

# DIC-PPS Machine Requirements

## Molding Equipment:

As with other engineering thermoplastics, DIC-PPS can be processed on conventional reciprocating screw injection molding machines.

## Screw:

As with all filled engineering plastics, wear protected screw must be used processing with glass or glass/mineral filled DIC-PPS. General screws which have structurally 1/3 feed zone, 1/3 transition zone and 1/3 metering zone are used for processing with DIC-PPS. Non-return valve is strongly recommended to be equipped in order to obtain consistent shot volumes.

### Screw Recommendation:

L/D ratio : 17 -23  
Compression ratio : 1:1 – 3:1

## Shot Volume:

Shot volume is preferably recommended within 50 – 70% of machine capacity.

## Barrel Heating:

Heating system which has at least three separate cylinder temperature controller is recommended. Separate nozzle temperature controller is necessary to prevent drool.

## Nozzle:

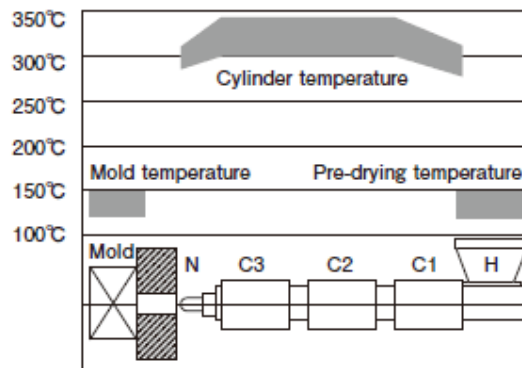
Generally usual open nozzles are used; however needle shut-off nozzles are efficient for precise moldings in order to keep shot volumes more consistent.

## Clamping force:

Clamping force for a typical molding machine is recommended to be within 16 – 32 tons of force / cm<sup>2</sup> of projected area.

## Mold Heating:

Mold tool heating equipment must have ability to maintain tool temperature at 120 - 150°C. Temperature control of molding tool is significant in order to obtain sufficient performance of DIC-PPS as crystalline, high heat resistance thermoplastic. Generally hot oil, high pressure water or electric cartridge systems are used.



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