

MAINTAINING HIGH FLOWS AND PRESSURES IN HIGH VISCOSITY APPLICATIONS

MEGARROYAL® pumps provide accurate injection of high flow polymer solutions into an extruder to produce raw plastic pellets which are used in the global plastic market.

The polymer manufacturing process requires performant and flexible pumps that can adapt to a variety of production demands.

The MEGARROYAL triplex monobloc pumps are equipped with a VFD motor that adjusts to changes in production flow rates as needed.



Additional Features & Benefits:

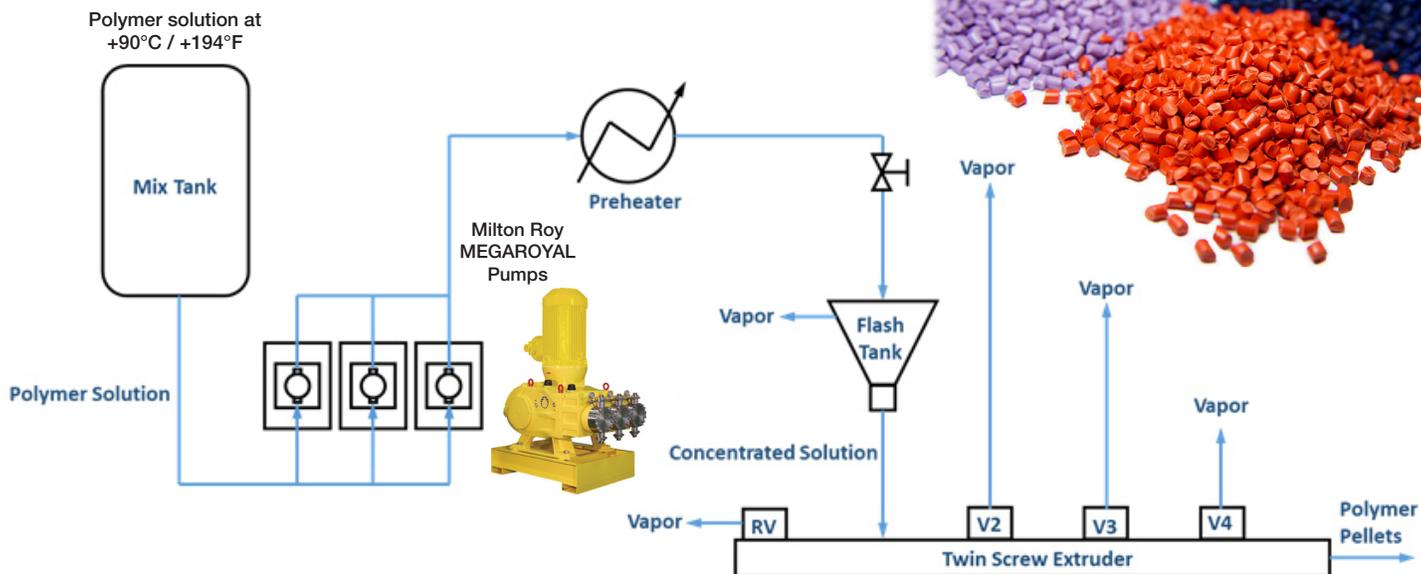
- Deliver constant flow rates 7,000 LPH max (1,850 GPH max) at 70 bar / 1,015 psi discharge pressure.
- Heating jackets maintain the right temperature (+90°C / +194°F) of the polymer solution in order to maintain the required viscosity.
- Special check valves designed to handle viscous polymer solutions (10,000 cps).
- Capable of supporting the continuous operation of feeding the extruder.
 - The accuracy of the MEGARROYAL dosing pump allows the synchronization with the extruder rotation speed to produce a constant quality of the plastic pellet.
- High level of accuracy, linearity and repeatability adapts to the production flow as needed.

Questions?

Visit www.miltonroy.com or contact your local representative.



Typical Polymer Application (phases 5 & 6)



*The application detail and general process schematic are based on an installation involving a NFM/WE Twin Screw Extruder.

How the plastic pellets are made from the crude oil?

- 1 - Petroleum is drilled from the earth and transported to an oil refinery for processing.
- 2 - The crude oil that is removed from the earth gets refined into petrochemicals such as ethane and propane.
- 3 - Ethane and propane are then used to make the hydrocarbons ethylene and propylene in a heating process known as cracking or catalytic cracking. This process breaks down larger molecules into ethylene or propylene or other types of hydrocarbons.
- 4 - After the material is cracked, a catalyst is added in a reactor, which creates a powder material called a polymer. This material, which the refineries call "fluff," is combined with different additives (depending on the type of plastic desired) in a continuous blender.
- 5 - The polymer solution is then pumped from the mix tank to the flash tank, through a preheater which maintains the polymer solution at the right temperature 90°C +194°F. The Megaroyal pump continuously injects the polymer solution into the flash tank which feeds the extruder.
- 6 - Once the extruded material cools it is cut and formed into the plastic pellets. These plastic pellets are the raw material for the plastic industry (for instance, the injection molding processing).



About Ingersoll Rand

Ingersoll Rand (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is committed to helping make life better. We provide innovative and mission-critical industrial, energy, medical and specialty vehicle products and services across 40+ respected brands designed to excel in even the most complex and harsh conditions where downtime is especially costly. Our employees connect to customers for life by delivering proven expertise, productivity and efficiency improvements. For more information, visit www.IRco.com.

Contact your local representative to find out more.

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Literature #IR-Polymer Solution Pumps Rev 11/2020