



Northstar Polymers (Div. of Tandem Products, Inc.)
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Information about Meter Mixing/Dispensing Machines for 2-Part Polyurethane Casting Resins

Two-part polyurethane casting resin systems may be processed manually without using a dispensing machine. However, for a higher production quantity and for some specialty applications, you may need to use a meter-dispensing machine to process the 2-part polyurethane casting resin materials.

Basically, a dispensing machine for 2-part polyurethane resin system has to:

- Feed the component materials to the pump
- Meter the materials at the correct ratio and send them to the mixing head
- Mix the two components
- Dispense the blended material

The dispense machine assembly parts for these functions have options for you to choose from. For example, if you want to mix dye, filler, or other additive, you may want an agitator and vacuum capacity in your feeding tank. If your ratio needs to be varied, you need to get a variable mixing ratio system and not a fixed ratio system. Your output and shot size determines the type and size of the pump and driving mechanism. If the component is very thick or solid at room temperature, you need the material heated in the machine. If the two resin components are difficult to mix, you may need to get a dynamic mixing system instead of static mixing system.

Each application is different, so the machine manufactures typically custom-assemble your machine based on your requirements. You will have to provide various pieces of information including these to your machine supplier in order for you to obtain a quote.

- Mixing Ratio
- Viscosity of Components
- Output rate
- Shot Size
- Filler Requirement
- Heating Requirement
- Other Specific Requirements





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After you make an initial contact with a sales person, typically the machine supplier will send you a form to fill out your answers. They will be quoting you based on your answers. It is important that you provide the accurate information to avoid surprises later on.

For your reference, you may access to the links below for more detailed information to read about the polyurethane meter-dispensing machines.

Articles about Polyurethane Dispensing Machines for Your Reading

<https://polyurethane.americanchemistry.com/Polyurethanes-Technical-Conference/PU-105-Polyurethane-Processing-Equipment.pdf>

<https://polyurethane.americanchemistry.com/Introduction-to-Polyurethanes/Applications/Polyurethane-Processing-Equipment/Low-Pressure.html>

<http://ashbycross.net/2015/12/15/206/>

<https://www.adhesivesmag.com/articles/91295-meter-mix-dispensing-for-polyurethane-elastomers>

<https://polyurethane.americanchemistry.com/High-Pressure-Impingement-Metering-Equipment/>

Northstar Polymers does not recommend a certain machine manufacture. We are not affiliated with any machine supplier. The list below is provided for the convenience of our current and potential future customers, and it is reference only.

List of Manufacturers of Polyurethane Meter Dispensing Machines

Ashby Cross

<https://www.ashbycross.com/>

Graco

<https://www.graco.com/us/en/in-plant-manufacturing/products/sealants-adhesives/meter-mix-dispense-equipment.html>

Nordson

<https://www.nordson.com/en/divisions/sealant-equipment>

Edge-Sweet

<http://www.edge-sweets.com/dispensing-equipment.aspx>

Ellsworth

<https://www.ellsworth.com/promotions/meter-mix-and-dispensing-equipment/>

<http://www.northstarpolymers.com>





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AST

<http://ast-corp.net/>

Hennecke

<https://www.hennecke.com/us/products/dosing/overview>

Exact Dispensing

<https://exactdispensing.com/>

Jesco Products Company

<http://www.jescoproductsco.com/>

Mahr

https://mahrusa.com/products/meter-mix-dispense/?gclid=Cj0KCQjwwb3rBRDrARIsALR3XeaX6yhrwEfWCQsuvBU11O_K-04wLgBaNAnvmn3_O7xYHAls3SVxT6kaAk9KEALw_wcB

As mentioned, your machine is likely to be customized for your specific requirement. You will need to work with the supplier for the setup, maintenance, repair, parts, and other issues for a long time. It is important that you select a machine supplier that you feel comfortable working with for a long term. Some manufacturers have direct sales people, and some of them primarily use distributors. The machine distribution companies often have engineering capacity to help setting up and deal with issues locally.

Northstar Polymers will be happy to work with your choice of machine supplier. Please feel free to have them contact us for detailed questions as they need to.

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