INNOVATIONS

MASTER CATALOGUE

A4™ Tooling and Beyond™ Inserts

2013

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KENNAMETAL®

A4™ Tooling and Beyond™ Inserts for All Your O.D. and I.D. Applications

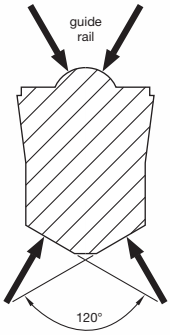
Primary Application

Choose A4 tooling for turning, facing, grooving, face grooving, and cut-off applications across a broad range of workpiece materials. The unique clamping system and versatile insert geometry deliver the highest metal removal rates in the industry.

Features and Benefits

A4 Grooving and Turning System

- One tool for turning, facing, grooving, face-grooving, and cut-off in O.D. and I.D. applications means exceptionally fast cycle times, no turret indexes!
- Extra-long clamping area, ground 120° bottom prism seating surface, and an exclusive top guide rail combine to deliver unsurpassed grooving and side-turning stability!
- Precise insert positioning is ensured for accurate cuts!
- Rigid clamping securely locks insert in place through the toughest cuts.
- Versatile design enables one system to handle O.D. and I.D. grooving, face grooving, back turning, undercutting, and even threading operations.
- Chip control inserts provide excellent chip evacuation in grooving, and offer better chip control in multidirectional turning.



A4 Chipbreakers


GMN Chipbreaker


GMP Chipbreaker


GMN Chipbreaker


GMP Chipbreaker


GUP Chipbreaker

The A4™ System Increases Productivity

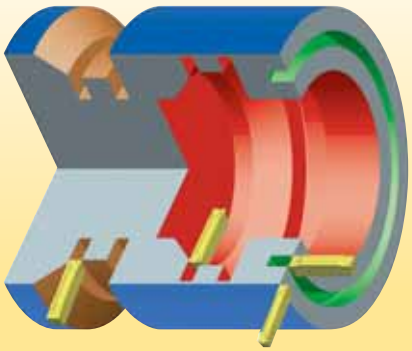
- Covers multiple applications.
- Reduces tool cost.
- Minimises machining time.

To learn more, ***scan here****.*
For instructions on how to scan, please see page xxix.

Step 1 • Select A4 size for grooving and turning application

What you need to know:

- Groove depth, width, and profile.
- Material being machined.
- Application to be performed (O.D. and I.D. grooving, turning, face grooving, and cut-off).



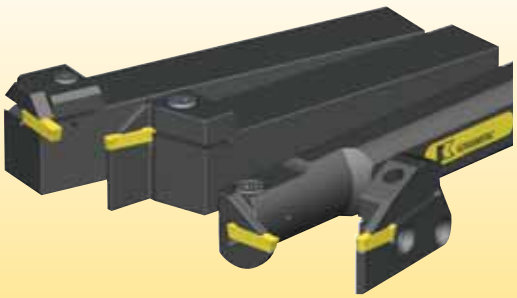
General Recommendation to Select the Insert Size

for workpiece diameters	insert seat size
<25mm	3
25–50mm	4
>50mm	5–10

Step 2 • Select toolholder based on the application

	conventional toolholders	modular blades
O.D. grooving, cut-off, and turning	page D82	page D94
face grooving	page D85	page D95
I.D. grooving, cut-off, and turning	page D87	—

NOTE: Insert seat size must match the seat size of the toolholder.



Step 3 • Select chipbreaker style and feed rate

Choose Chipbreaker Based on Material Type

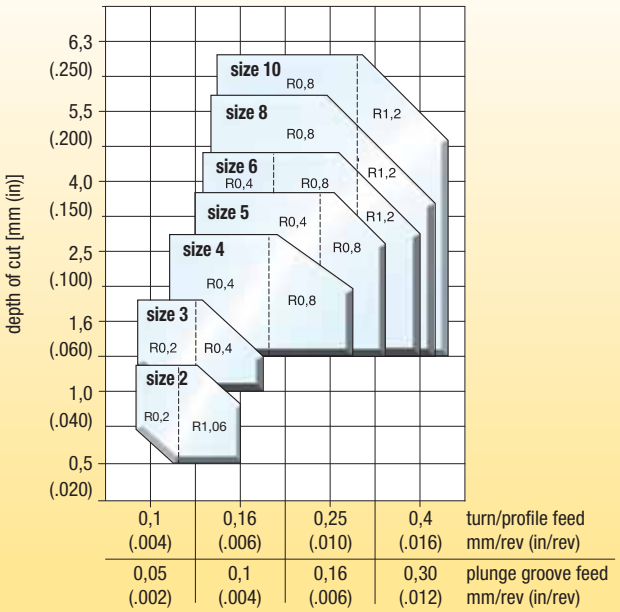
P	M	N	S	H
GMN	GUP/GMP	GUP/GMP precision ground (-E for KD 1405)	GUP/GMP precision ground	GMN

NOTE: Precision ground A4-P-GMN inserts can be applied on all material groups for inch-width grooving.

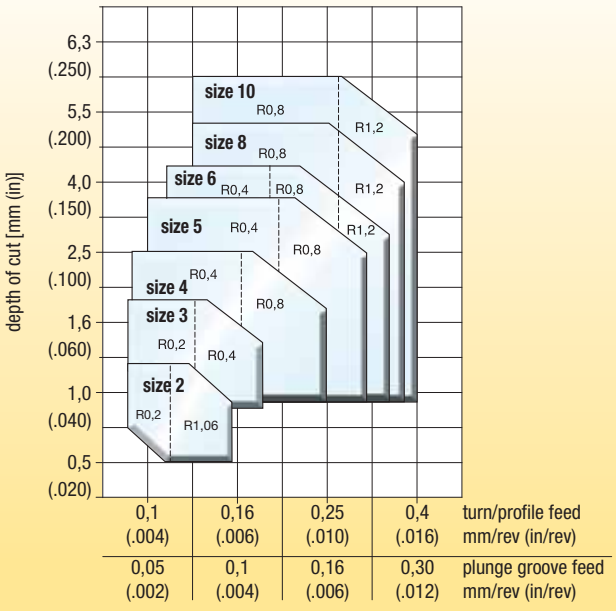
Depth of Cut and Feed Guidelines

square inserts (A4G...)			full radius inserts (A4R...)	
GMN chipbreaker	**GMP chipbreaker**	**GUP chipbreaker**	**GMN chipbreaker**	**GMP chipbreaker**
				
• Groove and turn moulded and precision ground inserts. • Stable cutting edge. • Available in metric and inch widths.	• Groove and turn inserts. • Available in moulded and precision-ground styles. • Positive rake angle. • Available in metric widths only.	• Groove and turn inserts in new Beyond™ grades. • Available in moulded and precision-ground styles. • Positive rake angle with enhanced chip control. • Available in metric widths only.	• Maximum turning and profiling depth of cut equals half the insert width. • The maximum turn and profile feed rate depends on the material to be machined and the depth of cut. For easy-to-machine materials, feed can be increased up to 1,5 times.	• Groove and turn inserts. • Available in moulded and precision-ground styles. • Positive rake angle. • Available in metric widths only.

GMN



GMP/GUP



NOTE: Select feed based on nose radius.
Diagram explanation: R0,2 - R = corner radius; 0,2 = 0,2mm radius.

Step 4 • Select grade and speed

Recommended Beyond™ Grades

cutting condition		P	M	K	N	S	H
heavily interrupted cut		KCU25/KC5025	KCU25/KC5025	KC9125	KCU25/KC5025	KCU25/KC5025	—
lightly interrupted cut		KCP25/KC9125/ KC9125/KCU25/ KC5025	KCU25/KC5025	KC9125	KCU25/KC5025	KCU25/KC5025	—
varying depth of cut, casting, or forging skin		KCU10/KC5010	KCU10/KC5010	KC9110	KCU10/KC5010/ KD1405	K313/KU10/ KCU10/KC5010	KCU10/KC5010
smooth cut, pre-turned surface		KT315/KCP10/ KC9110	KT315	KC9110	KCU10/KC5010/ KD1405	K313/KU10/ KCU10/KC5010	KCU10/KC5010

Recommended Beyond Cutting Speeds

Steel — speed — m/min (SFM) — starting conditions ◇

material group	grade	60	120	185	245	300	360	m/min
P	KCU10		◇					120
	KCP10				◇			275
	KCP25			◇				220
	KC5025		◇					120
	KC9110				◇			250
	KC9125			◇				200
	KT315**					◇		260

**KT315 is an alternative choice for steel; primarily available in the GMP chipbreaker.

Stainless Steel — speed — m/min (SFM) — starting conditions ◇

material group	grade	45	90	140	185	230	275	m/min
M	KU10	◇						55
	KCU10			◇				140
	KCU25		◇					110
	KC5010			◇				135
	KC5025		◇					105
	KT315				◇			170

Non-Ferrous Metals — speed — m/min (SFM) — starting conditions ◇

material group	grade	150	300	460	610	760	900	m/min
N	KC5025		◇					365
	KC5010			◇				455
	KD1405***				◇			610

***Recommended for high-silicon aluminium alloys and abrasive nonmetallics.

High-Temperature Alloys — speed — m/min (SFM) — starting conditions ◇

material group	grade	15	35	55	75	90	140	m/min
S	KU10	◇						22
	KCU10				◇			65
	KCU25			◇				50
	KC5010				◇			60
	KC5025			◇				45
	KT315		◇					30

Hardened Materials — speed — m/min (SFM) — starting conditions ◇

material group	grade	15	35	55	75	95	115	m/min
H	KC5010		◇					30

Step 5 • Select insert and holder from catalogue page

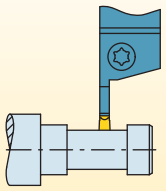
NOTE: The insert seat size must match the seat size of your toolholder selection.

Example for A4 — Groove and Turn

Material	low-alloyed steel
Workpiece O.D.	38mm
Groove depth	12mm
Groove width	22mm
Lightly interrupted cut	

Recommendation

Insert	A4G0405M04U08GMN
Grade	KC9125
Insert width	4,05mm
Insert seat size	4
Toolholder	A4SMR160417
Grooving depth	17mm
Seat size	4



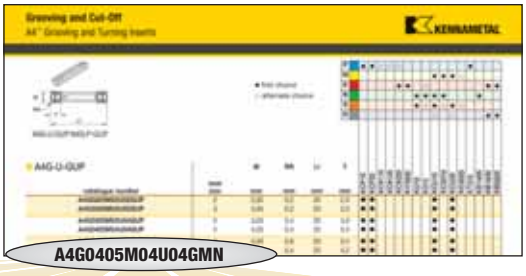
Speed: 200 m/min
Feed: 0,25 mm/rev
Plunge feed: 0,14 mm/rev

Congratulations!

You have successfully maximised your productivity by selecting the best A4 insert geometry, grade, and cutting specifications for your application!

How Do Catalogue Numbers Work?

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



Grooving and Turning Inserts

A4	G	0405	M	04	U	04	GMN
Tooling System	Insert Type	Groove Width	Unit of Measurement for Grooving Width	Seat Size	Insert Tolerance	Corner Radii	Chipbreaker Type/Edge Prep
A4 = Grooving and Turning	**G** = Square **R** = Full radius **C** = Cut-off	Expressed in 1/100mm	**M** = Metric				

pocket seat size	cutting width (mm)
02	2,00–2,62
2B	2,39–2,62
03	3,0–3,05
04	4,0–4,05
05	5,0–5,05
06	6,0–6,05
08	8,0–8,05
10	10,0–10,05
2S	2,00–2,62
3S	3,00–3,05
4S	4,00–4,05
5S	5,00–5,05

P = Precision ground grooving width tolerance: ± 0,025mm (.001")

U = Utility moulded grooving width tolerance:

3,05-4,05: $\frac{+0{,}15\text{mm}}{-0}$

5,05-10,05: $\frac{+0{,}25\text{mm}}{-0}$

metric
01 = 0,1
02 = 0,2
04 = 0,4
08 = 0,8
12 = 1,2
full radius = 00

GMN = Grooving and turning medium machining stable cutting edge

GMP = Grooving and turning medium machining positive rake angle

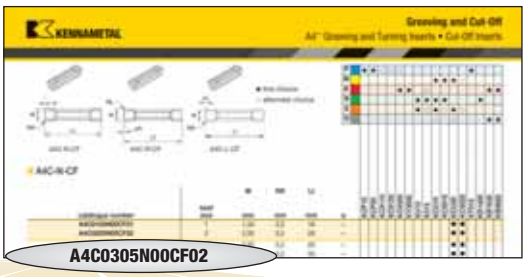
GUP = Grooving and turning high positive geometry. Especially in stainless steels and high-temp alloys

B = Flat top for special forms and applications

E = Flat top, slight honed edge

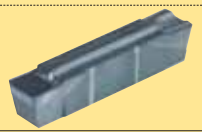
S = Negative land plus hone

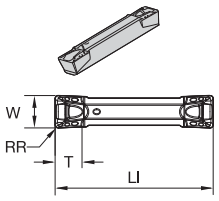
ST = Single tip



Cut-Off Inserts

A4	C	0305	N	00	CF	02
Tooling System	Insert Type	Cutting Width	Hand of Insert	Main Cutting Edge Lead Angle	Chipbreaker Type	Corner Radius
A4 = Grooving and Turning	**C** = Cut-off	Expressed in 1/100mm	**R** = Right hand **L** = Left hand **N** = Neutral	**00** = Neutral **06** = 6° **10** = 10°	**CF** = Cut-off fine positive rake	**metric** 02 = 0,2

insert type and chipbreaker designation		application range	metric widths (mm)	P	M	N	S	H
Moulded: A4G-U-GUP		Groove and Turn: • Stable cutting edge for higher feed rates. • Utility moulded.	2–10	●	●	●	●	○
Precision Ground: A4G-P-GUP		• Stable, precision ground cutting edge. • General grooving for specific inch widths. • ± 0,025mm width tolerance.	2–10	●	●	●	●	○
Moulded: A4G-U-GMN		Groove and Turn: • Stable cutting edge for higher feed rates. • Utility moulded.	3,05–10,05	●				●
Precision Ground: A4G-P-GMN		• Stable, precision ground cutting edge. • General grooving for specific inch widths. • ± 0,025mm width tolerance.	—	●	○	○	○	●
Moulded: A4G-U-GMP		Groove and Turn: • Positive rake angle. • Reduced cutting force. • Small to medium feed rates. • Utility moulded.	3,05–10,05	○	●			
Precision Ground: A4G-P-GMP		• Positive rake angle. • Precision ground cutting edge. • ± 0,025mm width tolerance.	3–10		○	●	●	
Moulded: A4R-U-GMN		Groove and Turn: • Stable cutting edge for higher feed rates. • Utility moulded.	3,05–10,05	●				●
Precision Ground: A4R-P-GMN		• Stable, precision ground cutting edge. • General grooving for specific inch widths. • ± 0,025mm width tolerance.	—	●	○	○	○	●
Precision Ground: A4R-P-GMP		Groove and Turn: • Positive rake angle. • Precision ground cutting edge. • ± 0,025mm width tolerance.	3–10		●	●	●	
Moulded: A4G-U-B		Groove and Turn: • For special profiles and for PCBN-tipped inserts (by request only). • Secondary choice for cast iron and high-temp alloys.	3,05–10,05				○	
Precision Ground: A4G-P-E-PCD		• Diamond sheet-tipped tool for high-performance non-ferrous machining.	3–5			●		
Moulded: A4C-CF		Cut-Off: • High positive rake angle. • Sharp cutting edge. • Available in neutral lead angle in 6° and 10° right- and left-hand styles.	3,05–4,05	●	●	●	●	



A4G-U-GUP/A4G-P-GUP

● first choice
○ alternate choice

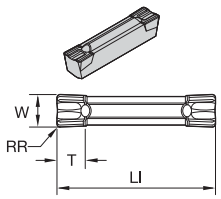
		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-U-GUP

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0205M02U02GUP	2	2,05	0,2	20	2,0	●	●							●		●					
A4G0305M03U02GUP	3	3,05	0,2	20	3,0	●	●							●		●					
A4G0305M03U04GUP	3	3,05	0,4	20	3,0	●	●							●		●					
A4G0405M04U04GUP	4	4,05	0,4	20	3,4	●	●							●		●					
A4G0405M04U08GUP	4	4,05	0,8	20	3,4	●	●							●		●					
A4G0505M05U04GUP	5	5,05	0,4	25	4,2	●	●							●		●					
A4G0505M05U08GUP	5	5,05	0,8	25	4,2	●	●							●		●					
A4G0605M06U04GUP	6	6,05	0,4	30	4,5	●	●							●		●					
A4G0605M06U08GUP	6	6,05	0,8	30	4,5	●	●							●		●					
A4G0605M06U12GUP	6	6,05	1,2	30	4,5	●	●							●		●					
A4G0805M08U08GUP	8	8,05	0,8	30	6,0	●	●							●		●					
A4G0805M08U12GUP	8	8,05	1,2	30	6,0	●	●							●		●					
A4G1005M10U08GUP	10	10,05	0,8	30	6,0	●	●							●		●					
A4G1005M10U12GUP	10	10,05	1,2	30	6,1	●	●							●		●					

A4G-P-GUP

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0200M02P02GUP	2	2,00	0,2	20	1,9							●		●		●					
A4G0300M03P02GUP	3	3,00	0,2	20	2,9							●		●		●					
A4G0300M03P04GUP	3	3,00	0,4	20	2,9							●		●		●					
A4G0400M04P02GUP	4	4,00	0,2	20	3,3							●		●		●					
A4G0400M04P04GUP	4	4,00	0,4	20	3,3							●		●		●					
A4G0400M04P08GUP	4	4,00	0,8	20	3,3							●		●		●					
A4G0500M05P04GUP	5	5,00	0,4	25	4,1							●		●		●					
A4G0500M05P08GUP	5	5,00	0,8	25	4,1							●		●		●					
A4G0600M06P04GUP	6	6,00	0,4	30	4,5							●		●		●					
A4G0600M06P08GUP	6	6,00	0,8	30	4,5							●		●		●					
A4G0800M08P08GUP	8	8,00	0,8	30	6,0							●		●		●					
A4G0800M08P12GUP	8	8,00	1,2	30	6,0							●		●		●					
A4G1000M10P08GUP	10	10,00	0,8	30	6,0							●		●		●					
A4G1000M10P12GUP	10	10,00	1,2	30	6,0							●		●		●					



A4G-U-GMP/A4G-P-GMP

● first choice
○ alternate choice

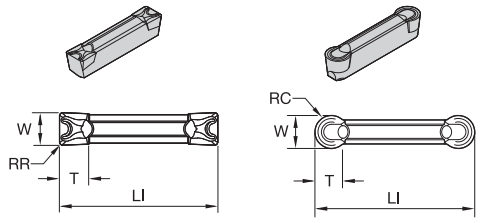
		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-U-GMP

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0205M02U02GMP	2	2,05	0,2	20	2,0			●						●	●	●	●				
A4G0255M2BU02GMP	2B	2,62	0,2	20	2,0											●	●				
A4G0305M03U02GMP	3	3,05	0,2	20	3,5			●	●					●	●	●	●	●			
A4G0305M03U04GMP	3	3,05	0,4	20	3,5			●	●					●	●	●	●	●			
A4G0405M04U04GMP	4	4,05	0,4	20	3,5			●	●					●	●	●	●	●			
A4G0405M04U08GMP	4	4,05	0,8	20	3,5			●	●					●	●	●	●	●			
A4G0505M05U04GMP	5	5,05	0,4	25	4,2			●	●					●	●	●	●				
A4G0505M05U08GMP	5	5,05	0,8	25	4,2			●	●					●	●	●	●	●			
A4G0605M06U04GMP	6	6,05	0,4	30	4,9			●	●					●	●	●	●				
A4G0605M06U08GMP	6	6,05	0,8	30	4,9			●	●					●	●	●	●	●			
A4G0605M06U12GMP	6	6,05	1,2	30	4,9									●	●		●				
A4G0805M08U08GMP	8	8,05	0,8	30	6,4			●	●							●	●				
A4G0805M08U12GMP	8	8,05	1,2	30	6,4												●				
A4G1005M10U08GMP	10	10,05	0,8	30	8,1									●	●	●	●				
A4G1005M10U12GMP	10	10,05	1,2	30	8,1				●								●				

A4G-P-GMP

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0200M02P02GMP	2	2,00	0,2	20	2,0									●	●	●	●				
A4G0250M2BP02GMP	2B	2,50	0,2	20	2,0									●	●						
A4G0300M03P02GMP	3	3,00	0,2	20	3,5								●	●	●	●	●				
A4G0300M03P04GMP	3	3,00	0,4	20	3,5								●	●	●	●	●				
A4G0400M04P02GMP	4	4,00	0,2	20	3,5								●	●	●	●	●				
A4G0400M04P04GMP	4	4,00	0,4	20	3,5								●	●	●	●	●				
A4G0400M04P08GMP	4	4,00	0,8	20	3,5									●	●	●	●				
A4G0500M05P04GMP	5	5,00	0,4	25	4,2								●	●	●	●	●				
A4G0500M05P08GMP	5	5,00	0,8	25	4,2								●	●	●	●	●				
A4G0600M06P04GMP	6	6,00	0,4	30	4,8									●	●	●	●				
A4G0600M06P08GMP	6	6,00	0,8	30	4,8									●	●	●	●				
A4G0800M08P08GMP	8	8,00	0,8	30	6,3								●	●	●	●	●				
A4G0800M08P12GMP	8	8,00	1,2	30	6,3									●	●						
A4G1000M10P08GMP	10	10,00	0,8	30	8,0								●	●	●	●	●				
A4G1000M10P12GMP	10	10,00	1,2	30	8,0									●	●						



A4G-U-GMN/A4G-P-GMN A4R-P-GMP

● first choice
○ alternate choice

		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-U-GMN

catalogue number	seat size	W mm	RR mm	LI mm	T mm
A4G0205M02U02GMN	2	2,05	0,2	20	2,0
A4G0255M2BU02GMN	2B	2,62	0,2	20	2,0
A4G0305M03U02GMN	3	3,05	0,2	20	3,5
A4G0305M03U04GMN	3	3,05	0,4	20	3,5
A4G0405M04U04GMN	4	4,05	0,4	20	3,5
A4G0405M04U08GMN	4	4,05	0,8	20	3,5
A4G0505M05U04GMN	5	5,05	0,4	25	4,2
A4G0505M05U08GMN	5	5,05	0,8	25	4,2
A4G0605M06U04GMN	6	6,05	0,4	30	4,9
A4G0605M06U08GMN	6	6,05	0,8	30	4,9
A4G0605M06U12GMN	6	6,05	1,2	30	4,9
A4G0805M08U08GMN	8	8,05	0,8	30	6,4
A4G0805M08U12GMN	8	8,05	1,2	30	6,4
A4G1005M10U08GMN	10	10,05	0,8	30	8,1
A4G1005M10U12GMN	10	10,05	1,2	30	8,1

	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0205M02U02GMN			●						●	●	●	●				
A4G0255M2BU02GMN										●		●				
A4G0305M03U02GMN			●	●					●	●	●	●				
A4G0305M03U04GMN			●	●					●	●	●	●				
A4G0405M04U04GMN			●	●					●	●	●	●				
A4G0405M04U08GMN			●	●					●	●	●	●				
A4G0505M05U04GMN			●	●					●	●	●	●				
A4G0505M05U08GMN			●	●					●	●	●	●				
A4G0605M06U04GMN			●	●					●	●	●	●				
A4G0605M06U08GMN			●	●					●	●	●	●				
A4G0605M06U12GMN				●					●	●	●	●				
A4G0805M08U08GMN			●	●					●	●	●	●				
A4G0805M08U12GMN			●	●					●	●	●	●				
A4G1005M10U08GMN			●	●							●	●				
A4G1005M10U12GMN			●	●								●				

A4G-P-GMN

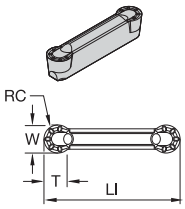
catalogue number	seat size	W mm	RR mm	LI mm	T mm
A4G094I2BP05GMN	2B	2,39	0,2	20	1,9
A4G125I03P05GMN	3	3,18	0,2	20	3,4
A4G125I03P1GMN	3	3,18	0,4	20	3,4
A4G187I04P1GMN	4	4,76	0,4	20	3,5
A4G187I04P2GMN	4	4,76	0,8	20	3,5
A4G250I06P1GMN	6	6,35	0,4	30	4,7
A4G250I06P2GMN	6	6,35	0,8	30	4,7
A4G312I08P1GMN	8	7,94	0,4	30	6,2
A4G312I08P2GMN	8	7,94	0,8	30	6,2
A4G375I10P1GMN	10	9,53	0,4	30	7,9
A4G375I10P2GMN	10	9,53	0,8	30	7,9

	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G094I2BP05GMN									●	●						
A4G125I03P05GMN									●	●	●	●				
A4G125I03P1GMN									●	●	●	●				
A4G187I04P1GMN									●	●	●	●				
A4G187I04P2GMN									●	●	●	●				
A4G250I06P1GMN									●	●	●	●				
A4G250I06P2GMN									●	●	●	●				
A4G312I08P1GMN										●	●	●				
A4G312I08P2GMN												●				
A4G375I10P1GMN										●						
A4G375I10P2GMN									●	●	●	●				

A4R-P-GMP

catalogue number	seat size	W mm	RC mm	LI mm	T mm
A4R0200M02P00GMP	2	2,00	1,0	20	1,7
A4R0300M03P00GMP	3	3,00	1,5	20	2,5
A4R0400M04P00GMP	4	4,00	2,0	20	3,4
A4R0500M05P00GMP	5	5,00	2,5	25	4,1
A4R0600M06P00GMP	6	6,00	3,0	30	4,9
A4R0800M08P00GMP	8	8,00	4,0	30	6,5
A4R1000M10P00GMP	10	10,00	5,0	30	8,1

	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4R0200M02P00GMP									●	●	●	●				
A4R0300M03P00GMP								●	●	●	●	●				
A4R0400M04P00GMP								●	●	●	●	●				
A4R0500M05P00GMP								●	●	●	●	●				
A4R0600M06P00GMP									●	●	●	●				
A4R0800M08P00GMP								●	●	●	●	●				
A4R1000M10P00GMP								●								



A4R-U-GMN/A4R-P-GMN
A4R-U-GUP/A4R-U-GUP

● first choice
○ alternate choice

		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4R-U-GMN

catalogue number	seat size	W mm	RC mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4R0205M02U00GMN	2	2,05	1,1	20	1,8			●						●	●	●	●				
A4R0305M03U00GMN	3	3,05	1,5	20	2,6			●	●					●	●	●	●				
A4R0405M04U00GMN	4	4,05	2,0	20	3,4			●	●					●	●	●	●				
A4R0505M05U00GMN	5	5,05	2,5	25	4,1			●	●					●	●	●	●				
A4R0605M06U00GMN	6	6,05	3,0	30	4,9			●	●					●	●	●	●				
A4R0805M08U00GMN	8	8,05	4,0	30	6,5			●	●					●	●	●	●				
A4R1005M10U00GMN	10	10,05	5,0	30	8,1				●					●	●	●	●				

A4R-P-GMN

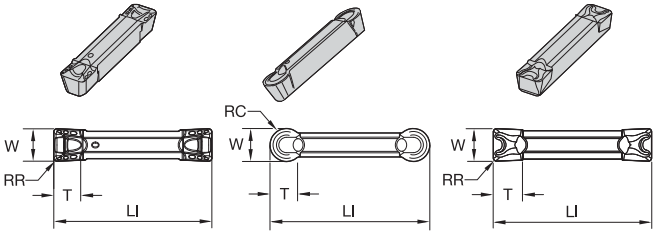
catalogue number	seat size	W mm	RC mm	LI mm	T mm
A4R125I03P00GMN	3	3,18	1,6	20	2,7
A4R187I04P00GMN	4	4,76	2,4	20	3,8
A4R250I06P00GMN	6	6,35	3,2	30	5,2
A4R312I08P00GMN	8	7,94	4,0	30	6,4
A4R375I10P00GMN	10	9,53	4,8	30	7,3

A4R-U-GUP

catalogue number	seat size	W mm	RC mm	LI mm
A4R0305M03U00GUP	3	3,05	1,5	20
A4R0505M05U00GUP	5	5,05	2,5	25
A4R1005M10U00GUP	10	10,05	5,0	30

A4R-P-GUP

catalogue number	seat size	W mm	RC mm	LI mm
A4R0300M03P00GUP	3	3,00	1,5	20
A4R0400M04P00GUP	4	4,00	2,0	20
A4R0500M05P00GUP	5	5,00	2,5	25
A4R0600M06P00GUP	6	6,00	3,0	30
A4R0800M08P00GUP	8	8,00	4,0	30
A4R1000M10P00GUP	10	10,00	5,0	30
A4R125I03P00GUP	3	3,18	1,6	20
A4R187I04P00GUP	4	4,76	2,4	20
A4R250I06P00GUP	6	6,35	3,2	30
A4R312I08P00GUP	8	7,94	4,0	30
A4R375I10P00GUP	10	9,52	4,8	30



A4G-SU-GUP/A4G-SP-GUP A4R-SP-GMP A4G-SU-GMN

● first choice
○ alternate choice

		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-SU-GUP • Small Diameter Face Grooving

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0205M2SU02GUP	2S	2,05	0,2	20	2,0									●		●					
A4G0305M3SU02GUP	3S	3,05	0,2	20	3,0									●		●					
A4G0305M3SU04GUP	3S	3,05	0,4	20	3,0									●		●					
A4G0405M4SU04GUP	4S	4,05	0,4	20	3,4									●		●					
A4G0405M4SU08GUP	4S	4,05	0,8	20	3,4									●		●					
A4G0505M5SU04GUP	5S	5,05	0,4	25	4,2									●		●					
A4G0505M5SU08GUP	5S	5,05	0,8	25	4,2									●		●					

NOTE: A4-S inserts are reduced-height A4 inserts.
For example, a 2S seat size holder will not accept a seat size 2 insert.

A4G-SP-GUP • Small Diameter Face Grooving

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0200M2SP02GUP	2S	2,00	0,2	20	1,9									●		●					
A4G0300M3SP02GUP	3S	3,00	0,2	20	2,9									●		●					
A4G0300M3SP04GUP	3S	3,00	0,4	20	2,9									●		●					
A4G0400M4SP04GUP	4S	4,00	0,4	20	3,4									●		●					
A4G0400M4SP08GUP	4S	4,00	0,8	20	3,4									●		●					
A4G0500M5SP04GUP	5S	5,00	0,4	25	4,1									●		●					
A4G0500M5SP08GUP	5S	5,00	0,8	25	4,1									●		●					

NOTE: A4-S inserts are reduced-height A4 inserts.
For example, a 2S seat size holder will not accept a seat size 2 insert.

A4R-SP-GMP • Small Diameter Face Grooving

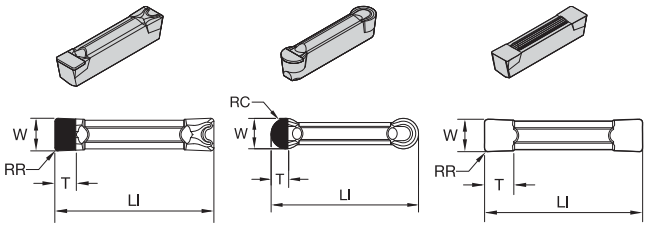
catalogue number	seat size	W mm	RC mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4R0200M2SP00GMP	2S	2,00	1,0	20	1,7											●					
A4R0300M3SP00GMP	3S	3,00	1,5	20	2,5											●					
A4R0400M4SP00GMP	4S	4,00	2,0	20	3,4											●					
A4R0500M5SP00GMP	5S	5,00	2,5	25	4,1											●					

NOTE: A4-S inserts are reduced-height A4 inserts.
For example, a 2S seat size holder will not accept a seat size 2 insert.

A4G-SU-GMN • Small Diameter Face Grooving

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0205M2SU02GMN	2S	2,05	0,2	20	2,0									●		●					
A4G0305M3SU02GMN	3S	3,05	0,2	20	3,5									●		●					
A4G0305M3SU04GMN	3S	3,05	0,4	20	3,5									●		●					
A4G0405M4SU04GMN	4S	4,05	0,4	20	3,6									●		●					
A4G0405M4SU08GMN	4S	4,05	0,8	20	3,6									●		●					
A4G0505M5SU04GMN	5S	5,05	0,4	25	4,2									●		●					
A4G0505M5SU08GMN	5S	5,05	0,8	25	4,2									●		●					

NOTE: A4-S inserts are reduced-height A4 inserts.
For example, a 2S seat size holder will not accept a seat size 2 insert.



A4G-P-E A4R-P-E A4G-U-B

● first choice
○ alternate choice

		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-P-E • PCD Grooving

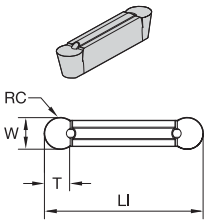
catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0300M03P04E	3	3,00	0,4	20	3,5														●		
A4G0400M04P04E	4	4,00	0,4	20	3,5														●		
A4G0500M05P08E	5	5,00	0,8	25	4,2														●		

A4R-P-E • PCD Grooving

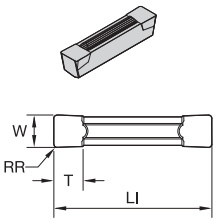
catalogue number	seat size	W mm	RC mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4R0500M05P00E	5	5,00	2,5	25	4,1														●		

A4G-U-B

catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0305M03U02B	3	3,05	0,2	20	3,5					●						●	●				
A4G0405M04U04B	4	4,05	0,4	20	3,4					●							●				
A4G0505M05U04B	5	5,05	0,4	25	4,2					●						●	●				
A4G0605M06U04B	6	6,05	0,4	30	4,9					●						●	●				
A4G0805M08U08B	8	8,05	0,8	30	6,4					●											
A4G1005M10U08B	10	10,05	0,8	30	8,1					●											



A4R-P-T



A4G-P-T

● first choice
○ alternate choice

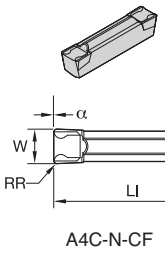
		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4G-P-T

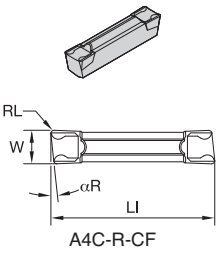
catalogue number	seat size	W mm	RR mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4G0300M03P04T01025	3	3,00	0,4	20	3,4						●										
A4G125I03P1T0425	3	3,18	0,4	20	3,4						●										
A4G0400M04P04T01025	4	4,00	0,4	20	3,4						●										
A4G187I04P2T0425	4	4,76	0,8	20	3,4						●										
A4G0500M05P08T01025	5	5,00	0,8	25	4,2						●										
A4G0600M06P08T01025	6	6,00	0,8	30	4,8						●										
A4G250I06P2T0425	6	6,35	0,8	30	4,9						●										
A4G0800M08P08T01025	8	8,00	0,8	30	6,4						●										

A4R-P-T

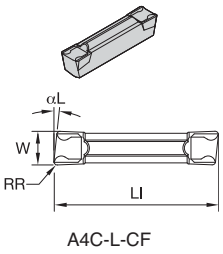
catalogue number	seat size	W mm	RC mm	LI mm	T mm	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
A4R0300M03P00T01025	3	3,00	1,5	20	2,4						●										
A4R125I03P00T0425	3	3,18	1,6	20	2,6						●										
A4R0400M04P00T01025	4	4,00	2,0	20	3,0						●										
A4R187I04P00T0425	4	4,76	2,4	20	4,3						●										
A4R0500M05P00T01025	5	5,00	2,5	25	4,1						●										
A4R0600M06P00T01025	6	6,00	3,0	30	4,3						●										
A4R250I06P00T0425	6	6,35	3,2	30	4,8						●										
A4R0800M08P00T01025	8	8,00	4,0	30	6,4						●										



A4C-N-CF



A4C-R-CF



A4C-L-CF

● first choice
○ alternate choice

		KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P		●	●	○	○	○								●			
M										●	●	●	○				
K						●	●		○							●	●
N								●	●	●	●				●		
S								●	○	●	○	●	○				
H										○		○				●	●

A4C-N-CF

catalogue number	seat size	W mm	RR mm	LI mm	α
A4C0155N00CF01	1	1,50	0,2	16	–
A4C0205N00CF02	2	2,05	0,2	20	–
A4C0255N00CF02	2B	2,50	0,2	20	–
A4C0305N00CF02	3	3,05	0,2	20	–
A4C0405N00CF02	4	4,05	0,2	20	–

catalogue number	KCU25	KC5025
A4C0155N00CF01	●	●
A4C0205N00CF02	●	●
A4C0255N00CF02	●	●
A4C0305N00CF02	●	●
A4C0405N00CF02	●	●

A4C-R-CF

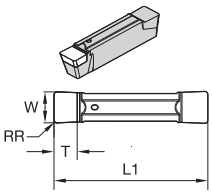
catalogue number	seat size	W mm	RL mm	LI mm	αR
A4C0155R16CF01	1	1,50	0,2	16	16.0
A4C0155R06CF01	1	1,50	0,2	16	6.0
A4C0155R10CF01	1	1,50	0,2	16	10.0
A4C0205R10CF02	2	1,99	0,2	20	10.0
A4C0205R06CF02	2	1,99	0,2	20	6.0
A4C0255R06CF02	2B	2,49	0,2	20	6.0
A4C0305R06CF02	3	3,05	0,2	20	6.0
A4C0305R10CF02	3	3,05	0,2	20	10.0
A4C0405R06CF02	4	4,05	0,2	20	6.0
A4C0405R10CF02	4	4,05	0,2	20	10.0

catalogue number	KCU25	KC5025
A4C0155R16CF01		●
A4C0155R06CF01		●
A4C0155R10CF01	●	●
A4C0205R10CF02	●	●
A4C0205R06CF02	●	●
A4C0255R06CF02		●
A4C0305R06CF02	●	●
A4C0305R10CF02	●	●
A4C0405R06CF02	●	●
A4C0405R10CF02	●	●

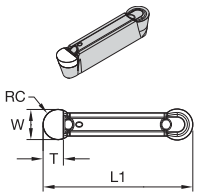
A4C-L-CF

catalogue number	seat size	W mm	RR mm	LI mm	αL
A4C0155L06CF01	1	1,50	0,2	16	6.0
A4C0205L06CF02	2	1,99	0,2	20	6.0
A4C0205L10CF02	2	1,99	0,2	20	10.0
A4C0305L06CF02	3	3,05	0,2	20	6.0
A4C0305L10CF02	3	3,05	0,2	20	10.0
A4C0405L06CF02	4	4,05	0,2	20	6.0
A4C0405L10CF02	4	4,05	0,2	20	10.0

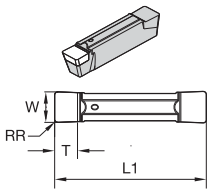
catalogue number	KCU25	KC5025
A4C0155L06CF01		●
A4C0205L06CF02	●	●
A4C0205L10CF02		●
A4C0305L06CF02	●	●
A4C0305L10CF02	●	●
A4C0405L06CF02	●	●
A4C0405L10CF02	●	●



A4G-P-S-ST



A4R-P-E-ST



A4G-P-E-ST

● first choice
○ alternate choice

	KCP10	KCP25	KC9110	KC9125	KC9320	KY3500	KU10	K313	KCU10	KC5010	KCU25	KC5025	KT315	KD1405	KB1630	KB5625
P	●	●	○	○	○								●			
M									●	●	●	○				
K					●	●		○							●	●
N							●	●	●	●				●		
S							●	○	●	○	●	○				
H									○		○				●	●

A4G-P-S-ST

catalogue number	seat size	W mm	RR mm	LI mm	T mm
A4G0300M03P04S02025ST	3	3,00	0,4	20	3,0
A4G0400M04P04S02025ST	4	4,00	0,4	20	3,3
A4G0500M05P08S02025ST	5	5,00	0,8	25	3,5
A4G0600M06P08S02025ST	6	6,00	0,8	30	4,0

A4R-P-E-ST

catalogue number	seat size	W mm	RR mm	LI mm	T mm
A4R0300M03P00EST	3	3,00	–	20	2,2
A4R0400M04P00EST	4	4,00	–	20	2,9
A4R0500M05P00EST	5	5,00	–	25	3,7
A4R0600M06P00EST	6	6,00	–	30	4,4

A4G-P-E-ST

catalogue number	seat size	W mm	RR mm	LI mm	T mm
A4G0300M03P04EST	3	3,00	0,4	20	3,0
A4G0400M04P04EST	4	4,00	0,4	20	3,3
A4G0500M05P08EST	5	5,00	0,8	25	3,5
A4G0600M06P08EST	6	6,00	0,8	30	4,0

Carbide Recycling

Help preserve and protect our planet!

It's easy for your company to be environmentally conscious with the Kennametal Carbide Recycling Program.

By sending us your used carbide tools, you help preserve and protect the environment and ensure that these products are recycled responsibly. Kennametal accepts any coated or non-coated carbide items, including inserts, drills, reamers, and taps.

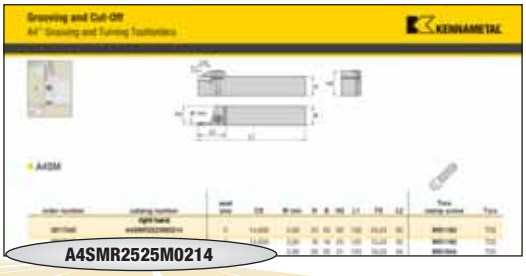
By using the Kennametal Carbide Recycling Program, you will receive:

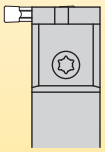
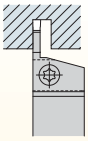
- A partner who cares about a sustainable environment.
- Easy-to-use web portal to value your used carbide.
- Access to our popular Green Box™ options for carbide collection.
- Systematic and efficient disposal of carbide materials.
- Improved profitability.

Program is not currently available in all geographical areas.
For more information, please visit **www.kennametal.com/carbiderecycling.**

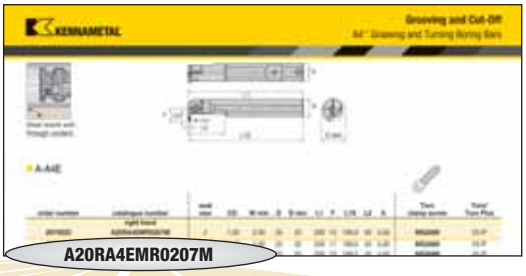
How Do Catalogue Numbers Work?

Each character in our catalogue number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



A4	S	M	R	2525M	02	14
Tooling System	Tool Style	Support Type	Hand of Tool	Shank Size	Seat Size	Max Grooving Depth
A4 = Grooving and Turning	 **S** = Straight  **E** = End mounted 90°	**M** = Maximum support for specific groove widths and straight clearance for unlimited workpiece diameters **E** = No steel support for face grooving	 **R** = Right hand **L** = Left hand **N** = Neutral	**metric:** Height x width in mm, letter indicates tool length according to ISO **metric tool length (mm)** K = 125 M = 150 P = 170	02 03 04 05 06 08 10	in millimetres

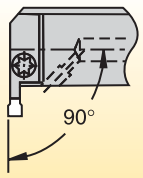
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



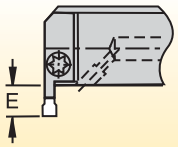
A20RA4EMR0207M

A	20	R	A4	E	M	R	02	07	M
Steel Bar with Coolant	Bar Diameter	Bar Length	A4 Groove & Turn System	Tool Style	Support Type	Hand of Tool	Insert Seat Size	Grooving Depth in mm	Tool Units

M = Metric
N = Inch

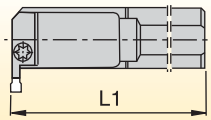


E = End mounted (90°)



conversions:

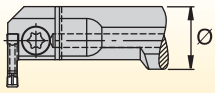
mm		inch
7mm	=	.28"
10mm	=	.39"
12mm	=	.47"
16mm	=	.63"



metric bars:
R = 200mm
S = 250mm
T = 300mm

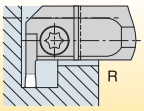
inch bars:
R = 8"
S = 10"
T = 12"

pocket seat size	cutting width (mm)
02	2,00–2,62
2B	2,39–2,62
03	3,0–3,05
04	4,0–4,05
05	5,0–5,05
06	6,0–6,05
08	8,0–8,05
10	10,0–10,05

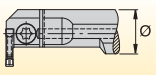


metric bars:
Bar diameter in millimetres

inch bars:
A two-digit number which indicates the bar diameter in 1/16" increments.

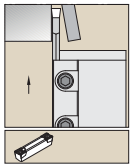


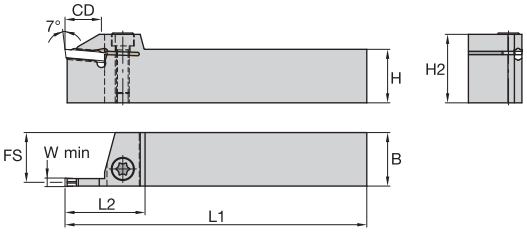
R = Right hand



L = Left hand

M = Maximum support



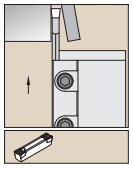


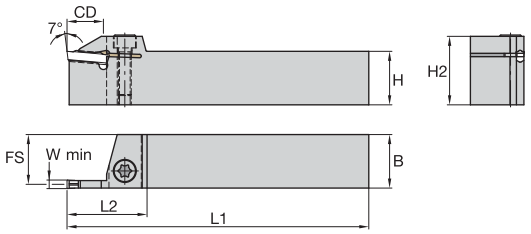
A4SM

order number	catalogue number	seat size	CD	W min	H	B	H2	L1	FS	L2	Torx clamp screw	Torx
	right hand											
3017340	A4SMR2525M0214	2	14,000	2,00	25	25	30	150	24,20	30	MS1160	T20
3017342	A4SMR1616K0214	2	14,000	2,00	16	16	25	125	15,20	30	MS1160	T20
2974425	A4SMR2020K0217	2	17,000	2,00	20	20	31	125	19,20	34	MS1944	T25
3017339	A4SMR2525M0217	2	17,000	2,00	25	25	31	150	24,20	34	MS1944	T25
1949635	A4SMR2020K0314	3	14,000	3,00	20	20	27	125	18,72	35	MS1595	T30
1949633	A4SMR1616K0314	3	14,000	3,00	16	16	27	125	14,72	35	MS2091	T25
1949637	A4SMR2525M0317	3	17,000	3,00	25	25	32	150	23,72	37	MS1970	T30
2503551	A4SMR2020K0317	3	17,000	3,00	20	20	32	125	18,70	37	MS1970	T30
2503557	A4SMR2016K0317	3	17,000	3,00	20	16	32	125	14,70	37	MS1970	T30
1949639	A4SMR2020K0414	4	14,000	4,00	20	20	27	125	18,22	35	MS1595	T30
1949643	A4SMR3225P0417	4	17,000	4,00	32	25	40	170	23,22	37	MS1970	T30
2503553	A4SMR2020K0417	4	17,000	4,00	20	20	32	125	18,20	37	MS1970	T30
1949641	A4SMR2525M0417	4	17,000	4,00	25	25	32	150	23,22	37	MS1970	T30
2503559	A4SMR2016K0417	4	17,000	4,00	20	16	32	125	14,20	37	MS1970	T30
1949645	A4SMR2020K0519	5	19,000	5,00	20	20	28	125	17,72	40	MS1595	T30
1949647	A4SMR2525M0520	5	20,000	5,00	25	25	33	150	22,72	40	MS1970	T30
1949649	A4SMR3225P0522	5	22,000	5,00	32	25	40	170	22,72	42	MS1970	T30
2503555	A4SMR2020K0620	6	20,000	6,00	20	20	33	125	17,30	40	MS1970	T30
2245484	A4SMR2525M0620	6	20,000	6,00	25	25	33	150	22,30	40	MS1970	T30
2263089	A4SMR3225P0626	6	26,000	6,00	32	25	40	170	22,30	45	MS1970	T30
2245485	A4SMR2525M0820	8	20,000	8,00	25	25	34	150	21,40	43	MS1490	T45
2263091	A4SMR3225P0826	8	26,000	8,00	32	25	41	170	21,40	47	MS1490	T45
2263173	A4SMR3225P1026	10	26,000	10,00	32	25	41	170	20,80	47	MS1490	T45
3017341	A4SMR2020K0214	2	14,000	–	20	20	25	125	19,20	30	MS1160	T20

(continued)

(A4SM continued)





order number	catalogue number	seat size	CD	W min	H	B	H2	L1	FS	L2	Torx clamp screw	Torx
	left hand											
3017338	**A4SML1616K0214**	2	14,000	2,00	16	16	25	125	15,20	30	**MS1160**	T20
3017335	**A4SML2525M0214**	2	14,000	2,00	25	25	30	150	24,20	30	**MS1160**	T20
3017337	**A4SML2020K0217**	2	17,000	2,00	20	20	31	125	19,20	34	**MS1944**	T25
3017334	**A4SML2525M0217**	2	17,000	2,00	25	25	31	150	24,20	34	**MS1944**	T25
1949636	**A4SML2020K0314**	3	14,000	3,00	20	20	27	125	18,72	35	**MS1595**	T30
1949634	**A4SML1616K0314**	3	14,000	3,00	16	16	27	125	14,72	35	**MS2091**	T25
2503550	**A4SML2020K0317**	3	17,000	3,00	20	20	32	125	18,70	37	**MS1970**	T30
1949638	**A4SML2525M0317**	3	17,000	3,00	25	25	32	150	23,72	37	**MS1970**	T30
2503556	**A4SML2016K0317**	3	17,000	3,00	20	16	32	125	14,70	37	**MS1970**	T30
1949640	**A4SML2020K0414**	4	14,000	4,00	20	20	27	125	18,22	35	**MS1595**	T30
1949642	**A4SML2525M0417**	4	17,000	4,00	25	25	32	150	23,22	37	**MS1970**	T30
2503552	**A4SML2020K0417**	4	17,000	4,00	20	20	32	125	18,20	37	**MS1970**	T30
2503558	**A4SML2016K0417**	4	17,000	4,00	20	16	32	125	14,20	37	**MS1970**	T30
1949644	**A4SML3225P0417**	4	17,000	4,00	32	25	40	170	23,22	37	**MS1970**	T30
1949646	**A4SML2020K0519**	5	19,000	5,00	20	20	28	125	17,72	40	**MS1595**	T30
1949648	**A4SML2525M0520**	5	20,000	5,00	25	25	33	150	22,72	40	**MS1970**	T30
1949650	**A4SML3225P0522**	5	22,000	5,00	32	25	40	170	22,72	42	**MS1970**	T30
2245486	**A4SML2525M0620**	6	20,000	6,00	25	25	33	150	22,30	40	**MS1970**	T30
2503554	**A4SML2020K0620**	6	20,000	6,00	20	20	33	125	17,30	40	**MS1970**	T30
2263090	**A4SML3225P0626**	6	26,000	6,00	32	25	40	170	22,30	45	**MS1970**	T30
2245487	**A4SML2525M0820**	8	20,000	8,00	25	25	34	150	21,40	43	**MS1490**	T45
2263092	**A4SML3225P0826**	8	26,000	8,00	32	25	41	170	21,40	47	**MS1490**	T45
2263174	**A4SML3225P1026**	10	26,000	10,00	32	25	41	170	20,80	47	**MS1490**	T45
3017336	**A4SML2020K0214**	2	14,000	–	20	20	25	125	19,20	30	**MS1160**	T20