

**Customer:** [REDACTED]

**Machine Used:** TensileTurn – Industrial Upgrade Model

**Date:** [REDACTED]

**Prepared By:** [REDACTED]

**Machined Specimens:**

- Tipo T4-M6
- Tipo T3-M10
- Tipo T2-M14
- Tipo T1-M18

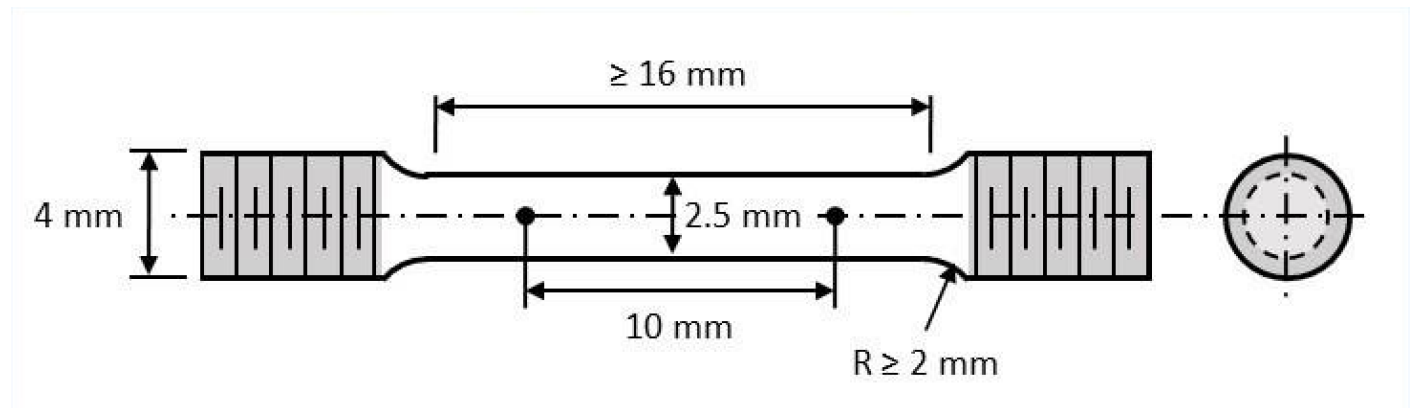
**General Machining Information:**

All parts were machined using Hysol MB10 coolant, with appropriate speeds and feeds selected based on material properties. A tailstock was used for all parts to ensure stability during machining operations.

Specimens were held using a 3-jaw self-centering chuck throughout all procedures.

**Notes:**

- All parts were machined under standard testing conditions.
- Optimized cutting parameters (feed, speed, tooling) may be applied by the customer during continuous production to improve cycle time and surface quality.
- All machining operations comply with the ASTM E8 standard for metallic tensile specimen preparation.



ASTM E8 Schematic Representation



## Tipo T4-M6

### Machining Operations:

#### Operation 1: Facing and Center Drilling

- Facing Tool: Tool 1 – SDJCR, Radius: 0.0157”
- Center Drill: Tool 8 – 1/8" Body #3, 2-Flute Center Sink, 60°

#### Operation 2:

- Rough Left: Tool 1 – SDJCL, Radius: 0.0315”
- Semi-Finish Left: Tool 5 – SDJCR, Radius: 0.0157”
- Rough Right: Tool 2 – SDJCL, Radius: 0.0315”
- Finish Grips: Tool 5 – SDJCR, Radius: 0.0157”
- Finish Gauge Diameter: Tool 8 – SVVCN with VBMT Neutral Insert, Radius: 0.0157”
- Threading: Tool 4 – External ISO 2.00GM Carbide Turning Insert
- Cutoff: Tool 8 – 2 mm Cutoff Tool

### Feeds and Speeds:

TOOL	OPERATION	FEEDRATE (mm/rev)	CUTTING SPEED (m/min)	DEPTH OF CUT (mm)
Tool 1	Roughing (Left)	0.1	70	0.5
Tool 2	Roughing (Right)	0.1	70	0.5
Tool 3	Finishing	0.05	80	–
Tool 4	Threading	–	20	0.25
Tool 5	Semi- Finishing	0.1	60	1
Tool 7	Cutoff	0.03	40	–
Tool 8	Center Drilling	0.03	40	3

**Tailstock Pressure:** 25 psi

**Machining Time:** 4 minutes



## Typo T3-M10

### Machining Operations:

#### Operation 1: Facing and Center Drilling

- Facing Tool: Tool 1 – SDJCR, Radius: 0.0157”
- Center Drill: Tool 8 – 1/8” Body #3, 2-Flute Center Sink, 60°

#### Operation 2: Turning and Finishing

- Roughing – Left Side: Tool 1 – SDJCL, Radius: 0.0315”
- Semi-Finishing – Left Side: Tool 5 – SDJCR, Radius: 0.0157”
- Roughing – Right Side: Tool 2 – SDJCL, Radius: 0.0315”
- Finishing – Grips (Both Sides): Tool 5 – SDJCR, Radius: 0.0157”
- Finishing – Gauge Diameter: Tool 8 – SVVCN Holder with VBMT Neutral Insert, Radius: 0.0157”
- Threading: Tool 4 – External ISO 2.00GM Carbide Turning Insert
- Cutoff: Tool 8 – 2 mm Cutoff Tool

### Feeds and Speeds:

TOOL	OPERATION	FEEDRATE (mm/rev)	CUTTING SPEED (m/min)	DEPTH OF CUT (mm)
Tool 1	Roughing (Left)	0.1	70	0.5
Tool 2	Roughing (Right)	0.1	70	0.5
Tool 3	Finishing	0.05	80	–
Tool 4	Threading	–	20	0.25
Tool 5	Semi- Finishing	0.1	60	1
Tool 7	Cutoff	0.03	40	–
Tool 8	Center Drilling	0.03	40	3

**Tailstock Pressure:** 25 psi

**Total Machining Time:** 6 minutes



## Tipo T2-M14

### Machining Operations:

#### Operation 1: Facing and Center Drilling

- Facing Tool: Tool 1 – SDJCR, Radius: 0.0157”
- Center Drill: Tool 8 – 1/8” Body #3, 2-Flute Center Sink, 60°

#### Operation 2: Turning and Finishing

- Roughing – Left Side: Tool 1 – SDJCL, Radius: 0.0315”
- Semi-Finishing – Left Side: Tool 5 – SDJCR, Radius: 0.0157”
- Roughing – Right Side: Tool 2 – SDJCL, Radius: 0.0315”
- Finishing – Grips (Both Sides): Tool 5 – SDJCR, Radius: 0.0157”
- Finishing – Gauge Diameter: Tool 8 – SVVCN Holder with VBMT Neutral Insert, Radius: 0.0157”
- Threading: Tool 4 – External ISO 2.00GM Carbide Turning Insert
- Cutoff: Tool 8 – 2 mm Cutoff Tool

### Feeds and Speeds:

TOOL	OPERATION	FEEDRATE (mm/rev)	CUTTING SPEED (m/min)	DEPTH OF CUT (mm)
Tool 1	Roughing (Left)	0.1	70	0.5
Tool 2	Roughing (Right)	0.1	70	0.5
Tool 3	Finishing	0.05	80	–
Tool 4	Threading	–	20	0.25
Tool 5	Semi- Finishing	0.1	60	1
Tool 7	Cutoff	0.03	40	–
Tool 8	Center Drilling	0.03	40	3

**Tailstock Pressure:** 25 psi

**Total Machining Time:** 10 minutes



## Tipo T1-M18

### Machining Operations:

#### Operation 1: Facing and Center Drilling

- Facing Tool: Tool 1 – SDJCR, Radius: 0.0157”
- Center Drill: Tool 8 – 1/8” Body #3, 2-Flute Center Sink, 60°

#### Operation 2: Turning and Finishing

- Roughing – Left Side: Tool 1 – SDJCL, Radius: 0.0315”
- Semi-Finishing – Left Side: Tool 5 – SDJCR, Radius: 0.0157”
- Roughing – Right Side: Tool 2 – SDJCL, Radius: 0.0315”
- Finishing – Grips (Both Sides): Tool 5 – SDJCR, Radius: 0.0157”
- Finishing – Gauge Diameter: Tool 8 – SVVCN Holder with VBMT Neutral Insert, Radius: 0.0157”
- Threading: Tool 4 – External ISO 2.00GM Carbide Turning Insert
- Cutoff: Tool 8 – 2 mm Cutoff Tool

### Feeds and Speeds:



TOOL	OPERATION	FEEDRATE (mm/rev)	CUTTING SPEED (m/min)	DEPTH OF CUT (mm)
Tool 1	Roughing (Left)	0.2	30	0.5
Tool 2	Roughing (Right)	0.1	70	0.5
Tool 3	Finishing	0.05	80	–
Tool 4	Threading	–	20	0.25
Tool 5	Semi- Finishing	0.1	60	1
Tool 7	Cutoff	0.03	40	–
Tool 8	Center Drilling	0.03	40	3



**Tailstock Pressure:** 50 psi

**Total Machining Time:** 50 minutes



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