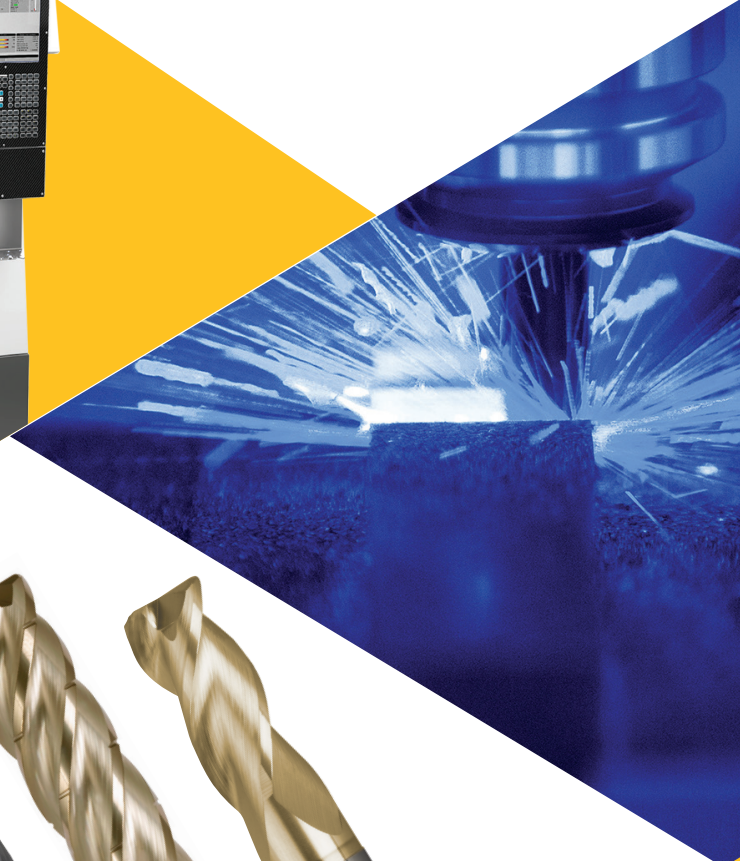


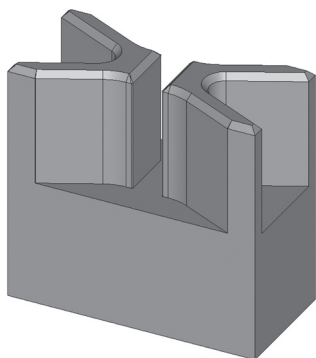


Where **high performance**  
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**M.A. Ford**  
**tools in action**

▶ Work piece material  
**Steel 080A15**



▶ **TuffCut® XV**  
Series XV5CB 4xD

**Operation: Rough Profile**  
**48mm Depth**

Tool Type: TuffCut® XV  
Series XV5CB 4xD End mill  
Tool Number: XV5CBM1204-R0.5AQW  
Dia: 12mm - 5 Flute  
Vc: 250 m/min  
n: 6631 RPM  
Fz: 0.10mm  
Vf: 3355 mm/min  
Ap: 48mm  
Ae: 1.2mm



▶ **TuffCut® XV**  
Series XV9

**Operation: Rough Profile**  
**30mm Depth**

Tool Type: TuffCut® XV  
Series XV9 End mill  
Tool Number: XV9M1200-R0.5AQ  
Dia: 12mm - 9 Flute  
Vc: 250 m/min  
n: 6631 RPM  
Fz: 0.10mm  
Vf: 6253 mm/min  
Ap: 30mm  
Ae: 0.9mm



▶ **TuffCut® XT9**  
Series 380

**Operation: Rough Profile**  
**48mm Depth**

Tool Type: TuffCut® XT9  
Series 380 End mill  
Tool Number: 380M1200N4-1.0RAX  
Dia: 12mm - 9 Flute  
Vc: 250 m/min  
n: 6253 RPM  
Fz: 0.12mm  
Vf: 6126 mm/min  
Ap: 18mm  
Ae: 0.9mm



▶ **TuffCut® HF**  
Series FHFP

**Operation: Rough Slot**  
**48mm deep**

Tool Type: TuffCut® HF  
Series FHFP End mill  
Tool Number: FHFP 12N-CCAQ  
Dia: 12mm - 5 Flute  
Vc: 230 m/min  
n: 6095 RPM  
Fz: 0.40mm  
Vf: 12000 mm/min  
Ap: 0.25mm  
Ae: 12mm



▶ **TuffCut® GP**  
Series 5HC

**Operation: Chamfer 45°**

Tool Type: TuffCut® GP  
Series 5HC 45° Helical chamfer mill  
Tool Number: 5HCM10003B  
Dia: 10mm - 5 Flute  
Vc: 350 m/min  
n: 9275 RPM  
Fz: 0.05mm  
Vf: 2500 mm/min  
Ae: 3.0mm



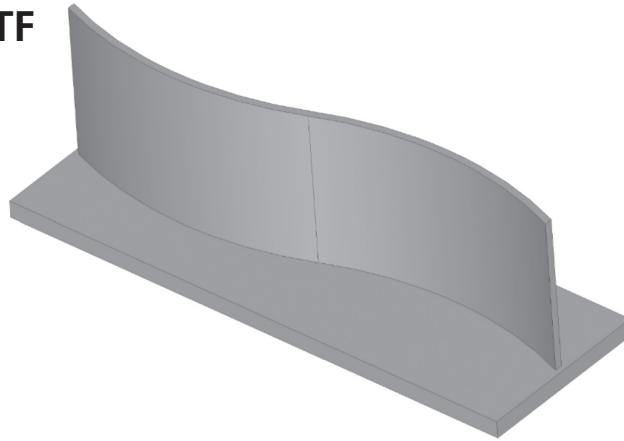
# M.A. Ford tools in action

## Aluminium Demo



Where **high performance**  
is the **standard**

- ▶ Work piece material  
**Aluminium H30TF**



- ▶ **TuffCut® X-AL**  
Series 137V5R N5

**Operation: Rough Profile**

Tool Type: TuffCut® X-AL  
Series 137V5R N5 End mill  
Tool Number: 137V5R 12N5-1.0RALC  
Dia: 12mm - 5 Flute  
Vc: 453 m/min  
n: 12000 RPM  
Fz: 0.175mm  
Vf: 8400 mm/min  
Ap: 47mm  
Ae: 3.6mm



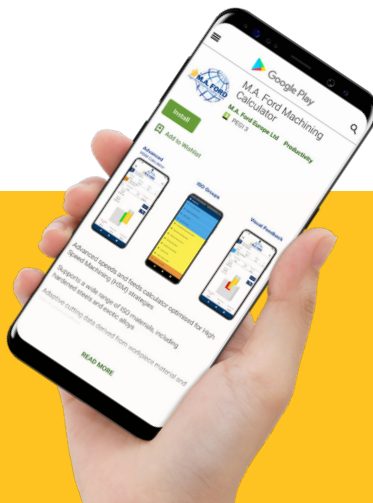
- ▶ **TuffCut® X-AL**  
Series 137VTWF

**Operation: Thin Wall Finishing**

Tool Type: TuffCut® X-AL  
Series 137VTWF Thin Wall Finisher  
Tool Number: 137TWF 1204-ALCC  
Dia: 12mm - 5 Flute  
Vc: 226 m/min  
n: 6000 RPM  
Fz: 0.07mm  
Vf: 2000 mm/min  
Ap: 47mm  
Ae: 0.3mm



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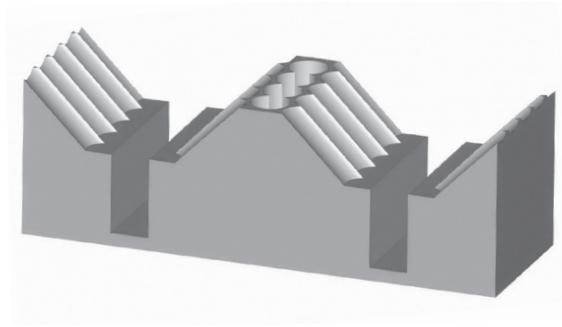
# M.A. Ford tools in action

## Aluminium Plunge Demo



Where **high performance**  
is the **standard**

### ▶ Work piece material **Aluminium H30TF**



### ▶ **TuffCut® X-AL** Series 137V

#### **Operation: 45° Rough Plunge**

Tool Type: TuffCut® X-AL  
Series 137V End mill  
Tool Number: 137V 12N3AL  
Dia: 12mm - 3 Flute  
Vc: 453 m/min  
n: 12000 RPM  
Fz: 0.05mm  
Vf: 1800 mm/min  
Plunge Depth: 21mm  
Ae: 12mm



### ▶ **TuffCut® X-AL** Series 137V

#### **Operation: Full Diameter Plunge**

Tool Type: TuffCut® X-AL  
Series 137V End mill  
Tool Number: 137V 12N3AL  
Dia: 12mm - 3 Flute  
Vc: 453 m/min  
n: 12000 RPM  
Fz: 0.022mm  
Vf: 800 mm/min  
Plunge Depth: 16mm  
Ae: 12mm



### ▶ **TuffCut® X-AL** Series 137V

#### **Operation: 2 x Diameter Slotting**

Tool Type: TuffCut® X-AL  
Series 137V End mill  
Tool Number: 137V 12N3AL  
Dia: 12mm - 3 Flute  
Vc: 453 m/min  
n: 12000 RPM  
Fz: 0.05mm  
Vf: 1800 mm/min  
Plunge Depth: 24mm  
Ae: 12mm



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