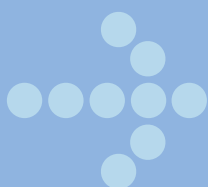


New Leader of Carbide & Diamond Tools

JD TOOLS

PROGRAM



www.jdtools.co.kr

Introduction



Special tools are strength!

Dear Customers,

We have been very much grateful of our all customers who love JD TOOLS.

We, JD TOOLS is the leading supplier of custom Carbide Cutting tools and Diamond tools in Korea and specialized in the Carbide slitting(slotting) Saw, Form Tools and Diamond Tools.

Even we are not the No. 1 in the world, we have tried to reach the position with our sincere service and improvement of quality.

We believe **The Best Quality** is **The Best Way** to reach the position

Looking forward to have an opportunity of serving you and good business relations with you in the nearest future.

TRUST



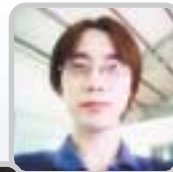
GLOBAL



Our Staffs



- Ryu Ji Dong
- Director
- jdryu@jdtools.co.kr



- Kim Seung Nam
- Technical Employee
- snkim@jdtools.co.kr



- Park Chul Woo
- Technical Adviser
- cwpark@jdtools.co.kr



- Nam Ki Sook
- Export Sales Manager
- ksnam@jdtools.co.kr



Saw	<ul style="list-style-type: none"> • Saw for H.D.D Arm • Saw for Aluminium 	<ul style="list-style-type: none"> • Saw for Optical Frame • Knife 	6
------------	--	--	----------

Drill	<ul style="list-style-type: none"> • Burnishing Drill • Half Moon Drill • Multipoint Drill 	<ul style="list-style-type: none"> • Twist Drill • Diamond Tip Drill • Flat Drill 	7
--------------	---	--	----------

End mill	<ul style="list-style-type: none"> • Solid Carbide End Mill (2, 3, 4, 6F) • Brazed End Mill(2, 4, 6F) 	<ul style="list-style-type: none"> • Ball Nose End Mill • Taper End Mill • End Mill with Radius 	8
-----------------	---	--	----------

Reamer	<ul style="list-style-type: none"> • Boring Reamer • Mill Reamer • Chucking Reamer 	<ul style="list-style-type: none"> • Broach Reamer • Reamer with Oil Hole • Diamond Tip Reamer 	9
---------------	---	---	----------

Insert & bite	<ul style="list-style-type: none"> • Carbide Insert • CBN Insert • PCD Insert 	<ul style="list-style-type: none"> • Ceramic Insert • Carbide Bite • Diamond Bite 	10
--------------------------	--	--	-----------

Cutter	<ul style="list-style-type: none"> • T-Cutter • Balancing Cutter • Form Tool • Side Milling Cutter 	<ul style="list-style-type: none"> • Plain Cutter • Work Blade • Lathe Center 	11
---------------	--	--	-----------

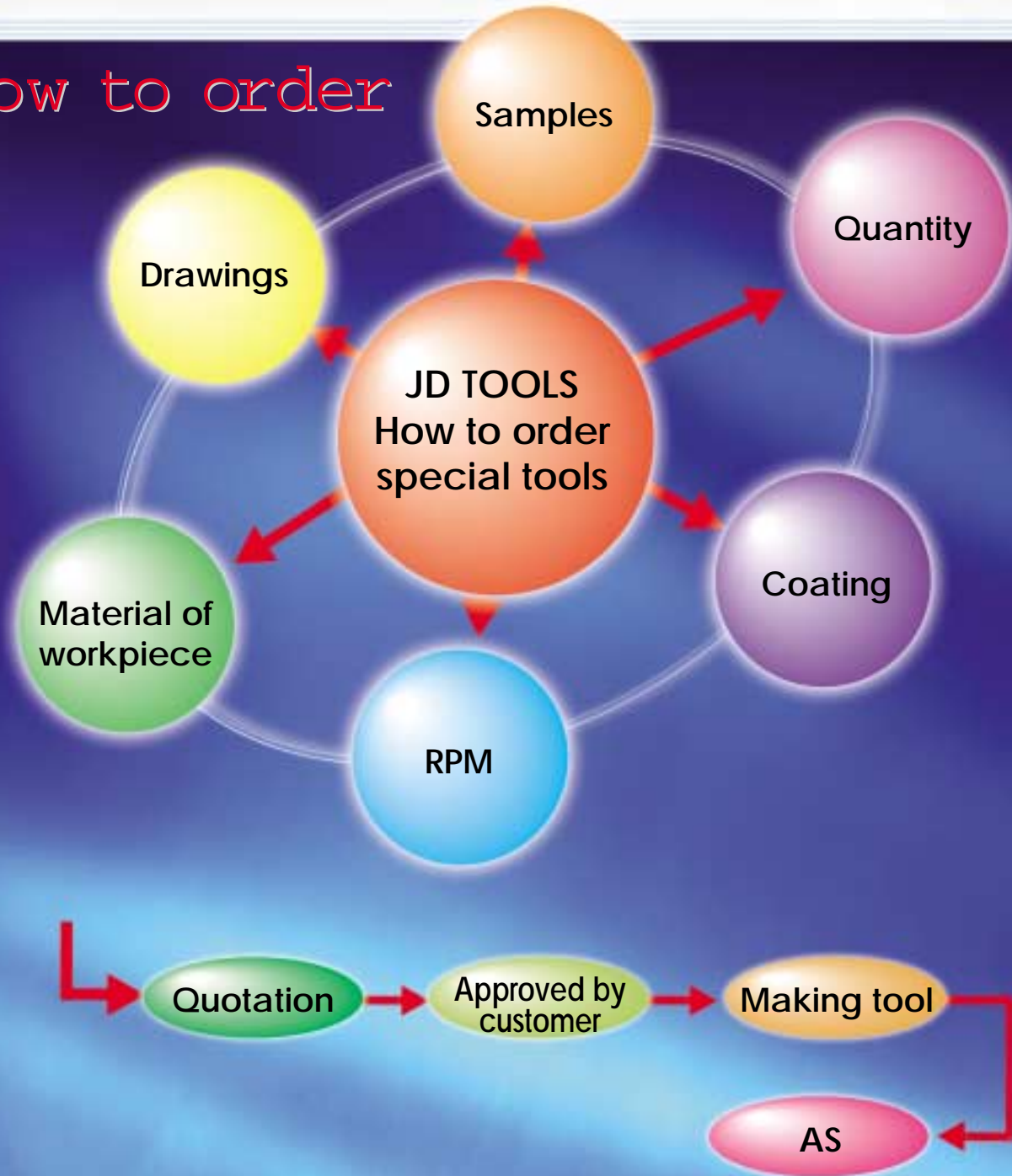
Diamond tools	<ul style="list-style-type: none"> • Wheels • PCD & PCBN Tools • Diamond Dresser • Diamond Insert 		12
----------------------	---	--	-----------

Coating			13
----------------	--	--	-----------

Grade			14
--------------	--	--	-----------



How to order



Our company lead time

- 1 Week** ➡ Solid drill, End mill, Reamer
- 2 Weeks** ➡ Saw, Cutter, Brazed End mill, T-Cutter, Brazed Reamer, Diamond Wheel
- 3 Weeks** ➡ Diamond Bite, Diamond Dresser, Diamond Insert, Special Form Tool, Side Milling Cutter
- 4 Weeks** ➡ Insert, etc

Cost Effective Solutions!

DIA	TH	ID	TEETH
12	0.18 ~ 0.3	5	20
25.4	3 ~ 6	8	24
32	2.73	8	24
40	2.0 ~ 2.2	10	32
63	1.9 ~ 2.5	16	40
80	1.9 ~ 3	22	48
97	2.0 ~ 3.5	22	48
100	1.0 ~ 3.0	22	48

* Other size is available.

Form " a "



Form " b "



Form " c "



ITEMS

- Saw for H.D.D Arm
- Saw for Aluminium
- Saw for Optical Frame
- Knife

* Uncoating / TiN / TiAlN / Diamond



Commitment to Total Quality!



ITEMS

- Burnishing Drill
- Half Moon Drill
- Multipoint Drill
- Twist Drill
- Diamond Tip Drill
- Flat Drill

* Uncoating / TiN / TiAlN / Diamond
* $\phi 1 \sim \phi 40$ are available

The Art of Tools

ITEMS

- Solid Carbide End Mill (2, 3, 4, 6F)
- Brazed End Mill(2, 4, 6F)
- Ball Nose End Mill
- Taper End Mill
- End Mill with Radius

* Uncoating / TiN / TiAlN / Diamond
* $\phi 2 \sim \phi 40$ are available



Proven Performance!

ITEMS

- Boring Reamer
- Mill Reamer
- Chucking Reamer
- Broach Reamer
- Reamer with Oil Hole
- Diamond Tip Reamer

* Uncoating / TiN / TiAlN / Diamond
* $\phi 2 - \phi 40$ are available

Insert & Bite

One Stop Solution!

ITEMS

- Carbide Insert
- CBN Insert
- PCD Insert
- Ceramic Insert
- Carbide Bite
- Diamond Bite

* Uncoating / TiN / TiAlN / Diamond
* Standard / Special Products

Total Tooling System!

ITEMS

- T-Cutter
- Balancing Cutter
- Form Tool
- Side Milling Cutter
- Plain Cutter
- Work Blade
- Lathe Center

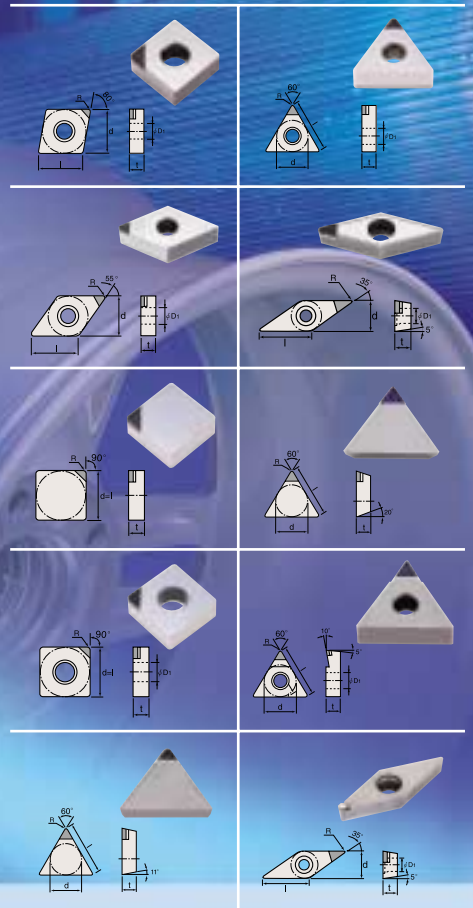
* Uncoating / TiN / TiAlN / Diamond
 * Custom Made Products

Diamond tools

ITEMS

- W heels
- PCD & PCBN Tools
- Diamond Dresser
- Diamond Insert

Future of Special Tools!



• Diamond Insert



• Resin Bonded Wheels



• Metal Bonded Wheels



• Vitrified Bonded Wheels



• Diamond blades

Coating Material	Microhardness HV*	Friction Coefficient against steel (dry)*	Internal stress (Gpa)*	Max. Application Temperature (°C)*	Coating Color	Coating Structure
AlCrN	3,200	0.35	-3	1,100	Blue-grey	Monolayer
CrN	1,750	0.5	-1.5/-2.0	700	Silver-grey	Monolayer
DLC(a-C:H)	2,500	0.1 - 0.2		350	Black-grey	Monolayer
Polycrystalline diamond	8,000 ~ 10,000	0.15 - 0.20		600	Light-grey	Monolayer
TiAlN	3,300	0.30 - 0.35	-1.3/-1.5	900	Violet-grey	Nano structured
TiAlN	3,300	0.25	-1.3/-1.5	900	Violet-grey	Nano structured
TiAlN	3,500	0.4	-4.0	800	Violet-grey	Monolayer
TiAlN	3,300	0.4	-3.0/-3.5	900	Blue-grey	Monolayer
TiAlN+WC/C	3,000	0.15	-1.7/-2.0	800	Dark-grey	Nano structured
TiCN	3,000	-0.20	-4.0	400	Blue-grey	Multilayer, lamellar
TiCN+TiN	3,000	0.4	-4.0	400	Gold-yellow	Multilayer, gradient
TiN	2,300	0.4	-2.5	600	Gold-yellow	Monolayer
WC/C	1,000/2,000	0.10 - 0.20	-1.0	300	Black-grey	Lamellar

* Depending on application and test conditions. (Quote from Balzers)

Cutting tool grades

ISO Class	Grade	Materials	Cutting Methods	Application	Composition	Features
P	P10	Steel Cast Steel	Threading Turning Milling	Medium-high Speed General cutting	WC+Co+TiC+ TaC	TiC+TaC is added for improving heat & crater resistance
	P20					
	P30			Low-medium speed Roughing		
M	M10	Steel Cast iron Stainless steel	Turning Milling	Medium speed	WC+Co+TiC+ TaC	Less TiC and TaC is added. Better wear and shock resistance than P grades.
	M20			Low speed Heavy cutting		
	M40					
K	K10	Cast iron Hardened steel	Reaming Turning Milling	Finishing	WC+Co	No TiC or TaC. Excellent mechanical wear resistance and shock resistance.
	K20	Nonferrous metal Nonmetallics		Medium speed		
Micro-Alloy	UF1	Steel, Cast steel, Cast iron, Copper,				Higher Hardness, Higher
	UF2	Aluminum, Glass				Toughness

* Depending on application and test conditions.



JD TOOLS

Carbide & Diamond tools serve as a promoter of globalization

JD TOOLS is actively pursuing globalization by partnerships with reliable companies around the world to cope effectively with many changes in the industry.

The international connections of JD TOOLS have helped secure a great number of customers around the world and obtain reputation as a reliable supplier of quality carbide and diamond tools.

International cooperation in the carbide and diamond tools industry are gaining more speed with the discovery of new technologies. JD TOOLS is playing an active role in promoting international cooperation in the industry.

JD TOOLS



25 Pyungsa, Jillyang, Kyungsan, Kyungbuk, KOREA (712-834)

HEAD OFFICE Tel: 82-53-852-2664, 853-2661

Fax: 82-53-853-2665, 853-2667

FACTORY Tel: 82-53-853-1308 Fax: 82-53-853-1309

WEB www.jdtools.co.kr

E-MAIL jdtools@jdtools.co.kr