

Applications
Applications
Anwendungen

L02

End mills
.....
.....

L04

Torus end mills
.....
.....

L09

Contour end mills
.....
.....

L11

Ball nose end mills
.....
.....

L12

Drills
Forets
Spiralbohrer

L17

Others
D'autres
Andere

L21

Tungsten carbide burrs
Limes rotatives
Rotierfräser

L23

Technical information
Information technique
Technische Auskunft

L26

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters


Solid carbide

Boring heads

Arbors & adaptors


End mills -

6020
2 Flutes




Page L.04

6021
2 Flutes




Page L.04

6120
2 Flutes (Long)




Page L.04

7405
2 Flutes




Page L.05

7415
2 Flutes (Long)




Page L.05

6915
2 Flutes




Page L.05

6030
3 Flutes




Page L.06

6031
3 Flutes




Page L.06

6130
3 Flutes (Long)




Page L.06

6040
4 Flutes




Page L.07

6041
4 Flutes




Page L.07

6140
4 Flutes (Long)




Page L.07

6137
6/8 Flutes




Page L.08

6197
6/8 Flutes



Page L.08


6060
6 Flutes



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Torus end mills -

6231
2 Flutes




Page L.09

6241
2 Flutes




Page L.09

6327
2 Flutes




Page L.10

6337
2 Flutes (Long)




Page L.10

6427
4 Flutes



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6437
4 Flutes (Long)



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Contour end mills -

7965
2 Flutes



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7975
2 Flutes with front out



Page L.11


Ball nose end mills -

6320
2 Flutes




Page L.12

6321
2 Flutes




Page L.12

6420
2 Flutes (Long)




Page L.12

9645
2 Flutes




Page L.13

6955
2 Flutes (Long)




Page L.13

7597
2 Flutes




Page L.13

6330
3 Flutes




Page L.14

6331
3 Flutes




Page L.14

6430
3 Flutes




Page L.14

6340
4 Flutes




Page L.15

6341
4 Flutes




Page L.15

6440
4 Flutes




Page L.15

6521
2 Flutes



Page L.16

6541
4 Flutes




Page L.16







Drills - Forets - Spiralbohrer

7020
Hard-metal twist drills
2 Flutes




Page L.17

7030
Hard-metal twist drills
3 Flutes



Page L.18

7120
Hard-metal twist drills
2 Flutes (Long)




Page L.18






Others - D'autres - Andere

80
Solid carbide center drill




Page L.21

81
Solid carbide center drill
for C.N.C. 90°



Page L.21

82
Solid carbide center drill
for C.N.C. 120°



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83
Solid carbide
Countersinks




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84
Solid carbide
Countersinks




Page L.22

85
Centerless ground
carbide



Page L.22

86
Centerless ground
carbide



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Tungsten carbide burrs - Limes rotatives - Rotierfräser

90
Cylindrical




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91
Cylindrical round top




Page L.23

92
Tree radius nose



Page L.23

93
Tree pointed




Page L.23

94
Cone




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95
Olive (Egg)




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96
Ball




Page L.24

97
Inverted one




Page L.24

98
Deburring 60°



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99
Deburring 90°



Page L.25




Inserts

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lathes

Ceramic
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cutters

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Boring
heads

Arbors &
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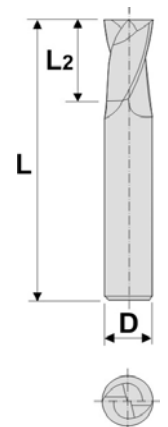
Boring heads

Arbors & adaptors

6020



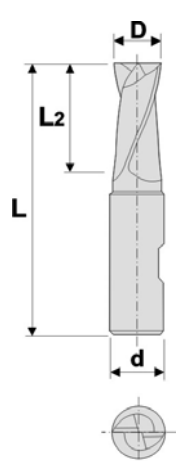
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602003	3	-	12	40	●	●		
602004	4	-	12	40	●	●		
602005	5	-	14	50	●	●		
602006	6	-	16	50	●	●		
602007	7	-	20	60	●	●		
602008	8	-	20	60	●	●		
602009	9	-	20	60	●	●		
602010	10	-	22	70	●	●		
602011	11	-	22	70	●	●		
602012	12	-	22	70	●	●		
602013	13	-	25	75	●	○		
602014	14	-	25	75	●	○		
602015	15	-	25	75	●	○		
602016	16	-	28	80	●	○		
602018	18	-	28	80	●	○		
602020	20	-	35	100	●	○		
602022	22	-	35	100	○	○		
602025	25	-	35	100	○	○		
602030	30	-	35	100	○	○		
602032	32	-	35	100	○	○		



6021



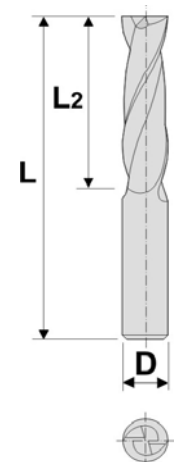
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602105	5	6	10	57	○			
602106	6	6	10	57	○			
602107	7	8	13	63	○			
602108	8	8	16	63	○			
602109	9	10	16	72	○			
602110	10	10	19	72	○			
602111	11	12	22	83	○			
602112	12	12	22	83	○			
602113	13	14	22	83	○			
602114	14	14	22	83	○			
602115	15	16	26	92	○			
602116	16	16	26	92	○			
602118	18	18	26	92	○			
602120	20	20	32	104	○			
602122	22	25	32	104	○			
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602130	30	32	32	104	○			
602132	32	32	32	104	○			



6120



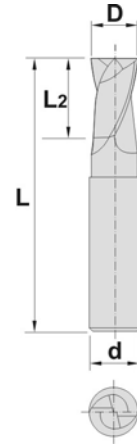
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612004	4	-	25	60	○			
612005	5	-	30	70	○			
612006	6	-	30	70	○			
612007	7	-	35	80	○			
612008	8	-	35	80	○			
612010	10	-	45	100	○			
612012	12	-	45	100	○			
612014	14	-	45	100	○			
612016	16	-	45	100	○			
612018	18	-	45	100	○			
612020	20	-	55	125	○			
612022	22	-	55	125	○			
612025	25	-	55	125	○			
612030	30	-	55	125	○			
612032	32	-	55	125	○			



7405



REF.	z	D	d	L	L2	K10	TiN	TiCN	TiAlN
740503	2	3	6	57	4	o			
740504	2	4	6	57	5	o			
740505	2	5	6	57	7	o			
740506	2	6	6	57	7	o			
740508	2	8	8	63	9	o			
740510	2	10	10	72	11	o			
740512	2	12	12	83	12	o			
740516	2	16	16	92	16	o			
740520	2	20	20	104	20	o			
740525	2	25	25	106	25	o			



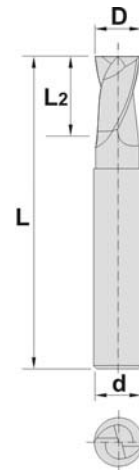
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	<850 N/mm² ★	>850 N/mm² ★	★

7415



REF.	z	D	d	L	L2	K10	TiN	TiCN	TiAlN
741506	2	6	6	80	7	o			
741508	2	8	8	80	9	o			
741510	2	10	10	100	11	o			
741512	2	12	12	100	12	o			
741516	2	16	16	100	16	o			
741520	2	20	20	125	20	o			
741525	2	25	25	150	25	o			



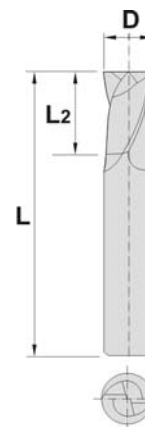
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	<850 N/mm² ★	>850 N/mm² ★	★

6915



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
691501	2	1	38	5	o			
691501,5	2	1,5	38	5	o			
691502	2	2	38	8	o			
691502,5	2	2,5	38	8	o			
691503	2	3	38	12	o			
691504	2	4	40	12	o			
691505	2	5	50	14	o			
691506	2	6	50	16	o			
691508	2	8	63	20	o			
691510	2	10	72	22	o			
691512	2	12	73	22	o			
691514	2	14	75	25	o			
691516	2	16	82	28	o			
691518	2	18	84	28	o			
691520	2	20	104	35	o			



☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	<850 N/mm² ★	>850 N/mm² ★	★

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors



Inserts

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Automatic lathes

Ceramic tools

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Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

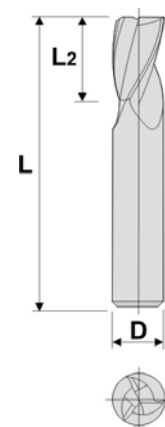
Boring heads

Arbors & adaptors

6030



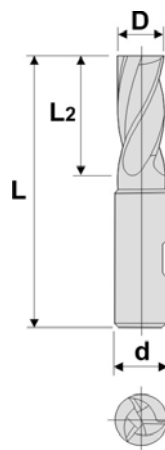
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603004	4	-	12	40	●	○		
603005	5	-	14	50	●	○		
603006	6	-	16	50	●	○		
603007	7	-	20	60	●	○		
603008	8	-	20	60	●	○		
603009	9	-	20	60	●	○		
603010	10	-	22	70	●	○		
603011	11	-	22	70	●	○		
603012	12	-	22	70	●	○		
603013	13	-	25	75	●	○		
603014	14	-	25	75	●	○		
603015	15	-	25	75	●	○		
603016	16	-	28	80	●	○		
603018	18	-	28	80	●	○		
603020	20	-	35	100	●	○		
603022	22	-	35	100	○	○		
603025	25	-	35	100	○	○		
603030	30	-	35	100	○	○		
603032	32	-	35	100	○	○		



6031



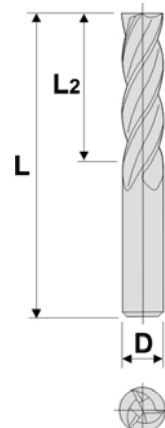
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603105	5	6	10	57	○			
603106	6	6	10	57	○			
603107	7	8	13	63	○			
603108	8	8	16	63	○			
603109	9	10	16	72	○			
603110	10	10	19	72	○			
603111	11	12	22	83	○			
603112	12	12	22	83	○			
603113	13	14	22	83	○			
603114	14	14	22	83	○			
603115	15	16	26	92	○			
603116	16	16	26	92	○			
603118	18	18	26	92	○			
603120	20	20	32	104	○			
603122	22	25	32	104	○			
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603130	30	32	32	104	○			
603132	32	32	32	104	○			



6130



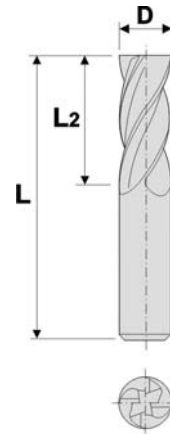
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613006	6	-	30	70	○			
613007	7	-	35	80	○			
613008	8	-	35	80	○			
613010	10	-	45	100	○			
613012	12	-	45	100	○			
613014	14	-	45	100	○			
613016	16	-	45	100	○			
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613020	20	-	55	125	○			
613022	22	-	55	125	○			
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613032	32	-	55	125	○			



6040



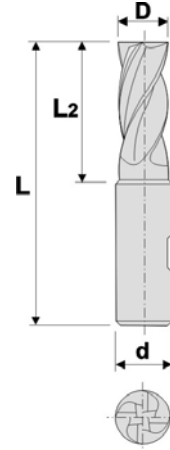
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604004	4	-	12	40	●	●		
604005	5	-	14	50	●	●		
604006	6	-	16	50	●	●		
604007	7	-	20	60	●	●		
604008	8	-	20	60	●	●		
604009	9	-	20	60	●	●		
604010	10	-	22	70	●	●		
604011	11	-	22	70	●	●		
604012	12	-	22	70	●	●		
604013	13	-	25	75	●	●		
604014	14	-	25	75	●	●		
604015	15	-	25	75	●	●		
604016	16	-	28	80	●	●		
604018	18	-	28	80	●	●		
604020	20	-	35	100	●	●		
604022	22	-	35	100	○	○		
604025	25	-	35	100	○	○		
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604032	32	-	35	100	○	○		



6041



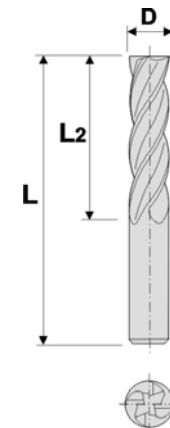
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604106	6	6	10	57	○			
604107	7	8	13	63	○			
604108	8	8	16	63	○			
604109	9	10	16	72	○			
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604111	11	12	22	83	○			
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604113	13	14	22	83	○			
604114	14	14	22	83	○			
604115	15	16	26	92	○			
604116	16	16	26	92	○			
604118	18	18	26	92	○			
604120	20	20	32	104	○			
604122	22	25	32	104	○			
604125	25	25	32	104	○			
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604132	32	32	32	104	○			



6140



REF.	D	d	L2	L	K10	TIN	TICN	TIALN
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614004	4	-	25	60	○			
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614006	6	-	30	70	○			
614007	7	-	35	80	○			
614008	8	-	35	80	○			
614010	10	-	45	100	○			
614012	12	-	45	100	○			
614014	14	-	45	100	○			
614016	16	-	45	100	○			
614018	18	-	45	100	○			
614020	20	-	55	125	○			
614022	22	-	55	125	○			
614025	25	-	55	125	○			
614030	30	-	55	125	○			
614032	32	-	55	125	○			



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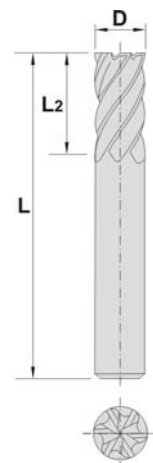
Boring heads

Arbors & adaptors

6137



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
613706	6	6	60	20				○
613708	6	8	80	25				○
613710	6	10	80	30				○
613712	6	12	100	36				○
613716	6	16	106	46				○
613720	8	20	125	60				○
613725	8	25	150	75				○



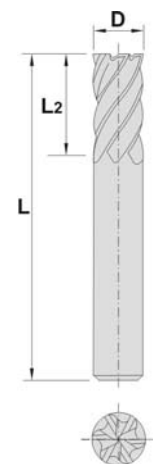
☆ Not suitable ★ Suitable ⬤ Especially suitable

Steels					INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm ²	<850 N/mm ²	<1.100 N/mm ²	<1.300 N/mm ²	>45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	CAST IRON	Ti	Cu, Ms	Al	Plastics
☆	☆	⬤	⬤	⬤	⬤	★	⬤	☆	☆	☆	☆

6197



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
619706	6	6	60	20				○
619708	6	8	80	25				○
619710	6	10	80	30				○
619712	6	12	100	36				○
619716	6	16	106	46				○
619720	8	20	125	60				○
619725	8	25	150	75				○



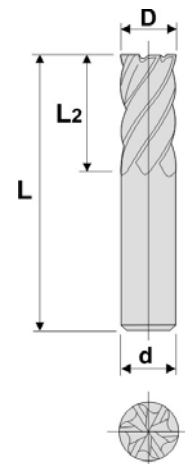
☆ Not suitable ★ Suitable ⬤ Especially suitable

Steels					INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm ²	<850 N/mm ²	<1.100 N/mm ²	<1.300 N/mm ²	>45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	CAST IRON	Ti	Cu, Ms	Al	Plastics
☆	☆	☆	⬤	⬤	☆	☆	⬤	☆	☆	☆	☆

6060



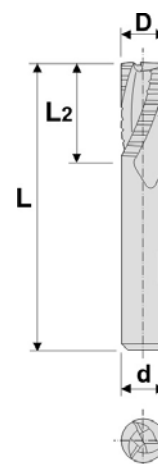
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606004	4	-	12	40				○
606005	5	-	14	50				○
606006	6	-	16	50				○
606007	7	-	20	60				○
606008	8	-	20	60				○
606009	9	-	20	60				○
606010	10	-	22	70				○
606011	11	-	22	70				○
606012	12	-	22	70				○
606014	14	-	25	75				○
606016	16	-	28	80				○
606018	18	-	28	80				○
606020	20	-	35	100				○
606022	22	-	35	100				○
606025	25	-	35	100				○



6231



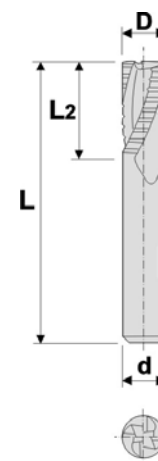
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
623103	3	6	8	57	o			
623104	4	6	11	57	o			
623105	5	6	13	57	o			
623106	6	6	13	57	o			
623108	8	8	19	63	o			
623110	10	10	22	72	o			
623112	12	12	26	83	o			
623114	14	14	26	83	o			
623116	16	16	32	92	o			
623118	18	18	32	92	o			
623120	20	20	38	104	o			
623122	22	25	38	104	o			
623125	25	25	38	104	o			
623130	30	32	38	104	o			
623132	32	32	38	104	o			



6241



REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
624103	3	6	8	57	o			
624104	4	6	11	57	o			
624105	5	6	13	57	o			
624106	6	6	13	57	o			
624108	8	8	19	63	o			
624110	10	10	22	72	o			
624112	12	12	26	83	o			
624114	14	14	26	83	o			
624116	16	16	32	92	o			
624118	18	18	32	92	o			
624120	20	20	38	104	o			
624122	22	25	38	104	o			
624125	25	25	38	104	o			
624130	30	32	38	104	o			
624132	32	32	38	104	o			



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

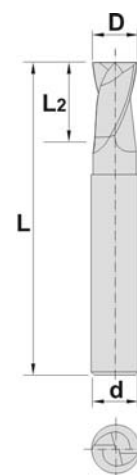
Boring heads

Arbors & adaptors

6327



REF.	z	D	d	L	L2	K10	TiN	TiCN	TiAlN
632703	2	3	6	57	4				○
632704	2	4	6	57	5				○
632705	2	5	6	57	6				○
632706	2	6	6	57	7				○
632708	2	8	8	63	9				○
632710	2	10	10	72	11				○
632712	2	12	12	83	12				○
632716	2	16	16	92	16				○
632718	2	18	18	92	18				○
632720	2	20	20	104	20				○



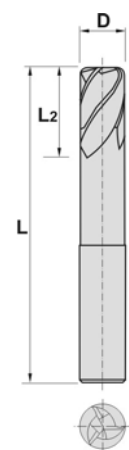
☆ Not suitable ★ Suitable ⬤ Especially suitable

Steels					INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm ²	<850 N/mm ²	<1.100 N/mm ²	<1.300 N/mm ²	>45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	CAST IRON	Ti	Cu, Ms	Al	Plastics
☆	☆	⬤	⬤	⬤	⬤	★	⬤	☆	☆	★	☆

6337



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
633706	2	6	80	7				○
633708	2	8	80	9				○
633710	2	10	100	11				○
633712	2	12	120	12				○
633716	2	16	160	16				○



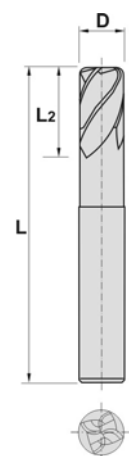
☆ Not suitable ★ Suitable ⬤ Especially suitable

Steels					INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm ²	<850 N/mm ²	<1.100 N/mm ²	<1.300 N/mm ²	>45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	CAST IRON	Ti	Cu, Ms	Al	Plastics
☆	☆	⬤	⬤	⬤	⬤	★	⬤	☆	☆	★	☆

6427



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
642706	4	6	57	7				○
642708	4	8	63	9				○
642710	4	10	72	11				○
642712	4	12	83	12				○
642716	4	16	92	16				○
642718	4	18	92	18				○
642720	4	20	104	20				○



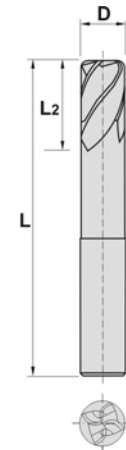
☆ Not suitable ★ Suitable ⬤ Especially suitable

Steels					INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm ²	<850 N/mm ²	<1.100 N/mm ²	<1.300 N/mm ²	>45 HRC	INOX < 850 N/mm ²	INOX > 850 N/mm ²	CAST IRON	Ti	Cu, Ms	Al	Plastics
☆	☆	⬤	⬤	⬤	★	☆	⬤	★	☆	☆	☆

6437



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
643706	4	6	80	7				○
643708	4	8	80	9				○
643710	4	10	100	11				○
643712	4	12	120	12				○
643716	4	16	160	16				○



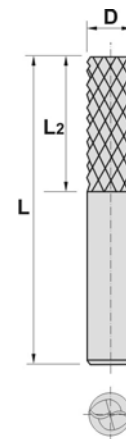
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ⊕	<1.300 N/mm² ⊕	>45 HRC ⊕	<850 N/mm² ★	>850 N/mm² ☆	★

7965



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
796502	2	2	38	10	○			
796503	2	3	38	12	○			
796504	2	4	40	15	○			
796505	2	5	50	16	○			
796506	2	6	50	18	○			
796508	2	8	63	25	○			
796510	2	10	72	30	○			
796512	2	12	73	30	○			
796514	2	14	75	30	○			
796516	2	16	82	30	○			
796518	2	18	84	32	○			
796520	2	20	104	35	○			



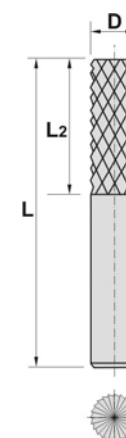
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	<850 N/mm² ☆	>850 N/mm² ☆	⊕

7975



REF.	z	D	L	L2	K10	TiN	TiCN	TiAlN
797502	2	2	38	10	○			
797503	2	3	38	12	○			
797504	2	4	40	15	○			
797505	2	5	50	16	○			
797506	2	6	50	18	○			
797508	2	8	63	25	○			
797510	2	10	72	30	○			
797512	2	12	73	30	○			
797514	2	14	75	30	○			
797516	2	16	82	30	○			
797518	2	18	84	32	○			
797520	2	20	104	35	○			



☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX	INOX	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	<850 N/mm² ☆	>850 N/mm² ☆	⊕

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

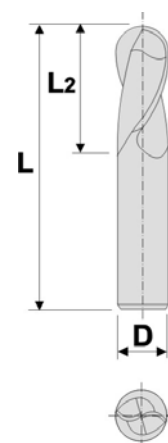
Boring heads

Arbors & adaptors

6320



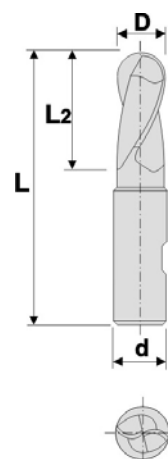
REF.	D	d	L2	L	K10	TIN	TICN	TIALN
632001	1	-	5	40	○	○		
632002	2	-	8	40	●	○		
632003	3	-	12	40	●	○		
632004	4	-	12	40	●	○		
632005	5	-	14	50	●	○		
632006	6	-	16	50	●	○		
632007	7	-	20	60	●	○		
632008	8	-	20	60	●	○		
632009	9	-	20	60	●	○		
632010	10	-	22	70	●	○		
632011	11	-	22	70	●	○		
632012	12	-	22	70	●	○		
632013	13	-	25	75	○	○		
632014	14	-	25	75	○	○		
632015	15	-	25	75	○	○		
632016	16	-	28	80	○	○		
632018	18	-	28	80	○	○		
632020	20	-	35	100	○	○		
632022	22	-	35	100	○	○		
632025	25	-	35	100	○	○		
632030	30	-	35	100	○	○		
632032	32	-	35	100	○	○		



6321



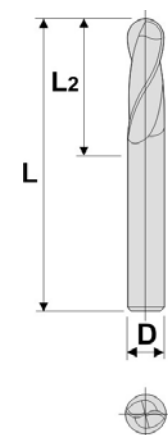
REF.	D	d	L2	L	K10	TIN	TICN	TIALN
632102	2	6	6	50	○			
632103	3	6	7	57	○			
632104	4	6	8	57	○			
632105	5	6	10	57	○			
632106	6	6	10	57	○			
632107	7	8	13	63	○			
632108	8	8	16	63	○			
632109	9	10	16	72	○			
632110	10	10	19	72	○			
632111	11	12	22	83	○			
632112	12	12	22	83	○			
632113	13	14	22	83	○			
632114	14	14	22	83	○			
632115	15	16	26	92	○			
632116	16	16	26	92	○			
632118	18	18	26	92	○			
632120	20	20	32	104	○			
632122	22	25	32	104	○			
632125	25	25	32	104	○			
632130	30	32	32	104	○			
632132	32	32	32	104	○			



6420



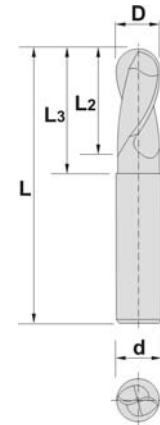
REF.	D	d	L2	L	K10	TIN	TICN	TIALN
642003	3	-	25	60	●	○		
642004	4	-	25	60	●	○		
642005	5	-	30	70	●	○		
642006	6	-	30	70	●	○		
642007	7	-	35	80	●	○		
642008	8	-	35	80	●	○		
642010	10	-	45	100	●	○		
642012	12	-	45	100	●	○		
642014	14	-	45	100	○	○		
642016	16	-	45	100	○	○		
642018	18	-	45	100	○	○		
642020	20	-	55	125	○	○		
642022	22	-	55	125	○	○		
642025	25	-	55	125	○	○		
642030	30	-	55	125	○	○		
642032	32	-	55	125	○	○		



6945



REF.	z	D	d	L	L2	L3	K10	TiN	TiCN	TiAlN
694502	2	2	6	57	4	6	○			
694503	2	3	6	57	6	9	○			
694504	2	4	6	57	8	12	○			
694505	2	5	6	57	10	15	○			
694506	2	6	6	57	12	20	○			
694508	2	8	8	63	16	20	○			
694510	2	10	10	72	20	31	○			
694512	2	12	12	83	24	37	○			
694516	2	16	16	92	32	43	○			
694520	2	20	20	104	40	53	○			



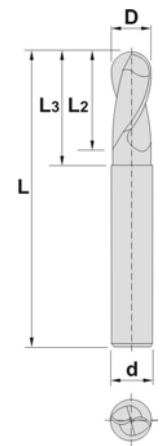
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX < 850 N/mm²	INOX > 850 N/mm²	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	★	★	☆

6955



REF.	z	D	d	L	L2	L3	K10	TiN	TiCN	TiAlN
695502	2	2	6	80	4	12	○			
695503	2	3	6	80	6	15	○			
695504	2	4	6	80	8	18	○			
695505	2	5	6	80	10	25	○			
695506	2	6	6	80	12	30	○			
695508	2	8	8	80	16	35	○			
695510	2	10	10	100	20	40	○			
695512	2	12	12	120	24	50	○			
695516	2	16	16	160	32	55	○			
695520	2	20	20	160	40	60	○			



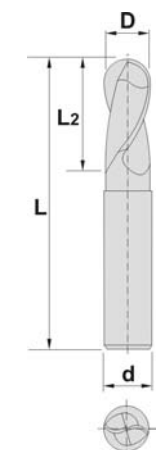
☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX < 850 N/mm²	INOX > 850 N/mm²	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ☆	<1.300 N/mm² ☆	>45 HRC ☆	★	★	☆

7597



REF.	z	D	d	L	L2	K10	TiN	TiCN	TiAlN
759702	2	2	6	80	6				○
759703	2	3	6	80	7				○
759704	2	4	6	80	8				○
759705	2	5	6	80	10				○
759706	2	6	6	80	10				○
759708	2	8	8	100	16				○
759710	2	10	10	120	19				○
759712	2	12	12	120	22				○
759716	2	16	16	160	26				○
759720	2	20	20	160	32				○
759725	2	25	25	160	32				○



☆ Not suitable ★ Suitable ⊕ Especially suitable

Steels	INOX < 850 N/mm²	INOX > 850 N/mm²	CAST IRON	Ti	Cu, Ms	Al	Plastics
<400 N/mm² ☆	<850 N/mm² ☆	<1.100 N/mm² ⊕	<1.300 N/mm² ⊕	>45 HRC ⊕	★	☆	☆

- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

6330



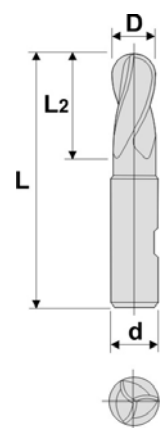
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
633001	1	-	5	40	o	o		
633002	2	-	8	40	o	o		
633003	3	-	12	40	o	o		
633004	4	-	12	40	o	o		
633005	5	-	14	50	o	o		
633006	6	-	16	50	o	o		
633007	7	-	20	60	o	o		
633008	8	-	20	60	o	o		
633009	9	-	20	60	o	o		
633010	10	-	22	70	o	o		
633011	11	-	22	70	o	o		
633012	12	-	22	70	o	o		
633013	13	-	25	75	o	o		
633014	14	-	25	75	o	o		
633015	15	-	25	75	o	o		
633016	16	-	28	80	o	o		
633018	18	-	28	80	o	o		
633020	20	-	35	100	o	o		
633022	22	-	35	100	o	o		
633025	25	-	35	100	o	o		
633030	30	-	35	100	o	o		
633032	32	-	35	100	o	o		



6331



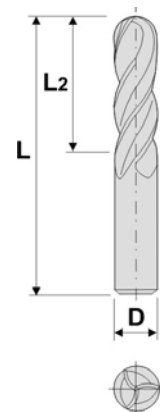
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
633102	2	6	6	50	o			
633103	3	6	7	57	o			
633104	4	6	8	57	o			
633105	5	6	10	57	o			
633106	6	6	10	57	o			
633107	7	8	13	63	o			
633108	8	8	16	63	o			
633109	9	10	16	72	o			
633110	10	10	19	72	o			
633111	11	12	22	83	o			
633112	12	12	22	83	o			
633113	13	14	22	83	o			
633114	14	14	22	83	o			
633115	15	16	26	92	o			
633116	16	16	26	92	o			
633118	18	18	26	92	o			
633120	20	20	32	104	o			
633122	22	25	32	104	o			
633125	25	25	32	104	o			
633130	30	32	32	104	o			
633132	32	32	32	104	o			



6430



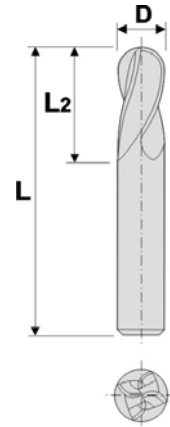
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
643003	3	-	25	60	o			
643004	4	-	25	60	o			
643005	5	-	30	70	o			
643006	6	-	30	70	o			
643007	7	-	35	80	o			
643008	8	-	35	80	o			
643010	10	-	45	100	o			
643012	12	-	45	100	o			
643014	14	-	45	100	o			
643016	16	-	45	100	o			
643018	18	-	45	100	o			
643020	20	-	55	125	o			
643022	22	-	55	125	o			
643025	25	-	55	125	o			
643030	30	-	55	125	o			
643032	32	-	55	125	o			



6340



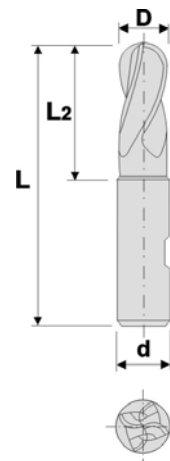
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
634001	1	-	5	40	●	○		
634002	2	-	8	40	●	○		
634003	3	-	12	40	●	○		
634004	4	-	12	40	●	○		
634005	5	-	14	50	●	○		
634006	6	-	16	50	●	○		
634007	7	-	20	60	●	○		
634008	8	-	20	60	●	○		
634009	9	-	20	60	●	○		
634010	10	-	22	70	●	○		
634011	11	-	22	70	●	○		
634012	12	-	22	70	●	○		
634013	13	-	25	75	●	○		
634014	14	-	25	75	●	○		
634015	15	-	25	75	●	○		
634016	16	-	28	80	●	○		
634018	18	-	28	80	●	○		
634020	20	-	35	100	●	○		
634022	22	-	35	100	●	○		
634025	25	-	35	100	●	○		
634030	30	-	35	100	●	○		
634032	32	-	35	100	●	○		



6341



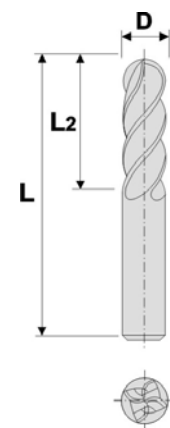
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
634102	2	6	6	50	○			
634103	3	6	7	57	○			
634104	4	6	8	57	○			
634105	5	6	10	57	○			
634106	6	6	10	57	○			
634107	7	8	13	63	○			
634108	8	8	16	63	○			
634109	9	10	16	72	○			
634110	10	10	19	72	○			
634111	11	12	22	83	○			
634112	12	12	22	83	○			
634113	13	14	22	83	○			
634114	14	14	22	83	○			
634115	15	16	26	92	○			
634116	16	16	26	92	○			
634118	18	18	26	92	○			
634120	20	20	32	104	○			
634122	22	25	32	104	○			
634125	25	25	32	104	○			
634130	30	32	32	104	○			
634132	32	32	32	104	○			



6440



REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
644003	3	-	25	60	○			
644004	4	-	25	60	○			
644005	5	-	30	70	○			
644006	6	-	30	70	○			
644007	7	-	35	80	○			
644008	8	-	35	80	○			
644010	10	-	45	100	○			
644012	12	-	45	100	○			
644014	14	-	45	100	○			
644016	16	-	45	100	○			
644018	18	-	45	100	○			
644020	20	-	55	125	○			
644022	22	-	55	125	○			
644025	25	-	55	125	○			
644030	30	-	55	125	○			
644032	32	-	55	125	○			



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

6521



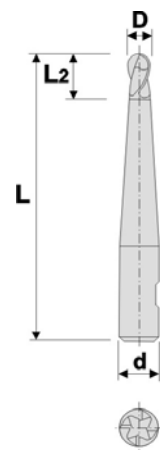
REF.	D	d	L ₂	L	K10	TiN	TiCN	TiAlN
652103	3	6	4	57				•
652104	4	6	5	57				•
652105	5	8	6	63				•
652106	6	8	6	63				•
652108	8	10	10	72				•
652110	10	12	12	73				•



6541



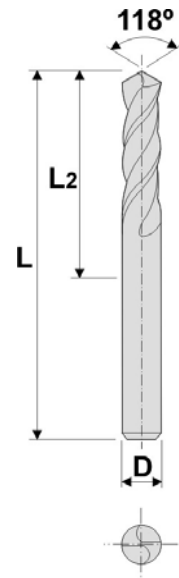
REF.	D	d	L ₂	L	K10	TiN	TiCN	TiAlN
654104	4	8	6	100				•
654105	5	8	6	63				○
654105L	5	8	6	100				•
654106	6	8	6	63				○
654106L	6	10	9	100				•
654108	8	10	10	72				○
654108L	8	10	12	100				•
654110	10	12	12	73				○
654110L	10	12	15	100				•
654112	12	16	15	150				•



7020



REF.	D	L2	L	K10	TiN	TiCN	TiAlN
702000.5	0,5	6	26	•			
702000.6	0,6	6	26	•			
702000.7	0,7	6	26	•			
702000.8	0,8	6	26	•			
702000.9	0,9	6	26	•			
702001.0	1,0	6	26	•			
702001.1	1,1	7	28	•			
702001.2	1,2	8	30	•			
702001.3	1,3	8	30	•			
702001.4	1,4	9	32	•			
702001.5	1,5	9	32	•			
702001.6	1,6	10	34	•			
702001.7	1,7	10	34	•			
702001.8	1,8	11	36	•			
702001.9	1,9	11	36	•			
702002.0	2,0	12	38	•			
702002.1	2,1	12	38	•			
702002.2	2,2	13	40	•			
702002.3	2,3	13	40	•			
702002.4	2,4	14	43	•			
702002.5	2,5	14	43	•			
702002.6	2,6	14	43	•			
702002.7	2,7	16	46	•			
702002.8	2,8	16	46	•			
702002.9	2,9	16	46	•			
702003.0	3,0	16	46	•			
702003.1	3,1	18	49	•			
702003.2	3,2	18	49	•			
702003.3	3,3	18	49	•			
702003.4	3,4	20	52	•			
702003.5	3,5	20	52	•			
702003.6	3,6	20	52	•			
702003.7	3,7	20	52	•			
702003.8	3,8	22	55	•			
702003.9	3,9	22	55	•			
702004.0	4,0	22	55	•			
702004.1	4,1	22	55	•			
702004.2	4,2	22	55	•			
702004.3	4,3	24	58	•			
702004.4	4,4	24	58	•			
702004.5	4,5	24	58	•			
702004.6	4,6	24	58	•			
702004.7	4,7	24	58	•			
702004.8	4,8	26	62	•			
702004.9	4,9	26	62	•			
702005.0	5,0	26	62	•			
702005.1	5,1	26	62	•			
702005.2	5,2	26	62	•			
702005.3	5,3	26	62	•			
702005.4	5,4	28	66	•			
702005.5	5,5	28	66	•			
702005.6	5,6	28	66	•			
702005.7	5,7	28	66	•			
702005.8	5,8	28	66	•			
702005.9	5,9	28	66	•			
702006.0	6,0	28	66	•			
702006.1	6,1	31	70	•			
702006.2	6,2	31	70	•			
702006.3	6,3	31	70	•			
702006.4	6,4	31	70	•			
702006.5	6,5	31	70	•			
702006.6	6,6	31	70	•			
702006.7	6,7	31	70	•			
702006.8	6,8	34	74	•			
702006.9	6,9	34	74	•			
702007.0	7,0	34	74	•			
702007.1	7,1	34	74	•			
702007.2	7,2	34	74	•			
702007.3	7,3	34	74	•			
702007.4	7,4	34	74	•			
702007.5	7,5	34	74	•			
702007.6	7,6	36	79	•			
702007.7	7,7	36	79	•			
702007.8	7,8	36	79	•			
702007.9	7,9	36	79	•			
702008.0	8,0	36	79	•			
702008.1	8,1	36	79	•			
702008.2	8,2	36	79	•			
702008.3	8,3	36	79	•			
702008.4	8,4	36	79	•			
702008.5	8,5	36	79	•			
702008.6	8,6	40	84	•			



- Inserts
- Turning
- Automatic lathes
- Ceramic tools
- Parting & grooving
- Threading
- Drills
- Cartridges
- Brazed tools
- Milling cutters
- Solid carbide
- Boring heads
- Arbors & adaptors

• Normally available for immediate delivery

◦ Only available in a limited quantity



Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

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Cartridges

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Milling cutters

Solid carbide

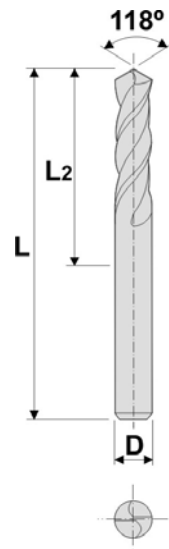
Boring heads

Arbors & adaptors

7020



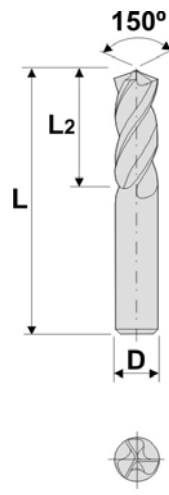
REF.	D	L2	L	K10	TiN	TiCN	TiAlN
702008.7	8,7	40	84	●			
702008.8	8,8	40	84	●			
702008.9	8,9	40	84	●			
702009.0	9,0	40	84	●			
702009.1	9,1	40	84	●			
702009.2	9,2	40	84	●			
702009.3	9,3	40	84	●			
702009.4	9,4	40	84	●			
702009.5	9,5	40	84	●			
702009.6	9,6	43	86	●			
702009.7	9,7	43	86	●			
702009.8	9,8	43	86	●			
702009.9	9,9	43	86	●			
702010.0	10,0	43	86	●			
702010.2	10,2	43	86	●			
702010.5	10,5	43	86	●			
702011.0	11,0	47	95	●			
702011.5	11,5	47	95	●			
702012.0	12,0	51	102	●			
702012.5	12,5	51	102	●			
702013.0	13,0	51	102	●			
702013.5	13,5	54	107	●			
702014.0	14,0	54	107	●			
702014.5	14,5	56	111	●			
702015.0	15,0	56	111	●			
702015.5	15,5	58	115	●			
702016.0	16,0	58	115	●			
702016.5	16,5	60	119	●			
702017.0	17,0	60	119	●			
702017.5	17,5	62	123	●			
702018.0	18,0	62	123	●			
702018.5	18,5	64	127	●			
702019.0	19,0	64	127	●			
702019.5	19,5	66	131	●			
702020.0	20,0	66	131	●			



7030



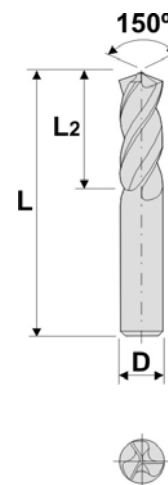
REF.	D	L2	L	K10	TiN	TiCN	TiAlN
703003.0	3,0	16	46	○			
703003.1	3,1	18	49	○			
703003.2	3,2	18	49	○			
703003.3	3,3	18	49	○			
703003.4	3,4	20	52	○			
703003.5	3,5	20	52	○			
703003.6	3,6	20	52	○			
703003.7	3,7	20	52	○			
703003.8	3,8	22	55	○			
703003.9	3,9	22	55	○			
703004.0	4,0	22	55	●			
703004.1	4,1	22	55	○			
703004.2	4,2	22	55	○			
703004.3	4,3	24	58	○			
703004.4	4,4	24	58	○			
703004.5	4,5	24	58	○			
703004.6	4,6	24	58	○			
703004.7	4,7	24	58	○			
703004.8	4,8	26	62	○			
703004.9	4,9	26	62	○			
703005.0	5,0	26	62	●			
703005.1	5,1	26	62	○			
703005.2	5,2	26	62	○			
703005.3	5,3	26	62	○			
703005.4	5,4	28	66	○			
703005.5	5,5	28	66	○			
703005.6	5,6	28	66	○			
703005.7	5,7	28	66	○			
703005.8	5,8	28	66	○			
703005.9	5,9	28	66	○			
703006.0	6,0	28	66	●			
703006.1	6,1	31	70	○			
703006.2	6,2	31	70	○			
703006.3	6,3	31	70	○			
703006.4	6,4	31	70	○			
703006.5	6,5	31	70	○			



7030



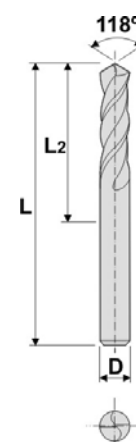
REF.	D	L2	L	K10	TiN	TiCN	TiAlN
703006.6	6,6	31	70	○			
703006.7	6,7	31	70	○			
703006.8	6,8	34	74	○			
703006.9	6,9	34	74	○			
703007.0	7,0	34	74	●			
703007.1	7,1	34	74	○			
703007.2	7,2	34	74	○			
703007.3	7,3	34	74	○			
703007.4	7,4	34	74	○			
703007.5	7,5	34	74	○			
703007.6	7,6	36	79	○			
703007.7	7,7	36	79	○			
703007.8	7,8	36	79	○			
703007.9	7,9	36	79	○			
703008.0	8,0	36	79	●			
703008.1	8,1	36	79	○			
703008.2	8,2	36	79	○			
703008.3	8,3	36	79	○			
703008.4	8,4	36	79	○			
703008.5	8,5	36	79	○			
703008.6	8,6	40	84	○			
703008.7	8,7	40	84	○			
703008.8	8,8	40	84	○			
703008.9	8,9	40	84	○			
703009.0	9,0	40	84	●			
703009.1	9,1	40	84	○			
703009.2	9,2	40	84	○			
703009.3	9,3	40	84	○			
703009.4	9,4	40	84	○			
703009.5	9,5	40	84	○			
703009.6	9,6	43	89	○			
703009.7	9,7	43	89	○			
703009.8	9,8	43	89	○			
703009.9	9,9	43	89	○			
703010.0	10,0	43	89	●			
703010.2	10,2	43	89	○			
703010.5	10,5	43	89	○			
703011.0	11,0	47	95	●			
703011.5	11,5	47	95	○			
703012.0	12,0	51	102	●			
703012.5	12,5	51	102	○			
703013.0	13,0	51	102	●			
703013.5	13,5	54	107	○			
703014.0	14,0	54	107	●			
703014.5	14,5	56	111	○			
703015.0	15,0	56	111	●			
703015.5	15,5	58	115	○			
703016.0	16,0	58	115	●			
703016.5	16,5	60	119	○			
703017.0	17,0	60	119	●			
703017.5	17,5	62	123	○			
703018.0	18,0	62	123	●			
703018.5	18,5	64	127	○			
703019.0	19,0	64	127	●			
703019.5	19,5	66	131	○			
703020.0	20,0	66	131	●			



7120



REF.	D	L2	L	K10	TiN	TiCN	TiAlN
712001.0	1,0	12	34	●			
712001.1	1,1	14	36	○			
712001.2	1,2	16	38	○			
712001.3	1,3	16	38	○			
712001.4	1,4	18	40	○			
712001.5	1,5	18	40	○			
712001.6	1,6	20	43	○			
712001.7	1,7	20	43	○			
712001.8	1,8	22	46	○			
712001.9	1,9	22	46	○			
712002.0	2,0	24	49	●			
712002.1	2,1	24	49	○			
712002.2	2,2	28	53	○			
712002.3	2,3	28	53	○			
712002.4	2,4	30	57	○			
712002.5	2,5	30	57	○			
712002.6	2,6	30	57	○			
712002.7	2,7	33	60	○			
712002.8	2,8	33	60	○			
712002.9	2,9	33	60	○			
712003.0	3,0	33	60	●			
712003.1	3,1	33	65	○			



Inserts

Turning

Automatic
lathesCeramic
toolsParting &
grooving

Threading

Drills

Cartridges

Brazen
toolsMilling
cuttersSolid
carbideBoring
headsArbors &
adaptors

7120

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

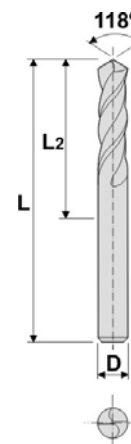
Brazed tools

Milling cutters

Solid carbide

Boring heads

Arbors & adaptors

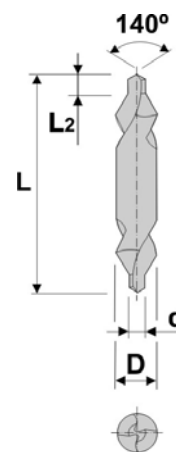


REF.	D	L2	L	K10	TIN	TICN	TIALN
712003.2	3,2	36	65	○			
712003.3	3,3	36	65	○			
712003.4	3,4	36	70	○			
712003.5	3,5	39	70	○			
712003.6	3,6	39	70	○			
712003.7	3,7	39	70	○			
712003.8	3,8	43	75	○			
712003.9	3,9	43	75	○			
712004.0	4,0	43	75	●			
712004.1	4,1	43	75	○			
712004.2	4,2	43	75	○			
712004.3	4,3	47	80	○			
712004.4	4,4	47	80	○			
712004.5	4,5	47	80	○			
712004.6	4,6	47	80	○			
712004.7	4,7	47	80	○			
712004.8	4,8	52	86	○			
712004.9	4,9	52	86	○			
712005.0	5,0	52	86	●			
712005.1	5,1	52	86	○			
712005.2	5,2	52	86	○			
712005.3	5,3	52	86	○			
712005.4	5,4	57	93	○			
712005.5	5,5	57	93	○			
712005.6	5,6	57	93	○			
712005.7	5,7	57	93	○			
712005.8	5,8	57	93	○			
712005.9	5,9	57	93	○			
712006.0	6,0	57	93	●			
712006.1	6,1	63	101	○			
712006.2	6,2	63	101	○			
712006.3	6,3	63	101	○			
712006.4	6,4	63	101	○			
712006.5	6,5	63	101	○			
712006.6	6,6	63	101	○			
712006.7	6,7	63	101	○			
712006.8	6,8	69	109	○			
712006.9	6,9	69	109	○			
712007.0	7,0	69	109	●			
712007.1	7,1	69	109	○			
712007.2	7,2	69	109	○			
712007.3	7,3	69	109	○			
712007.4	7,4	69	109	○			
712007.5	7,5	69	109	○			
712007.6	7,6	75	117	○			
712007.7	7,7	75	117	○			
712007.8	7,8	75	117	○			
712007.9	7,9	75	117	○			
712008.0	8,0	75	117	●			
712008.1	8,1	75	117	○			
712008.2	8,2	75	117	○			
712008.3	8,3	75	117	○			
712008.4	8,4	75	117	○			
712008.5	8,5	75	117	○			
712008.6	8,6	81	125	○			
712008.7	8,7	81	125	○			
712008.8	8,8	81	125	○			
712008.9	8,9	81	125	○			
712009.0	9,0	81	125	●			
712009.1	9,1	81	125	○			
712009.2	9,2	81	125	○			
712009.3	9,3	81	125	○			
712009.4	9,4	81	125	○			
712009.5	9,5	81	125	○			
712009.6	9,6	87	133	○			
712009.7	9,7	87	133	○			
712009.8	9,8	87	133	○			
712009.9	9,9	87	133	○			
712010.0	10,0	87	133	●			
712010.2	10,2	87	133	○			
712010.5	10,5	87	133	○			
712010.8	10,8	94	142	○			
712011.0	11,0	94	142	●			
712011.5	11,5	94	142	○			
712012.0	12,0	101	151	●			
712012.5	12,5	101	151	○			
712013.0	13,0	101	151	●			
712013.5	13,5	108	160	○			
712014.0	14,0	108	160	●			
712014.5	14,5	114	169	○			
712015.0	15,0	114	169	●			
712015.5	15,5	120	178	○			
712016.0	16,0	120	178	●			

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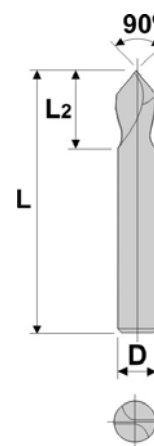
REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
800000.80	3,15	0,80	1,3	38	●			
800001.00	3,15	1,00	1,6	38	●			
800001.25	3,15	1,25	1,9	38	●			
800001.60	4,00	1,60	2,4	38	●			
800002.00	5,00	2,00	2,9	50	●			
800002.50	6,00	2,50	3,6	50	●			
800003.15	8,00	3,15	4,4	60	○			
800004.00	10,00	4,00	5,6	60	○			
800005.00	12,00	5,00	6,0	60	○			



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REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
810006	6	-	16	50	●			
810008	8	-	20	60	●			
810010	10	-	22	70	●			
810012	12	-	22	70	●			
810014	14	-	25	75	○			
810016	16	-	25	80	○			
810020	20	-	30	100	○			



82



REF.	D	d	L2	L	K10	TiN	TiCN	TiAlN
820006	6	-	16	50	●			
820008	8	-	20	60	●			
820010	10	-	22	70	●			
820012	12	-	22	70	●			
820014	14	-	25	75	○			
820016	16	-	25	80	○			
820020	20	-	30	100	○			



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Boring heads

Arbors & adaptors

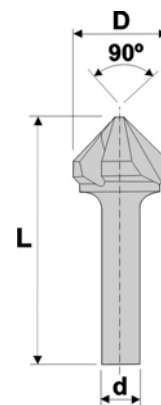


Inserts

83



REF.	D	d	L	z	K10	TiN	TiCN	TiAlN
833005.3	5,3	6	50	3	○			
833005.8	5,3	6	50	3	○			
833006.3	6,3	6	50	3	○			
833007.3	7,3	6	50	3	○			
833008.3	8,3	6	50	3	○			
833009.4	9,4	8	50	3	○			
833010.4	10,4	6	50	3	○			
833012.4	12,4	8	56	3	○			
833013.4	13,4	8	60	3	○			
833014.4	14,4	8	60	3	○			
833016.4	16,4	10	60	3	○			
833019.5	19,5	10	60	3	○			
833020.5	20,5	10	60	3	○			
833025.0	25,0	10	67	3	○			
833031.0	31,0	12	71	3	○			



Turning

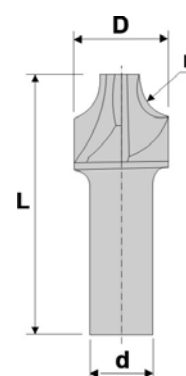
Automatic lathes

Ceramic tools

84



REF.	D	d	r	L	z	K10	TiN	TiCN	TiAlN
844001.00	8,0	8	1,00	50	4	●			
844001.25	8,0	8	1,25	50	4	○			
844001.50	10,0	10	1,50	50	4	○			
844001.75	10,0	10	1,75	50	4	○			
844002.00	12,0	12	2,00	50	4	●			
844002.25	12,0	12	2,25	50	4	○			
844002.50	12,0	12	2,50	50	4	○			
844003.00	14,0	12	3,00	55	4	●			
844003.50	16,0	12	3,50	55	4	○			
844004.00	16,0	12	4,00	60	4	●			
844004.50	18,0	12	4,50	60	4	○			
844005.00	20,0	16	5,00	65	4	●			
844006.00	21,0	16	6,00	65	4	●			
844008.00	26,5	20	8,00	70	4	●			
844010.00	32,0	20	10,00	70	4	○			
844012.00	38,0	20	12,00	75	4	○			



Parting & grooving

Threading

Drills

85



REF.	D	L	K10	TiN	TiCN	TiAlN
850002	2	100	●			
850003	3	100	●			
850004	4	100	●			
850005	5	100	●			
850006	6	100	●			
850007	7	100	●			
850008	8	100	●			
850009	9	100	●			
850010	10	100	●			
850011	11	100	●			
850012	12	100	●			
850014	14	100	○			
850016	16	100	○			
850018	18	100	○			
850020	20	100	○			



Cartridges

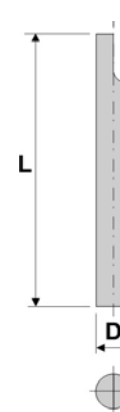
Brazed tools

Milling cutters

86



REF.	D	L	K10	TiN	TiCN	TiAlN
860002	2	100	●			
860003	3	100	●			
860004	4	100	●			
860005	5	100	●			
860006	6	100	●			
860007	7	100	●			
860008	8	100	●			
860009	9	100	●			
860010	10	100	●			
860011	11	100	●			
860012	12	100	●			
860014	14	100	○			
860016	16	100	○			
860018	18	100	○			
860020	20	100	○			



Boring heads

Arbors & adaptors

90



Straight 900

Crossed 901

REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
90003	3	3	40	14	-	•			
90006	6	3	44	14	-	•			
90008	8	6	63	18	-	•			
90010	10	6	65	20	-	•			
90012	12	6	70	25	-	•			
90016	16	8	70	25	-	•			
90106	3	3	44	14	-	•			
90108	6	6	63	18	-	•			
90110	10	6	65	20	-	•			
90112	12	6	70	25	-	•			
90116	16	8	70	25	-	•			



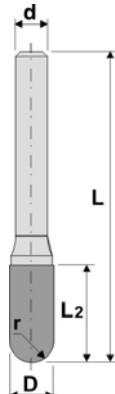
91



Straight 910

Crossed 911

REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
91003	3	3	40	14	1,5	•			
91006	6	3	44	14	3,0	•			
91008	8	6	63	18	4,0	•			
91010	10	6	65	20	5,0	•			
91012	12	6	70	25	6,0	•			
91016	16	8	70	25	8,0	•			
91106	6	3	44	14	3,0	•			
91108	8	6	63	18	4,0	•			
91110	10	6	65	20	5,0	•			
91112	12	6	70	25	6,0	•			
91116	16	8	70	25	8,0	•			



92



Straight 920

Crossed 921

REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
92003	3	3	40	12	0,8	•			
92006	6	3	44	14	1,5	•			
92008	8	6	61	16	2,0	•			
92010	10	6	65	20	2,5	•			
92012	12	6	70	25	3,0	•			
92016	16	8	70	25	5,0	•			
92106	6	3	44	14	1,5	•			
92108	8	6	61	16	2,0	•			
92110	10	6	65	20	2,5	•			
92112	12	6	70	25	3,0	•			
92116	16	8	70	25	5,0	•			



93



Straight 930

Crossed 931

REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
93003	3	3	40	12	-	•			
93006	6	3	44	14	-	•			
93008	8	6	62	16	-	•			
93010	10	6	65	20	-	•			
93012	12	6	70	25	-	•			
93016	16	8	70	27	-	•			
93106	6	3	44	14	-	•			
93108	8	6	62	16	-	•			
93110	10	6	65	20	-	•			
93112	12	6	70	25	-	•			
93116	16	8	70	27	-	•			



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- Arbors & adaptors



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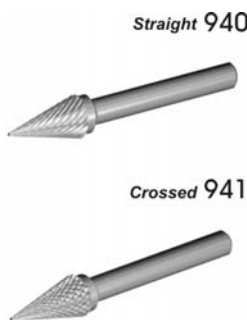
Milling cutters

Solid carbide

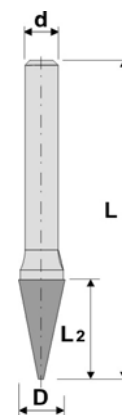
Boring heads

Arbors & adaptors

94



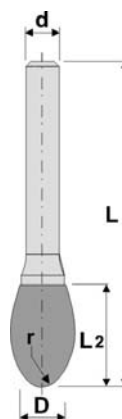
REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
94003	3	3	50	12	-	•			
94006	6	3	44	14	-	•			
94008	8	6	62	16	-	•			
94010	10	6	63	18	-	•			
94012	12	6	65	20	-	•			
94016	16	8	70	25	-	•			
94106	6	3	44	14	-	•			
94108	8	6	62	16	-	•			
94110	10	6	63	18	-	•			
94112	12	6	65	20	-	•			
94116	16	8	70	25	-	•			



95



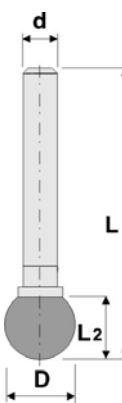
REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
95003	3	3	40	6	1,2	•			
95006	6	3	39	9	2,5	•			
95008	8	6	59	14	3,7	•			
95010	10	6	61	16	4,0	•			
95012	12	6	65	20	5,0	•			
95016	16	8	70	25	6,5	•			
95106	6	3	39	9	2,5	•			
95108	8	6	59	14	3,7	•			
95110	10	6	61	16	4,0	•			
95112	12	6	65	20	5,0	•			
95116	16	8	70	25	6,5	•			



96



REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
96003	3	3	40	3	-	•			
96006	6	3	35	5	-	•			
96008	8	6	52	7	-	•			
96010	10	6	54	9	-	•			
96012	12	6	56	11	-	•			
96016	16	8	59	14	-	•			
96106	6	3	35	5	-	•			
96108	8	6	52	7	-	•			
96110	10	6	54	9	-	•			
96112	12	6	56	11	-	•			
96116	16	8	59	14	-	•			



97



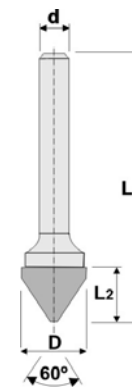
REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
97003	3	3	40	3	-	•			
97006	6	3	36	6	-	•			
97008	8	6	53	8	-	•			
97010	10	6	55	10	-	•			
97012	12	6	57	12	-	•			
97016	16	8	60	15	-	•			
97106	6	3	36	6	-	•			
97108	8	6	53	8	-	•			
97110	10	6	55	10	-	•			
97112	12	6	57	12	-	•			
97116	16	8	60	15	-	•			



98



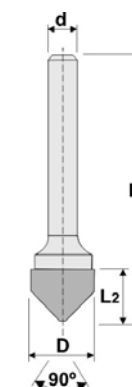
REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
98006	6	6	50	6	-	•			
98008	8	6	53	8	-	•			
98010	10	6	55	10	-	•			
98012	12	6	57	12	-	•			
98016	16	6	61	16	-	•			



99



REF.	D	d	L	L2	r	K10	TiN	TiCN	TiAlN
99006	6	6	50	6	-	•			
99008	8	6	53	8	-	•			
99010	10	6	55	10	-	•			
99012	12	6	57	12	-	•			
99016	16	6	61	16	-	•			



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Cutting data for solid carbide

Material	Condition	Feed rate S=mm/2 Ø						Coolant	Cutting speed m/min
		2-3	4-6	7-10	11-15	16-20	21-32		
Structural steel	R.400/600	0.015	0.02	0.03	0.04	0.05	0.07	Emulsion	60-80 40-60 30-50
	R.600/1000	0.01	0.015	0.02	0.03	0.04	0.06		
	R.1000/1400	0.01	0.01	0.02	0.03	0.04	0.06		
Tool steel	HB 230	0.01	0.01	0.02	0.03	0.04	0.06	Emulsion	30-50 30-40
	HB 230/285	0.01	0.01	0.02	0.03	0.04	0.06		
Stainless steel	Cr. Mo	0.01	0.01	0.02	0.03	0.04	0.04	Emulsion cutting oil	30-50 20-40
	Cr. Ni	0.01	0.01	0.02	0.02	0.03	0.05		
Semi-steel	To 220	0.01	0.02	0.04	0.06	0.07	0.09	Dry-emulsion	80-100
Malleable cast iron	Over 220	0.01	0.02	0.03	0.04	0.05	0.07	Dry-emulsion	60-90
Cast steel	R. 800	0.01	0.02	0.03	0.04	0.05	0.07	Emulsion	70-130
Titanium and titanium alloys	456	0.01	0.02	0.02	0.03	0.04	0.06	Emulsion	30-60
Aluminium & alloys	10% Si	0.02	0.03	0.05	0.07	0.10	0.12	Emulsion	500-800 250-500
	18% Si	0.01	0.02	0.03	0.05	0.07	0.10		
Brass, copper, bronze	456	0.01	0.02	0.03	0.05	0.07	0.10	Dry-emulsion	140-250
Layered plastics	456	0.02	0.03	0.05	0.07	0.10	0.13	Dry with suction	100-200

Cutting data for solid carbide drills

Material	Condition	Feed rate S=mm/2 Ø				Coolant	Cutting speed m/min
		1 - 3	4 - 7	8 - 13	14 - 20		
Structural steel	R.800 R.800-1000 R.1000-1200 R.1200-1400	0.01-0.03	0.02-0.05	0.05-0.08	0.08-0.12	Emulsion	80-100 70-100 60-90 50-70
		0.01-0.03	0.02-0.04	0.04-0.07	0.07-0.10		
		0.01-0.02	0.02-0.03	0.03-0.06	0.06-0.08		
		0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.06		
Tool steel HRC 20/30	HB 230 HB 230/285	0.01-0.02	0.02-0.03	0.03-0.06	0.06-0.08	Emulsion	30-40 20-30
		0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.07		
Steel HRC 50		0.005-0.01	0.01-0.02	0.02-0.03	0.03	Emulsion	8-12
Stainless steel	To 230	0.01-0.02	0.02-0.05	0.05-0.08	0.08-0.10	Emulsion	25-40
Semi-steel	To 285	0.02	0.03-0.06	0.06-0.09	0.10-0.16	Dry	60-90
Malleable cast iron	R. 700	0.02	0.02-0.04	0.04-0.08	0.09-0.15	Dry	70-100
Cast steel		0.01-0.02	0.02-0.05	0.05-0.08	0.08-0.14	Emulsion	60-90
Titanium & titanium alloys		0.005-0.01	0.01-0.03	0.04-0.08	0.8-0.10	Emulsion cutting oil	30-60
Aluminium & alloys	10% Si 12% Si	0.03-0.06	0.06-0.08	0.08-0.13	0.14-0.20	Emulsion	100-140 50-60
		0.01-0.04	0.04-0.06	0.06-0.09	0.09-0.12		
Brass, Copper, Bronze		0.03-0.06	0.06-0.10	0.10-0.15	0.15-0.20	Dry	60-120
Layered plastics		0.02-0.04	0.04-0.06	0.06-0.08	0.08-0.12	Dry	60-120

Cutting data for tungsten carbide burrs

Material	Condition	HB	Kind of teeth		Cutting speed m/min
			Straight cut	Crossed cut	
Unalloyed steel	C < 0,25% C < 1 < 0,80% C, 40%	110-310	● ● ●	● ● ●	800-1200 800-1200 800-1200
Low alloyed steel	Annealed Hardened	125-225 220-450	●	● ●	700-1000 600-800
High alloyed steel	Annealed Hardened	150-250 250-500	●	● ●	600-800 600-800
High alloyed steel	Annealed high speed steel (HSS) Hardened tool steel	150-250 250-350	●	● ●	600-800 600-800
Stainless steel	Ferritic-martensitic	150-270	●	●	600-800
Steel casting	Unalloyed Low alloyed High alloyed	150-250	● ● ●	● ● ●	600-800 600-800 600-800
Stainless steel	Austenitic	150-270	●	●	600-800
Stainless steel castings	Ferritic-Martensitic Austenitic Manganese steel	200 200 250	● ● ●	● ● ●	400 300 160
Malleable cast iron	Ferritic - Short chip Pearlitic - Long chip	110-145 200-230	● ●	● ●	750 650
Grey cast iron	High traction resistant Low traction resistant	180 260	● ●	● ●	950 700
Nodular cast iron	Ferritic Pearlitic	160 250	● ●	● ●	650 550
Shell cast iron		400	●	●	160

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The indicated data are recommended for manual applications, with a strength of 5-25 N. Increase the cutting speed for light deburring. For heavy operations, for instance by a robot, the cutting speed must be reduced.

Les conditions indiquées sont recommandées pour applications manuelles avec une force de 5-25 N. Augmenter la vitesse de coupe pour les ébavurages légers. Pour les opérations pesantes, par exemple moyennant un robot, on doit réduire la vitesse de coupe.

Die angegebene Bedingungen sind für manuellen Anwendungen mit einer Kraft von 5-25 N empfohlen. Für leichtes Entgraten, die Schnittgeschwindigkeit erhöhen. Für schwere Operationen, z.B. mit einem Roboter, muß die Schnittgeschwindigkeit reduziert werden.

Straight cutting flutes burrs

- Best surface finishing.
- Maximum chip removal in soft materials.
- Excellent tool life.
- Produce needle chips.
- État de surface optimale.
- Maximum enlèvement de copeaux dans des matériaux mous.
- Excellente vie de l'outil.
- Produit des copeaux à forme d'aiguille.
- Optimale Oberflächengüte.
- Maximale Spanabfuhr in weiche Materialien.
- Ausgezeichnete Standzeit.
- Sie produzieren nagelförmige Späne.



Crossed cutting flutes burrs

- Allow a lower spindle speed.
- Smoother operation, even allow speeds.
- High chip removal in hard and soft materials.
- Produce short and rounded chips.
- Permet une vitesse de l'axe plus basse.
- Opérations plus douces.
- Grand enlèvement de copeaux dans des matériaux durs et mous.
- Produit des copeaux courts et arrondis.
- Sie erlauben eine niedrigere Drehzahl.
- Weichere Operationen.
- Hohe Spanabfuhr in harte und weiche Materialien.
- Sie produzieren kurze und runde Späne.



<p>Type 90</p> <p>Surfaces and smooth edges</p>	<p>Type 91</p> <p>Radius and surfaces</p>	<p>Type 92</p> <p>General shapes</p>	<p>Type 93</p> <p>Curved shapes with narrow spaces</p>	<p>Type 94</p> <p>Narrow spaces</p>
<p>Type 95</p> <p>Complicated shapes</p>	<p>Type 96</p> <p>Welded shapes and holes in curved surfaces</p>	<p>Type 97</p> <p>Inverted cone shape</p>	<p>Type 98</p> <p>30° Degrees chamfering</p>	<p>Type 99</p> <p>45° Degrees chamfering</p>