edition 04/2018

circular saw blades
side milling cutters

cutting-off, sawing, milling

ALESA
...us de Schwiiz

Overview

Grüezi and welcome!

An innovative family company since 80 years

Within the manufacturing unit in Switzerland, ALESA employs highly motivated, well trained staff, sharing a wealth of experience and knowledge gained within the cutting tool industry. We are proud that we are one of the few remaining family owned businesses within our sector.

At all times we supply market leading products, offer the highest possible technical support, deliver on time at competitive prices. This is achieved via a network of some 60 global distributors ensuring continuity of supply of both products and services.

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CH-5707 Seengen

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Fax +41 62 7676 282
info@alesa.ch, www.alesa.ch

Production plant and administration building of ALESA Ltd

Precision tool factory

Precision.

We specialise in the manufacture of highly positive, sharply ground, precision cutting tools produced from HSS and carbide.
These offer the highest possible performance figures particularly on difficult materials and extraordinary applications.

We can offer engineering solutions to the most demanding machining problems reducing cycle times, vibration and tooling costs whilst improving surface finishes and chip formation.

Call us now and realise the potential of ALESA!

Metal cutting with creativity.

Milling: The ALESA TWIST helical indexable insert which was developed and patented by us in 1996 is distinguished by a high-tech cutting geometry and is being used to great success all over the world.
The extensive range of ISO standard indexable inserts is of course also equipped with our highly positive, extremely sharp ground cutting edge.
ALESA indexable inserts are available in HSS-E and finest grain metal carbide. Various hard material coatings ensure a long tool life.
It goes without saying that almost all our toolholders are prepared for internal coolant supply.

Turning/parting: In this area, too, we have an extensive range of toolholders for external and internal turning with the matching indexable inserts in HSS-E to ISO standard.
Our ALESA GOLD high-precision ISO toolbits and cutting tools are also world-renowned. Similarly, the Minicut and Duocut parting inserts and cutting-off tools in HSS-E are a byword in the trade.

Sawing: The ALESA metal-cutting circular saws in HSS and carbide give top performance all around. Our circular saws with steam-tempered surface or hard-material coating achieve even better life expectancy.

Nutex: The extraordinary combination of circular saw blade and holder in one tool indicates the system Nutex, Nutex Mini and Nutex Plus. With this tool it is possible to machine on CNC centres without fixings protruding out of the tool face.

Custom-made products: If you have any processing problems, we consider it our duty to be able to offer a solution. Our development department welcomes the challenge of producing special tools to individual requirements or customer drawings.

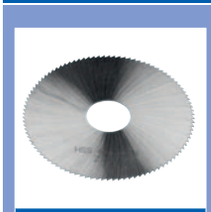
With you as partner we aim to develop visions and pursue new methods.

Our general delivery and sales conditions apply, see www.alesa.ch

Notes

Tools

Circular saw blades DIN



HSS fine tooth
Ø 20 – 250
No 6010
p. 6

HSS coarse tooth
Ø 32 – 250
No 6040
p. 9

HSS coated
Ø 50 – 125
No 6140
p. 11

Carbide fine tooth
Ø 25 – 100
No 6310
p. 12

Carb. coarse tooth
Ø 50 – 160
No 6340
p. 13

Side milling cutters

DIN 1834A-N fine
Ø 50 – 125
No 3255
p. 14

DIN 1834A – N
Ø 50 – 200
No 3260
p. 15

DIN 1834A-N TiN
Ø 63 – 160
No 3555
p. 17

DIN 885A – N
Ø 50 – 250
No 3275
p. 18

HSS circular saw blades (32)2/8/45 + 2/9/50 + 2/11/63

untoothed
bright
No 6520
p. 20

untoothed
steam tempered
No 6522
p. 21

untoothed
TiAlN
No 6525
p. 22

toothed Bw/C
steam tempered
No 6530
p. 23

HSS circular saw blades (40)2/8/55 + 4/12/64

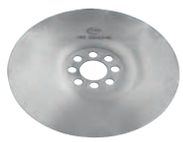
untoothed
bright
No 6620
p. 25

untoothed
steam tempered
No 6622
p. 26

untoothed
TiAlN
No 6625
p. 27

toothed Bw/C
steam tempered
No 6630
p. 28

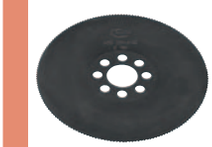
HSS circular saw blades (50)4/15/80 + 4/14/85



untoothed
bright
No 6720
p. 29

untoothed
steam tempered
No 6722
p. 30

untoothed
TiAlN
No 6725
p. 31

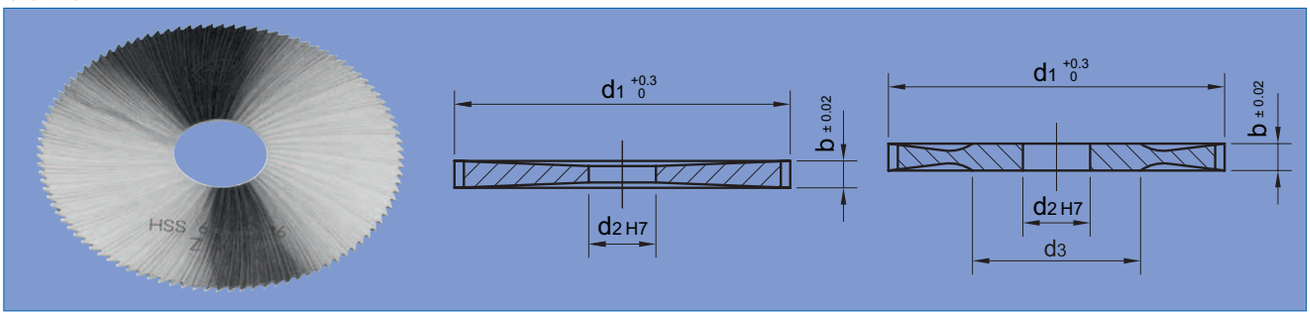


toothed C
steam tempered
No 6730
p. 32

Circular saws HSS, fine tooth, DIN 1837

angular tooth type A, hollow ground

6010



Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6010.0191	20	0.20	5		80	0.8	A
6010.0192	20	0.25	5		64	1.0	A
6010.0193	20	0.30	5		64	1.0	A
6010.0195	20	0.40	5		64	1.0	A
6010.0196	20	0.50	5		48	1.3	A
6010.0197	20	0.60	5		48	1.3	A
6010.0199	20	0.80	5		48	1.3	A
6010.0201	20	1.00	5		40	1.6	A
6010.0203	20	1.20	5		40	1.6	A
6010.0206	20	1.50	5		40	1.6	A
6010.0207	20	1.60	5		40	1.6	A
6010.0209	20	2.00	5		32	2.0	A
6010.0211	20	2.50	5		32	2.0	A
6010.0213	20	3.00	5		32	2.0	A
6010.0215	20	4.00	5		24	2.6	A
6010.0217*	20	5.00	5		24	2.6	A
6010.0218*	20	6.00	5		24	2.6	A
6010.0311	25	0.20	8		80	1.0	A
6010.0312	25	0.25	8		80	1.0	A
6010.0313	25	0.30	8		80	1.0	A
6010.0315	25	0.40	8		64	1.2	A
6010.0316	25	0.50	8		64	1.2	A
6010.0317	25	0.60	8		64	1.2	A
6010.0319	25	0.80	8		48	1.6	A
6010.0321	25	1.00	8		48	1.6	A
6010.0323	25	1.20	8		48	1.6	A
6010.0326	25	1.50	8		40	2.0	A
6010.0327	25	1.60	8		40	2.0	A
6010.0329	25	2.00	8		40	2.0	A
6010.0331	25	2.50	8		40	2.0	A
6010.0333	25	3.00	8		32	2.5	A
6010.0335	25	4.00	8		32	2.5	A
6010.0337*	25	5.00	8		32	2.5	A
6010.0338*	25	6.00	8		24	3.3	A
6010.0371	32	0.20	8		100	1.0	A
6010.0372	32	0.25	8		100	1.0	A
6010.0373	32	0.30	8		80	1.3	A
6010.0375	32	0.40	8		80	1.3	A
6010.0376	32	0.50	8		80	1.3	A
6010.0377	32	0.60	8		64	1.6	A
6010.0379	32	0.80	8		64	1.6	A
6010.0381	32	1.00	8		64	1.6	A
6010.0383	32	1.20	8		48	2.1	A
6010.0386	32	1.50	8		48	2.1	A
6010.0387	32	1.60	8		48	2.1	A
6010.0389	32	2.00	8		48	2.1	A
6010.0391	32	2.50	8		40	2.5	A
6010.0393	32	3.00	8		40	2.5	A
6010.0395	32	4.00	8		40	2.5	A
6010.0461	40	0.20	10		128	1.0	A
6010.0462	40	0.25	10		100	1.3	A
6010.0463	40	0.30	10		100	1.3	A
6010.0465	40	0.40	10		100	1.3	A
6010.0466	40	0.50	10		80	1.6	A
6010.0467	40	0.60	10		80	1.6	A

Info When selecting the appropriate circular saw blade, the correct circular tooth pitch is an important factor for achieving good cutting results.

Info The angular tooth type A is ideal for short-chipping material and small cutting depths.

Circular saws HSS, fine tooth, DIN 1837

angular tooth type A, hollow ground

Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6010.0469	40	0.80	10		80	1.6	A
6010.0471	40	1.00	10		64	2.0	A
6010.0473	40	1.20	10		64	2.0	A
6010.0476	40	1.50	10		64	2.0	A
6010.0477	40	1.60	10		64	2.0	A
6010.0479	40	2.00	10		48	2.6	A
6010.0481	40	2.50	10		48	2.6	A
6010.0483	40	3.00	10		48	2.6	A
6010.0485	40	4.00	10		40	3.1	A
6010.0487*	40	5.00	10		40	3.1	A
6010.0488*	40	6.00	10		40	3.1	A
6010.0521	50	0.20	10		128	1.2	A
6010.0522	50	0.25	10		128	1.2	A
6010.0523	50	0.30	10		128	1.2	A
6010.0525	50	0.40	10		100	1.6	A
6010.0526	50	0.50	10		100	1.6	A
6010.0527	50	0.60	10		100	1.6	A
6010.0529	50	0.80	10		80	2.0	A
6010.0531	50	1.00	10		80	2.0	A
6010.0533	50	1.20	10		80	2.0	A
6010.0536	50	1.50	10		64	2.5	A
6010.0537	50	1.60	10		64	2.5	A
6010.0539	50	2.00	10		64	2.5	A
6010.0541	50	2.50	10		64	2.5	A
6010.0543	50	3.00	10		48	3.3	A
6010.0545	50	4.00	10		48	3.3	A
6010.0547*	50	5.00	10		48	3.3	A
6010.0548*	50	6.00	10		40	3.9	A
6010.0551	50	0.20	13		128	1.2	A
6010.0552	50	0.25	13		128	1.2	A
6010.0553	50	0.30	13		128	1.2	A
6010.0555	50	0.40	13		100	1.6	A
6010.0556	50	0.50	13		100	1.6	A
6010.0557	50	0.60	13		100	1.6	A
6010.0559	50	0.80	13		80	2.0	A
6010.0561	50	1.00	13		80	2.0	A
6010.0563	50	1.20	13		80	2.0	A
6010.0566	50	1.50	13		64	2.5	A
6010.0567	50	1.60	13		64	2.5	A
6010.0569	50	2.00	13		64	2.5	A
6010.0571	50	2.50	13		64	2.5	A
6010.0573	50	3.00	13		48	3.3	A
6010.0575	50	4.00	13		48	3.3	A
6010.0577*	50	5.00	13		48	3.3	A
6010.0578*	50	6.00	13		40	3.9	A
6010.0612	63	0.25	16		160	1.2	A
6010.0613	63	0.30	16		128	1.5	A
6010.0615	63	0.40	16		128	1.5	A
6010.0616	63	0.50	16		128	1.5	A
6010.0617	63	0.60	16		100	2.0	A
6010.0619	63	0.80	16		100	2.0	A
6010.0621	63	1.00	16		100	2.0	A
6010.0623	63	1.20	16		80	2.5	A
6010.0626	63	1.50	16		80	2.5	A
6010.0627	63	1.60	16		80	2.5	A
6010.0629	63	2.00	16		80	2.5	A
6010.0631	63	2.50	16		64	3.1	A
6010.0633	63	3.00	16		64	3.1	A
6010.0635	63	4.00	16		64	3.1	A
6010.0638*	63	6.00	16		48	4.1	A
6010.0643	80	0.30	16		160	1.6	A
6010.0645	80	0.40	16		160	1.6	A
6010.0646	80	0.50	16		128	2.0	A
6010.0647	80	0.60	16		128	2.0	A
6010.0649	80	0.80	16		128	2.0	A
6010.0651	80	1.00	16		100	2.5	A
6010.0653	80	1.20	16		100	2.5	A
6010.0656	80	1.50	16		100	2.5	A
6010.0657	80	1.60	16		100	2.5	A
6010.0659	80	2.00	16		80	3.1	A
6010.0661	80	2.50	16		80	3.1	A
6010.0663	80	3.00	16		80	3.1	A
6010.0665	80	4.00	16		64	3.9	A
6010.0667*	80	5.00	16		64	3.9	A
6010.0673	80	0.30	22		160	1.6	A

Circular saws HSS, fine tooth, DIN 1837

angular tooth type A, hollow ground

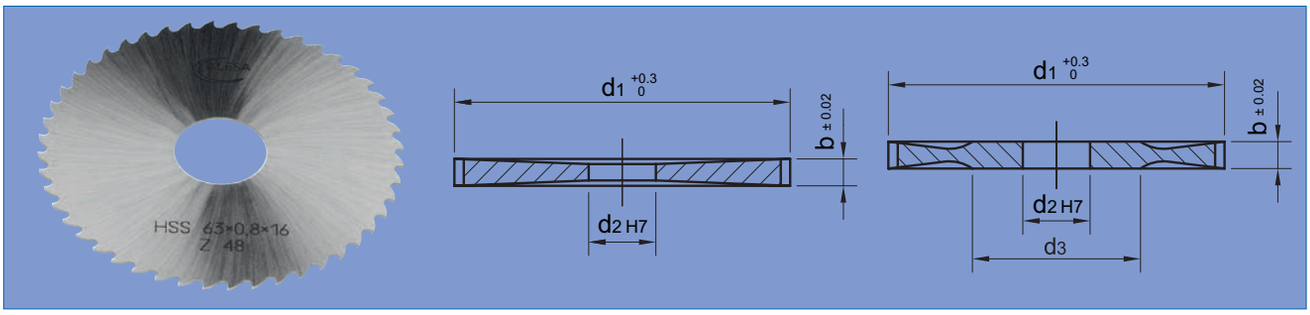
Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6010.0675	80	0.40	22		160	1.6	A
6010.0676	80	0.50	22		128	2.0	A
6010.0677	80	0.60	22		128	2.0	A
6010.0679	80	0.80	22		128	2.0	A
6010.0681	80	1.00	22		100	2.5	A
6010.0683	80	1.20	22		100	2.5	A
6010.0686	80	1.50	22		100	2.5	A
6010.0687	80	1.60	22		100	2.5	A
6010.0689	80	2.00	22		80	3.1	A
6010.0691	80	2.50	22		80	3.1	A
6010.0693	80	3.00	22		80	3.1	A
6010.0695	80	4.00	22		64	3.9	A
6010.0698*	80	6.00	22		64	3.9	A
6010.0706	100	0.50	22		160	2.0	A
6010.0707	100	0.60	22		160	2.0	A
6010.0709	100	0.80	22		128	2.5	A
6010.0711	100	1.00	22		128	2.5	A
6010.0713	100	1.20	22		128	2.5	A
6010.0716	100	1.50	22		100	3.1	A
6010.0717	100	1.60	22		100	3.1	A
6010.0719	100	2.00	22		100	3.1	A
6010.0721	100	2.50	22		100	3.1	A
6010.0723	100	3.00	22		80	3.9	A
6010.0725	100	4.00	22		80	3.9	A
6010.0727*	100	5.00	22		80	3.9	A
6010.0728*	100	6.00	22		64	4.9	A
6010.0737	125	0.60	22		160	2.5	A
6010.0739	125	0.80	22		160	2.5	A
6010.0741	125	1.00	22		160	2.5	A
6010.0743	125	1.20	22		128	3.1	A
6010.0746	125	1.50	22		128	3.1	A
6010.0747	125	1.60	22		128	3.1	A
6010.0749	125	2.00	22		128	3.1	A
6010.0751	125	2.50	22		100	3.9	A
6010.0753	125	3.00	22		100	3.9	A
6010.0755	125	4.00	22		100	3.9	A
6010.0757*	125	5.00	22		80	4.9	A
6010.0758*	125	6.00	22		80	4.9	A
6010.0771	160	1.00	32	63	160	3.1	A
6010.0773	160	1.20	32	63	160	3.1	A
6010.0776	160	1.50	32	63	160	3.1	A
6010.0777	160	1.60	32	63	160	3.1	A
6010.0779	160	2.00	32	63	128	3.9	A
6010.0781	160	2.50	32	63	128	3.9	A
6010.0783	160	3.00	32	63	128	3.9	A
6010.0785	160	4.00	32	63	100	5.0	A
6010.0787*	160	5.00	32	63	100	5.0	A
6010.0788*	160	6.00	32	63	100	5.0	A
6010.0831	200	1.00	32	63	200	3.1	A
6010.0833	200	1.20	32	63	200	3.1	A
6010.0836	200	1.50	32	63	160	3.9	A
6010.0837	200	1.60	32	63	160	3.9	A
6010.0839	200	2.00	32	63	160	3.9	A
6010.0841	200	2.50	32	63	160	3.9	A
6010.0843	200	3.00	32	63	128	4.9	A
6010.0845	200	4.00	32	63	128	4.9	A
6010.0896	250	1.50	32	63	200	3.9	A
6010.0897	250	1.60	32	63	200	3.9	A
6010.0899	250	2.00	32	63	200	3.9	A
6010.0901	250	2.50	32	63	160	4.9	A
6010.0903	250	3.00	32	63	160	4.9	A
6010.0905	250	4.00	32	63	160	4.9	A

*while stocks last

Circular saws HSS, coarse tooth, DIN 1838

curved tooth type B/Bw, hollow ground

6040



Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6040.0373	32	0.30	8		40	2.5	B
6040.0375	32	0.40	8		40	2.5	B
6040.0376	32	0.50	8		40	2.5	B
6040.0377	32	0.60	8		32	3.1	B
6040.0379	32	0.80	8		32	3.1	B
6040.0381	32	1.00	8		32	3.1	B
6040.0383	32	1.20	8		24	4.2	B
6040.0386	32	1.50	8		24	4.2	B
6040.0387	32	1.60	8		24	4.2	B
6040.0389	32	2.00	8		24	4.2	B
6040.0391	32	2.50	8		20	5.0	B
6040.0393	32	3.00	8		20	5.0	B
6040.0395	32	4.00	8		20	5.0	B
6040.0397*	32	5.00	8		20	5.0	B
6040.0398*	32	6.00	8		20	5.0	B
6040.0463	40	0.30	10		48	2.6	B
6040.0465	40	0.40	10		48	2.6	B
6040.0466	40	0.50	10		40	3.1	B
6040.0467	40	0.60	10		40	3.1	B
6040.0469	40	0.80	10		40	3.1	B
6040.0471	40	1.00	10		32	3.9	B
6040.0473	40	1.20	10		32	3.9	B
6040.0476	40	1.50	10		32	3.9	B
6040.0477	40	1.60	10		32	3.9	B
6040.0479	40	2.00	10		24	5.2	B
6040.0481	40	2.50	10		24	5.2	B
6040.0483	40	3.00	10		24	5.2	B
6040.0485	40	4.00	10		20	6.3	B
6040.0487*	40	5.00	10		20	6.3	B
6040.0488*	40	6.00	10		20	6.3	B
6040.0553	50	0.30	13		64	2.5	B
6040.0555	50	0.40	13		48	3.3	B
6040.0556	50	0.50	13		48	3.3	B
6040.0557	50	0.60	13		48	3.3	B
6040.0559	50	0.80	13		40	3.9	B
6040.0561	50	1.00	13		40	3.9	Bw
6040.0563	50	1.20	13		40	3.9	Bw
6040.0566	50	1.50	13		40	3.9	Bw
6040.0567	50	1.60	13		32	4.9	Bw
6040.0569	50	2.00	13		32	4.9	Bw
6040.0571	50	2.50	13		32	4.9	Bw
6040.0573	50	3.00	13		24	6.5	Bw
6040.0575	50	4.00	13		24	6.5	Bw
6040.0577*	50	5.00	13		24	6.5	Bw
6040.0578*	50	6.00	13		24	6.5	Bw
6040.0613	63	0.30	16		64	3.1	B
6040.0615	63	0.40	16		64	3.1	B
6040.0616	63	0.50	16		64	3.1	B
6040.0617	63	0.60	16		48	4.1	B
6040.0619	63	0.80	16		48	4.1	B
6040.0621	63	1.00	16		48	4.1	Bw
6040.0623	63	1.20	16		40	4.9	Bw

Info Due to its big volume of chips the curved tooth type B is one of the most commonly used product for cutting ferrous materials.

Info The tooth Bw with alternate chamfering splits the chips in one part 2/3 of the blade thickness, which is ideal for cutting tubes and profiles.

Info Due to the large number of cutting edges, circular saw blades are very efficient tools also for slotting.

Info Selecting the right feed rate per tooth is very important for a long tool life and ideal chip forming.

Circular saws HSS, coarse tooth, DIN 1838

curved tooth type B/Bw, hollow ground

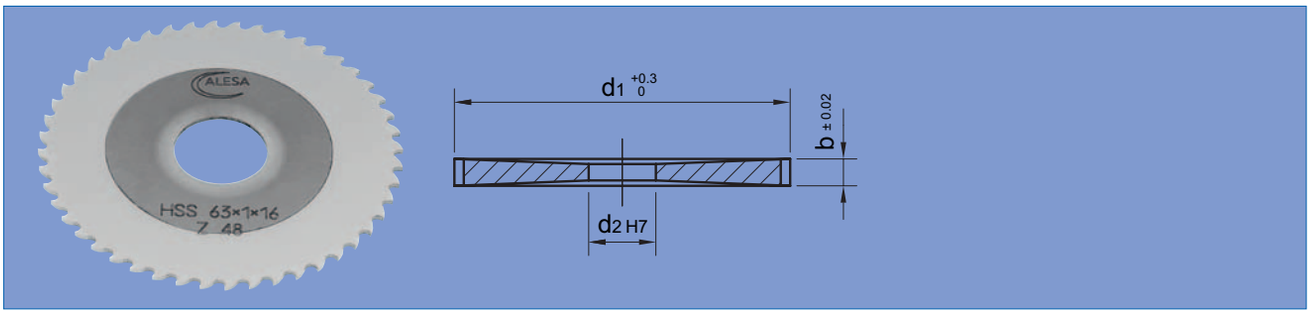
Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6040.0626	63	1.50	16		40	4.9	Bw
6040.0627	63	1.60	16		40	4.9	Bw
6040.0629	63	2.00	16		40	4.9	Bw
6040.0631	63	2.50	16		32	6.2	Bw
6040.0633	63	3.00	16		32	6.2	Bw
6040.0635	63	4.00	16		32	6.2	Bw
6040.0637*	63	5.00	16		24	8.2	Bw
6040.0638*	63	6.00	16		24	8.2	Bw
6040.0677	80	0.60	22		64	3.9	B
6040.0679	80	0.80	22		64	3.9	B
6040.0681	80	1.00	22		48	5.2	Bw
6040.0683	80	1.20	22		48	5.2	Bw
6040.0686	80	1.50	22		48	5.2	Bw
6040.0687	80	1.60	22		48	5.2	Bw
6040.0689	80	2.00	22		40	6.3	Bw
6040.0691	80	2.50	22		40	6.3	Bw
6040.0693	80	3.00	22		40	6.3	Bw
6040.0695	80	4.00	22		32	7.9	Bw
6040.0697*	80	5.00	22		32	7.9	Bw
6040.0698*	80	6.00	22		32	7.9	Bw
6040.0707	100	0.60	22		80	3.9	B
6040.0709	100	0.80	22		64	4.9	B
6040.0711	100	1.00	22		64	4.9	Bw
6040.0713	100	1.20	22		64	4.9	Bw
6040.0716	100	1.50	22		64	4.9	Bw
6040.0717	100	1.60	22		48	6.5	Bw
6040.0719	100	2.00	22		48	6.5	Bw
6040.0721	100	2.50	22		48	6.5	Bw
6040.0723	100	3.00	22		40	7.9	Bw
6040.0725	100	4.00	22		40	7.9	Bw
6040.0727*	100	5.00	22		40	7.9	Bw
6040.0728*	100	6.00	22		32	9.8	Bw
6040.0739	125	0.80	22		80	4.9	B
6040.0741	125	1.00	22		80	4.9	Bw
6040.0743	125	1.20	22		64	6.1	Bw
6040.0746	125	1.50	22		64	6.1	Bw
6040.0747	125	1.60	22		64	6.1	Bw
6040.0749	125	2.00	22		64	6.1	Bw
6040.0751	125	2.50	22		48	8.2	Bw
6040.0753	125	3.00	22		48	8.2	Bw
6040.0755	125	4.00	22		48	8.2	Bw
6040.0757*	125	5.00	22		40	9.8	Bw
6040.0758*	125	6.00	22		40	9.8	Bw
6040.0771	160	1.00	32	63	80	6.3	Bw
6040.0773	160	1.20	32	63	80	6.3	Bw
6040.0776	160	1.50	32	63	80	6.3	Bw
6040.0777	160	1.60	32	63	80	6.3	Bw
6040.0779	160	2.00	32	63	64	7.9	Bw
6040.0781	160	2.50	32	63	64	7.9	Bw
6040.0783	160	3.00	32	63	64	7.9	Bw
6040.0785	160	4.00	32	63	48	10.5	Bw
6040.0787*	160	5.00	32	63	48	10.5	Bw
6040.0788*	160	6.00	32	63	48	10.5	Bw
6040.0833	200	1.20	32	63	100	6.3	Bw
6040.0836	200	1.50	32	63	100	6.3	Bw
6040.0837	200	1.60	32	63	80	7.9	Bw
6040.0839	200	2.00	32	63	80	7.9	Bw
6040.0841	200	2.50	32	63	80	7.9	Bw
6040.0843	200	3.00	32	63	64	9.8	Bw
6040.0845	200	4.00	32	63	64	9.8	Bw
6040.0897	250	1.60	32	63	100	7.9	Bw
6040.0899	250	2.00	32	63	100	7.9	Bw
6040.0901	250	2.50	32	63	80	9.8	Bw
6040.0903	250	3.00	32	63	80	9.8	Bw
6040.0905	250	4.00	32	63	80	9.8	Bw

*while stocks last

Circular saws HSS TiN, coarse tooth, DIN 1838

curved tooth type B/Bw, hollow ground

6140



Part No	d1 mm	b mm	d2 mm	✹	Pitch	Toothform
6140.0556	50	0.50	13	48	3.3	B
6140.0561	50	1.00	13	40	3.9	Bw
6140.0566	50	1.50	13	40	3.9	Bw
6140.0569	50	2.00	13	32	4.9	Bw
6140.0616	63	0.50	16	64	3.1	B
6140.0619	63	0.80	16	48	4.1	B
6140.0621	63	1.00	16	48	4.1	Bw
6140.0627	63	1.60	16	40	4.9	Bw
6140.0629	63	2.00	16	40	4.9	Bw
6140.0679	80	0.80	22	64	3.9	B
6140.0681	80	1.00	22	48	5.2	Bw
6140.0686	80	1.50	22	48	5.2	Bw
6140.0689	80	2.00	22	40	6.3	Bw
6140.0711	100	1.00	22	64	4.9	Bw
6140.0716	100	1.50	22	64	4.9	Bw
6140.0719	100	2.00	22	48	6.5	Bw
6140.0741	125	1.00	22	80	4.9	Bw
6140.0746	125	1.50	22	64	6.1	Bw
6140.0749	125	2.00	22	64	6.1	Bw

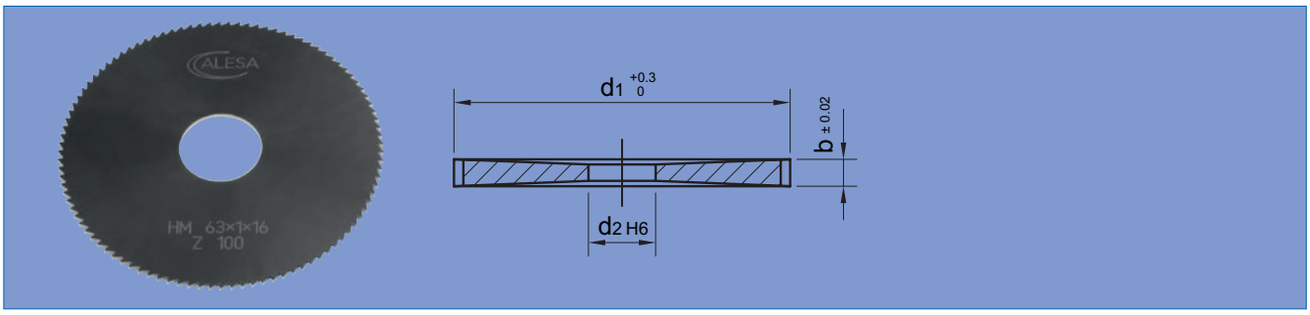
Info The use of coated circular saw blades offers considerably increased tool life and higher metal removal rates.

Info Circular saw blades are very economical tools for cutting-off and for slotting a wide range of various materials.

Carbide circular saws, fine tooth, DIN 1837

angular tooth type A, hollow ground

6310



Part No	d1 mm	b mm	d2 mm		Pitch	Toothform
6310.0311	25	0.20	8	80	1.0	A
6310.0315	25	0.40	8	64	1.2	A
6310.0317	25	0.60	8	64	1.2	A
6310.0319	25	0.80	8	48	1.6	A
6310.0321	25	1.00	8	48	1.6	A
6310.0326	25	1.50	8	40	2.0	A
6310.0329	25	2.00	8	40	2.0	A
6310.0371	32	0.20	8	100	1.0	A
6310.0375	32	0.40	8	80	1.3	A
6310.0377	32	0.60	8	64	1.6	A
6310.0379	32	0.80	8	64	1.6	A
6310.0381	32	1.00	8	64	1.6	A
6310.0386	32	1.50	8	48	2.1	A
6310.0389	32	2.00	8	48	2.1	A
6310.0461	40	0.20	10	128	1.0	A
6310.0465	40	0.40	10	100	1.3	A
6310.0467	40	0.60	10	80	1.6	A
6310.0469	40	0.80	10	80	1.6	A
6310.0471	40	1.00	10	64	2.0	A
6310.0476	40	1.50	10	64	2.0	A
6310.0479	40	2.00	10	48	2.6	A
6310.0551	50	0.20	13	128	1.2	A
6310.0555	50	0.40	13	100	1.6	A
6310.0557	50	0.60	13	100	1.6	A
6310.0559	50	0.80	13	80	2.0	A
6310.0561	50	1.00	13	80	2.0	A
6310.0566	50	1.50	13	64	2.5	A
6310.0569	50	2.00	13	64	2.5	A
6310.0615	63	0.40	16	128	1.5	A
6310.0617	63	0.60	16	100	2.0	A
6310.0619	63	0.80	16	100	2.0	A
6310.0621	63	1.00	16	100	2.0	A
6310.0626	63	1.50	16	80	2.5	A
6310.0629	63	2.00	16	80	2.5	A
6310.0679	80	0.80	22	128	2.0	A
6310.0681	80	1.00	22	100	2.5	A
6310.0686	80	1.50	22	100	2.5	A
6310.0689	80	2.00	22	80	3.1	A
6310.0691	80	2.50	22	80	3.1	A
6310.0693	80	3.00	22	80	3.1	A
6310.0711	100	1.00	22	128	2.5	A
6310.0716	100	1.50	22	100	3.1	A
6310.0719	100	2.00	22	100	3.1	A
6310.0721	100	2.50	22	100	3.1	A
6310.0723	100	3.00	22	80	3.9	A

Info The angular tooth type A is ideal for short-chipping material and small cutting depths.

Info When using carbide circular saw blades you can achieve much higher cutting speeds.

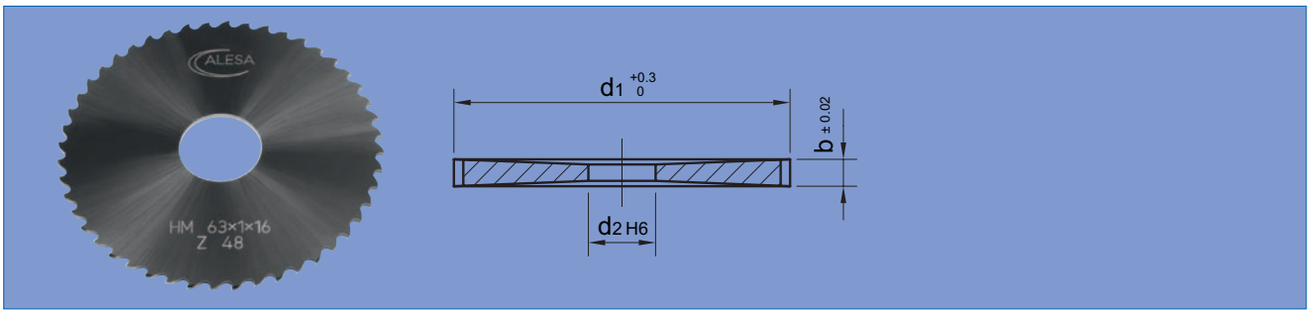
Info The use of coated circular saw blades offers considerably increased tool life and higher metal removal rates.

Info These precision tools produced from solid carbide are designed for use on modern vibration-free machines. The workpiece must be clamped tightly and free from vibration.

Carbide circular saws, coarse tooth, DIN 1838

curved tooth type B/Bw, hollow ground

6340



Part No	d1 mm	b mm	d2 mm		Pitch	Toothform
6340.0555	50	0.40	13	48	3.3	B
6340.0557	50	0.60	13	48	3.3	B
6340.0559	50	0.80	13	40	3.9	B
6340.0561	50	1.00	13	40	3.9	Bw
6340.0566	50	1.50	13	32	4.9	Bw
6340.0569	50	2.00	13	32	4.9	Bw
6340.0615	63	0.40	16	64	3.1	B
6340.0617	63	0.60	16	48	4.1	B
6340.0619	63	0.80	16	48	4.1	B
6340.0621	63	1.00	16	48	4.1	Bw
6340.0626	63	1.50	16	40	4.9	Bw
6340.0629	63	2.00	16	40	4.9	Bw
6340.0679	80	0.80	22	64	3.9	B
6340.0681	80	1.00	22	48	5.2	Bw
6340.0686	80	1.50	22	48	5.2	Bw
6340.0689	80	2.00	22	48	5.2	Bw
6340.0691	80	2.50	22	40	6.3	Bw
6340.0693	80	3.00	22	40	6.3	Bw
6340.0711	100	1.00	22	64	4.9	Bw
6340.0716	100	1.50	22	48	6.5	Bw
6340.0719	100	2.00	22	48	6.5	Bw
6340.0721	100	2.50	22	48	6.5	Bw
6340.0723	100	3.00	22	40	7.9	Bw
6340.0741	125	1.00	22	80	4.9	Bw
6340.0746	125	1.50	22	64	6.1	Bw
6340.0749	125	2.00	22	64	6.1	Bw
6340.0751	125	2.50	22	48	8.2	Bw
6340.0753	125	3.00	22	48	8.2	Bw
6340.0771	160	1.00	32	80	6.3	Bw
6340.0776	160	1.50	32	80	6.3	Bw
6340.0779	160	2.00	32	64	7.9	Bw
6340.0781	160	2.50	32	64	7.9	Bw
6340.0783	160	3.00	32	64	7.9	Bw

Info These precision tools produced from solid carbide are designed for use on modern vibration-free machines. The workpiece must be clamped tightly and free from vibration.

Info When using carbide circular saw blades you can achieve much higher cutting speeds.

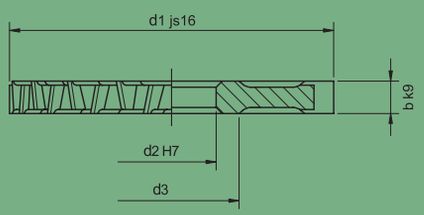
Info Selecting the right feed rate per tooth is very important for a long tool life and ideal chip forming.

Info Carbide circular saw blades are available on request with diameters of 20 mm to 200 mm. You can choose a width from 0.2 mm to 3 mm, depending on the diameter.

Side milling cutters HSS, narrow, fine tooth

DIN 1834 A – type N

3255



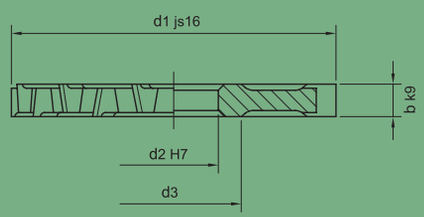
Part No	d1 mm	b mm	d2 mm	d3 mm	☼
3255.0101	50	1.50	16	26	28
3255.0102	50	1.60	16	26	28
3255.0103	50	2.00	16	26	28
3255.0104	50	2.50	16	26	28
3255.0105	50	3.00	16	26	28
3255.0106*	50	3.50	16	26	28
3255.0107	50	4.00	16	26	28
3255.0108	50	5.00	16	26	28
3255.0151	63	1.50	22	34	32
3255.0152	63	1.60	22	34	32
3255.0153	63	2.00	22	34	32
3255.0154	63	2.50	22	34	32
3255.0155	63	3.00	22	34	32
3255.0157	63	4.00	22	34	32
3255.0203	80	2.00	22	41	36
3255.0204	80	2.50	22	34	36
3255.0205	80	3.00	22	34	36
3255.0207	80	4.00	22	34	36
3255.0253	80	2.00	27	41	36
3255.0254	80	2.50	27	41	36
3255.0255	80	3.00	27	41	36
3255.0256*	80	3.50	27	41	36
3255.0257	80	4.00	27	41	36
3255.0303	100	2.00	27	48	40
3255.0304	100	2.50	27	48	40
3255.0305	100	3.00	27	42	40
3255.0307	100	4.00	27	42	40
3255.0353	100	2.00	32	48	40
3255.0354	100	2.50	32	48	40
3255.0355	100	3.00	32	48	40
3255.0356*	100	3.50	32	48	40
3255.0357	100	4.00	32	48	40
3255.0403	125	2.00	27	48	48
3255.0404	125	2.50	27	48	48
3255.0405	125	3.00	27	48	48
3255.0407	125	4.00	27	42	48
3255.0453	125	2.00	32	48	48
3255.0454	125	2.50	32	48	48
3255.0455	125	3.00	32	48	48
3255.0456*	125	3.50	32	48	48
3255.0457	125	4.00	32	48	48

*while stocks last

Side milling cutters HSS, narrow

DIN 1834 A – type N

3260



Part No	d1 mm	b mm	d2 mm	d3 mm	
3260.0101	50	1.50	16	26	18
3260.0102	50	1.60	16	26	18
3260.0103	50	2.00	16	26	18
3260.0104	50	2.50	16	26	18
3260.0105	50	3.00	16	26	18
3260.0107	50	4.00	16	26	18
3260.0108	50	5.00	16	26	18
3260.0109	50	6.00	16	26	18
3260.0151	63	1.50	22	34	22
3260.0152	63	1.60	22	34	22
3260.0153	63	2.00	22	34	22
3260.0154	63	2.50	22	34	22
3260.0155	63	3.00	22	34	22
3260.0157	63	4.00	22	34	22
3260.0158	63	5.00	22	34	22
3260.0159	63	6.00	22	34	22
3260.0201	80	1.50	22	41	24
3260.0202	80	1.60	22	41	24
3260.0203	80	2.00	22	41	24
3260.0204	80	2.50	22	34	24
3260.0205	80	3.00	22	34	24
3260.0207	80	4.00	22	34	24
3260.0208	80	5.00	22	34	24
3260.0209	80	6.00	22	34	24
3260.0251	80	1.50	27	41	24
3260.0252	80	1.60	27	41	24
3260.0253	80	2.00	27	41	24
3260.0254	80	2.50	27	41	24
3260.0255	80	3.00	27	41	24
3260.0257	80	4.00	27	41	24
3260.0258	80	5.00	27	41	24
3260.0259	80	6.00	27	41	24
3260.0301	100	1.50	27	48	28
3260.0302	100	1.60	27	48	28
3260.0303	100	2.00	27	48	28
3260.0304	100	2.50	27	48	28
3260.0305	100	3.00	27	42	28
3260.0307	100	4.00	27	42	28
3260.0308	100	5.00	27	42	28
3260.0309	100	6.00	27	42	28
3260.0310*	100	7.00	27	42	28
3260.0351	100	1.50	32	48	28
3260.0352	100	1.60	32	48	28
3260.0353	100	2.00	32	48	28
3260.0354	100	2.50	32	48	28
3260.0355	100	3.00	32	48	28
3260.0356*	100	3.50	32	48	28
3260.0357	100	4.00	32	48	28
3260.0358	100	5.00	32	48	28
3260.0359	100	6.00	32	48	28
3260.0360*	100	7.00	32	48	28
3260.0402	125	1.60	27	48	32
3260.0403	125	2.00	27	48	32
3260.0404	125	2.50	27	48	32
3260.0405	125	3.00	27	48	32
3260.0407	125	4.00	27	42	32
3260.0408	125	5.00	27	42	32
3260.0409	125	6.00	27	42	32
3260.0452	125	1.60	32	48	32
3260.0453	125	2.00	32	48	32

Side milling cutters HSS, narrow

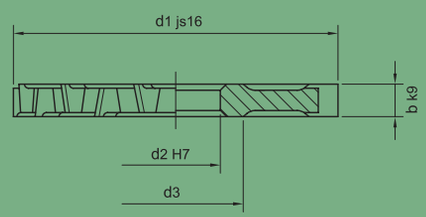
DIN 1834 A – type N

Part No	d1 mm	b mm	d2 mm	d3 mm	
3260.0454	125	2.50	32	48	32
3260.0455	125	3.00	32	48	32
3260.0457	125	4.00	32	48	32
3260.0458	125	5.00	32	48	32
3260.0459	125	6.00	32	48	32
3260.0503	160	2.00	32	60	36
3260.0504	160	2.50	32	60	36
3260.0505	160	3.00	32	60	36
3260.0507	160	4.00	32	60	36
3260.0508	160	5.00	32	48	36
3260.0509	160	6.00	32	48	36
3260.0553	160	2.00	40	65	36
3260.0554	160	2.50	40	65	36
3260.0555	160	3.00	40	65	36
3260.0557	160	4.00	40	65	36
3260.0558	160	5.00	40	60	36
3260.0559	160	6.00	40	60	36

*while stocks last

Side milling cutters HSS, narrow, TiN
DIN 1834 A – type N

3555

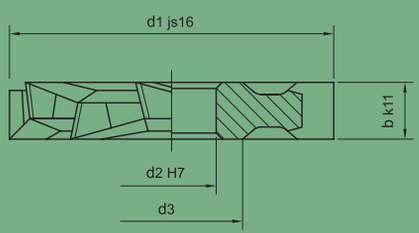


Part No	d1 mm	b mm	d2 mm	d3 mm	
3555.0153	63	2.00	22	34	22
3555.0155	63	3.00	22	34	22
3555.0157	63	4.00	22	34	22
3555.0203	80	2.00	22	41	24
3555.0205	80	3.00	22	34	24
3555.0207	80	4.00	22	34	24
3555.0253	80	2.00	27	41	24
3555.0255	80	3.00	27	41	24
3555.0257	80	4.00	27	41	24
3555.0303	100	2.00	27	48	28
3555.0305	100	3.00	27	42	28
3555.0307	100	4.00	27	42	28
3555.0353	100	2.00	32	48	28
3555.0355	100	3.00	32	48	28
3555.0357	100	4.00	32	48	28
3555.0403	125	2.00	27	48	32
3555.0405	125	3.00	27	48	32
3555.0407	125	4.00	27	42	32
3555.0408	125	5.00	27	42	32
3555.0453	125	2.00	32	48	32
3555.0455	125	3.00	32	48	32
3555.0457	125	4.00	32	48	32
3555.0458	125	5.00	32	48	32
3555.0505	160	3.00	32	60	36
3555.0507	160	4.00	32	60	36
3555.0508	160	5.00	32	48	36
3555.0509	160	6.00	32	48	36
3555.0555	160	3.00	40	65	36
3555.0557	160	4.00	40	65	36
3555.0558	160	5.00	40	60	36
3555.0559	160	6.00	40	60	36

Side milling cutters HSS-E

DIN 885 A – type N

3275



Part No	d1 mm	b mm	d2 mm	d3 mm	
3275.0110	50	7.00	16	26	12 / 14
3275.0111	50	8.00	16	26	12 / 14
3275.0113	50	10.00	16	26	12 / 14
3275.0159	63	6.00	22	34	14 / 16
3275.0160	63	7.00	22	34	14 / 16
3275.0161	63	8.00	22	34	14 / 16
3275.0162*	63	9.00	22	34	14 / 16
3275.0163	63	10.00	22	34	14 / 16
3275.0164	63	12.00	22	34	12 / 16
3275.0165	63	14.00	22	34	12 / 14
3275.0209	80	6.00	22	35	16 / 18
3275.0210	80	7.00	22	35	16 / 18
3275.0211	80	8.00	22	35	16 / 18
3275.0213	80	10.00	22	35	16 / 18
3275.0214	80	12.00	22	35	16 / 18
3275.0215	80	14.00	22	35	14 / 18
3275.0217*	80	18.00	22	35	14
3275.0218*	80	20.00	22	35	14
3275.0259	80	6.00	27	40	16 / 18
3275.0260	80	7.00	27	40	16 / 18
3275.0261	80	8.00	27	40	16 / 18
3275.0263	80	10.00	27	40	16 / 18
3275.0264	80	12.00	27	40	16 / 18
3275.0265	80	14.00	27	40	14 / 18
3275.0309	100	6.00	27	42	18 / 20
3275.0310	100	7.00	27	42	18 / 20
3275.0311	100	8.00	27	42	18 / 20
3275.0312*	100	9.00	27	42	18 / 20
3275.0313	100	10.00	27	42	18 / 20
3275.0314	100	12.00	27	42	18 / 20
3275.0315	100	14.00	27	42	18 / 20
3275.0359	100	6.00	32	48	18 / 20
3275.0360	100	7.00	32	48	18 / 20
3275.0361	100	8.00	32	48	18 / 20
3275.0362*	100	9.00	32	48	18 / 20
3275.0363	100	10.00	32	48	18 / 20
3275.0364	100	12.00	32	48	18 / 20
3275.0365	100	14.00	32	48	18 / 20
3275.0369*	100	22.00	32	48	16
3275.0414*	125	12.00	27	42	20
3275.0415*	125	14.00	27	42	20
3275.0416*	125	16.00	27	42	20
3275.0419	125	22.00	27	42	18
3275.0463	125	10.00	32	48	20 / 22
3275.0464	125	12.00	32	48	20 / 22
3275.0465	125	14.00	32	48	20 / 22
3275.0466*	125	16.00	32	48	20
3275.0469*	125	22.00	32	48	18
3275.0513	160	10.00	32	48	22 / 26
3275.0514	160	12.00	32	48	22 / 24
3275.0515*	160	14.00	32	48	22 / 24
3275.0517	160	18.00	32	48	22
3275.0518*	160	20.00	32	48	20
3275.0519*	160	22.00	32	48	20
3275.0520*	160	25.00	32	48	20
3275.0523*	160	32.00	32	48	20
3275.0562*	160	9.00	40	58	22
3275.0563	160	10.00	40	58	22 / 26
3275.0564	160	12.00	40	58	22 / 24
3275.0565	160	14.00	40	58	22 / 24

Side milling cutters HSS-E
DIN 885 A – type N

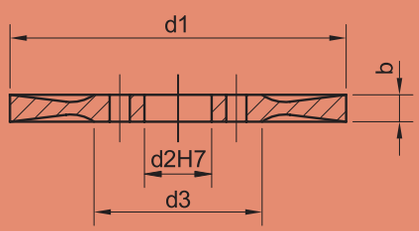
Part No	d1 mm	b mm	d2 mm	d3 mm	
3275.0566*	160	16.00	40	58	22
3275.0567*	160	18.00	40	58	22
3275.0568*	160	20.00	40	58	20
3275.0569*	160	22.00	40	58	20
3275.0573*	160	32.00	40	58	20
3275.0670*	250	25.00	40	58	24

*while stocks last

HSS circular saw blades – 2/8/45 + 2/9/50 + 2/11/63

untoothed, bright surface

6520



Part No	d1 mm	b mm	d2 mm	d3 mm	
6520.0168	175	1.20	32	80	
6520.0174	175	1.50	32	80	
6520.0180	200	1.20	32	100	
6520.0186	200	1.50	32	90	
6520.0193	200	1.80	32	90	
6520.0196	200	2.00	32	90	
6520.0208	225	1.20	32	100	
6520.0211	225	1.60	32	90	
6520.0217	225	2.00	32	90	
6520.0222	225	2.50	32	90	
6520.0228	250	1.60	32	100	
6520.0234	250	2.00	32	100	
6520.0241	250	2.50	32	100	
6520.0251	275	2.00	32	100	
6520.0255	275	2.50	32	100	
6520.0259	300	2.00	32	100	
6520.0262	300	2.50	32	100	
6520.0267	315	2.50	32	100	
6520.0272	350	2.50	32	120	
6520.0275	350	3.00	32	120	

Info When machining aluminium a circular saw blade with bright surface should be selected.

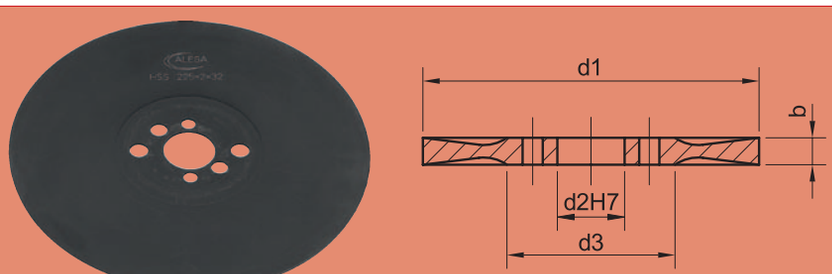
Info The use of coated circular saw blades offers considerably increased tool life and higher metal removal rates.

Info Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/45 + 2/9/50 + 2/11/63

untoothed, steam tempered

6522



Part No	d1 mm	b mm	d2 mm	d3 mm	
6522.0168	175	1.20	32	80	
6522.0174	175	1.50	32	80	
6522.0180	200	1.20	32	100	
6522.0186	200	1.50	32	90	
6522.0193	200	1.80	32	90	
6522.0196	200	2.00	32	90	
6522.0208	225	1.20	32	100	
6522.0211	225	1.60	32	90	
6522.0217	225	2.00	32	90	
6522.0222	225	2.50	32	90	
6522.0228	250	1.60	32	100	
6522.0234	250	2.00	32	100	
6522.0241	250	2.50	32	100	
6522.0251	275	2.00	32	100	
6522.0255	275	2.50	32	100	
6522.0259	300	2.00	32	100	
6522.0262	300	2.50	32	100	
6522.0267	315	2.50	32	100	
6522.0272	350	2.50	32	100	
6522.0275	350	3.00	32	100	

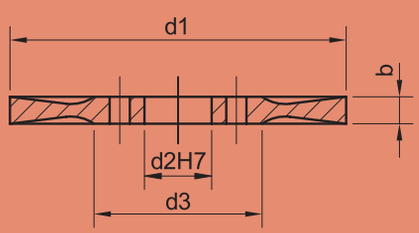
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/45 + 2/9/50 + 2/11/63

untoothed, TiAlN-coated

6525



Part No	d1 mm	b mm	d2 mm	d3 mm	
6525.0196	200	2.00	32	90	
6525.0217	225	2.00	32	90	
6525.0234	250	2.00	32	100	
6525.0255	275	2.50	32	100	
6525.0262	300	2.50	32	100	
6525.0267	315	2.50	32	100	
6525.0272	350	2.50	32	120	

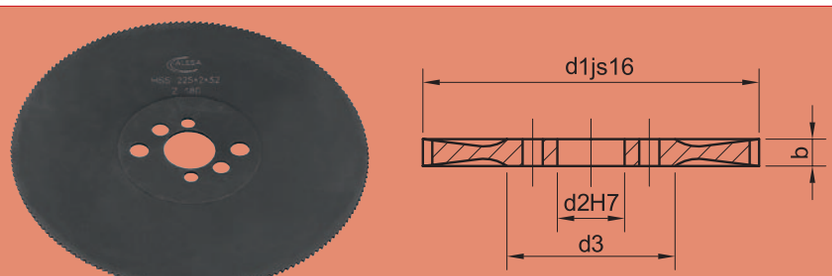
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/45 + 2/9/50 + 2/11/63

curved tooth, type Bw/C, steam tempered

6530



Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6530.0348	175	1.20	32	80	180	3.1	Bw
6530.0349	175	1.20	32	80	130	4.2	Bw
6530.0350	175	1.20	32	80	100	5.5	C
6530.0351	175	1.20	32	80	80	6.9	C
6530.0354	175	1.50	32	80	180	3.1	Bw
6530.0355	175	1.50	32	80	130	3.9	Bw
6530.0356	175	1.50	32	80	100	5.5	C
6530.0357	175	1.50	32	80	80	6.9	C
6530.0360	200	1.20	32	100	200	3.1	Bw
6530.0361	200	1.20	32	100	160	3.9	Bw
6530.0362	200	1.20	32	100	130	4.8	C
6530.0364	200	1.20	32	100	100	6.3	C
6530.0366	200	1.50	32	90	200	3.1	Bw
6530.0367	200	1.50	32	90	160	3.9	Bw
6530.0368	200	1.50	32	90	130	4.8	C
6530.0369	200	1.50	32	90	100	6.3	C
6530.0372	200	1.80	32	90	200	3.1	Bw
6530.0373	200	1.80	32	90	160	3.9	Bw
6530.0374	200	1.80	32	90	130	4.8	C
6530.0375	200	1.80	32	90	100	6.3	C
6530.0376	200	2.00	32	90	200	3.1	Bw
6530.0377	200	2.00	32	90	160	3.9	Bw
6530.0378	200	2.00	32	90	130	4.8	C
6530.0379	200	2.00	32	90	100	6.3	C
6530.0380	200	2.00	32	90	80	7.9	C
6530.0386	225	1.20	32	100	220	3.2	Bw
6530.0387	225	1.20	32	100	180	3.9	Bw
6530.0388	225	1.20	32	100	140	5.0	C
6530.0389	225	1.20	32	100	120	5.9	C
6530.0390	225	1.60	32	90	220	3.2	Bw
6530.0391	225	1.60	32	90	180	3.9	Bw
6530.0392	225	1.60	32	90	140	5.0	C
6530.0393	225	1.60	32	90	120	5.9	C
6530.0397	225	2.00	32	90	220	3.2	Bw
6530.0398	225	2.00	32	90	180	3.9	Bw
6530.0400	225	2.00	32	90	120	5.9	C
6530.0401	225	2.00	32	90	90	7.9	C
6530.0402	225	2.50	32	90	220	3.2	Bw
6530.0403	225	2.50	32	90	180	3.9	Bw
6530.0404	225	2.50	32	90	120	5.9	C
6530.0405	225	2.50	32	90	90	7.9	C
6530.0407	250	1.60	32	100	240	3.3	Bw
6530.0408	250	1.60	32	100	200	3.9	Bw
6530.0409	250	1.60	32	100	160	4.9	C
6530.0410	250	1.60	32	100	128	6.1	C
6530.0414	250	2.00	32	100	240	3.3	Bw
6530.0415	250	2.00	32	100	200	3.9	Bw
6530.0417	250	2.00	32	100	160	4.9	C
6530.0418	250	2.00	32	100	128	6.1	C
6530.0419	250	2.00	32	100	100	7.9	C
6530.0420	250	2.00	32	100	80	9.8	C
6530.0421	250	2.50	32	100	240	3.3	Bw
6530.0422	250	2.50	32	100	200	3.9	Bw
6530.0424	250	2.50	32	100	160	4.9	C
6530.0425	250	2.50	32	100	128	6.1	C

Info The tooth Bw with alternate chamfering splits the chips in one part 2/3 of the blade thickness, which is ideal for cutting tubes and profiles.

Info The curved tooth type C (roughing tooth) is ideal for big sections and deep slots. The roughing tooth is about 0.1 to 0.3 mm higher than the finishing tooth and splits the chips into 3 sections.

HSS circular saw blades – 2/8/45 + 2/9/50 + 2/11/63

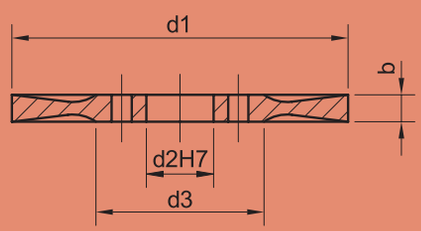
curved tooth, type Bw/C, steam tempered

Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6530.0426	250	2.50	32	100	100	7.9	C
6530.0427	250	2.50	32	100	80	9.8	C
6530.0431	275	2.00	32	100	220	3.9	Bw
6530.0432	275	2.00	32	100	180	4.8	C
6530.0433	275	2.00	32	100	120	7.2	C
6530.0435	275	2.50	32	100	220	3.9	Bw
6530.0436	275	2.50	32	100	180	4.8	C
6530.0437	275	2.50	32	100	120	7.2	C
6530.0439	300	2.00	32	100	220	4.3	Bw
6530.0440	300	2.00	32	100	180	5.2	C
6530.0441	300	2.00	32	100	120	7.9	C
6530.0442	300	2.50	32	100	220	4.3	Bw
6530.0443	300	2.50	32	100	180	5.2	C
6530.0444	300	2.50	32	100	160	5.9	C
6530.0445	300	2.50	32	100	120	7.9	C
6530.0447	315	2.50	32	100	240	4.1	Bw
6530.0448	315	2.50	32	100	200	4.9	C
6530.0449	315	2.50	32	100	160	6.2	C
6530.0450	315	2.50	32	100	120	8.2	C
6530.0452	350	2.50	32	120	220	5.0	C
6530.0453	350	2.50	32	120	160	6.9	C
6530.0454	350	2.50	32	120	120	9.2	C
6530.0455	350	3.00	32	120	160	6.9	C
6530.0456	350	3.00	32	120	120	9.2	C

HSS circular saw blades – 2/8/55 + 4/12/64

untoothed, bright surface

6620



Part No	d1 mm	b mm	d2 mm	d3 mm	
6620.0214	250	2.00	40	100	
6620.0220	250	2.50	40	100	
6620.0244	275	2.00	40	100	
6620.0250	275	2.50	40	100	
6620.0256	275	3.00	40	100	
6620.0262	300	2.50	40	100	
6620.0268	300	3.00	40	100	
6620.0274	315	2.50	40	100	
6620.0282	315	3.00	40	100	
6620.0290	350	2.50	40	120	
6620.0296	350	3.00	40	120	
6620.0302	370	3.50	40	120	
6620.0308	400	3.00	40	120	
6620.0314	400	3.50	40	120	
6620.0320	425	3.50	40	120	

Info When machining aluminium a circular saw blade with bright surface should be selected.

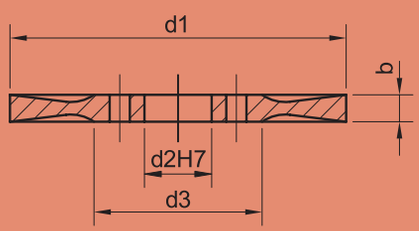
Info The use of coated circular saw blades offers considerably increased tool life and higher metal removal rates.

Info Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/55 + 4/12/64

untoothed, steam tempered

6622



Part No	d1 mm	b mm	d2 mm	d3 mm	
6622.0214	250	2.00	40	100	
6622.0220	250	2.50	40	100	
6622.0244	275	2.00	40	100	
6622.0250	275	2.50	40	100	
6622.0256	275	3.00	40	100	
6622.0262	300	2.00	40	100	
6622.0268	300	3.00	40	100	
6622.0274	315	2.50	40	100	
6622.0282	315	3.00	40	100	
6622.0290	350	2.50	40	120	
6622.0296	350	3.00	40	120	
6622.0302	370	3.50	40	120	
6622.0308	400	3.00	40	120	
6622.0314	400	3.50	40	120	
6622.0320	425	3.50	40	120	

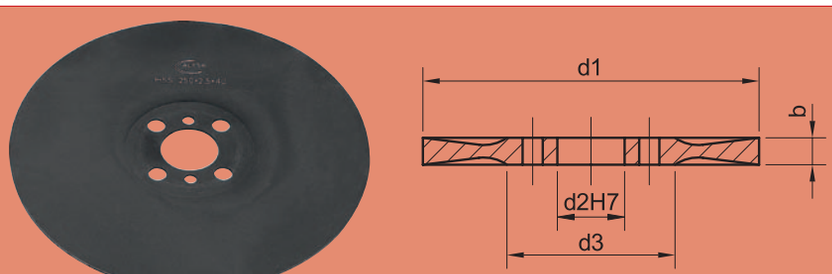
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/55 + 4/12/64

untoothed, TiAlN-coated

6625



Part No	d1 mm	b mm	d2 mm	d3 mm	
6625.0214	250	2.00	40	100	
6625.0250	275	2.50	40	100	
6625.0262	300	2.50	40	100	
6625.0296	350	3.00	40	120	
6625.0314	400	3.50	40	120	

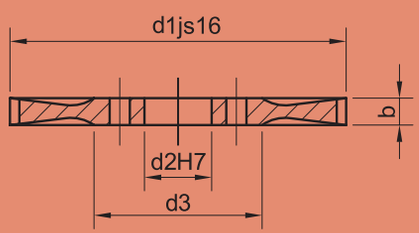
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 2/8/55 + 4/12/64

curved tooth, type Bw/C, steam tempered

6630



Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6630.0395	250	2.00	40	100	200	3.5	Bw
6630.0397	250	2.00	40	100	128	5.5	C
6630.0398	250	2.00	40	100	100	7.1	C
6630.0401	250	2.50	40	100	200	3.5	Bw
6630.0403	250	2.50	40	100	128	5.5	C
6630.0404	250	2.50	40	100	100	7.1	C
6630.0424	275	2.00	40	100	280	3.1	Bw
6630.0425	275	2.00	40	100	220	3.9	Bw
6630.0426	275	2.00	40	100	180	4.8	C
6630.0427	275	2.00	40	100	140	6.2	C
6630.0428	275	2.00	40	100	110	7.9	C
6630.0430	275	2.50	40	100	280	3.1	Bw
6630.0431	275	2.50	40	100	220	3.9	Bw
6630.0432	275	2.50	40	100	180	4.8	C
6630.0433	275	2.50	40	100	140	6.2	C
6630.0434	275	2.50	40	100	110	7.9	C
6630.0437	275	3.00	40	100	120	7.2	C
6630.0438	275	3.00	40	100	110	7.9	C
6630.0439	275	3.00	40	100	90	9.6	C
6630.0442	300	2.50	40	100	220	4.3	Bw
6630.0443	300	2.50	40	100	160	5.9	C
6630.0444	300	2.50	40	100	120	7.9	C
6630.0448	300	3.00	40	100	220	4.3	Bw
6630.0449	300	3.00	40	100	180	5.2	C
6630.0450	300	3.00	40	100	120	7.9	C
6630.0454	315	2.50	40	100	240	4.1	Bw
6630.0455	315	2.50	40	100	160	6.2	C
6630.0456	315	2.50	40	100	120	8.2	C
6630.0457	315	2.50	40	100	100	9.9	C
6630.0458	315	2.50	40	100	80	12.4	C
6630.0462	315	3.00	40	100	240	4.1	Bw
6630.0463	315	3.00	40	100	160	6.2	C
6630.0464	315	3.00	40	100	120	8.2	C
6630.0465	315	3.00	40	100	100	9.9	C
6630.0466	315	3.00	40	100	80	12.4	C
6630.0470	350	2.50	40	120	220	5.0	C
6630.0471	350	2.50	40	120	180	6.1	C
6630.0472	350	2.50	40	120	140	7.9	C
6630.0476	350	3.00	40	120	220	5.0	C
6630.0477	350	3.00	40	120	180	6.1	C
6630.0478	350	3.00	40	120	140	7.9	C
6630.0482	370	3.50	40	120	220	5.3	C
6630.0483	370	3.50	40	120	190	6.1	C
6630.0484	370	3.50	40	120	140	8.3	C
6630.0488	400	3.00	40	120	200	6.3	C
6630.0489	400	3.00	40	120	160	7.9	C
6630.0490	400	3.00	40	120	120	10.5	C
6630.0494	400	3.50	40	120	200	6.3	C
6630.0495	400	3.50	40	120	160	7.9	C
6630.0496	400	3.50	40	120	120	10.5	C
6630.0500 **	425	3.50	40	120	130	10.3	C
6630.0501 **	425	3.50	40	120	96	13.9	C

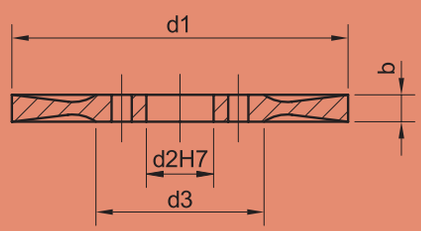
Info The tooth Bw with alternate chamfering splits the chips in one part 2/3 of the blade thickness, which is ideal for cutting tubes and profiles.

Info The curved tooth type C (roughing tooth) is ideal for big sections and deep slots. The roughing tooth is about 0.1 to 0.3 mm higher than the finishing tooth and splits the chips into 3 sections.

** Driving holes: 4/12/64, 2/15/80 and 2/15/100

HSS circular saw blades – 4/15/80 + 4/14/85
untoothed, bright surface

6720



Part No	d1 mm	b mm	d2 mm	d3 mm	
6720.0196	350	2.50	50	120	
6720.0202	350	3.00	50	120	
6720.0214	370	3.00	50	120	
6720.0232	400	3.00	50	120	
6720.0238	400	3.50	50	120	
6720.0244	400	4.00	50	120	
6720.0256	425	3.50	50	120	
6720.0262	450	3.00	50	130	
6720.0268	450	4.00	50	130	

Info When machining aluminium a circular saw blade with bright surface should be selected.

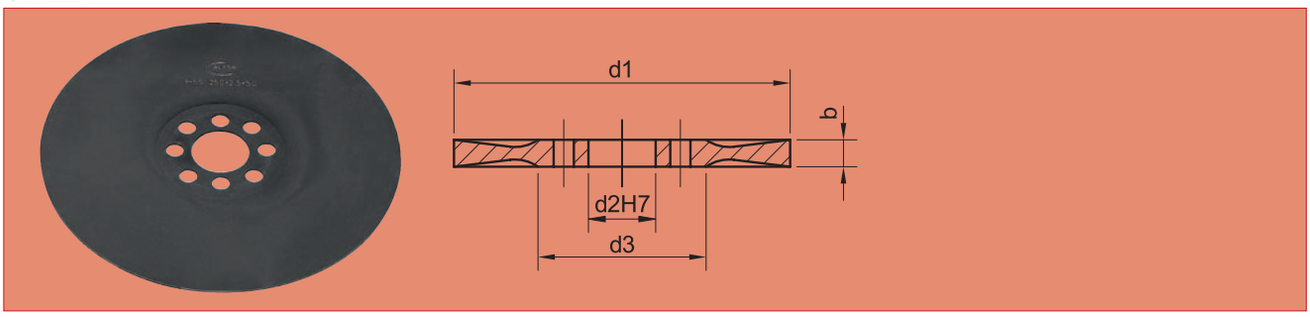
Info The use of coated circular saw blades offers considerably increased tool life and higher metal removal rates.

Info Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 4/15/80 + 4/14/85

untoothed, steam tempered

6722



Part No	d1 mm	b mm	d2 mm	d3 mm	
6722.0196	350	2.50	50	120	
6722.0202	350	3.00	50	120	
6722.0214	370	3.00	50	120	
6722.0232	400	3.00	50	120	
6722.0238	400	3.50	50	120	
6722.0244	400	4.00	50	120	
6722.0256	425	3.50	50	120	
6722.0262	450	3.00	50	130	
6722.0268	450	4.00	50	130	

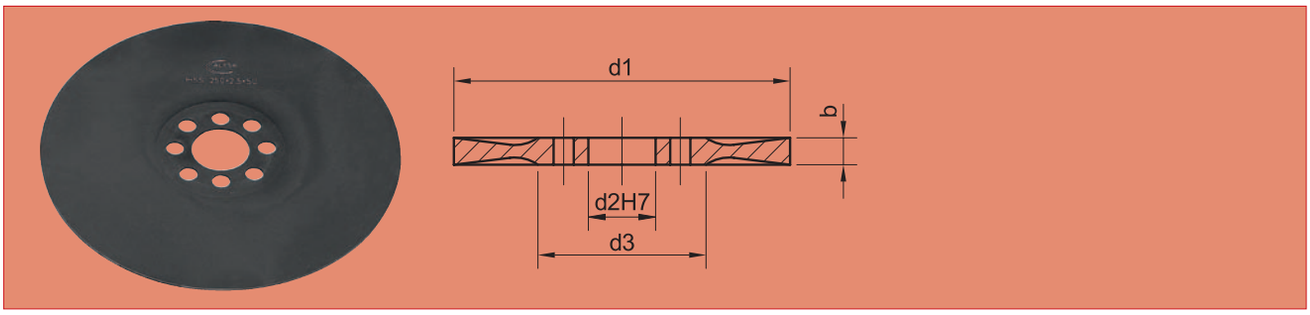
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 4/15/80 + 4/14/85

untoothed, TiAlN-coated

6725



Part No	d1 mm	b mm	d2 mm	d3 mm	
6725.0214	370	3.00	50	120	
6725.0238	400	3.50	50	120	
6725.0256	425	3.50	50	120	

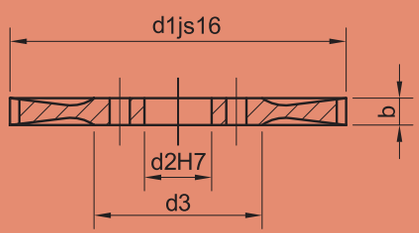
Info

Blanks for circular saw blades can be toothed to your requirements. Possible tooth forms: B, Bw, C (minimal pitch T=3 mm).

HSS circular saw blades – 4/15/80 + 4/14/85

curved tooth, type C, steam tempered

6730



Part No	d1 mm	b mm	d2 mm	d3 mm		Pitch	Toothform
6730.0380	350	2.50	50	120	90	12.2	C
6730.0376	350	2.50	50	120	220	5.0	C
6730.0378	350	2.50	50	120	160	6.9	C
6730.0379	350	2.50	50	120	120	9.2	C
6730.0382	350	3.00	50	120	220	5.0	C
6730.0384	350	3.00	50	120	160	6.9	C
6730.0385	350	3.00	50	120	120	9.2	C
6730.0386	350	3.00	50	120	90	12.2	C
6730.0394	370	3.00	50	120	220	5.3	C
6730.0396	370	3.00	50	120	160	7.3	C
6730.0397	370	3.00	50	120	120	9.7	C
6730.0398	370	3.00	50	120	100	11.6	C
6730.0412	400	3.00	50	120	160	7.9	C
6730.0413	400	3.00	50	120	120	10.5	C
6730.0414	400	3.00	50	120	96	13.1	C
6730.0420	400	3.50	50	120	120	10.5	C
6730.0421	400	3.50	50	120	96	13.1	C
6730.0424	400	4.00	50	120	160	7.9	C
6730.0425	400	4.00	50	120	120	10.5	C
6730.0426	400	4.00	50	120	96	13.1	C
6730.0438	425	3.50	50	120	220	6.1	C
6730.0439	425	3.50	50	120	160	8.3	C
6730.0440	425	3.50	50	120	130	10.3	C
6730.0441	425	3.50	50	120	96	13.9	C
6730.0442	450	3.00	50	130	230	6.1	C
6730.0443	450	3.00	50	130	180	7.9	C
6730.0444	450	3.00	50	130	140	10.1	C
6730.0445	450	3.00	50	130	120	11.8	C

Info The tooth Bw with alternate chamfering splits the chips in one part 2/3 of the blade thickness, which is ideal for cutting tubes and profiles.

Info Due to the large number of cutting edges, circular saw blades are very efficient tools also for slotting.

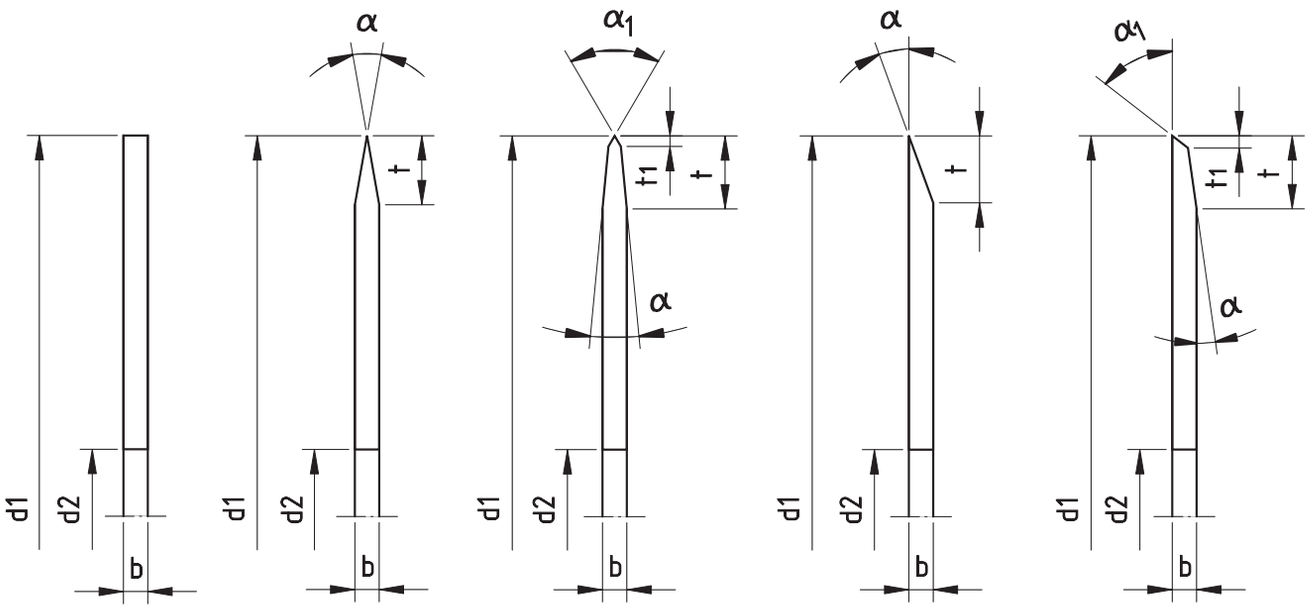
Info The curved tooth type C (roughing tooth) is ideal for big sections and deep slots. The roughing tooth is about 0.1 to 0.3 mm higher than the finishing tooth and splits the chips into 3 sections.

Notes

Circular knives

There are almost innumerable possible profiles of circular knives. We configurate every circular knife according to your individual requirements. We therefore kindly ask you to copy the opposite page, fill it in and fax it to +41 62 7676 282.

Bevel profiles for circular knives



Profile 0–0
without bevel

Profile 1–1
double sided bevel

Profile 2–2
double sided bevel with double sided pre-bevel

Profile 1–0
single bevel

Profile 2–0
single bevel with single pre-bevel

Legend

d1	=	Knife diameter [mm] / ± 0.5 mm
d2	=	Bore diameter [mm] / H7
b	=	Knife width [mm] / ± 0.05 mm
α	=	Bevel angle [°]
α_1	=	Pre-bevel angle [°]
t	=	Bevel length [mm]
t_1	=	Pre-bevel length [mm]

Materials

ALESA circular knives are available in various HSS qualities, high-grade steel or carbide.

Coatings

ALESA offers various coatings for a wide range of applications. We look forward to advice you with the appropriate coating for maximum performance.

Tooth shapes

Almost all tooth profiles are available. Just ask us.

Samples

Circular knives Fax order

Please fill in a copy of this page and fax it to +41 62 7676 282.

❑ Enquiry ❑ Order Date _____

Customer _____ Last name _____

_____ First name _____

Address _____ Phone/fax _____

Place _____ Email _____

Required bevel profile

❑ Profile 0–0 ❑ Profile 1–1 ❑ Profile 2–2 ❑ Profile 1–0 ❑ Profile 2–0 ❑ Profile X*

Dimensions

d1 = _____ mm

d2 = _____ mm

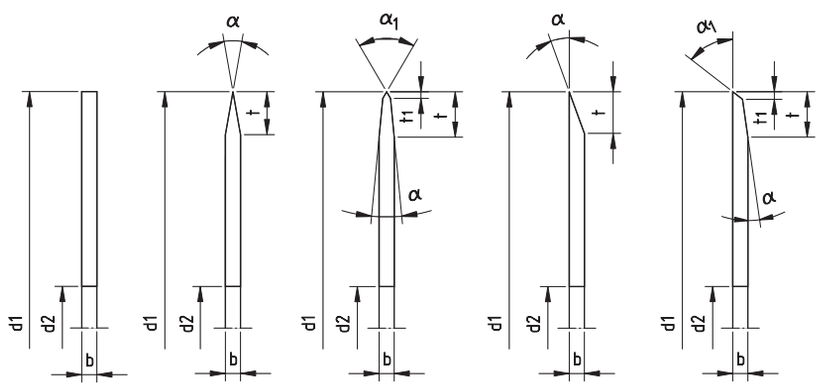
b = _____ mm

α = _____ °

α_1 = _____ °

t = _____ mm

t_1 = _____ mm



Profile 0–0
without bevel

Profile 1–1
double sided bevel

Profile 2–2
double sided bevel with double sided pre-bevel

Profile 1–0
single bevel

Profile 2–0
single bevel with single pre-bevel

Material _____

Coating _____

Quantity (min 2) _____

Delivery date _____

* Sketch of your bevel profile

Notes

Special tools

Your partner for complete engineering solutions!

ALESA Ltd. specialise in the production of circular saw blades from High Speed Steel and Micrograin Carbide. These are precision ground to produce highly positive geometries with extremely sharp cutting edges that are specifically designed to offer engineering solutions when machining difficult materials or when operating in unfavourable conditions.

Special dimensions

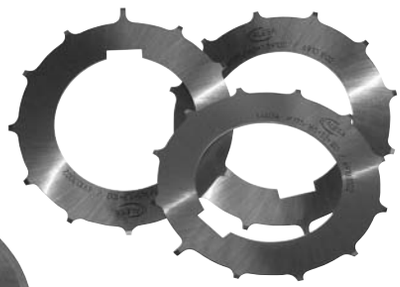
Standard tools can be modified to suit customers specific requirements.
Carbide-circular saw blades
DIN1837/38 are available with diameters of 20 mm to 200 mm and with widths from 0.2 mm to 3 mm.

Special application

Perforating knives or circular knives:
Circular knives can be used for a variety of different applications: e.g. synthetic ribbons, paper, textiles, and so forth. If you have any processing problems, we consider it our duty to be able to offer a solution. Our development department welcomes the challenge of producing special tools to individual requirements or customer drawings.

Special tools – examples

Special circular knives

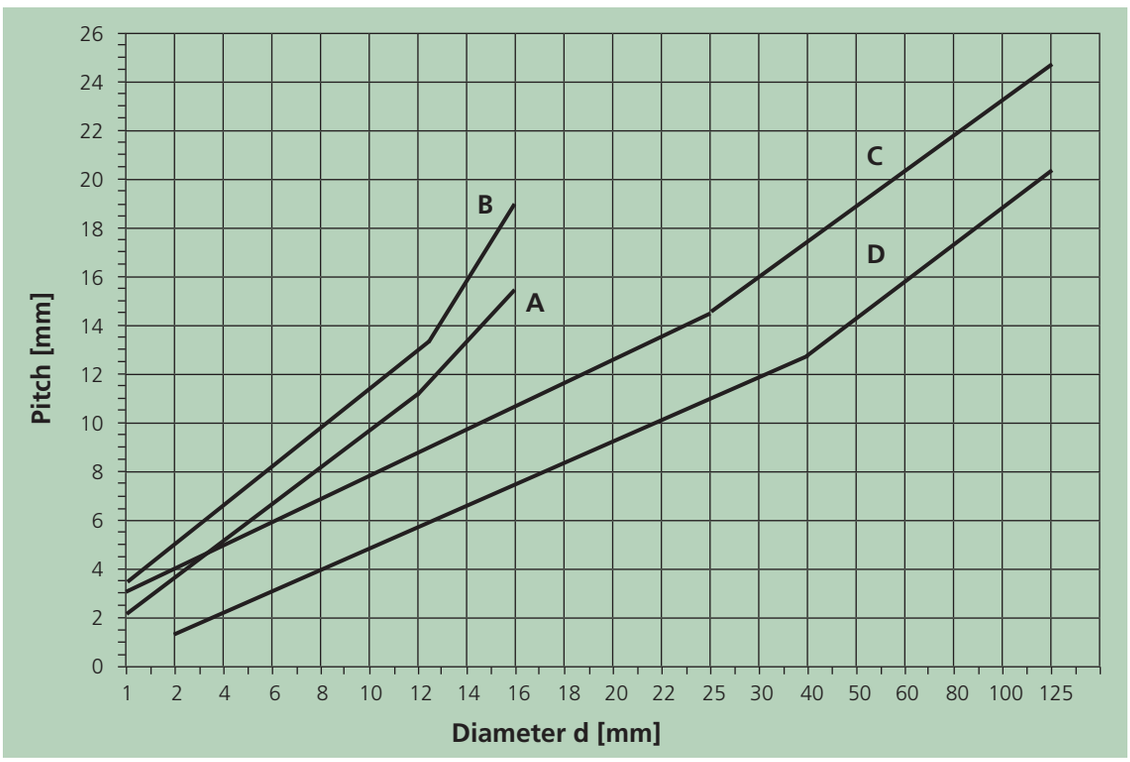


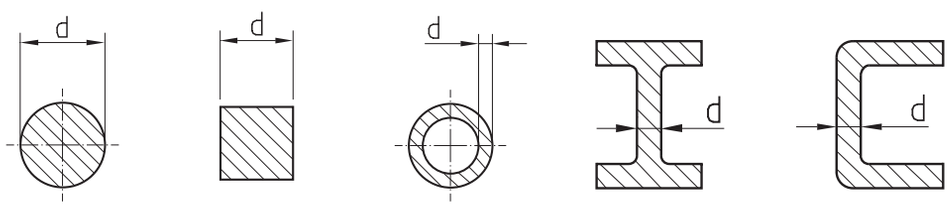
Special saw blades out of the Nutex-family

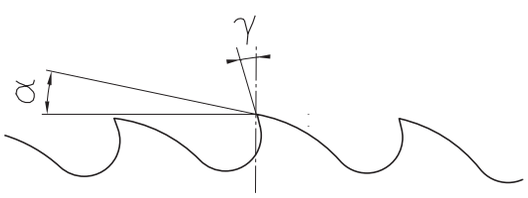
Special milling tools

Tooth pitch selector and cutting geometries

Cutting-off with HSS-circular saw blades







Slotting (cutting-off)

To remain above an average chip thickness of **hm = 0.01 mm**, the feed rate should remain above the following values:

a_e/D:	0.01	0.02	0.04	0.06	0.10	0.30
Min.-f_z:	0.10	0.07	0.05	0.04	0.03	0.02

			Cutting geometries		Pitch see diagram	
Material classification			Rake angle γ	Clearance angle α	Profiles/tubes	Full material
1, 2	Steel	< 800 N/mm²	**16°–20°**	**8°–10°**	**B**	**D**
3	Steel	800 N/mm²–1200 N/mm²	**12°–16°**	**6°–8°**	**C**	**D**
3, 4	Grey cast iron		**10°–14°**	**6°–8°**		**D**
7	Copper		**20°–25°**	**10°–12°**	**B**	**C**
8	Bronze		**6°–10°**	**5°–7°**	**B**	**C**
7	Brass, zinc alloy		**12°–16°**	**6°–8°**	**A**	**D**
9÷11	Aluminium alloy		**22°–28°**	**10°–12°**	**B**	**C**

Info When selecting the appropriate circular saw blade, the correct tooth pitch is an important factor for achieving good results. (General rule: 2–3 teeth in contact)

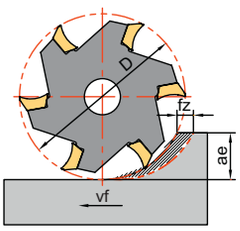
Average chip thickness hm for saw blades

The average chip thickness hm

The average chip thickness hm must be calculated (see formula to the right) and stays in direct relation of tool diameter (D), radial engagement (ae) and feed per tooth (fz).

$$h_m \approx f_z \cdot \sqrt{\frac{a_e}{D}}$$

$$f_z \approx h_m \cdot \sqrt{\frac{D}{a_e}}$$



ALESA hm sheet for saw blades and side milling cutters

Material / Tool	Alu. (< 6%Si) & Copper	400–650 N/mm²	650–800 N/mm²	800–1200 N/mm²	over 1200 N/mm²	Nickel based & Titanium alloys
HSS tools						
Side milling cutter	0.020 – 0.040	0.015 – 0.035	0.015 – 0.030	0.010 – 0.020	–	0.010 – 0.020
DIN saw blade	0.020 – 0.035	0.015 – 0.030	0.015 – 0.025	0.010 – 0.020	–	0.010 – 0.020
Nutex Mini	0.020 – 0.030	0.015 – 0.020	0.010 – 0.018	0.010 – 0.015	–	0.010 – 0.015
Nutex	0.020 – 0.035	0.015 – 0.030	0.015 – 0.025	0.010 – 0.020	–	0.010 – 0.020
Nutex Plus	0.020 – 0.030	0.015 – 0.020	0.010 – 0.018	0.010 – 0.015	–	0.010 – 0.015
Carbide tools						
DIN saw blade	0.015 – 0.035	0.010 – 0.025	0.010 – 0.020	0.010 – 0.016	0.010 – 0.014	0.010 – 0.018
Nutex Mini	0.015 – 0.030	0.010 – 0.020	0.010 – 0.015	0.010 – 0.012	0.008 – 0.012	0.008 – 0.012
Nutex	0.015 – 0.035	0.010 – 0.025	0.010 – 0.020	0.010 – 0.016	0.010 – 0.014	0.010 – 0.018
Nutex Plus	0.015 – 0.030	0.010 – 0.020	0.010 – 0.015	0.010 – 0.012	0.008 – 0.012	0.008 – 0.012
Tool width (ap) < 1 mm						
$hm = hm_{(max)} \bullet ap \bullet x$	x = 0.40	x = 0.45	x = 0.55	x = 0.65	x = 0.70	x = 0.60

The above mentioned hm values are only valid while using ALESA tools and the ALESA «cutting calculation» programme.

Teeth and cutting angles

A (DIN 1837) toothforms are normally used in **fine machining operations** and jewellery. This type of teeth is normally used on thin blades with **pitch range from 0.8 to 3.0 mm.** These blades have sharp cutting edges. The chip clearance is reduced.

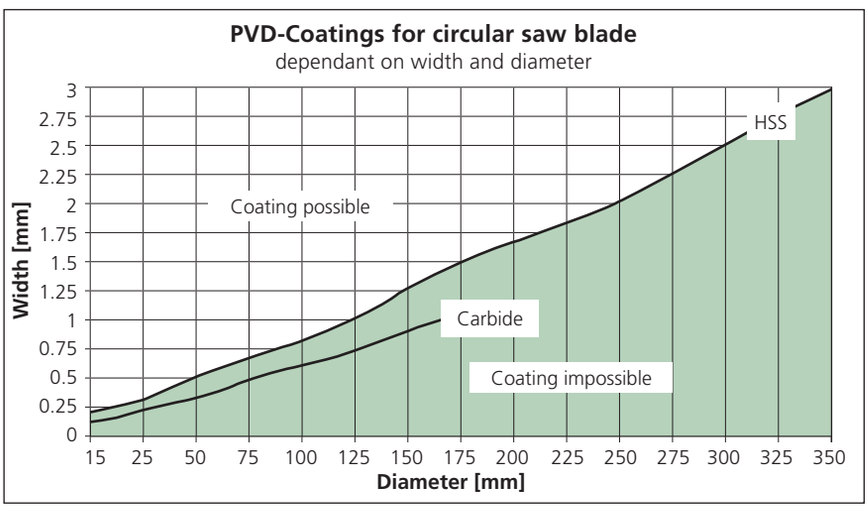
B and Bw (DIN 1838) toothforms are the most common used on cut-off machines saws to cut **ferrous materials.** They have a **larger chip clearance** and allow to cut **thicker materials.** With Bw teeth (alternatively bevelled teeth) the chip is in one part 2/3 of the blade thickness. We suggest using this tooth-form **to cut tubes and profiles** with section up to 3–4 mm.

The C tooth-form differ significant from the tooth form B. Every second tooth, also known as trapezoidal tooth, is **0.1 - 0.3mm higher** than the following flat tooth. This "C" tooth-form has the characteristic of **splitting the chip into three parts**. Each chip fragment is about 1/3 of the blade thickness.
We recommend this tooth form to cut **large cross sections**. One positive function of the trapezoidal tooth is the leading grove to achieve more straight cuts with very large saws.
The smaller chip fragments have an additional effect on the easy chip removal and they are clogging the teeth less.

Hard coatings: range and information

ALESA coatings are designed to offer maximum protection against thermal and mechanical stresses. The PVD hard coatings offer longer tool life and reduced cycle times leading to increased profitability.

Selecting the correct coating increases tool life and metal removal rates considerably.



Possible coatings and surface treatments

Steam tempering is the most common method of surface treatment for circular saws. This is not a PVD-coating, but a controlled surface oxidation, by vaporizing the tool in a chamber with a temperature of more than 500°C. The result of this method is an iron oxide coating (Fe_3O_4) on the surface of the saw blade, which improves the sliding characteristics.

With the **TiN coating** saws achieve a surface hardness of more than 2300 HV. Increased cutting speeds with constant feed rate per tooth give an important reduction of the machining time. As a result of this a cost reduction can be achieved.

The PVD-coating **TiAlN** on HSS with a surface hardness of 3000 HV is the ideal coating for cutting tough materials such as stainless steels, brass and copper. This coating is suitable for cutting-off even when cooling is insufficient.

For carbide tools: PVD-coatings based on **AlCrN** showed best results.
Besides the surface hardness of approx. 3200 HV AlCrN-coatings have an improved application temperature and a good ply adhesion.
AlCrN is perfect for material classification 1, 2 & 3.
We recommend **AlCrN-VAT** for Duplex-materials, Material classification 5 and Cobalt-based alloys.

The **DLC-H** coating is very hard with more than 5000 HV. It is a very smooth coating with a low sticking effect of the chips. It has a very low friction coefficient.
As a thin layer coating it maintains the sharp ground cutting edges.

IMPORTANT: This coating is for NON – FERRITIC alloys ONLY as

- Copper, Tin, Lead, Silver, Gold, Platinum
- Alum-alloys and -cast with up to 12% Silicon
- GFK and CFK and organic materials as wood and paper

Recommended for application with characteristic abrasion und adhesion behaviour.

Range of coatings for circular saw blades

	Material classification	HSS		Carbide					
		TiN	TiAlN	TiAlN	AlCrN	AlCrN-VAT	DLC-H		special coating
1a	**Steels < 650 N/mm²** - Construction steels - Fine grain steels - Case hardening steels - Steel castings	●	●	●	●				
1b	**Steels < 800 N/mm²** - Construction steels - Fine grain steels - Case hardening steels - Free-cutting steels - Heat-treatable steels - High-temperature constructional steels - Tough at subzero steels - Nitriding steels - Tool steels	●	●	●	●				
1c	**Steels 800 - 1200 Nmm²** - Heat-treatable steels - High-temperature constructional steels - Tough at subzero steels - Nitriding steels - Tool steels - High speed steels - Heat-resisting steels		○	●	●				
1d	**Steels > 1200 N/mm²** - Heat-treatable steels - Nitriding steels - Tool steels - High speed steels			○	●				
2a	**Stainless steels < 800 N/mm²**	●	●	●	●	●			
2b	**Stainless steels > 800 N/mm²**		●	○	●	●			
3a	**Castings 1** - Grey cast iron < 150 HB - Cast iron with spheroidal graphite < 200 HB - Malleable cast iron < 200 HB - Magnesium cast alloy		○	●	●				
3b	**Castings 2** - Grey cast iron tempered > 150 HB - Cast iron with spheroidal graphite temp. > 200 HB - Malleable cast iron tempered > 200 HB			●	●				
3c	**Castings 3**: Steel castings < 800 N/mm²		○	●	●				
3d	**Castings 4:** Steel castings 800 - 1200 N/mm²		○	○	●	●			
3e	**Aluminium cast material > 6% Si**			●	●		●		
4a	**Non-ferrous metal:** Copper and copper-tin alloys	●	○	●	○		●		
4b	**Non-ferrous metal** - Copper-forging alloys - Copper-tin alloys (bronze)	●	●	●	●		●		
4c	**Non-ferrous metal** - Pure aluminium - Non hardened aluminium	●	●	●	●		●		
4d	**Non-ferrous metal:** Hardened aluminium	●	●	●	●		●		
4e	**Aluminium cast material < 6% Si**	●	●	●	●		●		
5a	**Non-alloyed Ni / Ti < 650 N/mm²**		●	○	●	●			●
5b	**Ni-/Ti-based alloys < 900 N/mm², Duplex**		●	○	●	●			●
5c	**Ni-/Ti-based alloys 900 - 1200 N/mm²**			○	●	●			●
6a	**Synthetic material - Thermoplast**	●	●	●	●		●		
6b	**Synthetic material - Duroplast** - Duroplast non laminated - Duroplast laminated	●	●	●	●		●		

Driving holes of various sawing machines

Machines	d_1	d_2	driving holes
ADIGE SALA	200–250	32	4/9/50
	275–315	32	2/11/63
	350	40	4/12/64
	400–425	50	4/15/80
BAIER	175–250	32	4 slots
BEWO	250–300	32	2/8/45 man.
	315	40	2/8/55 man.
	350	40	4/11/63 man.
	315	40	4/11/63 autom.
BIMAX	175–300	32	2/8/45+2/11/63
BONAK	250–350	40	2/8/55+4/12/64
BROBO WALDOWN	250	32	2/11/63
	300–400	40	2/8/55+4/12/64
	500	40	2/12/64+2/12/80
CONNI	250–425	40	4/11/63
	400–425	50	4/15/80
DEMURGER	200–250	32	2/8/45+2/11/63
	225–300	40	2/8/55+4/11/63
DORINGER	315–350	40	2/12/64
EISELE	110	22	
	210–225	40	2/8/55
	250–350	40	2/8/55+4/12/64
	370–450	40	2/12/64+2/15/80
	500	40	2/15/80+2/15/100
FABRIS	225–350	32	2/8/45+2/11/63
FEMI	225–315	32	2/8/45+2/11/63
FONG-HO	250–275	32	2/8/45+2/9/50+2/11/63
	300–400	32	4/11/63
	360	40	2/11/63+3/11/65
GERNETTI	250–350	40	4/11/63
	350	50	4/15/80
	500	50	4/18/100
HAEBERLE	225–315	40	2/8/55
	350–450	40	2/8/55+4/12/64
IBP PEDRAZZOLI	200–350	32	2/11/63
	425–500	50	4/15/80
IMET	250–350	32	2/8/45+2/11/63
	315–350	40	2/8/55+4/12/64
KALTENBACH	225–250	32	–
	350–370	50	4/15/80
KASTO	315–350	40	4/11/63
	400–450	50	4/15/80
MACO	425	50	4/15/80
MAIR	300–350	32	2/8/45+2/11/63
	300–350	40	2/8/55+4/12+64
MEP	225–350	32	2/8/45+2/11/63
METORA	250–350	32	2+2 Universall.
OMES	250–300	32	2/8/45+2/11/63
O.M.P.	250–370	32	2/8/45+2/11/63
	400–525	50	4/15/80
R.G.A.	275–370	40	2/8/55+2/11/63

Machines	d_1	d_2	driving holes
ROBEJO	250–350	32	2/8/45+2/11/63
ROHBI	175–250	32	2/8/45
SCOTCHMAN IND.	250–300	32	2/8/45+2/11/63
	275–350	40	2/8/55+4/12/64
SIMEC	250–350	32	4/11/63
SINICO	350	32	2/8/45+2/11/63
SOCO	250–350	32	2/11/63
STARTRITE	250	32	2/9/56
	300–315	32	2/11/80
STAYER	225	32	–
THOMAS	225–350	32	2/8/45+2/11/63
TOMET	250–315	32	2/8/45+2/11/63
TRENNJAEGER	250–275	40	4/11/63
	315–400	50	4/14/85
ULMIA	160–250	32	
	250–400	40	4/11/63
VIEMME	250–350	32	2/8/45+2/11/63
WAGNER	200–315	32	4/9/50
	350	50	4/14/80
WAHLEN	250–400	40	2/8/55+2/11/63
WEIDMANN	210–275	32	2/8/45
WINTER	250–315	40	2/8/55+4/11/63
WUNSCH	210–250	32	2/8/45
	210–400	40	2/8/55+4/12/64

Cutting speed v_c [m/min] - HSS and Carbide

Circular saws DIN / Side milling cutters / Nutex-tools

Material classification		HSS uncoated	HSS coated	Carbide uncoated	Carbide coated
		v_c [m/min]	v_c [m/min]	v_c [mm]	v_c [mm]
1a	**Steels < 650 N/mm²** - Construction steels - Fine grain steels - Case hardening steels - Steel castings	40 - 60	60 - 95	120 - 200	160 - 250
1b	**Steels < 800 N/mm²** - Construction steels - Fine grain steels - Case hardening steels - Free-cutting steels - Heat-treatable steels - High-temperature constructional steels - Tough at subzero steels - Nitriding steels - Tool steels	30 - 45	50 - 75	100 - 160	120 - 200
1c	**Steels 800 - 1200 Nmm²** - Heat-treatable steels - High-temperature constructional steels - Tough at subzero steels - Nitriding steels - Tool steels - High speed steels - Heat-resisting steels	20 - 35	30 - 55	80 - 130	95 - 160
1d	**Steels > 1200 N/mm²** - Heat-treatable steels - Nitriding steels - Tool steels - High speed steels	15 - 25	20 - 40	60 - 100	70 - 120
2a	**Stainless steels < 800 N/mm²**	20 - 35	30 - 55	80 - 130	95 - 160
2b	**Stainless steels > 800 N/mm²**	15 - 25	20 - 40	60 - 100	70 -120
3a	**Castings 1** - Grey cast iron < 150 HB - Cast iron with spheroidal graphite < 200 HB - Malleable cast iron < 200 HB - Magnesium cast alloy	30 - 45	50 - 75	100 - 160	120 - 200
3b	**Castings 2** - Grey cast iron tempered > 150 HB - Cast iron with spheroidal graphite temp. > 200 HB - Malleable cast iron tempered > 200 HB	20 - 35	30 - 55	80 - 130	95 - 160
3c	**Castings 3**: Steel castings < 800 N/mm²	20 - 35	30 - 55	100 - 160	120 - 200
3d	**Castings 4:** Steel castings 800 - 1200 N/mm²	15 - 25	30 - 55	80 - 130	95 - 160
3e	**Aluminium cast material > 6% Si**	120 - 200	200 - 320	150 - 300	200 - 500
4a	**Non-ferrous metal:** Copper and copper-tin alloys	120 - 250	190 - 400	200 - 400	1000-1800
4b	**Non-ferrous metal** - Copper-forging alloys - Copper-tin alloys (bronze)	40 - 120	65 - 195	150 - 400	180 - 480
4c	**Non-ferrous metal** - Pure aluminium - Non hardened aluminium	800 - 1400	1200 - 2000	800 - 1600	1000 - 2000
4d	**Non-ferrous metal:** Hardened aluminium	400 - 600	600 - 950	600 - 1000	1000 - 1500
4e	**Aluminium cast material < 6% Si**	400 - 600	600 - 950	400 - 600	600 - 1000
5a	**Non-alloyed Ni / Ti < 650 N/mm²**	30 - 45	50 - 75	60 - 100	70 -120
5b	**Ni-/Ti-based alloys < 900 N/mm², Duplex**	15 - 25	20 - 40	25 - 60	30 - 75
5c	**Ni-/Ti-based alloys 900 - 1200 N/mm²**	10 - 15	15 - 25	20 - 40	25 - 50
6a	**Synthetic material - Thermoplast**	100 - 150	160 - 250	150 - 300	200 - 500
6b	**Synthetic material - Duroplast** - Duroplast non laminated - Duroplast laminated	60 - 100	95 - 160	80 - 250	100 - 500

Allocation of the materials

Material	Tensile strength	DIN-No.	DIN-Code	Euronorm EN	AFNOR	B.S.	AISI SAE	Material classification
Construction steels	< 650 N/mm²	1.0032	St34-2	S25GT				1a
		1.0035	St33	S185	A 33	Fe 310-0	A283 Gr.A	
		1.0037	St37-2	S 235 JR	E 24-2	Fe 360 B	A283 Gr.C, 1015	
		1.0044	St44-2	S 275 JR	E 28-2	Fe 430 B FN	A570 Gr.40, 1020	
		1.0570	St52-3	S 355 J2 G3				
	< 800 N/mm²	1.0050	St50-2	E 295	A 50-2	Fe 490-2, 50C	A570 Gr.50	1b
		1.0060	St60-2	E 335	A 60-2	Fe 590-2 FN	A572 Gr.65	
Fine grain steels	< 650 N/mm²	1.0970	QStE 260 N	S 260 MC				1a
		1.0974	QStE 340 TM	S 340 MC				
		1.0978	QStE 380 TM	S 380 MC				
		1.0980	QStE 420 TM	S 420 MC				
	< 800 N/mm²	1.0982	QStE 460 TM	S 460 MC				1b
		1.0984	QStE 500 TM	S 500 MC				
		1.0986	QStE 550 TM	S 550 MC				
Free-cutting steels	< 800 N/mm²	1.0711	9S20	10S20		220M07	1112	1b
		1.0715	9SMn28	9SMn28	S 250	230M07	1213	
		1.0718	9SMnPb28	11SMnPb30	S 250 Pb		12L13	
		1.0722	10SPb20	10SPb20	10 PbF 2		11L08	
		1.0726	35S20	35S20	35 MF 6	212M36	1140	
		1.0737	9SMnPb36	11SMnPb37	S 300 Pb		12L14	
Case hardening steels	< 650 N/mm²	1.0301	C10	C10	C 10; XC 10	045M10	1010	1a
		1.0302	C10Pb	C10	AF34C10	045M10	1010	
		1.0401	C15	S15R	XC18, AF37C12	080M15	1015	
		1.1121	Ck10	2C10 E	XC10	040A10	1010	
		1.1141	Ck15	C15E , 32C	XC12	080M15	1015	
		1.7131	16MnCr5	EN 10084:2008-06	16MC4; 16MnCr5	527M20	5115	
	< 800 N/mm²	1.5752	14NiCr14	ECN 35, 36A	12NC15; 14NC12	655M13,655A12	3415; 3310	1b
		1.5919	15CrNi6	15CrNi6	16NC6		3115	
		1.5920	18CrNi8	18CrNi8	20NC6			
		1.6587	17CrNiMo6	18CrNiMo7-6	18NCD6	820A16		
Heat-treatable steels	< 800 N/mm²	1.1151	Ck22	C22E	XC25	055M15	1023	1b
		1.1181	Ck35	C35E	XC38H2	080A35	C1034	
		1.1191	Ck45	C45E	XC42H1, XC45	080M46	1045	
		1.1221	Ck60	C60E, 43D	C60; XC60	060A62	1060	
		1.7218	25CrMo4	25CrMo4	25CD4	708A25	4130	
		1.7220	34CrMo4	19B, 34CrMo4	35CD4	708A37	4137; 4135	
		1.7225	42CrMo4	19A, 42CrMo4	42CD4	709M40	4140, 4142	
		1.7228	50CrMo4	50CrMo4	50CrMo4	708A47	4150	
	800-1200 N/mm²	1.0601	C 60	C60	CC55	080A62	1060	1c
		1.0966	QStE 690 TM	S 700 MC				
		1.7218	25CrMo4	25CrMo4	25CD4	708A25	4130	
		1.7220	34CrMo4	19B, 34CrMo4	35CD4	708A37	4137; 4135	
		1.7225	42CrMo4	19A, 42CrMo4	42CD4	709M40	4140, 4142	
		1.7228	50CrMo4	50CrMo4	50CrMo4	708A47	4150	
		1.5864	35NiCr8	35NiCr18	40NC17			
		1.6580	30CrNiMo8	30CrNiMo8	30CND8	823M30		
		1.6582	34CrNiMo6	EN24T, 34CrNiMo6	35NCD6	816M40; 817M40	4340, 4337	
		1.7361	32CrMo12	40B	30CD12	722M24		
		1.7707	30CrMoV9	30CrMoV9				
		1.8161	58CrV4	58CrV4		526M60		
	> 1200 N/mm²	1.7218	25CrMo4	25CrMo4	25CD4	708A25	4130	1d
		1.7220	34CrMo4	19B, 34CrMo4	35CD4	708A37	4135; 4137	
		1.7225	42CrMo4	19A, 42CrMo4	42CD4	709M40	4140; 4142	
		1.7228	50CrMo4	50CrMo4	50 CrMo 4	708A47	4150	
		1.5864	35NiCr8	35NiCr18	40NC17			
		1.6580	30CrNiMo8	30CrNiMo8	30CND8	823M30		
		1.6582	34CrNiMo6	EN24T, 34CrNiMo6	35NCD6	816M40; 817M40	4340, 4337	
		1.7361	32CrMo12	40B	30CD12	722M24		
		1.7707	30CrMoV9	30CrMoV9				
		1.8161	58CrV4	58CrV4		526M60		
High-temperature constructional steels	< 800 N/mm²	1.0482	19Mn5	P 310 GH				1b
		1.4922	X20CrMoV12-1	SEW310		762	416C	
		1.5406	17MoV8 4	17MoV8-4				
		1.6513	28NiCrMo4	110	40NCD3	816M40	9840	
		1.8070	21CrMoV5 11	21CrMoV5-11				
	> 800 N/mm²	1.0482	19Mn5	P 310 GH				1c
		1.4922	X20CrMoV12-1	SEW310		762	416C	
		1.5406	17MoV8 4	17MoV8-4				
		1.6513	28NiCrMo4	110	40NCD3	816M40	9840	
		1.8070	21CrMoV5 11	21CrMoV5-11				
Tough at subzero steels	< 800 N/mm²	1.6900	X12CrNi189					1b
		1.7219	26CrMo4	26CrMo4			4130, 4130H	
	> 800 N/mm²	1.6900	X12CrNi189					1c
		1.7219	26CrMo4	26CrMo4			4130, 4130H	
Nitriding steels	< 800 N/mm²	1.8504	34CrAl6					1b
		1.8506	31CrAlS5					
	800-1200 N/mm²	1.8507	34CrAlMo5	34CrAlMo5-10	30CAD6-12		A355Cl-D	1c
		1.8515	31CrMo12	31CrMo12	30CD12	722M24		
		1.8519	31CrMoV9	31CrMoV9				
		1.8523	39CrMoV13-9	39CrMoV13-9	40CDV12	897M39, 3S132		
		1.8550	34CrAlNi7	34CrAlNi7				
	> 1200 N/mm²	1.8523	39CrMoV139	39CrMoV13-9	40CDV12	897M39, 3S132		1d
		1.8550	34CrAlNi7	34CrAlNi7				
Tool steels	< 800 N/mm²	1.2056	90Cr3	90Cr3				1b
		1.2162	21MnCr5	21MnCr5				
		1.2363	X100CrMoV5-1	X100CrMoV5-1	Z100CDV5	BA2	A2	
		1.2519	110WCrV5	110WCrV5				
		1.2823	70Si7	70Si7				
	800-1200 N/mm²	1.2080	X210Cr12	X210Cr12	Z200C12	BD3	D3	1c
		1.2311	40CrMnMo7	40CrMnNiMo8-6	40CMD8			
		1.2312	40CrMnMoS86	40CrMnNiMoS8-6-4	40CMD8S			
		1.2344	X40CrMoV5-1	X40CrMoV5-1	Z40CDV5	BH13	H13	

Allocation of the materials

Material	Tensile strength	DIN-No.	DIN-Code	Euronorm EN	AFNOR	B.S.	AISI SAE	Material classification
		1.2379	X155CrVMo12-1	X155CrVMo12-1	32CDV12-28	BD2	D2	1c
		1.2436	X210CrW12	X210CrW12	X210CW12-01		D6	
		1.2567	X30WCrV5 3	X30WCrV5-3	X32WCRV5			
		1.2678	X45CoCrWV555	X45CoCrWV5-5-5				
		1.2713	55NiCrMoV6	55NiCrMoV6	55NCD7	BH224/5	L6	
		1.2714	56NiCrMoV7	55NiCrMoV7			6F3	
		1.2743	60NiCrMo124	60NiCrMoV12-4				
		1.2766	35NiCrMo16	35NiCrMo16	35NCD16	BP30		
	> 1200 N/mm²	1.2080	X210Cr12	X210Cr12	Z200C12	BD3	D3	1d
		1.2311	40CrMnMo7	40CrMnNiMo8-6	40CMD8			
		1.2312	40CrMnMoS86	40CrMnNiMoS8-6-4	40CMD8S			
		1.2344	X40CrMoV5-1	X40CrMoV5-1	Z40CDV5	BH13	H13	
		1.2379	X155CrVMo12-1	X155CrVMo12-1	32CDV12-28	BD2	D2	
		1.2436	X210CrW12	X210CrW12	Z210CW12-01		D6	
		1.2567	X30WCrV5 3	X30WCrV5-3	X32WCRV5			
		1.2678	X45CoCrWV555	X45CoCrWV5-5-5				
		1.2713	55NiCrMoV6	55NiCrMoV6	55NCDV7;	BH224/5	L6	
		1.2714	56NiCrMoV7	55NiCrMoV7			6F3	
		1.2743	60NiCrMo124	60NiCrMoV12-4				
		1.2766	35NiCrMo16	35NiCrMo16	35NCD16	BP30		
High speed steels	800-1200 N/mm²	1.3207	S10-4-3-10	HS 10-4-3-10	Z130WKCDV	BT42		1c
		1.3243	S6-5-2-5	HS 6-5-2-5	Z85WDKCV	BM35		
		1.3247	S2-10-1-8	HS 2-10-1-8	Z110DKCWV	BM42	M42	
		1.3343	S6-5-2	HS 6-5-2	Z85WDCV	BM2	M2 CLASS 1	
	> 1200 N/mm²	1.3207	S10-4-3-10	HS 10-4-3-10	Z130WKCDV	BT42		1d
		1.3243	S6-5-2-5	HS 6-5-2-5	Z85WDKCV	BM35		
		1.3247	S2-10-1-8	HS 2-10-1-8	Z110DKCWV	BM42	M42	
		1.3343	S6-5-2	HS 6-5-2	Z85WDCV	BM2	M2 CLASS 1	
Steel castings	< 700 N/mm²	1.0416	GS-38	EN 10016-2:1995-04	230-400 M			1a
		1.0446	GS-45	GE 240	E23-45 M	A1		
		1.0552	GS-52	S355 JRC		A2		
	< 800 N/mm²	1.5919	GS-15CrNi6	15CrNi6	16NC6		3115	3c
		1.7218	GS-25CrMo4	25CrMo4	25CD4	708A25	4130	
		1.7220	GC-34CrMo4	19B, 34CrMo4	35CD4	708A37	4137; 4135	
		1.7379	GS-18CrMo910	G17CrMo9-10		622		
	800-1200 N/mm²	1.0416	GS-38	EN 10016-2:1995-04	230-400 M			3d
		1.0446	GS-45	GE 240	E23-45M	A1		
		1.0552	GS-52	S355 JRC		A2		
		1.5919	GS-15CrNi6	15CrNi6	16NC6		3115	
		1.7218	GS-25CrMo4	25CrMo4	25CD4	708A25	4130	
		1.7220	GS-34CrMo4	19B, 34CrMo4	35CD4	708A37	4137; 4135	
		1.7379	GS-18CrMo910	G17CrMo9-10		622		
Grey cast iron	< 150 HB	0.6015	GG-15	EN-GJL-150	Ft 15 D	Grade 150	No 25B	3a
		0.6020	GG-20	EN-GJL-200	Ft 20 D	Grade 220	No 30B	
		0.6025	GG-25	EN-GJL-250	Ft 25 D	Grade 260	No 35B	
		0.6030	GG-30	EN-GJL-300	Ft 30 D	Grade 300	No 45B	
Grey cast iron tempered	> 150 HB	0.6015	GG-15	EN-GJL-150	Ft 15 D	Grade 150	No 25B	3b
		0.6020	GG-20	EN-GJL-200	Ft 20 D	Grade 220	No 30B	
		0.6025	GG-25	EN-GJL-250	Ft 25 D	Grade 260	No 35B	
		0.6030	GG-30	EN-GJL-300	Ft 30 D	Grade 300	No 45B	
Cast iron with spheroidal graphite	< 200 HB	0.7040	GGG-40	EN-GJS-400-15	FCS 400-12	SNG 420/12	60-40-18	3a
		0.7050	GGG-50	EN-GJS-500-7	FGS 500-7	SNG 500/7	65-54-12	
		0.7060	GGG-60	EN-GJS-600-3	FGS 600-3	SNG 600/3	80-55-06	
Malleable cast iron	< 200 HB	0.8035	GTW-35-04	EN-GJS-800-2				3a
		0.8040	GTW-40-05	EN-GJS-800-2				
		0.8045	GTW-45-07	EN-GJS-800-2				
		0.8135	GTS-35-10	EN-JM1010	MN 35-10	B 340/12	32510	
		0.8145	GTS-45-06	EN-JM1040	MN 450	P 440/7	40010	
		0.8155	GTS-55-04	EN-JM1050	MP 50-5	P 510/4	50005	
		0.8165	GTS-65-02	GJMB 650-2	MP 60-3	P 570/3	70003	
Cast iron with spheroidal graphite tempered	> 200 HB	0.7040	GGG-40	EN-GJS-400-15	FCS 400-12	SNG 420/12	60-40-18	3b
		0.7050	GGG-50	EN-GJS-500-7	FGS 500-7	SNG 500/7	65-54-12	
		0.7060	GGG-60	EN-GJS-600-3	FGS 600-3	SNG 600/3	80-55-06	
		0.7070	GGG-70	EN-GJS-700-2	FGS 700-2	SNG 700/2	100-70-03	
		0.7080	GGG-80	EN-GJS-800-2				
Malleable cast iron tempered	> 200 HB	0.8035	GTW-35-04	EN-GJS-800-2				3b
		0.8040	GTW-40-05	EN-GJS-800-2				
		0.8045	GTW-45-07	EN-GJS-800-2				
		0.8135	GTS-35-10	EN-JM1010	MN 35-10	B 340/12	32510	
		0.8145	GTS-45-06	EN-JM1040	MN 450	P 440/7	40010	
		0.8155	GTS-55-04	EN-JM1050	MP 50-5	P 510/4	50005	
		0.8165	GTS-65-02	GJMB 650-2	MP 60-3	P 570/3	70003	
Stainless steels	< 850 N/mm²	1.4104	14CrMoS17	X14CrMoS17-2	Z 3CF17	441S29	430F	2a
		1.4113	X 6 CrMo 17	X6CrMo17-1	Z8CD17.01	434S17	434	
		1.4301	X5CrNi1810	58E, X5CrNi18-10	Z4CN18-10FF	304S15	304	
		1.4305	X8CrNiS18-9	58M; X10CrNiS18-9	Z8CNF18-09	303S21	303	
		1.4306	X2CrNi19-11	X2CrNi19-11	Z2CN18-10	304S12	304L	
		1.4401	X5CrNiMo17 12 2	G-X6CrNiMo17-12-2	Z6CND17-17-11	316S16	316	
		1.4404	X2CrNiMo17-12-2	X3CrNiMo17122	Z3CND18-12-02	316S12	316L	
		1.4406	X2CrNiMoN17-11-2	X2CrNiMoN17-12-2	Z2CND17-12-Az	316S16	316LN	
		1.4435	X2CrNiMo18-14-3	X2CrNiMo18-14-3	Z2CND18-14-03	316S11	316L	
		1.4436	X3CrNiMo17-13-3	X3CrNiMo17-13-3	Z7CND18-12-03;	316S33	316	
		1.4539	X1NiCrMoCuN25-20-5	X1NiCrMoCu25-20-5	Z2NCDU25-20-5	904S13	904L, N08904	
		1.4541	X6CrNiTi18-10	58B; X6CrNiTi18-10	Z6CNT18-10	321S31	321	
		1.4573	X10CrNiMoTi18-12	X6CrNiMoTi18-12		320S33	316Ti	
	< 1000 N/mm²	1.4002	X6CrAl13	X6CrAl13	Z6CA13	405S17	405	2b
		1.4006	X10Cr13	56A; X12Cr13	Z10C14	410S21	410, AMS 5613	
		1.4016	X6Cr17	60; X6Cr17	Z8C17	430S17	430/1	
		1.4021	X20Cr13	X20Cr13	Z20C13	420S37	420	
		1.4028	X30Cr13	X30Cr13	Z30C13	420S45	420F	
		1.4034	X46Cr13	56D; X46Cr13	Z38C13M	420S45	420C/4	
		1.4057	X17CrNi16-2	57; X17CrNi16-2	Z15CN16-02	431S29	431	

Allocation of the materials

Material	Tensile strength	DIN-No.	DIN-Code	Euronorm EN	AFNOR	B.S.	AISI SAE	Material classification
		1.4112	X90CrMoV18	X90CrMoV18			440B	2b
		1.4116	X45CrMoV15	X50CrMoV15	A35-572		UNE 36016-1	
		1.4125	X105CrMo17	X105CrMo17	Z100CD17	X105CrMo17	440C	
		1.4460	X3CrNiMon27-5-2	X3CrNiMoN27-5-2	Z3CND27-07 AZ	X3CrNiMoN27-5-2	329	
		1.4510	X3CrTi17	X6CrTi17	Z4CT17, X3CrTi17	X3CrTi17	430Ti	
		1.4512	X6CrTi12	X5CrTi12	Z3CT12, Z6CT12	409S19	409	
		1.4582	X4CrNiMoNb257	X4CrNiMoNb25-7				
Stainless steel castings	< 850 N/mm²	1.4308	GX6CrNi18 9	G-X6CrNi18-9	Z6CN18-10M	304C15	304H,CF-8	2a
		1.4340	G-X40CrNi274	GX40CrNi27-4			J92615, A781-05	
	< 1000 N/mm²	1.4086	G-X120Cr29	57; X17CrNi16-2	15CN16-02	431S29	431	2b
		1.4106	G-X10CrMo13	X2CrMoSiS18-2-1	X2CrMoSiS18-2-1			
		1.4138	G-X120CrMo292					
Heat-resisting steels	< 1000 N/mm²	1.4722	X10CrSi13					1c
		1.4724	X10CrAl13; X10CrAlSi13	X10CrAl11-3	Z13C13	403S17	405	
		1.4741	X10CrSi18					
		1.4742	X10CrAl18	60; X10CrAl(Si)18	Z10CAS18	430S15	430	
		1.4762	X10CrAl24	X10CrAlSi25	Z210CAS24	X10CrAlSi25	446	
		1.4821	X20CrNiSi254		Z20CNS25-4			
Duplex steels	< 900 N/mm²	1.3964	X 2 CrNiMnMoNNb 21 16 5 3		NF 05-159		XM-19	5b
		1.4429	X 2 CrNiMoN 17 13 3	X2CrNiMoN17-13-3	Z2CND17-13-Az	316S63	316LN	
		1.4462	X 2 CrNiMoN 22 5 3	X2CrNiMoN22-5-3	Z2CNDU21-08-Az	318S13	329A, UNS31803	
		1.4529	X 1 NiCrMoCuN 25 20 7	10088-3	X1CrNiMoCuN25-20-7	X1CrNiMoCuN25-20-7	B649, N08926	
		1.4547	X 1 CrNiMoCuN 20 18 7	10088-3	X1CrNiMoCuN20-18-7	X1CrNiMoCuN20-18-7	S31254	
Non-alloyed titanium	< 650 N/mm²	3.7024	Ti 99.5					5a
		3.7034	Ti 99.7					
		3.7055	Ti 99.4					
		3.7064	Ti 99.2					
Titanium alloys soft-annealed	< 900 N/mm²	3.7164	TiAl6V4					5b
		3.7114	TiAl5Sn2					
		3.7124	TiCu2					
		3.7174	TiAl6V6Sn2					
Titanium alloys hardened	900-1250 N/mm²	3.7164	TiAl6V4					5c
		3.7124	TiCu2					
		3.7144	TiAl6Sn2Zr4Mo2					
		3.7154	TiAl6Zr5					
		3.7174	TiAl6V6Sn2					
		3.7184	TiAl4Mo4Sn2					
Pure nickel	< 500 N/mm²	2.4060	Nickel 200					5a
High temperature nickel-based alloys	< 900 N/mm²	2.4360	Monel 400					5b
		2.4375	Monel K 500	Alloy K500		3072 3076 (NA18)	N05500	
		2.4812	Hastelloy C		Ni-Mo28	ANC15		
		2.4816	Inconel 600			HR208		
		2.4617	Hastelloy B-2				N10665	
		2.4665	Hastelloy X			HR204		
		2.4983	Udimet 500					
		1.4876	Incoloy 800		Z8NC32-21	3076NA15H	B163, N08800	
	900-1200 N/mm²	2.4631	Nimonic 80A			2HR201	NC20TA, HEV5	5c
		2.4632	Nimonic 90			2HR2	HEV6	
		2.4634	Nimonic 105					
		2.4662	Nimonic 901		Z8NCDT42	HR 53	5660, 5661	
		2.4668	Inconel 718		NC19FeNb	HR 8	N07718, 5662, 5663	
		2.4670	Nimocast 713					
		2.4674	Nimocast PK24					
		2.4856	Inconel 625	499		NA21	B564/446, 5599, 5666	
		2.6554	Waspaloy					
Pure copper	< 350 N/mm²	2.0060	E-Cu57					4a
		2.0070	SE-Cu					
		2.0090	SF-Cu					
		2.1356	CuMn3	CW107C			C19400	
Copper-zinc alloys (brass)	< 700 N/mm²	2.0250	CuZn20					4a
		2.0265	CuZn30					
		2.0321	CuZn37					
		2.0360	CuZn40					
		2.0380	CuZn39Pb2					
		2.0410	CuZn44Pb2					
		2.0561	CuZn40Al1	CW713R		CZ135, CZ114	C67400	
		2.0580	CuZn40Mn1Pb	CW713R		CZ135, CZ114	C67400	
		2.0771	CuNi7Zn39Mn5Pb3					
Copper-forging alloys hardenable	< 800 N/mm²	2.1245	CuBe1.7					4b
		2.1247	CuBe2					
		2.1293	CuCrZr					
		2.1525	CuSi3Mn	CW107C			C19400	
Copper-forging alloys non hardenable	< 600 N/mm²	2.1201	CuAgo.03	CC491K	CuSn5Pb5Zn5	LG2	C83600	4b
		2.1366	CuMn5	CW107C			C19400	
		2.1522	CuSi2Mn	CW107C			C19400	
		2.1525	CuSi3Mn	CW107C			C19400	
Copper-tin alloys (bronze)	< 700 N/mm²	2.1016	CuSn4	CW450K	CuSn4P	PB101	C51100	4b
		2.1020	CuSn6	CW452K	CuSn6P	PB103	C51900	
		2.1030	CuSn8	CW453K	CuSn8P, CuSn9	PB104	C52100	
		2.1050	G-CuSn10-C	CC480K	CuSn10P	CT1/PB4	C90700	
		2.1052	G-CuSn12-C	CC483K	CuSn12P / UE12P	PB2	C90800	
		2.1060	G-CuSn12Ni2-C	CC484K	CuSn12Ni2	CT2	C91700	
		2.1061	G-CuSn11Pb2-C	CC482K	CuSn12Pb	PB4	C92500	
		2.1076	CuSn4Pb4Zn4	CW456K	CuSn4Pb4Zn4		C54400	
		2.1080	CuSn6Zn6	CW456K	CuSn4Pb4Zn4		C54400	
		2.1086	G-CuSn10Zn	CW456K	CuSn4Pb4Zn4		C54400	
		2.1090	G-CuSn7Zn4Pb7-C	CC493K	CuSn7Pb6Zn4		C93200	
		2.1093	G-CuSn6ZnNi	CC492K	CuSn7Zn2Pb3	LG4	C91410	
		2.1096	G-CuSn5ZnPb	CC491K	CuSn5Pb5Zn5	LG2	C83600	

Allocation of the materials

Material	Tensile strength	DIN-No.	DIN-Code	Euronorm EN	AFNOR	B.S.	AISI SAE	Material classification
Pure aluminium	< 150 N/mm²	3.0255	Al99.5	EN AW-1050A	A-5	1B	1050A	4c
Non hardened aluminium	< 400 N/mm²	3.0515	AlMn1	EN AW-3003/3103	A-M1/-	N3		4c
		3.2315	AlMgSi1	EN AW-6082	A-SGM0.7	H30	6082	
		3.3315	AlMg1	EN AW-5005A	A-G0,6	N41	5005A	
		3.3535	AlMg3	EN AW-5754	A-G3M		5754	
		3.3547	AlMg4.5Mn	EN AW-5083	A-G4,5MC	N8	5083	
		3.4365	AlZnMgCu1.5	EN AW-7075	A-Z5GU	2L95/96	7075	
Hardened aluminium	< 650 N/mm²	3.0615	AlMgSiPb	EN AW-6012	A-SGPb		6012	4d
		3.1325	AlCuMg1	EN AW-2017A	A-U4G	H14	2017A	
		3.1355	AlCuMg2	EN AW-2024	A-U4G1	2L97/98	2024	
		3.1655	AlCuBiPb	EN AW-2011	A-U5PbBi	FC1	2011	
		3.4335	AlZn4.5Mg1	EN AW-7020	A-Z5G	H17	7020	
		3.4345	AlZnMgCu5.0	EN AW-7022	A-Z4GU		7022	
		3.4365	AlZnMgCu1.5	EN AW-7075	A-Z5GU	2L95/96	7075	
Aluminium cast material < 6% Si	< 400 N/mm²	3.1841	G-AlCu4Ti	EN AC-AlCu4Ti				4e
		3.2134	G-AlSi5Cu1Mg	EN AC-AlCu4Ti				
		3.3241	G-AlMg3Si	EN AW-6061	A-GSUC	H20	6061	
		3.3292	GD-AlMg9					
Aluminium cast material > 6% Si	< 400 N/mm²	3.2152	GD-AlSi6Cu4	EN AC-AlSi6Cu4				3e
		3.2162	GD-AlSi8Cu3	EN AC-AlSi6Cu4				
		3.2373	G-AlSi9Mg	EN AC-AlSi9Mg				
		3.2381	G-AlSi10Mg	EN AC-AlSi10Mg				
		3.2383	G-AlSi10Mg (Cu)					
		3.2581	G-AlSi12	EN AC-AlSi12(a)				
		3.2583	G-AlSi12 (12)	EN AC-AlSi12(Cu)				
		3.2982	GD-AlSi12 (Cu)	EN AC-AlSi12Cu1(Fe)				
Magnesium cast alloy	< 400 N/mm2	3.5106	G-MgAg3SE2Zr1					3e
		3.5662	G-MgAl6					
		3.5812	G-MgAl8Zn1					
		3.5912	G-MgAl9Zn1					
Thermoplast		PTFE	Teflon, Hostaflon, Lubriflon					6a
		PVDF	Kynar, Solef					
		PA	Ertalon, Ultramid, Nylon					
		POM	Delrin, Hostaform					
		PETP	Arnite, Ertalyte					
		PVC-hart	Hostalit, Vinoflex, Trovidur					
		PETP	Hostalen, Ertalene, Lupolen					
		PP	Hostalen, Ertalen					
		PC	Makralon, Lexan					
Duroplast non laminated		PF	Bakelit, Resalit, Luphen					6b
		MF	Albamit, Keramin, Resopal					
		UF	Resopal, Basapor					
Duroplast laminated		PF	Ferrozell, Resofil, Canevasit					6b
		MF	Resopal, Resamin, Textolit					
		UF	Resamin, Basapor					

Please contact us, if the DIN standard no. you're searching for, is not mentioned above.