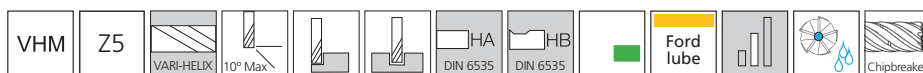


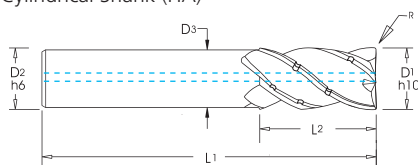
**M.A. FORD EUROPE LTD**

# TuffCut® X-AL Series 137V5

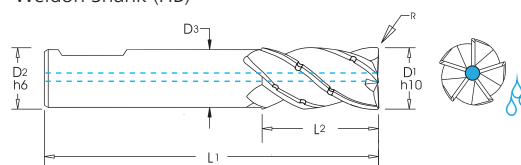
## High Efficiency Milling in Aluminium



Cylindrical Shank (HA)



Weldon Shank (HB)



### Features

- Vari-Helix 5 flute design
- Fordlube coating
- Chipbreaker technology
- Through coolant feature

### Benefits

- High feed rates with reduced vibration for stable machining
- Prevents built up edge and increases tool-life
- Excellent chip management and safer process
- Rapid chip evacuation in pocketing applications

**NEW  
PRODUCT**

### Cylindrical Shank (HA)

| Tool Number         | D1   | D2   | L1    | L2   | R   |
|---------------------|------|------|-------|------|-----|
| 137V5 1003-ALCC     | 10.0 | 10.0 | 75.0  | 32.0 | -   |
| 137V5 1003-1.0RALCC | 10.0 | 10.0 | 75.0  | 32.0 | 1.0 |
| 137V5 1203-ALCC     | 12.0 | 12.0 | 87.0  | 38.0 | -   |
| 137V5 1203-1.0RALCC | 12.0 | 12.0 | 87.0  | 38.0 | 1.0 |
| 137V5 1603-ALCC     | 16.0 | 16.0 | 104.0 | 50.0 | -   |
| 137V5 1603-1.0RALCC | 16.0 | 16.0 | 104.0 | 50.0 | 1.0 |
| 137V5 2003-ALCC     | 20.0 | 20.0 | 120.0 | 62.0 | -   |
| 137V5 2003-1.0RALCC | 20.0 | 20.0 | 120.0 | 62.0 | 1.0 |

### Weldon Shank (HB)

| Tool Number          | D1   | D2   | L1    | L2   | R   |
|----------------------|------|------|-------|------|-----|
| 137V5 1003-ALCCW     | 10.0 | 10.0 | 75.0  | 32.0 | -   |
| 137V5 1003-1.0RALCCW | 10.0 | 10.0 | 75.0  | 32.0 | 1.0 |
| 137V5 1203-ALCCW     | 12.0 | 12.0 | 87.0  | 38.0 | -   |
| 137V5 1203-1.0RALCCW | 12.0 | 12.0 | 87.0  | 38.0 | 1.0 |
| 137V5 1603-ALCCW     | 16.0 | 16.0 | 104.0 | 50.0 | -   |
| 137V5 1603-1.0RALCCW | 16.0 | 16.0 | 104.0 | 50.0 | 1.0 |
| 137V5 2003-ALCCW     | 20.0 | 20.0 | 120.0 | 62.0 | -   |
| 137V5 2003-1.0RALCCW | 20.0 | 20.0 | 120.0 | 62.0 | 1.0 |

# TuffCut® X-AL Series 137V5 High Efficiency Milling in Aluminium

## Recommended cutting data

| Series      |  | Type of cut |           | Vc       | Diameter - mm |      |      |      |
|-------------|--|-------------|-----------|----------|---------------|------|------|------|
|             |  |             |           |          | 10.0          | 12.0 | 16.0 | 20.0 |
|             |  | Ae          | Ap        | m/min    | fz            | fz   | fz   | fz   |
| 137V5 3 x D |  | 0.1 x D     | 3 x D     | 300-1000 | 0.1           | 0.12 | 0.16 | 0.2  |
|             |  | 0.15 x D    | 3 x D     | 300-1000 | 0.1           | 0.12 | 0.16 | 0.2  |
|             |  | 0.2 x D     | 3 x D     | 300-1000 | 0.1           | 0.12 | 0.16 | 0.2  |
|             |  | 0.3 x D     | 2 x D     | 300-1000 | 0.1           | 0.12 | 0.16 | 0.2  |
|             |  | 1 x D       | 1 x D Max | 300-1000 | 0.05          | 0.06 | 0.08 | 0.1  |
|             |  |             |           |          |               |      |      |      |

Note:

Ramping (10° max) to 3 x D at slotting feed rates.

To achieve the highest torque when using this tool on low powered machines, the rpm may need to be adjusted.

During profile milling less than 50% of the cutter diameter radial width, the actual chip thickness at the cutting edge is less than the programmed chipload. The accompanying table shows the increase in tooth load by given radial percentage engagement. Multiply your feed per tooth by the factor before finalising your table feed.

| Radial Cut (Ae) | Chip thickness Compensation factor |
|-----------------|------------------------------------|
| 30%             | 1.10                               |
| 20%             | 1.20                               |
| 15%             | 1.40                               |
| 10%             | 1.80                               |
| 5%              | 2.30                               |
| 1%              | 5.00                               |