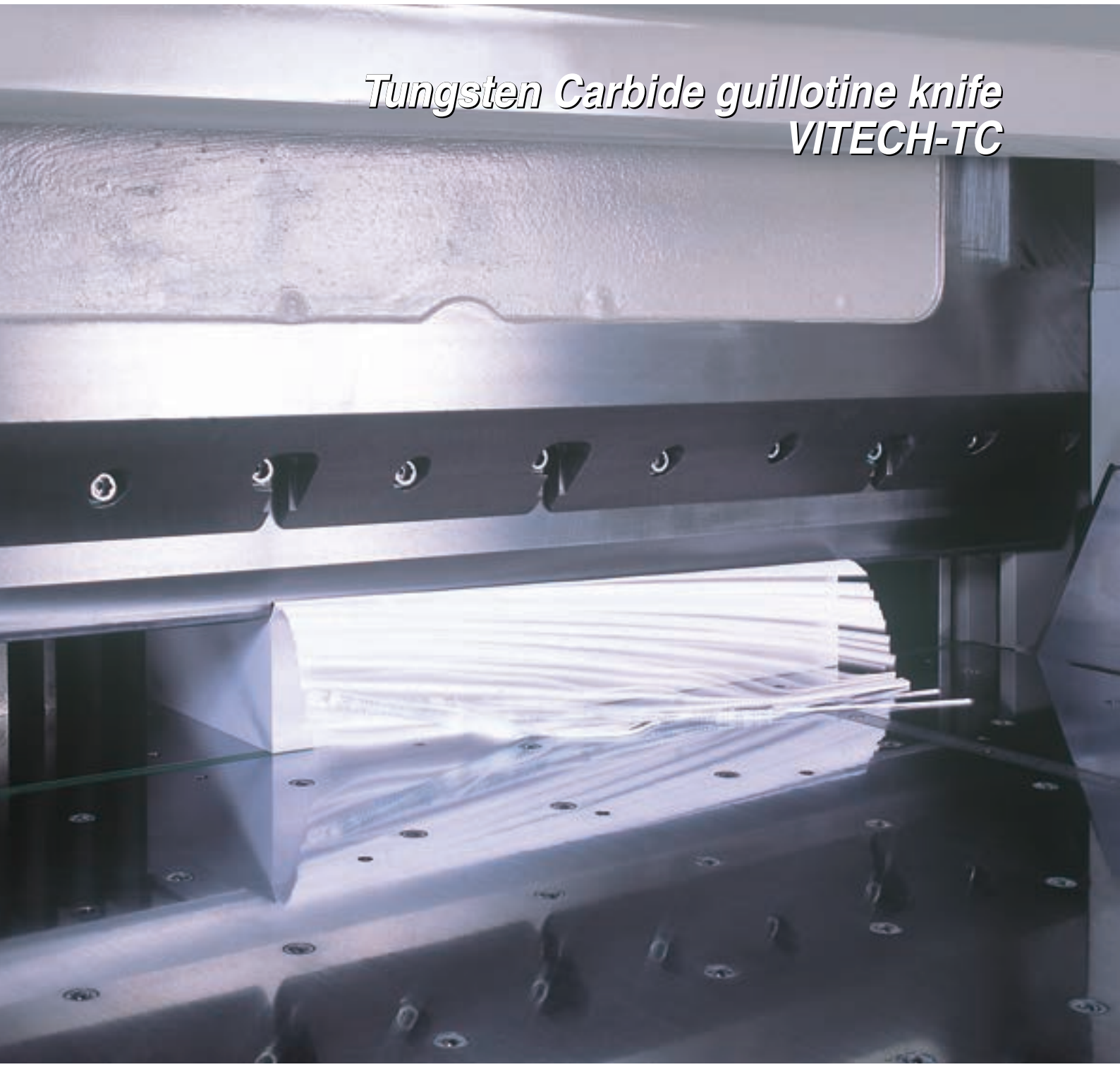
VITECH-TC

KANEFUSA



Tungsten Carbide guillotine knife
VITECH-TC

Kanefusa - A New Dimension of Performance

ISO 9001
JQA-QM3710

ISO 14001
JQA-EM3137
Head Office
Factory

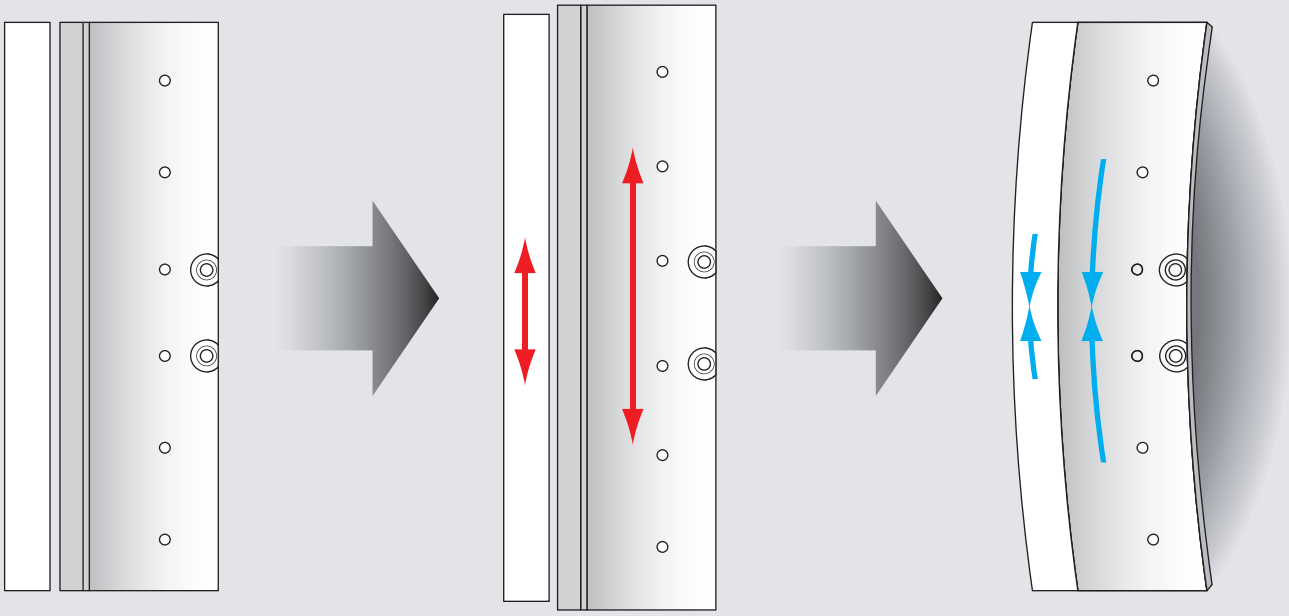
Specifications and appearance are subject to change without notice.
Photographs and illustrations may vary from actual products.

0-48E-3
[Class] [Article] [Revision]

Vital Technology

PAT.EP1245380, US6817103

The Problem



Knife and cutting edge material at room temperature.

Knife and cutting edge material at brazing temperature (~ 800 °C).

Knife and cutting edge material at room temperature. The knife bows.

Conventionally the Tungsten Carbide (TC) is brazed to a steel substrate. The TC as well as the steel are heated up to 800 °C during the brazing process. Due to different expanding coefficients they expand to different lengths.

After the TC and the steel are joined together, they cool down and shrink.

The TC shrinks differently from the substrate causing internal stress. As a result the knife bows. The internal stress also damages the TC structure and causes nicking of the edge.

VITECH-TC

The Solution – Vital Technology - VITECH

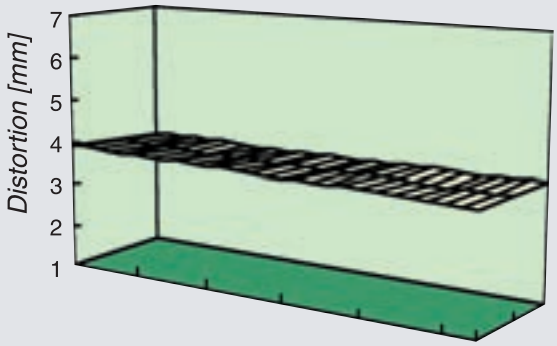
What is VITECH? VITECH stands for innovative and outstanding paper cutting knives and related knife manufacturing technology.

In the case of VITECH-TC, the Tungsten Carbide cutting edge is not brazed but at low temperature bonded to a steel substrate, which eliminates internal stress.

Therefore VITECH-TC paper cutting knives are sharper, straighter and outlast other Tungsten Carbide knives many times.

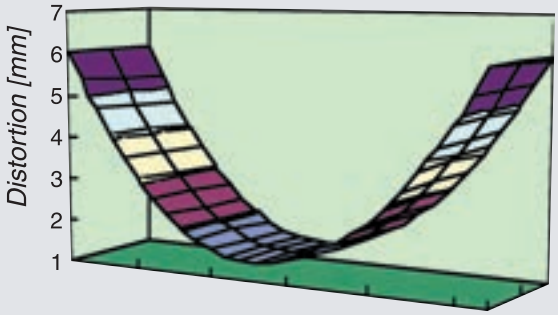
Bowing

VITECH-TC



Bowing of a VITECH-TC cutting knife for a Polar 115 machine.
Knife size: 1390 x 160 x13.75
The measured maximum distortion is 0.23 mm.

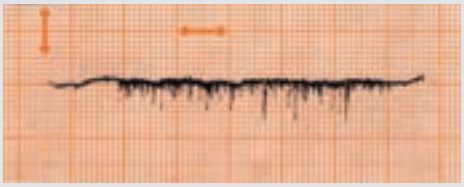
Conventional Inlaid Knife



Bowing of a conventional carbide inlaid paper cutting knife for a Polar 115 machine.
Knife size: 1390 x 160 x13.75
The measured maximum distortion is 4.65 mm.

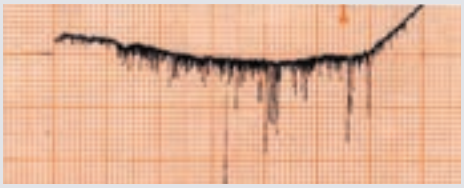
Cutting Edge Roughness

VITECH-TC



The measured cutting edge roughness after 20 cuts in Ivory Carton #36 with a thickness of 3.0 mm is Ra max = 14 µm.

Conventional Inlaid Knife



The measured cutting edge roughness after 20 cuts in Ivory Carton #36 with a thickness of 3.0 mm is Ra max = 50 µm.

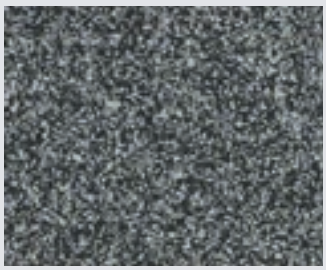
KANEFUSA

Tungsten Carbide Grade

The VITECH-TC bonding technology allows the use of a special carbide grade that has advanced technical properties. It is more abrasion resistant and outperforms conventional carbide grades.

In addition the VITECH-TC grade is very even in grain distribution and uniform in size. It allows the grinding of a very sharp but also very durable cutting edge.

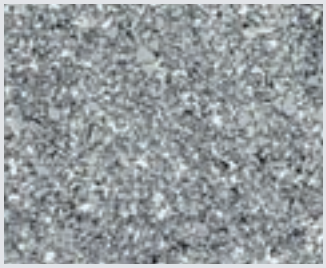
VITECH Tungsten Carbide Grade



The advantages of this grade are:
- a higher degree of hardness
- a higher resistance to nicking
- it creates a sharper cutting edge

➡ longer life and better cut quality

Conventional Tungsten Carbide Grade



The disadvantages of this grade are:
- easy nicking
- a rough cutting edge
- the edge dulls quicker

➡ short life and inferior cut quality

Color Marking

It is very easy to distinguish between a VITECH-TC knife and other knives.

The VITECH-TC knife has a red colored line between the substrate material and the Tungsten Carbide.

This way the user and grinder can easily recognize the VITECH-TC knife.

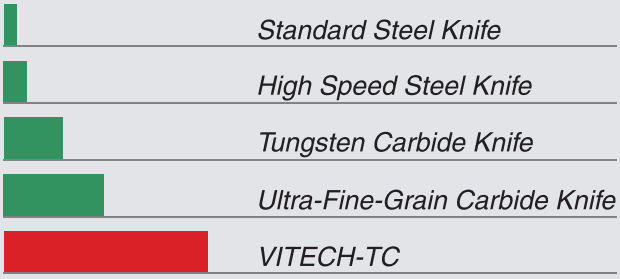
VITECH-TC

KANEFUSA

User Benefits

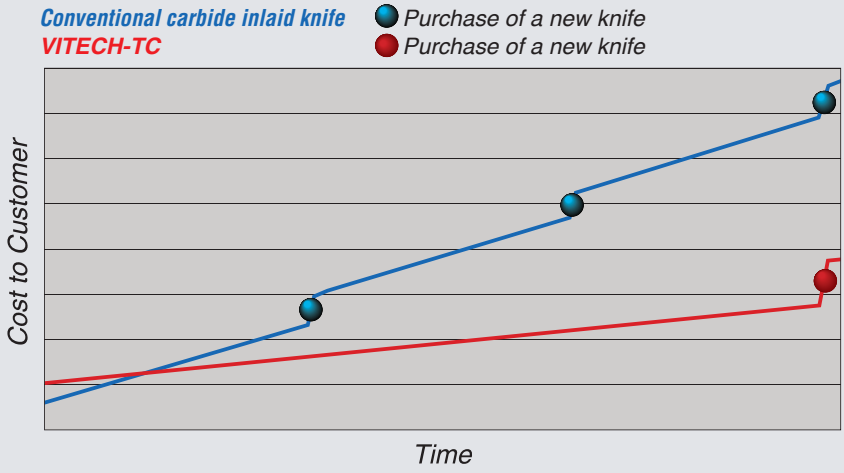
- Long tool life for more machine uptime
- Lower ongoing grinding cost
- Higher resistance to nicking and chipping producing smoother cuts

Performance Comparison

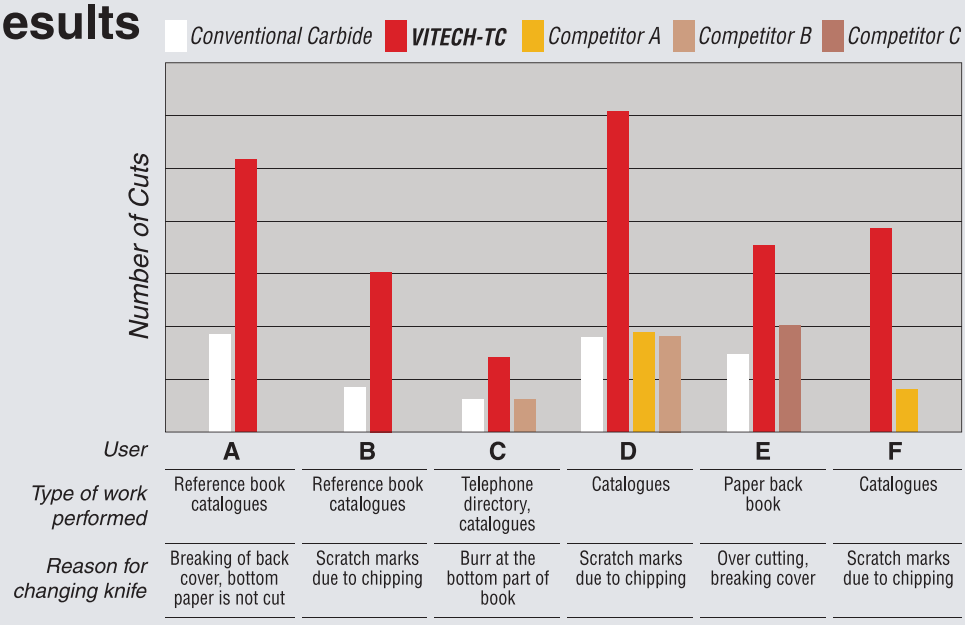


Cost Comparison

Due to its superior performance, the Kanefusa VITECH-TC knife is more cost efficient than any other product on the market.



Monitor Test Results



User	A	B	C	D	E	F
Type of work performed	Reference book catalogues	Reference book catalogues	Telephone directory, catalogues	Catalogues	Paper back book	Catalogues
Reason for changing knife	Breaking of back cover, bottom paper is not cut	Scratch marks due to chipping	Burr at the bottom part of book	Scratch marks due to chipping	Over cutting, breaking cover	Scratch marks due to chipping

http://www.kanefusa.net

KANEFUSA CORPORATION

Head Office / Factory
1-1 Nakaoguchi, Ohguchi-cho, Niwa-Gun
Aichi-ken, Japan, Postal Code 480-0192
Tel : +81 587 95 7221　Fax:+81 587 95 7226
E-mail:sales-ex@kanefusa.co.jp

PT. KANEFUSA INDONESIA

EJIP Industrial Park, Jl. Ciujung Plot 8 D, South Cikarang,
Bekasi 17530, West Java, Indonesia
Tel :+62 21 897 0360　Fax:+62 21 897 0286, +62 21 897 0287
E-mail : sales@kanefusa.co.id

Surabaya Service Center

JL. Berbek Industri VII/5B Kawasan Industri Sier Surabaya, Indonesia
Tel :+62 31 849 1784　Fax:+62 31 849 2784

KANEFUSA EUROPE B.V.

De Witbogt 12, 5652 AG, Eindhoven, The Netherlands
Tel :+31 40 2900 901　Fax:+31 40 2900 908
E-mail : info@kanefusa.nl

Moscow Office

Vozdvizhenka 10, 125009, Moscow, Russia
Tel : +7 495 797 3759

KANEFUSA USA, INC.

621 Dolwick Drive, Erlanger, KY 41018, USA
Tel :+1 859 283 1450　Fax:+1 859 283 5256
E-mail : sales@kanefusa-na.com

Atlanta Office

3675 Crestwood Pkwy, Ste 400, Duluth, GA 30096, U.S.A
Tel : +1 770 817 7593

KANEFUSA CHINA CORPORATION

NO.50 Zhuzhu Road, Lujia Town Kunshan city, Jiangsu, China
Tel : +86 512 57875072　Fax:+86 512 57875073
E-mail : yy@kanefusa-cn.com

Tianjin Office

Sanjinglu No.5 Dongli economic development zone Tianjin city China
Tel :+86 22 5823 7633　Fax:+86 22 5823 7632
E-mail : tjkfc03@kanefusa-cn.com

Guangdong Office

No.2 Danhen Road, Danzao Town Foshan City, Guangdong,China
Tel :+81(0)75785406562　Fax:+81(0)75785406571
E-mail : fssales@kanefusa-cn.com

KANEFUSA INDIA PRIVATE LIMITED

Plot No.232, Sector-8, IMT Manesar, Gurgaon,
Haryana PIN 122-050 India
Tel : +91 124 420 8440　Fax: +91 124 420 8441
E-mail : info@kanefusa.co.in

KANEFUSA DO BRASIL LTDA.

Rua Bom Pastor, 2732 Bloco Torre Sul - Sala 73 São Paulo - SP Cep:04203-003
Tel :+55 11 2372 7664　Fax:+55 11 2372 7663
E-mail : vendas@kanefusa.net.br

Joinville Service Center

Rua Helmuth Fallgatter 1937, Boa Vista, Joinville, SC, 89206-101, Brasil
Tel : +55-11-9-8680-8497

KANEFUSA MEXICO S.A. DE C.V.

Circuito Logistic Aeropuerto No.4 Fracc.1 Lote2 Predio San
Antonio Texas Silao Guanajuato C.P. 36273 Mexico
Tel :+52 1 472 7486314/3　Fax:+52 1 472 7486313
E-mail : info@kanefusa.com.mx

KANEFUSA VIETNAM CO., LTD.

Road No.N3-2, Long Duc IP, Long Duc Ward,
Long Thanh District, Dong Nai Province, Vietnam
Tel : +84 251 368 1400　Fax:+84 251 368 1402
E-mail : sales@kanefusa-vn.com

VEGETABLE OIL INK
R40 古紙パルプ配合率80%
再生紙を使用しています。

18．9　1,000