

# BEST CARBIDE

...simply the best choice for advanced carbide cutting tools!



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5. Carbide Burs / Group 700

## VI. Company History

## I. Company Profile

- Highly specialized carbide cutting tool manufacturing company
- Privately owned & founded in 1980
- Total of 81 employees / 90 grinding centers / 8 industrial suites

### Main product line:

- Solid Carbide End Mills
- Solid Carbide Drills
- Carbide Burs

### Complimentary product line:

- Solid Carbide Routers
- Miscellaneous Solid Carbide Tools
- Special Round Tools

### Special Expertise:

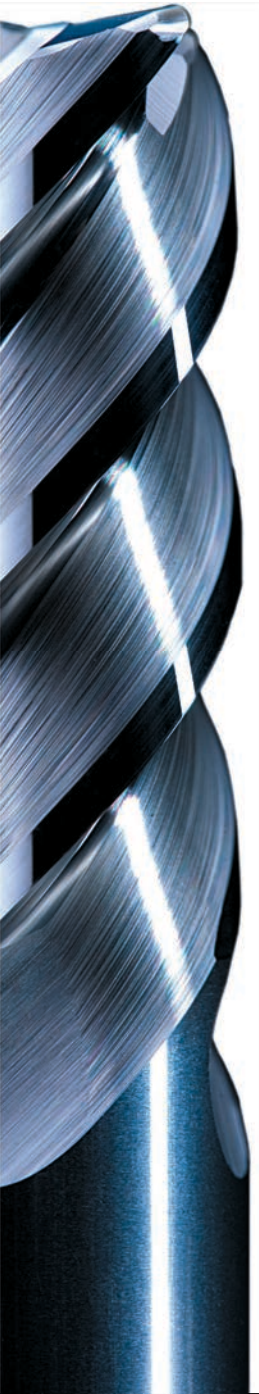
- Solid Carbide Micro Tools

### Customer Profile:

- Domestic & international distribution
- Multi marketing channel management (Distributors, OEM, Private Label)
- Main market: USA
- Strongest export markets: Western Europe, Japan, Russia & South America



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## Competitive Advantages

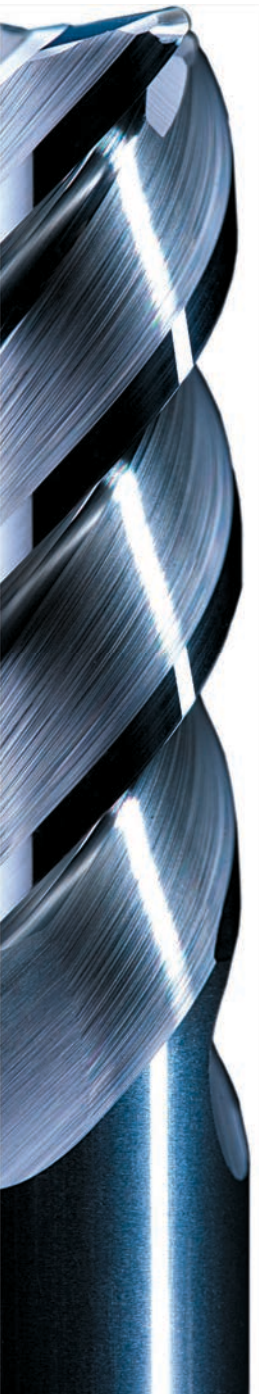
- Latest CNC grinding technology & plant equipment
- State of the art quality control equipment
- 33 years of tool making experience & expertise
- Outstanding product / price value



- Optimized carbide grades
- Superior grinding quality
- Highly innovative tool geometries
- Advanced coating technology

- Commitment to total customer satisfaction
- Providing solutions with performance & special tools
- Fast turn-around time for quotations
- Outstanding order fulfillment & excellent customer service





## II. Management & Staff

### Management

- Sal Nuñez, Jr. - President
- Mark A. Nuñez - Executive Vice President
- Carmen M. Nuñez - Director of Operations
- Uwe Heinrich - Vice President

### Office Staff ( 11 employees )

- Amanda Rosales - Office Manager
- George Cullen - Marketing Assistant
- Art Sanchez - Customer Service
- Jessica Reyes - Customer Service
- Tanya Jimenez - Purchasing Agent
- Arturo Vasquez - Lead Engineer
- Gladdiss Infante - Production Planning
- Elvia Reynoso - Production Planning
- David Celestino - Production Planning
- Yocsan Del Aguila - Production Planning
- Tereasa Centeno - Inventory Manager

### Warehouse / Shipping & Receiving ( 8 employees )

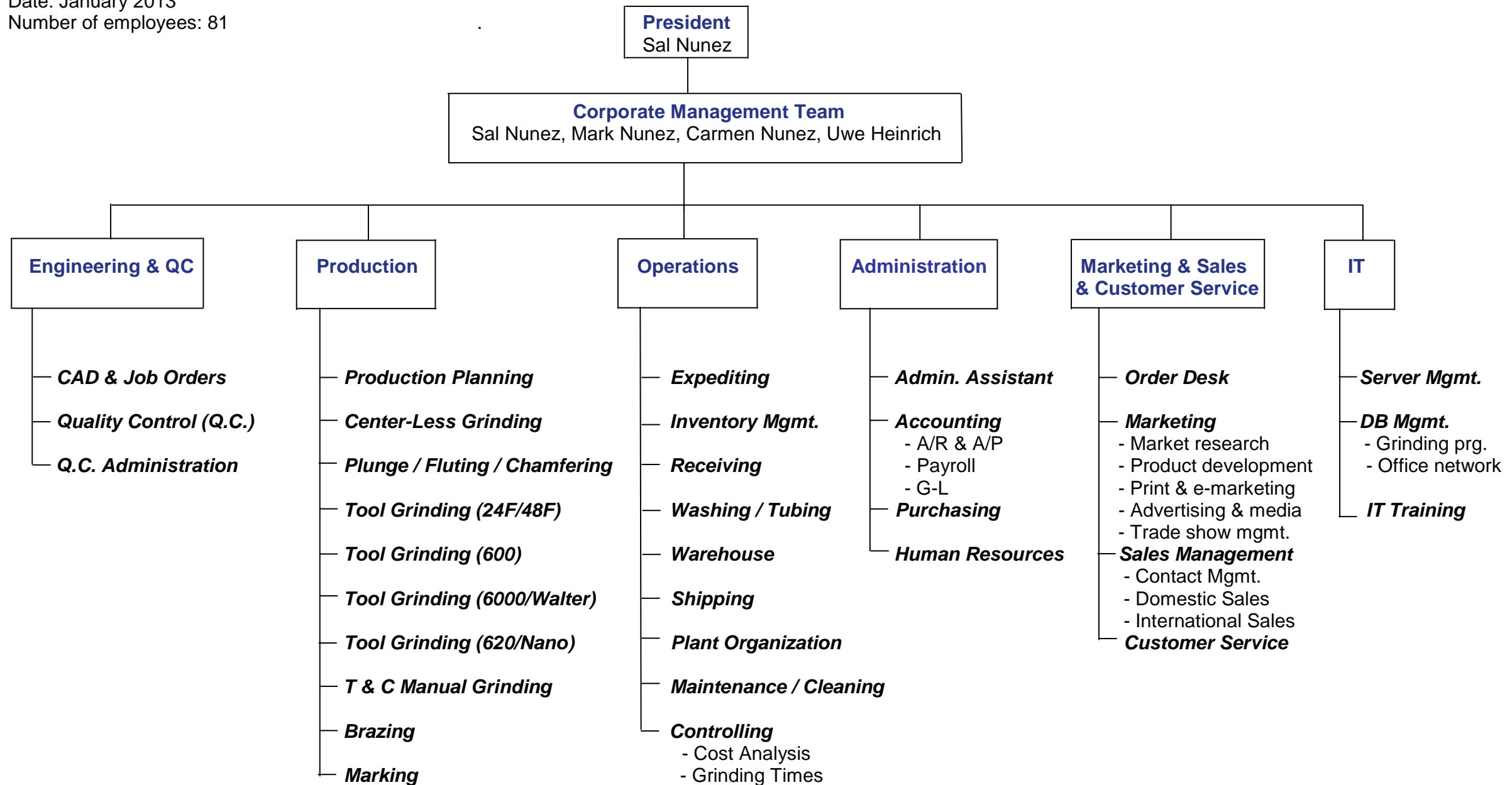
- Eugenio Lima - Shipping & Receiving
- Art Sanchez - Shipping & Receiving
- Luis Rodriguez - Shipping & Receiving
- Maria Cabrera - Shipping & Receiving
- Maria Medina - Shipping & Receiving
- Javier Becerra - Warehouse
- Lourdes Garcia - Warehouse
- Martha Rocha - Warehouse

### Plant Operations

- A total 62 employees work in our plant operations.

### III. Organizational Structure

Date: January 2013  
Number of employees: 81



## IV. Process Technology

### IV. 1. Production Capacity

Operating with the most modern CNC machines and precision grinding equipment, "BEST CARBIDE" is well equipped to meet the greatest demands for high precision crafted tools. The following key parameters describe our modern plant:

- **8** individual plant buildings, measuring a total of 35,000 square foot / 11,000 square meters
- **13** center-less grinding machines
- **90** grinding machines
- **85** Rollomatic & **3** Walter grinding machines



Rollomatic 620XS



Rollomatic 6000X



Rollomatic Nano 6



## IV. 2. Grinding Equipment:

### 1) Center-Less Grinding Equipment:

We are operating a total of **13** center-less grinding machines.

- **3 Royal Master**
- **10 Cincinnati**

### 2) Fluting Equipment:

We are operating a total of **28** fluting machines.

- **4 Rollomatic CNC 48F4**
- **3 Rollomatic CNC 12**
- **19 Rollomatic CNC 24F3**
- **2 Rollomatic SP 01-3**

### 3) End Styling Equipment:

We are operating a total of **8** end-styling machines.

- **4 Rollomatic CNC 148F3**
- **4 Rollomatic CNC 100F3**

### 4) Plunge Grinding Equipment:

We are operating a total of **11** plunge grinding machines.

- **3 Rollomatic NP4**
- **2 Truetec TTS 10362 C**
- **3 Rollomatic NP5**
- **3 Rollomatic RPG**

### 5) Tool Grinding Equipment:

We are operating a total of **43** tool grinding machines.

- **15 Rollomatic CNC 620 XS**
- **10 Rollomatic CNC 600 X**
- **3 Rollomatic CNC 6000XL**
- **6 Rollomatic Nano 6**
- **3 Rollomatic Nano 5**
- **3 Walter Helitronic**
- **3 Rollomatic 528 XE**



## IV. 3. Quality Assurance Equipment for Diamond Wheels



Rollomatic Tool Programming  
& Diamond Wheel Presetting Station



Rollomatic Profilesmart  
Diamond Wheel Dressing Machine



Rollomatic BMT 200S  
Diamond Wheel Balancing Station



## IV. 4. Measuring Technology



Zoller Genius 3 Micron Measuring  
with 2D and 3D Lens System



Walter Helicheck  
Measuring Machine

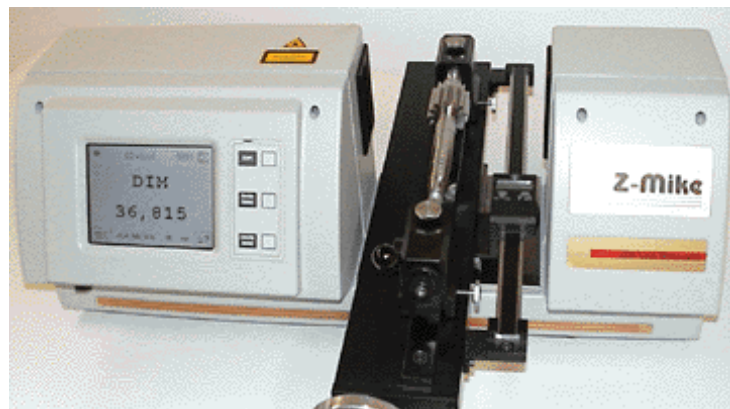


Walter Micro Check  
Measuring Machine

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## IV. 5. Auxiliary Quality Equipment



Z Mike  
Laser Micrometer



Rollomatic Concentricity  
Pro Measuring Fixture



Crest Ultra Sonic  
Tool Washing Machine



## IV. 6. Future Plant Investments



2 Rollomatic Nano 6 Machines ( On order )  
for Radial Micro Tools



Magnetfinish MF 61 SA Machine  
for Automatic Edge Preparation



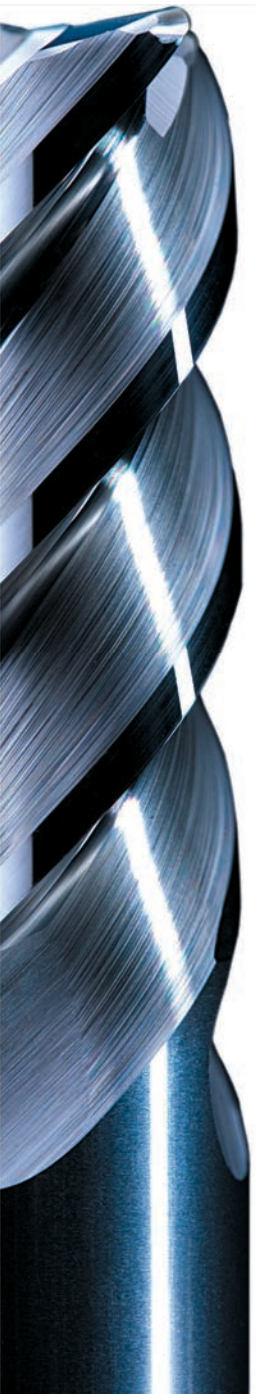
## V. 1. Product Strategy

In order to meet the constantly increasing requirements for higher productivity, our product strategy focuses on the following tool attributes:

- **Maximum cutting performance**
- **Highest tool quality & precision**
- **Greatest cost competitiveness**
- **Improved machining solutions**

In order to meet these attributes, tool engineering and manufacturing focus on the production of advanced cutting tools and less on the manufacturing of universal application tools.

Therefore, our premier tools feature the following performance and quality characteristics:



## Optimized Carbide Grades

- Fine carbide grades (1  $\mu\text{m}$ -1.3  $\mu\text{m}$ )
- Submicron carbide grades (0.5  $\mu\text{m}$ -0.9  $\mu\text{m}$ )
- Ultra fine carbide grades (0.2  $\mu\text{m}$ -0.5  $\mu\text{m}$ )
- Nano carbide grades (<0.2  $\mu\text{m}$ )

## Superior Grinding Finish & Dimensional Accuracy

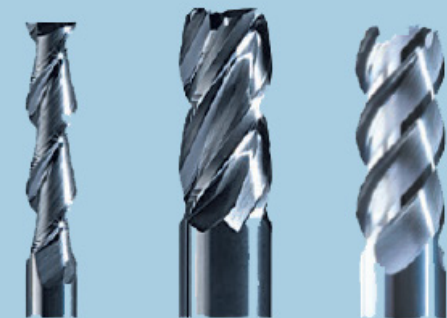
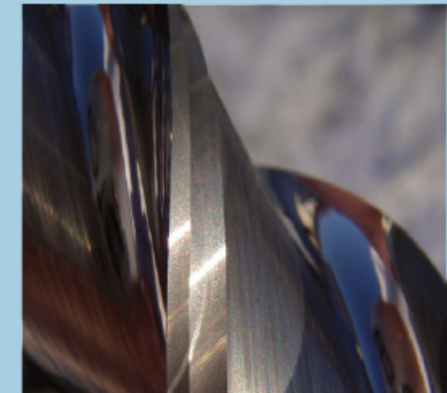
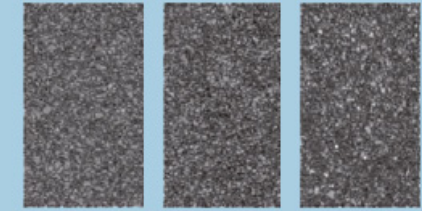
- Flute Concentricity cutting diameter range: (0.2 mm - 3.0 mm): 1  $\mu\text{m}$  to 3  $\mu\text{m}$
- Flute Concentricity cutting diameter range: (1.0 mm - 6.0 mm): 1  $\mu\text{m}$  to 3  $\mu\text{m}$
- Flute Concentricity cutting diameter range: (8.0 mm - 20.0 mm): 1  $\mu\text{m}$  to 6  $\mu\text{m}$
- Radius Tolerance: +/- 0.004 mm
- Shank Concentricity: 0.002 mm
- Cutting Diameter Tolerance: h5, h6 & h8
- Shank Diameter Tolerance: h5

## Highly Innovative Tool Geometries

- Unique flute forms
- Various honed cutting edge contours
- Special grinding features
- Variable helix and variable flute offsets
- Optimized rake, clearance and helix angles

## Advanced Tool Coating Technology

- TiAlN coatings
- Nanocomposite coatings
- X-LC coatings
- Aluminum Chromium Nitride coatings
- Diamond coatings



## V. 2. Solid Carbide End Mills (metric) / Group 300-400

### Group Profile:

- Universal & high performance solid carbide end mills in metric specifications
- Square end (cylindrical), corner radii & ball nose (full radius) geometries

### Performance Factors:

- Optimized carbide grades
- Superior grinding quality
- Highly Innovative tool geometries
- Advanced coating technologies (TiAlN, nano composite, X-LC & special coatings)

### Applications:

- High Speed Cutting (HSC)
- High Precision Cutting (HPC)
- High Feed Cutting (HFC)

### Size Range:

- 0.1 mm to 20 mm end mill cutting diameters





## V. 3. Solid Carbide End Mills (inch) / Group 500-600

### Group Profile:

- Universal & high performance solid carbide end mills in inch specifications
- Square end (cylindrical), corner radii & ball nose (full radius) geometries

### Performance Factors:

- Optimized carbide grades
- Superior grinding quality
- Highly innovative tool geometries
- Advanced coating technologies (TiAlN, nano composite, XLC & special coatings)

### Applications:

- Broad application range suitable for U.S. market requirements
- Micro End Mills (regular, stub, long, extra long / square, corner radius, ball nose)
- Universal End Mills (stub, regular, long, extra long / square, corner radius, ball nose)
- High Performance End Mills (Aluminum, variable helix, hard milling & HSC)

### Size Range:

- 0.005" to 1" end mill cutting diameters



## V. 4. Solid Carbide Drills / Group 200

### Group Profile:

- Universal application solid carbide drills in inch and metric specifications
- Complete size range in metric, fractional, wire and letter sizes

### Performance Factors:

- Accurate and consistent drill point geometry
- Web thinning / split point for sizes over 2 mm
- Superior surface finish
- Edge preparation and post polishing upon request
- Advanced coating technologies (TiAlN, nano composite, XLC & special coatings)

### Applications:

- Aluminum & non-ferrous materials (Jobber Length Drills - 118° / 25° Helix)
- Steels, stainless steels, alloy steels (Slow Spiral / Stub Drills - 135° / 15° Helix)
- Hardened steels (Straight Flute Drills - 140° Notched Point)

### Size Range:

- Metric: 0.7 mm to 12.0 mm
- Fractional: 1/64" to 1"
- Wire: #80 to #1
- Letter: A to Z



## V. 5. Carbide Burs / Group 700

### Group Profile:

#### Complete line of industrial carbide burs in inch and metric specifications:

- Regular Size Carbide Burs (single cut / double cut)
- Long Shank Carbide Burs (single cut / double cut)
- Miniature Size Carbide Burs (single cut / double cut)
- Regular Size Aluminum Cut Burs
- Long Shank Aluminum Cut Burs

#### All burs are available in the most popular shapes:

- **SA** -Cylinder Shape
- **SB** - Cylinder Shape with End Cut
- **SC** - Cylinder Shape with Radius End
- **SD** - Ball Shape
- **SE** - Oval Shape
- **SF**- Tree Shape with Radius End
- **SG** - Tree Shape with Pointed End
- **SH** - Flame Shape
- **SJ** - 60° Cone Shape
- **SK** - 90° Cone Shape
- **SL** - 14° Taper Shape with Radius End
- **SM** - Cone Shape
- **SN** - Inverted Cone Shape





## Performance Factors:

- Near perfect shape ( no manual radius grinding )
- Consistent, highly accurate tool geometry ( flute spacing, flute depth, chisel length, no land )
- Superior flute finish
- Strongest braze ( check brazing strength with a shear-off force of 2,800 - 3,500 psi )

## Applications:

- High production de-burring applications in shipyards and foundries
- Single cut geometries for perfect surface work piece finishes
- Double cut geometries for better operator control and suitable work piece finishes
- Diamond cut geometries for hard materials & better heat management
- Coarse cut geometries for maximum metal removal rates

## Size Range:

- All common and standard sizes feature shank diameters of 3 mm, 6 mm, 1/8" and 1/4"
- 8 mm shanks and 3/8" shanks are available upon request

## VI. Company History & Highlights:

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- 1980 Founded in Gardena - company manufactures carbide cutting tools for local aerospace industry.
  - 1984 Business expansion into the semi conductor industry - company starts manufacturing industrial carbide round tools.
  - 1989 1st fully automated CNC machines with robot - company commits to plant automation - exports to South American countries.
  - 1994 Continued sales expansion - move into a new plant facility.
  - 1998 Nationwide recognition as a reputable OEM supplier to the U.S. cutting tool industry.
  - 2006 Continues growth! Operates 6 industrial buildings and employs over 60 full time employees.
  - 2007 Company launches its international branding strategy - accomplishes a new sales record - continued business expansion with double digit sales growth!
  - 2008 NEW SALES RECORD! Purchases 8 new grinding machines - including three 3 NANO grinding machines - move into 7th industrial building.
  - 2009 Despite the global recession, exports increase by 19% over the 2008 record! U.S. distribution of brand products gains momentum. 2 additional Rollomatic machines were purchased.
  - 2010 NEW ALL TIME SALES RECORD within the U.S. and export markets with 15% growth over 2008! Operates 24 hours a day - 7 days a week. New staff additions add to 77 employees.
  - 2011 CONSECUTIVE SALES RECORD YEAR (Corporate Sales: + 14%, Export Sales: + 65%).
  - 2012 THIRD CONSECUTIVE SALES RECORD YEAR (Corporate Sales + 10%, Export Sales: + 52%). Staff expansion to 81 employees.