Info — 18820-18829 UNISIX clamped lathe chisels range, type PM

KOMET

The tried-and-tested lathe chisel range for conventional centre lathes.
For using KOMET-UNISIX cemented-carbide indexable inserts with a total of six cutting edges.
Mounted with special clamping screw accessible from above.

18820 Offset side turning clamp holder PM

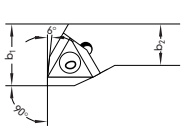
KOMET

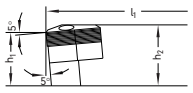
Design
Right.

Note:
When using left indexable inserts, the clamp holder can be used for turning and facing.

18820

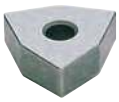
Type	b_2 x h_2 x l_1 mm	For Unisix insert	h_1 mm	b_1 mm	18820	...
PM 1/16	16 x 17.7 x 140	P1	15.7	19.8		201
PM 1	16 x 21.7 x 140	P1	19.7	19.8		202
PM 2	20 x 26.1 x 165	P2	23.7	24.0		203





18822 Replacement intermediate layers

18822



Type	For holder	18822	...
16	PM 1/16		101
1	PM 1		102
2	PM 2		103

18823 Replacement clamping screws

18823

Size	For holder		18823	...
M 4.5 x 14.5	PM 1/16	10 pcs.		101
M 4.5 x 18.7	PM 1	10 pcs.		102
M 4.5 x 22.5	PM 2	10 pcs.		103

18828 - 18829 Cemented-carbide indexable inserts KOMET-UNISIX

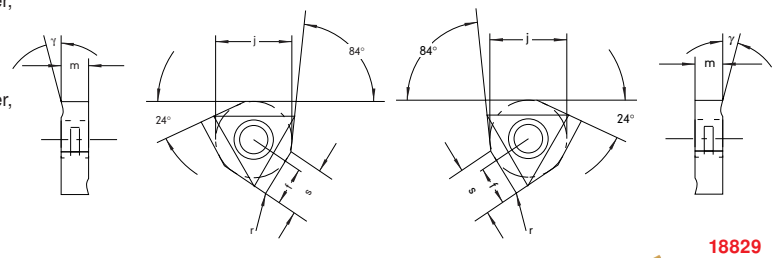
KOMET

Applications
In clamp holder art. no. 18820. Designed as six-edged indexable insert (84° tip angle) with six cutting edges. Indexable inserts with chip breakers have a positive chip angle of 18°, insert has a 5° incline in the holder, and this creates a positive chip angle of 13°. (for long-chipping materials: steel, steel casting, etc.). All indexable inserts can be interchanged within one holder size.

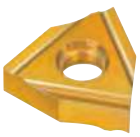
18828
With chip breaker, right positive.

18829
With chip breaker, left positive.

18828 18829



18829



Tip size	j mm	s mm	m mm	f mm	g	r
P1/W04 42...	12.0	7.5	4.5	6.642	18°	0.2
P2/W04 50...	15.0	9.5	5.0	8.285	18°	0.4

right		P M K HM quality P 25	...	P M HM quality P 40	...	N P M K HM quality K 10	...
Plate size		18828	...	18828	...	18828	...
P1/W04 42 480.02	10 pcs.		120		122		123
P2/W04 50 480.04	10 pcs.		128		130		

left		P M K HM quality P 25	...	P M HM quality P 40	...	N P M K HM quality K 10	...
Plate size		18829	...	18829	...	18829	...
P1/W04 42 180.02	10 pcs.		120		122		123
P2/W04 50 180.04	10 pcs.		128		130		

Info

18835 - 18841 Clamped lathe chisel range

KOMET

The modern high-performance tool range. With standard, interchangeable cutter holders, hardened, for compact three-sided positioning of the indexable insert. Primarily for use on conventional lathes.
All clamped lathe chisels complete with cutter holder and TX clamping screw. Without key and indexable insert.

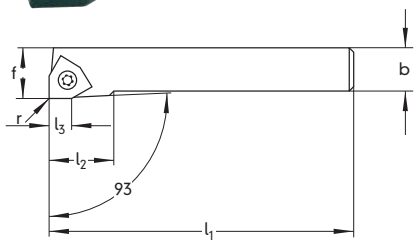
18835 Clamped lathe chisels

KOMET

Design
Angle of attack 93°, right.
Applications
For Unisix indexable inserts, positive.

Note:
Replacement clamping screws, see art. no. 18840.

18835



Designation	l_1 mm	l_2 mm	l_3 mm	f mm	r mm	b mm	For indexable insert	Replacement clamping screw	Right 18835	...
SWLCR 1010 E05	70	15	5.3	12	0.2	10	W29.. 24..	N00 57511/T8		103
SWLCR 1212 F05	80	18	5.3	16	0.2	12	W29.. 24..	N00 57511/T8		104
SWLCR 1616 H06	100	20	6.6	20	0.2	16	W29.. 34..	N00 57521/T10		105
SWLCR 2020 K07	125	24	7.9	25	0.2	20	W29.. 42..	N00 57531/T15		106

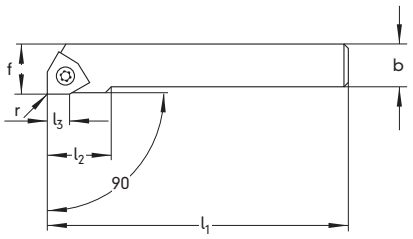
18836 Clamped lathe chisels

KOMET

Design
Angle of attack 90°, right.
Applications
For Unisix indexable inserts, positive.

Note:
Replacement clamping screws, see art. no. 18840.

18836



Designation	l_1 mm	l_2 mm	l_3 mm	f mm	r mm	b mm	For indexable insert	Replacement clamping screw	Right 18836	...
SWGCR 1010 E05	70	15	5.3	12	0.2	10	W29.. 24..	N00 57511/T8		103
SWGCR 1212 F05	80	19	5.3	16	0.2	12	W29.. 24..	N00 57511/T8		104
SWGCR 1616 H06	100	20	6.6	20	0.2	16	W29.. 34..	N00 57521/T10		105
SWGCR 2020 K07	125	25	7.9	25	0.2	20	W29.. 42..	N00 57531/T15		106

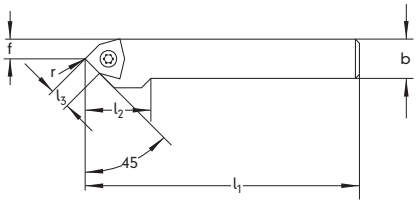
18838 Clamped lathe chisels

KOMET

Design
Angle of attack 45°, right.
Applications
For Unisix indexable inserts, positive.

Note:
Replacement clamping screws, see art. no. 18840.

18838



Designation	l_1 mm	l_2 mm	l_3 mm	f mm	r mm	b mm	For indexable insert	Replacement clamping screw	Right 18838	...
SWDCR 1010 E05	70	17	5.3	5	0.2	10	W29.. 24..	N00 57511/T8		103
SWDCR 1212 F05	80	18	5.3	6	0.2	12	W29.. 24..	N00 57511/T8		104
SWDCR 1616 H06	100	23	6.6	8	0.2	16	W29.. 34..	N00 57521/T10		105
SWDCR 2020 K07	125	10	7.9	10	0.2	20	W29.. 42..	N00 57531/T15		106

18840 Replacement clamping screws

KOMET

Applications
For KOMET clamped lathe chisels
art. no. 18835–18838.

18840

Designation	Size		18840	...
N00 57511	M 2.5 x 7.2	10 pcs.		101
N00 57521	M 3.5 x 7.3	10 pcs.		102
N00 57531	M 4.5 x 9	10 pcs.		103

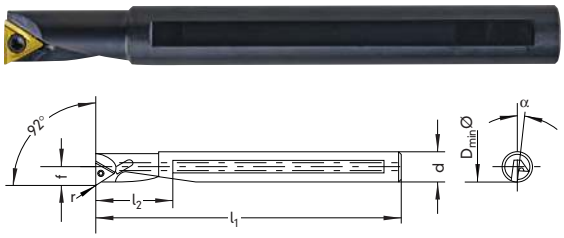
18839 Clamped lathe chisels (boring bars)

KOMET

Design
Angle of attack 92°, right, **with internal coolant supply.**
Applications
For Unisix indexable inserts, positive.

Note:
Replacement clamping screws see art. no. 18841.

18839



Right

Designation	Dmin mm	d mm	l_1 mm	l_2 mm	f mm	r mm	a	For indexable inserts	Replacement clamping screw	18839	...
UJ 0410 R	7.9	8	85	15	3.95	0.2	8° 30'	W30.. 04..	N00 56021/T6		102
UJ 0420 R	9.9	10	95	20	4.95	0.2	5° 30'	W30.. 04..	N00 56021/T6		103
UJ 0430 R	11.9	12	110	25	5.95	0.2	7° 30'	W30.. 14..	N00 56101/T8		104
UJ 0450 R	15.9	16	120	30	7.95	0.2	5°	W30.. 14..	N00 56101/T8		105

18841 Replacement clamping screws

KOMET

Applications
For KOMET clamped lathe chisels (boring bars) art. no. 18939.

Designation	Size		18841	...
N00 56021	M 2 x 3.6	10 pcs.		101
N00 56101	M 2.6 x 5.1	10 pcs.		102

18841

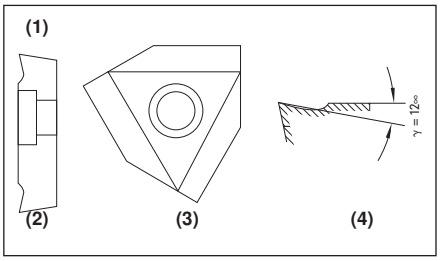
Info 18842 - 18845 indexable inserts Unisix

KOMET

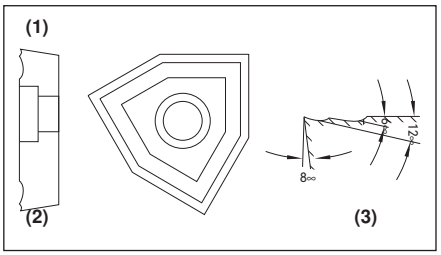
Made from cemented carbide, standard version.
High-performance indexable inserts with three positively ground chip breakers. 8° clearance angle, 12° chip angle (a) and 84° tip angle (with P 800). Fastening screw countersunk. Free chip flow.

Cemented carbide grades:

P 25 M	uncoated, for steel machining
K 10	uncoated, for grey cast iron and non-ferrous metals
BK6425	TiN-coated for steel machining
BK7615	coated, for grey cast iron and hardened steels



(1) P plate,
(2) Standard,
(3) Right-cutting,
(4) Flute shape.



(1) P plate,
(2) Standard,
(3) Flute shape.

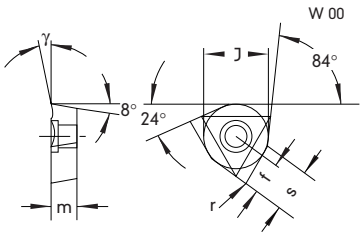
18842 Indexable inserts Unisix

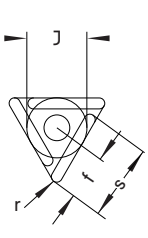
KOMET

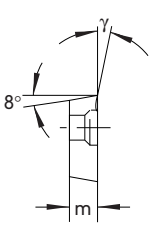
Design
With ground chip breaker, **right.**

W 30

18842







W00

W30

N P M K

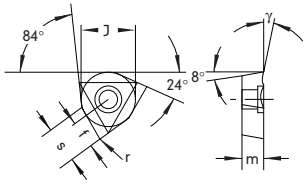
Cemented carbide grade							uncoated P 25 M		K 10		coated BK6425	
Insert size	J mm	m mm	s mm	f mm	r mm		18842	...	18842	...	18842	...
W00 34420.02	10.0	3.0	6.6	5.531	0.2	10 pcs.		113		114		116
W00 42420.02	12.0	3.8	7.9	6.642	0.2	10 pcs.		123		124		126
W00 50420.04	15.0	4.3	9.9	8.285	0.4	10 pcs.		133		134		136
W30 04420.03	4.0	1.8	3.5	3.245	0.3	10 pcs.		143		144		146
W30 14420.04	5.6	2.5	4.5	4.557	0.4	10 pcs.		153		154		156

18843 Indexable inserts Unisix

KOMET

Version
With ground chip breaker, **left.**

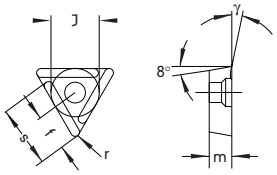
W 00



18843

W00

W 30



W30

N P M K

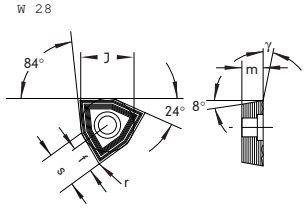
Cemented carbide grade							uncoated P 25 M		K 10		coated BK6425	
Insert size	J mm	m mm	s mm	f mm	r mm		18843	...	18843	...	18843	...
W00 34120.02	10.0	3.0	6.6	5.531	0.2	10 pcs.		113		114		116
W00 42120.02	12.0	3.8	7.9	6.642	0.2	10 pcs.		123		124		126
W00 50120.04	15.0	4.3	9.9	8.285	0.4	10 pcs.		133		134		136
W30 04120.03	4.0	1.8	3.5	3.245	0.3	10 pcs.		143		144		146
W30 14120.04	5.6	2.5	4.5	4.557	0.4	10 pcs.		153		154		156

18844 Indexable inserts Unisix

KOMET

Version
With positively sintered breaker geometry, cutting edges rounded, standard version.

W 28



18844

W28

N P M K

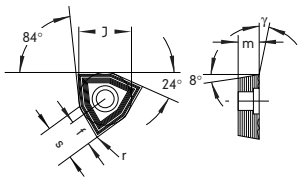
Cemented carbide grade							uncoated P 25 M		K 10		coated BK6425	
Insert size	J mm	m mm	s mm	f mm	r mm		18844	...	18844	...	18844	...
W28 34000.04	10.0	3.0	6.6	5.509	0.4	10 pcs.		113		114		116
W28 42000.04	12.0	3.8	7.9	6.619	0.4	10 pcs.				124		
W28 50000.04	15.0	4.3	9.9	8.285	0.4	10 pcs.		133		134		136

18845 Indexable inserts Unisix

KOMET

With positively sintered breaker geometry, cutting edges chamfered and rounded, reinforced version.

W 29



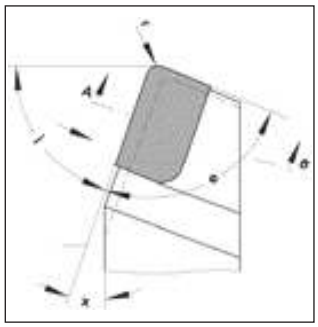
18845

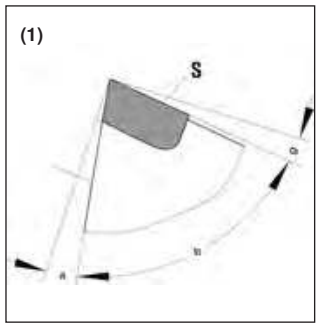
W29

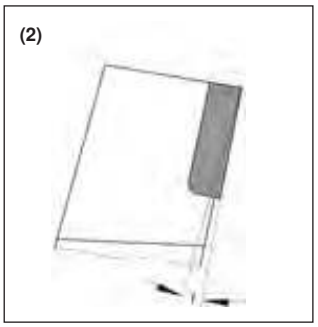
Cemented carbide grade							uncoated P 25 M		coated BK6425		coated BK7615	
Insert size	J mm	m mm	s mm	f mm	r mm		18845	...	18845	...	18845	...
W29 24010.04	8.0	3.8	5.3	4.398	0.4	10 pcs.		103		104		
W29 24010.04	8.0	3.8	5.3	4.398	0.4	10 pcs.						105
W29 34010.04	10.0	3.8	6.6	5.509	0.4	10 pcs.		113		114		
W29 34010.04	10.0	3.8	6.6	5.509	0.4	10 pcs.						115
W29 34010.08	10.0	3.8	6.6	5.465	0.8	10 pcs.				118		
W29 42010.04	12.0	4.8	7.9	6.619	0.4	10 pcs.		123		124		
W29 42010.08	12.0	4.8	7.9	6.575	0.8	10 pcs.		127		128		
W29 42010.08	12.0	4.8	7.9	6.575	0.8	10 pcs.						129

= The specified prices are unit prices. Only sold in the specified packing units. Always specify number of units in order information.

Reference values for machining with carbide turning tools







(1) = Cut A - B
(2) = View Z
H = Main cutting edge
F = Clearance surface
S = Chip surface
a = Clearance angle
g = Chip angle
b = Wedge angle
l = Tilt angle
e = Corner angle
j = Setting angle
w = Main cutting angle

Material	Strength or hardness (N/mm^2)	Roughing and interrupted cuts						Finishing and semi-finishing					
		HM grade	Feed rate (mm/rev)	Cutting speed (m/min)	Cutting edge angle a°	g°	l°	HM grade	Feed rate (mm/rev)	Cutting speed (m/min)	Cutting edge angle a°	g°	l°
Construction steels	< 500	P 20	0.4 - 0.8	70 - 120	6	10 - 12	4						
		P 25/30	0.6 - 1.2	60 - 90	6	10 - 12	4	P 10	0.1 - 0.4	160 - 220	6	12	0
								K 20	0.1 - 0.6	120 - 160	6	12	4
Structural and tempering steels	500 - 700												
		P 25/30	0.6 - 1.2	50 - 80	6	10 - 12	4	P 10	0.1 - 0.4	150 - 200	6	12	4
								P 20	0.4 - 0.8	60 - 120	6	12	4
								P 10	0.1 - 0.4	120 - 180	6	12	4
	700 - 1000	P 25/30	0.6 - 1.2	35 - 75	6	10	4	M 10/M 20	0.1 - 0.3	80 - 150	6	12	4
								P 20	0.4 - 0.8	60 - 100	6	12	4
Manganese, chrome, chrome molybdenum and other alloy steels	850 - 1000							P 10	0.1 - 0.4	70 - 140	6	12	4
		P 25/30	0.6 - 1.2	25 - 60	6	6	4	M 10/M 20	0.1 - 0.3	60 - 110	6	12	4
								P 20	0.4 - 0.8	50 - 90	6	12	4
	1000 - 1400	P 20	0.3 - 0.6	30 - 70	6	6	4	P 10	0.1 - 0.4	40 - 100	6	6	4
								M 10/M 20	0.1 - 0.3	35 - 60	6	6	4
		P 25/30	0.5 - 1.2	20 - 40	6	6	4						
Tool steels	1500 - 1800	P 20	0.2 - 0.6	25 - 40	6	0	6	P 10	0.1 - 0.3	45 - 55	6	0	4
								K 10	0.1 - 0.5	10 - 45	6	0	6
								M 10/M 20	0.1 - 0.5	10 - 45	6	0	6
Stainless steels	600 - 700							P 10	0.1 - 0.2	70 - 120	6	12 - 15	4
		P 20	0.1 - 0.4	50 - 70	6	12	4	M 10/M 20	0.1 - 0.3	50 - 100	6	12 - 15	4
								K 20	0.2 - 0.4	40 - 80	6	12	6
Hardened steels	> 500 HRC	K 10	0.1 - 0.4	4 - 15	6	0	-6						
		M 20	0.1 - 0.4	4 - 15	6	-5	-6						
Cast steel	< 500	P 25/30	0.3 - 1.2	40 - 90	6	12	4	P 10	0.1 - 0.2	130 - 180	6	12	4
								M 10/M 20	0.1 - 0.4	100 - 160	6	12	4
								P 20	0.2 - 0.8	80 - 120	6	12	4
	500 - 700	P 25/30	0.3 - 1.2	36 - 80	6	12	4	P 10	0.1 - 0.2	90 - 130	6	6	4
								M 10/M 20	0.1 - 0.4	60 - 130	6	6	4
								P 20	0.2 - 0.8	50 - 100	6	12	4
Grey cast iron	< 200 HB	K 20	> 0.5	40 - 90	6	6	4	K 10	0.1 - 0.5	50 - 100	6	6	4
	> 200 HB	K 20	0.3 - 1.2	30 - 70	6	6	4	K 10	0.1 - 0.5	40 - 80	6	6	4
								M 10/M 20	0.1 - 0.5	40 - 60	6	6	4
Alloyed grey cast iron	200 - 250 MHB	M 10/M 20	0.1 - 1.0	20 - 35	6	6	4	K 10	0.1 - 1.0	25 - 40	6	6	4
Black malleable cast iron	< 220 HB	K 20	> 0.4	40 - 50	6	4	4	K 10	0.1 - 0.4	50 - 80	6	6	4
								M 10/M 20	0.1 - 0.4	70 - 100	6	6	4
Hard cast iron	65 - 90 Shore	K 10		4 - 12	6	0	0						
	> 90 Shore	K 10		2 - 5	6	0	0						
Copper		K 20	0.3 - 0.6	400 - 500	10	18	0	K 10	0.1 - 0.3	450 - 600	10	18	0
Red bronze		K 20	0.3 - 0.6	400 - 500	10	12	0	K 10	0.1 - 0.3	450 - 600	10	12	0
Zinc alloy		K 20	0.3 - 0.6	200 - 250	6	10	0	K 10	0.1 - 0.3	200 - 300	6	10	0
Pure aluminium		K 20	0.3 - 0.6	400 - 1000	8	20	0	K 10	0.1 - 0.3	500 - 1200	8	20	0