

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

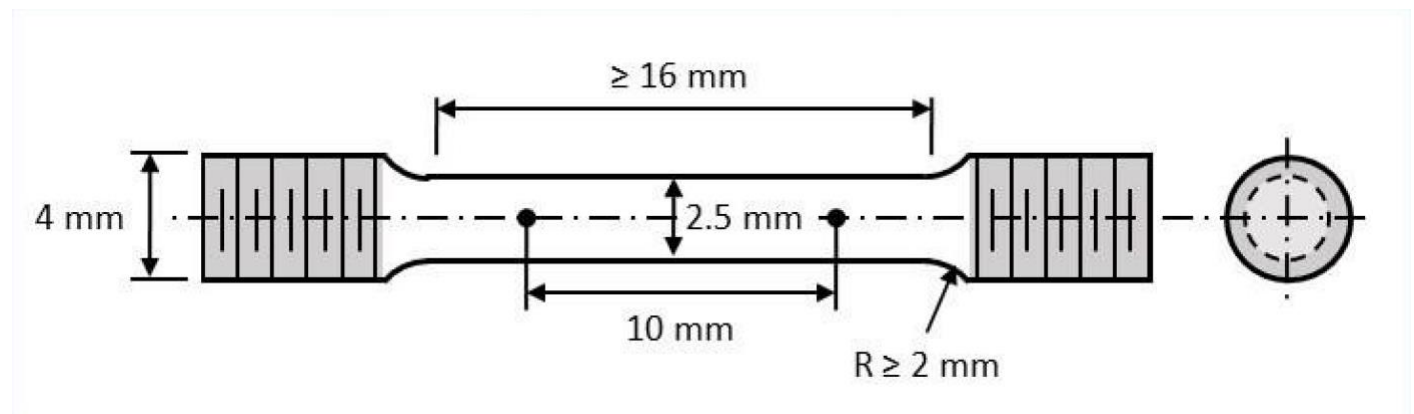
General Machining Information:

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





Tipo 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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