

Grooving Tools



A combination of ground profile and sintered chip - breaker

Advantages:

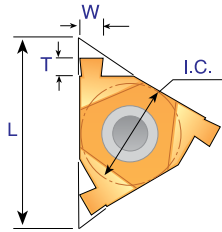
- Same Toolholder for Grooving and Threading
 - Minimum Investment in Tooling
 - Three cutting edges
 - Precision Ground

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Grooving Inserts



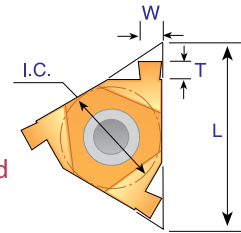
External & Internal

ER / IL

Same insert can be used for EX.RH and for IN.LH.

IR / EL

Same insert can be used for IN.RH and for EX.LH.



W ±0.02	T	I.C. in	L mm	Ordering Code		Ordering Code	
				ER/IL Inserts	Anvil	IR/EL Inserts	Anvil
10.50	1.4	1/4	11	11 ER/IL 0.50	-	11 IR/EL 0.50	-
0.60	1.4	1/4	11	11 ER/IL 0.60	-	11 IR/EL 0.60	-
0.70	1.4	1/4	11	11 ER/IL 0.70	-	11 IR/EL 0.70	-
0.80	1.4	1/4	11	11 ER/IL 0.80	-	11 IR/EL 0.80	-
1.00	1.3	1/4	11	11 ER/IL 1.00	-	11 IR/EL 1.00	-
1.20	1.4	1/4	11	11 ER/IL 1.20	-	11 IR/EL 1.20	-
0.50	1.4	3/8	16	16 ER/IL 0.50	AE 16-0	16 IR/EL 0.50	AI 16-0
1.00	1.4	3/8	16	16 ER/IL 1.00	AE 16-0	16 IR/EL 1.00	AI 16-0
1.20	1.6	3/8	16	16 ER/IL 1.20	AE 16-0	16 IR/EL 1.20	AI 16-0
1.40	1.8	3/8	16	16 ER/IL 1.40	AE 16-0	16 IR/EL 1.40	AI 16-0
1.70	2.0	3/8	16	16 ER/IL 1.70	AE 16-0	16 IR/EL 1.70	AI 16-0
1.95	2.0	3/8	16	16 ER/IL 1.95	AE 16-0	16 IR/EL 1.95	AI 16-0
2.25	2.25	3/8	16	16 ER/IL 2.25	AE 16-0	16 IR/EL 2.25	AI 16-0

Order example: 16 ER/IL 1.20 BXC

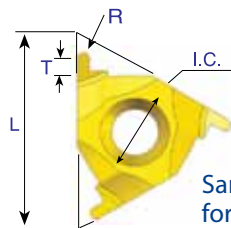
* The inserts should be used with our standard threading toolholders

* The anvil must be changed to AE 16-0 or AI 16-0 before using size 16mm (3/8") inserts

* Other available blank sizes: I.C. 5/8", 1/2", 3/16" & 5/32"

Grooving Inserts for Snap Ring

Carbide Grade: BXC



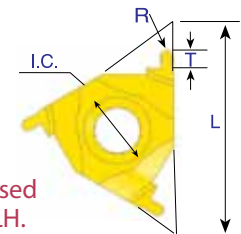
External & Internal Partial Profile Inserts

ER / IL

Same insert can be used for EX.RH and for IN.LH.

IR / EL

Same insert can be used for IN.RH and for EX.LH.



R ±0.04	T	I.C. in	L mm	Ordering Code		Ordering Code	
				ER/IL Inserts	Anvil	IR/EL Inserts	Anvil
.020	.055	3/8	16	16 ER/IL R0.50	AE 16 - 0	16 IR/EL R0.50	AI 16 - 0
.024	.063	3/8	16	16 ER/IL R0.60	AE 16 - 0	16 IR/EL R0.60	AI 16 - 0
.035	.079	3/8	16	16 ER/IL R0.90	AE 16 - 0	16 IR/EL R0.90	AI 16 - 0
.039	.079	3/8	16	16 ER/IL R1.00	AE 16 - 0	16 IR/EL R1.00	AI 16 - 0
.043	.087	3/8	16	16 ER/IL R1.10	AE 16 - 0	16 IR/EL R1.10	AI 16 - 0
.077	.089	3/8	16	16 ER/IL R1.20	AE 16 - 0	16 IR/EL R1.20	AI 16 - 0

Order example: 16ER/IL R1.20 BXC

* The inserts should be used with our standard threading toolholders

* The anvil must be changed to AE 16-0 or AI 16-0 before using size 16mm (3/8") inserts

* Other available blank sizes: I.C. 5/8", 1/2", 1/4", 3/16" & 5/32"

Grooving Kits



**ER / IL INSERT
KGRO - EXTERNAL**

16	ER / IL 1.0	BXC	1 unit
16	ER / IL 1.2	BXC	1 unit
16	ER / IL 1.4	BXC	1 unit
16	ER / IL 1.7	BXC	1 unit
16	ER / IL 1.95	BXC	1 unit
16	ER / IL 2.25	BXC	1 unit
ANVIL AE 16 - 0			1 unit

**IR / EL INSERT
KGRO - INTERNAL**

16	IR / EL 1.0	BXC	1 unit
16	IR / EL 1.2	BXC	1 unit
16	IR / EL 1.4	BXC	1 unit
16	IR / EL 1.7	BXC	1 unit
16	IR / EL 1.95	BXC	1 unit
16	IR / EL 2.25	BXC	1 unit
ANVIL AI 16 - 0			1 unit

Technical Section

Cutting Speeds for Grooving Tools

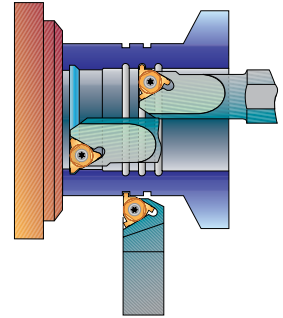
Carbide Grades:

BXC (P30 - P50, K25 - K40)

PVD TiN coated grade for low cutting speed. Works well with a wide range of stainless steels.

BMA (P20 - P40, K20 - K30)

PVD TiAlN coated sub-micrograin grade for stainless steels and exotic materials at medium to high cutting speeds.



ISO Standard	Materials	Cutting Speed m/min
P	Low & Medium Carbon Steel	20-100
	High Carbon Steel	30-80
	Alloy Steels and Treated Steels	40-90
M	Stainless Steels	30-80
	Cast Steels	30-90
K	Cast Iron	30-90
N	Non-Ferrous & Aluminum	20-200

For grooving small bores see pages 89-95

