2006-2009

2009 **01** Acquired the MAIN BIZ certification

2007 **10** Acquired IOS 14001 certification

2010-2015

2015 **11** Established R & D Center attached to Gun Woo Carbide Co., Ltd

2014 **08** Established Training Center of Gun Woo Carbide Co., Ltd.

01 Selected as Hidden Champion (the Ministry of Employment and Labor)

2012 **03** Received Award of Citation as Model Taxpayer (Geumjeong Tax Office)

2011 **06** Received Business Management Grand Prize (Korea Management Information Society)

2010 **11** Moved to (Geumsa-dong) 129, Gaejwa-ro, Geumjeong-gu, Busan-si for expansion

01 Acquired the INNO-BIZ

2016-

2018 **07** Selected as Technology Evaluation Excellent Company (NICE Information Service)

2017 **11** Selected as Military Service Designated Company (Military Manpower Administration)

CEO Greeting

Since its establishment in 1992, Gun Woo Garbide has been growing steadily with your support and advices.

Since its establishment in 1992 as Gun Woo Carbide Industry, Gun Woo Carbide Co., Ltd. has been well-received not only by Korean companies but also by major importers of such Asian countries as Japan, Singapore and Malaysia on the strength of our new products based on technology development and the spirit of challenge. Currently, we export 80% of our sales to advanced countries such as the US, UK, Germany and France, and we are doing our best to meet the demands of our customers at the level of their eye-sight.

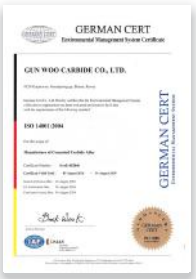
We believe that these achievements are the results of care that our customers showed us as a sign of their trust. In the future, we will redouble our effort to give the greatest satisfaction and impression to our customers.

CEO/Chairman
Gun Young, Lee

Certification & Awords

Certification

ISO9001



ISO14001

INNO-BIZ

MAIN-BIZ

R & D Center Attached to the Company

Promising SMB Export Company Certification

Utility Model Registration

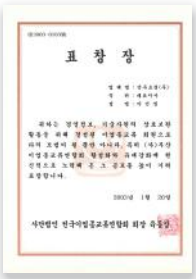
Excellent Quality Certification

Technology Evaluation Excellent Company Certification

Excellent Businessman Certification

Hidden Champion Certification

Awords



Chairman of Korea Inter-Industry Alliance Citation

CLEAN Business Site Certification

SMB Promotion Corporation Citation

Tax Office Award of Citation

Technology & Business line

GENERAL PURPOSE LATHE

MILLING MACHINE

WIRE CUTTING MACHINE

PROFILE MACHINE

GRINDING SHOP

GRINDING SHOP

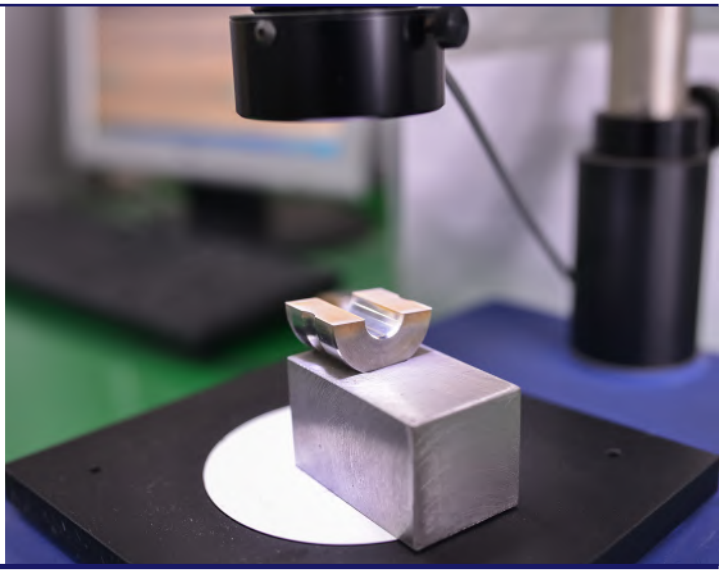
LAPPING SHOP

PROJECTOR

HARDNESS TESTING MACHINE

CHART PLOTTER

CYLINDRICAL GRINDING



ELECTRONIC MICROSCOPE

Main Products

01 Tungsten-Carbide

A hard alloy made by tungsten carbide and cobalt powder with excellent wear resistance.
It is used as a die, plug, cutter, roll, etc., and maintains a much better life span than steel products.

Main Products

02

Dies / Plug (Heading Die, Drawing Die, Ball Die, Specialty Die, Trimming Die)

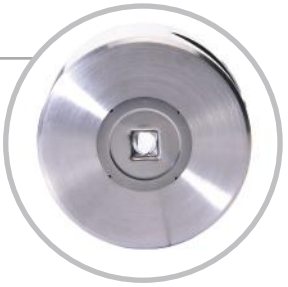
Frames used for plastic processing of metals such as forge welding, drawing processing, extrusion processing and press processing. Female types of the product are sculpted using the tool steel, and the material is inserted between the two molds for forging or pressing.

1. Heading Die

Dies used in forging machines or presses to generate the head of bolts, rivets and similar parts.

Main Products

1. Heading Die



2. Drawing Die

Dies for obtaining a section product according to the required dimension, shape, and hardness by drawing a rod or pipe through a smaller dimension die.

3. Ball Die

Dies for making bearing balls used in various bearings.

4. Specialty Die

Dies made of wire cutting or electric discharge machining to draw rods or pipes that are non-cylindrical but square or special shape.

Main Products

5. Plug

Form the inner diameter by fixing the pipe to be located at the center of the dies when drawing
AP, AP, FP, Defomed plug manufacture.

03 Bush (Car Guide Bush, Gun Drill Bush, Fixed Bush)

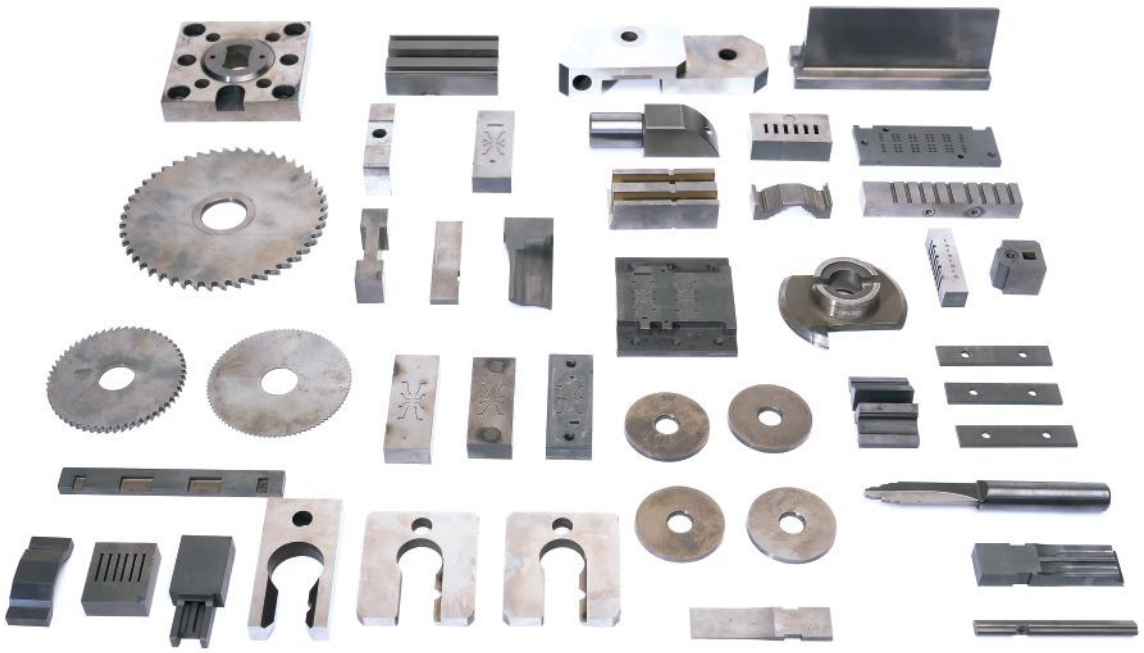
The role of guiding drills or reamers to the correct location when drilling holes in a workpiece.

04 Punch & Pin

Dies for drilling holes in workpieces or for processing the head of bolts, rivets and similar parts.

05 Semi Conductor Mold & Cutter & Gauge

- **Mold** Used as semiconductor injection mold.
- **Cutter** A rotary cutter for cutting products or digging grooves by rotating, and a fixed cutter and a mobile cutter for cutting rods as a set.
- **Gauge** An instrument made to measure dimensions such as diameter and thickness. Used mainly as a test gauge for mass production of small varieties by using go / no go gauge.



06 Roll/TC Housing

It is used as a shaft guide for various steel, galvanized sheet iron, and aluminum steel plate. It is also used when rolling steel plate using both rolls.

07 Carbide Nozzle

A product that uses hard-metal to increase the wear resistance of the inner diameter or nozzle to excrete liquid, gas, and flame at high speed.

Grade & Properties

No.	Grade	Blend adjustment		Physical properties				
		WC particle size	Co+etc.	Hardness		Deflective strength	Specific gravity	
		μm (wt.%)	wt.%	HRA	Range	kgf/mm²	-	Range
1	KFD25	Ultrafine	15.2	92.0	±0.5	350<	14.00	±0.05
2	KEA60	Coarse	17.0	85.5	±0.8	280<	13.90	±0.10
3	KEA70	Coarse	20.0	84.3	±0.8	275<	13.65	±0.10
4	KEA80	Coarse	22.0	83.5	±0.8	275<	13.40	±0.10
5	KVA70	Coarse	18.0	84.0	±0.8	245<	13.80	±0.10
6	KVA80	Coarse	22.0	82.5	±0.8	245<	13.45	±0.10
7	K40	Fine	10.0	90.0	±0.5	290<	14.50	±0.10
8	KRD20	Medium	7.3	91.5	±0.8	305<	14.80	±0.05
9	KG2	Fine	5.9	92.0	±0.5	250<	15.00	±0.10
10	KFD15	Fine	12.0	91.0	±0.5	325<	14.30	±0.05
11	KG3	Medium	8.0	91.0	±0.5	290<	14.70	±0.10
12	JR60	Extra Coarse	15.0	85.0	±1.0	210<	14.00	±0.10
13	JSF13	Ultrafine	12.7	92.5	±0.5	320<	14.20	±0.10
14	JF12	Submicron	12.0	90.5	±0.5	330<	14.30	±0.10
15	UF10	Submicron	10.3	92.5	±0.5	300<	14.35	±0.10
16	UF20	Fine	12.3	90.5	±0.5	330<	14.25	±0.10
17	UF30	Medium	15.8	88.5	±0.5	330<	13.85	±0.10
18	KFRT15	Fine	14.5	90.5	±0.5	295<	14.15	±0.05
19	KRD50	Medium	14.7	89.0	±0.8	325<	14.00	±0.10
20	KVA40	Coarse	9.0	87.5	±0.8	255<	14.65	±0.10
21	JA50	Medium	14.0	88.5	±1.0	310<	14.15	±0.10
22	KVA60	Coarse	15.0	85.0	±0.8	245<	14.05	±0.10
23	KG4	Medium	10.0	90.0	±0.5	300<	14.55	±0.10
24	KG5	Medium	12.0	89.0	±0.5	310<	14.35	±0.10
25	JA30	Medium	11.0	89.5	±1.0	310<	14.45	±0.10
26	KG6	Coarse	15.0	86.5	±1.0	290<	14.00	±0.10
27	KG7	Coarse	18.0	85.0	±1.0	270<	13.72	±0.10
28	KM8	Extra Coarse	22.8	82.3	±1.0	260<	13.25	±0.10
29	KM9	Extra Coarse	24.0	81.8	±1.0	250<	13.15	±0.10

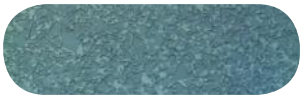
Microstructure (x1000)

JF series

UF series

KG series

JA series



KM series

JR series

KEA series

KVA series