



**Duall Division**

BULLETIN OCS

# Odor Control Systems

*COST EFFECTIVE  
FRP DUAL LAMINATE AND  
THERMOPLASTIC SCRUBBERS,  
FANS AND VENTILATION PRODUCTS*



*Municipal and Industrial  
Odor Control Specialists*

*Known for our quality,  
Proven to be dependable*

# Duall...Leaders in Odor Control System Design and Manufacturing

## OUR HISTORY

Duall has designed and manufactured odor control systems for over 35 years. We have the experience necessary to make your project a success. Whether your application is sewage lift stations, complete waste treatment or complex industrial processes, Duall can help.

## DUALL HAS THE PRODUCT YOU NEED

Duall has manufactured and tested systems from 100 cfm to 65,000 cfm. We have installed systems from the coldest climates of Canada to the hot and abrasive conditions of Texas and Arizona. And we have designed systems to withstand 150 mph hurricane winds in Florida and seismic zone 4 requirements in California.

## EQUIPMENT DESIGNS

Whether your requirements are based on space limitations, system flexibility, maximum efficiency, or a combination of all these, we have a system for you.

- Packed bed towers
- Low profile packaged systems
- Horizontal cross-flow scrubbers
- Single-stage
- Multi-stage
- Multi-chemistry

## QUALITY CONTROL

In-house fabrication of our systems (in PVC, polypropylene, CPVC, polyethylene, or FRP Dual Laminate with inner liner) allows us to constantly monitor manufacturing quality.

## MINIMUM AIR VOLUME

Duall is expert in ventilation design. Covers, shields,

hoods, and curtains can reduce initial system costs and continuously save on operating expenses.

## FIELD SERVICES, ENGINEERING, INSTALLATION, START-UP AND OPERATOR TRAINING

When the project is completed, Duall can train your employees to properly operate the equipment. We will help you with any problems and will answer any questions arising during start-up and initial operation procedures. Duall start-up service will also help your operators to understand the components and the chemistry of your system.

## BUDGET DESIGN AND ASSISTANCE

Simply fill out our Scrubber Data Checklist (141-01-OC), and we will evaluate your project requirements and recommend an appropriate Duall system. We will also provide you with all of the information required to allow you to decide if the system is right for your client. Our "Budget Design" package includes:

- Performance requirements
- Written specifications
- System and PID drawings
- Component sizing (pumps, fans, motors, etc.)
- Annual operating cost estimation
- System budget price

## START TO FINISH

Put our experience to work for you from budget and design through start-up and operator training. Our goal is to make your job easier.



Material of Construction: UV Stabilized Polyethylene  
 Application: Headworks  
 Problem: H<sub>2</sub>S  
 Solution: 12,000 CFM Low Profile PT512-MD Packaged System



Material of Construction: UV Stabilized Polyethylene  
 Application: Pump Station  
 Problem: H<sub>2</sub>S  
 Solution: 1,000 CFM Low Profile PT512-MD Packaged System

Tested	Inlet	Outlet	Removal Efficiency
H <sub>2</sub> S	29 ppmv	.117 ppmv	99.9%

Tested	Inlet	Outlet	Removal Efficiency
H <sub>2</sub> S	57 ppmv	.15 ppmv	99.74%

## ADVANTAGES OF PACKED BED SCRUBBERS



Material of Construction: 100% Corrosion Resistant UV Stabilized PVC (3/8" to 1/2" thick)  
 Application: Wastewater Treatment Plant Odors  
 Problem: H<sub>2</sub>S, NH<sub>3</sub>  
 Solution: Multi-Stage, Multi-Chemistry Horizontal Cross Flow F Series Scrubber

- The most frequently specified equipment
- Offers the greatest design flexibility
- Economically treats large volumes of process air with infinite turndown ratio, accommodating virtually all choices of chemistry
- High mass transfer rates achieved in a relatively small equipment footprint
- High liquid recirculation rates guarantee sufficient chemical is always available to absorb odors
- On demand chemical addition minimizes operating costs
- Counter-current flow maximizes the driving force for absorption
- Cross flow (horizontal) scrubbers are available to meet low profile requirements
- Utilizes non-plugging spray nozzles and packing media
- No solid waste disposal

## ADVANTAGES OF "DUALLAST"

**As the saying goes, "the last shall be first"...**  
**DUALLast unique FRP dual laminate construction extends service life; and assures stronger and more corrosion resistant products at competitive costs.**

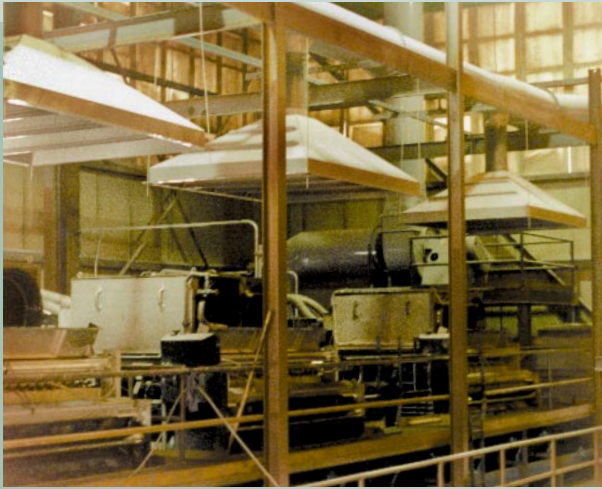


Material of Construction: DUALLast - the Ultimate FRP Construction  
 Application: Pharmaceutical Fermentation Odors  
 Problem: H<sub>2</sub>S, Dimethylsulfide and Dimethylsulfide Odors  
 Solution: Multi-Stage PT-510 Scrubber

- PVC corrosion resistant inner liner is a minimum 1/8" thick (125 mils), compared to 20-50 mils for typical FRP composites
- Homogenous thermoplastic inner liner is not subject to costly weeping and crazing failures often associated with solid FRP construction
- Thermoplastic lined vessels can be spark tested to ensure leakproof construction which is not always assured in solid FRP fabrications
- Outer FRP shell provides maximum U.V. resistance and structural strength for very high wind or vacuum applications while still enabling the user to enjoy the corrosion resistant benefits of thermoplastics
- Dual-Last is approved by the National Sanitation Foundation for use in potable water applications

Tested Compound	Inlet	Outlet	Removal Efficiency
H <sub>2</sub> S	165 ppmv	0.5 ppmv	99.7%
DMS/DMDS	300 ppmv	< 1.0 ppmv	99.7%
Odor Units	170,000	< 300	99.8%

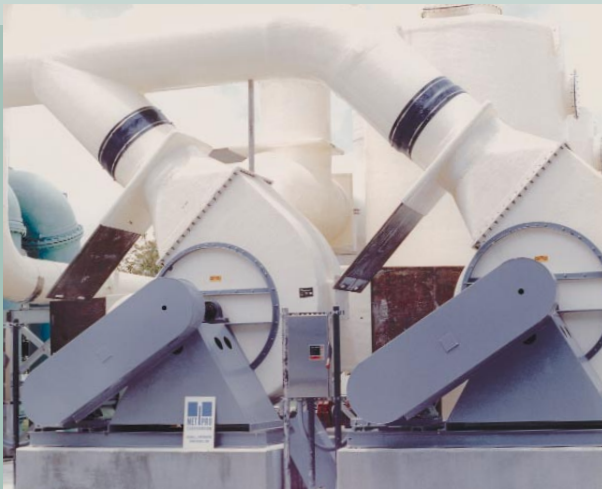
## SOLID PVC VENTILATION SYSTEM HOODS AND DUCT



Cost effective thermoplastic odor capture enclosures and ducting are available for DAF processes, belt filter presses, lime stabilization tanks, and many other applications. Hoods and ducting are available in corrosion resistant FM4910 approved materials.

### DUALL FANS

Manufactured in our factory, Duall Model RB and NH fans are performance certified by AMCA. Our fan impellers are manufactured of FRP encapsulated steel providing the ultimate combination of corrosion resistance and structural integrity. Our unique Permagriip encapsulation process has provided many years of reliable service to our customers. (See Duall Bulletin RBNH for more information).



## SUCCESSFUL APPLICATIONS

### Municipal Waste Treatment

Aeration Basins	Compost Facilities
Holding Tanks	Anaerobic Digesters
Dewatering Facilities	Lift Stations
Clarifiers	Headworks
Sludge Dryers	Bio Roughing Towers
Municipal Solid Waste	Industrial Wastewater Toll Plants

### Industrial Odor Control

Chemical Processing	Compost Facilities
Pharmaceutical Fermentations	Reactor Vents
Coating Processes	Food & Spice Processing
Storage Tanks	Animal Rendering Plants
Compost Facilities	Paint Stripping
Fish & Poultry Processing	Drying Processes
Pulp & Paper Manufacturing	Breweries

### Some Typical Odors Controlled by Duall

Hydrogen Sulfide	Amines
Alcohols	Chlorine
Ketones	Phenols
Aldehydes	Acrylates
Acetic Acid	Mercaptans
Creosols	Carboxylic Acids
Dimethydisulfide	Dimethylsulfide
Ammonia	Butyric Acid



Duall Division Met-Pro Corporation, certifies that the RB & NH type exhaust fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



# Duall Division

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