

PARADIGM®

DIAMOND WHEELS FOR INSERT PERIPHERY GRINDING



Edge Out the Competition with Superior Tungsten Carbide and Ceramic Insert Peripheries

Norton Winter Paradigm wheels deliver both unsurpassed edge quality and overall productivity.

FEATURES & BENEFITS

- Fine grit diamond availability for excellent finish and edge quality
- High diamond concentration increases parts per dress and wheel life
- Natural porosity increases chip clearance and coolant penetration for higher removal rates and better edge quality
- Low specific cutting energy enables higher machine throughput
- Online truable bond technology enables easier truing than competitive wheels, and allows wheel face to stay open and hold form longer, resulting in increased wheel life for more parts per dress

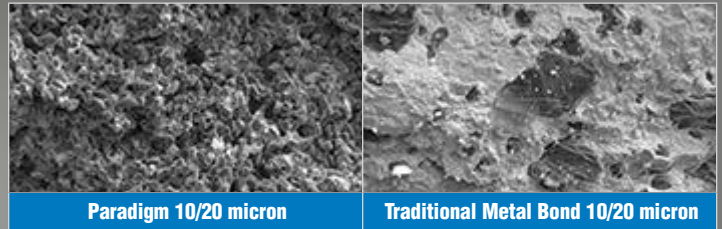
ONLINE TRUING & DRESSING CAPABILITY
LOWER TOOLING COST | BETTER EDGE QUALITY

A **PARADIGM SHIFT** IN CUTTING TOOL MANUFACTURING™



PARADIGM[®]

DIAMOND WHEELS FOR INSERT PERIPHERY GRINDING



THE PARADIGM SHIFT

Increase productivity/decrease costs:

- Up to 46% porosity
- + > 2:1 diamond to bond ratio
- + Metal matrix forms an ionic bond with the diamond particles
- + Finer grits and more working particles with higher exposure
- = Lower cutting energies with highest quality part edges and finish

MADE-TO-ORDER AVAILABILITY

All Norton Winter Paradigm diamond wheels are made to your precise requirements.

Paradigm wheels for insert periphery grinding are available in 2A2 and 11A2 wheel shapes for all common machine wheel sizes, including 200mm, 250mm, 350mm, and 400mm diameters.

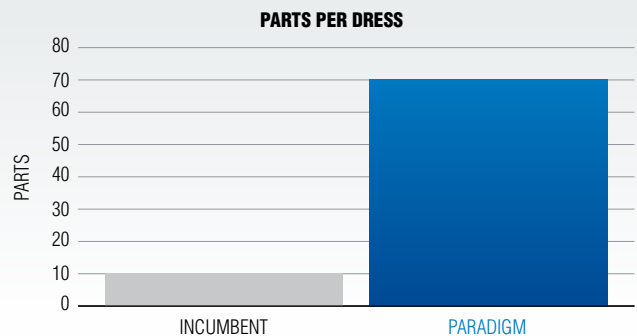
GENERAL APPLICATION PARAMETERS	
Wheel Speed:	6,000-9,000 SFPM
Infeed Rate:	0.5" to 1.0" per minute
Stock Removal:	Up to 0.030"
Truing/Dressing Parameters:	Dresser and wheel surface velocity ratio approximately 3:1, infeed 0.0005" or less, plunge at 0.025" per minute. Use 220 grit or finer silicon carbide or aluminum oxide H grade or softer truing wheels
Coolant:	Straight oil

DIAMOND STARTING SPECIFICATIONS FOR CARBIDE AND CERAMICS	
DES30/40MIC-E160-P200C	Tungsten carbide
DES10/20MIC-E160-P200C	Ceramic

Prior to order entry, please contact your Norton representative for specification recommendations to ensure maximum grinding performance, quotations, and current lead-times.

Case Study – Carbide

<i>APPLICATION:</i>	Insert periphery grinding of carbide squares
<i>MACHINE:</i>	Large diameter CNC insert periphery grinder
<i>NORTON WINTER PRODUCT:</i>	2A2T wheel shape 400mm x 28mm x 340mm Paradigm AD30/40MIC-E160-P100C
<i>INCUMBENT PRODUCT:</i>	400 grit diamond metal bond
<i>RESULTS:</i>	The Paradigm wheel reduced total cost vs. the incumbent product by 41% for the periphery grind. Parts per dress were increased by 700% and cycle time was decreased by 38.5%.



BEST – NORTON WINTER Paradigm | **BETTER** – NORTON WINTER G-Force and Series 700 | **GOOD** – NORTON WINTER B80 / B610 / B90

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NO-RISK TEST

