



WINTER

FLUTE
EVO

FLUTE GRINDING HAS EVOLVED

PRECISION

EFFICIENT

FLEXIBLE

HIGH PERFORMANCE

OPTIMISED



FLUTE GRINDING HAS EVOLVED

The demands of modern grinding and machining round tools are constantly changing and becoming more sophisticated. To keep up with this ever-dynamic landscape, **Norton Winter** have developed **Q-Flute-EVO**: the next evolution in flute grinding.

KEY EVOLUTIONS

• IMPROVED FLUTE SURFACE QUALITY

New high performance Q-Flute Bond is flexible and excels in the most demanding of processes.

• 20% LOWER GRINDING FORCES

Free grinding bond system significantly reduces grinding forces when compared to competitor products. Producing far superior part quality.

• OPTIMISED FOR PRECISION

Unparalleled standards of edge stability and optimised for low-medium volume batches.

• SHORT LEAD TIMES

Norton Winter hold customisable stock and parts for production on a "Just-in-time" basis.

CASE STUDY

Application:

Carbide End mill Ø12 Flute grinding

Machine:

Walter Helitronic Vision

SGA Tool/Specifications:

SP1A1-150-12-16 20* D54 Q-FLUTE-EVO C

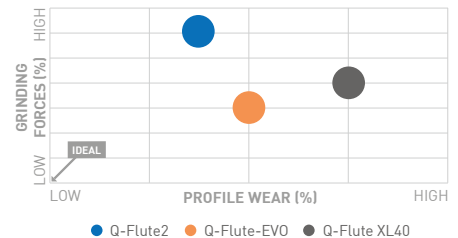
Cooling:

Oil

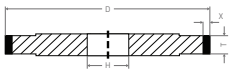
Benefits:

- Easy preparation
- Low feed rates possible ($Q'w \approx 3$)
- Significant increase in productivity possible ($Q'w \approx 6$)
- Improved work piece quality
- Perfect interaction with V-Prime to optimise the entire process

Q-Flute-EVO Product Positioning

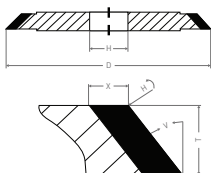


1A1 Stock Programme



SHAPE	D Range [mm]	T Range [mm]	X [mm]	H [mm]	GRIT SIZE	BOND	BODY
1A1	100 • 125 • 150	8 • 10 • 12 • 15	16	>20	D54	Q-FLUTE-EVO	C

1V1 Stock Programme



SHAPE	D Range [mm]	T Range [mm]	X [mm]	V [°]	H [mm]	GRIT SIZE	BOND	BODY
1V1	100 • 125 • 150	8 • 10 • 12 • 15	10 - 16*	<20	>20	D54	Q-FLUTE-EVO	C

* Usable layer depth depending on layer angle
Other shapes and dimensions on request.

FLUTE GRINDING EFFICIENCY & EDGE STABILITY AT $Q = 5 \text{ mm}^3/\text{s/mm}$

