2153 1280 - 8150	97 245	73 185	12 30	16 40	1225 555	10750 4875
4045	511 - 3257 1935 -12330	115 290	87 220	14 35	18 45	1560 710	15000 6805

* Height of support legs can vary to suit application.
** Capacity can vary depending on inlet loading and screen mesh.