delair™

delfacts

www.delairindia.com

ISO 9001: 2000 CERTIFIED

A PAWA ENTERPRISE

delair india pvt. ltd.

Inaugural Issue

delair meeting your Compressed Air Drying needs

delair, in India, has been providing you with quality dryers for compressed air systems since 1988. From time to time, we have been covering dry air stories relevant to compressed air users in our quarterly newsletter, **Dryfacts**.

However, we felt that we needed to have a more focussed newsletter addressed only to compressed air drying needs, hence the "***delfacts***".

This is our inaugural issue and we will be looking forward to your feedback .

SHOWCASING delair AT OUR NEW CORPORATE FACILITY

The display area at our Corporate office showcases the full delair range as well as our total product range. Please schedule a visit to our facility, we will be happy to show around.

delair upgrades to ISO 9001:2000

At **delair**, the effort has always been to keep improving. Thus, it was natural for **delair** to upgrade from ISO9001:1994 to ISO9001:2000. It has moulded its systems to be more customercentric and process oriented.

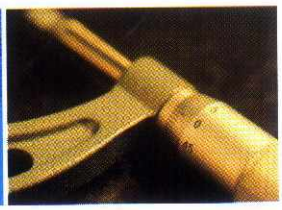
Please visit us at the Leather Show
booth # E-32
Hall no.: 12B

DILF 2003

11th Delhi International Leather Fair
Oct. 19-22, 2003
Pragati Maidan
New Delhi

Typical Common Problems faced by compressed air users

Water or Moisture in the compressed air system causes air leakages, damages tools, affects processes, spoils product quality and ultimately increases costs. Problems due to unwanted moisture in the compressed air system manifests in form of:



Sluggish operation of pneumatic tools and gauges

Malfunction of instrumentations like

- Recorder
- Indicator
- Test stand
- Analyzer
- Relay
- Integrator

Contaminated food-processing and packaging

Rusting of pipes and fittings leading to leakage

Blisters on painted surface

Chemicals, pharmaceuticals- Spoilage of materials during pneumatic conveying

This results in loss of effciency and material, and increases downtime. **Moisture is usually the single major cause of unnecessary costs to compressed air systems.** The cost of drying air is much lower than the damage caused by moisture.

Typical Pollutants found in compressed air

• humidity • dust • oil • gases, vapours, fumes • bacteria, viruses

Source

• Components in the air sucked in by the compressor
• Elements added to the air by the compressor

Thus, clean, dry compressed air is essential for effective working of any pneumatic system.

Appropriate Air Quality gives

• Optimal compressed air, economy • Low running costs
• Low maintenance costs • Reliability • Better product

To achieve quality air, contaminants present in the compressed air must be removed

The only positive means of removing moisture from compressed air, i.e. completely drying air, is to install an air dryer. **Compressed air can be dried by two methods :**

Refrigeration : removes moisture by cooling the air.

Adsorption : remove moisture by passing air over desiccants.

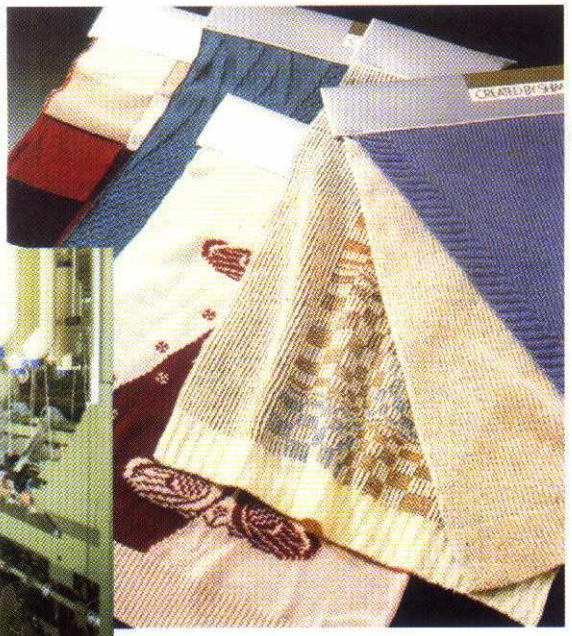
How to Remove Contaminants from compressed air

Contaminant	Can be removed by
Moisture	
...as free water	Separators, mechanical filters, coalescing filter, air dryers
...as aerosol mist	Coalescing filter, air dryers
...as vapour	Air Dryers
Oil	
...as free oil	Separators, mechanical filters, coalescing filter
...as aerosol mist	Coalescing filter
...as vapour	Adsorbents and activated carbon
Scale	
...as particles	Mechanical filter, coalescing filter (by impingement)
Dust (most type)	
...as particles	Mechanical filter, coalescing filters, (by impingement)
Pollens	
...as particles	Mechanical filter, coalescing filters, (by impingement)
Bacteria (90-100%)	
...as particles	Coalescing filters (by impingement)

When Moisture is Torture!

Dry, Compressed Air for Textiles !!

Spinning, Knitting and Hosiery mills use compressed air widely for many processes like blow room, carding, actuation of autoconers, looming, comber, spinning frame, splicers, to name just few. With the machinery being used by the textile industry getting more and more sophisticated, pneumatic controls have become more complicated .



Typically, certain widely used processes like airjet weaving and spinning uses a large amount of compressed air for picking insertion and yarn consolidation. In fact, cost of compressed air forms a significant part of overall production cost. Thus, the quality of compressed air needed for these processes is very important to ensure that there are production losses due to contiminants in the compressed air line In fact, most of the processes require 100% moisture free compressed air.

Moisture Problems:

Moisture (condensation or water vapour) in compressed air stream leads to :

- Corrosion in pipes, cylinders and other components.
- Increased downtime and maintenance costs of pneumatic controls.
- Washing out of the basic lubrication in the cylinders.
- Contamination and damage at points where the compressed air comes directly in contact with sensitive materials.
- Rust and scale formation within pipelines.
- Sluggish and inconsistent operation of air valves and cylinders.
- Freezing of exposed lines during cold weather.

The delair solution

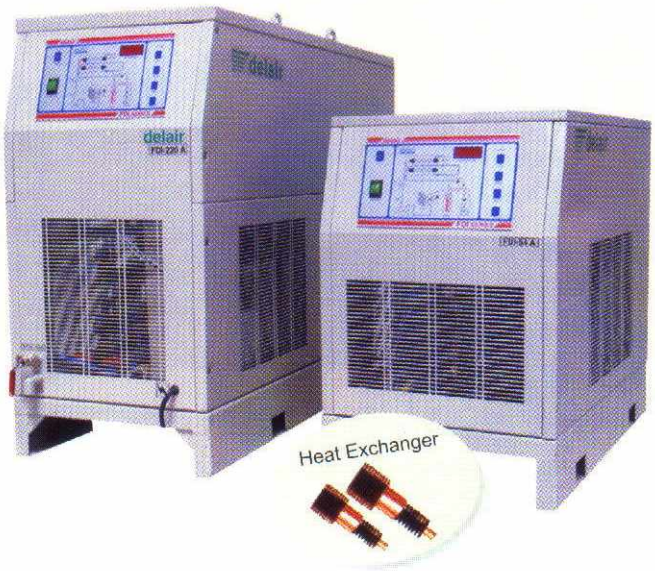
Generally, most spinning mills use a Heatless type compressed air dryers to dry the compressed air, thereby increasing power usage due to the purging process of reactivation of the dryer. To cater for the process as well as purge air, capacity of the compressor has to be increased to take care of the "extra waste" air needed by the dryer. This, obviously raises first as well as operating cost. Delair engineers after understanding the exact process requirements, recommended that the compressed air be dried at 2 to 5°C PDP (Pressure dew point) instead of (-) 20°C PDP being done. Thus, a Refrigerated type Air Dryer provided the ideal solution for providing dry compressed air. Thus, delair was able to help many textiles mills to save on production and power costs by eliminating the use of heatless type Air Dryer. The Thuran Spinning Mills Ltd., a group company of the prestigious, 300 crore, Tiruppur based CENTWIN GROUP, has replaced the existing heatless dryer at their Dindugal plant in Tamil Nadu with a Delair Refrigeration type compressed air dryer, FDI 430A series of 250 CFM capacity, therby saving a lot in power costs. The delair's KW rating of the dryer was comparatively very much lower than other manufacturers of dryers thereby saving an additional cost in power.

delair

Compressed air dryer - FDI Series

Most compressed air dryer users over specify their dewpoint requirement down to (-) 40°C to (-) 60°C due to inadequate information, which consequently lead to high cost dryers in terms of, both, first and operating costs. However, for most common application of general plant air, instrumentation and tools, dry air with pressure dewpoints between 2°C to 10°C or (-) 25°C to (-) 17°C atmospheric dewpoint is required, which is well within the reach of refrigeration dryers.

Refrigeration dryers are low in first cost, operating cost and energy consumption, making them the most cost-effective solution to all such drying needs, requiring pressure dewpoints 2°C to 10°C. The Refrigeration dryer is a self-contained, packaged and fully automatic unit which produces a steady output of dry air. There is no regeneration cycle with complex valving, no periodic recharging of chemical and also, oil in the air stream does not affect the performance.



- ✓ CNC manufactured with power coated finish
- ✓ Every unit is thoroughly tested for proper performance before leaving te factory

Easy to use :
User friendly simplistic display cabinet style, highly portable, rugged, easy-to-install & maintain design

Products *from*
PAHWA ENTERPRISES

Bry-Air

ECOPLAST

ECOFRESH

ECOCOOL

Products from delair


Adsorption Type Heatless Dryer


Refrigeration Type Dryers


Air Filters


Moisture Separators


After-Coolers


Air Receivers

For more information on any product application covered in the issue, please contact :
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Edited, Printed & Published by Sonali Dutta for delair india pvt. ltd. , 21C, Sector-18, Gurgaon- 122015 (HARYANA)