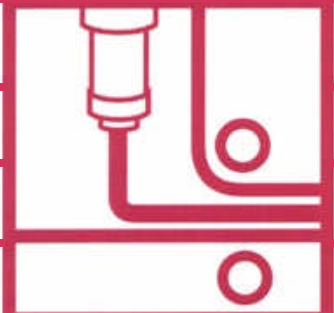


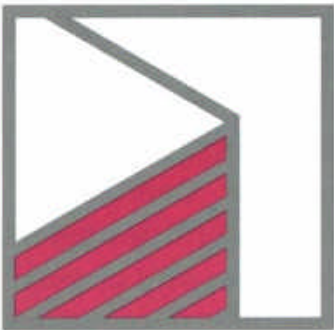
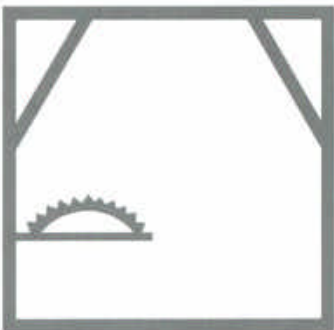
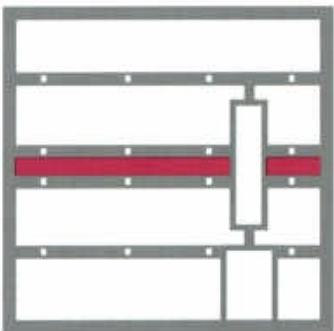


*Phenolic Foam*

**PHENOFLO<sup>®</sup> 20/100**



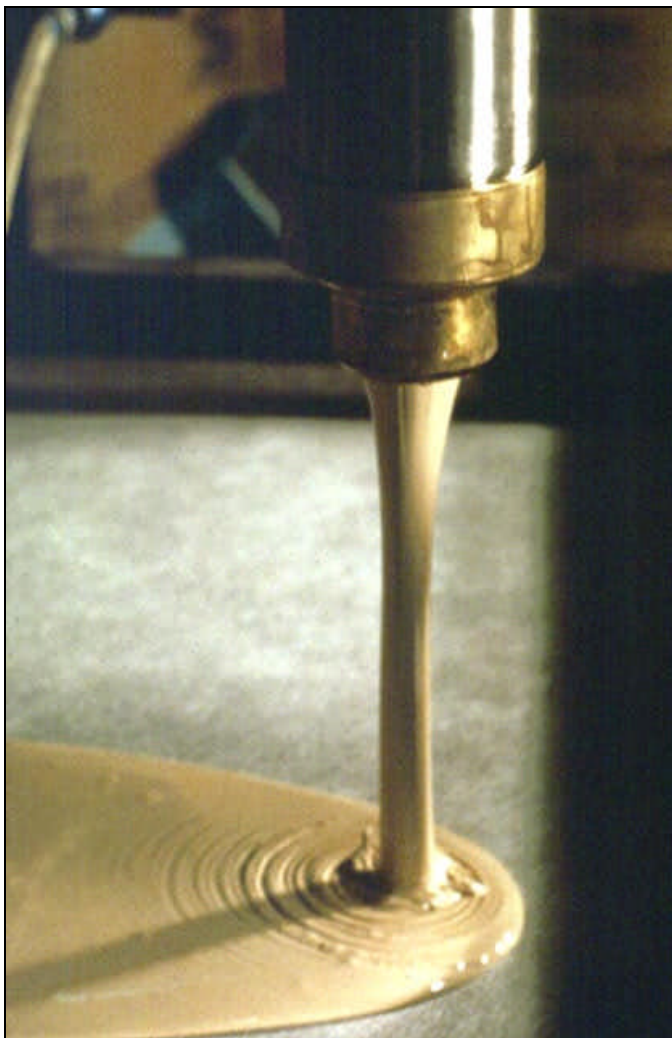
***Meter Mixing  
and  
Dispensing  
Equipment***



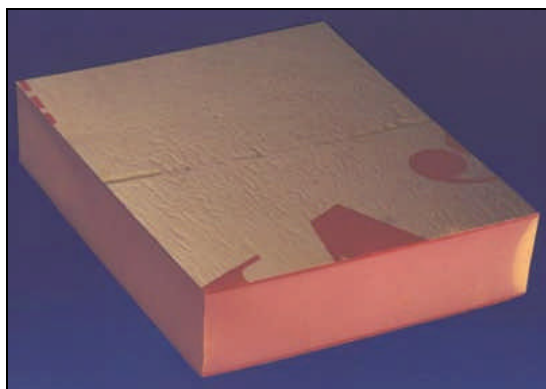
*Plastics Machinery Systems*

**KORNYLAK** CORPORATION

# PHENOFLO® 20/100



*Phenoflo - to meter, mix and pour or spray phenolic formulations in a viscosity from 5,000 to 100,000 CPS.*



*Phenolic Foam Panel  
Zero Smoke - Zero Flame*

## DESCRIPTION

Phenoflo® 20/100 is a low pressure chemical meter, mixing machine. It can be designed to handle a variety of chemicals, but is specifically intended for the difficult phenolic ingredients. Its three basic components are a mixing head, a control console and a pump unit. Outstanding features include:

- corrosion resistance for aggressive acid catalyst*
- compact design*
- service convenience*
- ample instrumentation*
- ratio and flow controls*
- reduced energy losses*
- wide range adjustability*
- system monitoring*
- user-friendly controls*

Phenoflo® 20/100 capabilities cover the full range of cellular phenolics from the relatively low viscosity floral formulations to the high viscosity insulating foams. Capacity ranges from 200 LB/min for 2500 CPS viscosity to 50LB/min for 50,000 CPS formulations. Its advanced design has been proven both in laboratory and full scale panel and slab production running a number of phenolics developed by U.S. and overseas firms.

## DISPENSE HEAD

Laydown options include either pour or spray and a choice of stationary, traverse or boom mounting. A selection of shear and turbulent style mixers for selective energy transfers are hydraulically driven with variable speed to accommodate a variety of formulations. Maximum speed is 7000 rpm with close speed regulation regardless of load. The mixing chamber as well as the primary valve chambers are flushed to protect them and connecting lines from clogging or etching by residual chemicals. Pressure balancing is adjustable for optimum pour or spray operation. Continuous internally recirculating coolant lubricates the head and protects against damage from acid or resin leakage. External coolant for "hot" formulations maintains head temperature.

## **MODULAR DESIGN** for convenience and easy servicing

### **CONTROL AND PUMP CONSOLES**

Precision pump drives maintain speed and ratio within 1% of setpoint.

A single master control simultaneously changes the speeds of all pumps from near zero to maximum flow while maintaining the set ratios. Flow-meter feedback is provided for the blowing agent pump and the acid stream to accommodate the high slip common with these components.

The use of flush mounted sensors and the elimination of dead spots in the lines and pumps protect against clogging of the resin, whose shelf life may be drastically shortened at high processing temperatures.

Automatic adjustment of process conditions minimizes mixing power requirements. This energy conservation reduces heat buildup and eliminates the need for console ventilation and the accompanying exposure of the console to acidic fumes.

Additional instrumentation is provided to indicate fluid temperature in the lines, pump output pressure, and mixer RPM. Switches in the pressure display meters help protect the system from dangerous overpressures or annoying underpressures by use of alarms or system shutdown. An ammeter is furnished to indicate the instantaneous load on the resin pump.

The head mounted control is removable to eliminate electrical signals at the head for users of pentane blowing agents.



*Mixing head temperature control system reduces premature frothing and foaming. Wrap-around stainless steel cooling jacket permits coolant to maintain favorable phenolic mix temperature for "hot" formulations.*



*"User friendly" control panel - Regulates and displays temperature, pressure and flow of resin, catalyst, additive and blowing agent - Incorporates shot time and mixer speed control - Stainless steel day tanks (added as an optional feature) - provide chemical temperature control*

# KORNYLAK CORPORATION

Since 1958 Korynlak has meant leadership in high productivity equipment to the cellular foam industry. The industry's first self-tracking metal belt line for continuous flex foam production was the famous **Armorbelt®**, the first combination round and rectangular **Bun Line**, the first adjustable width horizontal run out **Flex Foam Line**, the "one side of a home every two minutes" **Panel Line**, the first continuous **Carpet Underlay Line**, the first four sided **Rigid Bun Line**, and the high speed smooth surface **Process Tunnel®**. Korynlak's pioneering continues in a cellular plastics laboratory with full-scale production lines. Several years of testing of numerous phenolic formulations led to the development of **Phenoflo®** and offers the industry an opportunity to produce the long sought building insulation featuring high fire retardance, low smoke generation, low toxicity and excellent R-values of the new phenolic foam.

Most of Korynlak's development work has been in concert with leaders in the chemical and production segments of the industry. Its strong background of experience dates back to the first days of urethane foam in the U.S. Hundreds of Korynlak foam processing lines have been installed throughout the world.

To compliment this line of foam processing equipment, Korynlak recently added **Blockmold®** for expandable polystyrene foam. You are invited to discuss processor equipment plans with us and to benefit from our excellent laboratory facilities.



**PROCESS TUNNEL**



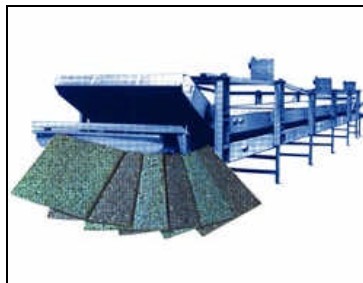
**BUILDING PANEL**



**3 METER WIDTH**



**REBOND CARPET UNDERLAY**



**CARPET UNDERLAY**



**POLYSTYRENE BLOCKMOLD**

## A WORLD LEADER IN INSULATED PANEL TECHNOLOGY

# KORNYALK CORPORATION

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**POLYSTYRENE PANEL MOLD**