

Getting started made **EASY**

beyond™ EVOLUTION™

Your day made **EASY**

Choosing the right tooling can be complicated and time-consuming. Built on simplicity, we have engineered a new tool that makes every machine operator's life EASY.

Unwilling to sacrifice performance or applications, Kennametal introduces Beyond™ Evolution™.

Beyond™ Evolution™ is the new single-side grooving and cut-off tool that also performs multi-directional turning.

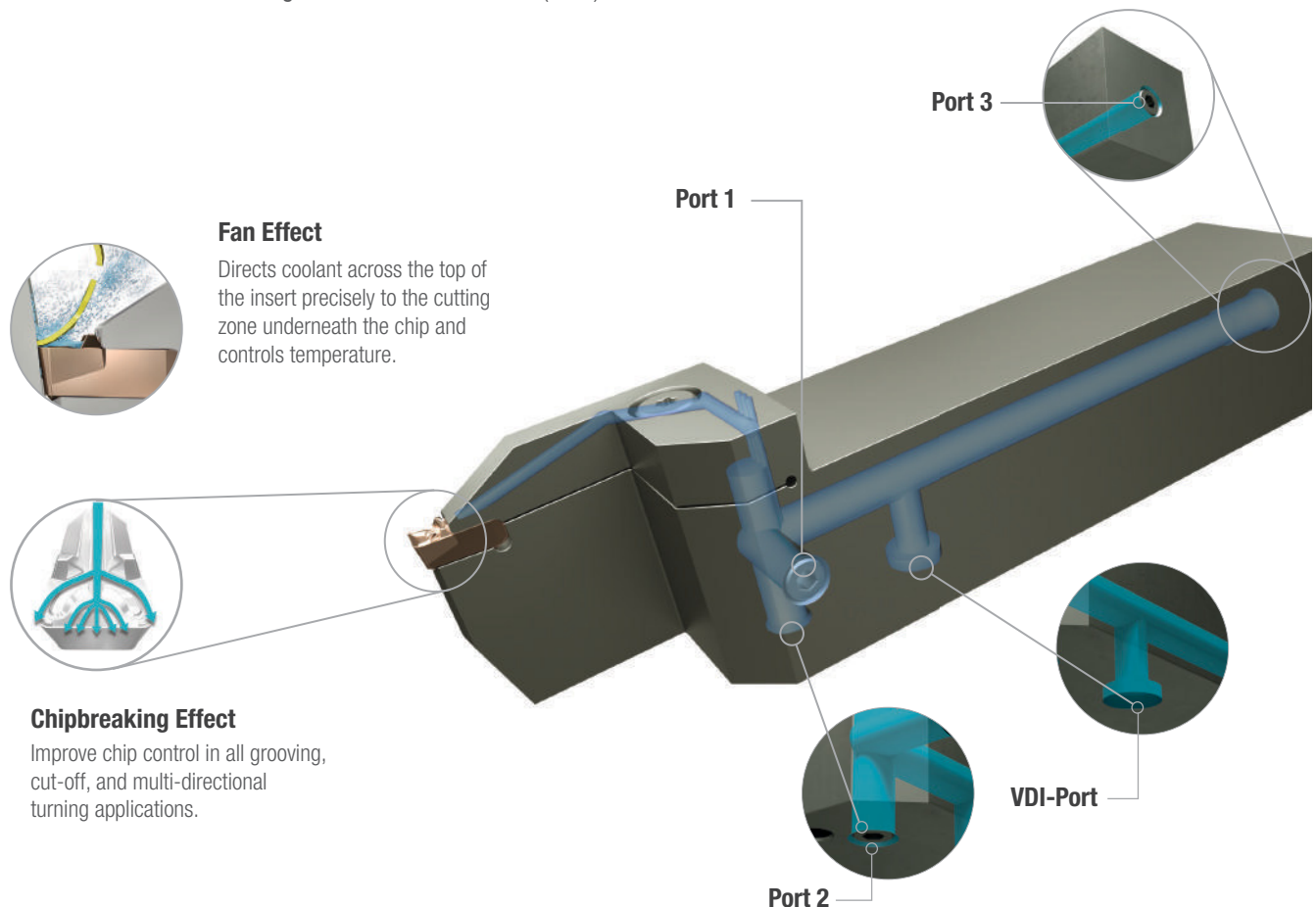


Productivity made **EASY**

Active Coolant Control

If your coolant delivery is typical to the market, you may be applying more heat to the cutting edge than you think. This reduces tool life and increases cycle time.

With Beyond™ Evolution™, you won't have to change your existing equipment. Whether you are using a high-pressure or low-pressure coolant supply, Beyond™ Evolution™, featuring Active Coolant Control, delivers more tool life and higher Metal Removal Rates (MRR).

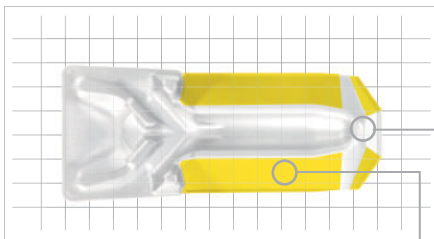


Smooth surface finish made EASY Triple-V Seating

Problem: Traditional single-sided grooving and cut-off systems cannot deliver smooth surface finish due to lack of stability.

Solution: The Beyond™ Evolution™ proprietary new Triple-V Seating feature provides functional stability and minimises vibration.

Three contact surfaces provide unmatched stability:
When combined with GUP and CF chipbreakers, Triple-V Seating provides excellent surface finish.

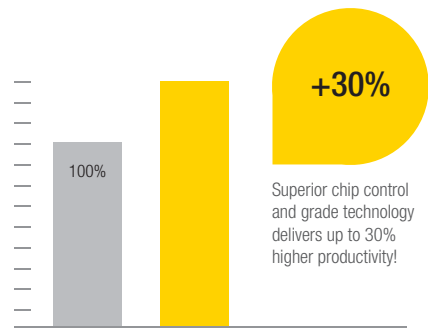


Top and Bottom-V

Precise and secure insert positioning for increased rigidity and dimensional accuracy

V-Back Design

Unsurpassed grooving, cut-off, and multi-directional turning load stability.



Saving money made EASY

Beyond™ Evolution™, featuring Active Coolant Control, Triple-V Seating, and Beyond™ Drive™ grades with Wear Detection Technology, provides longer tool life, maximum stability, and higher Metal Removal Rates (MRR), resulting in up to 30% higher productivity.



You can also use our NOVO app to guide you to the correct choice!

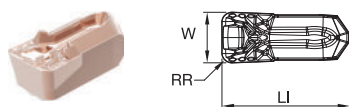
For more information, please visit kenametal.com/novo.

NOVO: The Digital Source for Delivering Smart Machining Solutions



- Positive chipbreaker lowers cutting forces.
- Engineered geometry for chip control in side turning.
- High performance in all materials.

● first choice
○ alternate choice



■ GUP Precision Moulded • Metric

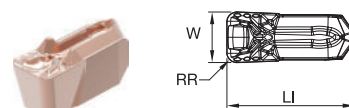
ISO catalogue number	SSC	W	W tol ±	RR	LI	KCU10	KCU25
EG0212M02U02GUP	2	2,125	0,050	0,20	8,97	6013031	5532930
EG0251M02U02GUP	2	2,511	0,050	0,20	8,97	6013032	5532931
EG0312M03U02GUP	3	3,125	0,075	0,20	9,60	6013033	5941056
EG0312M03U04GUP	3	3,125	0,075	0,40	9,60	6013034	5941057
EG0412M04U04GUP	4	4,125	0,075	0,40	10,19	6012944	5941071
EG0412M04U08GUP	4	4,125	0,075	0,80	10,19	-	5941083
EG0512M05U04GUP	5	5,125	0,075	0,40	12,25	6012946	5533212
EG0512M05U08GUP	5	5,125	0,075	0,80	12,25	6012947	5533214
EG0612M06U04GUP	6	6,125	0,075	0,40	14,60	6012948	5533120
EG0612M06U08GUP	6	6,125	0,075	0,80	14,60	6012949	5533124
EG0812M08U08GUP	8	8,125	0,075	0,80	17,47	6012961	5532941
EG1012M10U12GUP	10	10,125	0,075	1,20	20,80	6012963	5533220

SSC = To correspond with the SSC on the toolholder.

P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

- Positive chipbreaker lowers cutting forces.
- Engineered geometry for chip control in side turning.
- High performance in all materials.
- More precise widths and better repeatability.

● first choice
○ alternate choice



■ GUP Precision Ground • Metric

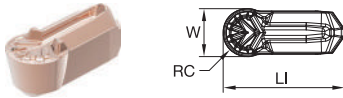
ISO catalogue number	SSC	W	W tol ±	RR	LI	KCU10	KCU25
EG0200M02P02GUP	2	2,000	0,025	0,20	8,80	6012687	5988771
EG0300M03P02GUP	3	3,000	0,025	0,20	9,40	6012688	5941101
EG0300M03P04GUP	3	3,000	0,025	0,40	9,60	6012689	5941102
EG0400M04P04GUP	4	4,000	0,025	0,40	10,10	6012690	5941103
EG0400M04P08GUP	4	4,000	0,025	0,80	10,10	6012701	5941104
EG0500M05P04GUP	5	5,000	0,025	0,40	12,20	6012702	5988774
EG0500M05P08GUP	5	5,000	0,025	0,80	12,20	6012703	5988775
EG0600M06P04GUP	6	6,000	0,025	0,40	14,50	6012704	5988772
EG0600M06P08GUP	6	6,000	0,025	0,80	14,50	6012705	5988773
EG0700M06P08GUP	6	7,000	0,025	0,80	14,50	6012707	-
EG0800M08P08GUP	8	8,000	0,025	0,80	17,40	6012708	5988777
EG0800M08P12GUP	8	8,000	0,025	1,20	17,40	-	5988778
EG1000M10P12GUP	10	10,000	0,025	1,20	20,70	6012711	-

SSC = To correspond with the SSC on the toolholder.

P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	

- First choice in profiling.
- >180° cutting edge.
- High performance in all materials.

- first choice
- alternate choice



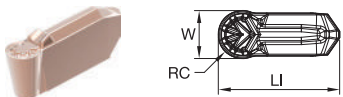
■ GUP Full Radius Precision Moulded • Metric

ISO catalogue number	SSC	W	W tol ±	RC	LI	KCU10	KCU25
ER0212M02U00GUP	2	2,120	0,050	1,060	8,97	6231902	6231905
ER0312M03U00GUP	3	3,125	0,075	1,560	9,60	6013037	5534274
ER0412M04U00GUP	4	4,125	0,075	2,060	10,20	6012970	-
ER0512M05U00GUP	5	5,125	0,075	2,560	12,20	-	5534278
ER0612M06U00GUP	6	6,125	0,075	3,060	14,60	-	5534290
ER0812M08U00GUP	8	8,125	0,075	4,060	17,50	6012973	5534292

SSC = To correspond with the SSC on the toolholder.

- First choice in profiling.
- >180° cutting edge.
- High performance in all materials.
- More precise widths and better repeatability.

- first choice
- alternate choice

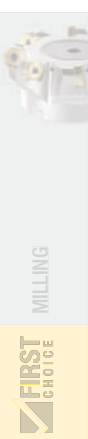


■ GUP Full Radius Precision Ground • Metric

ISO catalogue number	SSC	W	W tol ±	RC	LI	KCU10	KCU25
ER0200M02P00GUP	2	2,000	0,025	1,000	8,91	6231903	6231906
ER0300M03P00GUP	3	3,000	0,025	1,500	9,50	6012720	5988780
ER0400M04P00GUP	4	4,000	0,025	2,000	10,10	6012721	5988781
ER0500M05P00GUP	5	5,000	0,025	2,500	12,20	6012722	5988782
ER0600M06P00GUP	6	6,000	0,025	3,000	14,50	6012723	5988783
ER0800M08P00GUP	8	8,000	0,025	4,000	17,40	6012724	5988785

SSC = To correspond with the SSC on the toolholder.

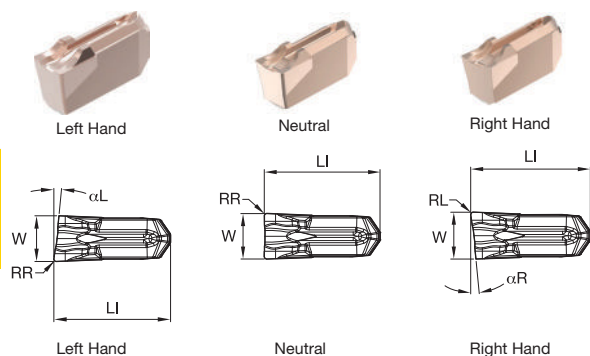
P	●	●
M	●	●
K	○	○
N	●	○
S	●	●
H	○	



- Positive chipbreaker lowers cutting forces.
- First choice for steel.
- Excellent surface finish.

● first choice
○ alternate choice

P	●
M	○
K	○
N	○
S	○
H	



CF Precision Moulded • Metric

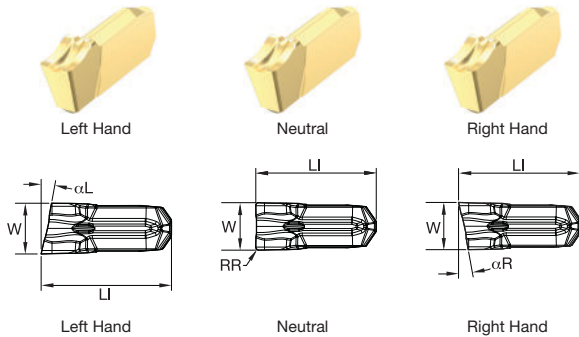
ISO catalogue number	SSC	W	W tol ±	LI	αR	αL	RR	RL	KCU25
EC014M1BL06CF01	1B	1,404	0,050	9,00	—	6	0,15	—	5533516
EC014M1BN00CF01	1B	1,400	0,050	9,00	—	—	0,15	0,15	5533081
EC014M1BR06CF01	1B	1,404	0,050	9,00	6	—	—	0,15	5533517
EC020M02L06CF02	2	2,000	0,050	8,97	—	6	0,20	—	5533150
EC020M02N00CF02	2	2,000	0,050	8,97	—	—	0,20	0,20	5533082
EC020M02R06CF02	2	2,000	0,050	8,97	6	—	—	0,20	5533151
EC030M03L06CF02	3	3,000	0,075	9,60	—	6	0,20	—	5941074
EC030M03N00CF02	3	3,000	0,075	9,60	—	—	0,20	0,20	5941073
EC030M03R06CF02	3	3,000	0,075	9,60	6	—	—	0,20	5941075
EC040M04L06CF02	4	4,000	0,075	10,19	—	6	0,20	—	5941077
EC040M04N00CF02	4	4,000	0,075	10,19	—	—	0,20	0,20	5941076
EC040M04R06CF02	4	4,000	0,075	10,19	6	—	—	0,20	5941078
EC050M05N00CF03	5	5,000	0,075	12,20	—	—	0,30	0,30	5533518

SSC = To correspond with the SSC on the toolholder.

- Positive chipbreaker lowers cutting forces.
- First choice for stainless steel and difficult to cut materials.
- Sharp corners and increased lead angles.
- Increased chip control.

- first choice
- alternate choice

P	Blue	●
M	Yellow	●
K	Red	○
N	Green	○
S	Orange	●
H	Grey	



CF Precision Ground • Metric

catalogue number	SSC	W	W tol ±	LI	αR	αL	RR	KCU25
EC014M1BPL06CF00	1B	1,400	0,025	9,00	—	6	—	6442340
EC014M1BPL12CF00	1B	1,400	0,025	9,00	—	12	—	6442339
EC014M1BPN00CF00	1B	1,400	0,025	9,00	—	—	—	6442471
EC014M1BPR06CF00	1B	1,400	0,025	9,00	6	—	—	6442472
EC014M1BPR12CF00	1B	1,400	0,025	9,00	12	—	—	6442473
EC020M02PL06CF00	2	2,000	0,025	8,95	—	6	—	6442475
EC020M02PL12CF00	2	2,000	0,025	8,95	—	12	—	6442474
EC020M02PN00CF00	2	2,000	0,025	8,94	—	—	—	6442476
EC020M02PN00CF02	2	2,000	0,025	9,04	—	—	0,20	6442488
EC020M02PR06CF00	2	2,000	0,025	8,94	6	—	—	6442477
EC020M02PR12CF00	2	2,000	0,025	8,95	12	—	—	6442479
EC030M03PL06CF00	3	3,000	0,025	9,48	—	6	—	6442480
EC030M03PL12CF00	3	3,000	0,025	9,48	—	12	—	6442337
EC030M03PN00CF00	3	3,000	0,025	9,48	—	—	—	6442481
EC030M03PN00CF02	3	3,000	0,025	9,63	—	—	0,20	6442336
EC030M03PR06CF00	3	3,000	0,025	9,48	6	—	—	6442482
EC030M03PR12CF00	3	3,000	0,025	9,48	12	—	—	6442338
EC040M04PL06CF00	4	4,000	0,025	10,01	—	6	—	6442483
EC040M04PN00CF00	4	4,000	0,025	10,01	—	—	—	6442484
EC040M04PN00CF02	4	4,000	0,025	10,16	—	—	0,20	6442489
EC040M04PR06CF00	4	4,000	0,025	10,01	6	—	—	6442485
EC050M05PN00CF03	5	5,000	0,020	12,22	—	—	0,30	6442502

SSC = To correspond with the SSC on the toolholder.



- Ultimate solution in edge stability.
- Leverage for interrupted cuts or hardened skin.
- First choice for cast iron.

● first choice
○ alternate choice

P	Blue	○
M	Yellow	○
K	Red	●
N	Green	○
S	Orange	○
H	Grey	



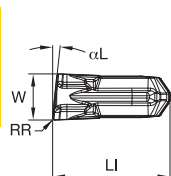
Left Hand



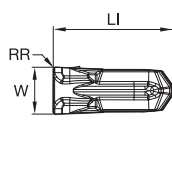
Neutral



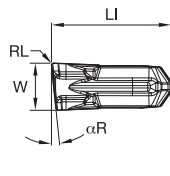
Right Hand



Left Hand



Neutral



Right Hand

CM Precision Moulded • Metric

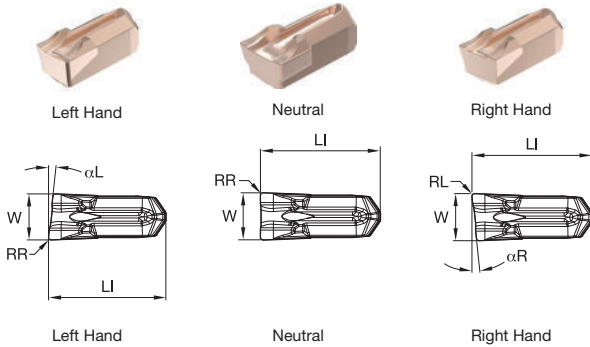
ISO catalogue number	SSC	W	W tol ±	LI	αR	αL	RR	RL	KCU25
EC014M1BL06CM02	1B	1,400	0,050	9,00	—	6	0,20	0,20	5533519
EC014M1BN00CM01	1B	1,400	0,050	9,00	—	—	0,15	0,15	5533089
EC014M1BR06CM02	1B	1,400	0,050	9,02	6	—	—	0,20	5533520
EC020M02N00CM02	2	2,000	0,050	8,98	—	—	0,20	0,20	5533090
EC020M02R06CM02	2	2,000	0,050	9,00	6	—	—	0,20	5533522
EC030M03L06CM02	3	3,000	0,075	9,60	—	6	0,20	—	5941085
EC030M03N00CM02	3	3,000	0,075	9,60	—	—	0,20	0,20	5941079
EC030M03R06CM02	3	3,000	0,075	9,60	6	—	—	0,20	5941086
EC040M04L06CM02	4	4,000	0,075	10,20	—	6	0,20	—	5941087
EC040M04N00CM02	4	4,000	0,075	10,20	—	—	0,20	0,20	5941080
EC040M04R06CM02	4	4,000	0,075	10,20	6	—	—	0,20	5941088
EC050M05N00CM03	5	5,000	0,075	12,20	—	—	0,30	0,30	5533523
EC060M06N00CM03	6	6,000	0,075	14,59	—	—	0,30	0,30	5533093
EC080M08N00CM04	8	8,000	0,075	17,50	—	—	0,40	0,40	5533525

SSC = To correspond with the SSC on the toolholder.

- Strong chip control due to concave edge.
- First choice in steel when additional stability is required.
- Can apply most aggressive feed rates.

● first choice
○ alternate choice

P		●
M		●
K		○
N		○
S		●
H		



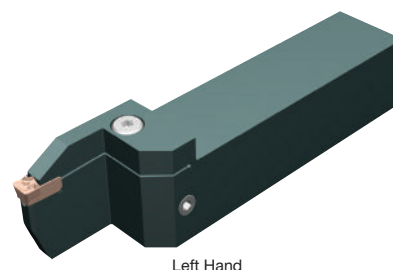
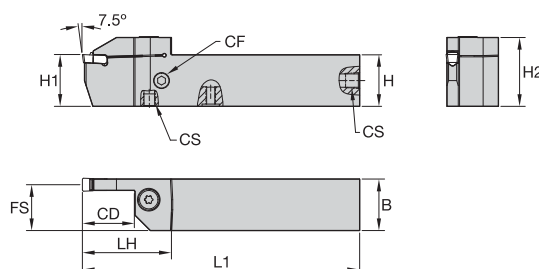
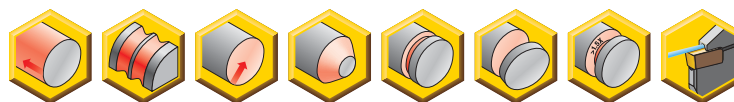
■ CR Precision Moulded • Metric

ISO catalogue number	SSC	W	W tol ±	LI	αR	αL	RR	RL	KCU25
EC020M02L06CR02	2	2,000	0,050	9,00	—	6	0,20	—	5533528
EC020M02N00CR02	2	2,000	0,050	8,98	—	—	0,20	0,20	5533156
EC020M02R06CR02	2	2,000	0,050	9,00	6	—	—	0,20	5533529
EC030M03L06CR02	3	3,000	0,075	9,60	—	6	0,20	—	5941089
EC030M03N00CR02	3	3,000	0,075	9,60	—	—	0,20	0,20	5941081
EC030M03R06CR02	3	3,000	0,075	9,60	6	—	—	0,20	5941090
EC040M04L06CR02	4	4,000	0,075	10,20	—	6	0,20	—	5941091
EC040M04N00CR02	4	4,000	0,075	10,20	—	—	0,20	0,20	5941082
EC040M04R06CR02	4	4,000	0,075	10,20	6	—	—	0,20	5941092
EC050M05N00CR03	5	5,000	0,075	12,25	—	—	0,30	0,30	5533526
EC060M06N00CR03	6	6,000	0,075	14,59	—	—	0,30	0,30	5533096
EC070M06N00CR04	6	7,000	0,075	14,60	—	—	0,40	0,40	5533527

SSC = To correspond with the SSC on the toolholder.



- Offers the greatest stability.
- Straight clearance for unlimited workpiece diameters.
- Through the pocket coolant capable.



■ Integral Straight • Metric

order number	catalogue number	SSC	CD	H1	H	B	H2	L1	FS	LH	CF	CS	Torx clamp screw	Torx clamp screw	Torx
right hand															
5953960	EVSMR2020K0216	2	16	20	20	20	27	125	19	31	—	—	—	MS1160	T20
5953958	EVSMR2525M0216	2	16	25	25	25	32	150	24	31	—	—	—	MS1160	T20
5953959	EVSMR2020K0222	2	22	20	20	20	29	125	19	38	—	—	MS2091	—	25 IP
5953957	EVSMR2525M0226	2	26	25	25	25	34	150	24	42	—	—	MS2091	—	25 IP
5939452	EVSMR2020K0316C	3	16	20	20	20	29	125	19	37	M8X1	M8X1	MS1595	—	T30
5939448	EVSMR2525M0316C	3	16	25	25	25	34	150	24	37	G1/8-28	G1/8-28	MS1595	—	T30
5939451	EVSMR2020K0322C	3	22	20	20	20	30	125	19	43	M8X1	M8X1	MS1595	—	T30
5939447	EVSMR2525M0326C	3	26	25	25	25	35	150	24	47	G1/8	G1/8	MS1595	—	T30
5939450	EVSMR2020K0416C	4	16	20	20	20	29	125	18	37	M8X1	M8X1	MS1595	—	T30
5939446	EVSMR2525M0416C	4	16	25	25	25	34	150	23	37	G1/8	G1/8	MS1595	—	T30
5939449	EVSMR2020K0422C	4	22	20	20	20	30	125	18	43	M8X1	M8X1	MS1595	—	T30
5939445	EVSMR2525M0426C	4	26	25	25	25	35	150	23	47	G1/8	G1/8	MS1595	—	T30
5939444	EVSMR3232P0426C	4	26	32	32	32	42	170	30	47	G1/8	G1/8	MS1970	—	T30
5939443	EVSMR3232P0432C	4	32	32	32	32	42	170	30	53	G1/8	G1/8	MS1970	—	T30
5954258	EVSMR2020K0516C	5	16	20	20	20	29	125	18	37	M8X1	M8X1	MS1595	—	T30
5954254	EVSMR2525M0516C	5	16	25	25	25	34	150	23	37	G1/8-28	G1/8-28	MS1970	—	T30
5954253	EVSMR2525M0526C	5	26	25	25	25	35	150	23	47	G1/8-28	G1/8-28	MS1970	—	T30
5954249	EVSMR3232P0526C	5	26	32	32	32	42	170	30	47	G1/8-28	G1/8-28	MS1970	—	T30
5954248	EVSMR3232P0532C	5	32	32	32	32	42	170	30	53	G1/8-28	G1/8-28	MS1970	—	T30
5954256	EVSMR2020K0616C	6	16	20	20	20	29	125	17	37	M8X1	M8X1	MS1595	—	T30
5954252	EVSMR2525M0616C	6	16	25	25	25	34	150	25	37	G1/8-28	G1/8-28	MS1970	—	T30
5954251	EVSMR2525M0626C	6	26	25	25	25	34	150	25	47	G1/8-28	G1/8-28	MS1970	—	T30
5954247	EVSMR3232P0626C	6	26	32	32	32	42	170	32	47	G1/8-28	G1/8-28	MS1970	—	T30
5954246	EVSMR3232P0632C	6	32	32	32	32	43	170	29	55	G1/8-28	G1/8-28	MS1490	—	T45
5954250	EVSMR2525M0826C	8	26	25	25	25	35	150	21	49	G1/8-28	G1/8-28	MS1490	—	T45
5954244	EVSMR3232P0832C	8	32	32	32	32	43	170	28	55	G1/8-28	G1/8-28	MS1490	—	T45

(continued)

(Integral Straight • Metric — continued)

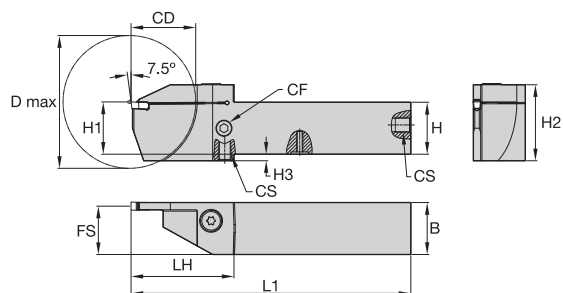
order number	catalogue number	SSC	CD	H1	H	B	H2	L1	FS	LH	CF	CS	 Torx clamp screw	 Torx clamp screw	Torx
left hand															
5953956	EVSMML2020K0216	2	16	20	20	20	27	125	19	31	—	—	—	MS1160	T20
5953954	EVSMML2525M0216	2	16	25	25	25	32	150	24	31	—	—	—	MS1160	T20
5953955	EVSMML2020K0222	2	22	20	20	20	29	125	19	38	—	—	MS2091	—	25 IP
5953953	EVSMML2525M0226	2	26	25	25	25	34	150	24	42	—	—	MS2091	—	25 IP
5939442	EVSMML2020K0316C	3	16	20	20	20	29	125	19	37	M8X1	M8X1	MS1595	—	T30
5939438	EVSMML2525M0316C	3	16	25	25	25	34	150	24	37	G1/8-28	G1/8-28	MS1595	—	T30
5939441	EVSMML2020K0322C	3	22	20	20	20	30	125	19	43	M8X1	M8X1	MS1595	—	T30
5939437	EVSMML2525M0326C	3	26	25	25	25	35	150	24	47	G1/8-28	G1/8-28	MS1595	—	T30
5939440	EVSMML2020K0416C	4	16	20	20	20	29	125	18	37	M8X1	M8X1	MS1595	—	T30
5939436	EVSMML2525M0416C	4	16	25	25	25	34	150	23	37	G1/8	G1/8	MS1595	—	T30
5939439	EVSMML2020K0422C	4	22	20	20	20	30	125	18	43	M8X1	M8X1	MS1595	—	T30
5939435	EVSMML2525M0426C	4	26	25	25	25	35	150	23	47	G1/8	G1/8	MS1595	—	T30
5939433	EVSMML3232P0426C	4	26	32	32	32	42	170	30	47	G1/8	G1/8	MS1970	—	T30
5939432	EVSMML3232P0432C	4	32	32	32	32	42	170	30	53	G1/8	G1/8	MS1970	—	T30
5954235	EVSMML2525M0516C	5	16	25	25	25	34	150	23	37	G1/8-28	G1/8-28	MS1970	—	T30
5954234	EVSMML2525M0526C	5	26	25	25	25	35	150	23	47	G1/8-28	G1/8-28	MS1970	—	T30
5954220	EVSMML3232P0526C	5	26	32	32	32	42	170	30	47	G1/8-28	G1/8-28	MS1970	—	T30
5954219	EVSMML3232P0532C	5	32	32	32	32	42	170	30	53	G1/8-28	G1/8-28	MS1970	—	T30
5954218	EVSMML3232P0626C	6	26	32	32	32	42	170	29	47	G1/8-28	G1/8-28	MS1970	—	T30
5954217	EVSMML3232P0632C	6	32	32	32	32	43	170	29	55	G1/8-28	G1/8-28	MS1490	—	T45
5954231	EVSMML2525M0826C	8	26	25	25	25	35	150	21	49	G1/8-28	G1/8-28	MS1490	—	T45
5954214	EVSMML3232P1032C	10	32	32	32	32	43	170	28	55	G1/8-28	G1/8-28	MS1490	—	T45

SSC = To correspond with the SSC on the insert.

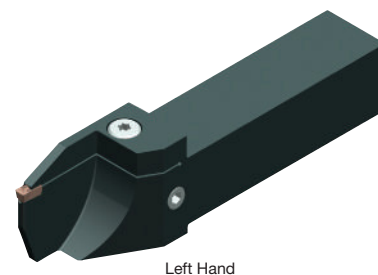
screw catalogue number	screw order number	torque		thread	socket	wrench catalogue number	wrench order number
MS1160	1099645	7	62	M5	T20	KT20	1022703
MS1162	1127019	9	80	M6	T25	KT25	1022725
MS1163	1124104	18	159	M8	T30	KT30L	3782185
MS1273	1020977	4	35	M4	T15	KT15	1022701
MS1490	2263299	17	151	M8	T45	KT45	1018227
MS1595	1094300	12	106	M6	T30	KT30	1099676
MS1970	1106668	12	106	M6	T30	KT30	1099676
MS2002	1621087	9	80	M6	T25	KT25	1022725
MS2091	1931147	9	80	M5	25IP	K25IP	2050113
191.916	1132523	5	44	M4	T15	KT15	1022701
MS1944	1732924	4	35	M4	T25	KT25	1022725



- Through the pocket coolant capable.
- Reinforced for added support in specific workpiece diameters.



CD = Maximum cut-off depth for solid bars.
D max = Maximum bar diameter for deep grooving or cut-off of tubes.



■ Integral Reinforced Straight Top Clamp • Metric

order number	catalogue number	SSC	CD	D max	H1	H	B	H2	H3	L1	FS	LH	CF	CS	Torx clamp screw	Torx clamp screw	Torx
right hand																	
6179757	EVSCCTR1212K1B16	1B	16	42	12	12	12	23	4	125	11	31	—	—	—	MS1160	T20
6179759	EVSCCTR1212K0216	2	16	42	12	12	12	23	4	125	11	31	—	—	—	MS1160	T20
5980139	EVSCCTR1616K0216	2	16	42	16	16	16	23	—	125	15	31	—	—	—	MS1160	T20
5980762	EVSCCTR2020K0216	2	16	42	20	20	20	27	—	125	19	31	—	—	—	MS1160	T20
5980767	EVSCCTR2525M0216	2	16	42	25	25	25	32	—	150	24	31	—	—	—	MS1160	T20
5980768	EVSCCTR2525M0226	2	26	62	25	25	25	34	—	150	24	42	—	—	MS2091	—	25 IP
6179755	EVSCCTR1212K0316C	3	16	52	12	12	12	23	4	125	11	33	M8X1	M8X1	MS1944	—	T25
5980140	EVSCCTR1616K0316C	3	16	52	16	16	16	24	—	125	15	35	M8X1	M8X1	MS2091	—	25 IP
5980763	EVSCCTR2020K0316C	3	16	52	20	20	20	29	—	125	19	37	M8X1	M8X1	MS1595	—	T30
5980138	EVSCCTR2525M0316C	3	16	62	25	25	25	34	—	150	24	37	G1/8-28	G1/8-28	MS1595	—	T30
5980764	EVSCCTR2020K0326C	3	26	62	20	20	20	34	4	125	19	47	M8X1	M8X1	MS1595	—	T30
5980769	EVSCCTR2525M0326C	3	26	62	25	25	25	35	—	150	24	47	G1/8-28	G1/8-28	MS1595	—	T30
5980761	EVSCCTR1616K0416C	4	16	52	16	16	16	24	—	125	14	35	M8X1	M8X1	MS2091	—	25 IP
5980765	EVSCCTR2020K0416C	4	16	52	20	20	20	29	—	125	18	37	M8X1	M8X1	MS1595	—	T30
5980766	EVSCCTR2020K0426C	4	26	62	20	20	20	34	4	125	18	47	M8X1	M8X1	MS1595	—	T30
5980770	EVSCCTR2525M0426C	4	26	62	25	25	25	35	—	150	23	47	G1/8-28	G1/8-28	MS1595	—	T30
5980771	EVSCCTR2525M0432C	4	32	64	25	25	25	39	4	150	23	53	G1/8-28	G1/8-28	MS1595	—	T30
5980772	EVSCCTR2525M0526C	5	26	62	25	25	25	35	—	150	23	47	G1/8-28	G1/8-28	MS1970	—	T30
5980775	EVSCCTR3232P0540C	5	40	82	32	32	32	47	4	170	30	63	G1/8-28	G1/8-28	MS1490	—	T45

(continued)

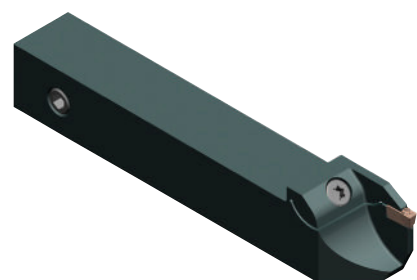
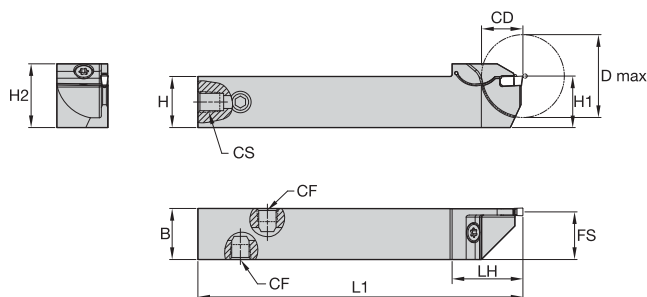
(Integral Reinforced Straight Top Clamp • Metric — continued)

order number	catalogue number	SSC	CD	D max	H1	H	B	H2	H3	L1	FS	LH	CF	CS	 Torx clamp screw	 Torx clamp screw	Torx
left hand																	
6179760	EVSCTL1212K1B16	1B	16	42	12	12	12	23	4	125	11	31	—	—	—	MS1160	T20
6179762	EVSCTL1212K0216	2	16	42	12	12	12	23	4	125	11	31	—	—	—	MS1160	T20
5980777	EVSCTL1616K0216	2	16	42	16	16	16	23	—	125	15	31	—	—	—	MS1160	T20
5980780	EVSCTL2020K0216	2	16	42	20	20	20	27	—	125	19	31	—	—	—	MS1160	T20
5980806	EVSCTL2525M0226	2	26	62	25	25	25	34	—	150	24	42	—	—	MS2091	—	25 IP
6179756	EVSCTL1212K0316C	3	16	52	12	12	12	23	4	125	11	33	M8X1	M8X1	MS1944	—	T25
5980778	EVSCTL1616K0316C	3	16	52	16	16	16	24	—	125	15	35	M8X1	M8X1	MS2091	—	25 IP
5980801	EVSCTL2020K0316C	3	16	52	20	20	20	29	—	125	19	37	M8X1	M8X1	MS1595	—	T30
5980776	EVSCTL2525M0316C	3	16	62	25	25	25	34	—	150	24	37	G1/8-28	G1/8-28	MS1595	—	T30
5980802	EVSCTL2020K0326C	3	26	62	20	20	20	34	4	125	19	47	M8X1	M8X1	MS1595	—	T30
5980807	EVSCTL2525M0326C	3	26	62	25	25	25	35	—	150	24	47	G1/8-28	G1/8-28	MS1595	—	T30
5980803	EVSCTL2020K0416C	4	16	52	20	20	20	29	—	125	18	37	M8X1	M8X1	MS1595	—	T30
5980804	EVSCTL2020K0426C	4	26	62	20	20	20	34	4	125	18	47	M8X1	M8X1	MS1595	—	T30
5980808	EVSCTL2525M0426C	4	26	62	25	25	25	35	—	150	23	47	G1/8-28	G1/8-28	MS1595	—	T30
5980809	EVSCTL2525M0432C	4	32	64	25	25	25	39	4	150	23	53	G1/8-28	G1/8-28	MS1595	—	T30
5980810	EVSCTL2525M0526C	5	26	62	25	25	25	35	—	150	23	47	G1/8-28	G1/8-28	MS1970	—	T30

NOTE: Through the pocket coolant available in seat sizes 3 and higher.
SSC = To correspond with the SSC on the insert.

screw catalogue number	screw order number	torque		thread	socket	wrench catalogue number	wrench order number
		Nm	in. lbs.				
MS1160	1099645	7	62	M5	T20	KT20	1022703
MS1162	1127019	9	80	M6	T25	KT25	1022725
MS1163	1124104	18	159	M8	T30	KT30L	3782185
MS1273	1020977	4	35	M4	T15	KT15	1022701
MS1490	2263299	17	151	M8	T45	KT45	1018227
MS1595	1094300	12	106	M6	T30	KT30	1099676
MS1970	1106668	12	106	M6	T30	KT30	1099676
MS2002	1621087	9	80	M6	T25	KT25	1022725
MS2091	1931147	9	80	M5	25IP	K25IP	2050113
191.916	1132523	5	44	M4	T15	KT15	1022701
MS1944	1732924	4	35	M4	T25	KT25	1022725





Right Hand

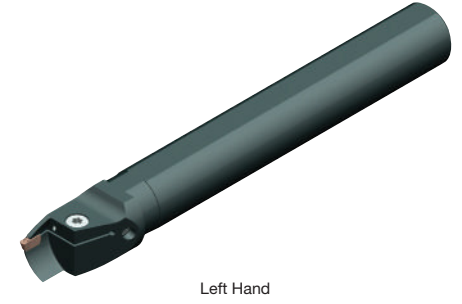
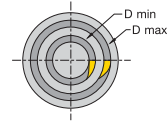
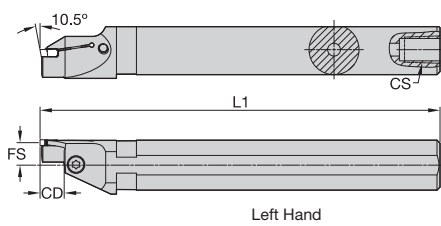
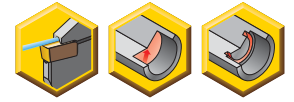
CD = Maximum cut-off depth for solid bars.
D max = Maximum bar diameter for deep grooving or cut-off of tubes.

■ Integral Reinforced Front Clamp • Metric

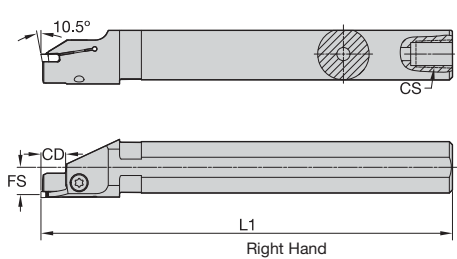
order number	catalogue number	SSC	CD	D max	H1	H	B	H2	L1	FS	LH	CF	CS	Torx clamp screw	Torx
right hand															
6179766	EVSCFR1212K1B10	1B	10	20	12	12	12	16	125	11	21	—	—	191.916	T15
6179767	EVSCFR1212K1B13	1B	13	26	12	12	12	16	125	11	24	—	—	191.916	T15
6179774	EVSCFR1616K1B16	1B	16	32	16	16	16	21	125	15	27	—	—	MS1160	T20
6179778	EVSCFR2020K1B16	1B	16	32	20	20	20	25	125	19	27	—	—	MS1160	T20
6179770	EVSCFR1212K0210	2	10	20	12	12	12	16	125	11	21	—	—	191.916	T15
6179771	EVSCFR1212K0216	2	16	32	12	12	12	16	125	11	27	—	—	191.916	T15
6179776	EVSCFR1616K0216	2	16	32	16	16	16	21	125	15	27	—	—	MS1160	T20
6179780	EVSCFR2020K0216	2	16	32	20	20	20	25	125	19	27	—	—	MS1160	T20
6179772	EVSCFR1212K0310C	3	10	20	12	12	12	17	125	11	22	M8X1	M8X1	191.916	T15
6179773	EVSCFR1212K0316C	3	16	32	12	12	12	17	125	11	28	M8X1	M8X1	191.916	T15
6179777	EVSCFR1616K0316C	3	16	32	16	16	16	21	125	15	28	M8X1	M8X1	MS1160	T20
6179781	EVSCFR2020K0316C	3	16	32	20	20	20	25	125	19	28	M8X1	M8X1	MS1160	T20
left hand															
6179922	EVSCFL1212K1B10	1B	10	20	12	12	12	16	125	11	21	—	—	191.916	T15
6179926	EVSCFL1212K0210	2	10	20	12	12	12	16	125	11	21	—	—	191.916	T15
6179927	EVSCFL1212K0216	2	16	32	12	12	12	16	125	11	27	—	—	191.916	T15
6179932	EVSCFL1616K0216	2	16	32	16	16	16	21	125	15	27	—	—	MS1160	T20
6179936	EVSCFL2020K0216	2	16	32	20	20	20	25	125	19	27	—	—	MS1160	T20
6179928	EVSCFL1212K0310C	3	10	20	12	12	12	17	125	11	22	M8X1	M8X1	191.916	T15
6179933	EVSCFL1616K0316C	3	16	32	16	16	16	21	125	15	28	M8X1	M8X1	MS1160	T20

NOTE: Through the pocket coolant available in seat sizes 3 and higher.
SSC = To correspond with the SSC on the insert.

screw catalogue number	screw order number	torque		thread	socket	wrench catalogue number	wrench order number
		Nm	in. lbs.				
MS1160	1099645	7	62	M5	T20	KT20	1022703
MS1162	1127019	9	80	M6	T25	KT25	1022725
MS1163	1124104	18	159	M8	T30	KT30L	3782185
MS1273	1020977	4	35	M4	T15	KT15	1022701
MS1490	2263299	17	151	M8	T45	KT45	1018227
MS1595	1094300	12	106	M6	T30	KT30	1099676
MS1970	1106668	12	106	M6	T30	KT30	1099676
MS2002	1621087	9	80	M6	T25	KT25	1022725
MS2091	1931147	9	80	M5	25IP	K25IP	2050113
191.916	1132523	5	44	M4	T15	KT15	1022701
MS1944	1732924	4	35	M4	T25	KT25	1022725



Left Hand



Right Hand

Steel Face Grooving Boring Bar • Metric

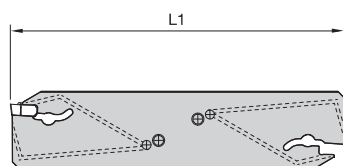
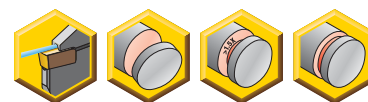
order number	catalogue number	SSC	CD	D	D min	D max	L1	FS	CS	Torx clamp screw	Torx
right hand											
6116521	A25REVSAR0212M026030	2	12,00	25	26	30	200	12	1/4-18 NPT	MS1160	T20
6116522	A25REVSAR0312M030035	3	12,00	25	30	35	200	11	1/4-18 NPT	MS1162	T25
left hand											
6116528	A25REVSAL0312M030035	3	12,00	25	30	35	200	11	1/4-18 NPT	MS1162	T25

SSC = To correspond with the SSC on the insert.

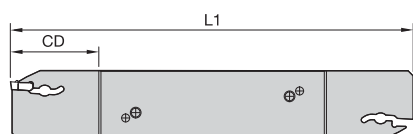
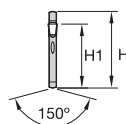
screw catalogue number	screw order number	torque		thread	socket	wrench catalogue number	wrench order number
		Nm	in. lbs.				
MS1160	1099645	7	62	M5	T20	KT20	1022703
MS1162	1127019	9	80	M6	T25	KT25	1022725
MS1163	1124104	18	159	M8	T30	KT30L	3782185
MS1273	1020977	4	35	M4	T15	KT15	1022701
MS1490	2263299	17	151	M8	T45	KT45	1018227
MS1595	1094300	12	106	M6	T30	KT30	1099676
MS1970	1106668	12	106	M6	T30	KT30	1099676
MS2002	1621087	9	80	M6	T25	KT25	1022725
MS2091	1931147	9	80	M5	25IP	K25IP	2050113
191.916	1132523	5	44	M4	T15	KT15	1022701
MS1944	1732924	4	35	M4	T25	KT25	1022725



- Universal pocket for holding all insert geometries.
- Through coolant active control technology.
- For even higher productivity in cut-off and deep-grooving applications.
- Assembly wrench supplied with blade.



Straight



Reinforced

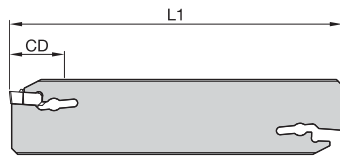
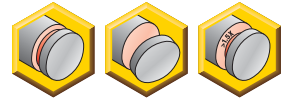


■ Beyond Evolution • Cut-Off Blade • Double Ended • Through Coolant

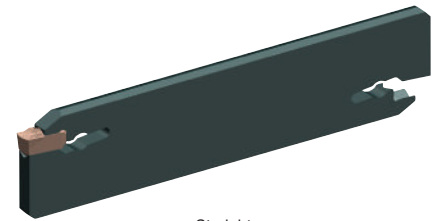
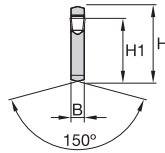
order number	catalogue number	SSC	H	W1	H1	L1	B	CD	assembly wrench
neutral hand									
6513449	EVBSN26M0233C	2	26	1,65	21,5	150	2	33	SCW5E
6513450	EVBSN32M0233C	2	32	1,65	25,1	150	2	33	SCW5E
6513521	EVBSN26J0340C	3	26	—	21,5	110	2	40	SCW5E
6513522	EVBSN26M0340C	3	26	—	21,5	150	2	40	SCW5E
6513523	EVBSN32M0350C	3	32	—	25,1	150	2	50	SCW5E
6513524	EVBSN26J0440C	4	26	—	21,5	110	3	40	SCW5E
6513525	EVBSN26M0440C	4	26	—	21,5	150	3	40	SCW5E
6513526	EVBSN32M0450C	4	32	—	25,1	150	3	50	SCW5E
6513527	EVBSN32M0560C	5	32	—	25,1	150	4	60	SCW5E
6513529	EVBSN32M0660C	6	32	—	25,1	150	5	60	SCW8E

SSC = To correspond with the SSC on the insert.

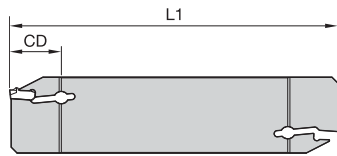
- For deep groove and cut-off applications.
- Universal pocket for holding all insert geometries.
- Assembly wrench supplied with blade.



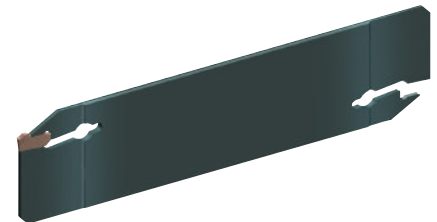
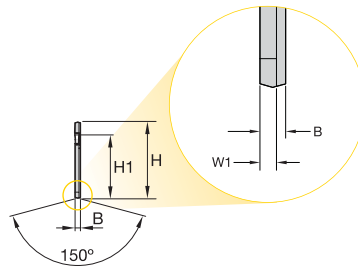
Straight



Straight



Reinforced



Reinforced

Double-Ended Cut-Off Blade

order number	catalogue number	SSC	H	W1	H1	L1	B	CD	assembly wrench
neutral hand									
5941706	EVBSN19G1B14	1B	19	1,15	15,5	90	2	14	SCW5E
5941708	EVBSN26J1B15	1B	26	1,15	21,5	110	2	15	SCW5E
5955392	EVBSN26J1F17	1F	26	1,30	21,5	110	2	17	SCW5E
5941707	EVBSN19G0220	2	19	—	15,5	90	2	—	SCW5E
5941709	EVBSN26J0230	2	26	—	21,5	110	2	—	SCW5E
5941710	EVBSN26M0230	2	26	—	21,5	150	2	—	SCW5E
5941724	EVBSN32M0250	2	32	—	25,1	150	2	—	SCW5E
5941721	EVBSN26J0340	3	26	—	21,5	110	2	—	SCW5E
5941722	EVBSN26M0340	3	26	—	21,5	150	2	—	SCW5E
5941725	EVBSN32M0350	3	32	—	25,1	150	2	—	SCW5E
5941723	EVBSN26J0440	4	26	—	21,5	110	3	—	SCW5E
5941726	EVBSN32M0450	4	32	—	25,1	150	3	—	SCW5E
5977635	EVBSN26J0540	5	26	—	21,5	110	4	—	SCW5E
5977637	EVBSN32M0560	5	32	—	25,1	150	4	—	SCW5E
5977638	EVBSN32M0660	6	32	—	25,1	150	5	—	SCW8E
5977640	EVBSN52X06120	6	53	—	45,3	260	5	—	SCW8E
5977639	EVBSN32M0860	8	32	—	25,1	150	7	—	SCW8E
5977721	EVBSN52X08120	8	53	—	45,3	260	7	—	SCW8E

SSC = To correspond with the SSC on the insert.

Select the geometry

- first choice
- alternate choice

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

Chip Control	Description	Insert Geometry	Seat Size (SSC)	Corner Radius	Starting Conditions	Plunge Feed Rates inch/rev (mm/rev)					
				in (mm)	in (mm)	.0020 (0,05)	.0040 (0,10)	.0060 (0,15)	.0080 (0,20)	.0100 (0,25)	.0120 (0,30)
-GUP	Positive rake angle for lower cutting forces.		1F	.008 (0,2)	.0024 (0,06)	◊					
			2	.008 (0,2)	.0031 (0,08)	◊	◊				
			3	.008 (0,2)	.0035 (0,09)		◊	◊			
			4	.016 (0,4)	.0043 (0,11)		◊	◊			
				.016 (0,4)	.0047 (0,12)		◊	◊			
				.031 (0,8)	.0059 (0,15)			◊	◊		

Pictorial View of Insert

Corner Radius

Recommended Starting Feed Rate

Plunge Feed Rates

Seat Size

Recommended Feed Rate Range

Primary Workpiece Material Group

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

- first choice
- alternate choice

Chip Control Geometry Designation

Maximum Feed Rate Values

	Material Group	Feed Factor
Data above is for P and K material groups. Maximum feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.	M	.8
	N	1.2
	S	.8
	H	.5

Plunge feed rates

● first choice

○ alternate choice

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

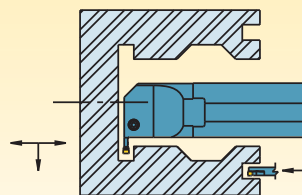
Chip Control	Description	Insert Geometry	Seat Size (SSC)	Corner Radius	Starting Conditions	Plunge Feed Rates mm/rev						
						0,05	0,10	0,15	0,20	0,25	0,30	0,35
-GUP	Positive rake angle for lower cutting forces.		1F	0,2	0,06	●						
			2	0,2	0,08	●	●					
			3	0,2	0,09	●	●	●				
				0,4	0,11		●	●	●			
			4	0,4	0,12		●	●	●	●		
				0,8	0,15		●	●	●	●	●	
			5	0,4	0,15		●	●	●	●	●	
				0,8	0,16		●	●	●	●	●	
			6	0,4	0,16		●	●	●	●	●	
				0,8	0,18		●	●	●	●	●	
-GUN	Stable negative cutting edge allowing for more aggressive applications.		8	1,2	0,20		●	●	●	●	●	
				1,2	0,22		●	●	●	●	●	
			10	1,2	0,24		●	●	●	●	●	
			1F	0,2	0,06	●						
			2	0,2	0,08	●	●					
			3	0,2	0,09	●	●	●				
				0,4	0,11		●	●	●			
			4	0,4	0,12		●	●	●	●		
				0,8	0,15		●	●	●	●	●	
			5	0,4	0,15		●	●	●	●	●	
				0,8	0,16		●	●	●	●	●	
			6	0,4	0,16		●	●	●	●	●	
				0,8	0,18		●	●	●	●	●	
			8	1,2	0,20		●	●	●	●	●	
				1,2	0,22		●	●	●	●	●	
			10	1,2	0,24		●	●	●	●	●	

Maximum Feed Rate Values

Data above is for P and K material groups. Maximum feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.	Material Group	Feed Factor
	M	.8
	N	1.2
	S	.8
	H	.5

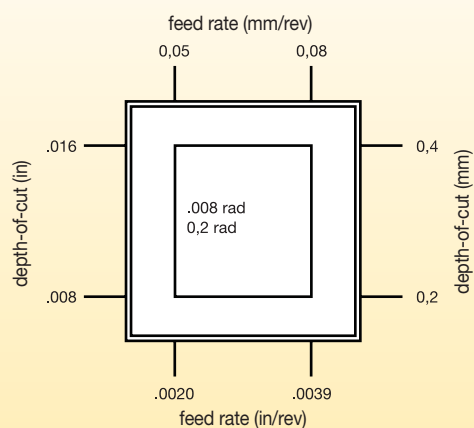
I.D. and Face Grooving

For I.D. and face grooving applications, reduce feed rate by 20%.

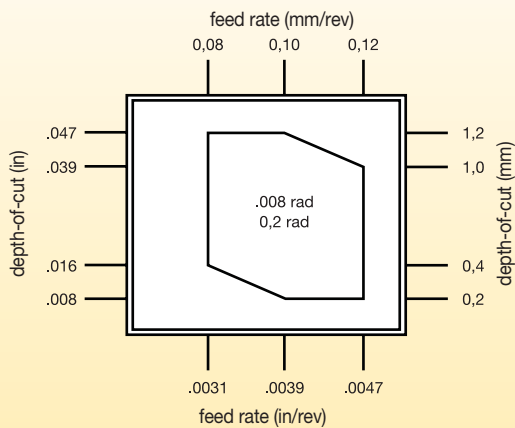


Turn and profile feed rates

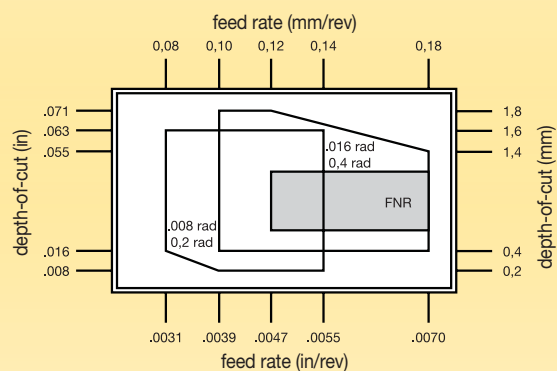
Seat Size 1F



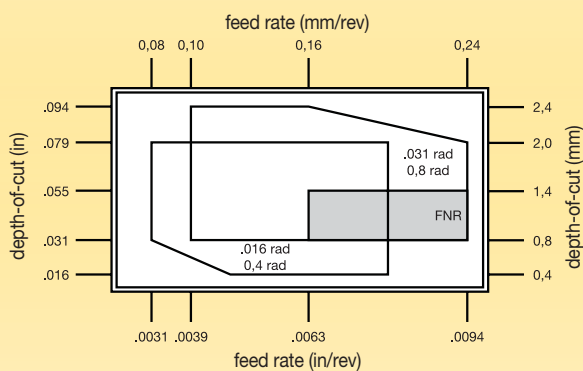
Seat Size 2



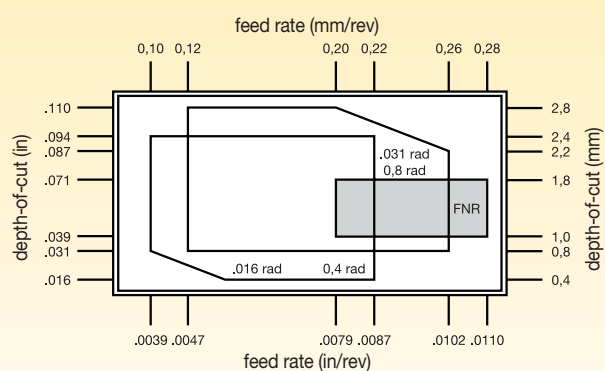
Seat Size 3



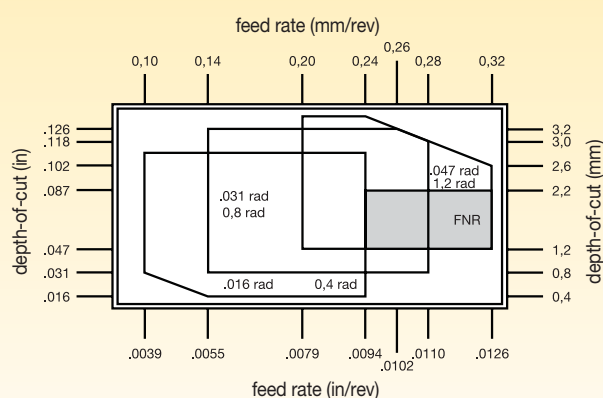
Seat Size 4



Seat Size 5



Seat Size 6

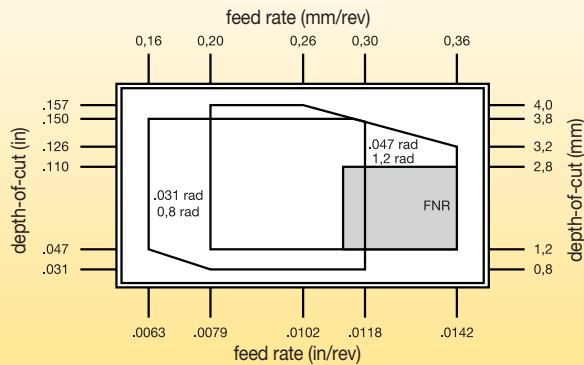


* FNR = Full Nose Radius

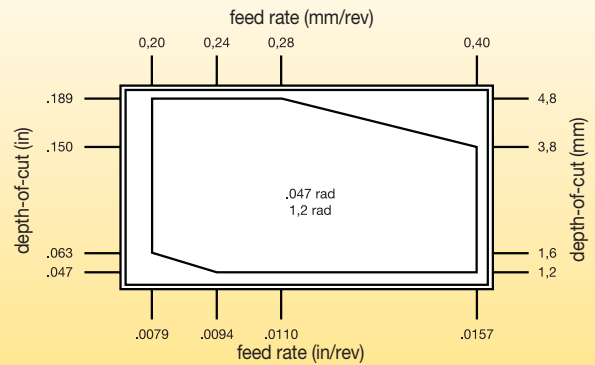
(continued)

(Turn and profile feed rates — continued)

Seat Size 8



Seat Size 10



Cut-Off Feed Rates

■ Plunge feed rates

- first choice
- alternate choice

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

Geometry	Description	Insert Geometry	Seat Size (SSC)	Starting Conditions	Cut-Off Feed Rates mm/rev								
				mm	0,05	0,10	0,15	0,20	0,25	0,30	0,35	0,40	
-CL	Aggressive geometry for hard to break chips.		1B	0,06		◆							
			2	0,07		◆							
			3	0,08		◆	◆						
			4	0,09		◆	◆	◆					
-CF	Positive geometry for reduced cutting forces.		1B	0,06		◆							
			2	0,07		◆							
			3	0,09		◆	◆						
			4	0,11		◆	◆	◆					
			5	0,13		◆	◆	◆	◆				
-CM	Stable cutting edge for aggressive feed rates. Primarily in cast iron.		1B	0,06		◆							
			2	0,07		◆							
			3	0,09		◆	◆						
			4	0,11		◆	◆	◆					
			5	0,14		◆	◆	◆	◆				
			6	0,16		◆	◆	◆	◆	◆			
			8	0,14		◆	◆	◆	◆	◆			
-CR	Most stable cutting edge for steel.		2	0,10		◆							
			3	0,14		◆	◆						
			4	0,16		◆	◆	◆					
			5	0,19		◆	◆	◆	◆				
			6	0,21		◆	◆	◆	◆	◆			
			8	0,23		◆	◆	◆	◆	◆	◆		

NOTE: For cut-off inserts with a lead angle, maximum feed rate should be reduced by up to 40%.

Maximum Feed Rate Values

Data above is for P and K material groups. Maximum feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.	Material Group	Feed Factor
	M	.8
	N	1.2
	S	.8
	H	.5



■ Recommended Starting Speeds [m/min]

Material Group		K313			KCU10			KCU25			KCM35B			KCP10B			KCP25B			KCK20B		
P	0-1	-	-	-	140	280	350	110	225	270	90	180	213	185	400	450	145	290	365	200	440	490
	2	-	-	-	140	200	300	110	160	260	90	130	155	185	270	350	145	200	305	200	300	380
	3	-	-	-	140	155	245	110	125	235	90	100	155	170	190	260	140	155	245	600	200	280
	4	-	-	-	75	110	170	60	90	160	50	70	110	90	145	200	75	110	180	100	160	220
	5	-	-	-	120	200	260	100	160	210	80	130	165	150	220	305	120	200	270	165	240	330
	6	-	-	-	110	150	230	85	120	185	70	100	145	120	180	275	110	150	230	130	190	300
M	1	60	90	120	140	210	280	90	170	245	75	120	135	-	-	-	-	-	-	-	-	-
	2	45	75	110	120	200	245	90	150	245	75	110	135	-	-	-	-	-	-	-	-	-
	3	35	65	100	120	180	245	90	140	210	75	90	135	-	-	-	-	-	-	-	-	-
K	1	30	75	120	120	180	245	100	145	225	-	-	-	170	245	440	140	200	360	210	305	550
	2	25	70	110	90	150	240	70	120	170	-	-	-	120	195	340	100	160	280	150	245	430
	3	20	60	90	60	110	150	50	85	120	-	-	-	120	170	270	100	140	220	150	210	335
N	1-2	150	370	610	150	550	975	120	440	780	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	120	275	430	120	365	700	100	290	490	-	-	-	-	-	-	-	-	-	-	-	-
	5	45	90	150	90	170	245	70	135	195	-	-	-	-	-	-	-	-	-	-	-	-
	6	40	75	150	120	210	305	100	170	245	-	-	-	-	-	-	-	-	-	-	-	-
S	1	8	30	75	15	55	135	8	40	60	8	35	60	-	-	-	-	-	-	-	-	-
	2	8	35	75	15	60	135	8	30	75	8	30	60	-	-	-	-	-	-	-	-	-
	3	8	40	75	15	70	150	15	40	75	15	35	60	-	-	-	-	-	-	-	-	-
	4	8	45	75	15	70	170	8	50	110	15	45	90	-	-	-	-	-	-	-	-	-
H	1	-	-	-	30	45	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	15	30	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE: FIRST choice starting speeds are in **bold** type.

As the average chip thickness increases, the speed should be decreased.

Mobile Apps

The Kennametal mobile app provides easy access to product information and calculators on both iPhone® and Android™ devices. We've highlighted a few of the key features...

There's an app for that.

SPEEDS & FEEDS

View speeds and feeds information for metalworking products.

PRODUCT AVAILABILITY

Check global availability of products. View available quantities by providing your Kennconnect login credentials.

CALCULATORS

Utilise our machining calculators for milling and drilling applications.

➔ By just scanning the bar code on the insert packet, you can find the most productive cutting conditions for tool life, process time, and chip control.

NOTE: The app is currently only available in the English-language version. We have plans to translate the app in different languages with future releases.

