DIANAMIC® SINGLE-LAYER / ELECTROPLATED SUPERABRASIVE WHEELS

Grinding Wheel Custom Application Design & Manufacturing Specification Questionnaire

APPLICATION ENGINEERING PROTOCOL

Thank you for choosing DIANAMIC® for your single-layer superabrasive tooling specifications. Also classified across industrial sectors as electroplated, these premium single-layer profiles provide high grain concentration paired with absolute form profile accuracy. Please provide detailed configurations below. Your responses will allow our engineering team to analyze your environment and engineer an "application-oriented" solution tailored to your micro-finish threshold metrics. If you are currently running a single-layer tool, please supply its baseline metrics for direct engineering cross-referencing.

MANUFACTURING QUALITY MANIFESTO

DIANAMIC® engineers premium tools utilizing only virgin, high-purity crystalline synthetic diamond, premium natural diamond, and application-tailored Cubic Boron Nitride (cBN) crystals. We never integrate reclaimed, multi-grade mixtures, or secondary chemical compounds. Every tool matrix is customized case-by-case, drawing on over 40 years of manufacturing field experience.

1. CORPORATE & LOGISTICS PROFILES

Company Name:

Ship-To Address:

Bill-To Address:

City: **State/Province:** **Zip/Postal Code:**

Country: **Telephone:** **Facsimile:**

Contact Name: **Contact Email:**

Corporate Web:

2. GRINDING WHEEL GEOMETRIC SPECIFICATIONS

*Note: Please submit dimensional component prints or form blueprints in AutoCAD (.dwg) or PDF formats to **info@dianamic.com**. All metrics may be entered in standard Inches or Metric units.*

Grinding Wheel Shape Class: **Current Tool Supplier:**

For Outside Diameter (OD) or Profile Form Wheels:

Outer Diameter: **Core Thickness:**

Arbor Bore Diameter: **Expected Tolerances:**

Bolt Hole Circle (BPC): **Mount Thread Size/Pattern:**

For Inside Diameter (ID) Mandrel Style Wheels:

Head Diameter: **Head Length:**

Overall Length (OAL): **Shank/Mount Size:**

Manufactured in Troy, Michigan USA with 100% US labor and globally sourced materials.

Email: info@dianamic.com • Web: www.dianamic.com • Tel: +1 248 280 1185 • Fax: +1 248 280 2733

DIANAMIC® SINGLE-LAYER / ELECTROPLATED SPECIFICATION QUESTIONNAIRE

Operational Parameters for Processing Steel and Carbide Substrates

3. ABRASIVE MATRIX & STRUCTURAL CONFIGURATIONS

Target Mesh / Micron Size: _____ **Bond Type Classification:** ☐ Electroplated ☐ Brazed

Superabrasive Crystal Type: ☐ Synthetic Crystalline Diamond (Uniform Shape) ☐ Synthetic Non-Crystalline Diamond (Free Cutting) ☐ Natural Diamond ☐ Cubic Boron Nitride (cBN)

Hub Layout Description: _____

Adaptor Style Profile: _____

4. WORKPIECE SUBSTRATE MATERIAL DETAILS

Material Component Type: ☐ Steel ☐ Carbide ☐ Ceramic ☐ Friction Compound ☐ Glass

Substrate Grade / Details: _____

Hardness (Rockwell C / HRC): _____ **Cobalt / Binder Content (%):** _____

Pre-Ground Parts Volumetrics: _____

5. MACHINE KINEMATICS & COOLANT ENVIRONMENT

Machine Brand & Model: _____ **Spindle Power (HP / kW):** _____

Coolant Media Brand & Type: _____ **Filtration Mechanism & Micron:** _____

Constant Velocity Spindle? ☐ Yes ☐ No **Active Coolant Chilling Used?** ☐ Yes ☐ No

High-Velocity Jet Delivery? ☐ Yes ☐ No **Jet Flow Rate / Pressure (PSI):** _____

6. GRINDING PARAMETERS & PERFORMANCE OBJECTIVES

Grinding Mode Category: ☐ OD ☐ ID ☐ Surface ☐ Form ☐ CNC ☐ Creep-Feed ☐ Creep-Feed High-Speed ☐ Profile ☐ OPG

In-Feed Depth Per Pass: _____ **Cross-Feed Velocity / Speed:** _____

Spindle Velocity (RPM / SFPM): _____ **Variable Speed Drive Capable?** ☐ Yes ☐ No

Total Material Stock Removal: _____ **Target Surface Finish (R_a):** _____

Additional Form Comments: _____

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