

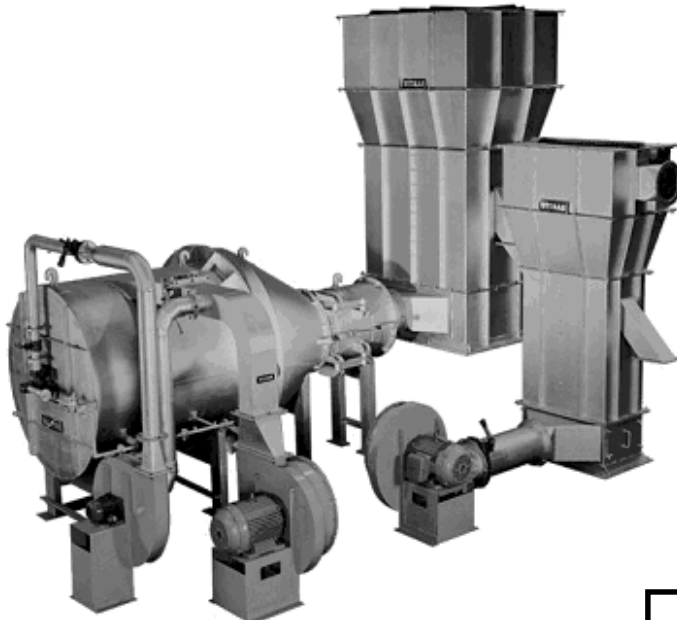
# WESMAN

## FOUNDRY EQUIPMENT DIVISION

# FLUIDIZED BED DRYER

FOUNDRY EQUIPMENT

When high-velocity air or gas passes through a bed of sand, the sand becomes a gas-solid mixture with characteristics of a liquid. In this fluidized state close contact between hot gas and sand enhances heat transfer by conduction and convection, and ensures efficient mixing and uniform drying.



**WESMAN FLUIDIZED BED SAND DRYERS** come in sizes from 200 kg to 12 tonnes per hour. It consists of a vertical container holding the sand to be dried, a distribution plate, and a pressure chamber. Hot air comes from an oil or gas fired hot air generator or electric air heater designed to operate at high back pressure. Special nozzles in the distribution plate allow hot gases to pass through but prevent sand from falling into the pressure chamber.

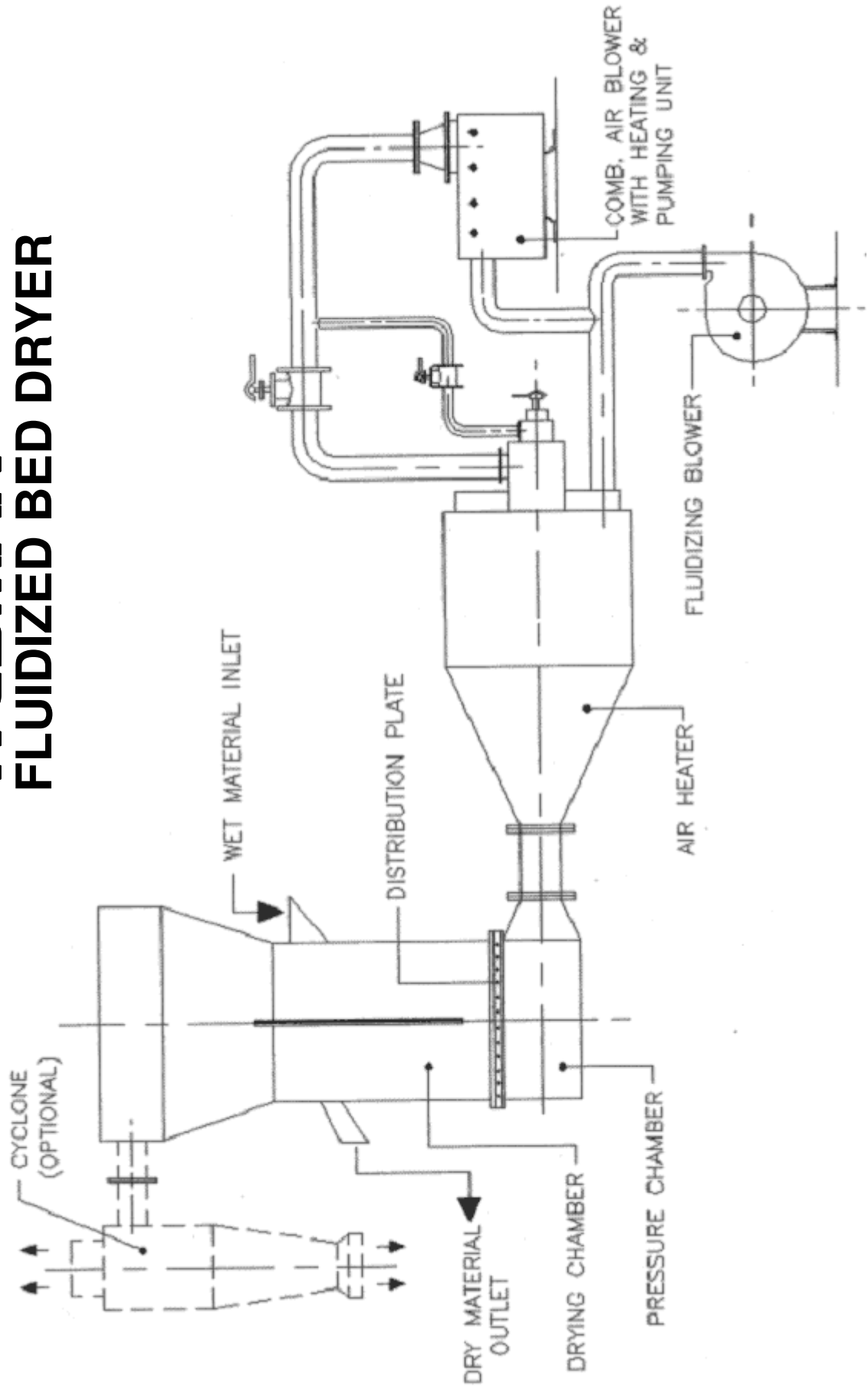
An expansion chamber at the top reduces the gas velocity and causes solid particles entrained in the fluidizing gas to drop back onto the bed. The exhaust gas may be passed through an optional **CYCLONE SEPARATOR** to extract fine particles which may be entrained. Wesman Fluidized Bed Sand Dryers operate at temperatures from 160°C to 600°C and can be configured for batch or continuous operation. Higher temperatures provide a greater yield but necessitate use of an after-cooler. Wesman supplies a matching after-cooler where, instead of hot air, ambient air fluidizes the column of hot sand from the dryer.

SEE REVERSE FOR INSTALLATION DIMENSIONS

### STAR FEATURES

- ▶ Energy efficient due to high heat transfer rate
- ▶ No moving parts in dryer
- ▶ Continuous or batch operation possible
- ▶ Noiseless dryer operation
- ▶ Clean environment
- ▶ Can be integrated with automatic or semi-automatic sand plant
- ▶ Occupies less space
- ▶ Low initial and operating cost compared to conventional rotary dryer

# WESMAN FLUIDIZED BED DRYER



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