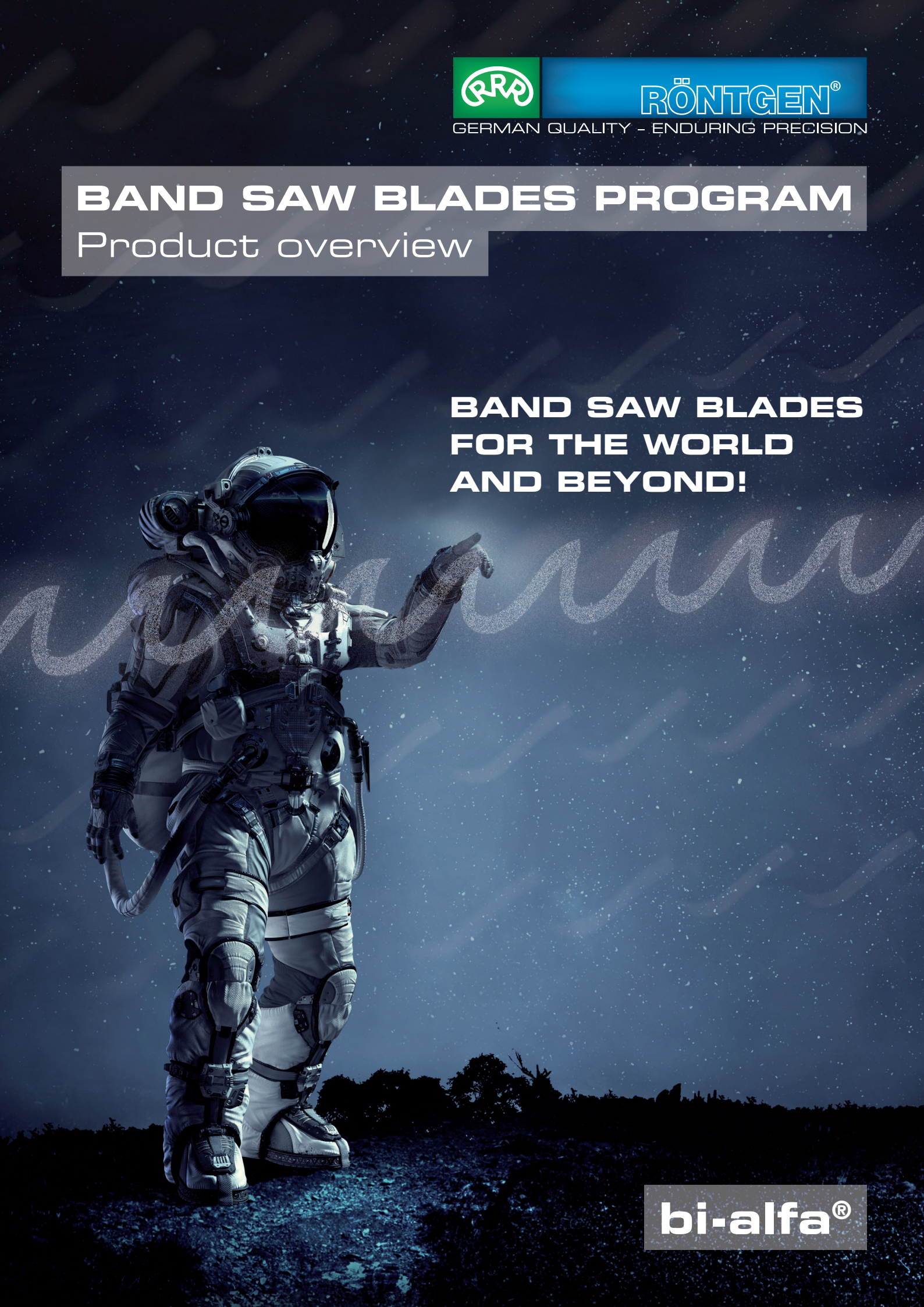
RÖNTGEN®

GERMAN QUALITY – ENDURING PRECISION

BAND SAW BLADES PROGRAM

Product overview

BAND SAW BLADES FOR THE WORLD AND BEYOND!



bi-alfa®

CONTENTS

APPLICATION AREAS

EXPLANATION OF ICONS

Due to the variety of our band saw blades, we are able to cover a wide range of applications. The following icons indicate which band saw blade fits best to your individual cutting job.


Square tube


Square tubes in bundles


Thick-walled tube


Thin-walled tube


Round tubes in bundles


T-, I- and L-beams


Bundled angles


Thick-walled tubes & solid bar


Plates


Bundled solids


Sandwich panels


Square solids


Round solids


Small round solids


Profiles

Back wave

bi-alfa®

cobalt M42
cobalt WS
cobalt WS ALU

- constant-/combi tooth pitch
- universal use, cutting of all common steel types up to a hardness of < 45 HRC
- tooth tips made of alloyed high-speed steel (HSS) M42
- backing material made of high alloyed spring steel
- quality WS creates a larger cutting channel, which helps to prevent blade binding, suitable for materials with residual stress
- also in WS ALU version for aluminium alloys > 5 % Si content

APPLICATION AREAS

Teeth per inch/constant tooth pitch

	1,25	2	3	4	6	8	10	14	18	
6 x 0,60					●					1/4 x .025
6 x 0,90					●		■	■		1/4 x .035
10 x 0,60					●	■				3/8 x .025
10 x 0,90				●	●	■	■	■		3/8 x .035
13 x 0,60					●		■	■	■	1/2 x .025
13 x 0,90			▲	●▲	●	■	■	■		1/2 x .035
16 x 0,60				●				■		5/8 x .025
20 x 0,90			● ▲	●	●			■	■	3/4 x .035
27 x 0,90		●▲	●■▲	●■▲	●■	■	■	■		1 x .035
27 x 1,10		▲								1 x 042
34 x 1,10	●▲	●▲	●■▲	●■	●■	■	■			1 1/4 x .042
41 x 1,30	●	●	● ▲	●						1 1/2 x .050
54 x 1,30	●									2 x .050
54 x 1,60		●								2 x .063
67 x 1,60	●									2 5/8 x .063

Width x thickness (mm) ● cobalt M42/10° ■ cobalt M42/0° ▲ WS Alu

Teeth per inch/combi tooth pitch

	0,75/ 1,25	1,1/ 1,6	1,5/ 2	2/3	3/4	4/5	4/6	5/6	5/8	6/10	8/12	10/14	14/18	
6 x 0,60												■	■	1/4 x .025
6 x 0,90												■		1/4 x .035
10 x 0,60												■		3/8 x .025
10 x 0,90												■		3/8 x .035
13 x 0,60										■	■	■		1/2 x .025
13 x 0,90									■	■		■		1/2 x .035
16 x 0,60												■		5/8 x .025
20 x 0,90							●		■	■	■	■		3/4 x .035
27 x 0,90				●	●■▲	●	●■▲	●	■	■	■	■		1 x .035
34 x 1,10			●	●▲	●■▲	●	●■▲	●	■	■	■			1 1/4 x .042
41 x 1,30			●	●▲	●■▲	●	●■▲		■	■				1 1/2 x .050
54 x 1,30			●	●	● ▲		● ▲							2 x .050
54 x 1,60	●	●	●	●▲	● ▲	●	●	●						2 x .063
67 x 1,60	●	●	●	●▲	● ▲									2 5/8 x .063
80 x 1,60	●	●	●	●										3 1/8 x .063
100 x 1,60			●											80 x 1.60

Width x thickness (mm)) ● cobalt M42/10° ■ cobalt M42/0° ▲ WS

bi-alfa®

cobalt forteC

- combi tooth pitch
- pre-honed cutting edges
- corresponds to the specification of bi-alfa cobalt M42 with an additional forteC-coating to increase the cutting performance

APPLICATION AREAS

Teeth per inch

	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4	
34 x 1,10				■	■	1 1/4 x .042
41 x 1,30			■		■	1 1/2 x .050
54 x 1,30				■	■	2 x .050
54 x 1,60			■	■	■	2 x .063
67 x 1,60	■	■	■	■		2 5/8 x .063
80 x 1,60		■	■			3 1/8 x .063

Width x thickness (mm) ■ Hook tooth

bi-alfa®

Profile
Profile WS

- combi tooth pitch
- the reinforced tooth back design increases the wear resistance of the tooth caused by vibration during interrupted cutting applications
- most suitable for tubes, beams and profiles
- backing material made of high alloyed spring steel
- quality WS creates a larger cutting channel, which helps to prevent blade binding, specially for materials with residual stress
- innovative tooth profile for low-vibration during the sawing process

APPLICATION AREAS

Teeth per inch

	2/3	3/4	4/6	5/7	7/9	8/11	12/16	
13 x 0,60						■		1/2 x .025
20 x 0,90						■	■	3/4 x .035
27 x 0,90		■	■	■	■	■	■	1 x .035
34 x 1,10	▲	■ ▲	■	■		■		1 1/4 x .042
41 x 1,30	▲	■ ▲	■	■				1 1/2 x .050
54 x 1,30	▲	■ ▲						2 x .050
54 x 1,60	▲	■ ▲	■					2 x .063
67 x 1,60	▲	■ ▲	▲					2 5/8 x .063

Width x thickness (mm) ■ Profile tooth ▲ Profile tooth WS

bi-alfa®

Profile forteC

Profile WS forteC

- combi tooth pitch
- pre-honed cutting edges
- corresponds to the specification of bi-alfa Profile/Profile WS with an additional forteC-coating to increase the cutting performance

APPLICATION AREAS

Teeth per inch

	2/3	3/4	4/6	5/7	
34 x 1,10		■	■	■	1 1/4 x .042
41 x 1,30	▲	■ ▲	■		1 1/2 x .050
54 x 1,60	▲	■ ▲	■		2 x .063
67 x 1,60	▲	■ ▲	▲		2 5/8 x .063

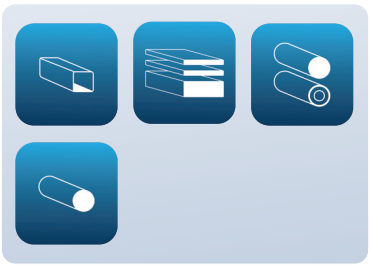
Width x thickness (mm) ■ Profile tooth ▲ Profile tooth WS

bi-alfa®

cobalt RP

- combi tooth pitch
- especially suitable for solid material of all common steel grades up to a hardness of < 45HRC
- aggressive cutting characteristics to cut exotic alloys and non-ferrous metals

APPLICATION AREAS



Teeth per inch

	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4	
27 x 0,90					■	1 x .035
34 x 1,10				■	■	1 1/4 x .042
41 x 1,30			■	■	■	1 1/2 x .050
54 x 1,30				■		2 x .050
54 x 1,60			■	■		2 x .063
67 x 1,60	■	■	■	■		2 5/8 x .063
80 x 1,60	■	■				3 1/8 x .063

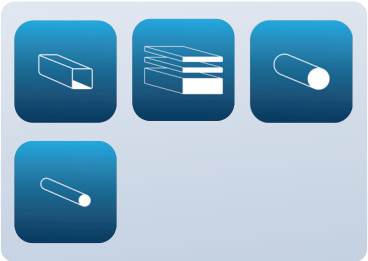
Width x thickness (mm) ■ RP tooth

bi-alfa®

Master

- combi tooth pitch
- especially suitable for solid material of all common steel grades up to a hardness of < 45HRC
- improved cutting guidance / performance by ground pre-cutter/tooth height difference
- for cutting high and highest alloyed materials

APPLICATION AREAS



Teeth per inch

	1,5/2	2/3	3/4	
27 x 0,90			■	1 x .035
34 x 1,10		■	■	1 1/4 x .042
41 x 1,30	■	■	■	1 1/2 x .050

Width x thickness (mm) ■ Master M42

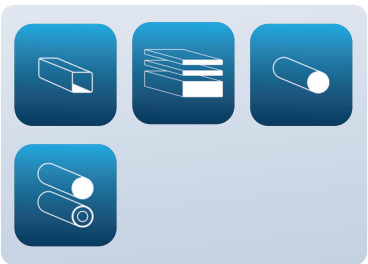
bi-alfa®

cobalt M51

Master M51

- combi tooth pitch
- cutting of all common steel grades up to a hardness of 50 HRC
- tooth tips made of alloyed high-speed steel (HSS) M51 have a high thermal and mechanical wear resistance
- backing material made of high alloyed spring steel
- Master version with special grinding on the pre-cutter

APPLICATION AREAS



Teeth per inch

	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4	4/5	4/6	
27 x 0,90				●	●	●	●	1 x .035
34 x 1,10				● ■	● ■		●	1 1/4 x .042
41 x 1,30			● ■	● ■	●		●	1 1/2 x .050
54 x 1,30			●	●				2 x .050
54 x 1,60		● ■	● ■	● ■	●			2 x .063
67 x 1,60	● ■	● ■	● ■	●				2 5/8 x .063
80 x 1,60	● ■	● ■						3 1/8 x .063

Width x thickness (mm) ● M51 ■ Master M51

bi-alfa®

Master Supreme

- combi tooth pitch
- cutting of all common steel grades up to a hardness of 50 HRC
- tooth tips made of alloyed high-speed steel (HSS) M51 have a high thermal and mechanical wear resistance
- improved cutting guidance / performance by ground pre-cutter/tooth height difference
- aggressive cutting characteristics to cut exotic alloys on larger cross sections
- longer life and improved cutting surfaces with hard to cut materials

APPLICATION AREAS

Available with backwave technology

Teeth per inch

	0,6/0,7	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4	
34 x 1,10					■	■	1 1/4 x .042
41 x 1,30				■	■		1 1/2 x .050
54 x 1,30				■	■		2 x .050
54 x 1,60			■	■	■		2 x .063
67 x 1,60		■	■	■			2 5/8 x .063
80 x 1,60		■	■				3 1/8 x .063
100 x 1,60	■						4 x .063

Width x thickness (mm) ■ **Master tooth**

RECOMMENDATIONS FOR TOOTH SELECTION

for solid material

Constant tooth pitch		Combi tooth pitch	
Cross section	**Tooth pitch**	**Cross section**	**Tooth pitch**
< 10 mm	14 ZpZ	<25 mm	10/14 ZpZ
10 - 30 mm	10 ZpZ	15 - 40 mm	8/12 ZpZ
30 - 50 mm	8 ZpZ	25 - 50 mm	6/10 ZpZ
50 - 80 mm	6 ZpZ	35 - 70 mm	5/8 ZpZ
80 - 120 mm	4 ZpZ	40 - 90 mm	5/6 ZpZ
120 - 200 mm	3 ZpZ	50 - 120 mm	4/6 ZpZ
200 - 300 mm	2 ZpZ	80 - 150 mm	3/4 ZpZ
300 - 700 mm	1,25 ZpZ	130 - 350 mm	2/3 ZpZ
> 600mm	0,75 ZpZ	150 - 450 mm	1,5/2 ZpZ
		200 -600 mm	1,1/1,6 ZpZ
		> 500 mm	0,75/1,25 ZpZ

for tubes and profiles

Wall thickness S (mm)	Outside diameter									
	20	40	60	80	100	120	150	200	300	500
2	14	12/16 P	12/16 P	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	8/11 P	5/7 P
3	14	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	8/11 P	5/7 P	5/7 P	5/7 P
4	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	7/9 P* 5/7 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P
5	12/16 P	12/16 P	8/11 P	7/9 P	7/9 P* 5/7 P	7/9 P* 5/7 P	5/7 P	4/6 P	4/6 P	4/6 P
6	12/16 P	8/11 P	8/11 P	7/9 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P	4/6 P	4/6 P
8	12/16 P	8/11 P	8/11 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P	4/6 P	4/6 P	4/6 P
10		8/11 P	7/9 P* 5/7 P	5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
12		7/9 P* 8/11 P	7/9 P* 5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
15		7/9 P* 8/11 P	7/9 P* 5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
20			4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	3/4 P
30				4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	3/4 P
50							4/6 P	3/4 P	3/4 P	2/3 P
80								3/4 P	2/3 P	2/3 P
>100									2/3 P	1,5/2

*Profile 7/9 tpi only available in width 27 mm at the moment of print

SAFETY INSTRUCTIONS

Endlessly welded RÖNTGEN saw bands are under tension when delivered. When opening the delivery form and placing the saw band on the sawing machine, the following safety measures must be observed:

- **wear safety glasses**
- **wear work gloves**
- **wear safety shoes**

Detailed safety instructions can be found in the operating instructions of the respective machine manufacturer or available upon request from RÖNTGEN.

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