

Technical information
Information technique
Technische Auskunft

J02

Applications
Applications
Anwendungen

J03

Toolholders
Porte-outils d'extérieurs
Drehmeissel

J04

Boring bars
Porte-outils d'intérieurs
Innendrehmeissel

J07

Inserts

Turning

Automatic
lathes

Ceramic
tools

Parting &
grooving

Threading

Drills

Cartridges

Brazed
tools

Milling
cutters

Solid
carbide

Boring
heads

Arbors &
adaptors

Uncoated inserts

K3

A finishing grade in the K10 range. This carbide grade is for use on cast iron, aluminium and heat-resistant alloys. This grade works well on cobalt based alloys and synthetic materials and is suitable for finishing on heat-resistant alloys.

P6

A general purpose uncoated grade in the P30 range. This tough, economical grade is for machining of carbon steels, alloys steels, tool steels and stainless steels.

P6 provides toughness and resistance to deformation in roughing and semi-finishing operations.

Grinding

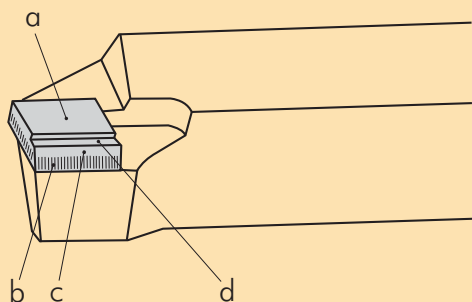
In order to obtain a satisfactory result, it is necessary to have a steady grinding table or holder which can be set to the required angle by means of a graduated scale and by non-vibrating small spindles.

Rough grinding is normally carried out using a silicon carbide grinding wheel. The finish grind or lapping must always be made using a diamond wheel.

Longer life of the cutting edge and less breakage justify the increased cost of correct grinding.

The grinding wheel must be kept clean to ensure that cutting capacity is maintained.

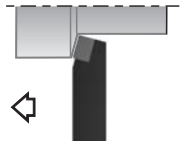
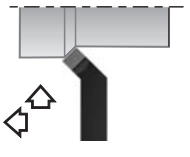
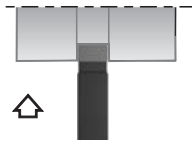
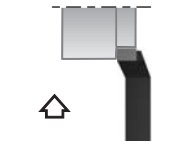
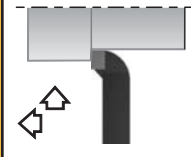
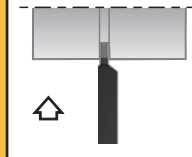
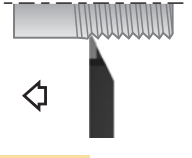
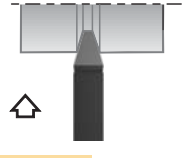
Whenever possible, always grind perpendicular to the cutting edge.



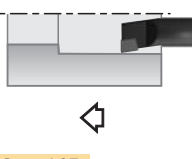
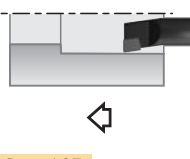
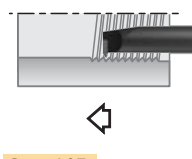
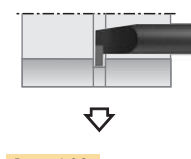
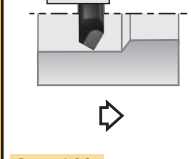
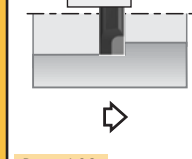
- a.- Top face
- b.- Secondary clearances
- c.- Lapped primary clearances
- d.- Chipbreaker groove



Toolholders - Porte-outils - Klemmhalter

<p>4102 75°</p>  <p>Page J.04</p>	<p>4103 45°</p>  <p>Page J.04</p>	<p>4107 90°</p>  <p>Page J.04</p>	<p>4108 90°</p>  <p>Page J.05</p>	<p>4104 90°</p>  <p>Page J.05</p>	<p>4109 90°</p>  <p>Page J.05</p>
<p>UI 30 55°-60°</p>  <p>Page J.06</p>	<p>UI 80</p>  <p>Page J.06</p>				

Boring bars - Barres d'alésage - Bohrstangen

<p>4110 75°</p>  <p>Page J.07</p>	<p>4111 90°</p>  <p>Page J.07</p>	<p>UI 40 55°-60°</p>  <p>Page J.07</p>	<p>UI 50 90°</p>  <p>Page J.08</p>	<p>C6 60°</p>  <p>Page J.08</p>	<p>D6 90°</p>  <p>Page J.08</p>
--	--	---	---	---	--

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

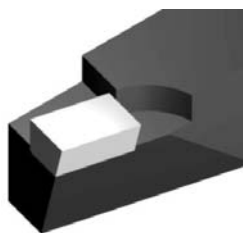
Solid carbide

Boring heads

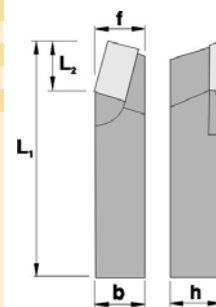
Arbors & adaptors

Inserts

4102 75°



REF.	h	b	L	f	L2	ABC	K3	P6
4102 1616 R/L K3	16	16	110	10	11	12	•	
4102 1616 R/L P6	16	16	110	10	11	12		•
4102 2020 R/L K3	20	20	125	12	15	16	•	
4102 2020 R/L P6	20	20	125	12	15	16		•
4102 2525 R/L K3	25	25	140	15	18	20	•	
4102 2525 R/L P6	25	25	140	15	18	20		•



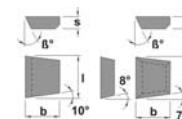
Turning

Automatic lathes

Ceramic tools



REF.	l	b	s
ABC 12	12	8	5
ABC 16	16	10	6
ABC 20	20	12	7

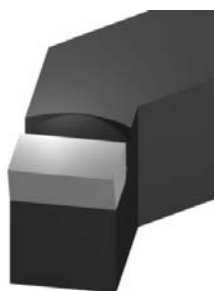


Only for:
 -ABC 10
 -ABC 20
 -ABC 25

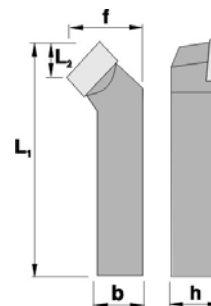
Only for:
 -ABC 12
 -ABC 16

Parting & grooving

4103 45°



REF.	h	b	L	f	L2	..C	K3	P6
4103 1010 R/L K3	10	10	90	14	8	8	○	
4103 1010 R/L P6	10	10	90	14	8	8		○
4103 1212 R/L K3	12	12	100	17	10	10	○	
4103 1212 R/L P6	12	12	100	17	10	10		•
4103 1616 R/L K3	16	16	110	22	12	12	•	
4103 1616 R/L P6	16	16	110	22	12	12		•
4103 2020 R/L K3	20	20	125	28	16	16	•	
4103 2020 R/L P6	20	20	125	28	16	16		•
4103 2525 R/L K3	25	25	140	35	20	20	•	
4103 2525 R/L P6	25	25	140	35	20	20		•
4103 3232 R/L K3	32	32	170	44	25	25	•	
4103 3232 R/L P6	32	32	170	44	25	25		•



Threading

Drills

Cartridges



REF.	l	b	s
C 8	8	5	3
ABC 10	10	6	4
ABC 12	12	8	5
ABC 16	16	10	6
ABC 20	20	12	7
ABC 25	25	16	8

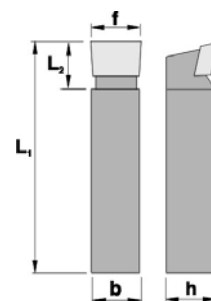


Brazed tools

4107 90°



REF.	h	b	L	f	L2	ABC	K3	P6
4107 1010 N K3	10	10	90	10	10	10	○	
4107 1010 N P6	10	10	90	10	10	10		○
4107 1212 N K3	12	12	100	12	12	12	○	
4107 1212 N P6	12	12	100	12	12	12		○
4107 1616 N K3	16	16	110	16	16	16	○	
4107 1616 N P6	16	16	110	16	16	16		○
4107 2020 N K3	20	20	125	20	20	20	○	
4107 2020 N P6	20	20	125	20	20	20		○
4107 2525 N K3	25	25	140	25	25	25	○	
4107 2525 N P6	25	25	140	25	25	25		○



Milling cutters

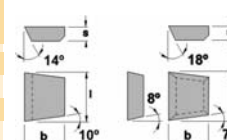
Solid carbide

Boring heads

Arbors & adaptors



REF.	l	b	s
ABC 10	11	6	4
ABC 12	13	8	5
ABC 16	17	10	6
ABC 20	21	12	7
ABC 25	26	14	8

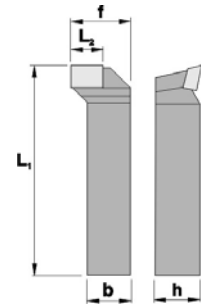


Only for ABC 12, ABC 16

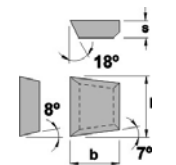
4108 90°



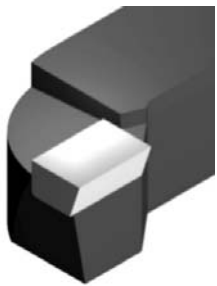
REF.	h	b	L	f	L ₂	ABC	K3	P6
4108 1616 R/L K3	16	16	110	24	12	12	○	
4108 1616 R/L P6	16	16	110	24	12	12		○
4108 2020 R/L K3	20	20	125	30	16	16	○	
4108 2020 R/L P6	20	20	125	30	16	16		○



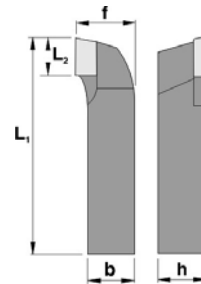
REF.	l	b	s
ABC 12	13	8	5
ABC 16	17	10	6



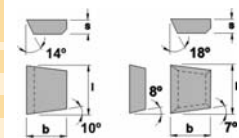
4104 90°



REF.	h	b	L	f	L ₂	..C	K3	P6
4104 1010 R/L K3	10	10	90	14	8	8	○	
4104 1010 R/L P6	10	10	90	14	8	8		○
4104 1212 R/L K3	12	12	100	17	10	10	○	
4104 1212 R/L P6	12	12	100	17	10	10		●
4104 1616 R/L K3	16	16	110	22	12	12	●	
4104 1616 R/L P6	16	16	110	22	12	12		●
4104 2020 R/L K3	20	20	125	28	16	16	●	
4104 2020 R/L P6	20	20	125	28	16	16		●
4104 2525 R/L K3	25	25	140	35	20	20	●	
4104 2525 R/L P6	25	25	140	35	20	20		●
4104 3232 R/L K3	32	32	170	44	25	25	●	
4104 3232 R/L P6	32	32	170	44	25	25		●

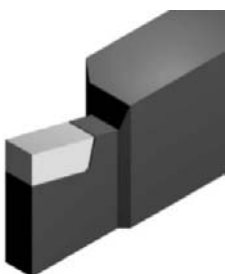


REF.	l	b	s
C 8	8	5	3
ABC 10	11	6	4
ABC 12	13	8	5
ABC 16	17	10	6
ABC 20	21	12	7
ABC 25	26	16	8

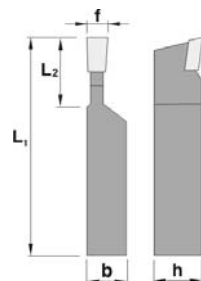


Only for ABC 12, ABC 16

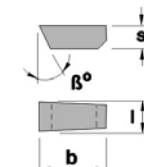
4109 90°



REF.	h	b	L	f	L ₂	D	K3	P6
4109 1208 R/L K3	12	8	100	3	12	3	○	
4109 1208 R/L P6	12	8	100	3	12	3		●
4109 1610 R/L K3	16	10	110	4	14	4	●	
4109 1610 R/L P6	16	10	110	4	14	4		●
4109 2012 R/L K3	20	12	125	5	16	5	●	
4109 2012 R/L P6	20	12	125	5	16	5		●
4109 2516 R/L K3	25	16	140	6	20	6	●	
4109 2516 R/L P6	25	16	140	6	20	6		●
4109 3220 R/L K3	32	20	170	8	25	8	●	
4109 3220 R/L P6	32	20	170	8	25	8		●
4109 4025 R/L K3	40	25	200	10	32	10	●	
4109 4025 R/L P6	40	25	200	10	32	10		●



REF.	l	b	s
D 3	3	8	3
D 4	4	10	4
D 5	5	12	5
D 6	6	14	6
D 8	8	16	8
D 10	10	18	10



● Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

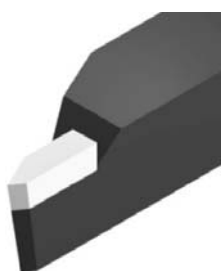
Solid carbide

Boring heads

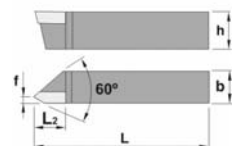
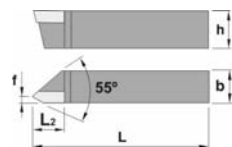
Arbors & adaptors

Inserts

UI 30<sup>55°
60°</sup>



REF.	h	b	L	f	L2	FIL	K3	P6
UI 30 55° 1212 R K3	12	12	100	1,8	12	3,5	○	
UI 30 55° 1212 R P6	12	12	100	1,8	12	3,5		○
UI 30 55° 1616 R K3	16	16	110	2,0	14	4	○	
UI 30 55° 1616 R P6	16	16	110	2,0	14	4		●
UI 30 55° 2020 R K3	20	20	125	2,5	16	5	○	
UI 30 55° 2020 R P6	20	20	125	2,5	16	5		●
UI 30 55° 2525 R K3	25	25	140	3,0	18	6	○	
UI 30 55° 2525 R P6	25	25	140	3,0	18	6		●
UI 30 60° 1212 R K3	12	12	100	1,8	12	3,5	●	
UI 30 60° 1212 R P6	12	12	100	1,8	12	3,5		●
UI 30 60° 1616 R K3	16	16	110	2,0	14	4	●	
UI 30 60° 1616 R P6	16	16	110	2,0	14	4		●
UI 30 60° 2020 R K3	20	20	125	2,5	16	5	●	
UI 30 60° 2020 R P6	20	20	125	2,5	16	5		●
UI 30 60° 2525 R K3	25	25	140	3,0	18	6	●	
UI 30 60° 2525 R P6	25	25	140	3,0	18	6		●



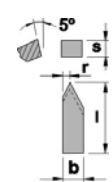
Turning

Automatic lathes

Ceramic tools

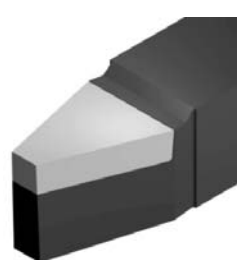


REF.	l	b	s
FIL 3,5	12	1,0	3,5
FIL 4	14	1,2	4,0
FIL 5	16	1,5	5,0
FIL 6	18	1,8	6,0

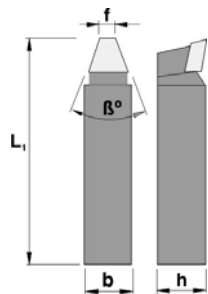


Parting & grooving

UI 80



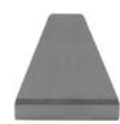
REF.	h	b	L	f	β°	TR	K3	P6
UI 80 34° 2516 K3	25	16	170	4,2	34°	16-3..	○	
UI 80 34° 2516 P6	25	16	170	4,2	34°	16-3..		○
UI 80 36° 2516 K3	25	16	170	3,7	36°	16-3..	○	
UI 80 36° 2516 P6	25	16	170	3,7	36°	16-3..		○
UI 80 38° 2516 K3	25	16	170	3,1	38°	16-3..	○	
UI 80 38° 2516 P6	25	16	170	3,1	38°	16-3..		○
UI 80 34° 3220 K3	32	20	200	6,2	34°	20-3..	○	
UI 80 34° 3220 P6	32	20	200	6,2	34°	20-3..		○
UI 80 36° 3220 K3	32	20	200	5,5	36°	20-3..	○	
UI 80 36° 3220 P6	32	20	200	5,5	36°	20-3..		○
UI 80 38° 3220 K3	32	20	200	4,9	38°	20-3..	○	
UI 80 38° 3220 P6	32	20	200	4,9	38°	20-3..		○



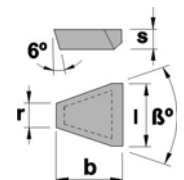
Threading

Drills

Cartridges



REF.	l	b	s
TR 16-34	21	16	6
TR 16-36	21	16	6
TR 16-38	21	16	6
TR 20-34	25	20	6
TR 20-36	25	20	6
TR 20-38	25	20	6



Brazed tools

Milling cutters

Solid carbide

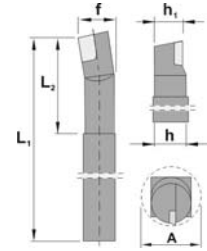
Boring heads

Arbors & adaptors

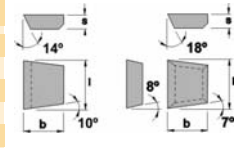
4110 75°



REF.	h=b	h1	L	b2	L2	f	A	..C	K3	P6
4110 1010 R K3	10	8,0	150	3,8	50	14	18	7	○	
4110 1010 R P6	10	8,0	150	3,8	50	14	18	7		○
4110 1212 R K3	12	9,6	180	4,8	63	17	21	8	○	
4110 1212 R P6	12	9,6	180	4,8	63	17	21	8		○
4110 1616 R K3	16	12,8	210	5,7	80	22	27	10	○	
4110 1616 R P6	16	12,8	210	5,7	80	22	27	10		○
4110 2020 R K3	20	16,0	250	7,6	100	28	34	12	○	
4110 2020 R P6	20	16,0	250	7,6	100	28	34	12		○
4110 2525 R K3	25	20,0	300	9,5	125	35	43	16	○	
4110 2525 R P6	25	20,0	300	9,5	125	35	43	16		○



REF.	l	b	s
C 7	6	4,0	2,5
C 8	8	5,0	3,0
ABC 10	11	6,0	4,0
ABC 12	13	8,0	5,0
ABC 16	17	10,0	6,0

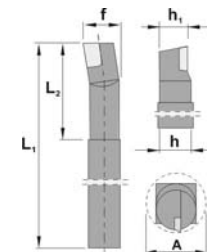


Only for ABC 12, ABC 16

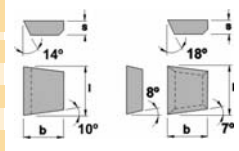
4111 90°



REF.	h=b	h1	L	b2	L2	f	A	..C	K3	P6
4111 0808 R K3	8	6,4	125	3,1	40	11	14	7	●	
4111 0808 R P6	8	6,4	125	3,1	40	11	14	7		●
4111 1010 R K3	10	8,0	150	4,0	50	14	18	7	●	
4111 1010 R P6	10	8,0	150	4,0	50	14	18	7		●
4111 1212 R K3	12	9,6	180	5,1	63	17	21	8	●	
4111 1212 R P6	12	9,6	180	5,1	63	17	21	8		●
4111 1616 R K3	16	12,8	210	6,2	80	22	27	10	●	
4111 1616 R P6	16	12,8	210	6,2	80	22	27	10		●
4111 2020 R K3	20	16,0	250	8,3	100	28	34	12	●	
4111 2020 R P6	20	16,0	250	8,3	100	28	34	12		●
4111 2525 R K3	25	20,0	300	10,0	125	35	43	16	●	
4111 2525 R P6	25	20,0	300	10,0	125	35	43	16		●
4111 3232 R K3	32	25,6	355	12,0	160	44	52	20	●	
4111 3232 R P6	32	25,6	355	12,0	160	44	52	20		●



REF.	l	b	s
C 6	6	4,0	2,5
C 8	8	5,0	3,0
ABC 10	11	6,0	4,0
ABC 12	13	8,0	5,0
ABC 16	17	10,0	6,0
ABC 20	21	12,0	7,0

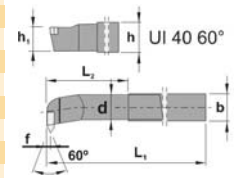
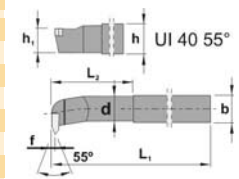


Only for ABC 12, ABC 16

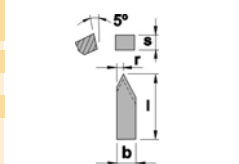
UI 40 55°/60°



REF.	d	h=b	L	L2	f	FIL	K3	P6
UI 40 55° 1010 R K3	10	10	140	52	1,8	3,5	○	
UI 40 55° 1010 R P6	10	10	140	52	1,8	3,5		○
UI 40 55° 1212 R K3	12	12	160	56	1,8	3,5	○	
UI 40 55° 1212 R P6	12	12	160	56	1,8	3,5		○
UI 40 55° 1616 R K3	16	16	180	63	2,0	4	○	
UI 40 55° 1616 R P6	16	16	180	63	2,0	4		○
UI 40 55° 2020 R K3	20	20	210	80	2,0	4	○	
UI 40 55° 2020 R P6	20	20	210	80	2,0	4		○
UI 40 60° 1010 R K3	10	10	140	52	1,8	3,5	●	
UI 40 60° 1010 R P6	10	10	140	52	1,8	3,5		●
UI 40 60° 1212 R K3	12	12	160	56	1,8	3,5	●	
UI 40 60° 1212 R P6	12	12	160	56	1,8	3,5		●
UI 40 60° 1616 R K3	16	16	180	63	2,0	4	●	
UI 40 60° 1616 R P6	16	16	180	63	2,0	4		●
UI 40 60° 2020 R K3	20	20	210	80	2,0	4	●	
UI 40 60° 2020 R P6	20	20	210	80	2,0	4		●
UI 40 60° 2525 R K3	25	25	250	100	2,5	5	●	
UI 40 60° 2525 R P6	25	25	250	100	2,5	5		●



REF.	l	b	s
FIL 3,5	12	3,5	3,5
FIL 4	14	4,0	4,0
FIL 5	16	5,0	5,0



● Normally available for immediate delivery

○ Only available in a limited quantity

Inserts

Turning

Automatic lathes

Ceramic tools

Parting & grooving

Threading

Drills

Cartridges

Brazed tools

Milling cutters

Solid carbide

Boring heads

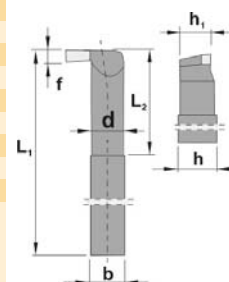
Arbors & adaptors

Inserts

UI 50 90°



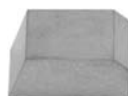
REF.	d	h=b	L	L2	f	D	K3	P6
UI 50 90° 1010 R K3	10	10	140	52	3	3	•	
UI 50 90° 1010 R P6	10	10	140	52	3	3		•
UI 50 90° 1212 R K3	12	12	160	56	4	4	•	
UI 50 90° 1212 R P6	12	12	160	56	4	4		•
UI 50 90° 1616 R K3	16	16	180	63	5	5	•	
UI 50 90° 1616 R P6	16	16	180	63	5	5		•
UI 50 90° 2020 R K3	20	20	210	80	6	6	•	
UI 50 90° 2020 R P6	20	20	210	80	6	6		•
UI 50 90° 2525 R K3	25	25	250	100	8	8	•	
UI 50 90° 2525 R P6	25	25	250	100	8	8		•



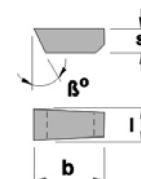
Turning

Automatic lathes

Ceramic tools

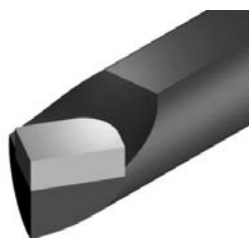


REF.	l	b	s
D 3	3	8	3
D 4	4	10	4
D 5	5	12	5
D 6	6	14	6
D 8	8	16	8

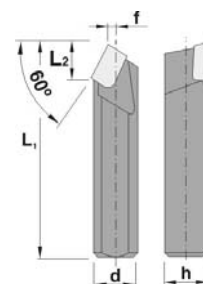


Parting & grooving

C6 60°



REF.	d	h	L	L2	f	C	K3	P6
C 6-08	8	7,0	24	6,5	0	7		•
C 6-10	10	8,5	50	6,5	0	8		•



Threading

Drills

Cartridges

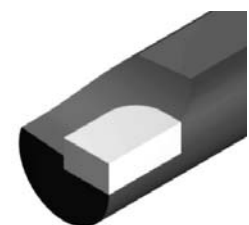


REF.	l	b	s
C 7	6	4	2,5
C 8	8	5	3,0

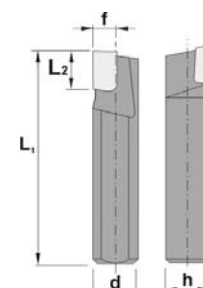


Brazed tools

D6 90°



REF.	d	h	L	L2	f	..C	K3	P6
D 6-8	8	7,0	24	7,0	1,9	7		•
D 6-10	10	8,5	50	8,0	4,6	8		•
D 6-12	12	10,5	60	10,0	5,6	10		•
D 6-16	16	14,0	90	12,0	7,6	12		•



Milling cutters

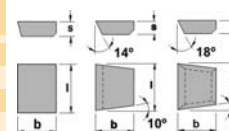
Solid carbide

Boring heads

Arbors & adaptors



REF.	l	b	s
C 7	6	4,0	2,5
C 8	8	5,0	3,0
ABC 10	11	6,0	4,0
ABC 12	13	8,0	5,0



Only for ABC 12, ABC 16



Inserts

Turning

Automatic
lathes

Ceramic
tools

Parting &
grooving

Threading

Drills

Cartridges

Brazed
tools

Milling
cutters

Solid
carbide

Boring
heads

Arbors &
adaptors