



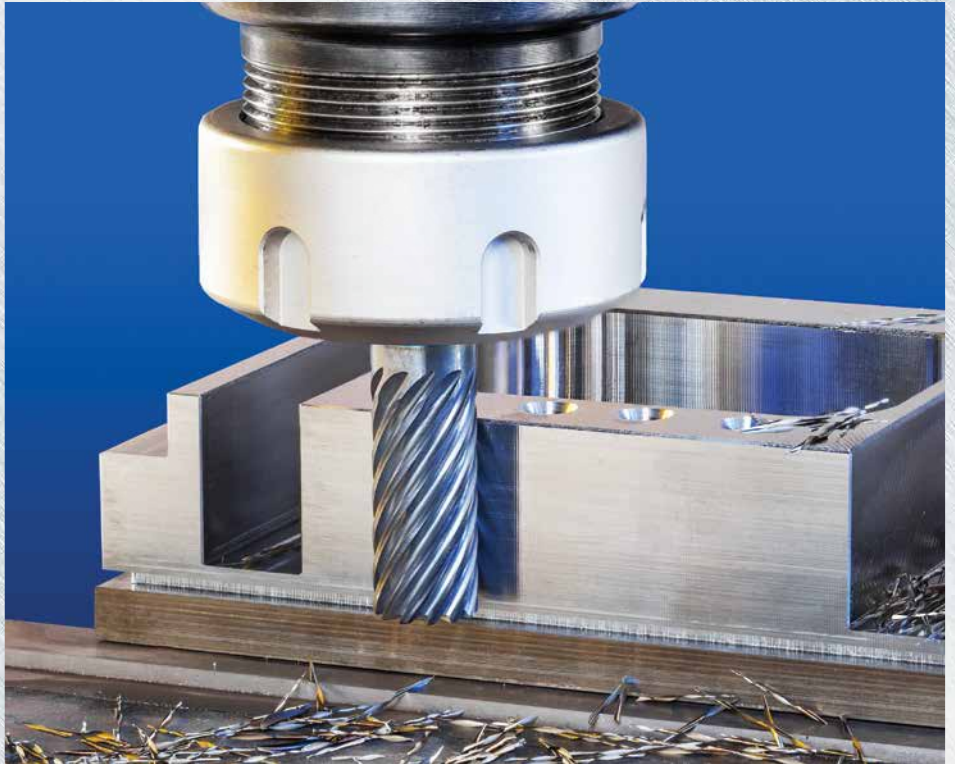
**Diameters:**  
6mm - 20mm  
0.250" - 0.750"

**Overall Length:**  
57mm - 104mm  
2.50" - 5.00"

**No. of Flutes:**  
6 - 20

**Helix Angle:**  
45°

**Grade:**  
IN2003



## **6- 20 Flute Solid Carbide Endmills with Different Helix and Variable Pitch, for Chatterfree High Speed Finish Milling**

*Ingersoll is introducing a new evolution of the variable pitch solid carbide endmills for high speed/trochoidal milling and finishing operations with specially designed multi-flute endmills with different flute helix angles and variable pitch.*

*The unique geometry of the different helix and the variable pitch provides the best chatter free tool for high speed / trochoidal milling, featuring high productivity on most material types such as alloyed and stainless steel, and high temperature alloys.*

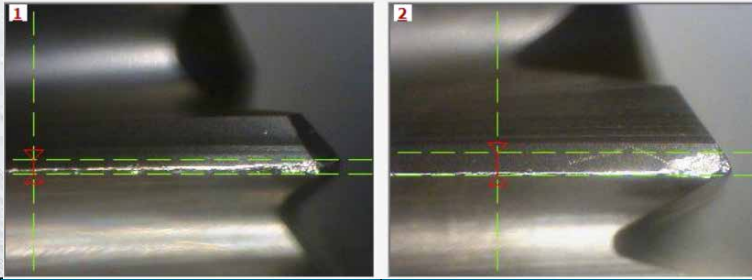
*Trochoidal milling is a programming technique applying a small radial width of cut, high cutting speed and feed per tooth. It provides long tool life and high productivity on most materials, but especially on high temperature alloys where chip breaking and heat disposal is usually very problematic.*

### **Features**

- Different helix and variable pitch, for a chatter free effect
- Special geometry - most recommended for high speed / trochoidal machining on most material types
- Low cutting forces
- Excellent for finishing operations
- Unique flute geometry provides good surface finish

**NEW  
PRODUCT  
ANNOUNCEMENT  
•2014•**

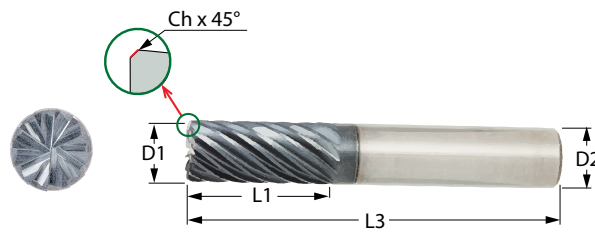
## TEST REPORT



	INGERSOLL	Competitor
Tool	49C01224T2RQ00	Finishing tool
Tool Diameter (mm)	12	12
No. of Flutes	12	12
Carbide Grade	IN2003	
Material Type	D2 (1.2379) 62 HRc	D2 (1.2379) 62 HRc
Cutting Speed (m/min)	60 (197 inch/min)	60 (197 inch/min)
Spindle Speed (rpm)	1592	1592
Depth of Cut (mm)	20 (0.787")	20 (0.787")
Width of Cut (mm)	0.2 (0.007")	0.2 (0.007")
Feed per Tooth (mm/t)	0.04 (0.001")	0.04 (0.001")
Table Feed (mm/min)	764 (30 inch/min)	764 (30 inch/min)
Coolant	Air	Air
Tool Life (min)	150	116
Wear (mm)	0.168 (0.006")	0.266 (0.10")
Reason for Stopping the Test	Can continue	Chipping end of tool life



## 48/49 RQ ENDMILLS



Designation	D1 Diameter	D2 Shank Size/Style	L1 Cut Length	L3 Overall Length	Z Flutes	Ch Chamfer	Ha Helix (Deg)
48C00612T7RQ00	6mm	6mm	12mm	57mm	6	0.2mm x 45°	45.0
49C00816T0RQ00	8mm	8mm	16mm	63mm	8	0.2mm x 45°	45.0
49C01020T1RQ00	10mm	10mm	20mm	72mm	10	0.3mm x 45°	35.0
49C01224T2RQ00	12mm	12mm	24mm	83mm	12	0.3mm x 45°	35.0
49C01632T3RQ00	16mm	16mm	32mm	92mm	16	0.3mm x 45°	35.0
49C02040T4RQ00	20mm	20mm	40mm	104mm	20	0.4mm x 45°	30.0

• Can machine at radial width of cut (ae) of up to 0.10mm x D

Designation	D1 Diameter	D2 Shank Size/Style	L1 Cut Length	L3 Overall Length	Z Flutes	Ch Chamfer	Ha Helix (Deg)
48C-2550R6RQ00	0.250"	0.250"	0.500"	2.50"	6	0.007" x 45°	45.0
49C-3163R7RQ00	0.312"	0.312"	0.630"	2.50"	8	0.007" x 45°	45.0
49C-3775R8RQ00	0.375"	0.375"	0.750"	3.00"	10	0.007" x 45°	35.0
49C-5010S4RQ00	0.500"	0.500"	1.000"	3.50"	12	0.011" x 45°	35.0
49C-6212S6RQ00	0.625"	0.625"	1.250"	4.00"	16	0.011" x 45°	35.0
49C-7515S7RQ00	0.750"	0.750"	1.500"	5.00"	20	0.015" x 45°	30.0

• Can machine at radial width of cut (ae) of up to .0039" x D