

2021



SÄGENBANDSTAHL

SPECIAL STEEL FOR SAWS QT





MADE FOR CIRCULAR SAWS

Facts RiWillit - Risse + Wilke long life time:

- Improved operating time for saws
- Tool life time cycle comparable to grade 80CrV2
- Considerable price advantage compared to 80CrV2
- Homogeneous microstructure with lowest internal stress values
- Excellent dimensional and flatness tolerances

Developed by Risse + Wilke, the registered trademark RiWillit closes the quality gap between the established grades 75Cr1 and 80CrV2.

The superior properties of RiWillit are achieved through a specifically defined chemical analysis, in combination with a correspondingly adapted production process for the quenched and tempered cold rolled steel strip.



Standard	Thickness	Width	Hardness	Flatness
	(mm)	(mm)	(HRC)	(µm/mm Bbr.)
DIN EN 10132-4 Spring steels	0.30 - 5.10	35 - 650	30 - 54	≤1.0



MADE FOR BAND SAWS

Facts RiWimendelejew - Risse + Wilke long life band saws:

- sufficient ductility even in their hardened condition
- enduring the bending load changes that occur during sawing
- not breaking prematurely
- improved wear resistance of the teeth

A grade has been presented named "RiWimendelejew®", which can further improve the known capabilities of the high-quality grades for band saws.

This is achieved by implementing a new chemical composition of the material in combination with modified production.



Standard	Thickness	Width	Hardness
	(mm)	(mm)	(HRC)
DIN EN 10132-4 Spring steels	0.50 - 2.00	35 - 250	35 - 46



MADE FOR DIAMOND GANG SAW BLADES

Facts RiWistone - Risse + Wilke no break technology:

- less brittle and unsusceptible to breakage
- higher brazing temperatures can be used
- better soldering joints by specifically, higher brazing temperatures
- less undesirable hard spots at the strip edges on the saw blade and during the subsequent use of the saw blades

With RiWistone in addition to the well known standard grades C75S, 75Cr1 and 75Ni8 R + W also offers a carbon-reduced special grade for the application of stone gang saws.

This grade is unsusceptible to overheating when brazing the segments. This means no undesirable hard spots at the strip edges on the saw blade and no premature breakage.

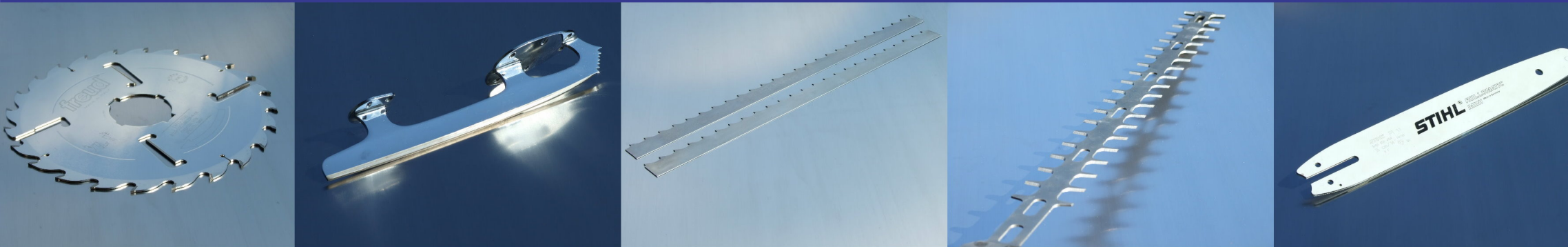


Standard	Thickness	Width	Hardness	Flatness
	(mm)	(mm)	(HRC)	(µm/mm Bbr.)
DIN EN 10132-3 Tempering steels	1.00 - 2.50	35 - 500	40 - 44	≤1.0

QUENCHED AND TEMPERED STEELS

Applications

2021



QUENCHED AND TEMPERED STEELS

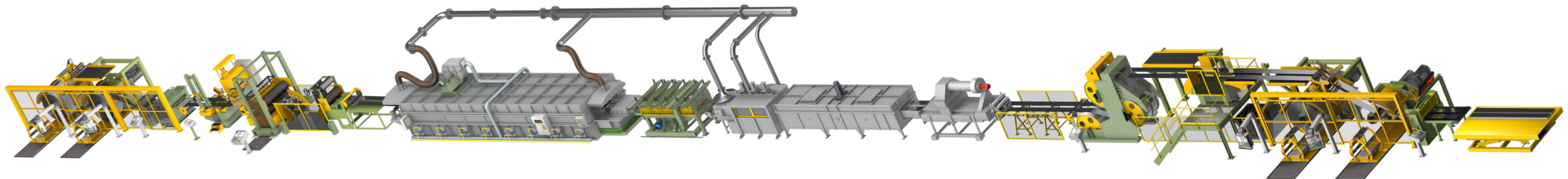
Standards	DIN EN 10132-3:2000 + -4:2003; Boron-alloyed steels based on DIN EN 10083-3:2007		
Grades	Tempering steels/ Spring steels/ Boron-alloyed steels: C35E, C45E, C55S, C60S, C67S, C75S, C85S, C90S, C100S, 51CrV4, 58CrV4, 68CrNiMo33, 75Cr1, 75Ni8, 80CrV2, 102Cr6, 25CrMo4, 27MnCrB5-2, 30MnB5, 34CrMo4, 42CrMo4 and similar		
Chemical cast analysis [Values in weight %]	Based on DIN EN 10132-3+4 and DIN EN 10083-3 respectively also special analysis		
Strip thicknesses [mm] ⁽¹⁾	Martensite: 0.30 - 5.10		
Strip widths [mm] ^{(2) (3)}	Martensite: 35 - 720		
Delivery conditions	QT - quenched and tempered with martensite structure		
Mechanical properties ⁽¹⁾	Martensite:	Spring steels	Hardness 30 - 54 HRC
Hardness range/		Tempering steels	Hardness 30 - 48 HRC
Range of tensile strengths		Boron-alloyed steels	Hardness 30 - 44 HRC

QUENCHED AND TEMPERED STEELS

Surfaces (appearance + finish)	Bright, grey-blue, polished and yellow tempered, brush-polished, ground		
Edge conditions	GK - slit edges, NK - mill or as rolled edges, SK - special edges (machined or edge-rolled)		
Dimensional tolerances	General tolerances:	acc. to DIN EN 10140 and special agreement	
	Strip width tolerances:	acc. to special agreement only	
Flatness	Usually max. 1.0 µm/mm width for martensitic tempered spring steels with C-contents of 0.67 - 1.00 %, max. 1.5 - 2.0 µm/mm width for boron-alloyed grades and tempering steels.		
Delivery forms	Coils and cut lengths		
Cut to length dimensions ⁽²⁾		Width 80 - 720 mm	Length: 400 - 4000 mm
Specialities	Hardening of low carbon steel with very good flatness values Hardening of extreme cross-sections with especially wide and thick dimensions		

⁽¹⁾ = Variations depending on grade and dimension to be taken into account ⁽²⁾ = Further dimensions upon agreement

⁽³⁾ = Strip width < 35 mm only available in slit-after-hardening condition



Company group:

Cold rolled steel

Hot rolled slit strip

Special steel sales services

Special steel for gang saws



Risse + Wilke
Kaltband und mehr ...

Wilke GmbH
Warmband und mehr ...

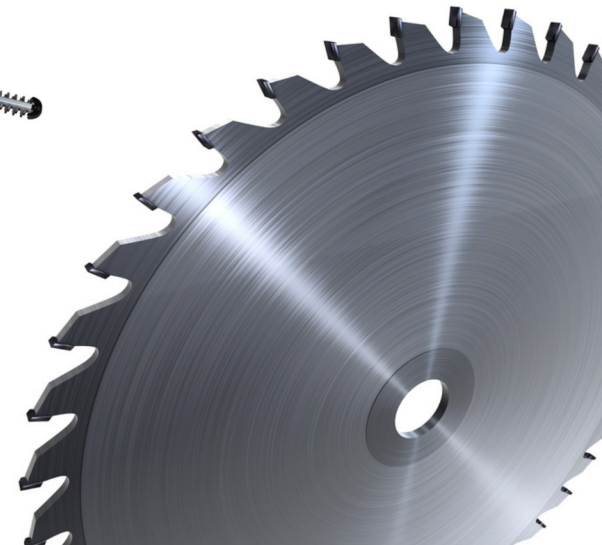
Hugo Schmitz
Special Steel Sales Service

GBS
General Business Service



With our portfolio, we are one of the leading suppliers of special steels. As a flexible and competent specialist for customer-specific technical problem solutions we continue to support our international customers from the fields of saw, tool and spring production as well as the stamping and bending parts industry.

Based on an extraordinarily large product range we are your "supplier for all cases" with a large number of flexible partners and their production facilities. Our service will satisfy you. Traditionally, the focus is on the quality of our steel strip products. A committed and competent team of employees is available to our customers at any time for problem solutions. We are also your partner for new products. Obviously our quality management system is in accordance with ISO 9001: 2015 and our partners are certified in accordance with ISO 9001 and IATF 16949.



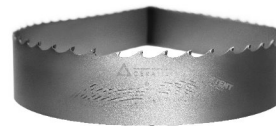
Ralf Burhardt - Commercial Director



Jacqueline Pietrucha - Sales



Patrick Gollin - QM/ Technical Customer Support



Norbert Ruckick - Export Sales

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GRADES *

C 55 E	42 CrMo 4
C 55 S	75 Cr 1
C 60 E	75 Ni 8
C 60 S	74 NiCr 2
C 67 S	80 CrV 2
C 75 S	D 6 A
C 85 S	48 CrNiMoV4.4
C 90 S	
C 100 S	

*please inquire for other grades

SURFACE FINISHES

- bright hardened surface
- white polished surface (brush polished)
- blue polished
- yellow / straw polished

TYPICAL PRODUCTS

- Bandsaws for extreme requirements
- Gang saws
- Circular saws
- Hand saws
- Chain saw safety guards
- Hack saws
- ...

SURFACE EXECUTIONS

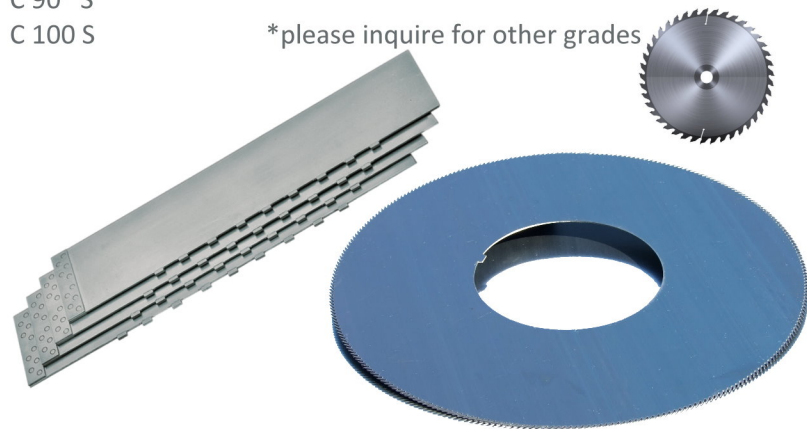
- bright rolled
- grey-blue (scaleless blue)
- bright hardened
- tempered to colour
- polished surface
 - fine polished
 - ground
- galvanized surface



RIWI-FLEX
SERVICE CENTER



Anja Krämer - RiWi-Flex



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Hugo Schmitz
Special Steel Sales Service



GBS
General Business Service

SPECIAL STEEL FOR GANG SAW BLADES

Range of production

2021



Welcome to GBS

Since 1986 General Business Service has specialised in the production of diamond tools for the processing of marble and similar materials. From now on GBS is part of the Risse + Wilke group. Apart from offering the standard product range the development of innovative steel grades for the cutting of stone is furthered. GBS stands out for:

- The quality of its products
- The product range and flexible production
- The research into cutting-edge products
- The customer service, fast deliveries and availability of standard products on stock

PORTFOLIO:



GRADES

- C75S
- 75Cr1
- 75Ni8
- RiWistone 27 => anti-crack
- RiWistone 68 => high resistance, for thin dimensions
- Stainless steel

HARDNESS

41 - 45 HRc

SURFACES

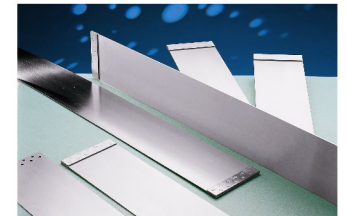
- Galvanized (anti-corrosion)
- Polished
- Ground

EDGES

- Supremely machined

DIMENSIONS

- 180 x 1,50 mm
- 180 x 1,70 mm
- 180 x 1,75 mm
- 180 x 2,00 mm
- 180 x 2,50 mm
- 180 x 3,00 mm
- 180 x 3,50 mm
- Other dimensions on request.



Company group:



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Kaltband und mehr ...

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STEEL & BODIES FOR GANG SAW BLADES

Products/ Production/ Company Group

2021



STEEL STRIP FOR BLADES

The steel strip used and / or sold by GBS is the achievement of profound research taking into account all problems related with the production and usage of diamond equipped saw blades.

The steel strips are produced from selected raw material and are submitted to severe inspections regarding the flatness, transformation stress, thickness and width.

We are able to offer our customer technical support at the highest stage. We can offer you different steel grades at corresponding different price levels thus enabling you to be more competitive.

- Steel strips marked "GBS"
- Unmarked steel strips (budget)
- Galvanized steel strip (RiWiZinc)

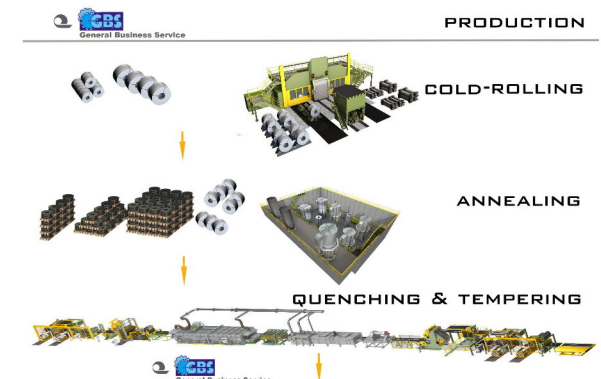
BLADE BODIES FOR GANG SAWS

- Maximum precision on thickness, length, flatness and stress-relief-rolling.
- Accurate linearity and straightness of the edges for optimal brazing of the diamond equipped segments.
- Ground or polished surface with very low roughness
- The attachments are produced from material grades especially developed for this purpose. The precise vertical fitting of the attachments is crucial and achieved by 11 high precision pin connections of 8 mm diameter.
- Corresponding sophisticated punching machines enable the necessary precise holes for the exact joining of the attachments on the saw blades; tolerances: 0.00/0.05 mm



SUPPLIERS

Our suppliers are equipped with state of the art installations and our joint technical team develops and improves the quality of the steel. GBS teams up with renowned metallurgical experts and continuously controls the steel to ensure constant quality and improved performance.



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KONTAKT



CONTACT

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2021



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UNSER SERVICECENTER:
RISSE-WILKE-SSC.DE

 **Risse + Wilke**
SÄGENBANDSTAHL
SERVICE CENTER

SPEZIALSTAHL DER FIRMENGRUPPE

 **Risse + Wilke**
Kaltband und mehr ...