



SPEC SHEET

Q-Drive Mold System for Quick-Turn Tooling

From Prototype to Production

The Q-Drive Mold System comprises a custom tool insert that fits into a master Q-Drive mold base. It's ideal for injection molding of small plastic parts, including complex applications such as gears. The customer owns only the custom tool insert, which saves time and cost. The flexible Q-Drive system can be used for prototypes, bridge tooling, and production.

Benefits

HIGH QUALITY

- ▶ Class 103 construction
- ▶ Hardened ground steel (54-56 HRC)
- ▶ Shot life: 250,000

FLEXIBILITY

- ▶ Can be used as prototype tool, bridge tool, or production tool (volume dependent)
- ▶ Suitable for validation and regulatory submissions

SPEED TO MARKET

- ▶ Building only custom tool insert saves time
 - ▶ Typical insert build is 2-4 weeks
- ▶ Design time and other process steps are also expedited

COST SAVINGS

- ▶ Cost for tool insert only is a fraction of the cost of a full tool build
- ▶ Reduced setup time increases efficiency and reduces part cost



Specifications

Q-DRIVE MOLD SYSTEM

- ▶ Class 103 construction (54-56 HRC)
- ▶ Shot life: 250,000
- ▶ Capable of ± 0.003 " tolerance (0.076 mm)
- ▶ Compatible with broad range of thermoplastics (not intended for Stanyl or TPU)
- ▶ Capable of 2-shot, overmolding & insert molding
- ▶ Cold runner only
- ▶ Cooling in master Q-Drive mold base
- ▶ Capable of complex features including:
 - ▶ Slides for undercuts
 - ▶ Sleeves for part ejection
- ▶ Parts need to be back-gated (expect gate vestige)

3.5" INSERT

- ▶ Part shot size limited to 0.3 g
- ▶ Maximum part height: 1.125" (28.575 mm)
- ▶ Maximum part width: 2.500" (63.5 mm)
- ▶ Capable of running hot oil – enables PEEK and other high-temperature materials

5.0" INSERT

- ▶ Part shot size limited to 1.0 g
- ▶ Maximum part height: 1.500" (38.1 mm)
- ▶ Maximum part width: 3.000" (76.2 mm)
- ▶ Cooling available in B-side – enables tolerances of less than $\pm .003$ "

TYPICAL TIMELINE*

- ▶ DFM: 3 days to 2 weeks, depending on part design
- ▶ Quote: 1-2 days
- ▶ Tool design: 3-5 days
- ▶ Tool build: 2-4 weeks
- ▶ Total: 3-7 weeks

*Actual timing based on factors such as complexity of part and design readiness

