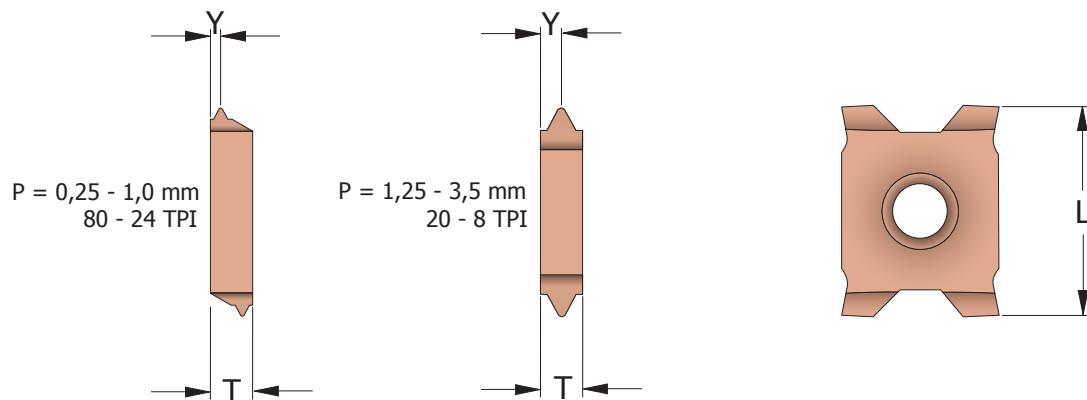


THREAD TURNING INSERTS

FourCut



M

METRIC

Pitch mm	Part Number EXTERNAL	L mm	T mm	Y mm
0,25	12E_0,25ISO_HC/LC	12	2,4	0,2
0,3	12E_0,3ISO_HC/LC	12	2,4	0,2
0,35	12E_0,35ISO_HC/LC	12	2,4	0,25
0,4	12E_0,4ISO_HC/LC	12	2,4	0,3
0,45	12E_0,45ISO_HC/LC	12	2,4	0,4
0,5	12E_0,5ISO_HC/LC	12	2,4	0,4
0,6	12E_0,6ISO_HC/LC	12	2,4	0,4
0,7	12E_0,7ISO_HC/LC	12	2,4	0,4
0,75	12E_0,75ISO_HC/LC	12	2,4	0,4
0,8	12E_0,8ISO_HC/LC	12	2,4	0,5
1,0	12E_1,0ISO_HC/LC	12	2,4	0,6
1,25	12E_1,25ISO_HC/LC	12	2,4	1,2
1,5	12E_1,5ISO_HC/LC	12	2,4	1,2
1,75	12E_1,75ISO_HC/LC	12	2,4	1,2
2,0	12E_2,0ISO_HC/LC	12	2,4	1,2
2,5	12E_2,5ISO_HC/LC	12	3,6	1,8
3,0	12E_3,0ISO_HC/LC	12	3,6	1,8
3,5	12E_3,5ISO_HC/LC	12	3,6	1,8

UN

UNIFIED

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
80	12E_80UN_HC/LC	12	2,4	0,2
72	12E_72UN_HC/LC	12	2,4	0,25
64	12E_64UN_HC/LC	12	2,4	0,3
56	12E_56UN_HC/LC	12	2,4	0,4
48	12E_48UN_HC/LC	12	2,4	0,4
44	12E_44UN_HC/LC	12	2,4	0,4
40	12E_40UN_HC/LC	12	2,4	0,4
36	12E_36UN_HC/LC	12	2,4	0,4
32	12E_32UN_HC/LC	12	2,4	0,5
28	12E_28UN_HC/LC	12	2,4	0,6
24	12E_24UN_HC/LC	12	2,4	0,6
20	12E_20UN_HC/LC	12	2,4	1,2
18	12E_18UN_HC/LC	12	2,4	1,2
16	12E_16UN_HC/LC	12	2,4	1,2
14	12E_14UN_HC/LC	12	2,4	1,2
13	12E_13UN_HC/LC	12	2,4	1,2
12	12E_12UN_HC/LC	12	2,4	1,2
11	12E_11UN_HC/LC	12	3,6	1,8
10	12E_10UN_HC/LC	12	3,6	1,8
9	12E_9UN_HC/LC	12	3,6	1,8
8	12E_8UN_HC/LC	12	3,6	1,8

THREAD TURNING INSERTS



FourCut

60°

PARTIAL PROFILE 60°

Pitch mm	TPI	Part Number EXTERNAL	L mm	T mm	Y mm
0,25 - 1,0	100-24	12E_AAA60_HC/LC	12	2,4	0,6
0,35 - 1,0	72-24	12E_AA60_HC/LC	12	2,4	0,6
0,5 - 2,0	48-12	12E_A60_HC/LC	12	2,4	1,2
0,5 - 3,0	48-8	12E_AG60_HC/LC	12	3,6	1,8
1,75 - 3,0	14-8	12E_G60_HC/LC	12	3,6	1,8

55°

PARTIAL PROFILE 55°

Pitch mm	TPI	Part Number EXTERNAL	L mm	T mm	Y mm
0,35 - 1,0	72-24	12E_AA55_HC/LC	12	2,4	0,6
0,5 - 2,0	48-12	12E_A55_HC/LC	12	2,4	1,2
0,5 - 3,0	48-8	12E_AG55_HC/LC	12	3,6	1,8
1,75 - 3,0	14-8	12E_G55_HC/LC	12	3,6	1,8

BS/G/Rp

WHITWORTH PIPE THREAD

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
28	12E_28W_HC/LC	12	2,4	0,6
24	12E_24W_HC/LC	12	2,4	0,6
20	12E_20W_HC/LC	12	2,4	1,2
19	12E_19W_HC/LC	12	2,4	1,2
18	12E_18W_HC/LC	12	2,4	1,2
16	12E_16W_HC/LC	12	2,4	1,2
14	12E_14W_HC/LC	12	2,4	1,2
12	12E_12W_HC/LC	12	2,4	1,2
11	12E_11W_HC/LC	12	3,6	1,8
10	12E_10W_HC/LC	12	3,6	1,8
9	12E_9W_HC/LC	12	3,6	1,8
8	12E_8W_HC/LC	12	3,6	1,8

R/Rc

BSPT PIPE THREAD

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
28	12E_28BSPT_HC/LC	12	2,4	1,2
19	12E_19BSPT_HC/LC	12	2,4	1,2
14	12E_14BSPT_HC/LC	12	3,6	1,8
11	12E_11BSPT_HC/LC	12	3,6	1,8

NPT

NPT PIPE THREAD

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
27	12E_27NPT_HC/LC	12	2,4	0,6
18	12E_18NPT_HC/LC	12	2,4	1,2
14	12E_14NPT_HC/LC	12	2,4	1,2
11,5	12E_11.5NPT_HC/LC	12	3,6	1,8
8	12E_8NPT_HC/LC	12	3,6	1,8

NPTF

NPTF DRYSEAL PIPE THREAD

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
27	12E_27NPTF_HC/LC	12	2,4	0,6
18	12E_18NPTF_HC/LC	12	2,4	1,2
14	12E_14NPTF_HC/LC	12	2,4	1,2
11,5	12E_11.5NPTF_HC/LC	12	3,6	1,8
8	12E_8NPTF_HC/LC	12	3,6	1,8

All inserts have ground profile and chipbreaker. Choose grade between HC and LC. [See page 43.](#)

THREAD TURNING INSERTS

FourCut

PG

STEEL CONDUIT THREAD DIN 40430

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
20	12E_20PG_HC/LC	12	2,4	1,2
18	12E_18PG_HC/LC	12	2,4	1,2
16	12E_16PG_HC/LC	12	2,4	1,2

TR

TRAPEZ DIN 103

Pitch mm	Part Number EXTERNAL	L mm	T mm	Y mm
1,5	12E_1.5TR_HC/LC	12	2,4	1,2
2,0	12E_2.0TR_HC/LC	12	2,4	1,2
3,0	12E_3.0TR_HC/LC	12	2,4	1,2
4,0	12E_4.0TR_HC/LC	12	3,6	1,8

RD

ROUND DIN 405

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
10	12E_10RD_HC/LC	12	3,6	1,8
8	12E_8RD_HC/LC	12	3,6	1,8

ACME

ACME

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
16	12E_16ACME_HC/LC	12	2,4	1,2
14	12E_14ACME_HC/LC	12	2,4	1,2
12	12E_12ACME_HC/LC	12	2,4	1,2
10	12E_10ACME_HC/LC	12	2,4	1,2
8	12E_8ACME_HC/LC	12	2,4	1,2
6	12E_6ACME_HC/LC	12	3,6	1,8

STACME

STUB ACME

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm
16	12E_16STACME_HC/LC	12	2,4	1,2
14	12E_14STACME_HC/LC	12	2,4	1,2
12	12E_12STACME_HC/LC	12	2,4	1,2
10	12E_10STACME_HC/LC	12	2,4	1,2
8	12E_8STACME_HC/LC	12	2,4	1,2
6	12E_6STACME_HC/LC	12	3,6	1,8
5	12E_5STACME_HC/LC	12	3,6	1,8

MJ

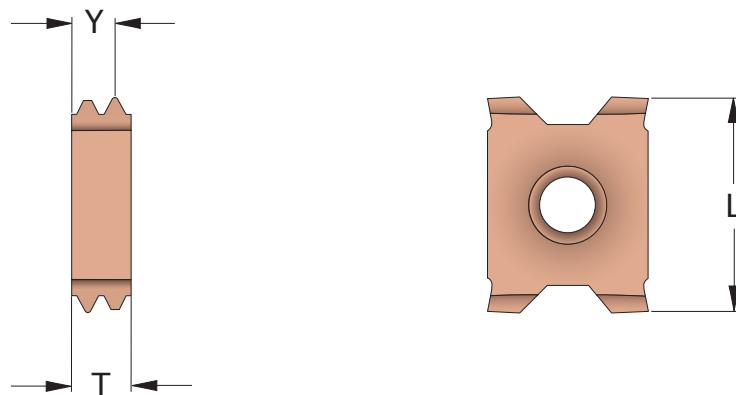
METRIC

Pitch mm	Part Number EXTERNAL	L mm	T mm	Y mm
1,0	12E_1.0MJ_HC/LC	12	2,4	0,6
1,5	12E_1.5MJ_HC/LC	12	2,4	1,2
2,0	12E_2.0MJ_HC/LC	12	3,6	1,8

All inserts have ground profile and chipbreaker. Choose grade between HC and LC. [See page 43.](#)

THREAD TURNING INSERTS

FourCut Multitooth



M

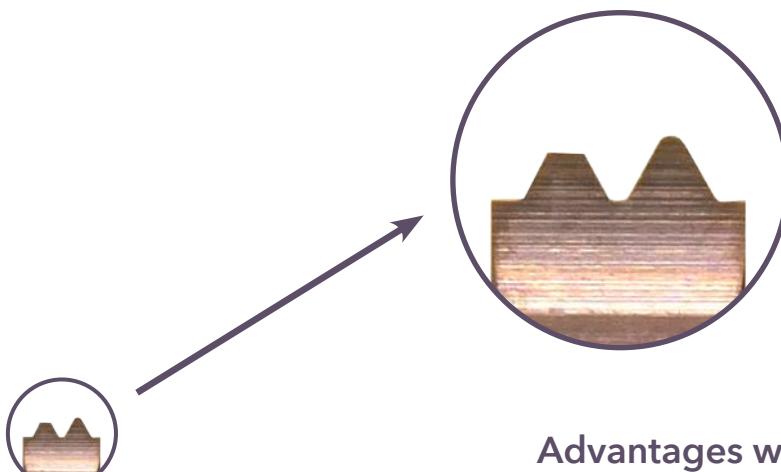
METRIC

Pitch mm	Part Number EXTERNAL	L mm	T mm	Y mm	Radial infeed per pass		
					1	2	3
1,0	12ER_1.0ISO2M_HC/LC	12	2,4	1,7	0,24	0,21	0,18
1,5	12ER_1.5ISO2M_HC/LC	12	3,6	2,55	0,43	0,30	0,21
2,0	12ER_2.0ISO2M_HC/LC	12	3,6	2,8	0,57	0,40	0,28

G/Rp

WHITWORTH PIPE THREAD

Pitch TPI	Part Number EXTERNAL	L mm	T mm	Y mm	Radial infeed per pass		
					1	2	3
14	12ER_14W2M_HC/LC	12	3,6	2,7	0,55	0,38	0,25



Advantages with Multitooth Inserts

With multitooth inserts the machining time can be reduced about 50% as two cutting edges are working every pass.

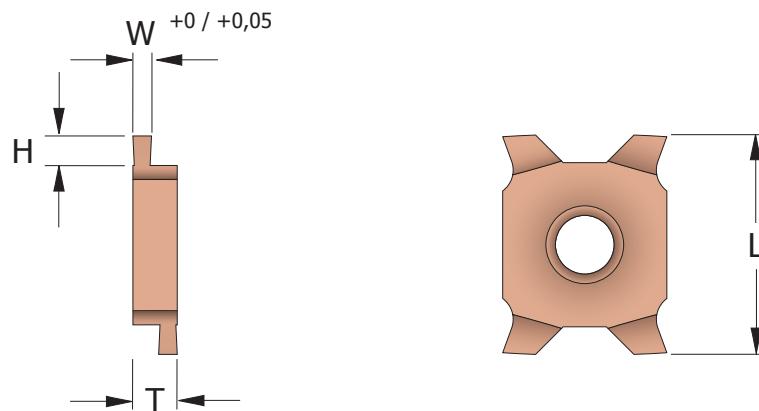
The first edge will cut the flanks of the thread and the second one will make the root radius. This will result in three easy breakable chips.

It is important to use radial infeed to get best performance. Above you have recommended infeed per pass for each insert.



GROOVING INSERTS

FourCut



SQ

GROOVING

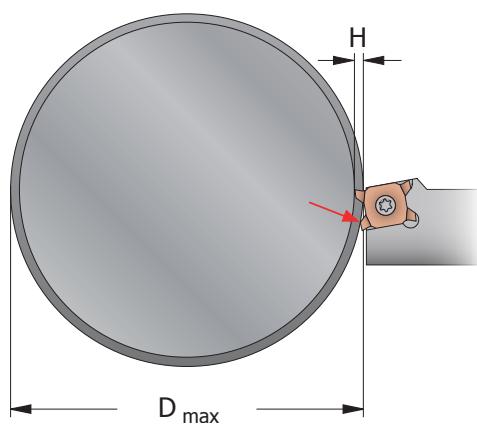
W +0 / +0,05	EXTERNAL Part Number	L mm	T mm	H mm
0,4	12ER_0.4SQ_HC/LC	12	2,4	0,8
0,5	12ER_0.5SQ_HC/LC	12	2,4	1,0
0,6	12ER_0.6SQ_HC/LC	12	2,4	1,2
0,7	12ER_0.7SQ_HC/LC	12	2,4	1,4
0,8	12ER_0.8SQ_HC/LC	12	2,4	1,6
0,9	12ER_0.9SQ_HC/LC	12	2,4	1,8
1,0	12ER_1.0SQ_HC/LC	12	2,4	2,0
1,1	12ER_1.1SQ_HC/LC	12	2,4	2,0
1,2	12ER_1.2SQ_HC/LC	12	2,4	2,0
1,3	12ER_1.3SQ_HC/LC	12	2,4	2,0
1,4	12ER_1.4SQ_HC/LC	12	2,4	2,0
1,5	12ER_1.5SQ_HC/LC	12	2,4	2,0
1,6	12ER_1.6SQ_HC/LC	12	2,4	2,0
1,7	12ER_1.7SQ_HC/LC	12	2,4	2,0
1,85	12ER_1.85SQ_HC/LC	12	2,4	2,0
2,0	12ER_2.0SQ_HC/LC	12	2,4	2,0
2,15	12ER_2.15SQ_HC/LC	12	2,4	2,0
2,3	12ER_2.3SQ_HC/LC	12	2,4	2,0
2,5	12ER_2.5SQ_HC/LC	12	3,6	2,0
2,65	12ER_2.65SQ_HC/LC	12	3,6	2,0
2,8	12ER_2.8SQ_HC/LC	12	3,6	2,0
3	12ER_3.0SQ_HC/LC	12	3,6	2,0
3,15	12ER_3.15SQ_HC/LC	12	3,6	2,0
3,3	12ER_3.3SQ_HC/LC	12	3,6	2,0
3,5	12ER_3.5SQ_HC/LC	12	3,6	2,0

All inserts have ground profile and chipbreaker. Choose grade between HC and LC. [See page 43.](#)

Maximum Grooving Diameter

You are not able to use the maximum grooving depth when the diameter is bigger then D_{max} as the cutting edge below will touch the part.

H mm	D _{max} mm
2,0	70
1,9	80
1,8	93
1,7	111
1,6	139
1,5	185

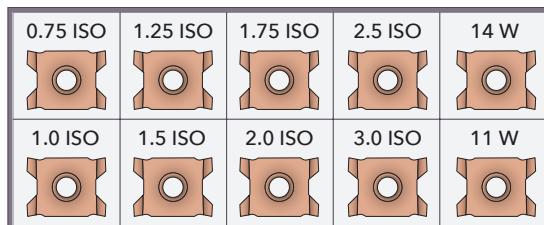


THREADING AND GROOVING INSERTS

Kits with Different Inserts



Threading Inserts Kits



Part Number

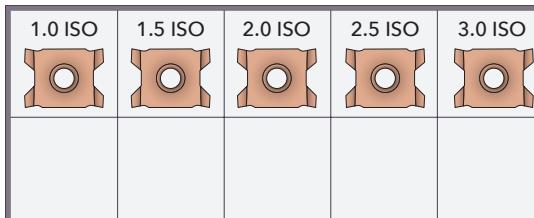
10X12E_HC

■ 10 different inserts in one box.

Part Number

10X12E_LC

■ 10 different inserts in one box.



Part Number

5X12E_HC

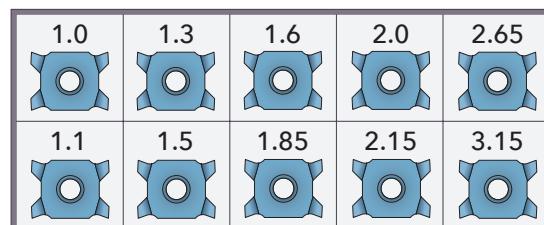
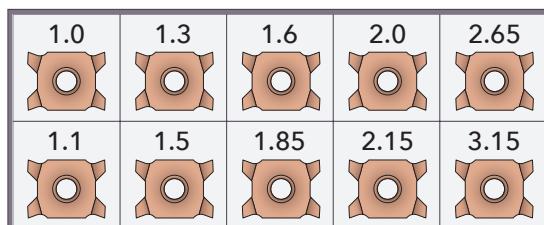
■ 5 different inserts in one box.

Part Number

5X12E_LC

■ 5 different inserts in one box.

Grooving Inserts Kits



Part Number

10X12SQ_HC

■ 10 different inserts in one box.

Part Number

10X12SQ_LC

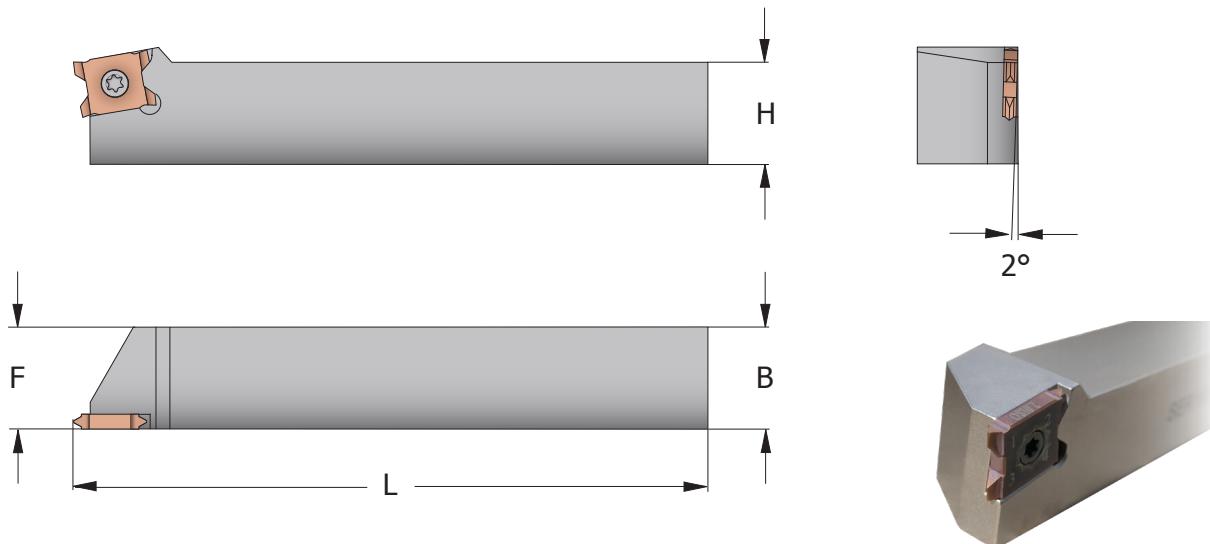
■ 10 different inserts in one box.



FourCut uses the same toolholder for grooving and threading.

THREAD TURNING TOOLHOLDERS

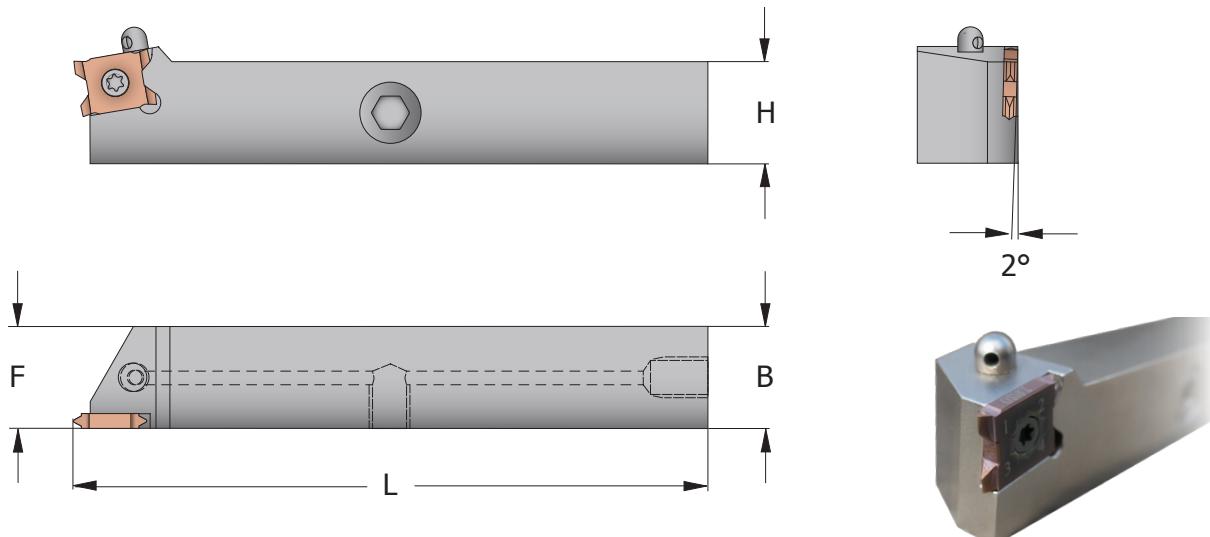
FourCut External



Insert mm	Part Number	B/H mm	L mm	F mm
12	SER0808H12	8	100	8
12	SER1010H12	10	100	10
12	SER1212H12	12	100	12
12	SER1616H12	16	100	16
12	SER2020K12	20	125	20
12	SER2525M12	25	150	25
12	SER3232P12	32	170	32

■ The Part Numbers are for Right Hand Toolholders. For Left Hand specify L instead of R. The Price is 10% higher for L.

with Internal Coolant

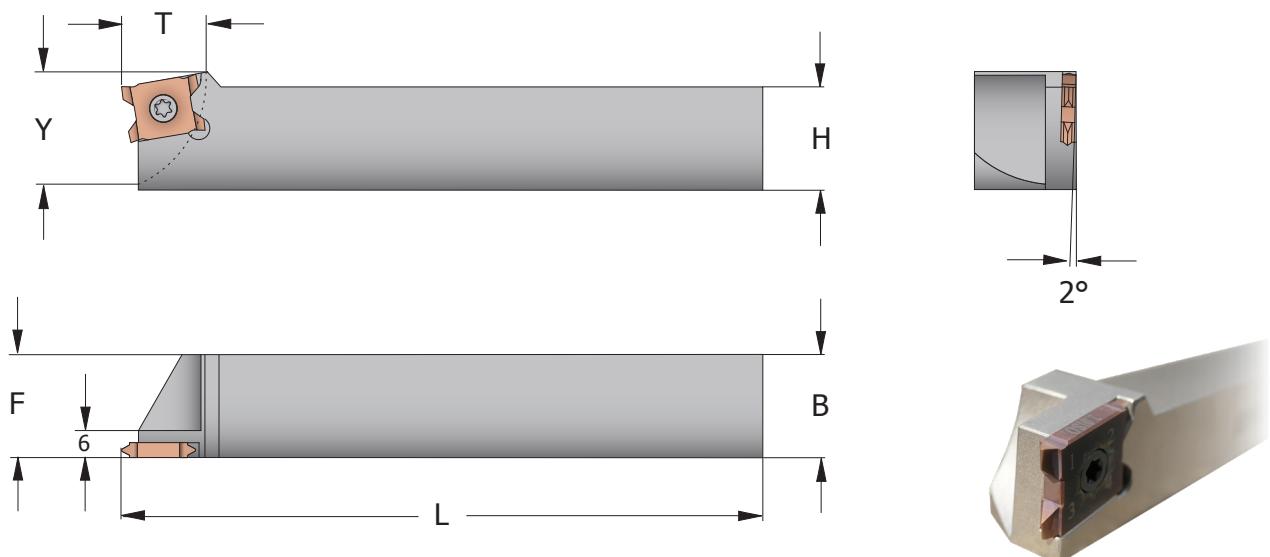


Insert mm	Part Number	B/H mm	L mm	F mm	PLUG
12	SER1212H12-J*	12	100	12	M8x1
12	SER1616H12-J	16	100	16	G1/8
12	SER2020K12-J	20	125	20	G1/8
12	SER2525M12-J	25	150	25	G1/8

* This toolholder also has a plug on the backside, totally three plugs.

THREAD TURNING TOOLHOLDERS

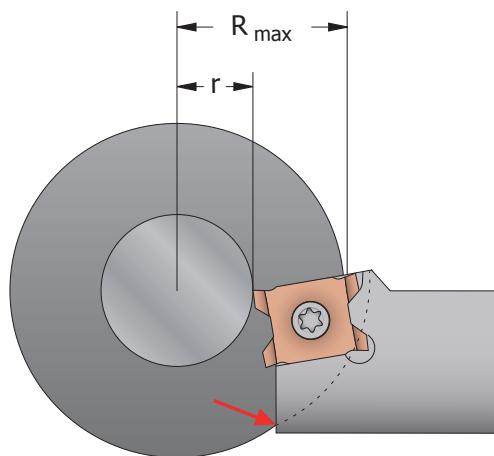
with Extra Accessibility



Insert mm	Part Number	B/H mm	L mm	F mm	T mm	Y mm
12	SER1212T09H12	12	100	12	9	11,0
12	SER1616T11H12	16	100	16	11	14,7
12	SER2020T14K12	20	125	20	14	18,7
12	SER2525T18M12	25	150	25	18	23,8

Maximum Allowable Access

When you are working between shoulders there is a limit of the accessibility which depends on the toolholder and the diameters of the workpiece.



$$R_{\max} = \sqrt{(r + 2,5)^2 + Y^2}$$

$$T = R - r$$

You should never exceed the calculated R_{\max} or the T dimension of the toolholder. If you need better accessibility you have to modify the holder.

For diagram of accessibility go to
smicut.com/acc



Spare Parts

Insert mm	Screw to insert	Torx key
12	T9XM3	TORX_T9