# **Q-PAC®** Tower Packing

is the heart of your wet **scrubbing**/ air **stripping** equipment. Rather than build or operate your system on old specs calling for outdated packings, choose Q-PAC<sup>®</sup> over conventional, round packings for the most cost-effective emission control.

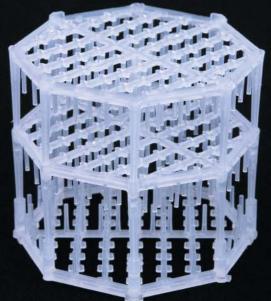
Q-PAC's unique drip point technology leads to the most effective masstransfer with lower capital and O&M costs.

Visit us online for Q-PAC<sup>®</sup> data and numerous case studies. Then call Lantec for a free packed bed design.

### www.lantecp.com/qpac







US Patent #5,458,817 Worldwide Patents Pending

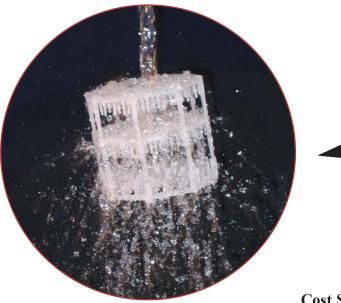


## Lantec Products Inc.

Lantec has designed advanced tower packings for over 20 years. sales@lantecp.com



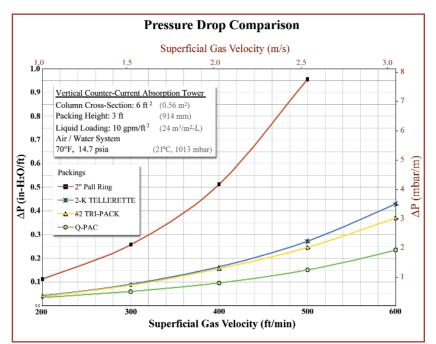
- **1. Smaller Tower Diameters** Reduced Capital Costs Smaller System Footprint
- 2. Lower Pressure Drop Smaller Blower Motors 30-50% Higher Capacity Lower Fan Power Costs Less Noise
- **3. Smaller Recirculation Pumps** Reduced Equipment and Operation Costs
- 4. Higher Flow Rates in Existing Towers
- 5. Smaller Mist Eliminators
- 6. Less Packing Volume
- 7. Q-PAC is a Lower Cost Packing Especially When Made of Specialty Plastics
- 8. Fouling and Plugging Resistant Reduced Maintenance Costs Ideal for Scrubbers Using Reclaimed Water



## What Q-PAC<sup>®</sup> Can Do for Your Design

#### **Amazingly Low Pressure Drop**

Q-PAC<sup>®</sup> saves electric power by reducing blower load.



A Major Advance in Packed Tower Technology

High-capacity Q-PAC<sup>®</sup> creates exciting new possibilities in packed tower design. Its patented structure uses drip points and gas turbulence to create millions of small droplets, multiplying the surface area for gas-liquid contact with minimal resistance to gas flow. Q-PAC<sup>®</sup> provides the most efficient mass transfer with low pressure drop.

#### Cost Savings Example - Odor Control Scrubber for H2S Removal

	Traditional Design	Modern Design	(metric)	Traditional Design	Modern Design
Packing Type:	2" Pall Rings	Q-PAC <sup>®</sup>		50 mm Pall Rings	Q-PAC <sup>®</sup>
Air Flow Rate:	45,000 acfm	45,000 acfm		75,000 Am <sup>3</sup> /h	75,000 Am <sup>3</sup> /h
Tower Diameter:	12 ft	9 ft		3500 mm	2750 mm
Superficial Velocity:	< 400 ft/min	> 600 ft/min		< 2.2 m/s	> 3 m/s
Tower Height:	22 ft	22 ft		6700 mm	6700 mm
Packed Height:	10 ft	10 ft		3000 mm	3000 mm
Packing Pressure Drop:	> 5" WC	< 3.5" WC		>15 mbar	< 9 mbar
Packing Volume:	1,130 ft <sup>3</sup>	640 ft <sup>3</sup>		29 m <sup>3</sup>	18 m <sup>3</sup>
Recirculation Flow Rate:	750 gpm	500 gpm		170 m³/h	120 m <sup>3</sup> /h
System Cost:	\$140,000	\$94,000		\$140,000	\$94,000
Savings:	n/a	\$46,000 (33%)		n/a	\$46,000 (33%)

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#### What Q-PAC<sup>®</sup> Can Do for Your Design (continued)

#### **Outstanding Resistance to Fouling**

Q-PAC's uniformly spaced bar-and-rod design and self-cleaning properties minimize plugging by mineral scale or biological growth. That means less down time for maintenance.

#### Higher Gas Velocity, Smaller Equipment

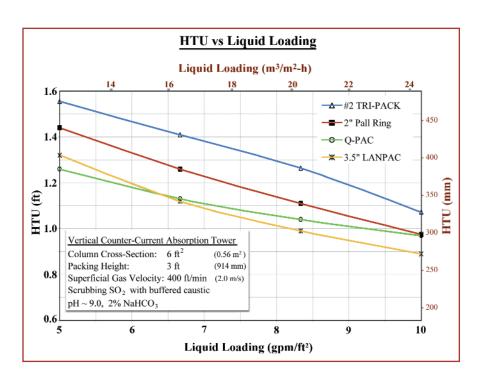
Q-PAC<sup>®</sup> can be used at higher gas velocities than old-style tower packings. Scrubbers and gas-cooling towers can be designed at well above conventional velocities without sacrificing efficiency. Capital costs can be cut by building smaller-diameter columns, often with smaller pumps and mist eliminators.

#### **Capacity-Boosting Upgrades**

Older equipment using conventional packings can be retrofitted with Q-PAC<sup>®</sup> to obtain additional capacity at a fraction of the cost of another tower.

#### **Lower Packing Cost**

Q-PAC<sup>®</sup>'s low weight per cubic foot reduces packing costs, especially when specialty thermoplastics are needed for heat and corrosion resistance.





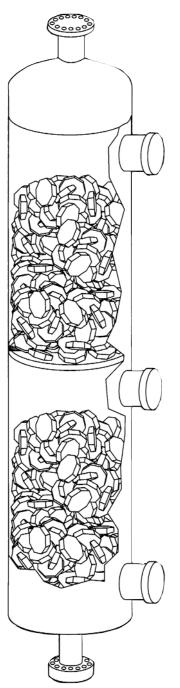
U.S.	Pate	nt # 5,45	8,817
World	Wide	Patents	Pending

Q-PAC <sup>®</sup> Physical Cl	naracteristics
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Dimensions	3.25" x 3.75"
Void Fraction	96.3%
Weight	
Polypropylene	2.1 lb/ft <sup>3</sup>
PVDF	4.1 lb/ft <sup>3</sup>
Number of Pieces	33/ft <sup>3</sup>
Packing Factor	7/ft
Drip Points	11,000/ft <sup>3</sup>
(Metri	c Units)
Dimensions	0.05
Dimensions	8.25 cm x 9.5 cm
Void Fraction	8.25 cm x 9.5 cm 96.3%
Void Fraction	
Void Fraction Weight	96.3%
Void Fraction Weight Polypropylene	96.3% 33.7 kg/m <sup>3</sup>
Void Fraction Weight Polypropylene PVDF	96.3% 33.7 kg/m <sup>3</sup> 65.8 kg/m <sup>3</sup>
Void Fraction Weight Polypropylene PVDF Number of Pieces	96.3% 33.7 kg/m <sup>3</sup> 65.8 kg/m <sup>3</sup> 1165/m <sup>3</sup>

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Lantec sells a line of plastic, ceramic, and metal media for use in various applications including:

- Wet Scrubbing
- Air Stripping
- VOC Control
- Biotreatment
- Mist Elimination
- Distillation

For two decades, Lantec has developed technical expertise in numerous applications involving tower packings. Lantec continues to develop new lines of packings and offers leading edge knowledge and support for its products.



LANPAC<sup>®</sup> offers excellent mass transfer at high liquid loadings.



HD Q-PAC<sup>®</sup> structured media offers ultra-high surface area.



NUPAC<sup>®</sup>: very high surface area random packing.



MLM<sup>®</sup> offers high heat recovery with low  $\Delta P$ .



Saddles: low cost ceramic media.



Low cost metal tower packing.



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