

POLYMEL® Blending System for the Food & Beverage, Pharmaceutical & Cosmetic Industries

As the French leader of industrial equipment for food, biopharmaceutical and cosmetic industries, PIERRE GUERIN is recognized for its know-how in the manufacture of automated complete equipment lines and for the quality of its products. Among the range of agitation and mixing systems, PIERRE GUERIN offers the **POLYMEL®**, an efficient powder/liquid mixing device.

Operational description

The **POLYMEL** comprises of a mixing chamber incorporating a centrifugal pump casing, an impeller and a horizontally mounted hopper.

The liquid enters tangentially in the diffuser pipe, through the mixing chamber by following the direction of impeller rotation, which causes a rapid acceleration in the speed.

A vortex forms in the impeller's eye causes a pressure drop thus causes a sucking-up of powder from the hopper.

Turbulences created by impeller result in the homogeneity of final product.

Depending on the application, final product is directly transferred (continuous process) or recycled in a buffer vessel (the recycling improves the mixing operation due to successive passes via the **POLYMEL**).

Advantages

- simple and robust system with the guarantee of a rapid and homogeneous mixing
- installation in a fabrication line without any significant modifications
- simple connection using flexible tubing
- compact, reliable (few moving parts) low maintenance cost
- easily dismantlable and cleanable-in-place

User Benefits

- economy of manpower and reduction of product losses
- improvement of User working conditions
- improvement to final product quality: no lumps, greater product homogeneity

Technical Features

- 3 models with a capacity of up to 9500 kg/h sucked powder
- 60° conical hopper, 50 liters capacity (for models 20 & 50)
- diffuser pipe with tangential liquid inlet
- casing design mixing chamber
- open impeller with inverted blades
- turbine driving with pulley and notched belt (model 50 & 150)
- simple Carbon/Silicon Carbide mechanical seal and leak proof static seal
- 230/400V, class F with shaft protection
- clamp or SMS connections
- in accordance with Europeans standards

Material

- all product-contact parts are made of stainless steel 1.4404 (316 L)
- EPDM gaskets

Finish

- internal: Ra ≤ 0.8 µm
- external: satin



Polymel - Model 20

Documentation

- manual of instruction and maintenance with CE certificate of conformity

Material Certificates

- EN 10028/7 3.1 material certificates: casing and back plate, impeller, diffuser, and inlet adapter
- FDA certificates for mechanical parts and gaskets
- roughness surface finish certificates of all product-contact parts

Options

- alternative mechanical seal materials: silicon carbide/silicon carbide for abrasive products (others on request)
- powder inlet fitted with pneumatic butterfly valve
- Viton gaskets
- ATEX version (zone 2 class 2)
- trolley mounted
- skid mounted version with preparation tank and dosing device for liquid and powder



Special design with hopper operating under pressure



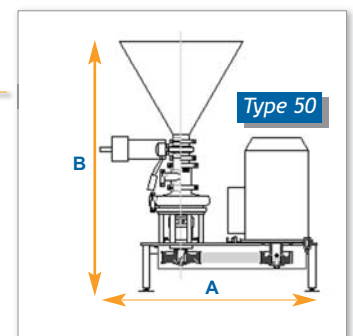
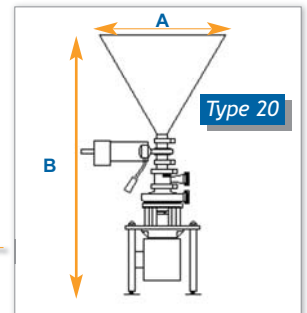
Trolley mounted version

Applications in the Food & Beverage Industries

- reconstitution of milk derived products
- standardization and enrichment of milk
- preparation of infantile and gelified milk
- coating products for pet foods
- dissolution of sugar (solutions up to 67° Brix)
- incorporation of stabilizers
- preparation of batter
- fabrication of brine
- preparation of food sauces
- incorporation of salt into oil
- reconstitution of egg white

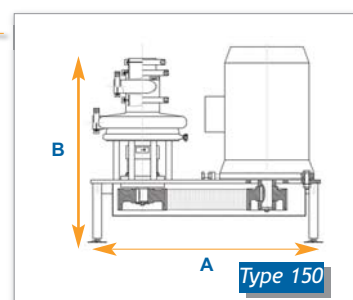
Applications in the Pharmaceutical & Cosmetic Industries

- dissolution of active pharmaceutical components
- mixing of base components for personal care products
- dissolution of detergent pellets



Sizes - Weighs - Flows rates

Model of POLYMEL	A	B	Frame Width	Net Weight (kg)	MAXIMUM flow rate (according to apparent density) (kg/h)	Liquid Flow (l/h)
20	600	1240	355	95	1 350	10 000
50	970	1280	400	190	2 700	27 000
150	860	760	400	250	9 500	32 000



More Information

- availability less than 6 weeks for standard models
- rental equipment available for trials

PIERRE GUERIN

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