

Saw Blades HSS Cold, Cut-Off Saws - HSS circular saw blades for cutting-off machines over 400mm

HSS Dmo5



Materials: steel, cast, non-ferrous metals

Application: efficient cutting operation

Machine: metal processing machines

D(mm)	Circular saw blades for cutting -off machines from HSS/Dmo5 and HSS/Emo5													
dH7 (mm)	dH7 (mm)	HUB (mm)	T3 BW	T4 BW	T5 C	T6 C	T7 C	T8 C	T9 C	T10 C	T12 C	T13 C	T14 C	T16 C
400 x 2,5	40/50	120		310	250	200		160		120	110	90		70
400 x 3,0	40/50	120		310	250	200		160		120	110	90		70
400 x 3,5	40/50	120		310	250	200		160		120	110	90		70
400 x 4,0	50	120		310	250	200		160		120	110	90		70
425 x 2,5	40/50	120		320	260	220		160		130	110		80	70
425 x 3,0	40/50	120		320	260	220		160		130	110		80	70
425 x 3,5	50	120		320	260	220		160		130	110		80	70
425 x 4,0	50	120		320	260	220		160		130	110		80	70
450 x 2,5	40 / 50	130		350	280	230		180		140	120		90	80
450 x 3,0	40 / 50	130		350	280	230		180		140	120		90	80
450 x 3,5	40 / 50	130		350	280	230		180		140	120		90	80
450 x 4,0	40 / 50	130		350	280	230		180		140	120		90	80
500 x 3,0	40 / 50	130			310	260		200		160	130	110	100	90
500 x 3,5	40 / 50	130			310	260		200		160	130	110	100	90
500 x 4,0	40 / 50	130			310	260		200		160	130	110	100	90
500 x 5,0	40 / 50	130			310	260		200		160	130	110	100	90
525 x 3,5	50	130		410	330	270		210		164	140	110	104	90
525 x 4,0	50	130		410	330	270		210		164	140	110	104	90
550 x 4,0	90	140		440	340	280		220		170	140	120	110	90
550 x 5,0	50	140		440	130	280		220		170	140	120	110	90
570 x 4,0	50	150		450	360	300		220		180	150	120	110	100
570 x 5,0	50	150		450	360	300		220		180	150	120	110	100
600 x 4,0	50	150		460	380	320		240		190	160	130	120	100
600 x 5,0	50	150		460	380	320		240		190	160	130	120	100

Quality Cutting-Off Saw Blades

Company GSP- High Tech saws s.r.o. produces HSS metal circular sawblades in diameters varying up to 720 mm in various designs. The tooth forms most used are HZ, BW, B, AW, A, VP and 'Chipbreaker' . Production is based on DIN standards 1836, 1837, 1838 and 1840, extended by the refined company GSP manufacturing standards. The delivery program consists of a range of standard sawblades which can be delivered from stock and a range of special sawblades to be produced to customer specifications. The HSS sawblades are supplied as standard in high speed steel grade M2 = DIN 1.3343, but can also be delivered in cobalt-alloyed steel grades, such as M35 = DIN 1.3243 and S390 Powder Metallurgy Steel. These blades are specifically suited for use in manual, semi-automatic and fully-automatic sawing operations. All blades are hardened to 64/65 RC, triple tempered and press quenched. This manufacturing method produces the flattest and straightest saw blade in the world today. The HSS sawblades can be supplied in among other things bright, steam-treated, flash-chrome, titanium nitride, titanium aluminium nitride, titanium carbon nitride or chrome nitride coated design. **HSS-DMo5**

Circular saws in M2 high speed steel (5% molybdenum content) suitable for cutting-off steels and alloys with hardness between 500 N/mm² and 800 N/mm². The saw blades are used on manual, semi-automatic and fully automatic sawing machines to cut tubes and pipes, open sections and solid sections up to 200 mm. Our range goes up to Ø 720 mm, with

thicknesses to a maximum of 6 mm by variable increments, with tooth forms A - AW - B - BW - C - BR (chip breaker). The standard execution of the whole range is HP-GRIND; we also supply CO² steam treated blades and PVD (Physical Vapour Deposition) coated ones. **HSS-Co5%**
Circular saws in super high speed steel (5% cobalt content) suitable for cutting-off steels and alloys with hardness above 800 N/mm². The saw blades are used on semi-automatic and fully automatic sawing machines to cut tubes and pipes, open sections and solid sections up to 200 mm.

STEEL QUALITIES

DMo5 - DIN 1.3343 - JIS SKH51 - M2 High speed TUNGSTEN MOLYBDENUM STEEL. It is strongly alloyed high speed steel containing wolfram, vanadium and molybdenum. Circular saws have both very good mechanical characteristics and excellent strength for these alloying elements. Fine structure of martensite, its formation is ensured by 5% molybdenum content, makes the blades resistant from disruption and fatigue of material. Wolfram content not only forms extremely hard carbides and improves blade strength, but above all keeps material grain growth off. Moreover increases the resistance to attritions, especially during big cutting temperatures. Analogous to above mentioned elements vanadium takes part in improvement of mechanical characteristics as well. It makes fine grains, participates in rise of hard carbides and increases the instrument resistant to attritions. For high performance saw blades. Hardened and tempered to 64 +/- 1

EMo5Co5 - DIN 1.3243 - JIS SKH55 - M35 TUNGSTEN MOLYBDENUM COBALT bearing steel. It is strongly alloyed high speed steel with content of wolfram, molybdenum and cobalt. From the HSS/DMo5 steel mentioned above differs by 5% cobalt content which keeps material grain growth off during high cutting temperatures and improves cutting operation. These characteristics are prerequisite for efficient cutting of hard materials as are stainless steels or steel of big strength. Special high performance saw blades. Hardened and tempered to 65 +/- 1

SURFACE TREATMENT

SLIPSLIDE STEAM-HOMO A controlled oxidation process produces a layer of iron oxide (Fe₃O₄) on the surface of a saw blade. It is a surface modification by CO₂ oxidation when made circular saws are once more let to tempering in overheated steam in cca 550°C. Thus is created extremely fine surface layer with hardness 900 HV. Because of stress release circular saws improved by this modification get a better elasticity which avoid their possible break. Microporosity arisen on surface enables better coolant water distribution. This increases its self-lubricating capability and greatly improves its resistance to 'pick-up'. Slipslide is a very low cost surface treatment suitable for most general cutting work. But exception is cutting of aluminium, copper, brass and their alloys. Technical characteristics: Surface Hardness: 900 HV; Coefficient of friction : 0.65;

Physical Vapour Deposition COATINGS PVD

TiN Titanium Nitride (GOLDSKIN): Circular saws coated by TiN (titanium-nitride) reach very high surface microhardness which enables their using for separation of material of high mechanical tenacity. It is very suitable for cutting medium-alloyed and hard steel. The coat characteristics enable to heighten circumferential speed and feed rate nearly by 50 % and it very shortens the time of working cycles.

TiCN Titanium Carbo Nitride (SPEEDSKIN): PVD coating with very low coefficient friction on steel. It enables to reach very clear cuts and avoid cool surfacing even in high circumferential cutting speed and shifts in such materials as are very hard steels, copper and brass, its cutting often create cool surfacing. It enables to heighten circumferential speed and feed speed nearly by 100 % in face of parameters for blank circular saws

TiAlN Titanium Aluminium Nitride (BLACKSKIN): This coating is suitable for separation of materials of high strength in traction, stainless steels and material with resistant to attritions, as are cast iron and brass. Its excellent characteristic is resistance in high work temperatures that is why it is suitable for use in dry cuts or in cuts with insufficient cooling. Moreover, it is very suitable for high circumferential speed.

CRN Chrome Nitride (GRAYSKIN): Very low friction coefficient makes circular saw blades with GRAYSKIN coating very suitable for cutting materials which have strong tendency for being stuck on tool sides, it means brass, copper and aluminium alloys. The possibility of coating tools in stronger layers up to the thickness 7µm is its next advantage.