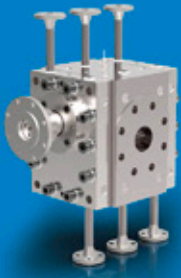


**BOOSTER**



**CHEM**



**EXTRU**



**PURO**

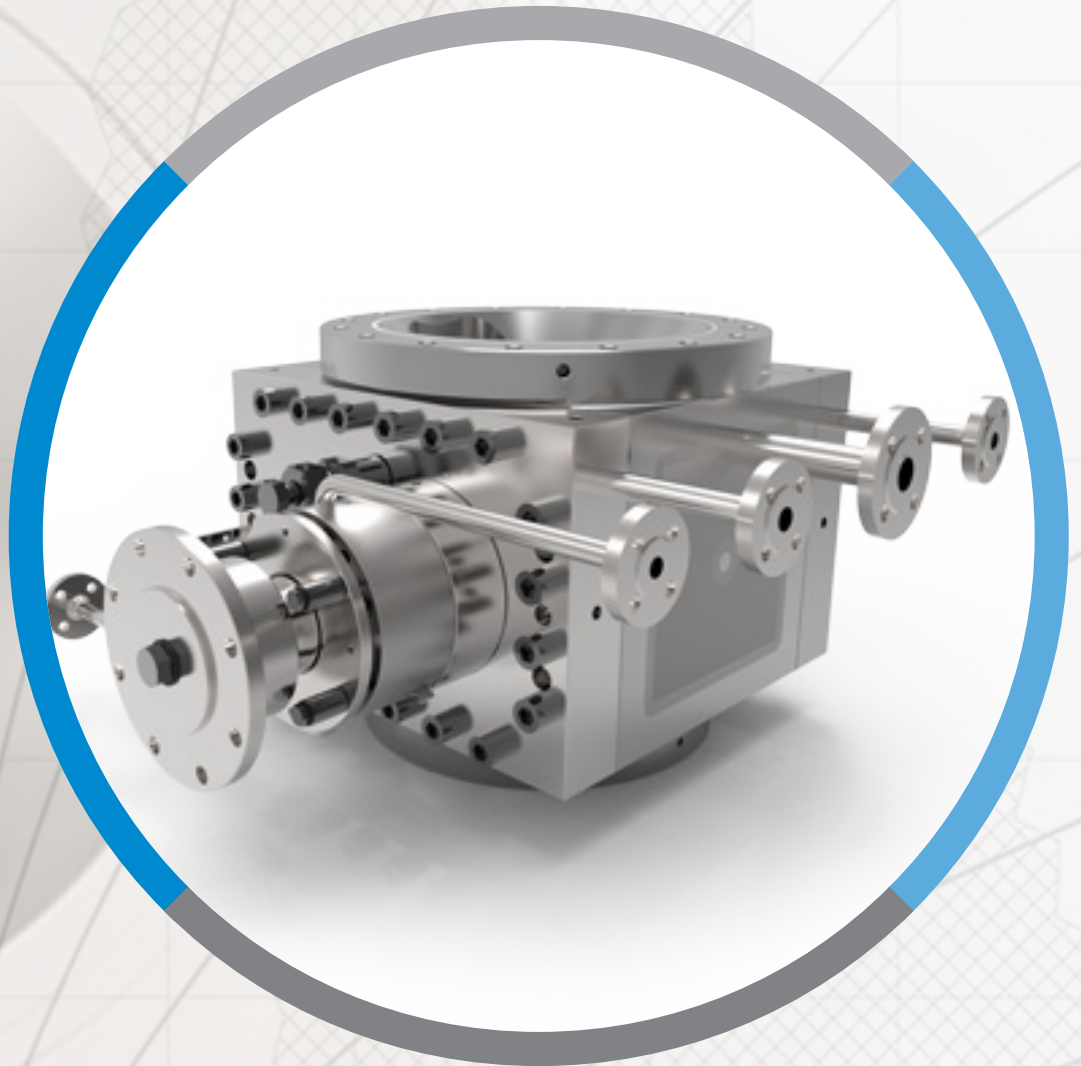


**POLY**



# POLY-AT Advanced Technology

Discharge gear pump for polymer processing.  
New design for more efficiency.



# POLY- AT Three Design Features

Advanced Technology

1

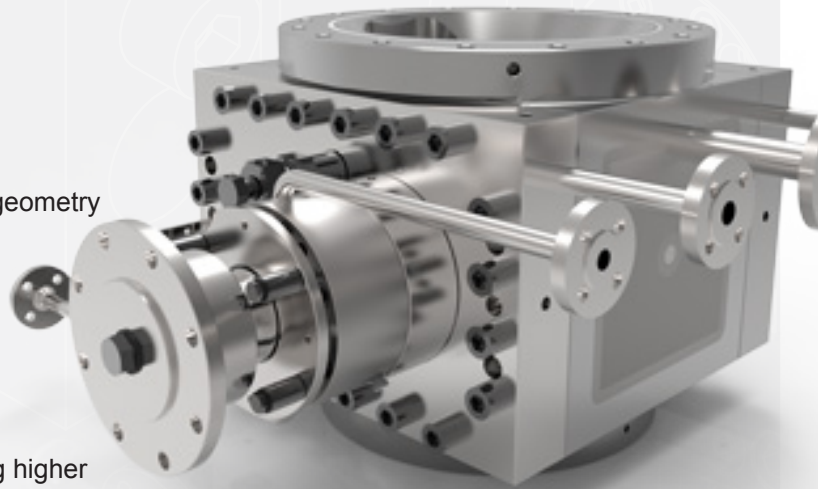
Higher capacity per revolution due to a new gear geometry and wider gears.

2

Increased efficiency due to new gear geometry with smaller gear center distance.

3

Smaller pump size capable of handling higher capacities therefore allowing debottleneck of existing lines.



## Technical specification

<b>Housing</b>	Stainless steel optional: Carbon steel Coatings
<b>Gears</b>	Nitrited steel optional: Tool steel Special steel Coatings
<b>Bearings</b>	Tool steel optional: Al-bronze NiAg Special materials Coatings
<b>Seals</b>	Vacuum viscoseal with buffered stuffing box optional: Buffered mechanical seal Combinations of different seals
<b>Heating</b>	Heat transfer oil optional: Steam

## Operating parameters\*

<b>Viscosity</b>	Up to 40.000 Pas
<b>Temperature</b>	Up to 350 °C
<b>Suction pressure</b>	Vacuum up to 15 bar
<b>Differential pressure</b>	Up to 250 bar/300 bar**

\*\*with square gear design (gear width = center distance)

## Result

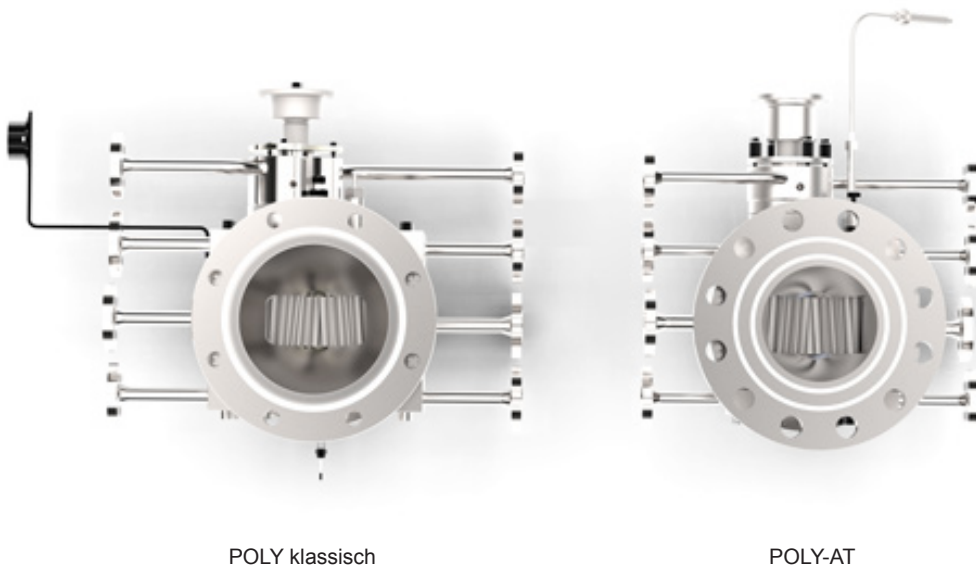
Optimization of the gear geometry and pump design lead to a higher performance polymer pump in a smaller package. This advance has great benefits when debottlenecking existing lines. Other applications will benefit from the larger inlet geometry that allows reduction in NPSHR. All customers can benefit from the new technology found in Witte's POLY-AT design.

# Technical data / operating data

Pump	Specific discharge volume in ccm	Gear center distance in mm	Gear width in mm	Capacity (t/d)*
POLY - AT	3.200	160	200	71 - 322
	6.300	200	250	118 - 552
	8.850	224	280	156 - 722
	12.600	250	320	198 - 957

\* The values depend on the flow to be supplied and process conditions. Maximum values, under circumstances, must not occur at the same time.

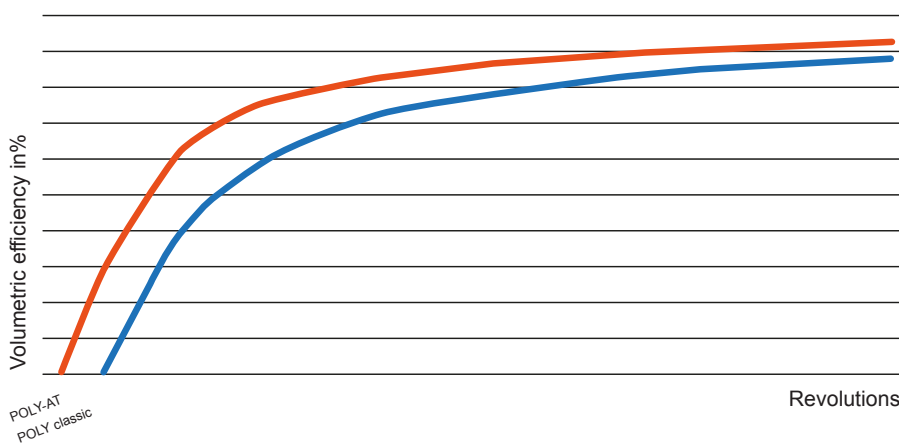
## Dimensions



## NPSH

The wider gears allow for optimum inlet geometry due to the modified relation of length to width, which reduces the pressure loss and in this way, minimizes the required inlet pressure or necessary liquid column (NPSHr). The residence time of the polymer can be significantly shortened.

## Increased efficiency



The redesign of the clearances as well as eye-striking change of the specific flow rate related to the gap sizes results in a considerable increase of the volumetric efficiency. Due to this effect, the minimum pump speed (rpm) is reduced which makes the pump applicable for a wider range of throughput.

## Survey on advantages

- Reduced temperature rise.
- Improved dissipation of heat in the friction bearings.
- Smaller physical size with identical specific flow rate.
- Increased capacity.
- Wide ranges of both viscosity and flow rate due to increase efficiency.



# WITTE WORLDWIDE

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