



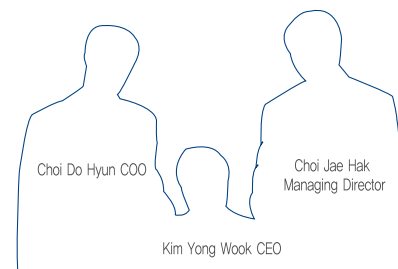
DAE WON IN MUL CO.,LTD.

DAE WON IN MUL Co.,Ltd has been producing knives with strictly chosen materials under adequate process and our own 20years technical know-how and new equipment. And we have been supplying the knives, which were developed by ourselves, for all the POSCO's processing lines in Korea and overseas plants. And we are continuously contributing to the growth of Steel Industries in Korea.

DAE WON IN MUL Co.,Ltd achieved ISO 9001 of international authorized quality assurance system, for the first time in the same industries and made an epochal history of Korea steel materials' technical advancement as we have very close business relation with New Japan Steel who is known to world wide market.

Under its goal of making high-value-added product we promise that we will further concentrating endeavor our great efforts to improve quality and to make satisfactory delivery to customers.





we are very much appreciating our customers' encourage and supports to us as the enterprise in order to maintain our reputation and tradition for a long time for the past 30 years. Thanks to the customers, we will make the future of DaeWon Knife a reality based on the technology accumulated for 30 years and do much for developing steel industry as the enterprise with history and tradition in the field of steel knife.

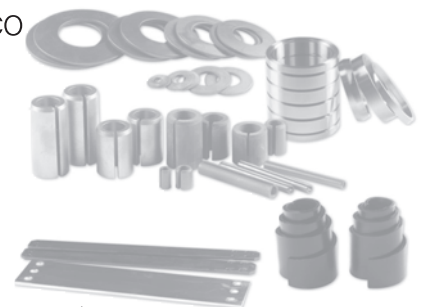
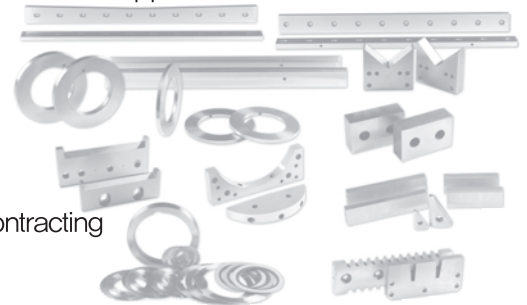
We, all staffs, will develop a company founded on the spirit of craftsman having a sense of duty which we will make the best quality of knife as a leading company in steel industry produces the best steel in the world.

DaeWon Knife promise that we will keep in mind the fact that producing economical and high quality goods is to embody the ideal of the company that serve the nation and the practical action of the DaeWon Knife. Further more, we will focus on the improvement of facilities, production, cost, sales, quality and management and we will put forth every ounce of our energies to invent new technology through continuous research for the best quality.

History of DAEWON ■■■



- 1973.05** Development of Knife for Steel
 - 1975.04** Development of Knife for POSCO
 - 1995.04** Corporation Establishment (Separated from DAE WON GANG UP Co., Ltd.)
 - 1997.12** Acquired KS A 9002, ISO 9002 Quality Management System Certificate
 - 1998.12** Export Knives to Nippon Steel Corporation
 - 2001.11** Acquired Patent of Working Material for Hi-ten & Stainless Steel (27K57V)
 - 2002.12** Received a thanks plaque from POSCO as an excellent machine supplier
 - 2005.11** Certified company for venture business
 - 2006.06** Obtained the INNO-BIZ Authentication
 - 2007.09** Established a Company-Annexed Institute
 - 2008.11** World Best, World First Technical development agreement contracting
 - 2009.07** Selected in prospected small and medium enterprises
 - 2009.11** Received the Presidential Citation, the present grand awards for cooperation between large and smaller companies
 - 2010.08** Acquired ISO 14001:2009 Environment Management System Certificate
 - 2010.11** Received the Win-Win Collaboration Excellence Award of POSCO
 - 2011.12** Selected as a Promising Export Firm
 - 2012.07** Selected as World Best Product to POSCO (Tungsten Carbide Knife)
 - 2012.12** Acquired a patent of Working Material for cutting steel (PSD1)
 - 2013.02** Selected as World First Product to POSCO (DSS Knife)
 - 2014.01** Selected as an excellent supplier to POSCO (POSCO Honored Partner)
- 2008~2014 Selected seven consecutive years



Knives

Knives made by DaeWon Knife show the technical know-how obtained by manufacturing knives covering 30 years. DaeWon Knife has become one of the leading company in a knife manufacturing industry by making a contribution to beginning home production of knife which is used by POSCO. A knife for cutting metal , all sorts of industrial parts, train parts has contributed to the advancement of domestic industry. DaeWon Knife secured the technical cooperation of maker of steel materials and continues to make an effort to develop a skill to produce the products of High accuracy and quality. ■

▼FLYING SHEAR KNIFE



▼BILLET SHEAR KNIFE

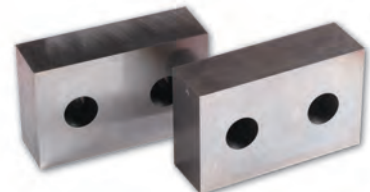


SHEAR KNIFE▼



◀SIDE TRIMMER KNIFE

CROP SHEAR CURVED KNIFE▼



▲GUILLOTINE SHEAR KNIFE



◀SLITTER KNIFE



▲SCRAP CHOPPER KNIFE



▲DIVIDING SHEAR
KNIFE FOR STEEL



▲SIDE CLIPPING SHEAR KNIFE



▲KNIFE FOR ROD AND H-BEAM



▲TUNGSTEN CARBIDE BRAZING KNIFE



◀ SPACER

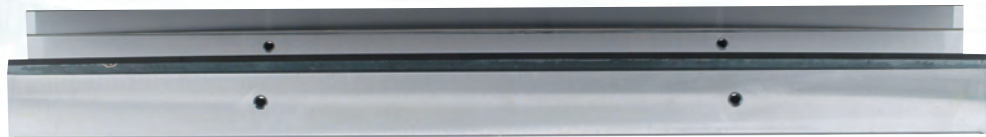
SHEAR KNIFE

- Used for both hot and cold rolling, with general SHEARING M/C there are various size for knives for most factories related to steel sheet.
- Material : general steel sheet, low alloy steel plate, stainless steel or scrap(the pieces of ships) etc.
- Size : within 100T x 250W x 6000L



CROP SHEAR CURVED KNIFE

- It is used to cut the vertical and end hem of the slab in the hot rolling mill. It can cut 20-60mm thick.
- The working temperature in MIN 900°C



FLYING SHEAR KNIFE

- Mainly with SIDE TRIMMER KNIFE used for cutting hot milling COIL, cold milling COIL.
- To produce proper size sheet used for re-cutting SIDE Trimmed sheet by fixed length and can cut 0.2~3.2mm of steel plate for cold milling and cut 1.0~12.7mm sheet for hot milling.
- 1 set of top bottom 2pcs one is taper angle which has wide both sides of the length and narrow center parts and other is right.





SLITTER
KNIFE

- Cut for cold milling COIL hot milling COIL etc. used in coil service center. Used for cutting thick coil by length to thin coil and generally 1 set of 50pcs.
- As same as SIDE TRIMMER KNIFE can cut 0.2~3.2mm of plate for cold milling and cut 1.0~12.7mm sheet for hot milling.
- Current available size : outside diameter : $\varnothing 800 \times 40$ mm and GANG SLITTER KNIFE is a kind of SLITTER KNIFE.



SIDE
TRIMMER
KNIFE

- Mainly used with FLYING SHEAR KNIFE for cutting hot milling COIL, cold milling COIL etc. To adjust the width of steel sheet, with fixing 4pcs of knives which are equipped by 2pcs on each side respectively and they are used for cutting the ends of both : able to cut 0.2~12.7mm sheet for cold milling and cut 1.0~12.7mm sheet for hot milling.
- Max. Cutting Size : outside diameter : $\varnothing 1290$, thickness : 80mm

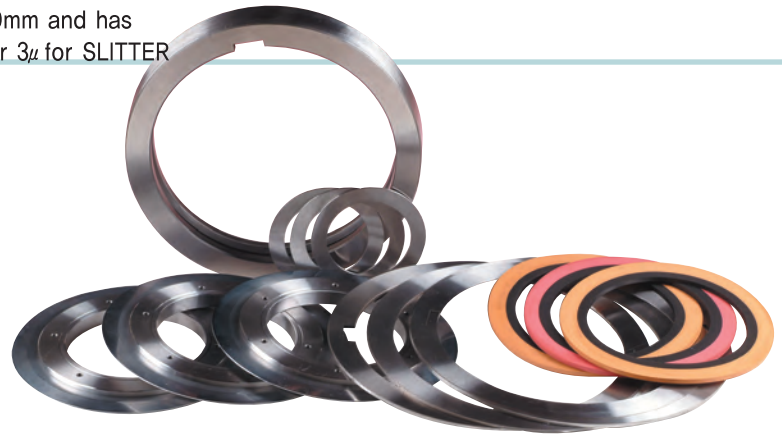
- This is used for the cutting process of the Coil, Steel Plate, etc.
- Comparing to the existing knives manufactured with all tungsten carbides, in case of BRAZING KNIFE, as tool steel is used inside of the KNIFE, the price is reasonable. In order to absorb shock occurred by the cutting work, a lot of cushion tips are inserted between the tungsten carbide and the tool steel, and the Spalling, the excoriation of cutting part of the KNIFE, is reduced, and thus the life span of the KNIFE is prolonged.

TUNGSTEN
CARBIDE
BRAZING
KNIFE



SPACER

- With setting like SLITTER KNIFE and SEPARATOR DISK used to adjust the width and the size are depend on the knife.
- Available size : outside diameter is $\varnothing 700\text{mm}$ and has various thickness : it's tolerance is under 3μ for SLITTER KNIFE and up to 5μ for plane figure.



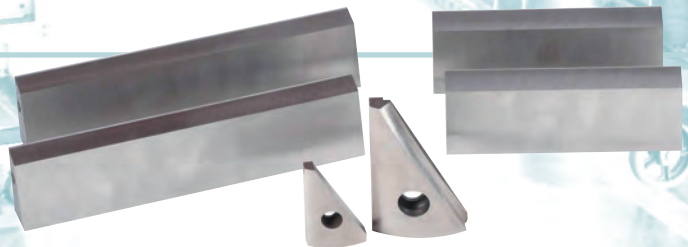
SIDE CLIPPING SHEAR KNIFE

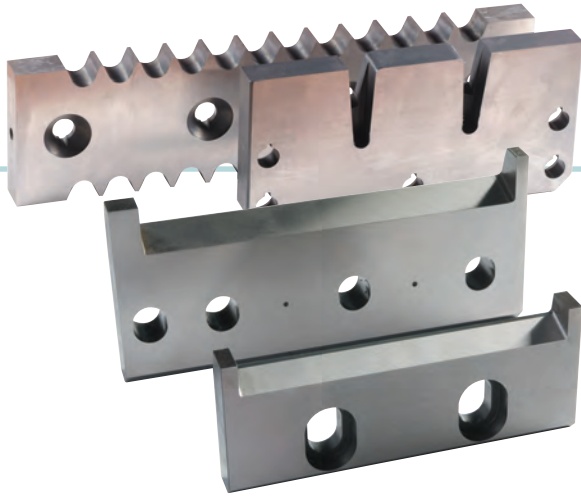
- Side clipping shear knife uses with Welder knife in continuous line. After cutting Welder knife, steel plates put together, it uses to notch each other on welding in Welding M/C. It is called Notcher knife.
- Circumstances are various.



SCRAP CHOPPER KNIFE

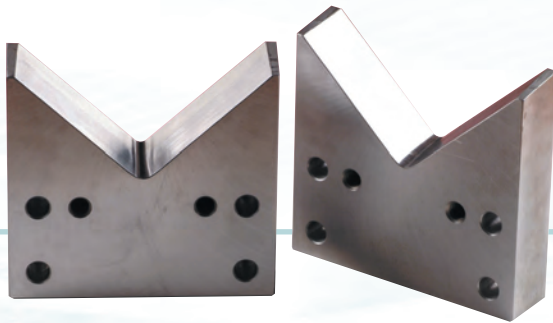
- Cut Hot rolling , Cold rolling COIL steel plate etc and used with mainly SIDE TRIMMER KNIFE or FLYING SHEAR KNIFE.
- A knife for cutting scrap in proper length after trimming both sides of sheet.
- Various shapes and sizes and the lengths are generally within 100~350mm under 1m.





**DIVIDING SHEAR
KNIFE
FOR STEEL/
KNIFE FOR ROD
AND H-BEAM**

- It is usually used in the company producing a steel reinforcement. It is can cut $\varnothing 10 \sim \varnothing 16$ mm thickness in heated condition.
- It is used to cut the Rod and H-beam and it usually cuts products in heated condition.

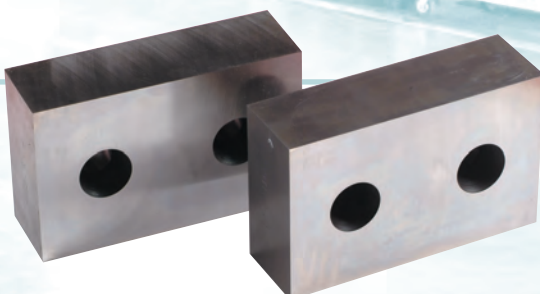


**BILLET
SHEAR KNIFE**

- Used for both hot and cold rolling. BILLET SHEAR KNIFE in the picture is a cladding knife welded onto the carved line part by a special welding rod, is able to use without stop in high emperature, is used for cutting BILLET being cast in required length under hot rolling state.

- A knife for cutting abandoned cars and scrap etc which are materials for making steel of electric furnace and used to cut huge material under severe condition.
- Current available size : under 110T x 230W x 1000

**GUILLOTINE
SHEAR
KNIFE**



Springs

springs are variously used in the industrial equipment. They are important products with the high technology accumulated from experience of the field. DaeWon Knife maintains the world-class quality by manufacturing Springs through the high level of heat treat and rigid test while choosing raw materials of plate spring including Disk Spring, Ring Spring, Spring Board. ■

▼DISK SPRING



▼RING SPRING



▲SPRING PIN

VOLUTE SPRING▶



▲PLATE SPRING



DISK SPRING

- Accumulated energy per volume is higher than coil spring's and big load capability of short stroke in small space. Available to change the spring's characters depending on working condition.
- Used for the cushion equipment to resist the weight of security valves in an atomic power plant huge industrial M/C's cushion equipment control valves and cushion spring of hydraulic cylinder.
- Available size : under $\varnothing 400 \times 30T$



RING SPRING

- As being loaded to its shaft with accumulated many wheels of inner and outer which have conical surface the ring springs have the constriction the extension elasticity and the friction of contact surface of inner and outer wheels. Ring spring is used by the character i.e. the constriction the extension elasticity and the friction of inner and outer wheels. The invariable number of ring spring will be archived by changing the ring numbers of and its shape.
- Use for industrial M/C's cushion equipment the cushion equipment for steel milling M/C.
- Available size : over $\varnothing 200 \times 480L$.

- The pin which has spring action and called role pin or self rock pin. For its heat treatment. It has fully strength against shearing stress and an advantage to be lighter than parallel pin.
- Instead of existing parallel pin used for partition pin rivet or join of screw stopper pins of bolt and nut locking pin clamping pin etc.

SPRING PIN



PLATE SPRING

- It is attached to the industrial equipment to absorb the impact on the machine.
- It is also used to set up a vibration to allow the flow of the metal well when manufacturing steel.



VOLUTE SPRING

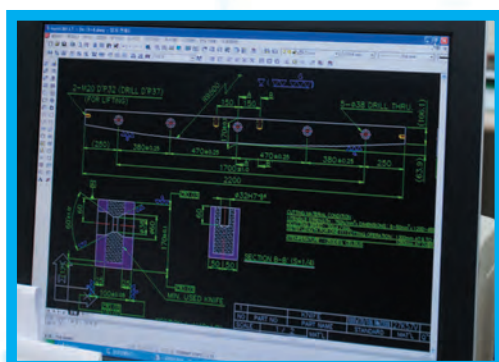


- It is used to buff the heavy load a small space.
- It is usually used for railroad vehicles industrial machines rolling equipments and weight conveyers.



Research and development >>

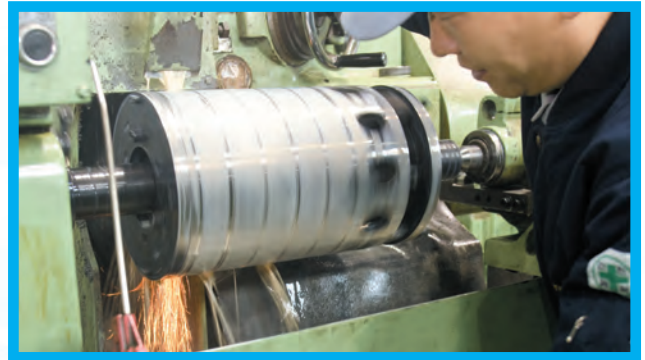
It is not too much to say that today is the year of research and development. In 2007, Our company found the DaeWon technical institution in the head office for we realized the best way to cope with the age of a considerable change every moment is the technical innovation. More over, we have invited lots of technical advisor from the university at home and abroad and are engrossed in research and development by bring in the introduction of technology from America and Japan. We have been trying to minimize an error in manufacturing. The positive investment and concern about research and development is the driving force so that DaeWon Knife can make a step forward. The research and development is not just limited the technical development but devote ourselves to the study for the better life of human beings based on the spirit of challenge and creation.■





Quality Control »

The demand of customers must be satisfied is a company motto from the beginning of the foundation of DaeWon Knife. Especially, Since most of the products is not a finished product to supply to customer directly but they are equipped all kinds of goods and it is important parts to influence efficiency, DaeWon Knife makes every effort to manufacture the greater quality of goods in a customer's place. All staff will do our best having a mind of quality first reflecting "Quality control makes or breaks the destiny of the company and individuals" while we have introduced quality control system from the choice of materials through service including process, goods, and carried out the system. DaeWon Knife continually try to be acknowledged the high quality with the name of DaeWon Knife. ■





■ the Presidential Citation, the present grand awards for cooperation between large and smaller companies



■ POSCO Honored Partner certification



■ Quality Management system certification



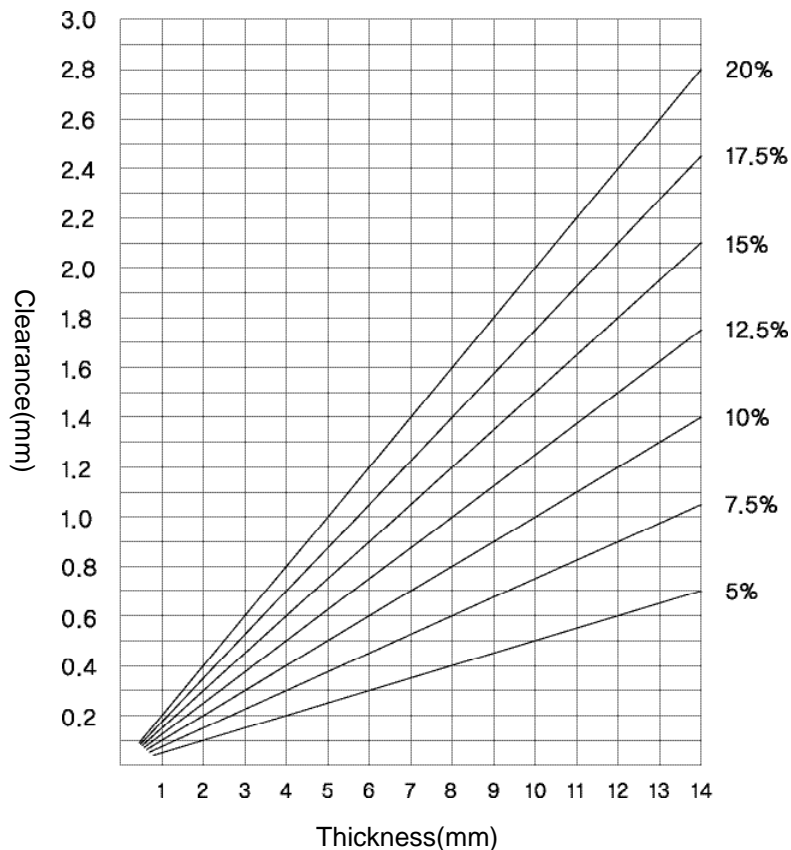
■ Environment Management System certification

• A conversion table of hardness

rock well scale solidity load150kg f	vickers solidity load 150kg f	brnell 10mm load3000kg f load standa rd sphere	shorle solidity	strength kg f/mm2 {N/mm2} approximat e quantity
65	832	—	91	—
64	800	—	88	—
				—
63	772	—	87	—
62	746	—	85	—
61	720	—	83	—
60	697	—	81	—
59	674	—	80	—
				—
58	653	—	78	—
57	633	—	76	—
56	613	—	75	—
55	595	—	74	212(2079)
54	577	—	72	205(2010)
53	560	—	71	199(1952)
52	544	500	69	192(1883)
51	528	487	68	186(1824)
50	513	475	67	179(1755)
49	498	464	66	172(1687)
48	484	451	64	167(1638)
47	471	442	63	161(1579)
46	458	432	62	156(1530)
45	446	421	60	151(1481)
44	434	409	58	146(1432)
43	423	400	57	141(1383)
42	412	390	56	136(1334)
41	402	381	55	132(1294)
40	392	371	54	127(1245)
39	382	362	52	124(1216)
38	372	353	51	120(1177)
37	363	344	50	118(1157)
36	354	336	49	114(1118)
35	345	327	48	110(1079)
34	336	319	47	108(1059)
33	327	311	46	105(1030)
32	318	301	44	102(1000)
31	310	294	43	100(981)
30	302	286	42	97(951)
29	294	279	41	95(932)
28	286	271	41	93(912)
27	279	264	40	90(883)
26	272	258	38	88(863)
25	266	253	38	86(843)
24	260	247	37	84(824)
23	254	243	36	82(804)
22	248	237	35	80(785)
21	243	231	35	79(775)
20	238	226	34	77(755)
-18	230	219	33	75(736)

• Horizontal clearance knife-setting

The most important factor for knife's life is that the user should keep optimum clearance between knife and the material to cut.



Corpper-soft	5%	Steel-soft (under 40kgf/mm)	8-12%
Brass	5-10%	Steel-stainless (over 50kgf/mm)	15-22%
Aluminum	5-10%	Titanium	15-22%

- I ask you inform about flowing matters for appropriation of material, heat-treat, size, precision of a knife at an inquiry of an estimate.

1. a drawing of size of a knife

· If you don't have a drawing I need sample or a sketch

2. sorts and types of material

· kinds of material, hardness, constancy of sort
· thickness of a board of material(common, minimum, maximum thickness)

· types and purpose for clipping

3. working condition

· working temperature(cold, warm, hot temperature)
· method of shearing or form of the machine
· a velocity of shearing use frequency

4. requirements of purchasers



DAE WON IN MUL CO.,LTD.

57, Gajwa-ro 96beon-gil, Bupyeong-gu, Incheon, Korea
TEL. 82. 32. 582. 6741~4 FAX. 82. 32. 582. 6745
E-mail. dwknife@korea.com