



**KINKELDER**<sup>®</sup>  
the cutting experts

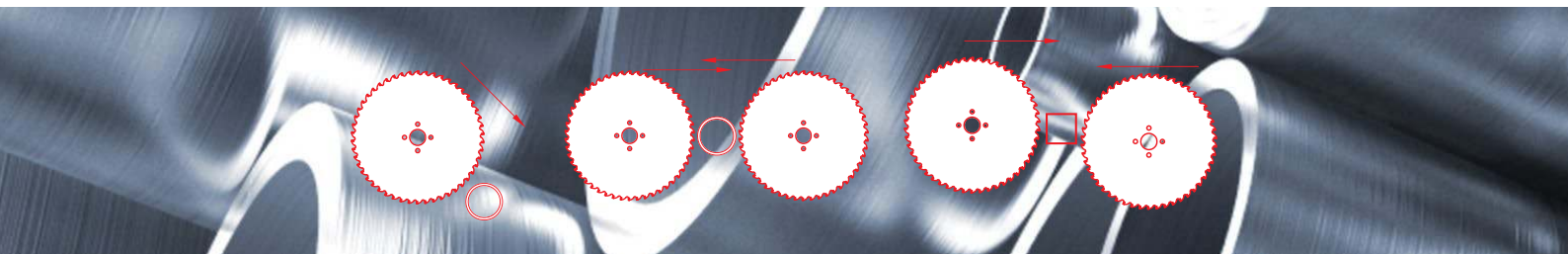


## **TCT SERIES**

# **FLYING CUT-OFF**

**3 proven sawing concepts  
for ERW tube and pipe industry**

# Single and Twin cut-off



SpeedMaster is a TCT saw blade for single- and twin cut-off units on steel tube mills. It provides an opportunity to greatly increase the tube manufacturing line speeds and cut the production costs.

Where cutting speed limits of coated HSS saw blades have been reached, SpeedMaster saw blades provide an effective solution.

## Advantages

- Extremely high line speed because of very short cutting times
- Very good surface finish, burr-free cut
- Increased uptime

## APPLICATIONS

Single and twin flying cut-off machines designed for TCT cutting with small or no ID-scarf. Tubes with a tensile strength up to 1.000 N/mm<sup>2</sup>

## PARAMETERS

Cutting speed: 350 m/min (starting value).  
Tooth load 1/2/3: relation 1/2/0.8. 0.05/0.10/0.04 mm/tooth.

*Note: To accommodate higher requirements of line speed or reduce vibration level when cutting thin wall section, higher cutting speeds (up to 500m/min) can be applied. Tooth load can be doubled if required, while respecting max fill ratio of 10%.*

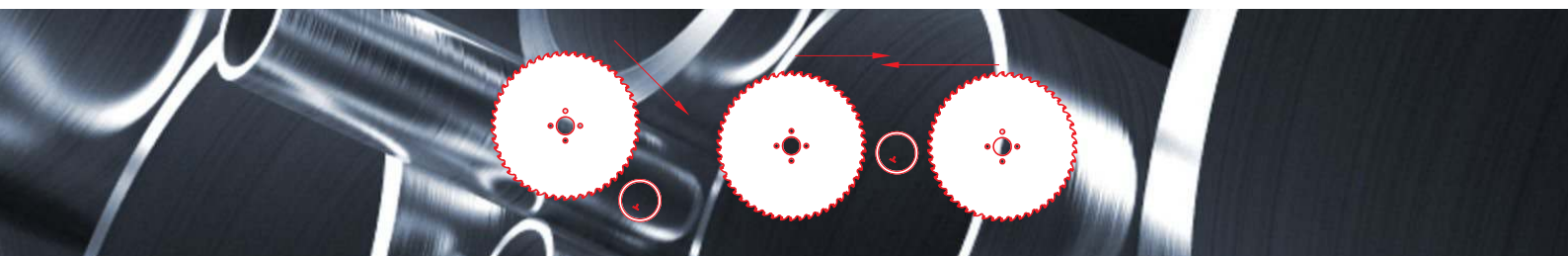
## TYPICAL APPLICATION EXAMPLES SPEEDMASTER

Dimensions (mm)	Material specifications	Tensile strength (N/mm <sup>2</sup> )	Mill speed (m/min)	Cutting speed (m/min)	Tooth load (mm/tooth)	Blade life (m <sup>2</sup> )
40 x 20 x 3	S355/1020	520	350	450	0,06/0,18	2,5
76 x 4,7	E235	420	90	400	0,06/0,14	7,9
60 x 5	S500MC	500	90	350	0,05/0,15	5,2

For more information:

[www.kinkelder.com](http://www.kinkelder.com)

# Single and Twin cut-off with inside scarf



The PVD coated carbide tipped ScarfMaster has specifically been designed for flying cut-off applications dealing with heavy inside scarf. It features a very specific tooth geometry, combined with highly shock resistant carbide tips.

Due to strong saw body shoulders which give the teeth maximum support, the combination tooth/body obtains very high stability and fracture resistance. Extended blade life is therefore achieved.

## Advantages

- High line speed
- Increased uptime
- High blade life
- Cuts heavy ID scarf
- Cuts high tensile API Pipes (up to 1.800 N/mm<sup>2</sup>)
- Various tooth geometries available

## APPLICATIONS

Flying cut-off applications dealing with heavy inside scarf

## PARAMETERS

Cutting speed: 400 – 500 m/min (choose max available).  
Tooth load 1/2/3: relation 1/1/1. Starting value 0.04 mm/tooth.

## MACHINES

ScarfMaster saw blades are available for flying cut-off machines, such as MTM, OTO mills, Nakata and Olimpia.

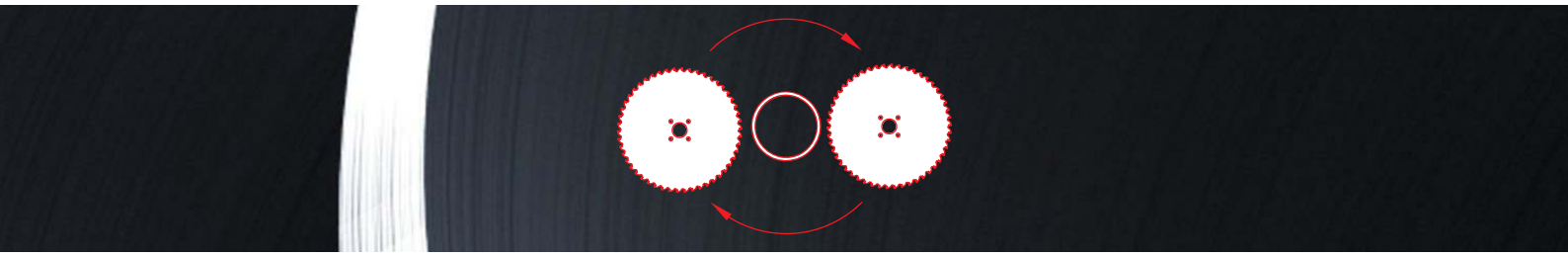
*Note: Primary failure mode for this application is tooth and shoulder damage. Raising cutting speed and reducing tooth load typically improves blade life. Blade life is highly depending on size, orientation and material grade of loose inside scarf. No guarantees can therefore be given for blade life. Blade life typically varies considerably, depending on operator/crew who influence scarf condition.*

## TYPICAL APPLICATION EXAMPLES SCARFMASTER

Dimensions (mm)	Material specifications	Tensile strength (N/mm <sup>2</sup> )	Mill speed (m/min)	Cutting time (s)	Blade life (m <sup>2</sup> )	Machine
168 x 6	S355	520	40	4,8	3,5	OTO mills
100 x 8	1018	480	30	4,2	5,2	OTO mills
63 x 5	S355	520	60	2,6	3,5	MTM
48 x 3	S500 MC	500	75	2,0	2,4	Olimpia



# Orbital cut-off



TubeMaster saw blades have especially been designed for orbital flying cut-off applications on tube mills. Key features of this saw blade are fracture-resistant carbide tips, protected with a high-tech TiAlN-based PVD coating. Combined with a light cutting geometry for smooth chip evacuation, a milled like surface finish is achieved. This geometry also reduces vibration when cutting thin walled tubes (<4mm), thereby achieving excellent blade life.

The new generation of TubeMaster products has a new body design, new carbide grade, new tip geometry and a special coating. This results in a higher blade life and more regular blade performance.

## Advantages

- High line speed
- High blade life
- Cuts high tensile API Pipes (up to 1.000 N/mm<sup>2</sup>, X80, HT)
- Burr-free cut

## APPLICATIONS

Orbital, flying cut-off applications

## PARAMETERS

Suggested cutting speed: 350 – 400 m/min.  
Feed 1/2: 0,04 / 0,12 mm/tooth.

## MACHINES

TubeMaster saw blades are available for all types of orbital cutting machines, such as MTM, OTO mills, Elmaksan, Kusakabe, Linsinger, Nakata and SMS Meer.

*Note: To accommodate higher requirements of line speed or reduce vibration level, much higher cutting speeds (up to 600 m/min) can be applied. Tooth load can be raised, while respecting max fill ratio of 10% during entry. Respect max cut depth of 3mm.*



The TubeMaster Stainless saw blade has specifically been developed for cutting stainless steel tubes on orbital flying cut-off units. These saw blades can cope with cutting speeds between 60 – 120 m/min. TubeMaster Stainless offers high uptime due to a blade life up to 3,5m<sup>2</sup>, combined with high cut quality and production output.

## APPLICATIONS

Orbital, stainless steel flying cut-off applications

## PARAMETERS

Suggested cutting speed: 60 – 120 m/min  
Feed: 0.035 – 0.10 mm/tooth

## MACHINES

TubeMaster Stainless saw blades are available for all orbital cutting machines.

# Which concept fits you?

3 concepts, each designed to address a specific flying cut-off application



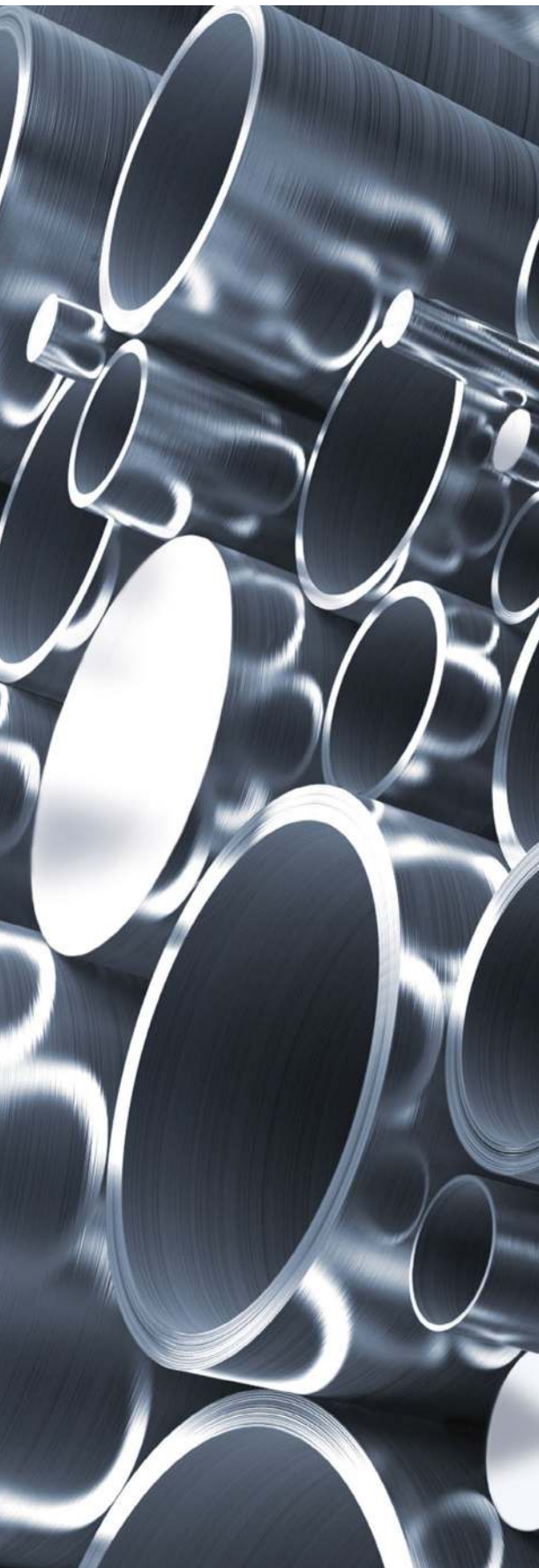
## Your benefits:

- Increase uptime
- Increase line speed
- Improve blade life
- Produce a burr-free cut

APPLICATIONS		
MACHINE	MATERIAL	SOLUTION
Orbital	Steel tubes	TubeMaster
	Stainless steel tubes	TubeMaster Stainless
Single linear or Twin	Steel tubes with heavy ID scarf	ScarfMaster
	Steel tube with little or no ID scarf	SpeedMaster



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