

Improve Your Injection Molding Ltd.

Injection Mold Design Checklist

Tick off the following information

1. Part Information	Notes
<input type="checkbox"/> Customer _____	
<input type="checkbox"/> Date _____	
<input type="checkbox"/> Part Name _____	
<input type="checkbox"/> Drawing no. _____	
<input type="checkbox"/> Part size _____	
<input type="checkbox"/> Wall thickness _____	
<input type="checkbox"/> Fillets and radii _____	
<input type="checkbox"/> Plastic material _____	
<input type="checkbox"/> Shrinkage _____	
<input type="checkbox"/> Core surface finish requirement: polishing grade/texture _____	
<input type="checkbox"/> Cavity surface finish polishing grade/ texture _____	
<input type="checkbox"/> In mold labelling or decorating requirement _____	
<input type="checkbox"/> Engraving detail _____	

Will your design produce quality parts at the right cycle time?

To get help with your current Mold Design go to:

<http://www.improve-your-injection-molding.com/design-review.html>

2. Basic Mold Design

- Gate location _____
- Gate size and type _____
- Runner type (hot/cold) _____
- Ejection method _____
- Minimum mould opening requirement _____
- Parting line locations (also called split lines) _____
- Venting positions(primary & secondary to atmosphere) _____
- Basic cooling design concept _____
- Interlocking method between fixed and moving sides of mould _____

- Heat treating requirements such as nitriding on moving mould components _____

3. Annual Production Quantity

- Annual production quantity_____
- Estimated cycle time_____
- Number of mould cavities_____
- Mould material for core and cavity inserts_____
- Hardness for core and cavity inserts_____
- Mould material for mould bolster_____
- Hardness and coatings for mould bolster_____

4. Molding Machine Specifications

- Location ring diameter_____
- Space between tie bars (both horizontally and vertically)_____
- Maximum opening stroke_____
- Minimum opening stroke_____
- Minimum die height_____
- Maximum die height_____
- Clamp hole size and position_____
- Maximum KO bar ejector stroke_____
- KO bar positions and diameter_____
- Core puller option_____
- Platen length and width_____
- Number of available cooling circuits on machine_____
- Number of available air lines on machine_____
- Robot take out or free fall requirement_____
- Mould clamping technique - direct bolting or clamps_____

5. Additional items to include in mold design:

- Number of hot runner electrical zones _____
- Cavity layout (ie 2x2, 3X4) _____
- Pitching distance between cavities _____
- Pre-alignment - guide pin and bush diameter _____
- Plate thicknesses – especially back plates for mould rigidity _____

- Sufficient support pillars for mould rigidity _____
- Mould design for easy mould assembly _____
- Mould design for easy cleaning of vents in the moulding machine: _____
- Mould design for easy access to block gates _____
- Mould design for easy machine installation and removal _____
- Corrosion protection coatings such as electroless nickel plating on P20 bolster plates _____

Additional Notes:

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