

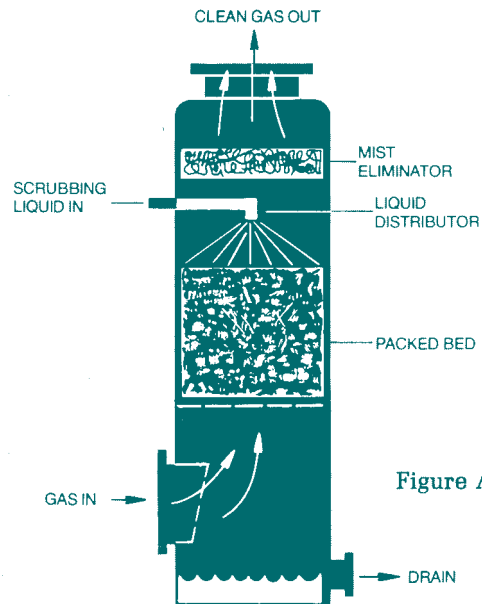
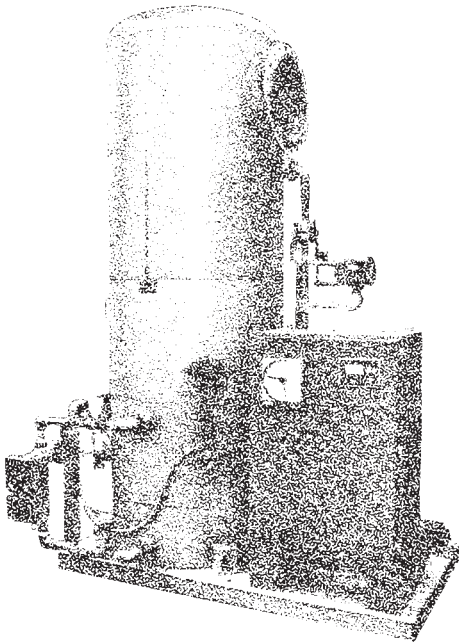
PACKED TOWERS

ED TOWERS □ COOLING TOWERS □
R PACKING □ HIGH ENERGY FUME
BERS □ JET VENTURI FUME SCRUB
□ PACKED TOWERS □ COOLING TOV
RUBBERS □ JET VENTURI FUME SCI
S □ PACKED TOWERS □ COOLING TO
SCRUBBERS □ **CROLL-REYNOLDS** □
□ TOWER PACKING □ HIGH ENERGY
BBER □ PACKED TOWERS □ COOLING
RS □ TOWER PACKING □ HIGH ENER
ME SCRUBBERS □ JET VENTURI FUM
UBBERS □ PACKED TOWERS □ COOL

CROLL-REYNOLDS PACKED TOWERS

This complete line of countercurrent packed tower type scrubbers lets you select the most efficient unit for your air pollution control problems. The basic design of the Croll-Reynolds type of unit channels the gas flow upwards through a packed bed while the scrubbing liquid flows downward by gravity over the packing. This method is well suited to high efficiency gas absorption but is not recommended for use on dust collection applications.

In addition to air pollution applications, it can also be adapted to process needs. The internal components of the tower consist of a packing support plate, a packing bed, a liquid distributor, and a mist eliminator (see Figure A). The tower can be designed for once-through operation, or to recycle the liquid, depending upon process conditions.



EFFICIENCY

The Croll-Reynolds' countercurrent packed tower can be designed to achieve virtually as high an efficiency as required. Based upon actual test data and results from field installations, our engineers can select the type of packing, scrubbing liquid, and tower size best suited to your particular needs. Since these units are custom designed for each application, optimization of overall design results in an economic product at the required performance.

TYPE OF PACKING

The key to designing a packed column for air pollution control is the tower packing. It should be very open in design to minimize pressure drop while still maintaining a high surface where the absorption of the gas will occur. Spiral-Pac™ type tower packing will accomplish this. For other purposes, alternate packing may be selected. The type of packing most suitable for any application will vary with temperature, pressure, gas concentration, and efficiency requirements. Careful consideration is given to the various alternatives before selecting the packing for each application.

CONSTRUCTION MATERIALS

Croll-Reynolds packed towers are available in a wide variety of construction materials. Any material that can be fabricated can be made into a packed tower. For reasons of economy, tower shells are often made from FRP fiberglass reinforced plastic, stainless steel, Alloy 20, or any other material indicated for the specific application. Tower internal components can be made from polypropylene or other plastics for low initial cost, or any other materials including metals depending upon the process requirements.

DIMENSIONS AND APPROXIMATE SIZING

The overall dimensions shown in the table are based on a typical application of 1% HCl in an air stream with a 99% removal required. The dimensions given are for a fiberglass tower with typical nominal 2" Spiral-Pac™ and a standard mesh type mist eliminator.

ALTERNATE DESIGNS

Counter-flow design towers offer the highest possible performance. Occasionally, space limitations or design limits require the use of cross flow or co-current flow. Croll-Reynolds has

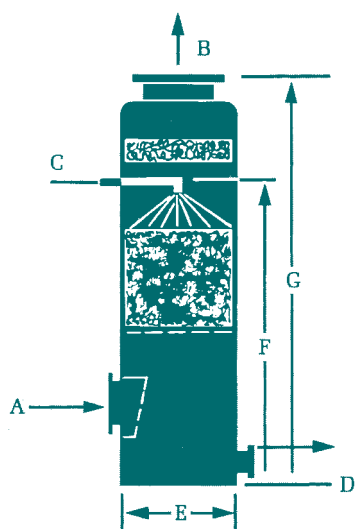
designed units for such applications and will design a custom unit for your needs.

High-pressure applications, Ethylene oxide removal, flue gas desulfurization, NO_x and phosgene scrubbing are examples of areas where Croll-Reynolds special experience can give you an economical and trouble-free system.

Where new or unusual problems face you, test units are available for in-plant use. In addition, our laboratory test facilities can be used to evaluate and select the packing and scrubbing solution best suited to your needs.

APPROXIMATE DIMENSIONS OF CROLL-REYNOLDS PACKED TOWERS

99% removal HCl (1% vol.) typical



Model #	Approximate CFM Capacity	Approximate Liquid Rate-GPM	Gas In & Out	Liquid In	Drain	Diam E	Height	
			A & B	C	D		F	G
12T-6H	300	3	8"	3/4"	1"	1'0"	8'6"	10'0"
18T-6H	700	9	10"	1"	1 1/2"	1'6"	9'6"	11'0"
24T-6H	1,300	16	14"	1 1/2"	1 1/2"	2'0"	10'0"	12'0"
30T-6H	2,000	25	18"	2"	2"	2'6"	11'0"	13'0"
36T-6H	3,000	35	20"	2"	2"	3'0"	11'6"	13'6"
42T-6H	4,000	48	24"	2"	3"	3'6"	12'6"	14'6"
48T-6H	5,000	60	28"	2"	3"	4'0"	13'6"	16'0"
54T-6H	6,500	80	30"	2"	3"	4'6"	15'0"	17'6"
60T-6H	8,000	100	36"	3"	4"	5'0"	15'6"	18'0"
66T-6H	10,000	120	36"	3"	4"	5'6"	16'0"	18'6"
72T-6H	12,000	140	42"	3"	4"	6'0"	16'0"	19'0"
84T-6H	16,000	190	48"	4"	6"	7'0"	17'0"	20'0"
96T-6H	21,000	250	54"	4"	6"	8'0"	18'0"	21'0"
108T-6H	27,000	320	60"	6"	6"	9'0"	18'6"	21'0"
120T-6H	33,000	400	66"	6"	8"	10'0"	19'0"	22'0"
132T-6H	40,000	475	72"	6"	8"	11'0"	20'0"	23'0"
144T-6H	50,000	575	84"	8"	8"	12'0"	20'0"	23'0"

Units normally include four hold-down lugs.

Towers up to 2'6" diameter have flanged tops. Towers 3'0" in diameter and up have manway for packing installation and inspection. Dimensions do not include storage capacity, which varies. Most units will have storage so that liquid can be recirculated.

Larger capacity sizes shown in the bulletin can be shop fabricated and shipped direct to the job site. For larger applications, field-erection or multiple units would be required. Croll-Reynolds can provide the necessary technology to design larger units. Flows of close to 500,000 acfm have been handled in Croll-Reynolds scrubbers in a single unit. Please contact the factory directly for further information on a specific application.



CROLL-REYNOLDS CLEAN AIR TECHNOLOGIES

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VENTURI FUME SCRUBBERS □ PACKING
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PACKING □ HIGH ENERGY FUME SC
JET VENTURI FUME SCRUBBE
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