

*When Your Operations Depend
On A Constant Supply Of Clean Liquid*

BULLETIN 2005

**R.P. ADAMS
PORO-EDGE™ AUTOMATIC
SELF-CLEANING
STRAINERS**



BETTER WATER MAKES BETTER PRODUCTS

– Protects process equipment in industrial applications

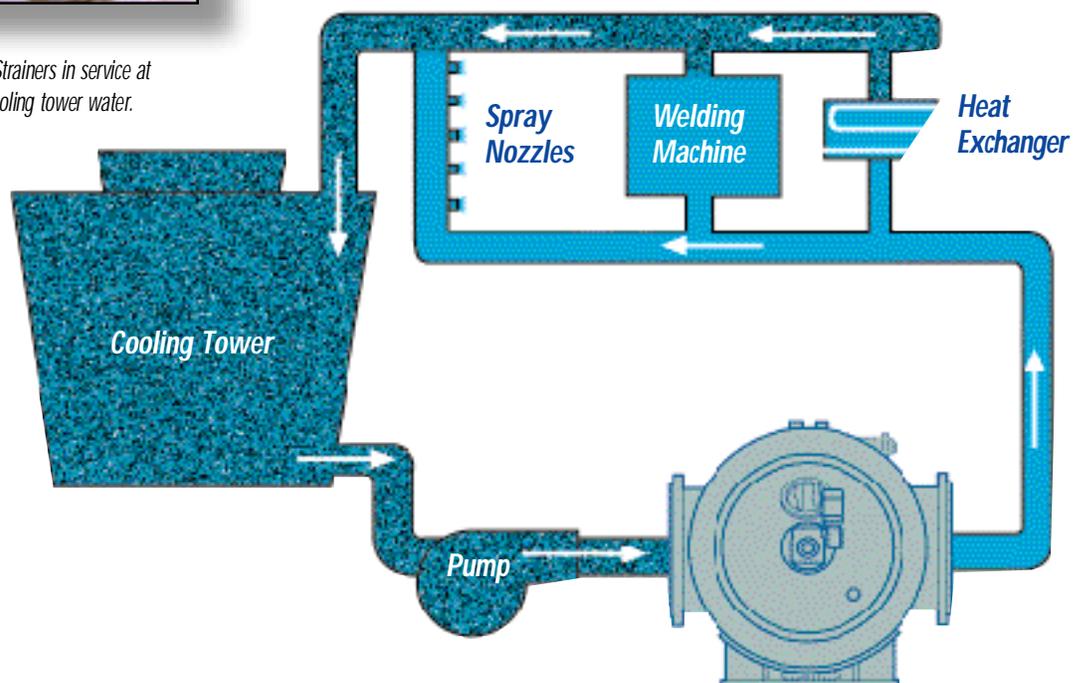
The R.P. ADAMS Poro-Edge™ Automatic Self-Cleaning Strainer has been designed to meet a wide variety of industrial applications. The strainer removes dirt and debris from water supplies creating water acceptable for process services. Even without man-made soiling of water supplies, there are the ever-existent impurities from nature. Every time it rains, a large percentage of rainfall finds its way into streams and lakes carrying with it soil, grass and leaves. To meet this challenge the R.P. ADAMS Poro-Edge Automatic Self-Cleaning Strainer can achieve separation to levels finer than the eye can see.



Three VDWS Series Poro-Edge Strainers in service at a major automotive plant on cooling tower water.

TYPICAL RECIRCULATING COOLING WATER SYSTEM:

R.P. ADAMS Poro-Edge Automatic Self-Cleaning Strainer **continuously** removes dirt and unwanted debris common to cooling tower water, thereby minimizing equipment downtime and cooling tower chemical-treatment expenses.

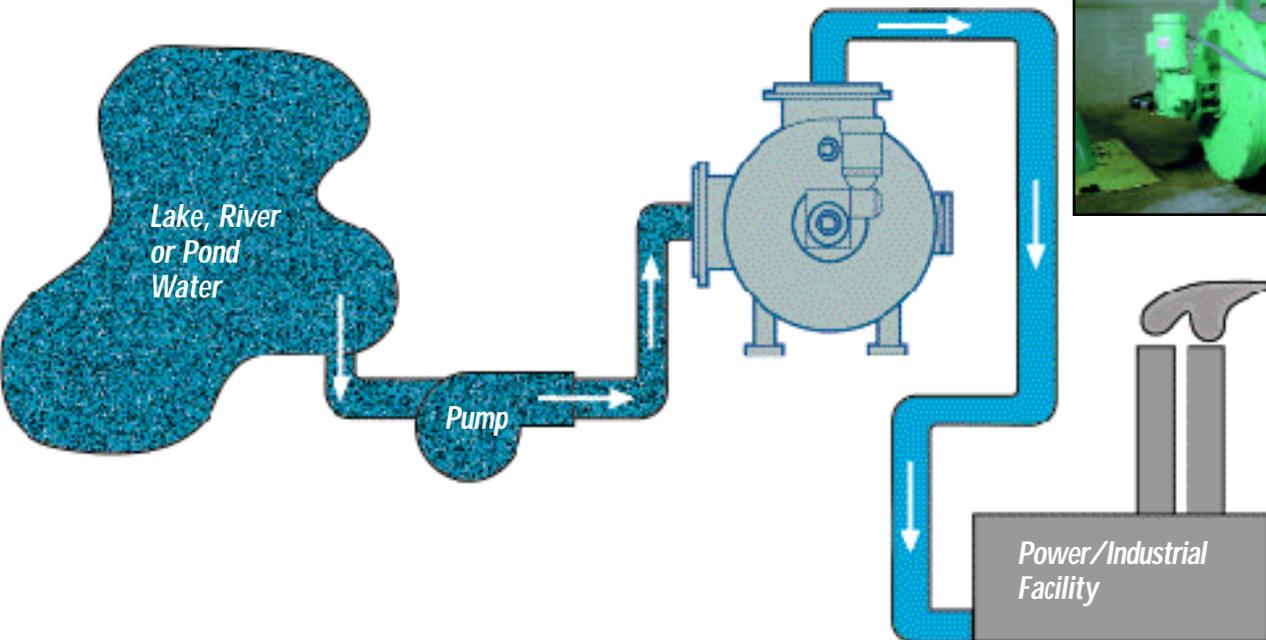


TYPICAL LAKE & RIVER WATER APPLICATION:

Lake, river or pond water is a common source of cooling water for many industries. R.P. ADAMS Poro-Edge™ Automatic Self-Cleaning Strainers *continuously* remove the dirt and debris from these sources, protecting all your water-cooled process equipment.



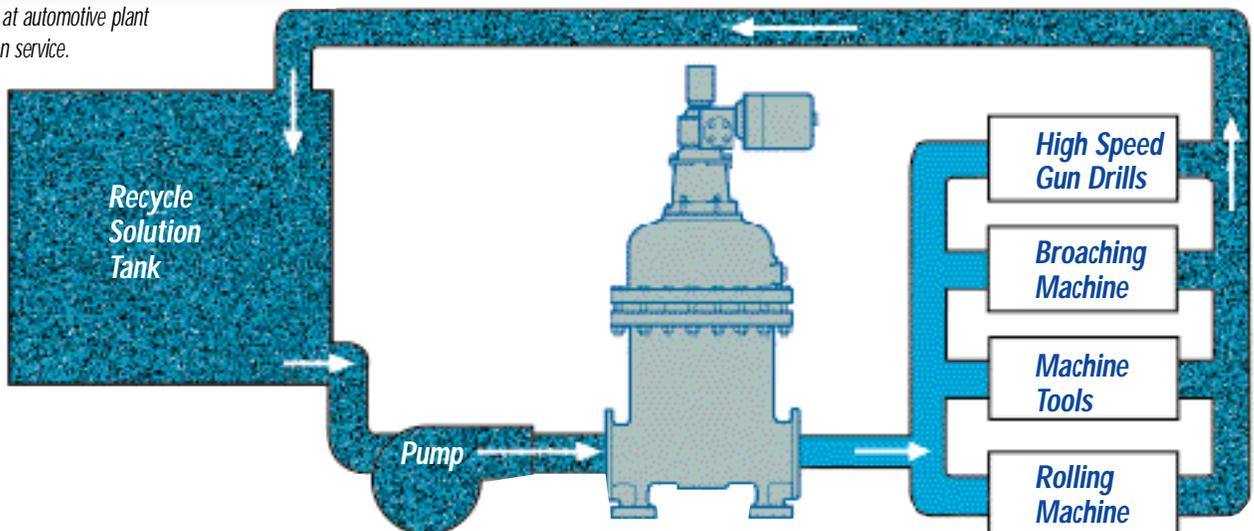
HWS Series Poro-Edge Strainer on river water supply to major tire manufacturing plant.



VWS Series strainer at automotive plant on broaching solution service.

TYPICAL RECYCLE OR REUSE SOLUTION SYSTEMS:

R.P. ADAMS Poro-Edge Automatic Self-Cleaning Strainers are widely used to remove debris from recycle streams. Manufacturing facilities using high-speed drills, broaching machines, machine tools and rolling machines utilize solutions, which need to be reused. An R.P. ADAMS Poro-Edge Strainer can *continuously* remove the machining chips and unwanted particulates from the solution, making it safe to reuse.

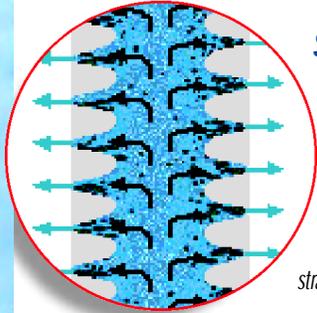


AUTOMATIC, UNATTENDED STRAINING & BACKWASHING

– Inside view of VWS Series Strainer

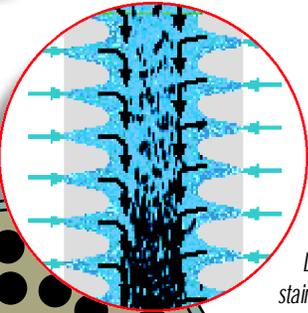
STRAINING

As raw water enters the unit, it passes through the tubesheet into the ports of the multiple Poro-Edge™ strainer tubes, causing dirt and debris to collect along the length of the tube. The tubes retain any solids while allowing clean water to pass through the slots and into the strained water chamber where it exits via the outlet.



BACKWASHING

During backwashing the stainless steel backwash assembly rotates along the tubesheet. The seal plate forms a pressure tight connection with the tubesheet permitting each tube to be cleaned – one at a time – in consecutive order.



(BOTTOM VIEW)

RAW
WATER
INLET

STRAINED
WATER
OUTLET

BACKWASH
OUTLET

(SIDE VIEW)

Unlike competitive designs, the Poro-Edge media of the R.P. ADAMS Strainer is separated from the backwash mechanism by a substantial metal tube sheet. This prevents the backwash mechanism from coming into contact with the media and damaging the elements caused by large solids becoming lodged between the media and the backwash arm. In the event of the shear key failing, due to very large solids entering the raw water chamber, the large surface area of the Poro-Edge media will permit flow to continue, allowing time to correct the problem before a loss of flow is encountered.

THE ADVANTAGES SET US APART

– Multiple features of the R.P. ADAMS Poro-Edge™ Strainer

PORO-EDGE MEDIA & FULL FLOW PROTECTION:

All R.P. ADAMS strainers use Poro-Edge media. The Poro-Edge element is made from continuous trapezoidal wire which is welded to axial stringers at every intersection. This forms a one-piece screen of amazing strength. The cylindrical wedge-wire media provides the largest effective straining area (dirt-holding capacity) of any automatic water strainer, while operating at a lower average pressure loss. The large open area allows greater efficiency by increasing the time between backwashing. In addition, the media is protected from damage by a large metal tubesheet separating the backwash mechanism and the media.

Available in several levels of separation, Poro-Edge media can safely handle differential pressures up to 200 PSIG, collapse or burst. R.P. ADAMS Automatic Self-Cleaning Strainers have a standard design pressure of 150 PSIG. Higher design pressures, special materials of construction and ASME Code design and stamp are available.

OPERATING ECONOMICS:

By design, R.P. ADAMS Poro-Edge strainers will operate at a clean pressure drop, typically 2 PSIG, until a 75% full condition exists. A lower pressure drop results in power savings and a better ability to handle upset conditions that would blind other strainers.

SPACE SAVING DESIGN FOR ECONOMICAL INSTALLATION:

Available in horizontal or vertical configurations, R.P. ADAMS Automatic Self-Cleaning Strainers adopt an efficient design which eliminates unnecessary piping and fitting. In addition, the flexibility of the strainer allows the inlet and outlet nozzles to be located in several different positions, including on the same side, if required.

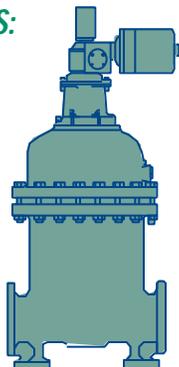
TWO-YEAR WARRANTY:

All R.P. ADAMS Automatic Self-Cleaning Strainers are backed by a two-year warranty on materials and workmanship.

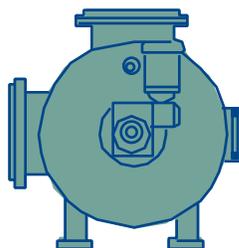
PRODUCT SUPPORT & START-UP ASSISTANCE:

All R.P. ADAMS products are supported by a factory staff and a domestic and international network of representatives that have been factory trained. Every R.P. ADAMS Poro-Edge strainer is offered with start-up and installation services by a trained representative. A video is provided with every strainer for start-up and routine maintenance. We also maintain a large inventory of spare parts for immediate shipment.

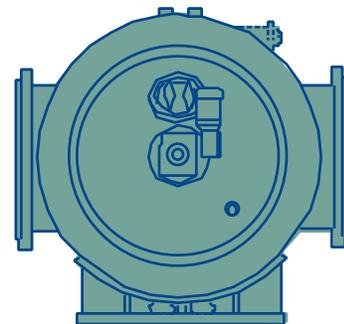
CONFIGURATIONS:



VWS 4 and 6 in-line vertical oriented strainer for capacities below 1000 GPM.



HWS (horizontal oriented) or VWS (vertical oriented) strainers for capacities as low as 750 GPM.



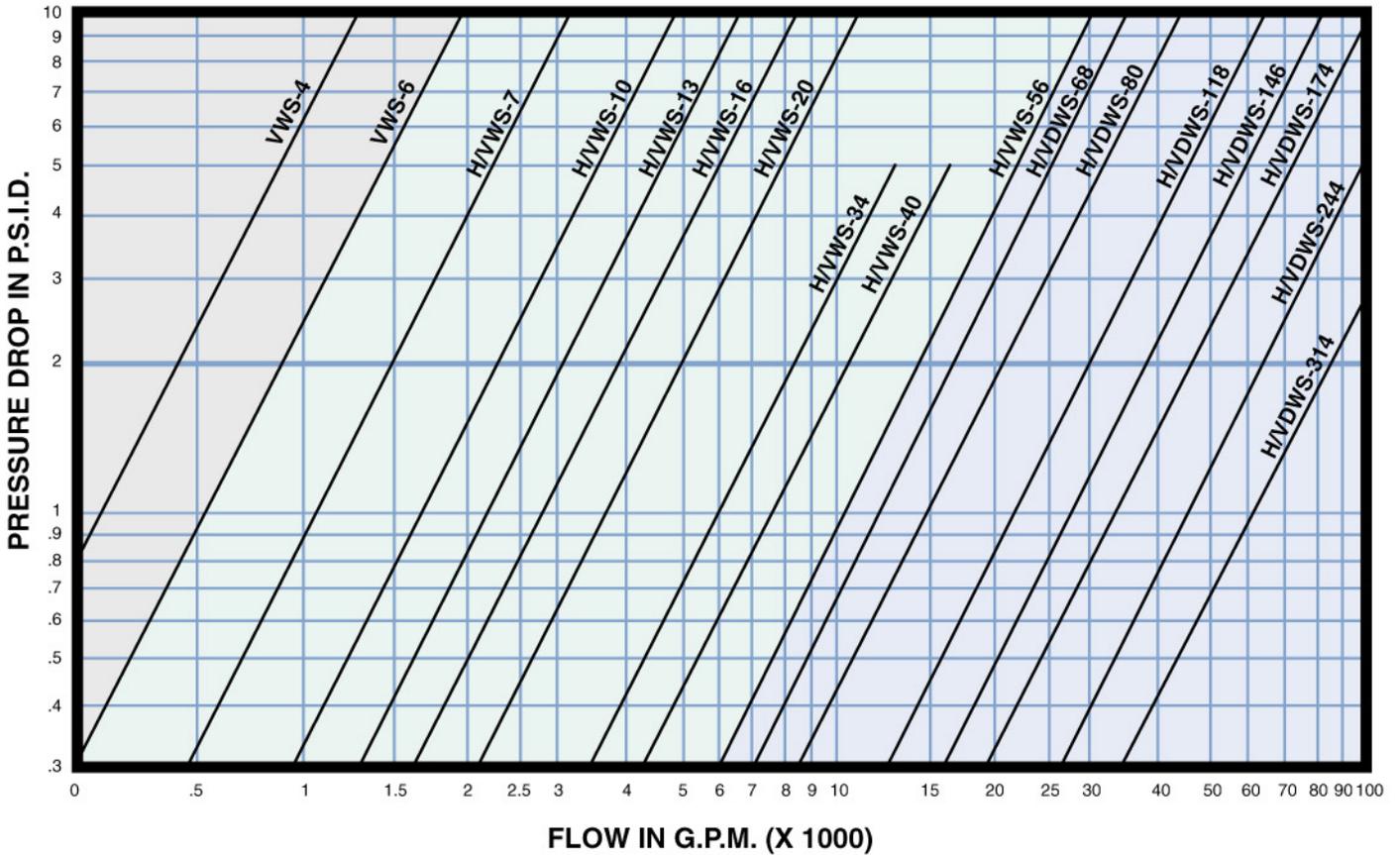
HDWS (horizontal oriented) or VDWS (vertical oriented) strainers for capacities up to 85,000 GPM.



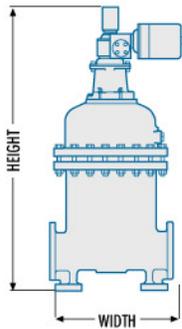
Poro-Edge Media

CAPACITY SELECTION & DIMENSIONS

STRAINER CAPACITY CHART

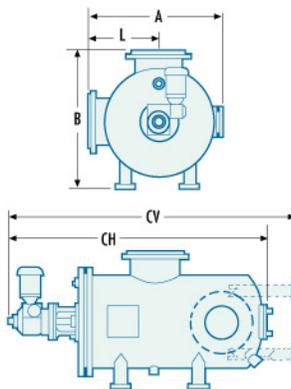


VWS-4 AND VWS-6 OVERALL DIMENSIONS



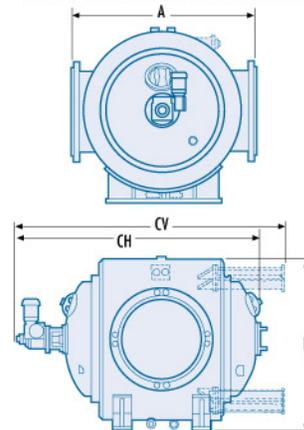
SIZE	OVERALL HEIGHT	OVERALL WIDTH
VWS-4	51 1/2	17 1/2
VWS-6	53 1/4	11 1/2

H/VWS-7 TO 56 OVERALL DIMENSIONS



SIZE	A	B	CH	CV	L	STANDARD NOZZLE SIZE*
7	24	26	63	74	12	8
10	28	30	61	70	14	8
13	32	34	64	73	16	10
16	37	39	67	76	19	12
20	42	45	71	80	22	14
34	42	45	73	82	22	16
40	46	49	83	92	24	18
56	53	55	89	101	27	20

H/VDWS-68 TO 314 OVERALL DIMENSIONS



SIZE	A	B	CH	CV	STANDARD NOZZLE SIZE*
68	72	54	85	95	20
80	78	60	89	99	24
118	84	66	99	111	30
146	90	72	110	122	36
174	96	78	116	128	36
244	108	90	128	140	42
314	120	102	139	151	48

Select unit based on 2 PSID clean pressure for optimum efficiency. Data listed here is for evaluating overall size. For complete dimensional data contact R.P. ADAMS. All dimensions are in inches.
 *Option of next larger nozzle size available on all models except VWS-4, 6, 7. Capacity chart applies for separation of 125 microns or greater. Please contact factory for capacities at finer separation.

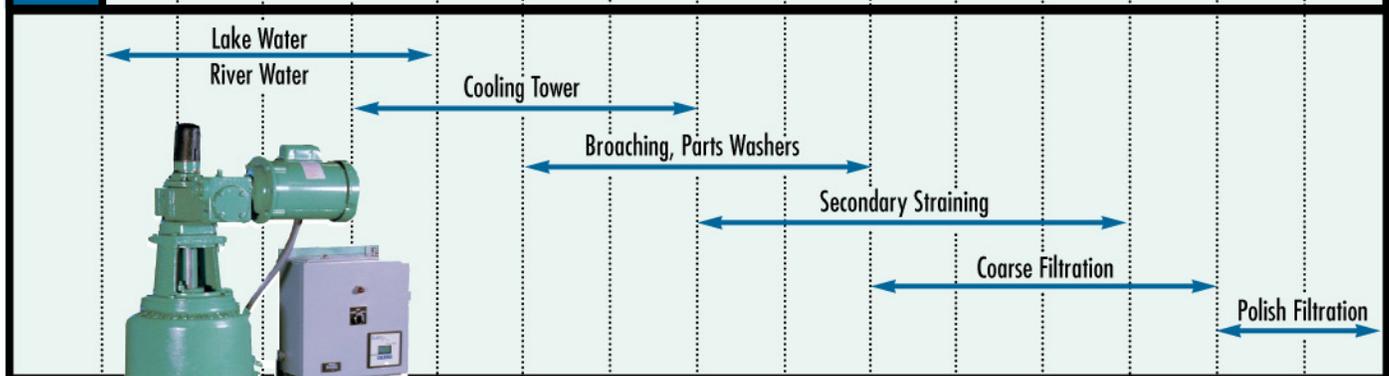
PORO-EDGE™: THE CLEAR ADVANTAGE

COMPARE PORO-EDGE TO OTHER TECHNOLOGIES

DEVICE	Requires Small Footprint	Handles Full Stream	Positive Separation	Automatic Operation	Large Open Area	Exchange Program on Media	Media Protected from Backwash Assembly	Energy Efficient	Two-Year Warranty
R.P. ADAMS Poro-Edge	✓	✓	✓	✓	✓	✓	✓	✓	✓
Centrifugal Separators		✓		✓					
Bag/Cartridge Filters	✓		✓						
Sand Filters				✓					
Manual Basket Strainers	✓	✓	✓						
Other Automatic Strainers	✓	✓	✓	✓					

CROSS REFERENCE CHART & TYPICAL APPLICATIONS

Microns	3,200	1,650	900	600	380	250	125	100	75	50	40	30	10	5	1
Inches	0.125	0.063	0.031	0.020	0.015	0.010	0.005	0.004	0.003	0.002	0.0016	0.0012	0.0004	0.0002	0.00004
Mesh	5	10	20	30	40	60	100	150	200	250	400	700	-	-	-
Open Area	51%	51%	34%	25%	19%	14%	10%	8%	6%	5%	4%	3%	-	-	-

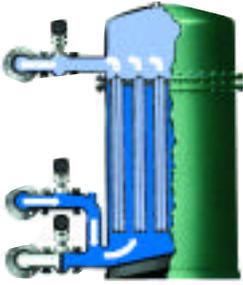


PILOT STRAINER:

To qualify the purchase of an Automatic Self-Cleaning Strainer, R.P. ADAMS offers skid mounted rental systems. This enables compatibility trials to assess the effectiveness of the strainer. Each system is fully functional and equipped with (flow and frequency) instrumentation for data collection. A choice of media is available to meet your separation requirements. Rental fees can be applied, in part, towards the purchase of an R.P. ADAMS Poro-Edge Strainer.



ALSO FROM R.P. ADAMS:



LIQUID FILTER SYSTEMS FOR FINE FILTRATION.

The R.P. ADAMS IWF Filtration System is a multiple element tubular filter designed to remove fine particulate from liquid process streams. With a filter aid precoat, it will remove particulate to levels below 0.5 micron with flow rates in excess of 2 gallons per minute per square foot of filter area.



GP FILTER PROVIDES GUARANTEED PROTECTION FOR AIR, GAS AND STEAM SYSTEMS.

The GP filter has a two-step separation process that ensures maximum filtration. The filter uses a permanent filter element that will not break or collapse, even when plugged, to fully protect your process equipment. In addition, the element can be cleaned and reused.

The rugged design of the GP filter allows it to withstand operation pressures up to 500 PSIG and operating temperatures to 650°F. It features 1/2" to 6" inline process connections for easy installation, and meets the requirements for ASME Code and the 3A standards for culinary steam systems.



SUPERIOR WATER-COOLED REMOVABLE AND FIXED BUNDLE AFTERCOOLERS PROVIDE CONSISTENT PROCESS CONTROL FOR YOUR APPLICATION.

R.P. ADAMS offers a wide selection of removable bundle and fixed bundle aftercoolers with and without cyclone separators to meet your compressed air and gas needs. More efficient cooling means less moisture downstream, thereby protecting sensitive process equipment. The removable tube bundle provides easy cleaning and maintenance while the fixed bundle offers significant cost savings.

Many of these aftercoolers and cyclone separators are available from stock and meet the requirements of the Tubular Equipment Manufacturer's Association (TEMA) and Section VIII of the ASME Code.



REHEAT PACKAGED SYSTEMS ELIMINATE PLANT ENERGY COSTS AND MAINTENANCE PROBLEMS.

An R.P. ADAMS Reheat System works much like a refrigerated dryer, where it cools the air by lowering the dew point, removes the moisture from the stream and then reheats the air for use in your process. However, the Reheat System does not require electricity to operate, thereby saving on plant energy costs. In addition, there are no moving parts or sensitive controls, which makes this system virtually maintenance free. A Reheat System is so efficient that it can actually take the place of a refrigerated dryer.



SHELL AND TUBE HEAT EXCHANGERS.

R.P. ADAMS offers a number of shell and tube heat exchangers, from U tube to removable bundle and fixed bundle designs, to meet your heat transfer requirements. R.P. ADAMS is a company with more than 60 years experience, and an R.P. ADAMS engineer can work closely with you to provide the best heat transfer solution for your application.

Proudly Represented By:



**R.P. ADAMS
COMPANY, INC**

CALL TOLL-FREE, 1-800-896-8869, TO DISCOVER HOW YOU CAN BENEFIT FROM AN R.P. ADAMS PORO-EDGE™ AUTOMATIC SELF-CLEANING STRAINER. VISIT OUR WEB SITE AT: www.rpadams.com.

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