



**CLEMCO**  
The Performance  
System

## TECHNICAL DATA SHEET

*Note: For safe, efficient blasting, read and follow the owner's manual and seek training for everyone who will use this equipment.*

### Purpose

Moisture is produced whenever air is compressed; and frequently oil is also present. If water or oil reaches the blast machine, it can wet the blast media, causing it to flow inconsistently or not flow at all. Water or oil that reaches the surface being blast cleaned can interfere with coating adhesion.

The Coalescent Filter removes water, oil, and dirt particles down to 10 microns from the compressed-air supply. It is designed for use with portable and stationary compressors, and works in conjunction with a conventional particulate air filter installed at the blast machine inlet.

### Requirements for Operation

The Coalescent Filter requires at least 200 cfm of air flow at 50 psi to operate. Efficiency increases as air volume and pressure increase to a maximum of 800 cfm at 150 psi. At lower volume and pressure, the Coalescent Filter does not remove as much moisture and oil.

These items are recommended but not included with the Coalescent Filter:

- Fittings and air valves.
- Additional technologies – including refrigerated and chemical air dryers – may be required, depending on the temperature and humidity of the ambient air.
- An optional 2-inch ball valve allows you to shut off air to the Coalescent Filter.

### Description of Operation

Connect the Coalescent Filter to the air supply between the compressor and the particulate air filter leading to the blast machine inlet. The farther the Coalescent Filter is from the compressor, the more moisture will condense in the line, making it more likely to be removed.

## Description

Portable 800-cfm capacity Coalescent Filter removes water from the compressed air supply for multiple blast machines and other pneumatic tools requiring a dry, high-volume air supply. Two 6-inch wheels and a rigid handle allow one person to move the Coalescent Filter along a smooth, level surface. The filter has one outlet and a manual petcock to drain accumulated moisture.



High Volume-Compressed-Air  
Coalescent Filter  
(shown with optional 2" ball valve)

As moist air enters the Coalescent Filter, it moves up inside the chamber passing through a fine-mesh stainless steel filter element that causes the water vapor and oil to coalesce into larger drops and fall to the bottom of the filter. Most particulate material (down to 10 microns) gets trapped in the filter mesh.

The water and oil that collect at the bottom of the Coalescent Filter must periodically be drained using the manual petcock. If the stainless-steel mesh becomes caked with oil and dirt, the operator should disconnect the Coalescent Filter from the air line, back-flush it with warm water, and drain the contaminants.

## High-Volume Coalescent Filter

Stock No. 23108



### Advantages

- Costs less to purchase and less to operate than refrigerated or chemical drying systems, which may be required in more humid environments
- One Coalescent Filter serves multiple blast machines or other pneumatic tools
- Simple, rugged design for in-plant or field use
- Cleaning is the only maintenance required

### Approvals and Certifications

Pressure vessel stamped with National Board Approval, and certified for use at pressures up to 150 psi by American Society of Mechanical Engineers (ASME).

Related Clemco Literature

Description	Stock No
Contractor Series catalog .....	21385
Abrasive Blasting Safety Practices .....	22090
Blast Off 2 .....	09294
Operator Safety Equipment .....	07764
Coalescent Filter Owners Manual .....	23109

Options and Accessories

Description	Stock No
2-inch ID ball valve, with handle.....	02368

PRESSURE DROP ACROSS THE COALESCENT FILTER							
psi							
cfm	50	60	70	80	90	100	150
800	0.5	0.46	0.32	0.25	0.23	0.2	0.1*
*extrapolated number				Optimal range for abrasive blasting			

This table shows test data of estimated pressure drop across the Coalescent Filter. The data demonstrate a minimal impact on pressure. Use the data to guide compressor pressure setting to maintain desired pressure at the nozzle.

Specifications

ASME-coded pressure vessel rated for 150 psi

	Size (Inches)
Inlet:	2
Outlet:	2

Packaging

Ships bolted to a pallet and protected by a shrink-wrap bag.

Dimensions Unit

Height:	31 in
Width:	23 in
Depth:	21 in
Weight:	108 lb

Color: Champagne

Authorized Distributor:

