



Technology Demonstration and System Proving Facility



*Inside is our Second-to-None
Offer and Performance Guarantee!*

Our Second-To-None Offer and Performance Guarantee



We'll review, evaluate and estimate your conveying project and requirements,

Perform material analyses and

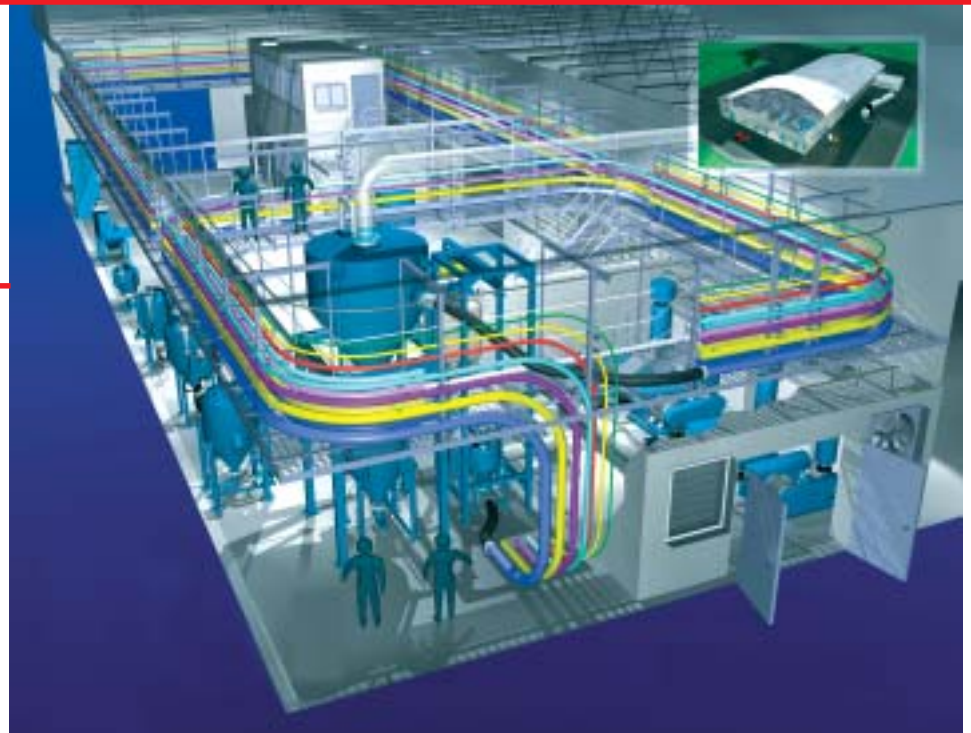
Set up and conduct full scale convey and rate/capacity tests.

Then we'll back our proposal with a *Written System and Rate Guarantee*

Interested?

Call our
SALES DEPARTMENT

(800) 445-0730 or
(402) 362-2000
for arrangements



CYCLONAIRE's state-of-the-art Technology Demonstration and System Proving Facility provides full scale testing of dry bulk materials in Semi-Dense, Dense and Dilute phases, in Vacuum, Pressure and combined Vacuum-Pressure modes.

CONFIGURATIONS Simulate transfer to/from rail cars, silos and bulk bags, in-plant processing, bulk storage or transport, in addition to scaling, batching and blending. Multiple sources and destinations are possible.

ADVANTAGE The advantage of Cyclonaire's facility is the ability to ensure the customer's equipment will handle the target rate, without risking capacity or extra capital investment.

EQUIPMENT The facility includes convey line lengths up to 1137 feet with line diameters of 2½, 3, 4, 5, 6 and 8 inches. Conveyor units range from one to 75 cubic feet. A bulk bag unloader, multiple low pressure blowers, a high volume 100 PSIG compressor, hoppers, filter receivers and dust collection round out the key hardware lineup.

PROTOCOLS All tests begin with computerized material analyses including automatic sieve analysis, bulk density, moisture content and particle surface characterization. A convey setup is devised to simulate the customer's target application.

DATA CAPTURE The facility's process controls allow evaluation of convey variables in real-time. Additionally, an air management system ensures stable and reliable transfer while allowing automatic switching between multiple sources and destinations as typical with scale, batch and blend conveying.

REPORTING Captured data includes average and instantaneous material and air flows, cycle times, conveyed weights and pressure requirements. Video tape capture is available for company representatives who are unable to live-witness the test.

Special Note: Cyclonaire continues its commitment of "dirty" materials such as carbon black and other sooty micro-particle materials in their original facility.



Specifications and Capabilities

Overview

- 5000 Square Feet, Indoor, Full Scale Test Facility
- Extensive Closed Loop Convey Line Configurations
- Advanced Material Analyses Capabilities
- Advanced Data Acquisition and Air Management Monitoring
- Wide Spectrum Conveying Technology
- Multiple Conveyors and Supporting Equipment

Conveying Capabilities

- Semi-Dense Phase
- Dense Phase
- Dilute Phase
- Vacuum (Venturi) or Gravity Load
- Pressure and/or Vacuum Conveying
- Weigh / Batch Conveying
- Multiple Sources and Destinations
- Bag Dump Station Discharging
- Bulk Bag Station Discharging
- Hopper / Silo Bulk Discharging
- Simulated Rail Car Discharging
- Hopper Destination
- Bulk Container Destination
- Relay Controls or PLC Systems Automation

Material Analyses Capabilities

- Automatic Sieve Analysis
- Particle Size Distribution Graphing
- Bulk Density Determination
- Particle Characterization
- Moisture Content Determination
- Aeration/Flowability Determination
- Special Characteristics Analyses
- Hazardous Materials Protocols
- Material Database Resource

Data Acquisition and Air Management

- Real Time Data Acquisition
- Real Time Report Generation
- Remote Video and Data Transmission
- Multiple System Operation Evaluation
- Filtration Optimization Calculations
- Instantaneous and Average Air Flows
- Instantaneous and Average Cycle Times
- Instantaneous and Average Conveyed Weights
- Instantaneous and Average Pressure
- Multi Sources, Destinations and Switching

Facility Equipment: Material Analysis, Conveying and Evaluation

- U.S. Standard Sieve Set
- Infrared Moisture Analyzer
- Recording Microscope
- Analytic Lab Scales
- Air Management System
- Data Acquisition and Capture
- Video Camera and Modem
- Sight Glass Stations
- Bi-Level Observation Promenade
- Lab Conference Room
- Semi-Dense Phase Conveyors
- Dense Phase Conveyors
- Dilute Phase Rotary Air Locks
- High Pressure Air Compressors
- Multi-Pressure Blowers
- Bulk Bag Unloading Station
- Bag Dump Station
- Filter Receiver
- Dust Collectors
- Bin Vents

Line Dia.	Configuration 1				Configuration 2				Configuration 3			
	Actual Length	# 90° Elbows	# 45° Elbows	Effective Length	Actual Length	# 90° Elbows	# 45° Elbows	Effective Length	Actual Length	# 90° Elbows	# 45° Elbows	Effective Length
2.5"	138	5	1	176	288	5	1	326	-	-	-	-
3.0"	138	5	1	184	288	5	1	333	424	9	1	503
4.0"	138	5	1	198	288	5	1	348	424	9	1	528
5.0"	138	5	1	214	288	5	1	364	424	9	1	556
6.0"	138	5	1	226	288	5	1	376	424	9	1	576
8.0"	138	5	1	258	288	5	1	408	424	9	1	632

Line Dia.	Configuration 4				Configuration 5			
	Actual Length	# 90° Elbows	# 45° Elbows	Effective Length	Actual Length	# 90° Elbows	# 45° Elbows	Effective Length
2.5"	-	-	-	-	-	-	-	-
3.0"	569	9	1	648	841	13	1	964
4.0"	569	9	1	673	841	13	1	1035
5.0"	569	9	1	701	841	13	1	1057
6.0"	569	9	1	721	841	13	1	1137
8.0"	569	9	1	777	-	-	-	-