

# Custom Machining

## The CTD Group provides full service custom machining capabilities from its two locations: Canadian Tool and Die Ltd. & CTD Machine Works.

Supporting services are also available for welding, assembly, painting, plating, and heat treating. Combine these services with our design and product development capabilities and CTD becomes a unique solution provider for customers seeking a more cost effective and efficient supply chain.



### Canadian Tool and Die:

- CTD operates 10 horizontal and vertical CNC milling machines with 3 and 4 axis capabilities and with capacities of up to 39" x 39" x 31" (x,y,z) for horizontal machines and 50" x 25" x 25" (x,y,z) for vertical machines.
- CTD has 16 turning machines with 2 and 4 axis capabilities and capacities of up to 32" diameter by 80" between centres. Our lathes with live tooling stations allow parts to be turned, milled, drilled, and tapped in one operation.
- Our Okuma robotic vertical turning cell with its two turning centres has a turning capacity of 30" dia and a weight capacity of 280lbs.
- Full inspection capability including a gantry CMM with 55"x 88"x 39" (x,y,z) capacity.

### CTD Machine Works:

- 2 Flexible Manufacturing Systems: one 24 pallet and one 6 pallet, both with 60" x 48" x 40" (x,y,z) capacity
- 8 CNC Turning centres with live tooling and capacities up to 32" diameter by 80" between centres.
- 5 vertical and horizontal machining centres with up to 40" x 25" x 25" (x,y,z) capacity.
- 2 broaching machines
- 2 CMMs with 55"x 88"x 39" (x,y,z) capacity



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## Additional capabilities include:

**Welding:** MIG, semi and fully automatic in specialized areas

**Castings:** CTD operates its own foundry, INTEGRA CASTINGS INC, Canada, which produce one piece grey, ductile and high chrome iron castings, from 150 to 5000 lbs.

**Painting:** Powder-coat, air dry, baked enamel, hand spray and fully automatic

**Product Engineering:** Our knowledgeable engineering staff helps our clients meet their production challenges. With the aid of our CAD/CAM system, our engineers design the unique tools, dies and jigs required to process the various parts effectively and accurately.

Jig and fixture design and manufacture

Milling and grinding equipment, fully automatic rolling machines, skiving/roller burnishing machine and various custom-designed machines dedicated to special processes

## Custom processes include:

### Skiving & Roller Burnishing

- Skiving provides a better finish at a lower cost & faster turnaround time.
- Skiving allows for heavier stock removal and is more economical than honing.
- Burnishing enhances the wear resistance of the cylinder wall.
- Tubes are finished without flaking or laminations
- Welded items such as trunnions, manifolds and port connections create no problem when skiving. *(We complete all welding prior to skiving & burnishing, eliminating the need for honing twice and removing any distortions due to the welding, assuring true ID. Finish can be varied to suit customer's specifications.)*
- Snap ring grooves may be finished prior to skiving.



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