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Airgen
Equipment Company

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September 24th , 2021

To,

Hanumant Paper Mills Pvt Limited,
8.5 km ,Jansath Road,
MUZAFFARNAGAR
(U.P.)

Dear Sir,

SUB: Offer for 300 cfm Heatless type Air Drying Unit working at 10 kg/cm²

Our Quotation No: **AG 190**

We thank you very much for your inquiry regarding your requirement of Heatless Type Air Dryer. We are pleased to submit our techno commercial offer for Airgen make Air Dryer Model AGD 300 details of which are given below.

1.0 Salient features of AIRGEN Heatless Air Drying Unit:

- (a) AIRGEN developed secondary adsorption technology ensures uninterrupted dew Point upto (-) 80° C.
- (b) Regeneration carried out at ambient temp. This results in reduced corrosion to Towers and long life of desiccant.
- (c) Snow storm filling prevents fluidization and channeling, ensuring even flow through Bed movement and maximum use of desiccant.
- (d) Soft seated control valves used for leak proof operation.
- (e) Gradual depressurization and depressurization prevents bed movement and attrition Loss.
- (f) Epoxy coated towers from inside for prevention of corrosion due to moist feed Air.
- (g) Integral stainless steel desiccant support screens inside each tower.
- (h) Low pressure drop, less than 2 PSIG only.
- (i) Honey comb feed Air distributors for uniform adsorption.
- (j) Design conforming to various National/International codes likes ASME, BS, DNV,
- (k) Adjustable dew point.
- (l) System with user friendly features.
- (m) Stage-wise inspection involved.

(n) Modular skid mounted compact units, wall or floor mounted for ease of installation.

2.0 Technical Specification:

(a)	Compressed Air capacity	:	300 cfm
(b)	Compressed Air pressure	:	10 kg/cm ²
(c)	Compressed Air inlet temp. To Air dryer :		40°C
(d)	Dew point after Air dryer	:	(-) 40°C
(e)	Type of dryer	:	Heatless
(f)	Particulate matter	:	Less than 5 microns

3.0 Description:

Air will enter pre-filter of drying unit. In the pre-filter moisture droplets dirt, dust, scales present in wet Air will get separated out by mechanical separation and filtration principal. Oil water emulsion will also separate in the pre-filter. The mixture of oil and water gets collected at the bottom of pre-filter and is drained out periodically by drain trap. Even after passing of Air through pre-filter, oil and water remains in the Air and present in the vapor form. Oil is detrimental to activated alumina desiccant used in the Air dryer. Oil covers the surface of activated alumina thereby choking the millions of pores on its surface thus reducing the moisture removal capacity Molecular Sieves. To avoid this, we incorporated an activated carbon filter just before the dryer. Oil vapors are absorbed by Activated carbon and Air comes out free of oil.

The Air from oil filter now passes through a twin tower drying unit. The drying towers are cylindrical vessels filled with activated alumina desiccant. At a time Air passes through one drying vessel for five minutes dried. Simultaneously, the other drying tower undergoes regeneration is depressurized to atmospheric pressure and then purging process is completed in 3 minutes time. In the balance minutes of cycle, depressurization of regenerated tower takes place up to the line pressure. When pressure in both the towers becomes equal, the drying towers change over. Now the regenerated drying tower comes in drying cycle and the wet tower undergoes similar regeneration process.

The total cycle time is as under:

Drying time	: 5 minutes
Regeneration time	:5 minutes
Total cycle time	:10 minutes

Every 5 minutes the drying tower keep changing over and dry Air comes out continuously without flow of pressure fluctuations. In the dry Air coming out from the drying unit, there might be micro dust which needs to be filtered out for making Air absolutely clean. We therefore, provide a 3 micron filter after drying unit. These Filters out dust completely. Now the clean and dry Air can directly take for end use.

4.0 Design Parameters:

- (a) Inlet Air flow rate : 300 cfm
- (b) Inlet pressure of Air to the dryer : 10 kg/cm²

5.0 Utilities Requirement:

This drying unit requires only single phase power supply for operation of solenoid valves and sequence timer. The power requirement is only 25 watts (max. equivalent to bulb).

6.0 Size of Unit :

Length	:	1200 mm
Width	:	1200 mm
Height	:	2000 mm

7.0 Design Codes and Materials:

The total drying unit shall be fabricated as per ASME Sec. VIII Div-1 Pressure vessel code.

- a) Design pressure : 11 bar
- b) Test pressure : 16.5 bar
- c) Design temp. : 40°C
- e) Material of construction : IS - 2062
for the vessels.
- f) Pipe Line : As per IS - 1239
- f) Flanges : RF flanges as per ASA -150 Lbs.

8.0 Technical Specification of Bought out Items:

- a) Pre-filter : Polypropylene type
- b) After filter : 3 Micron NWF type
- c) Activated carbon : AST/YAO
- d) Activated Alumina : IA-101
- e) Sequence timer : PLC based
- f) Pressure gauge : 3/8", 4" dial, 0-17 kg/cm²g
- g) Changeover valves : Automatic
- h) Pipes : IS-1239
- i) Non-return valve : Swing check, wafer design

9.0 Scope of Supplies:

- a) One pre-filter with drain valve.
- b) Activated carbon filters with drain valve.
- c) Two drying tower filled with Activated Alumina.
- d) Three Automatic changeover valves.
- e) Two non-return valve in the dryer outlet line.
- f) The exhaust silencer in the dryer outlet line.
- g) One after filter.
- h) All interconnected pipe line and fittings.
- i) All gaskets, bolts and pneumatic tubing within the unit.
- j) Instrumentation for fail proof operation of the system.
- k) One control panel.
- l) Painting of the unit.
- m) Commissioning of the unit.

10.0 Inspection and testing:

Complete assembly of the unit on a channel base frame shall be done at our works and shall show you complete pressure test at the time of inspection. We shall also show you sequence test of panel. Thereafter only unit shall be dispatched.

Terms and Conditions

A. AFTER SALES: We take care of all system maintenance and service requirements. In case of a rare service request to attend to the system; we shall attend to it at site in shortest possible time. We shall either repair or replace the defective parts, whichever takes minimum possible time.

B. PRICES:

For 300 cfm: The price is ₹ 3,25,000 (Two Lac Forty Eight Thousand only) per unit.

A special case discount of 20% is offered on the above price. **The FINAL PRICE after discount for 300 cfm Dryer will be ₹ 2,60,000.**

Auto Drain Valve is ₹ 7,500 each. Two valves will be required for unit.

C. FOR: The above Prices are FOR -NOIDA. Price quoted is based on present rules and regulations. In case of any variation on duties / taxes or if any levy is imposed the same shall be to the buyers account.

D. SALES TAX: GST @18% Octroi / Entry Tax, if applicable shall be to your account. Please send Road Permit along with your order if applicable.

E. INSURANCE: Insurance is to your account. Please supply us with the Road Permit for dispatch along with Purchase Order if applicable.

TERMS OF PAYMENT: 40% payment as an advance along with order & balance 60% payment against Proforma invoice drawn in the name of AIRGEN EQUIPMENT COMPANY vide demand draft / payee's cheque / RTGS / NEFT. Our Bank account number is 50200031850540, HDFC Bank, Shalimar Garden Extension 2, SAHIBABAD, RTGS/NEFT IFS Code ;HDFC0000433..

F. DELIVERY: Supply within 6-8 Weeks from the date of receipt of your order along with advance, subject to force majeure conditions and unforeseen delay, which is beyond our / our manufacturers' control.

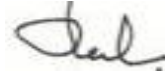
G. VALIDITY: Our offer shall remain valid for a period of 30 Days from the date of our offer and subject to our confirmation thereafter.

It will be a pleasure serving you for your valued requirement.

Thanking you and assuring you of our best services at all times,

Yours truly,

For Airgen Equipment Company



Atul Kumar
(Authorized Signatory)

