

TIGRA carbide grades and their applications  
TIGRA Hartmetallsorten und ihre Anwendung  
Les nuances de carbures TIGRA et leurs applications  
I tipi di metallo duro TIGRA e le loro applicazioni  
TIGRA tvrdokovový sortiment a jej použitie

The modern carbide technology classifies tungsten carbide in grain size and binder content (included in the name).  
In der modernen Hartmetall-Technologie werden die Hartmetalle nach Korngrößen und Bindergehalt klassifiziert (im Namen enthalten).

La technologie moderne classe les carbures en fonction de la grosseur du grain et de la teneur en liant de sa composition.

V modernej výrobe tvrdokovu je tento klasifikovaný podľa veľkosti zrna a pevnosti v ohybe (je zreteľné v názve)

Shortform Abkürzung Abréviation Abbreviazione Skrátený názov	Explanation Erklärung Explication Spiegazione Vysvetlenie	Grain size Korngröße Grosseur du grain Grossezza del grano Veľkosť zrna
NG	Nano Grain	0.2
UMG	Ultra Micro Grain	0.2 - 0.5
SMG	Sub Micro Grain	0.5 - 0.7
MG	Micro Grain	0.7 - 1.0
F	Fine Grain	1.0 - 1.4
MF	Medium Fine Grain	1.4 - 2.5
M	Medium Grain	2.5 - 4.0
C	Coarse Grain	4.0 - 10.0
EC	Extra Coarse	10

Technical Data - Technische Daten - Caractéristiques techniques - Dati tecnici - Technické dáta

TIGRA grade TIGRA - Sorte Nuance TIGRA Tipo TIGRA TIGRA označenie	Former name Alter Name Anciens nuances Tipi vecchi Staré označenie	US-Code	ISO-Code	Binder % Binder % Liant % % di legante Pojivo	Hardness Härte Dureté Durezza Tvrdosť (HV 10)	Breakage resistance Biegebruchfestigkeit Résistance à la flexion Resistenza flessionale Pevnosť v ohybe (N/mm <sup>2</sup> )
T02SMG				2.5	2300	2000
T03SMG	TIK 01SM		K01	3.0	2150	2400
T04F	TIK 05	C4	K05	4.0	1750	2350
T06M				6.0	1350	2400
T06MF	TIK 20	C3	K20	6.0	1600	2200
T08MF	TIK 30	C2	K30	8.0	1450	2500
T08SMG	TIK 030SM			8.0	1800	3300
T10MF	TIK 40	C1	K40	10.0	1400	2600
T10MG	TIK 050M			10.0	1650	3600
TL15	TIGRALIT			15.0	1400	3800
TL20				20.0	1400	3200









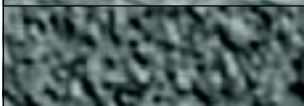
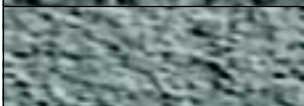

TIGRA carbide grades and their applications

TIGRA Hartmetallsorten und ihre Anwendung

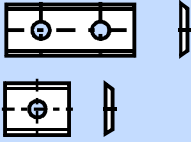

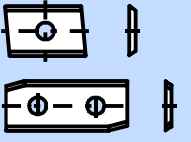

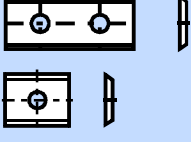
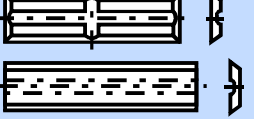
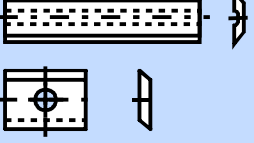
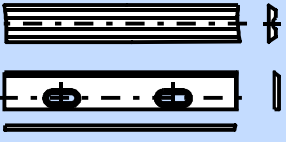
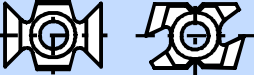
Les nuances de carbures TIGRA et leurs applications

I tipi di metallo duro TIGRA e le loro applicazioni

Tigra tvrdokovový sortiment a jeho odporúčané použitie

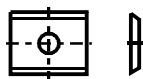
Structure Struktur Structure	Grade Sorte Nuance	MDF MDF MDF	Chipboard Spanplatte Panneux de particule	Hardwood Hartholz Bois dur	Softwood Weichholz Bois tendre	Glued-up Wood Verleimholz Bois collé
Struttura Štruktúra 1:5000	Tipo TYP	MDF MDF	Truciolare Drevotrieska	Legno duro Tvrde drevo	Legno tenero Mäkke drevo	Legno incolato Lepené drevo
	T02SMG	+++	++	-	--	--
	T03SMG	+++	+++	O	--	-
	T04F	+	++	+	+	+
	T06M	--	-	O	O	O
	T06MF	O	O	+	+	+
	T08MF	--	-	+	+	O
	T08SMG	O	+	++	+	++
	T10MF	--	--	O	+	O
	T10MG	O	O	++	++	+
	TL15	--	--	++	+++	+
	TL20	--	--	++	+++	+
	+++ Excellent	Hervorragend	Parfaitement	Perfettamente	Vynikajúce	
	++ Very Good	Sehr gut	Très bien	Molto idoneo	Velmi dobré	
	+ Good	Gut	Bien	Idoneo	Dobré	
	O Acceptable	Akzeptabel	Acceptable	Accettabile	Vyhovujúce	
	- Not too good	Weniger gut	Moins bien	Meno idoneo	Nevhodné	
	-- Poor	Schlecht geeignet	Mal adapté	Poco idoneo	Zlé	

Reversible knives and edge rounding knives  
 Wendeschneidplatten und Kantenrunder  
 Plaquettes reversibles et couteaux brise-arrête  
 Coltelli reversibili e spigolatori  
 Cuchillas reversibles y cuchillas para aristas

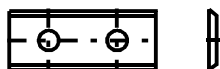
		Page Seite Page Pagina Página
	<p>Standard reversible knives - 35°            Standard Wendeschneidplatten - 35°            Plaquettes reversibles standard - 35°            Coltelli reversibili standard - 35°            Cuchillas reversibles standard - 35°</p>	12
	<p>Reversible knives, spurs, grooving knives            Wendeschneidplatten, Vorschneider, Nuter            Plaquettes reversibles, arasseur, couteaux pour rainures            Coltelli reversibili, rasanti, coltelli per incastri            Cuchillas reversibles, incisores, cuchillas para ranura</p>	13-14
	<p>Reversible knives            Wendeschneidplatten            Plaquettes reversibles            Coltelli reversibili            Cuchillas reversibles</p>	15
	<p>Standard reversible knives - 4 cutting edges            Standard Wendeschneidplatten - 4 Schneidkanten            Plaquettes reversibles standard - 4 tranchants            Coltelli reversibili standard - 4 taglianti            Cuchillas reversibles standard - 4 flos de corté</p>	16
	<p>Standard reversible knives - 45°            Standard Wendeschneidplatten - 45°            Plaquettes reversibles standard - 45°            Coltelli reversibili standard - 45°            Cuchillas reversibles standard - 45°</p>	17
	<p>Mini reversible knives            Mini - Wendeschneidplatten            Mini plaquettes reversibles            Mini coltelli reversibili            Mini cuchillas reversibles</p>	18
	<p>Special reversible knives            Spezial - Wendeschneidplatten            Plaquettes reversibles speciales            Coltelli reversibili speciali            Cuchillas reversibles especiales</p>	19
	<p>Reversible knives for portable planers            Wendeplatten für Handhobel            Plaquettes pour rabots electro portatifs            Coltelli piallatrici portatili            Cuchillas para acepilladoras electricas</p>	20
	<p>Edge rounding knives            Kantenrunder            Couteaux brise-arrête            Spigolatori            Cuchillas para aristas</p>	21

Standard reversible knives  
 Standard Wendeschneidplatten  
 Plaquettes reversibles standard  
 Coltelli reversibili standard  
 Cuchillas reversibles standard

35°



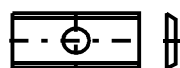
L mm	W mm	T mm	a mm	T04F	T03SMG	T10MG	TL15	T08SMG
7.5	12.0	1.5		12001	13811	13963	13734	14225
8.6	12.0	1.5		13182				
9.0	12.0	1.5		12043				
9.6	12.0	1.5		12015	13850	14010	30833	
10.0	12.0	1.5		13165				
10.5	12.0	1.5		13167				
11.0	12.0	1.5		13168				
11.6	12.0	1.5		13183				
13.0	12.0	1.5		13170				
13.6	12.0	1.5		13185				
14.6	12.0	1.5		13186				
15.0	12.0	1.5		12003	13819	13972	13741	14232
15.7	12.0	1.5		13172				
16.0	12.0	1.5		13203				
17.0	12.0	1.5		13173				
18.0	12.0	1.5		13174				
19.0	12.0	1.5		13175				
20.0	12.0	1.5		12004	13823	13977	13745	14235
25.0	12.0	1.5		12025	13853	14013	13766	
25.0	12.0	1.5	14.0	12011	13843	14001	13759	
30.0	12.0	1.5	14.0	12005	13828	13982	13749	14239
35.0	12.0	1.5	26.0	13208				
40.0	12.0	1.5	26.0	12014	13847	14006	13763	14255
50.0	12.0	1.5	26.0	12006	13834	13987	13753	14244
60.0	12.0	1.5	26.0	12007	13839	13994	13754	14248



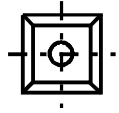







L mm	W mm	T mm	a mm	T08MF	T03SMG	T10MG	TL15	T08SMG
80.0	13.0	2.2	60.0	12008	13841	13997	13755	
100.0	13.0	2.2	60.0	12009	30831	13998	13756	
120.0	13.0	2.2	60.0	12010	30832	13999	13757	



L mm	W mm	T mm	a mm	T04F	T03SMG	T10MG	TL15	T08SMG
20.0	9.0	1.5		13195				
24.0	9.0	1.5	14.0	13197				
30.0	9.0	1.5	14.0	13199				
40.0	9.0	1.5	26.0	13200				
50.0	9.0	1.5	26.0	13201				

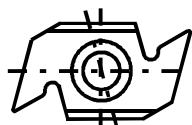


Standard reversible knives  
 Standard Wendeschneidplatten  
 Plaquettes reversibles standard  
 Coltelli reversibili standard  
 Cuchillas reversibles standard

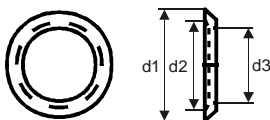
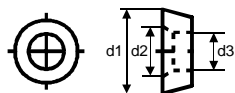
	L mm	W mm	T mm		d mm	T08MF	T04F	T03SMG	T10MG	TL15
	10.5	10.5	1.5	35°	4.0		13259	13863	14027	13769
	12.0	12.0	1.5	35°	4.0		12002	13815	13968	13737
	13.0	13.0	2.5	35°	4.0	13328				
	17.0	17.0	2.0	35°	3.0	16565	16564			
	17.0	17.0	2.0	35°	4.0	13266	13265	13864	30830	13770
	19.0	19.0	2.0	35°	4.0		13264	30838	30827	30826
	10.5	10.5	1.5	35°						40343
	13.0	13.0	2.5	30°		13324				
	13.6	13.6	2.0	30°		13299				
	13.6	13.6	2.0	45°		37522				
	14.0	14.0	1.2	30°		13295				
	14.0	14.0	1.7	22°		13297				
	14.0	14.0	1.7	30°		13307				
	14.0	14.0	2.0	30°		13273	13260	13865	14028	13771
 For Holz-Her system*	14.0	14.0	1.2	30°		13303				
	14.3	14.3	2.5	35°					13329	
	14.6	14.6	2.5	30°					13314	
	15.0	15.0	2.5	30°					13315	
	14.0	14.0	2.0	30°		13276				
	15.0	15.0	2.5	30°	R•50				43895	
	15.0	15.0	2.5	30°	R•150				13320	
	15.0	15.0	2.5	30°					44289	
	14.0	14.0	2.0	30°		44486				
	21.0	21.0	5.5	40°					22695	

Spurs, grooving knives  
 Vorschneider, Nuter  
 Arasseur, couteaux pour rainures  
 Rasanti, coltelli per incastri  
 Incisores, cuchillas para ranura

L mm	W mm	T mm		d mm	T08MF	T06MF	T10MG
14.0	14.0	2.00			13237		
18.0	18.0	1.95			13293		
18.0	18.0	2.45			13291		
18.0	18.0	2.95			13305		
18.0	18.0	3.70			13289		
22.9	19.8	2.5	30°		45180		
22.0	19.0	2.0	30°		13271		
14.0	14.0	2.0	30°		13258		
16.0	16.0	3.0	32°		30829		
18.5		3.25	30°				17190
33.5				2.5	13252		
18.9	7.9	4.0			13253		
18.0	5.7	3.5			13255		
34.0	16.0	4.0				13278	
34.0	16.0	5.0				13279	
34.0	16.0	6.0				13280	
34.0	16.0	7.0				13281	



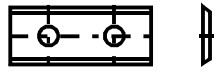

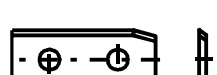


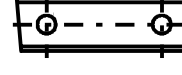
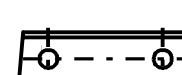





d1 mm	d2 mm	d3 mm	T mm			T06MF	T03SMG
11.0	7.0	5.1	4.0				13373
56.5	46.5	42.5	3.0			13370	



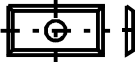
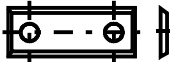

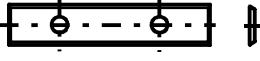
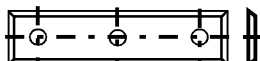



Standard reversible knives  
 Standard Wendeschneidplatten  
 Plaquettes reversibles standard  
 Coltelli reversibili standard  
 Cuchillas reversibles standard

35°

	L mm	W mm	T mm	a mm	T04F	T03SMG	T10MG
	20.0	14.3	2.5		13730	33492	33491
	44.5	15.0	1.5	25.0	13447		
	30.0	12.0	1.5	16.0	13449	33490	33477
	30.0	12.0	1.5	14.0	13430	13924	33466
	50.0	12.0	1.5	26.0	13432	33470	33468
	30.0	12.0	1.5	14.0	13431	13925	33467
	50.0	12.0	1.5	26.0	13433	33471	33469
	20.0	12.0	1.5		13436	33480	33479
	20.0	12.0	1.5		13441	33481	33482
	30.0	12.0	1.5	14.0	13437	13926	33489
	40.0	12.0	1.5	26.0	13440		
	50.0	12.0	1.5	26.0	13438	13927	14038
	30.0	12.0	1.5	1.40	13442	13928	33484
	40.0	12.0	1.5	26.0	13445		
	50.0	12.0	1.5	26.0	13443	13929	14039

Standard reversible knives  
 Standard Wendeschneidplatten  
 Plaquettes reversibles standard  
 Coltelli reversibili standard  
 Cuchillas reversibles standard

4 cutting edges  
 4 Schneidkanten  
 4 tranchants  
 4 taglianti  
 4 flos de corte

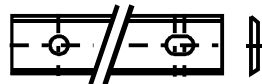
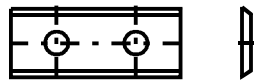
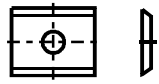
	L mm	W mm	T mm	a mm	T04F	T03SMG	T10MG	TL15
	19.5	7.0	1.5		13492	30874	30886	30904
	19.5	7.5	1.5		13493	30875	30887	30905
	19.5	8.0	1.5		13494	13945	30888	30906
	19.5	9.0	1.5		13495	13946	30889	30907
	19.5	10.0	1.5		13496	30876	30890	30908
	19.5	11.0	1.5		13497	30877	30891	30909
	19.5	12.0	1.5		13498	13947	30892	13774
	29.5	7.0	1.5	14.0	13501	30878	30893	30910
	29.5	7.5	1.5	14.0	13502	13948	30894	30911
	29.5	8.0	1.5	14.0	13503	13949	30895	30912
	29.5	9.0	1.5	14.0	13504	13950	30896	30913
	29.5	10.0	1.5	14.0	13505	30879	30897	30914
	29.5	11.0	1.5	14.0	13506	30880	30898	30915
	29.5	12.0	1.5	14.0	13507	13952	14088	13775
	39.5	9.0	1.5	26.0	13511	45134		
	39.5	12.0	1.5	26.0	13512	13954	14089	30916
	49.5	8.0	1.5	26.0	13516	13955	30899	30917
	49.5	9.0	1.5	26.0	13517	13956	30900	30918
	49.5	10.0	1.5	26.0	13518	30881	30901	30919
	49.5	11.0	1.5	26.0	13519	30882	30902	30920
	49.5	12.0	1.5	26.0	13520	13957	14090	13776
	59.5	12.0	1.5	26.0	13523	13958	30903	30921
	50.0	12.0	1.7	37.0	13327	13866	14030	13772
	50.0	10.0	1.7	37.0	16966	30883	30884	30885
	20.0	5.5	1.1			49525	49526	
	20.0	10.0	1.5			14273	30841	
	30.0	10.0	1.5			14275	30842	
	50.0	10.0	1.5			14277	30843	
	50.0	10.0	1.5			14279	30844	
	28.0	7.0	1.5	14.0	16823	16822		
	16.0	7.0	1.5	7.0	16934	16933		

\* For use in KWO-cutterheads only  
 \* Nur zur Verwendung in Messerköpfen der Firma KWO  
 \* Utilisation limitée aux têtes à lames de l'entreprise KWO  
 \* Da usare solo su teste portacoltelli della KWO  
 \* Solo para empleo con portacuchillas de la firma KWO



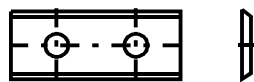
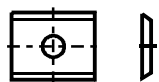
Standard reversible knives  
 Standard Wendeschneidplatten  
 Plaquettes reversibles standard  
 Coltelli reversibili standard  
 Cuchillas reversibles standard

45°



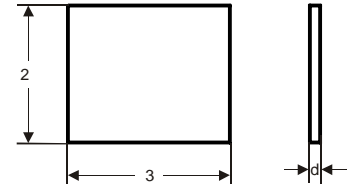
L mm	W mm	T mm	a mm	T08MF	T10MG	TL15	TL20
7.5	12.0	1.5			14091	13777	50259
9.6	12.0	1.5			14115	12950	50260
15.0	12.0	1.5			14098	13780	43675
20.0	12.0	1.5			14100	13781	43676
25.0	12.0	1.5			14123	13788	50261
25.0	12.0	1.5	14.0		14110	13786	43677
30.0	12.0	1.5	14.0		14102	13783	43678
40.0	12.0	1.5	26.0		14113	13787	43679
50.0	12.0	1.5	26.0		14105	13784	43680
60.0	12.0	1.5	26.0		14107	13785	45506
12.0	12.0	1.5			14096	13778	43674
80.0	13.0	2.2	60.0	13532			

>> MICROFINISH <<



L mm	W mm	T mm	a mm	T08MF	T10MG	TL15	
7.5	12.0	1.5			14093	30861	
9.6	12.0	1.5			14117	30864	
15.0	12.0	1.5			14099	30862	
20.0	12.0	1.5			14101	13782	
25.0	12.0	1.5			14124	30865	
25.0	12.0	1.5	14.0		14111	30863	
30.0	12.0	1.5	14.0		14103	30866	
40.0	12.0	1.5	26.0		14114	30870	
50.0	12.0	1.5	26.0		14106	30868	
60.0	12.0	1.5	26.0		14108	30869	
12.0	12.0	1.5			14097	13779	

Mini reversible knives  
 Mini Wendeschneidplatten  
 Mini plaquettes reversibles  
 Mini coltelli reversibili  
 Mini cuchillas reversibles



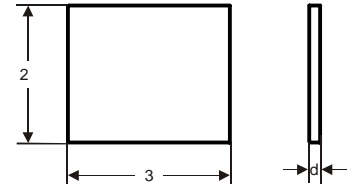
	L mm	W mm	T mm	T04F	T03SMG	Style
	12.0	5.5	1.1	13355	13882	Back groove
	20.0	5.5	1.1	13357	13884	Rückennut
	30.0	5.5	1.1	13363	13890	Rainure sur petite face
	40.0	5.5	1.1	13359	13886	Scanalatura posteriore
	50.0	5.5	1.1	13361	13888	Ranura de lomo
	20.0	4.1	1.1	13403		Back- and crossgrove
	20.0	5.5	1.1	13394	13911	Rücken- and Quernut
	25.0	5.5	1.1	13402	13920	Rainure transversal
	30.0	5.5	1.1	13397	13914	Scanalatura di sicurezza
	40.0	5.5	1.1	13399	13916	Ranura transversal
	50.0	5.5	1.1	13401	13918	
	12.0	5.5	1.1	13334	13870	Face groove
	20.0	5.5	1.1	13336	13872	Brustnut
	30.0	5.5	1.1	13345	13880	Rainure sur grande face
	40.0	5.5	1.1	13339	13874	Scanalatura frontale
	50.0	5.5	1.1	13342	13877	Ranura frontal
	20.0	5.5	1.1	13378	30871	4 Cutting edges
	25.0	5.5	1.1	13376	30872	4 Schneidkanten
	30.0	5.5	1.1	13379	30847	4 Tranchants
	35.0	5.5	1.1	13377	13893	4 Taglienti
	40.0	5.5	1.1	13380	13898	4 Filos de corte
	44.5	5.5	1.1	13375	30873	
	50.0	5.5	1.1	13381	13900	

Reversible knives with chip breakers  
 Wendeplatten mit Spanbrechernuten  
 Plaquettes reversibles avec brise copeaux  
 Coltellini con incastro rompitruciolo  
 Cuchillas reversibles con rompevirutas

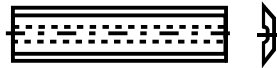
	L mm	W mm	T mm	a mm	T04F	T03SMG	T10MG	T08MF
	20.0	12.0	1.5		30928			
	30.0	12.0	1.5	14.0	13117			
	50.0	12.0	1.5	26.0	13127			
	15.0	15.0	2.0		13322		14029	

Special reversible knives  
 Spezial Wendeschneidplatten  
 Plaquettes reversibles especiales  
 Coltelli reversibili speciali  
 Cuchillas reversibles especiales

40°

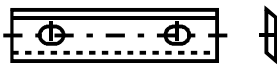


For Leitz system\*



L mm	W mm	T mm	T04F	T03SMG	T10MG
7.7	8.0	1.5	13457	13930	
9.7	8.0	1.5	13470	13942	14065
11.7	8.0	1.5	13458	13931	14043
14.7	8.0	1.5	13459	13932	14045
19.7	8.0	1.5	13460	13933	14047
24.7	8.0	1.5	13472	13943	14068
30.0	8.0	1.5	13461	13934	14049
35.0	8.0	1.5	13462	13935	14051
40.0	8.0	1.5	13463	13936	14053
45.0	8.0	1.5	13488	49488	14081
50.0	8.0	1.5	13464	13937	14055
60.0	8.0	1.5	13466	13938	14057
70.0	8.0	1.5	13478	30927	14074
80.0	8.0	1.5	13467	13939	14059
100.0	8.0	1.5	13468	13940	14061
120.0	8.0	1.5	13469	49489	14063

For Oertli system\*



L mm	W mm	T mm	T04F	T03SMG	T10MG
8.8	8.0	1.5	30931		17193
9.0	8.0	1.5	30932		17194
10.0	8.0	1.5	30933		17195
11.0	8.0	1.5	30934		17196
12.0	8.0	1.5	30935		17197
15.0	8.0	1.5	30936		17198
20.0	8.0	1.5	30937		17200
25.0	8.0	1.5	30938		17201
28.0	8.0	1.5	30939		17202
32.0	8.0	1.5	30940		17203
40.0	8.0	1.5	30941		17204
50.0	8.0	1.5	30942		17206
60.0	8.0	1.5	30943		17207
80.0	8.0	1.5	30944		17209
100.0	8.0	1.5	30945		17210
12.0	12.0	1.5	34294		34295

\* For use in Leitz/Oertli-cutterheads only

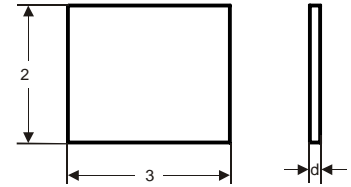
\* Nur zur Verwendung in Messerköpfen der Firma Leitz bzw. Oertli

\* Utilisation limitée aux têtes à lames de l'entreprises Leitz et Oertli

\* Da usare solo su teste portacoltelli della Leitz - Oertli

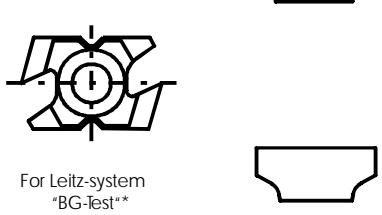
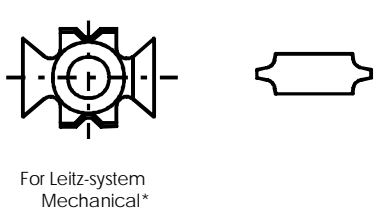
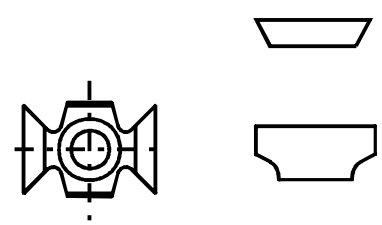
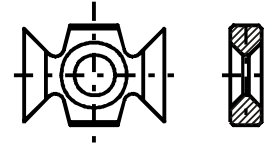
\* Sólo para empleo con portacuchillas de la firma Leitz/Oertli

Reversible knives for portable planers  
 Wendeplatten für Handhobel  
 Plaquettes por rabots electro portatifs  
 Coltelli piallatrici per portatili  
 Cuchillas para acepilladoras electricas



L mm	W mm	T mm	T10MF	
56.0	5.5	1.1	13041	Adler
60.0	5.5	1.1	13053	Wegoma
75.5	5.5	1.1	13001	AEG HTH75 Bosch 0590, P400, 1590, 1591 Festo REP75 Haffner FH222 Kress Jet Star 6701 Mafell HU75 Metabo 6375 Scheer MH75/3, MH80 Skil 98H Holz-Her 2223, 2286, 2320
75.7	5.5	1.2	13018	B&D DN75, DN750, BD750, SR6000K
78.0	5.5	1.1	13067	Virutex
80.5	5.9	1.2	13043	ELU MFF80, MFF40, PF161
80.5	5.5	1.1	13010	ELU MFF80
82.0	5.5	1.1	13020	AEG EH82, EH825, EH822, EH450, EH700, EH82-1, H750, EH700R B&D DN76 Bosch PHO 100/150, PHO 200/300, 4387, PHO 2-82/3-82, Gustav, HOO882 ALU HH15, HH40, HH04K, HH40EK Fein HS2151 Felisatti TP282 Haffner FH224 Hitachi FU20, F20A, FP20A, P20V Holz-Her 2321, 2322 Mafell EHU82, MHU82 Makita 1100, 1125B, 1900B, 1923B, 1923H Metabo Gustav 4382, MO8382, MO0882 Peugeot RA400, 82RAC, RA82CS, BRA1-82 Ryobi L1323-A Skil H92, H94, H95, H96, H97
			13082	Casals CE82
82.7	5.5	1.2	13032	B&D DN710, DN712, DN730, DN71-02, DN71-03, BD711
92.0	5.5	1.1	13057	AEG 450 Hitachi F30A, FU30 Ryobi L120N, L150N, L1205N, L1323
102.0	5.5	1.1	13061	AEG HB750, EH102, HBE800
75.0	12.0	1.8	13245	B&D
75.5	5.1	1.2	13031	Face groove, Brustnut Rainure sur grande face
82.0	5.1	1.2	13034	Scanalatura frontale, Ranura frontal

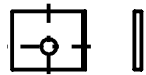
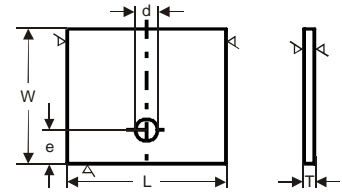
Edge rounding knives  
 Kantenrunder  
 Couteaux brise-arrête  
 Spigolatori  
 Cuchillas para aristas



L mm	W mm	T mm	Type	T10MG
16.0	22.0	5.0	TKM 45°	32292
16.0	22.0	5.0	TKM R 1.5	32294
16.0	22.0	5.0	TKM R 2.0	32295
16.0	22.0	5.0	TKM R 2.5	32296
16.0	22.0	5.0	TKM R 3.0	32297
16.0	22.0	5.0	TKM R 4.0	32299
16.0	22.0	6.0	TKM R 5.0	32301
15.0	20.0	8.0	TKM 11/0 - 45°	32304
15.0	17.5	8.0	TKM 11/1 - 60°	32305
15.0	22.3	9.0	TKM 12/0 R3	32306
15.0	20.0	7.3	TKM 12/3 R2	32308
15.0	18.3	7.3	TKM 12/3 R2F	32309
15.0	20.0	7.0	TKM 12/4 R1.5	32310
15.0	22.3	10.0	TKM 12/5 R3F	32311
15.0	22.3	7.3	TKM 13/0 (R1) N=5	32312
15.0	22.3	9.0	TKM 13/1 (R1) N=7	32313
15.0	22.3	7.3	TKM 16/0	32315
15.0	23.0	8.0	TKM 21/0 - 45°	32316
15.0	20.5	8.0	TKM 21/1 - 60°	32317
15.0	23.0	9.0	TKM 22/0 R3	32318
15.0	23.0	7.3	TKM 22/3 R2	32320
15.0	23.0	7.0	TKM 22/4 R1.5	32322
15.0	23.0	9.0	TKM 22/5 R3F	32323
15.0	25.7	7.3	TKM 23/0 (R1) N=5	32324
15.0	25.7	9.3	TKM 23/1 (R1) N=7	32325
15.0	23.0	9.0	TKM 22/1 R3	32319
15.0	25.7	7.3	TKM 24/0 R5	32326
15.0	25.7	7.3	TKM 24/1 R5	32327
15.0	25.7	7.3	TKM 26/0	32329

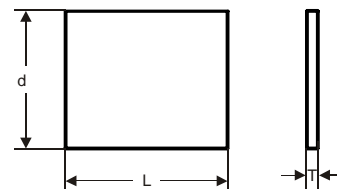
\* For use in Leitz-cutterheads only  
 \* Nur zur Verwendung in Messerköpfen der Firma Leitz  
 \* Utilisation limitée aux têtes à lames de l'entreprise Leitz  
 \* Da usare solo su teste portacoltelli della Leitz  
 \* Sólo para empleo con portacuchillas de la firma Leitz

Preprofiled Blanks  
 Vorprofilerte Blanketts  
 Plaquettes préprofilées  
 Placchette presagomate  
 Piezas en bruto preperfladas

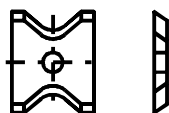


L mm	W mm	T mm	d mm	e mm	R mm	T04F	T03SMG	T10MG
13.0	16.0	2.0	3.0		2-4	15176	33175	33176
13.0	16.0	2.0	4.0		2-4	15177	33178	33179
20.0	21.0	2.0	3.0		5-8	15180	33181	33182
20.0	21.0	2.0	4.0		5-8	15181	33184	33185
26.0	24.0	2.0	3.0		9-13	15183	33187	33188
26.0	24.0	2.0	4.0		9-13	15185	33190	33191
12.0	14.5	2.0	4.0	6.0		17731	34072	34073
12.0	18.0	2.0	4.0	6.0		19815	34075	34076
12.0	18.0	2.0	5.0	5.5		37116	40950	40952
19.6	15.5	2.0	4.0	6.0		35156	40942	40947
19.6	15.5	2.0	4.0	6.0		35157	40943	40945
13.0	14.0	1.5	3.2		2-4	15189	33193	33194
20.0	16.0	2.0	3.2		5-8	15191	33203	33204
26.0	18.0	2.0	3.2		9-13	15193	33206	33207
30.0	20.0	2.0	3.2		14-16	15195	33213	33214
16.0	17.5	2.0	3.0	5.0	2-6	17550	34059	34060
16.0	17.5	2.0	3.5	5.0	2-6	15235	33227	33228
16.0	17.5	2.0	4.0	5.0	2-6	15242	33233	33234
20.0	17.5	2.0	4.0	6.0	2-8	15239	33236	33237
20.0	20.5	2.0	4.0	6.3	2-6	15245	33239	33240
16.0	17.5	2.0	4.4	5.4	2-6	15243	33230	33231
24.0	20.4	2.0	4.2	6.3	2-6	15247		
15.0	15.0	2.0	4.0	6.0		22306	34081	34082
16.0	14.6	2.0	5.0	6.0		46698		

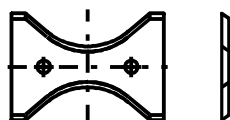
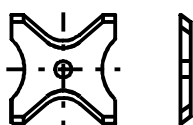
Profled standard blanks  
 Proflierte Standardblanketts  
 Plaquettes standard profilées  
 Placchette profilate standard  
 Piezas en bruto perfiladas standard



For Leuco system\*



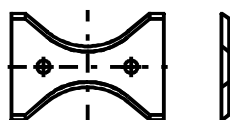
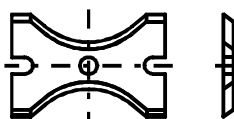
L mm	W mm	T mm	d mm	R mm	T04F	T03SMG	T10MG
13.0	16.0	2.0	4.0	2.0	32836	32876	32904
13.0	16.0	2.0	4.0	3.0	32837	32877	32909
13.0	16.0	2.0	4.0	4.0	32838	32878	32908
20.0	21.0	2.0	4.0	5.0	32839	32911	32910
20.0	21.0	2.0	4.0	6.0	32840	32879	32913
20.0	21.0	2.0	4.0	7.0	32841	32880	32914
20.0	21.0	2.0	4.0	8.0	32842	32881	32915
26.0	24.0	2.0	4.0	9.0	32843	32882	32919
26.0	24.0	2.0	4.0	10.0	32844	32883	32920
26.0	24.0	2.0	4.0	11.0	32845	32884	32921
26.0	24.0	2.0	4.0	12.0	32846	32885	32922
26.0	24.0	2.0	4.0	13.0	32847	32886	32923
30.0	25.0	2.0	4.0	14.0	32848	33782	33783
30.0	25.0	2.0	4.0	15.0	32849	33785	33786
30.0	25.0	2.0	4.0	16.0	32850	33788	33789



For Howema system\*

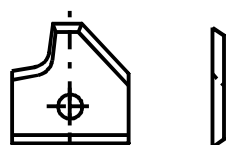
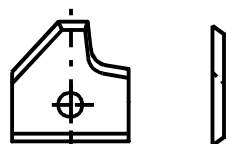
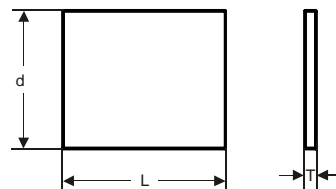


L mm	W mm	T mm	d mm	R mm	T04F	T03SMG	T10MG
13.0	14.0	1.5	3.2	2.0	16376	33809	33810
13.0	14.0	1.5	3.2	3.0	16377	33812	33813
13.0	14.0	1.5	3.2	4.0	16378	33815	33816
20.0	16.0	2.0	3.2	5.0	16379	33818	33819
20.0	16.0	2.0	3.2	6.0	16380	33821	33822
20.0	16.0	2.0	3.2	7.0	16381	33824	33825
20.0	16.0	2.0	3.2	8.0	16382	33827	33828
26.0	18.0	2.0	3.2	9.0	16383	33830	33831
26.0	18.0	2.0	3.2	10.0	16384	33833	33834
26.0	18.0	2.0	3.2	11.0	16385	33836	33837
26.0	18.0	2.0	3.2	12.0	16386	33839	33840
26.0	18.0	2.0	3.2	12.5	16391	33867	33868
30.0	20.0	2.0	3.2	13.0	16387	33842	33843
30.0	20.0	2.0	3.2	14.0	16388	33845	33846
30.0	20.0	2.0	3.2	15.0	16389	33848	33849
30.0	20.0	2.0	3.2	16.0	16390	33851	33852
40.0	28.0	2.0	3.2	17.0	16371	33854	33855
40.0	28.0	2.0	3.2	18.0	16372	33857	33858
40.0	28.0	2.0	3.2	19.0	16373	33860	33851
40.0	28.0	2.0	3.2	20.0	16374	33863	33864



\* For use in Leuco/Howema-cutterheads only  
 \* Nur zur Verwendung in Messerköpfen der Firma Leuco bzw. Howema  
 \* Utilisation limitée aux têtes à lames de l'entreprises Leuco et Howema  
 \* Da usare solo su teste portacoltelli della Leuco - Howema  
 \* Sólo para empleo con portacuchillas de la firma Leuco/Howema

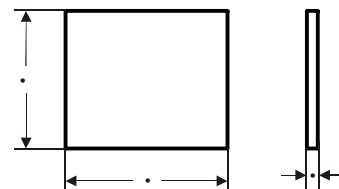
Profled standard blanks  
 Profilierte Standardblanketts  
 Plaquettes standard profilées  
 Placchette profilate standard  
 Piezas en bruto perfiladas standard











L	W	T	d	R	T04F	T03SMG	T10MG
mm	mm	mm	mm	mm			
12.0	12.0	1.5	4.0	2.0	16426	33022	33024
12.0	12.0	1.5	4.0	3.0	16427	33021	33025
12.0	12.0	1.5	4.0	4.0	16428	33023	33026
12.0	13.0	2.0	4.0	2.0	20990	33877	33878
12.0	13.0	2.0	4.0	2.5	22185	33874	33875
12.0	13.0	2.0	4.0	3.0	20853	33871	33872
16.0	14.0	2.0	4.0	3.0	39045		
16.0	17.5	2.0	3.0	2.0	16515	33880	33881
16.0	17.5	2.0	3.0	3.0	16516	33883	33884
16.0	17.5	2.0	3.0	4.0	16518	33886	33887
16.0	17.5	2.0	3.0	5.0	16519	33889	33890
16.0	17.5	2.0	3.5	2.0	16469	33892	33893
16.0	17.5	2.0	3.5	3.0	16470	33895	33896
16.0	17.5	2.0	3.5	4.0	16472	33898	33899
16.0	17.5	2.0	3.5	5.0	16473	33901	33902
16.0	17.5	2.0	3.5	6.0	16474	33904	33905
16.0	17.5	2.0	4.0	2.0	16477	32968	32973
16.0	17.5	2.0	4.0	3.0	16478	32969	32974
16.0	17.5	2.0	4.0	4.0	16479	32970	32975
16.0	17.5	2.0	4.0	5.0	16480	32971	32976
16.0	17.5	2.0	4.4	2.0	16510	33907	33908
16.0	17.5	2.0	4.4	3.0	16511	33910	33911
16.0	17.5	2.0	4.4	4.0	16512	33913	33914
16.0	17.5	2.0	4.4	5.0	16513	33916	33917
24.0	20.0	2.0	4.4	6.0	33919	33924	33925
24.0	20.0	2.0	4.4	7.0	33920	33927	33928
24.0	20.0	2.0	4.4	8.0	33921	33930	33931
24.0	20.0	2.0	4.4	9.0	33922	33933	33934
24.0	20.0	2.0	4.4	10.0	33923	33936	33937
20.0	20.5	2.0	4.0	2.0	16495	32991	32996
20.0	20.5	2.0	4.0	3.0	16496	32992	32997
20.0	20.5	2.0	4.0	4.0	16497	32993	32998
20.0	20.5	2.0	4.0	5.0	16498	32994	32999
20.0	20.5	2.0	4.0	6.0	16499	32995	33000
20.0	20.5	2.0	4.0	2.0	16500	33007	33011
20.0	20.5	2.0	4.0	3.0	16501	33006	33012
20.0	20.5	2.0	4.0	4.0	16502	33008	33013
20.0	20.5	2.0	4.0	5.0	16503	33009	33014
20.0	20.5	2.0	4.0	6.0	16504	33010	33015

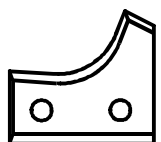
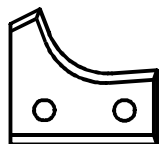
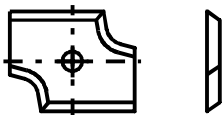
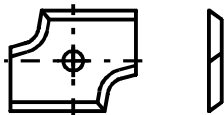
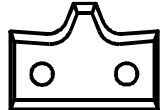
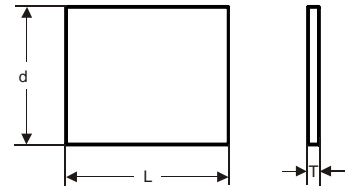


Profled standard blanks  
 Proflierte Standardblanketts  
 Plaquettes standard profilées  
 Placchette proflatae standard  
 Piezas en bruto perfiladas standard



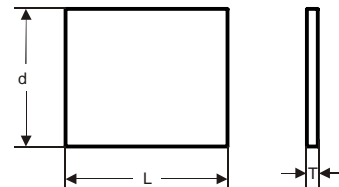
		L	W	T	d	R	T04F	T03SMG	T10MG
		mm	mm	mm	mm	mm			
		15.0	14.5	2.0	4.0	2.0	22305	33941	33942
		15.0	14.5	2.0	4.0	2.5	33939	33947	33948
		15.0	14.5	2.0	4.0	3.0	22308	33953	33954
		16.1	14.0	2.0	5.0	2.0	46693		
		16.1	14.0	2.0	5.0	3.0	49986		
		15.0	14.5	2.0	4.0	2.0	22307	33944	33945
		15.0	14.5	2.0	4.0	2.5	33940	33950	33951
		15.0	14.5	2.0	4.0	3.0	22309	33956	33957
		16.1	14.0	2.0	5.0	2.0	46694		
		16.1	14.0	2.0	5.0	3.0	49987		
		12.0	14.5	2.0	4.0	2.0	21044	33973	33974
		19.6	15.2	2.0	4.0	2.0	33963	33997	33998
		12.0	14.5	2.0	4.0	2.5	20397	34109	34110
		12.0	14.5	2.0	4.0	3.0	20620	34100	34101
		19.6	15.2	2.0	4.0	3.0	33967	34003	34004
		12.0	14.5	2.0	4.0	2.0	21045	33981	33982
		19.6	14.5	2.0	4.0	2.0	33966	34000	34001
		12.0	14.5	2.0	4.0	2.5	20396	34106	34107
		12.0	14.5	2.0	4.0	3.0	20619	34103	34104
		19.6	15.2	2.0	4.0	3.0	33968	34006	34007
	Quadromat	12.0	18.0	2.0	4.0	2.0	33969	34009	34010
		12.0	18.0	2.0	4.0	3.0	33970	34015	34017
 IMA	MFA	12.0	18.0	2.0	4.0	2.0	34024	34037	34038
		12.0	18.0	2.0	4.0	3.0	34031	34040	34041
	Quadromat	12.0	18.0	2.0	4.0	2.0	33971	34015	34013
		12.0	18.0	2.0	4.0	3.0	33972	34019	34020
 IMA	MFA	12.0	18.0	2.0	4.0	2.0	34025	41378	41379
		12.0	18.0	2.0	4.0	3.0	34032	40440	41381

Profled standard blanks  
 Proflierte Standardblanketts  
 Plaquettes standard profilées  
 Placchette proflata standard  
 Piezas en bruto perfladas standard



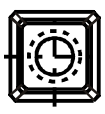
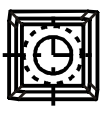
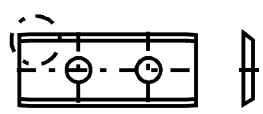
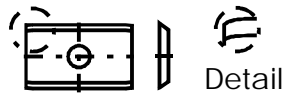
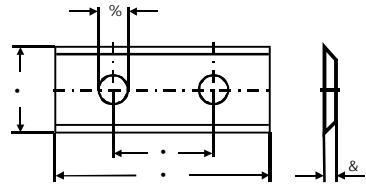
L	W	T	d	a	R	T04F	T03SMG	T10MG
mm	mm	mm	mm	mm	mm			
20.5	15.0	2.0	4.0	12.0	2.0	16429	33565	33566
20.8	15.0	2.0	4.0	12.0	3.0	16430	33568	33569
20.8	15.0	2.0	4.0	12.0	4.0	16431	33571	33572
30.0	17.0	2.0	4.0	20.0	5.0	16432	33574	33575
30.5	17.0	2.0	4.0	20.0	6.0	16433	33577	33578
30.0	17.0	2.0	4.0	20.0	7.0	16434	33580	33581
30.5	17.0	2.0	4.0	20.0	8.0	16435	33583	33584
30.5	16.5	2.0	4.0	20.0	5.0	16452	33595	33596
30.5	16.5	2.0	4.0	20.0	6.0	16453	33598	33599
30.5	16.5	2.0	4.0	20.0	7.0	16454	33601	33602
30.5	16.5	2.0	4.0	20.0	8.0	16455	33604	33605
20.0	16.0	2.0	3.0		3.0	33311	33607	33608
30.0	14.0	2.0	4.0		2.0	33312	33610	33611
30.0	14.0	2.0	4.0		2.5	33313	33613	33614
30.0	14.0	2.0	4.0		3.0	33314	33616	33617
20.0	16.0	2.0	3.0		3.0	33315	33619	33620
30.0	14.0	2.0	4.0		2.0	33316	33622	33623
30.0	14.0	2.0	4.0		2.5	33317	33625	33626
30.0	14.0	2.0	4.0		3.0	33318	33628	33629
12.0	12.0	1.5	4.0		45°	33319	33632	33633
16.5	17.5	1.0	4.0		45°	32964	33965	32966
16.5	17.5	2.0	4.4		45°	33324	41057	41058
16.5	17.5	2.0	3.5		45°	15237	34112	34113
21.8	19.5	2.0	3.0	12.0	10.0	33670	33674	33675
21.8	19.5	2.0	3.0	12.0	12.0	33671	33677	33678
21.5	20.0	2.0	3.0	12.0	9.0	16445	33657	33658
21.5	20.0	2.0	3.0	12.0	10.0	16446	33660	33661
21.5	20.0	2.0	3.0	12.0	11.0	16447	33663	33664
21.5	20.0	2.0	3.0	12.0	12.0	16448	33666	33667
21.8	19.5	2.0	3.0	12.0	10.0	33672	33680	33681
21.8	19.5	2.0	3.0	12.0	12.0	33673	33685	33686
21.5	20.0	2.0	3.0	12.0	9.0	16436	33645	33646
21.5	20.0	2.0	3.0	12.0	10.0	16437	33648	33649
21.5	20.0	2.0	3.0	12.0	11.0	16438	33651	33652
21.5	20.0	2.0	3.0	12.0	12.0	16439	33654	33655

Profled standard blanks  
 Proflierte Standardblanketts  
 Plaquettes standard profilées  
 Placchette proflatae standard  
 Piezas en bruto perfiladas standard



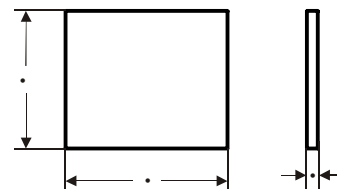
L mm	W mm	T mm	d mm	R mm	A°	T04F	T03SMG	T06MF
20.0	12.0	2.0	4.0	1.0	6°	32984	33031	
20.0	12.0	2.0	4.0	1.0	15°	50309	50310	
20.0	12.0	2.0	4.0	2.0	6°	16419	33033	
20.0	12.0	2.0	4.0	2.0	15°	50311	50312	
20.0	12.0	2.0	4.0	3.0	6°	16420	33034	
20.0	12.0	2.0	4.0	3.0	15°	50313	50314	
20.0	12.0	2.0	4.0	4.0	6°	16421	33043	
20.0	12.0	2.0	4.0	5.0	6°	16422	33042	
20.0	11.5	2.0	4.5	1.5		50088		
20.0	11.5	2.0	4.5	2.0		50089		
20.0	11.5	2.0	4.5	2.5		50090		
20.0	11.5	2.0	4.5	3.0		50091		
12.7	12.7	3.2		2.0				35041
12.7	12.7	3.2		3.0				37922
15.5	15.2	1.5	4.6	3.0		21377		
19.5	9.0	1.5	4.0	5x45°		33086	33118	
19.5	12.0	1.5	4.0	5x45°		34228	34229	
19.5	9.0	1.5	4.0	5.0		33090	33128	
19.5	12.0	1.5	4.0	5.0		34232	34233	
19.5	9.0	1.5	4.0	2.0		33117	33142	
19.5	9.0	1.5	4.0	3.0		33097	33146	
19.5	9.0	1.5	4.0	4.0		33098	33149	
19.5	9.0	1.5	4.0	5.0		33099	33152	
19.5	12.0	1.5	4.0	2.0		34236	34240	
19.5	12.0	1.5	4.0	3.0		34237	34243	
19.5	12.0	1.5	4.0	4.0		34238	34246	
19.5	12.0	1.5	4.0	5.0		34239	34249	
39.5	12.0	1.5	4.0			33400	33401	

Reversible knives for spiral cutterheads  
 Wendeplatten für Spiralhobelköpfe  
 Plaquettes reversibles pour porte-outils hélicoïdaux  
 Coltellini per teste elicoidali  
 Cuchillas reversibles para fresas helicoidales



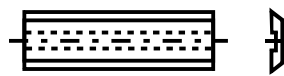
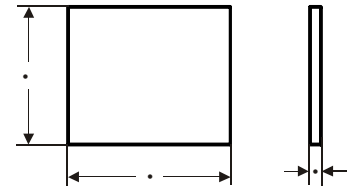
L mm	W mm	T mm		T08MF	T04F	T10MG	TL15
20.0	12.0	1.5	35°			13979	
24.5	12.0	1.5	40°	37246		41060	
30.0	12.0	1.5	35°			13984	
50.0	12.0	1.5	35°			13989	
10.5	10.5	1.5	35°				40343
14.0	14.0	2.0	30°	13273	13260	14028	13771
14.0	14.0	2.0	30°	13276			
15.0	15.0	2.5	R•150			13320	
15.0	15.0	2.5	R•50			43895	
14.0	14.0	2.0	30°	44486			
15.0	15.0	2.5	30°			44289	

Reversible knives for portable planers  
 Wendeplatten für Handhobel  
 Plaquettes por robots electro portatifs  
 Coltelli piallatrici portatili  
 Cuchillas para acepilladoras electricas



L mm	W mm	T mm	T10MF	
56.0	5.5	1.1	13041	Adler
60.0	5.5	1.1	13053	Wegoma
75.5	5.5	1.1	13001	AEG HTH75 Bosch 0590, P400, 1590, 1591 Festo REP75 Haffner FH222 Kress •et Star 6701 Mafell HU75 Metabo 6375 Scheer MH75/3, MH80 Skil 98H Holz-Her 2223, 2286, 2320
75.7	5.5	1.2	13018	B&D DN75, DN750, BD750, SR6000K
78.0	5.5	1.1	13067	Virutex
80.5	5.9	1.2	13043	ELU MFF80, MFF40, PF161
80.5	5.5	1.1	13010	ELU MFF80
82.0	5.5	1.1	13020	AEG EH82, EH825, EH822, EH450, EH700, EH82-1, H750, EH700R B&D DN76 Bosch PHO 100/150, PHO 200/300, 4387, PHO 2-82/3-82, Gustav, HOO882 ALU HH15, HH40, HH04K, HH40EK Fein HS2151 Felisatti TP282 Haffner FH224 Hitachi FU20, F20A, FP20A, P20V Holz-Her 2321, 2322 Mafell EHU82. MHU82 Makita 1100, 1125B, 1900B, 1923B, 1923H Metabo Gustav 4382, MO8382, MO0882 Peugeot RA400, 82RAC, RA82CS, BRA1-82 Ryobi L1323-A Skil H92, H94, H95, H96, H97
			13082	Casals CE82
82.7	5.5	1.2	13032	B&D DN710, DN712, DN730, DN71-02, DN71-03, BD711
92.0	5.5	1.1	13057	AEG 450 Hitachi F30A, FU30 Ryobi L120N, L150N, L1205N, L1323
102.0	5.5	1.1	13061	AEG HB750, EH102, HBE800
75.0	12.0	1.8	13245	B&D
75.5	5.1	1.2	13031	Face groove, Brustnut Rainure sur grande face
82.0	5.1	1.2	13034	Scanalatura frontale, Ranura frontal

Planer knives - Bulldozer system  
 Hobelmesser - System Bulldozer  
 Couteaux a raboter - Systeme Bulldozer  
 Coltelli da pialla - Sistema Bulldozer  
 Cuchillas para cepillar - System Bulldozer



Bulldozer system

L mm	W mm	T mm	T10MG
60.0	13.6	1.8	47422
80.0	13.6	1.8	46288
100.0	13.6	1.8	13713
110.0	13.6	1.8	47423
120.0	13.6	1.8	13715
130.0	13.6	1.8	13716
140.0	13.6	1.8	13723
150.0	13.6	1.8	13718
160.0	13.6	1.8	13726
180.0	13.6	1.8	13719
190.0	13.6	1.8	13725
200.0	13.6	1.8	13720
230.0	13.6	1.8	13721
240.0	13.6	1.8	40337
250.0	13.6	1.8	13722
260.0	13.6	1.8	35440