

A MULTI-PRODUCT ENGINEERING COMPANY

BAJAJ MISTRAL HUMIDIFICATION SYSTEM

**MOISTURE RESTORATION FOR MAINTAINING
COTTON FIBER QUALITY AND HIGHER PROFITABILITY**

- Instant / Online Humidification
- Reduces pressing force
- Reduces power cost per bale
- Improves lint grade & appearance
- High quality construction for longer life
- Improves fibre parameters



Humid Air Generator



SS Conditioning Hopper



**Internal view of lint slide for Humidification
Humid Air Applicator**

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BAJAJ MISTRAL HUMIDIFICATION SYSTEM

This is a unique device manufactured by Bajaj Steel Industries Limited for maintaining fiber parameters and moisture restoration in cotton lint applying psychrometric principles. With the hygroscopic property of air water is added to the hot air. The vapour phase transfer of moisture at the diffuser assures controlled and positive enhancement of moisture content in lint to highest acceptable level, as per international standard. This reduces pressing force of bale press resulting in lower power consumption per bale & also helps to maintain fiber quality in ginning.

TECHNICAL DATA OF MISTRAL

S.R.NO.	TECHNICAL SPECIFICATION	"MISTRAL" HUMIDIFICATION
1	Electrical control panel	PLC based with 10" HMI & Remote support system
2	Water Evaporation (Max):	680 Lit/hr.
3	Water pump	7.5 HP (Updated)
4	Water Pressure	5-5 Bar
5	SOFT Water Tank (Recommended)	10000 lit capacity
6	Water supply (Recommended) MAX	2000 lit/hr
7	Purge Water (MAX)	227 Lit/hr
8	Burner Input capacity (Max.)	4 MBTU/hr
9	Burner Type	Oil/Gas/Dual
10	Combustion Fan	3/5 HP (Depending on make of burner)
11	Heat required (Max)	1007920 Kcal/hr
12	Fuel consumption (Full throttle) w.r.t std. Calorific values of Diesel & NG	For (oil 107 lit /hr)* (Gas 118 m3/hr)*
13	Fuel consumption (Normal operation) w.r.t std. Calorific values of Diesel & NG	For (oil 75 lit/hr)* (Gas 82 m3/hr)*
14	Combustion & Temp control	PLC based
15	Water Temp. control	Purge control valve
16	Velocity Meter	Yes
17	Water Flow Meter	Yes (Electromagnetic type)
18	Air Control	VFD control/Damper Control
19	Thermohygrometer	Yes

* - Values calculated using standard calorific values of pure fuel used and ideal running conditions.

ACCESSORIES SUPPLIED WITH SYSTEM

Gi Ducting, Moist air supply blower,
Insulation ,Diesel Tank with Centrifuge
MoistureExtraction system - Blower,
Cyclone, Air filter.

OPTIONAL SUPPLY

S.S Lint slide, S.S Louvers, Stainless Steel
Conditioning hopperAuxiliary Heater,
complete range of spares, water softener
system, High pressure water mist supply system

SALIENT FEATURES

Instant humidification by easing out wax surface of the fibre and recuperation after humidification by cooling effect for retained moisture.

Preserves fiber length, improves strength and uniformity and reduces short fiber content.
Eliminates moisture condensation which is a general problem with all other moisturisation techniques.

Increases the lint slide capacity and allows more cotton to enter the press box at each stroke of the trampler and hence higher density bale is obtained.

Improves the capacity of the bale press whereas dry cotton requires higher compression forces and more time to charge and compact into the press box.

