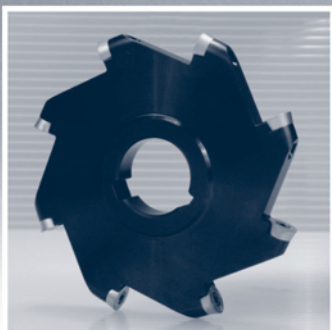
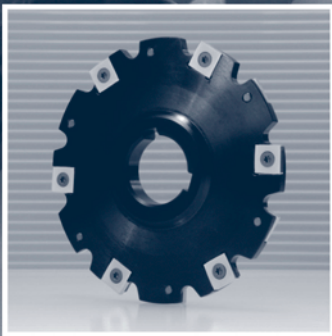
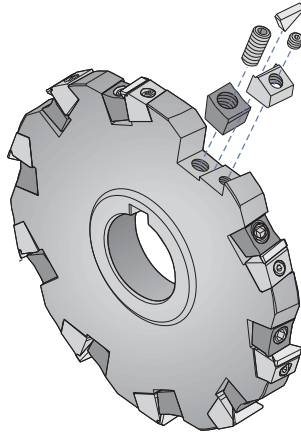


Slot cutters

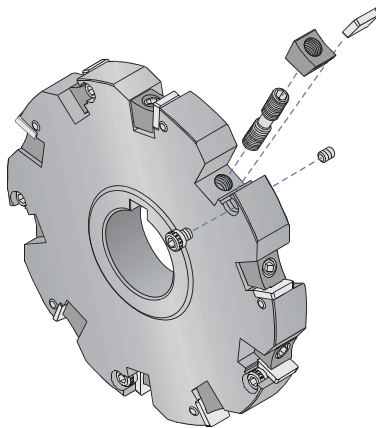
Technical information	M.02
Applications	M.03
Code key	M.03
Slot cutters	M.04
Cutting data	M.06





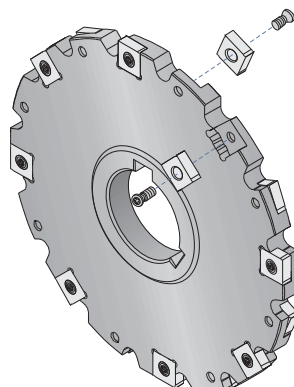
Wedge clamping

This classic positive insert clamping system allows the use of all models presenting this geometry, both with additional chipbreaker and sintered.



Wedge clamping

This classic positive insert clamping system allows the use of all models presenting this geometry, both with additional chipbreaker and sintered.



Screw clamping

Since the advent of the Torx screw it has been possible to hold with complete safety positive inserts with centre hole. Our range covers all the screw fixing permutations.

Inserts

General turning

Parting & grooving

Notch tools

Automatic lathes

Ceramic tools

Threading

Cartridges

Square shoulder cut.

Profile milling

Face milling

Slot cutters

Slot cutters

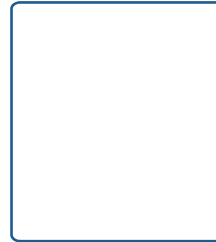
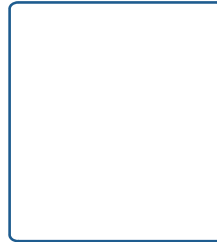
09 $\frac{1}{2}$ **0.95**
Slot milling 90°

Page M.04 SP.. 42..

1942.90
Slot milling 89°

SNHX 1102..
... SNHX 1207..

Page M.05



0	8	3	0	95	100	R
1	2	3	4	5	6	16

1

08 09 13 15 19 29

2

1 2 3 4

3

0 2 4 9

4

07 Short Weldon Ø12 Ø16 Ø20 Ø25 Ø32 Ø40	Short Morse DIN 228 M2-M3 30 M4 34 M5 35	90 Direct spindle mounting 	95 Direct spindle mounting 	96 Cutting hand
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5

Diameter, inch.

D

6 *

Cutting hand

R L

6 **

Cutting width

Slot cutters
Drilling & boring
Tooling

Inserts

General turning

Parting & grooving

Notch tools

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Ceramic tools

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Cartridges

Square shoulder cut.

Profile milling

Face milling

Slot cutters

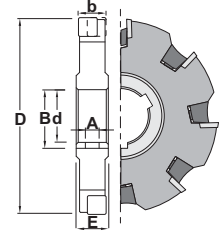
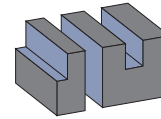
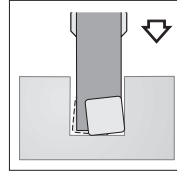


Characteristics:

This economic Slot cutter uses strong inserts allowing depth passes and high feed per teeth. Positive chip forming inserts are available to machine sticky materials. The insert is fixed by wedge that allow a good chip evacuation and an easy use.

Applications:

The Slot milling cutter works well on steels, alloyed steels, stainless steel, refractory casts and aluminium alloys.



0940.95 POSITIVE RAKE		D	b	d	A	E	B	Z	Insert size	lbs
Ref.	0940.95.0400.062	4.000	0.625	1.250	0.315	0.704	1.375	8	SP.. 42..	1.320
	0940.95.0400.075	4.000	0.750	1.250	0.315	0.823	1.375	8	SP.. 42..	1.320
	0940.95.0500.062	5.000	0.625	1.250	0.315	0.704	1.375	10	SP.. 42..	2.310
	0940.95.0500.075	5.000	0.750	1.250	0.315	0.823	1.375	10	SP.. 42..	2.530
	0940.95.0600.062	6.000	0.625	1.500	0.378	0.704	1.689	10	SP.. 42..	3.960
	0940.95.0600.075	6.000	0.750	1.500	0.378	0.823	1.689	10	SP.. 42..	4.290
	0940.95.0800.062	8.000	0.625	1.500	0.378	0.704	1.689	16	SP.. 42..	6.270
	0940.95.0800.075	8.000	0.750	1.500	0.378	0.823	1.689	16	SP.. 42..	6.930
	0940.95.1000.075	10.000	0.750	2.000	0.500	0.823	2.189	20	SP.. 42..	13.090
	0950.95.1000.100	10.000	1.000	2.000	0.500	1.079	2.189	20	SP.. 42..	15.950
	0940.95.1200.075	12.000	0.750	2.000	0.500	0.823	2.189	24	SP.. 42..	26.840
	0950.95.1200.100	12.000	1.000	2.000	0.500	1.079	2.189	24	SP.. 42..	34.100

Ref.	0940.95.0400.062	0940.95.0400.075	0940.95.0500.062	0940.95.0500.075	0940.95.0600.062	0940.95.0600.075	0940.95.0800.062	0940.95.0800.075	0940.95.1000.075	0940.95.1000.100	0940.95.1200.075	0950.95.1200.100
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					
	6010	6110	1088	5004	1295	1505	5025					
	6010	6110	1088	5004	1195	1505	5025					

		SP..	l	T	d	Positive 11° clearance - Square inserts.				
Ref.	SP.. 42..		0.500	0.125	0.500					
						For more information see page: A.41/43				
	SPKN	SPUN								

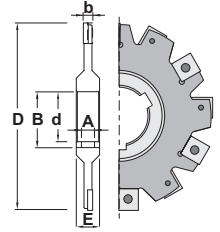
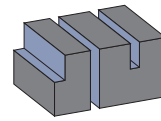
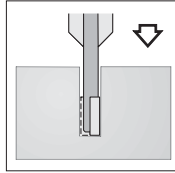


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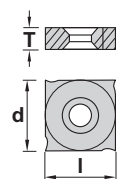
1942.90

NEGATIVE RAKE

Ref.	D	b	d	A	E	B	Z			Insert size	
1942.90.0400.16	4.000	0.161	1.000	0.250	0.472	1.110	12	1735	5607	SNHX 1102..	0.440
1942.90.0500.16	5.000	0.161	1.250	0.315	0.472	1.375	14	1735	5607	SNHX 1102..	0.770
1942.90.0400.18	4.000	0.187	1.000	0.250	0.472	1.110	12	1835	5607	SNHX 1103..	0.550
1942.90.0500.18	5.000	0.187	1.250	0.315	0.472	1.375	14	1835	5607	SNHX 1103..	0.880
1942.90.0600.18	6.000	0.187	1.250	0.315	0.472	1.375	18	1835	5607	SNHX 1103..	1.430
1942.90.0400.25	4.000	0.250	1.250	0.315	0.472	1.375	10	1745	5615	SNHX 1203..	0.660
1942.90.0500.25	5.000	0.250	1.250	0.315	0.472	1.375	12	1745	5615	SNHX 1203..	0.990
1942.90.0600.25	6.000	0.250	1.500	0.378	0.472	1.689	16	1745	5615	SNHX 1203..	1.650
1942.90.0800.25	8.000	0.250	1.500	0.378	0.472	1.689	18	1745	5615	SNHX 1203..	2.530
1942.90.0400.31	4.000	0.312	1.250	0.315	0.472	1.375	10	1846	5615	SNHX 1204..	0.770
1942.90.0500.31	5.000	0.312	1.250	0.315	0.472	1.375	12	1846	5615	SNHX 1204..	1.210
1942.90.0600.31	6.000	0.312	1.500	0.378	0.472	1.689	16	1846	5615	SNHX 1204..	2.090
1942.90.0800.31	8.000	0.312	1.500	0.378	0.472	1.689	18	1846	5615	SNHX 1204..	3.410
1942.90.0400.37	4.000	0.375	1.250	0.315	0.472	1.375	10	1845	5615	SNHX 1205..	0.880
1942.90.0500.37	5.000	0.375	1.250	0.315	0.472	1.375	12	1845	5615	SNHX 1205..	1.540
1942.90.0600.37	6.000	0.375	1.500	0.378	0.472	1.689	16	1845	5615	SNHX 1205..	2.530
1942.90.0800.37	8.000	0.375	1.500	0.378	0.472	1.689	18	1845	5615	SNHX 1205..	4.180
1942.90.0400.50	4.000	0.500	1.250	0.315	0.630	1.375	10	1847	5615	SNHX 1207..	1.100
1942.90.0500.50	5.000	0.500	1.250	0.315	0.630	1.375	12	1847	5615	SNHX 1207..	1.870
1942.90.0600.50	6.000	0.500	1.500	0.378	0.630	1.689	16	1847	5615	SNHX 1207..	3.080
1942.90.0800.50	8.000	0.500	1.500	0.378	0.630	1.689	18	1847	5615	SNHX 1207..	5.170

Ref.	SNHX	I	T	d	Negative square inserts.
	SNHX 1102..	0.433	0.094	0.433	
SNHX 1103..	0.433	0.106	0.433		
SNHX 1203..	0.500	0.125	0.500		
SNHX 1204..	0.500	0.177	0.500		
SNHX 1205..	0.500	0.213	0.500		
SNHX 1207..	0.500	0.276	0.500		

SNHX					



For more information see page: A.40

Inserts

General turning

Parting & grooving

Notch tools

Automatic lathes

Ceramic tools

Threading

Cartridges

Square shoulder cut.

Profile milling

Face milling

Slot cutters

Cutting data for disc cutters (0940.95)

Cutting speed nominal values

Description	HB	Basic qualities			
		TIN25	PM25	KM15	PM40
		Cutting speed ft/min			
Unalloyed steel	90-250	328-689	262-590		
Low alloyed steel	130-400	164-492	164-459		
High alloyed steel	150-500	98-295	131-295		
Martensitic, Stainless steel Ferritic	150-270	328-656	262-426		131-262
	150-200	197-426	131-295		
Austenitic, Stainless steel	150-270	262-590	164-394		66-164
Titanium	300-450			66-262	
Malleable cast iron	110-230			197-295	
Grey cast iron	180-260			262-394	
Nodular cast iron	160-250			197-262	
Aluminium alloys				656-1968	
Bronze and brass alloys	60-150			230-492	

Feed nominal values

Depending on the milling cutter situation and in relationship with its diameter and the cutting depth, the average chip thickness (h_m) can considerably vary, but it will always be smaller than the feed per tooth.

When you mill a groove, the feed is distributed between two stepped inserts, which are symmetrically spaced one at each side of the milling cutter, forming together the slot. Therefore, when you use the formulae, the z value (number of teeth) must always be divided by two.

Cutting data for disc cutters (1942.90)

Cutting speed nominal values - h_m 0.002-0.005

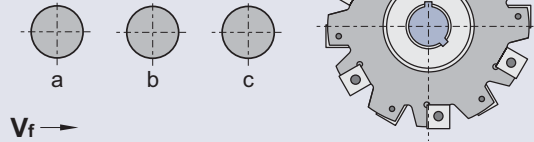
Description	HB	TIN25	TIN43	PM25	PM40
		Cutting speed ft/min			
Unalloyed steel	110-310	459-787	328-689	426-820	230-443
Low alloyed steel	125-450	426-689	164-492	279-590	148-262
High alloyed steel	150-500	262-394	98-295	197-394	98-213
Stainless	150-270		328-656		131-295
Steel castings	150-250	426-689	197-426	180-377	82-197

Description	HB	TIN21	PM40	KM15
		Cutting speed ft/min		
Austenitic, Stainless steel	150-270	262-590	131-295	
Titanium	300-450			66-262

Description	HB	TIN21	KM15	PM25
		Cutting speed ft/min		
Malleable cast iron	110-230	426-984	197-295	180-328
Grey cast iron	180-260	459-1312	262-394	197-394
Nodular cast iron - spheroidal graphite	160-250	328-656	197-262	131-262
Aluminium alloys	30-100		656-1968	
Bronze and brass alloys	60-150		230-492	

Machining example

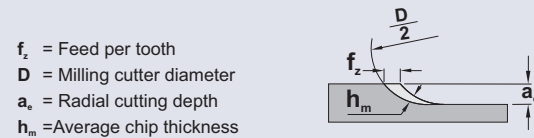
Working piece



Examples	Average chip thickness (h_m) inch.
a	0,003 - 0,0035
b	0,003
c	0,0025 - 0,003

Example a: $f_z \sim h_m$ Example c: $f_z = h_m \sqrt{\frac{D}{a_e}}$

Example b: f_z must be calculated between examples a and c



f_z = Feed per tooth
 D = Milling cutter diameter
 a_e = Radial cutting depth
 h_m = Average chip thickness

Feed nominal values

The chip average thickness (h_m) must be 0,004".

This corresponds to a feed per tooth of 0,012" in most of the operations made by a side and face milling cutter.

If the radial cutting depth (a_2) is too small compared with the milling cutter diameter, use the following formula:

$$f_z = 0,004 \sqrt{\frac{D}{a_e}}$$

NOTE: In order to calculate the table feeds, use the halfth of the inserts in a three cut milling cutter and a face milling cutter in order to get the effective number of teeth.

Table feeds = rpm x number of effective teeth x f_z