

KANEFUSA

# Cold Saw Blades

for Single Use

Ferro Max *TUBE*

Ferro Max *SPEED*

Ferro Max *SUS*

**ST-4**

**ST-4P**

**Ti-4**

**TA-4SUS**

*Kanefusa - A New Dimension of Performance*



JQA-QM3719



JQA-EM3137  
Head Office  
Factory

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

**0-46-2**

[Class] [Article] [Revision]

# Advantages

## Is the Throw-Away (TA) concept acceptable in our times?

The answer is **YES**, because the Kanefusa TA-Sawing Technology is superior to other sawing concepts both in economical and environmental perspectives.

Our TA-Cold Saw Blades cut on average three times faster than a conventional band saw or metal saw, which means one machine can do the job of three. This means less energy is needed to power the machines and less exhaust is produced. Less oil mist is in the air and less space is required ...

TA-Cold Saw Blade such as the Ferro Max Speed can outlast a conventional saw blade by up to 10 times. In the same period of time, the conventional saw blade must be reground 9 times. That is 9 times of regrinding, which produces poisonous sludge that requires costly disposal. That is also 9 times of pick up and delivery ...

A TA-Cold Saw Blades also allow a thinner kerf than resharpenable types, which lead to a better material utilization and less swarf that must be disposed of and recycled...

Because all Kanefusa TA-Cold Saw Blades are manufactured in Kanefusa Quality, all blades provide the same cut quality and durability, blade after blade providing you with high process reliability, which is a key to Just in Time production...

In other words, the TA-Cold Sawing Concept is efficient and highly economical. It allows you to use your resources in the most efficient way. It allows you to reduce manufacturing costs and to respond faster to your customer's needs.

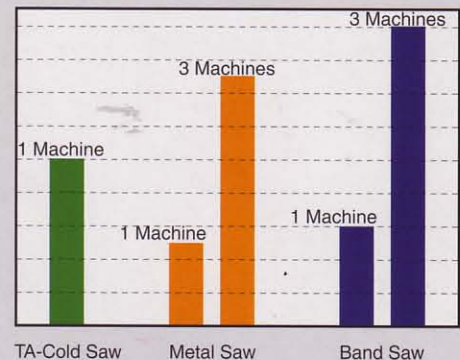
We believe the TA-Cold Sawing Technology fits perfectly into our times.

## 1 / Cycle Time



Type	Diameter [mm]	Metal Saw t [s]	Band Saw t [s]	TA-Cold Saw t [s]	Time Factor
Billet	55	285		28	10
Billet	75		475	33	14
Billet	110		220	39	5.6
Billet	13	11		7	1.6
Billet	42		159	8	20
Billet	48	95		9	11
Billet	105		217	30	7
Pipe	42 ; 12		67	6	11
Pipe	41 ; 10	46		5	9
Pipe	51 ; 8	138		6	23
Pipe	63.5 ; 10		170	7	24

Hourly machine operating cost



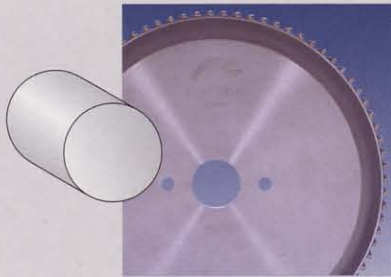
- Less space is required
- Fewer personnel are required
- Less environmental pollution from lubrication oil in the air
- No sawing sludge to be disposed of
- Less capital outlay

▶ **Lower cost per cut**

▶ **One TA-cold saw machine replaces three band or metal saw machines**

▶ **Dramatic reduction of production cost**

# Line Up



## ST-4

Edge Material: Cermet

Application: Cuts solids

Material: Carbon steel, alloy steel  
Carbon content between  
0.15 % and 0.45 %

Recommended cutting conditions

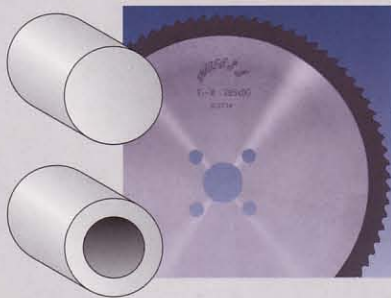
$v_c = 70 \text{ m/min} - 120 \text{ m/min}$

$f_z = 0.05 \text{ mm} - 0.07 \text{ mm}$

Lubricant: Supralube 50

▶ **Cuts clean with high dimensional accuracy**

PAT.TW154407



## Ti-4

Edge Material: Coated Tungsten Carbide

Application: Cuts solids and tubes

Material: Carbon steel, alloy steel  
special purpose steel  
Carbon content  $\geq 0.4 \%$

Recommended cutting conditions

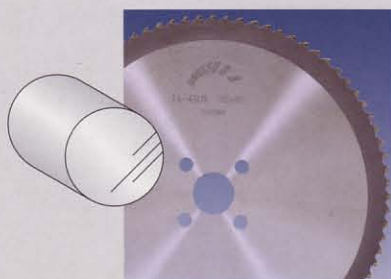
$v_c = 70 \text{ m/min} - 120 \text{ m/min}$

$f_z = 0.04 \text{ mm} - 0.07 \text{ mm}$

Lubricant: Supralube 50

▶ **Universal application and high performance**

PAT.EP98961371, TW154407



## TA-4SUS

Edge Material: Tungsten Carbide

Application: Cuts solids

Material: Stainless steel

Recommended cutting conditions

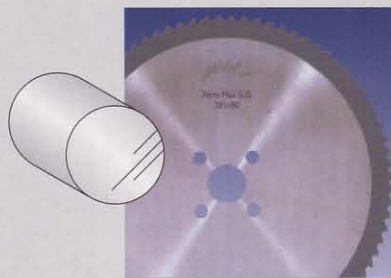
$v_c = 50 \text{ m/min} - 70 \text{ m/min}$

$f_z = 0.04 \text{ mm} - 0.06 \text{ mm}$

Lubricant: Supralube 60s

▶ **Reliable performance and outlasts most common saw blades in the market**

PAT.TW154407



## Ferro Max SUS

Edge Material: Coated Tungsten Carbide

Application: Cuts solids

Material: Stainless steel

Recommended cutting conditions

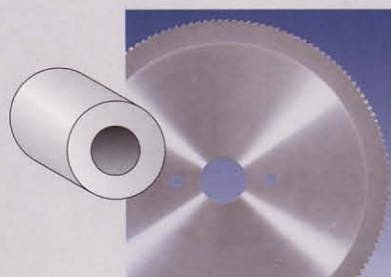
$v_c = 50 \text{ m/min} - 70 \text{ m/min}$

$f_z = 0.04 \text{ mm} - 0.06 \text{ mm}$

Lubricant: Supralube 60s

▶ **Special coating enables up to 100 % longer tool life compared with TA-4SUS**

PAT.EP98961371, TW154407



## ST-4P

Edge Material: Cermet

Application: Cuts tubes

Material: Carbon steel, alloy steel,  
Carbon content  $\leq 0.45\%$

Recommended cutting conditions

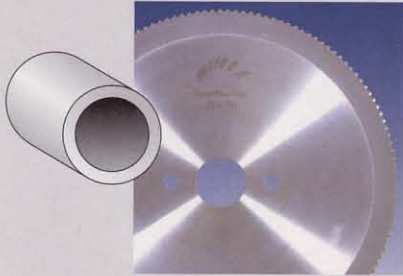
$v_c = 100 \text{ m/min} - 200 \text{ m/min}$

$f_z = 0.03 \text{ mm} - 0.06 \text{ mm}$

Lubricant: Supralube 50

▶ **Cuts clean with high dimensional accuracy**

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### Ferro Max Tube

Edge Material: Cermet

Application: Cuts thin wall tubes

Material: Carbon steel, alloy steel  
Tensile strength 400 - 1200 N/mm<sup>2</sup>

Recommended cutting conditions

$v_c = 100 \text{ m/min} - 200 \text{ m/min}$

$f_z = 0.03 \text{ mm} - 0.05 \text{ mm}$

Lubricant: Supralube 50

▶ **Cuts thin wall tubes without deformation of the wall**

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### Ferro Max Speed

Edge Material: Coated Tungsten Carbide

Application: Cuts solids and tubes

Material: Carbon steel, alloy steel

Recommended cutting conditions

$v_c = 200 \text{ m/min} - 300 \text{ m/min}$

$f_z = 0.05 \text{ mm} - 0.08 \text{ mm}$

Lubricant: Supralube 50

▶ **Due to high rim speed, cycle time is reduced and productivity is increased**

PAT.EP98961371, TW154407

## Application Chart

	JIS	Material Group	ST-4	ST-4P	Ti-4	TA-4SUS	Ferro Max SUS	Ferro Max Speed	Ferro Max Tube
Carbon Steels Alloy Steels	S-C	Case hardened steel	○		○			○	
	SNC	Nickel chrome steel	○						
	SNCM	Nickel chrome molybdenum steel	○						
	SCr	Chrome steel	○		○				
	SCM	Chrome molybdenum steel	○		○				
	SMn	Manganese steel	○		○				
Steel Tube	STKS	Alloy steels		○					○
	STK	Carbon steel		○					○
	STKM	Carbon steel		○					○
	STKR	Square steel tube for general structure		○				○	○
Special - Purpose Steel	SUS	Stainless steel				○	○		
	SUP	Spring steel			○				
	SUM	Sulfur free cutting steel			○				
	SUJ	High carbon chromium ball bearing steel			○				

We manufacture saw blades for the following makes:

**Behringer-Eisele, Bewo, Daito, Delta, Endo, Everising, Exact-Cut, Kasto, Nishijima, Noritake, Rattunde, Soco, Sinico, Tsune and others**

## Kanefusa Oil Lubricants

For best performance of the saw blades, we recommend original Kanefusa oil lubricants.

Material	Mist fluid	Composition	Dropping speed (1drop)	Characteristics
Mild steel	Supralube 50	Vegetable ester	5-7 S	High viscosity
Stainless steel	Supralube 60S	Sulfur mineral	1-2 S	Stainless steel only
Non - ferrous steel	Supralube 10P	Distilled vegetable ester	2-5 S	Odorless, low viscosity



Kanfusa is the pioneer of cold saw blades for single use. Since 1987, when we released the first version, we have not only improved the quality and durability of the saw blades, but also increased their versatility. Today our product range features seven different types used for cutting of bearing steel, drive shafts, rails, pipes and tubes, shock absorbers and in many more applications.

## 2 / Machine Uptime

### Efficiency Study at a user in Scandinavia

Machine : Bewo FCH-85-H      Material : 2172 (50 x 30 x t4)

Type	ST-4P	Metal Saw
Spec.	315 x 2.0 x 32 x z90	—
Average number of cuts	9000	900
Cut cycle time [s]	4	4
Edge Life [s]	36000	3600
Tool change time [s]	600	600
Production + tool change time / Saw blade [s]	36600	4200
Effective mfg time [s] (6 hours)	21600	21600
Number of cuts / day	5,311	4,629
Number of cuts / year (250 days)	1327869	1157143
Gain in productivity [%]	15	—

Longer edge life due to

- Kanfusa original tooth geometry
- Exclusive to Kanfusa - Cermets and Tungsten Carbide grades and our original coating technology
- ▶ Ø 300 % longer edge life compared with Band Saws or Metal Saws

▶ Increase of annual productivity by 15 % equal to 170726 cuts or 98 m<sup>2</sup>

▶ **More machine uptime leads to a better machinery utilization rate**

## 3 / Cut Quality

The cut surface and dimensional accuracy, that can be achieved with TA cold saw blades is superior to that of band saws.

- Eliminating or reducing subsequent manufacturing processes
- Reducing the manufacturing cost of a product
- Allowing higher sales price for a semi-finished product

▶ **Better profit extraction**



Band Saw



ST-4

## 4 / Process Reliability

Saw blades lose performance after grinding due to incorrect grinding or fatigue of the plate and tip material. Saw blades for single use deliver repeated quality cut after cut, blade after blade at fixed machining parameters.

- Performance is predictable and tool change times can be scheduled.
- Easier handling, because no pick up and delivery of saws is necessary.

▶ **Consistent machine performance and product quality**

