

Toronto Stamp steel stamps and dies are manufactured from tool steel matched to your service conditions.

In selecting the proper tool steel, these four characteristics must be balanced to provide the proper combination of properties. A compromise will be necessary, because toughness is inversely proportional to wear resistance.

1. **Toughness:** The steel's ability to withstand shock loads.
2. **Wear Resistance:** Proportional to the hardness of a given steel. Also provides high resistance to deformation under load.
3. **Heat Resistance:** Ability to operate at elevated temperatures.
4. **Stability in Hardening**

TOOL STEELS USED FOR STEEL STAMPS AND DIES

Cold Work (General Purpose)	AISI 01	Toughness: Good Wear Resistance: Good Heat Resistance: Average Stability in Hardening: Good	This oil hardening tool steel provides an excellent combination of toughness and wear resistance. Uses: hand stamps, machine stamps, embossing dies, roll dies, type.
Cold Work (Medium Life)	AISI A2	Toughness: Good Wear Resistance: Good Heat Resistance: Average Stability in Hardening: Excellent	This air hardening tool steel is used for dies of intricate design requiring high stability in hardening. Uses: hot stamping dies, golf ball dies.
Cold Work (Long Life)	AISI D2S	Toughness: Average Wear Resistance: Excellent Heat Resistance: Average Stability in Hardening: Excellent	This grade, because of its superior wear resistance, is used for long run stamps and dies. Uses: machine stamps, roll dies, type.
Cold Work (High Speed)	AISI M2	Toughness: Average Wear Resistance: Excellent Heat Resistance: Excellent Stability in Hardening: Good	This molybdenum bearing tool steel is used where maximum wear resistance is required. Uses: roll dies, type.
Hot Work	AISI H12	Toughness: Excellent Wear Resistance: Average Heat Resistance: Excellent Stability in Hardening: Excellent	This grade is used where the operating temperature of either the stamp or the part exceeds 400° F. Uses: machine stamps, roll dies, type.