

**TECHNICAL INFORMATION**  
**HSS SLITTING SAW BLADES**

**TYPES OF TEETH IN HSS SLITTING SAW BLADES:**

NAME	DRAWING	MARKING	ANGLE $\gamma$ FOR THE TYPE OF TOOL		
			N $\pm 2^\circ$	H $\pm 2^\circ$	D $\pm 2^\circ$
V-shaped tooth		A	5°	0°	10°
V-shaped tooth with alternate phases		Aw	5°	0°	10°
Curved tooth		B	15°	8°	25°
Curved tooth with alternate phases		Bw	15° 18°*	8°	25°
Curved tooth with a roughing and a finishing tooth		C	18°	8°	25°
Curved tooth with a shavings separator		Bf	18°	8°	25°

Key:  basic version \* – cut off saw blades

**EXAMPLES OF USE OF APPROPRIATE HSS SLITTING SAW BLADES DEPENDING ON MACHINED MATERIAL:**

material	type of tool	material	type of tool
mild steel	Rm to 500 MPa N, (W)	brittle copper alloys	N, (H)
medium-hard steel	Rm to 800 MPa N	zinc alloys	W, (N)
hard malleable steel	Rm to 1000 MPa N, (H)	soft aluminium alloys	W
hard malleable steel	Rm to 1300 MPa H	medium-hard aluminium alloys	N, (W)
cast steel	N, (H)	thermally improved aluminium alloys, low cutting speed	N
cast iron	HB to 180 kg/mm <sup>2</sup> N	thermally improved aluminium alloys, high cutting speed	W
cast iron	HB above 180 kg/mm <sup>2</sup> N, (H)	magnesium alloys	N, (W)
malleable cast	N	non-layered plastic	N, (W)
copper, soft copper alloys	W, (N)	layered plastic	W

Key:  
N – type of tool in general for structural steel, soft cast iron, medium-hard non-ferrous metals  
H – type of tool for extremely hard and high strength materials  
W – type of tool for very soft and malleable materials

Comments:  
Tool type not specified in brackets is particularly recommended.  
Tools – HSS slitting saw blades with teeth given in brackets can be used to process specified materials only in special cases.

**SPEED (IN REV/MIN)**

material	steel N/mm <sup>2</sup>												
	γ α	stainless steel	steel areas 1000 N/mm <sup>2</sup>	cast iron	700 ± 800	550 ± 650	450 ± 500	ebonite	pipes welded	pipes seamless	copper	brass	Al and light metals
		8°-10° 6°- 8°	12°-15° 6°- 8°	15°-20° 6°- 8°	18°-20° 6°- 8°	20°-22° 6°- 8°	23°-26° 8°-10°	0° 12°	18°-20° 6°- 8°	20°-22° 6°- 8°	20°-30° 8°-10°	2°-5° 5°-7°	25°-35° 10°-12°
20	318	637	637	796	796	955	955	955	1114	2387	3183	6366	
25	255	509	509	637	637	764	764	764	891	1910	2546	5096	
32	199	398	398	497	497	597	597	597	696	1492	1989	3979	
40	159	318	318	398	398	477	477	477	557	1194	1592	3183	
50	127	255	255	318	318	382	382	382	446	955	1273	2546	
63	101	202	202	253	253	303	303	303	354	758	1011	2021	
80	80	159	159	199	199	239	239	239	279	597	796	1592	
100	64	127	127	159	159	191	191	191	223	477	637	1273	
125	51	102	102	127	127	153	153	153	178	382	509	1019	
160	40	80	80	99	99	119	119	119	139	298	398	796	
200	32	64	64	80	80	95	95	95	111	239	318	637	
250	25	51	51	64	64	76	76	76	89	191	255	509	
315	20	40	40	51	51	61	61	61	71	152	202	404	

**Recommendations for achieving a high cut efficiency using general purpose HSS slitting saw blades:**

1. Correct grinding using methods which guarantee an appropriate tool rake  $\gamma$  and clearance angle  $\alpha$ .
2. Selecting an appropriate pitch of teeth for the cross-section and type of processed material.
3. Proper selection of cutting speed and feed rates.
4. Use of appropriate coolants and grease.
5. Preventing build-up on blades edges.