COFA-X
For 1:1 Ratio Cross Bores
COFA-X is the first and only tooling system that consistently and reliably removes burrs from interior uneven bore edges in applications with large intersections.

- Intersecting bores up to a main bore with a cross bore ratio of 1:1
- Cross bores in elbows: main hole must pass cross hole (recommend 120 degree drill point or less).
- Different size bores on center axis.

**CASE STUDY:**

**Oil Bores on a Crank Shaft**

A manufacturer of crank shafts had to guarantee no hanging burrs in the oil cross bores after machining.

Bore Diameter: Ø8.0 mm  
Cross Bore: Ø8.5 mm  
Material: Alloy Steel 42CrMoA  
Speed: 500 RPM  
Feed: 0.1 mm/rev  
Machine: Horz CNC  
Tool Solution: Extended COFA C6X-8.0-S with C6X-M-0001-A

Using HEULE’s new COFA-X tooling concept automated the process, producing parts free of hanging burrs in the oil bores.

**CASE STUDY:**

**1:1 Ratio Bores on a T-Fitting**

Main hole: Ø10.4 mm  
Cross hole: Ø10.4 mm  
Material: Stainless  
Machine: CNC Trunnion  
Cycle Time: 15 sec  
Annual Production: 1 million parts
Deburring issues? We can help.

Solutions begin with a clear description of the problem.

Before we can present a solution, we will need the following information:

• Description of the present deburring process
• Description of the environment: Machine, fixturing, work holding, interference considerations, coolant, etc.
• Number of bores to be produced/production volume per year
• Present cycle time
• Is there any function assigned to the deburr/chamfer surface?
• Description of the desired final result / target description
• Main bore diameter, including tolerance
• Cross bore diameter, including tolerance
• Bore depth
• Material
• Penetration angle
• Offset dimension
• STEP drawing