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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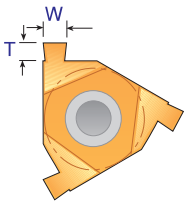
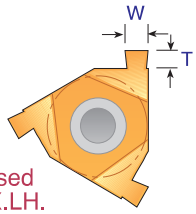
Grooving Inserts



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.

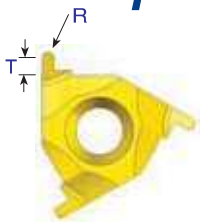


W ± 0.02	T	I.C. in	Ordering Code ER/IL Inserts	Anvil	Ordering Code IR/EL Inserts	Anvil
0.50	1.4	1/4	**11 ER/IL 0.50**	-	**11 IR/EL 0.50**	-
0.60	1.4	1/4	**11 ER/IL 0.60**	-	**11 IR/EL 0.60**	-
0.70	1.4	1/4	**11 ER/IL 0.70**	-	**11 IR/EL 0.70**	-
0.80	1.4	1/4	**11 ER/IL 0.80**	-	**11 IR/EL 0.80**	-
1.00	1.3	1/4	**11 ER/IL 1.00**	-	**11 IR/EL 1.00**	-
0.50	1.4	3/8	**16 ER/IL 0.50**	AE 16-0	**16 IR/EL 0.50**	AI 16-0
1.00	1.4	3/8	**16 ER/IL 1.00**	AE 16-0	**16 IR/EL 1.00**	AI 16-0
1.20	1.6	3/8	**16 ER/IL 1.20**	AE 16-0	**16 IR/EL 1.20**	AI 16-0
1.40	1.8	3/8	**16 ER/IL 1.40**	AE 16-0	**16 IR/EL 1.40**	AI 16-0
1.70	2.0	3/8	**16 ER/IL 1.70**	AE 16-0	**16 IR/EL 1.70**	AI 16-0
1.95	2.0	3/8	**16 ER/IL 1.95**	AE 16-0	**16 IR/EL 1.95**	AI 16-0
2.25	2.25	3/8	**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
* Attention: The anvil must be changed to AE 16-0 or AI 16-0
* Other available blank sizes: I.C. 5/8", 1/2", 3/16" & 5/32"

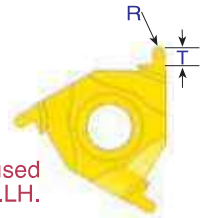
Grooving Inserts for Snap Ring



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	Ordering Code ER/IL Inserts	Anvil	Ordering Code IR/EL Inserts	Anvil
0.5	1.4	3/8	**16 ER/IL R 0.50**	AE 16 - 0	**16 IR/EL R 0.50**	AI 16 - 0
0.6	1.6	3/8	**16 ER/IL R 0.60**	AE 16 - 0	**16 IR/EL R 0.60**	AI 16 - 0
0.9	2.0	3/8	**16 ER/IL R 0.90**	AE 16 - 0	**16 IR/EL R 0.90**	AI 16 - 0
1.0	2.0	3/8	**16 ER/IL R 1.00**	AE 16 - 0	**16 IR/EL R 1.00**	AI 16 - 0
1.1	2.15	3/8	**16 ER/IL R 1.10**	AE 16 - 0	**16 IR/EL R 1.10**	AI 16 - 0
1.2	2.25	3/8	**16 ER/IL R 1.20**	AE 16 - 0	**16 IR/EL R 1.20**	AI 16 - 0

Order example: 16ER/IL R1.20 BXC

* The inserts should be used with our standard threading toolholders
* Attention: The anvil must be changed to AE 16-0 or AI 16-0
* Other available blank sizes: I.C. 5/8", 1/2", 1/4", 3/16" & 5/32"

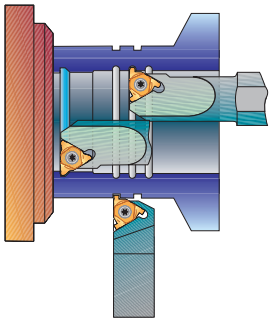
Grooving Kits

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 Grade:

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 & Aluminium	20-200

For grooving small bores see pages 183-188