

INDEXA-SEIKI™

Indexable Toolholders & Boring Bars

Illustrated are a few basic tool styles from a range that covers the majority of applications in turning. Generally Indexable toolholders use shims made of carbide that lie underneath the inserts in the holder pockets, fixed by means of a pin or screw. They provide clearance and maximum support which is achieved for the insert to absorb the cutting force. In the event of insert fracture, they protect the toolholder from damage.

C-Style Top Clamp

Especially suitable for boring and medium to heavy external turning operations, using positive rakes, various chip breakers and extra side clearance. The clamp is brought down onto the insert by a screw through the clamp. The clamp is designed and positioned so as not to hamper chip flow. When the screw is loosened the clamp lifts and a lug at the back of the clamp keeps it in position. The insert is securely fixed in the two-sided pocket by the positive, direct screw clamp action which gives solid clamping of insert types with no centre hole.



External



Internal

M-Style Combination Clamp & Pin

Suitable for turning and boring operations that require better accessibility than the lever system. The insert is clamped by a top clamp pushing the insert towards a fixed pin. The clamp improves rigidity by wedging the insert against the fixed pin and also clamping the insert down. The insert is held very securely but released through just a slight turn of the screw. The design also provides a clear top face. This design does not provide the same clamping stability as the two sided pocket design of the lever lock type.



External



Internal

Cartridge Units

Many boring, external and combination operations require a number of cuts to be made in a single feed of the tool. In other operations it is wise to distribute the depth of cut on several cutting edges. For this purpose special tools are designed based on standard cartridge units.

Compared to tools with fixed insert seats the use of built-in tools gives the following advantage:

Relatively small positional tolerances can be maintained. If the tool has to be changed, due to minor modification of the workpiece, the built-in units can be adjusted rather than the entire tool. An expensive tool is not damaged should there be an accident.

These items are available on request.
Please contact your distributor for further information.



C-Style



S-Style



P-Style

Widest range of styles and sizes. All compatible with ISO inserts.
Complete range of spares in stock. Full technical support services provided.

Performance Tooling
Assured Quality

INDEXA-SEIKI™

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Illustrated are a few basic tool styles from a range that covers the majority of applications in turning. Generally Indexable toolholders use shims made of carbide that lie underneath the inserts in the holder pockets, fixed by means of a pin or screw. They provide clearance and maximum support which is achieved for the insert to absorb the cutting force. In the event of insert fracture, they protect the toolholder from damage.

P-Style Lever Lock

For external turning and boring of larger diameter holes. Versatile general purpose system for light to heavy machining, utilising a wide range of negative/positive inserts to cover most applications. Inserts are clamped using the centre hole. A pivoted lever tilts by adjustment of the clamping screw. The lever forces the insert backwards into the pocket locating it firmly against two sides giving excellent stability and locating accuracy. This will ensure unobstructed chip flow over the insert top face. Easy to operate for quick indexing.



External



Internal

S-Style Screw-on

For the internal machining of small diameters and for external light roughing to finishing of smaller work pieces. Offers secure insert clamping, excellent repeatability, uninterrupted chip clearance, requires little space and few spares. Suitable for copy turning due to the positive insert being positioned neutrally in the toolholder, giving constant clearance around the periphery and ensuring a clean cut, excellent surface finish and long tool life. The single screw, fits into a hole in the insert pocket holding both insert and shim in place.



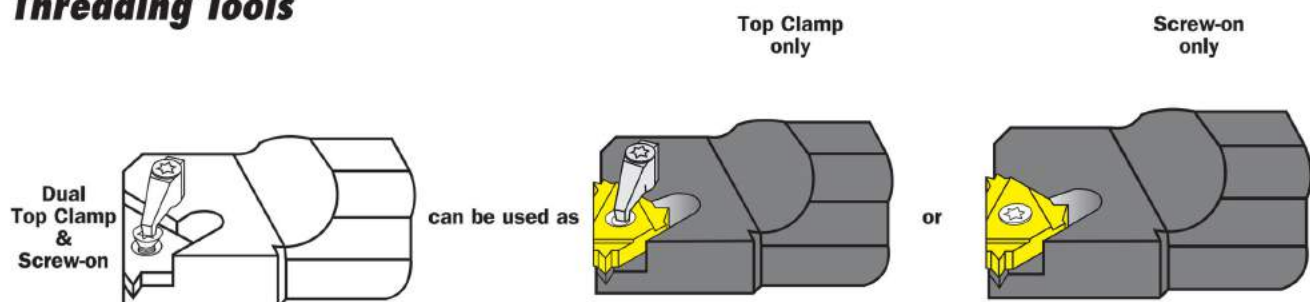
External



Internal

Carbide Shank Boring Bars also available

Threading Tools



Widest range of styles and sizes. All compatible with ISO inserts. Complete range of spares in stock. Full technical support services provided.

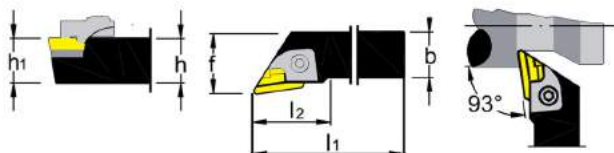
Performance Tooling
Assured Quality

CKJN R/L

93° approach for 55° negative parallelogram inserts.

Inserts See Group 120
Sizes **16** = 1604__

KN_X



Spares to Suit Contact your local branch for prices

						
Shim	Shim Pin	Claw	Clamp Screw	Spring	Spring Pin	Hex Key
Order Code IND-107						Order Code KEN-601
-1930K	-2945K	-0670K	-1280K	-0830K	-0840K	-1300K
-1940K	-2945K	-0680K	-1280K	-0830K	-0840K	-1300K

Designation	Dimensions (mm)					Weight each	Order Code
CKJN....	h=h ₁	b	l ₁	l ₂	f		IND-106
R 2525M 16	25	25	150	34	32	734g	-0240K
L 2525M 16						736g	-0250K

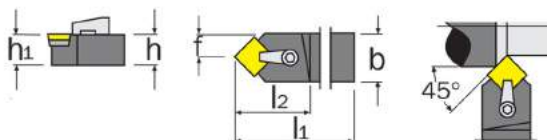
CSDP N

45° approach for 11° positive square inserts.

Inserts See Group 120
Sizes **09** = 0903__
Sizes **12** = 1203__

SP_R

SP_N



Spares to Suit Contact your local branch for prices

						
Shim	Shim Pin	Clamp Set				Hex Key
Order Code IND-107						Order Code KEN-601
-1950K	-2950K	-4200K	-	-	-	-1250K
-2000K	-2950K	-4300K	-	-	-	-1300K

Designation	Dimensions (mm)					Weight each	Order Code
CSDP....	h=h ₁	b	l ₁	l ₂	f		IND-106
N 1616H 09	16	16	100	22	8.0	194g	-0420K
N 2020K 12	20	20	125	28	10.0	380g	-0460K

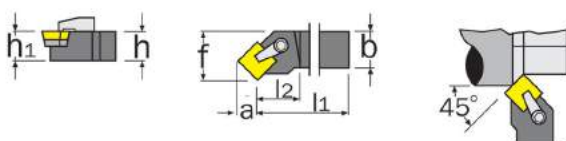
CSSP R/L

45° approach for 11° positive square inserts.

Inserts See Group 120
Sizes **12** = 1203__

SP_R

SP_N



Spares to Suit Contact your local branch for prices

						
Shim	Shim Pin	Clamp Set				Hex Key
Order Code IND-107						Order Code KEN-601
-2000K	-2950K	-4300K	-	-	-	-1300K

Designation	Dimensions (mm)					Weight each	Order Code
CSSP....	h=h ₁	b	l ₁	l ₂	f		IND-106
R 2525M 12	25	25	150	28	32	8.3	745g
							-0600K


CTFP R

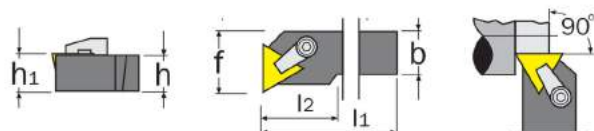
90° approach for 11° positive triangular inserts.


Inserts See Group 120

Sizes **11** = 1103__

Sizes **16** = 1603__

TP_R

TP_N


Designation	h=h ₁	b	l ₁	l ₂	f	Weight each	Order Code
CTFP....							IND-106
R 1616H 11	16	16	100	22	20	203g	-0900K
R 2020K 16	20	20	125	22	25	400g	-0940K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Clamp Set					Hex Key
Order Code IND-107							Order Code KEN-601
-	-	-4250K	-	-	-	-	-1250K
-2050K	-2950K	-4300K	-	-	-	-	-1300K

CTGP R/L

90° approach for 11° positive triangular inserts.


Inserts See Group 120

Sizes **11** = 1103__

Sizes **16** = 1603__

TP_R

TP_N


Designation	h=h ₁	b	l ₁	l ₂	f	Weight each	Order Code
CTGP....							IND-106
R 1212F 11	12	12	80	18	16	98g	-1040K
L 1212F 11						97g	-1050K
R 1616H 11	16	16	100	22	20	207g	-1060K
R 2020K 16	20	20	125	28	25	397g	-1100K
L 2020K 16						395g	-1110K
R 2525M 16	25	25	150	28	32	744g	-1120K
L 2525M 16						744g	-1130K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Clamp Set					Hex Key
Order Code IND-107							Order Code KEN-601
-		-4200K	-	-	-	-	-1250K
-2050K	-2950K	-4300K	-	-	-	-	-1300K
-2050K	-2950K	-4300K	-	-	-	-	-1300K

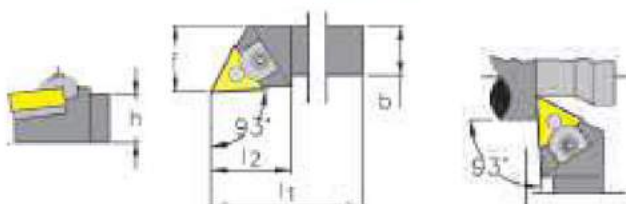
Combination Top Clamp & Pinlock External Toolholders
MTJN R

93° approach for negative triangular inserts.


Inserts See Group 120

Sizes : **16** = 1604

TN_A

TN_G


Designation	h=h ₁	b	l ₁	l ₂	f	Weight each	Order Code
MTJN....							IND-106
R 2020K 16	20	20	125	34	25	427g	-1300K
R 2525M 16	25	25	150	34	32	753g	-1320K

Spares to Suit Contact your local branch for prices

Shim	Lock Pin	Clamp					
Order Code IND-107							
-2087K	-1480K	-0943K	-	-	-	-	-

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MVJN R/L

93° approach for negative 35° rhombic inserts.



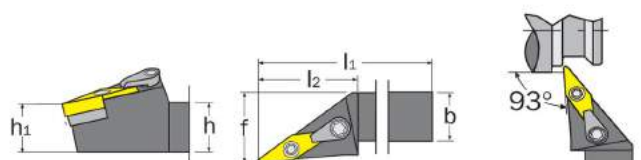
Inserts See Group 120

Sizes **16** = 1604__

VN_A



VN_G



Designation	Dimensions (mm)						Weight	Order Code
MVJN....	h=h ₁	b	l ₁	l ₂	f		each	IND-106
R 2020K 16	20	20	125	37	25		395g	-1500K
L 2020K 16							398g	-1510K
R 2525M 16	25	25	150	37	32		679g	-1520K
L 2525M 16							688g	-1530K

Spares to Suit Contact your local branch for prices

Shim	Lock Pin	Clamp	Clamp Screw			Shim Key	Clamp Key
Order Code IND-107						Order Code KEN-601	
-2100K	-1600K	-0600K	-0900K	-	-	-1200K	-1300K
-2100K	-1600K	-0600K	-0900K	-	-	-1200K	-1300K

MVVN N

72.5° approach for negative 35° rhombic inserts.



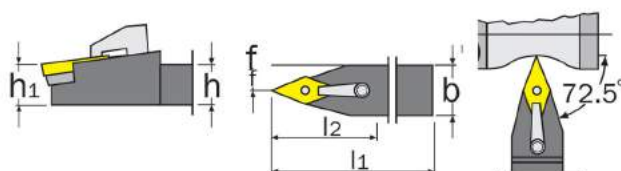
Inserts See Group 120

Size **16** = 1604__

VN_A



VN_G



Designation	Dimensions (mm)						Weight	Order Code
MVVN....	h=h ₁	b	l ₁	l ₂	f		each	IND-106
N 2020K 16	20	20	125	48	10.0		379g	-1580K
N 2525M 16	25	25	150	48	12.5		675g	-1600K

Spares to Suit Contact your local branch for prices

Shim	Lock Pin	Clamp	Clamp Screw			Shim Key	Clamp Key
Order Code IND-107						Order Code KEN-601	
-2100K	-1600K	-0600K	-0900K	-	-	-1200K	-1300K
-2100K	-1600K	-0600K	-0900K	-	-	-1200K	-1300K

MWLN R/L

95° approach for negative 80° trigon inserts.



Inserts See Group 120

Sizes **08** = 0804__

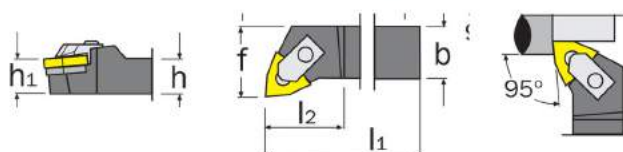
WN_A



WN_G



WN_M



Designation	Dimensions (mm)						Weight	Order Code
MWLN....	h=h ₁	b	l ₁	l ₂	f		each	IND-106
R 2020K 08	20	20	125	34	25		453g	-1680K
L 2020K 08							465g	-1690K
R 2525M 08	25	25	150	34	32		789g	-1700K
L 2525M 08							776g	-1710K

Spares to Suit Contact your local branch for prices

Shim	Lock Pin	Clamp	Clamp Screw			Shim Key	Clamp Key
Order Code IND-107						Order Code KEN-601	
-2920K	-1680K	-0940K	-0080K	-	-	-1250K	-1500K
-2920K	-1680K	-0940K	-0080K	-	-	-1250K	-1500K


PCBN R/L

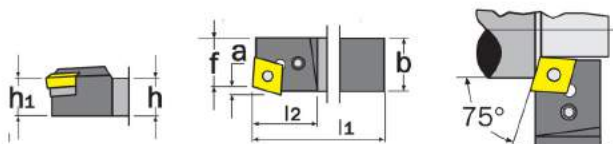
75° approach for negative 80° rhombic inserts.


Inserts See Group 120

Sizes **12** = 1204__

Sizes **16** = 1606__

CN_A

CN_G


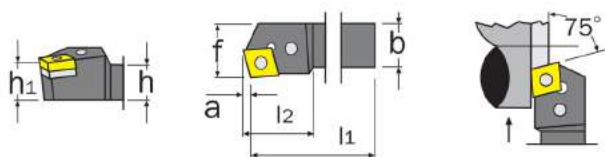
Designation	Dimensions (mm)	Weight	Order Code
PCBN....	h=h ₁ b l ₁ l ₂ f a	each	IND-106
R 2525M 12	25 25 150 28 22 3.1	730g	-1762K
L 2525M 12		725g	-1763K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K

PCKN R/L

75° approach for negative 80° rhombic inserts.



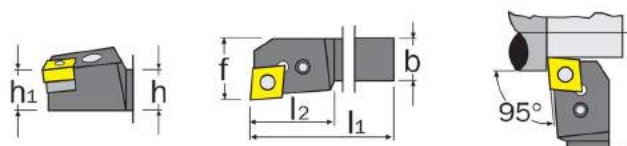
Designation	Dimensions (mm)	Weight	Order Code
PCKN....	h=h ₁ b l ₁ l ₂ f a	each	IND-106
R 2020K 12	20 20 125 28 25 3.1	408g	-1820K
R 2525M 12	25 25 150 34 22 3.8	760g	-1860K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K

PCLN R/L

95° approach for negative 80° rhombic inserts.



Designation	Dimensions (mm)	Weight	Order Code
PCLN....	h=h ₁ b l ₁ l ₂ f a	each	IND-106
R 1616H 12	16 16 100 26 20	206g	-1960K
R 2020K 09	20 20 125 28 25	406g	-1980K
R 2020K 12	20 20 125 28 25	404g	-2000K
L 2020K 12		404g	-2010K
R 2525M 12	25 25 150 28 32	742g	-2040K
L 2525M 12		738g	-2050K
R 2525M 16	25 25 150 34 32	743g	-2060K
L 2525M 16		749g	-2070K
R 3225P 12	32 25 170 28 32	1067g	-2100K
L 3225P 12		1045g	-2210K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2150K	-3100K	-1260K	-1500K	-	-	-	-1300K
-2130K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2860K	-3150K	-1220K	-1590K	-	-	-	-1300K
-2150K	-3100K	-1050K	-1400K	-	-	-	-1300K

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PDJN R/L

93° approach for negative 55° rhombic inserts.

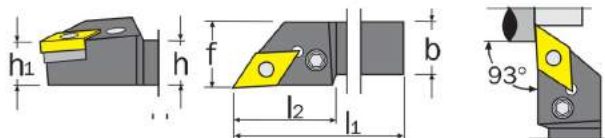


Inserts See Group 120

Sizes **11** = 1104_Sizes **15** = 1506_

= 1504_ (optional)

DN_A



Spares to Suit Contact your local branch for prices

		Optional 				
1104_ Shim	1506_ Shim	1504_ Shim	Shim Pin	Lever	Lever Screw	Hex Key
Order Code IND-107						Order Code KEN-601
-2800K	-	-	-3050K	-0950K	-1300K	-1250K
-	-2250K	-2270K	-3100K	-1100K	-1410K	-1300K
-2800K	-	-	-3050K	-0950K	-1300K	-1250K
-	-2250K	-2270K	-3100K	-1100K	-1410K	-1300K

Designation	Dimensions (mm)	Weight	Order Code
PDJN....	h=h ₁ b l ₁ l ₂ f	each	IND-106
R 2020K 11	20 20 125 30 25	386g	-2380K
L 2020K 11	20 20 125 30 25	383g	-2390K
R 2020K 15	20 20 125 34 25	383g	-2400K
L 2020K 15	20 20 125 34 25	393g	-2410K
R 2525M 11	25 25 150 33 32	715g	-2420K
L 2525M 11	25 25 150 33 32	715g	-2430K
R 2525M 15	25 25 150 34 32	726g	-2440K
L 2525M 15	25 25 150 34 32	720g	-2450K

PDNN R

63° approach for negative 55° rhombic inserts.

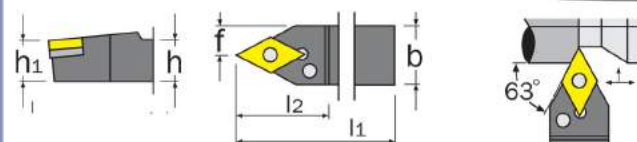


Inserts See Group 120

Sizes **15** = 1506_

= 1504_ (optional)

DN_A



Spares to Suit Contact your local branch for prices

	Optional 				
1506_ Shim	1504_ Shim	Shim Pin	Lever	Lever Screw	Hex Key
Order Code IND-107					
-2250K	-2270K	-3100K	-1100K	-1410K	-1300K

Designation	Dimensions (mm)	Weight	Order Code
PDNN....	h=h ₁ b l ₁ l ₂ f	each	IND-106
R 2525M 15	25 25 150 34 12.5	689g	-2580K

PRSN R

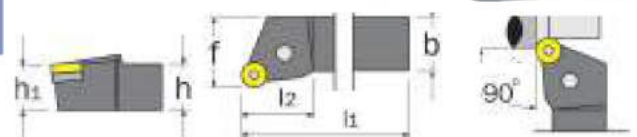
90° approach for negative round inserts.



Inserts See Group 120

Size **12** = 120400Sizes **19** = 190600

RN_A



Spares to Suit Contact your local branch for prices

				
Shim	Shim Pin	Lever	Lever Screw	Hex Key
Order Code IND-107				
-2350K	-3100K	-1050K	-1400K	-1300K

Designation	Dimensions (mm)	Weight	Order Code
PRSN....	h=h ₁ b l ₁ l ₂ f	each	IND-106
R 2525M 12	25 25 150 28 32	715g	-2840K

PSBN R/L

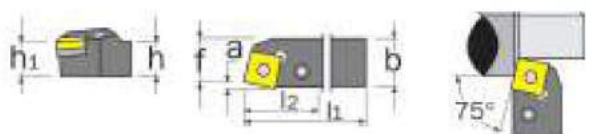
75° approach for negative square inserts.



Inserts See Group 120

Sizes **09** = 0903_Sizes **12** = 1204_Sizes **19** = 1906_

SN_A



Spares to Suit Contact your local branch for prices

				
Shim	Shim Pin	Lever	Lever Screw	Hex Key
Order Code IND-107				
-2500K	-3100K	-1050K	-1400K	-1300K
-2500K	-3100K	-1050K	-1400K	-1300K

Designation	Dimensions (mm)	Weight	Order Code
PSBN....	h=h ₁ b l ₁ l ₂ f a	each	IND-106
R 2020K 12	20 20 125 28 17 3	390g	-2940K
L 2020K 12	20 20 125 28 17 3	390g	-2950K
R 2525M 12	25 25 150 28 22 3	716g	-2960K



PSDN N

45° straight approach for negative square inserts.



Inserts See Group 120

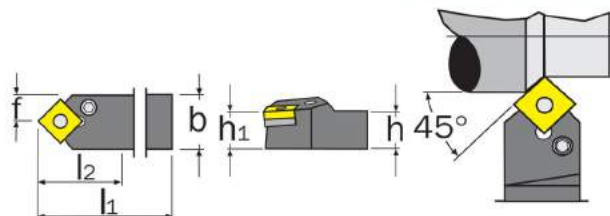
Size **12** = 1204__

Size **19** = 1906__

SN_A



SN_G



Designation	h=h ₁	b	l ₁	l ₂	f	Order Code
PSDN....						IND-106
N 2020K 12	20	20	125	28	10.0	-3220K
N 2525M 12	25	25	150	28	12.5	-3240K
N 3225P 19	32	25	170	42	12.5	-3280K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2500K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2500K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2550K	-3200K	-1250K	-1580K	-	-	-	-1400K

PSKN R/L

75° approach for negative square inserts.



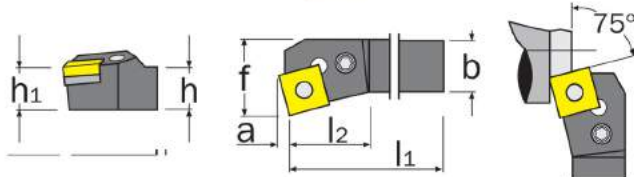
Inserts See Group 120

Size **12** = 1204__

SN_A



SN_G



Designation	h=h ₁	b	l ₁	l ₂	f	a	Order Code
PSKN....							IND-106
R 2525M 12	25	25	150	28	32	3.1	-3360K

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2500K	-3100K	-1050K	-1400K	-	-	-	-1300K

PSSN R/L

45° offset approach for negative square inserts.



Inserts See Group 120

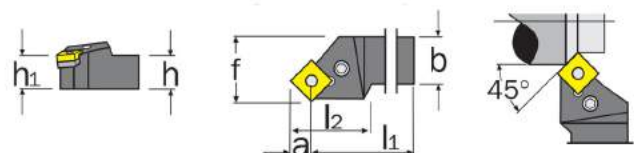
Size **12** = 1204__

Size **19** = 1906__

SN_A



SN_G



Designation	h=h ₁	b	l ₁	l ₂	f	a	Order Code
PSSN....							IND-106
R 2020K 12	20	20	125	28	25	8.3	-3540K
L 2020K 12	20	20	125	28	25	8.3	-3550K
R 2525M 12	25	25	150	28	32	8.3	-3560K
L 2525M 12	25	25	150	28	32	8.3	-3570K
R 3232P 19	32	32	170	42	40	12.5	-3660K

Spares to Suit Contact your local branch for prices

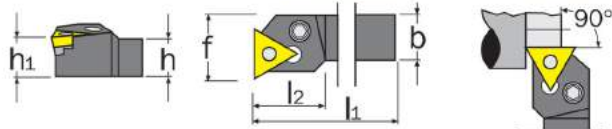
Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2500K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2500K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2550K	-3200K	-1250K	-1580K	-	-	-	-1400K

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PTFN R/L

90° approach for negative triangular inserts.



Designation	Dimensions (mm)					Order Code
PTFN....	h=h1	b	l1	l2	f	IND-106
R 2020K 16	20	20	125	22	25	-3680K
R 2525M 16	25	25	150	22	32	-3740K

Spares to Suit Contact your local branch for prices

							
Order Code IND-107							
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K

Inserts See Group 120
Sizes 16 = 1604__

TN_A

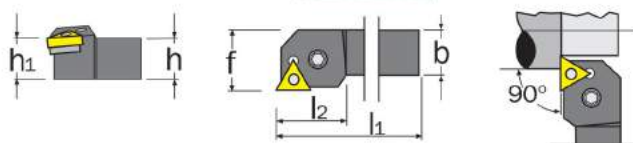


TN_G



PTGN R/L

90° approach for negative triangular inserts.



Designation	Dimensions (mm)					Order Code
PTGN....	h=h1	b	l1	l2	f	IND-106
R 1616H 16	16	16	100	22	20	-3900K
L 1616H 16	16	16	100	22	20	-3910K
R 2020K 16	20	20	125	22	25	-3940K
L 2020K 16	20	20	125	22	25	-3950K
R 2525M 16	25	25	150	22	32	-3960K
L 2525M 16	25	25	150	22	32	-3970K
R 2525M 22	25	25	150	28	32	-3980K

Spares to Suit Contact your local branch for prices

							
Order Code IND-107							
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2600K	-3100K	-1050K	-1400K	-	-	-	-1300K

Inserts See Group 120
Size 16 = 1604__
Size 22 = 2204__

TN_A

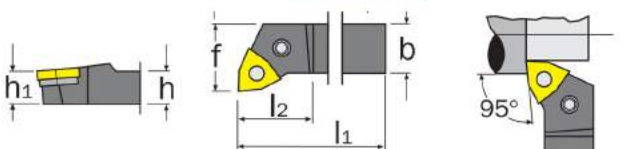


TN_G



PWLN R/L

95° approach for negative 80° trigon inserts.



Designation	Dimensions (mm)					Order Code
PWLN....	h=h1	b	l1	l2	f	IND-106
R 1616H 06	16	16	100	21	20	-4080K
L 1616H 06	16	16	100	21	20	-4082K
R 2020K 06	20	20	125	25	25	-4090K
L 2020K 06	20	20	125	25	25	-4092K
R 2020K 08	20	20	125	25	25	-4100K
L 2020K 08	20	20	125	25	25	-4110K
R 2525M 06	25	25	150	34	32	-4114K
L 2525M 06	25	25	150	34	32	-4116K
R 2525M 08	25	25	150	34	32	-4120K
L 2525M 08	25	25	150	34	32	-4130K

Spares to Suit Contact your local branch for prices

							
Order Code IND-107							
-2083K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2083K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2084K	-3100K	-1050K	-1400K	-	-	-	-1300K
-2083K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2084K	-3100K	-1050K	-1400K	-	-	-	-1300K

Inserts See Group 120
Size 06 = 0604__
Size 08 = 0804__

WN_A



WN_G

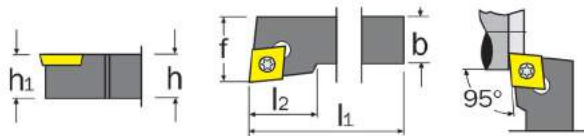



SCLC R/L

 95° approach for 7° positive
80° rhombic inserts.


Inserts See Group 120

 Size **06** = 0602
 Size **09** = 09T3
 Size **12** = 1204

CC_T

Spares to Suit Contact your local branch for prices

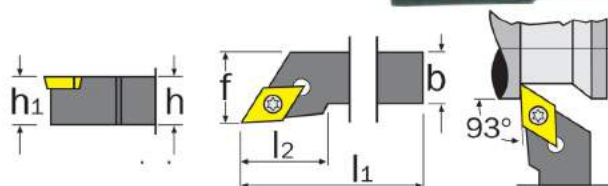
Shim	Shim Screw	Insert Screw						Torx Key
Order Code IND-107								
-	-	-3250K	-	-	-	-	-	-5070K
-	-	-3270K	-	-	-	-	-	-5150K
-	-	-3270K	-	-	-	-	-	-5150K
-	-	-3270K	-	-	-	-	-	-5150K
-	-	-3270K	-	-	-	-	-	-5150K
-2180K	-1575K	-1275K	-	-	-	-	-	-5200K
-2180K	-1575K	-1275K	-	-	-	-	-	-5150K

SDJC R/L

 93° approach for 7° positive
55° rhombic inserts.


Inserts See Group 120

 Size **07** = 0702
 Size **11** = 11T3

DC_T

Spares to Suit Contact your local branch for prices

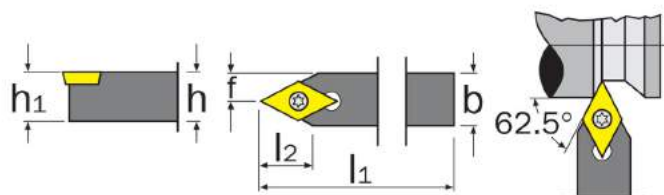
Shim	Shim Screw	Insert Screw						Torx Key
Order Code IND-107								
-	-	-3250K	-	-	-	-	-	-5070K
-	-	-3250K	-	-	-	-	-	-5070K
-	-	-3400K	-	-	-	-	-	-5150K
-2246K	-1570K	-3400K	-	-	-	-	-	-5150K
-2246K	-1570K	-3400K	-	-	-	-	-	-5150K
-2246K	-1570K	-3400K	-	-	-	-	-	-5150K

SDNC N

 62.5° approach for 7° positive
55° rhombic inserts.


Inserts See Group 120

 Size **07** = 0702
 Size **11** = 11T3

DC_T

Spares to Suit Contact your local branch for prices

Shim	Shim Screw	Insert Screw						Torx Key
Order Code IND-107								
-	-	-3250K	-	-	-	-	-	-5070K
-	-	-3250K	-	-	-	-	-	-5070K
-2246K	-1570K	-3400K	-	-	-	-	-	-5150K
-2246K	-1570K	-3400K	-	-	-	-	-	-5150K

Designation	SDNC....	h=h ₁	b	l ₁	l ₂	f	Order Code
N 1010E	07	10	10	70	16	5.0	-4720K
N 1212F	07	12	12	80	18	6.0	-4740K
N 1616H	11	16	16	100	22	8.0	-4780K
N 2020K	11	20	20	125	22	10.0	-4800K

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**SRDC N**90° approach for
positive round inserts.

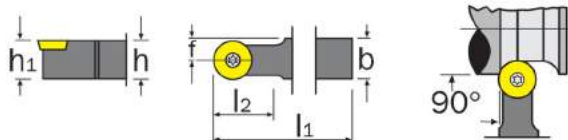
Inserts See Group 120

Sizes **06** = 0602M0.Sizes **08** = 0803M0.

RC_M



RC_T



Designation SRDC....	Dimensions (mm)					Order Code IND-106
	h=h1	b	l1	l2	f	
N 2020K 06	20	20	125	20	13.0	-4950K
N 2020K 08	20	20	125	20	14.0	-4960K
N 2525M 06	25	25	150	25	15.5	-4970K
N 2525M 08	25	25	150	25	16.5	-4980K

Spares to Suit Contact your local branch for prices

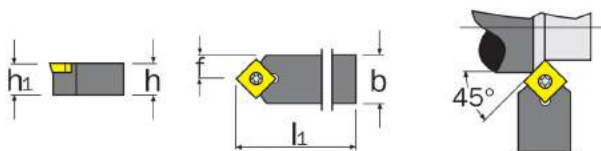
Insert Screw									Torx Key
Order Code IND-107									
-3250K	-	-	-	-	-	-	-	-	-5070K
-3264K	-	-	-	-	-	-	-	-	-5090K
-3250K	-	-	-	-	-	-	-	-	-5070K
-3264K	-	-	-	-	-	-	-	-	-5090K

SSDC N45° approach for
7° positive square inserts.

Inserts See Group 120

Sizes **09** = 09T3__Sizes **12** = 1204__

SC_T



Designation SSDC....	Dimensions (mm)					Order Code IND-106
	h=h1	b	l1	l2	f	
N 1212F 09	12	12	80	-	6	-5160K
N 1616H 09	16	16	100	-	8	-5180K
N 2020K 12	20	20	125	-	10	-5200K

Spares to Suit Contact your local branch for prices

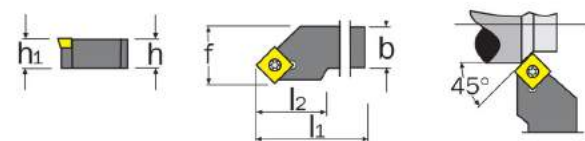
Shim	Shim Screw	Insert Screw							Torx Key
Order Code IND-107									
-	-	-3270K	-	-	-	-	-	-	-5150K
-	-	-3270K	-	-	-	-	-	-	-5150K
-2090K	-1575K	-1275K	-	-	-	-	-	-	-5200K

SSSC R/L45° approach for
7° positive square inserts.

Inserts See Group 120

Size **09** = 09T3__Size **12** = 1204__

SC_T



Designation SSSC....	Dimensions (mm)					Order Code IND-106
	h=h1	b	l1	l2	f	
R 1212F 09	12	12	80	22	20	-5310K
R 1616H 09	16	16	100	22	20	-5350K
R 2020K 12	20	20	125	22	25	-5390K

Spares to Suit Contact your local branch for prices

Shim	Shim Screw	Insert Screw							Torx Key
Order Code IND-107									
-	-	-3270K	-	-	-	-	-	-	-5150K
-	-	-3270K	-	-	-	-	-	-	-5150K
-2090K	-1570K	-1275K	-	-	-	-	-	-	-5200K


STGC R/L

90° approach for
7° positive triangular inserts.

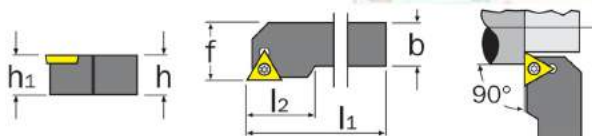


Inserts See Group 120

Sizes **11** = 1102__

Sizes **16** = 16T3__

TC_T



Designation	STGC....	h=h ₁	b	l ₁	l ₂	f	Order Code
							IND-106
R 1212F	11	12	12	80	18	16	-5660K
R 1616H	11	16	16	100	22	20	-5680K
R 2020K	16	20	20	125	22	25	-5740K
L 2020K	16	20	20	125	22	25	-5750K
R 2525M	16	25	25	150	22	32	-5760K

Spares to Suit Contact your local branch for prices

Shim	Shim Screw	Insert Screw					Torx Key
Order Code IND-107							
-	-	-3250K	-	-	-	-	-5070K
-	-	-3250K	-	-	-	-	-5070K
-2087K	-1570K	-3400K	-	-	-	-	-5150K
-2087K	-1570K	-3400K	-	-	-	-	-5150K

SVJN R/L

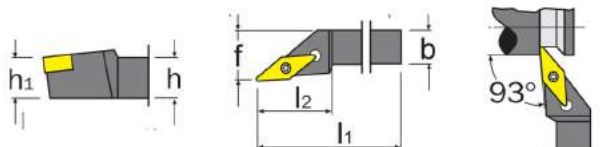
93° approach for
35° negative rhombic inserts.



Inserts See Group 120

Size **12** = 12T3__

VN_G



Designation	SVJN....	h=h ₁	b	l ₁	l ₂	f	Order Code
							IND-106
R 2020K	12	20	20	125	22	25	-5830K
L 2020K	12	20	20	125	22	25	-5840K
R 2525M	12	25	25	150	31	32	-5850K

Spares to Suit Contact your local branch for prices

		Insert Screw				Torx Key	Hex Key
Order Code IND-107							
-	-	-3520K	-	-	-	-5090K	-0080K
-	-	-3520K	-	-	-	-5090K	-

SVLB R/L

95° approach for 5° positive
35° rhombic inserts.



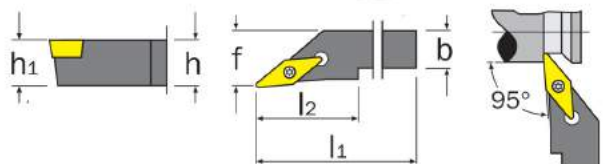
Inserts See Group 120

Size : **16** = 1604

VB_T

VB_A

VB_M



Designation	SVLB....	h=h ₁	b	l ₁	l ₂	f	Order Code
							IND-106
R 2020K	16	20	20	125	42	25	-5940K
L 2020K	16	20	20	125	42	25	-5950K
R 2525M	16	25	25	150	42	32	-6020K
L 2525M	16	25	25	150	42	32	-6030K

Spares to Suit Contact your local branch for prices

	Shim Screw	Insert Screw					Torx Key
Order Code IND-107							
	-1570K	-3400K	-	-	-	-	-5150K
	-1570K	-3400K	-	-	-	-	-5150K

SVVB N

72.5° approach for 5° positive
35° rhombic inserts.



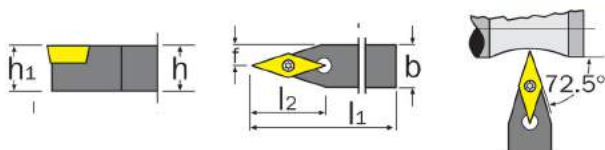
Inserts See Group 120

Size : **16** = 1604

VB_T

VB_A

VB_M



Designation	SVVB....	h=h ₁	b	l ₁	l ₂	f	Order Code
							IND-106
N 2020K	16	20	20	125	28	10.6	-6080K
N 2525M	16	25	25	150	28	13.1	-6100K
N 3225P	16	32	25	170	28	13.1	-6120K

Spares to Suit Contact your local branch for prices

	Shim Screw	Insert Screw					Torx Key
Order Code IND-107							
	-1570K	-3400K	-	-	-	-	-5150K
	-1570K	-3400K	-	-	-	-	-5150K
	-1570K	-3400K	-	-	-	-	-5150K

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CTFP R/L

90° approach for 11° positive triangular inserts.



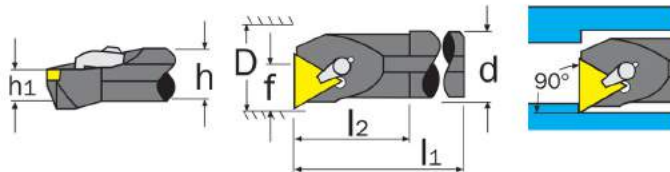
Inserts See Group 120

Sizes **11** = 1103__Sizes **16** = 1603__

TP_R



TP_N



Spares to Suit Contact your local branch for prices

							
Shim	Shim Pin	Clamp Set					Hex Key
Order Code IND-107							Order Code KEN-601
-	-	-4250K	-	-	-	-	-1250K
-	-	-4210K	-	-	-	-	-1250K
-	-	-4210K	-	-	-	-	-1250K
-	-	-4220K	-	-	-	-	-1300K
-2050K	-2950K	-4300K	-	-	-	-	-1300K

ISO Designation	Dimensions (mm)							Order Code IND-106
	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	
S12M CTFPR 11	12	11	5.5	150	25	9	16	-6400K
S16R CTFPR 11	16	15	7.5	200	30	11	20	-6410K
S20S CTFPR 11	20	18	9.0	250	35	13	24	-6420K
S25T CTFPR 16	25	23	11.5	300	40	17	31	-6460K
S32U CTFPR 16	32	30	15.0	350	50	22	39	-6480K

Top Clamp & Pin Lock Boring Bars

MWLN R/L

95° approach for 80° negative trigon inserts.

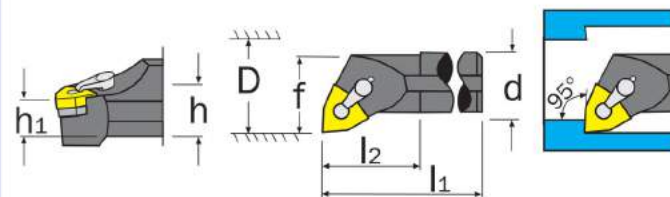


Inserts See Group 120

Sizes **08** = 0804__

WN_A

WN_G



Spares to Suit Contact your local branch for prices

								
Shim	Lock Pin	Clamp Set	Clamp Screw				Shim Key	Hex Key
Order Code IND-107							Order Code KEN-601	
-	-1490K	-0940K	-1880K	-	-	-	-1250K	-1500K
-2920K	-1680K	-0940K	-1880K	-	-	-	-1250K	-1500K
-2920K	-1680K	-0940K	-1880K	-	-	-	-1250K	-1500K

ISO Designation	Dimensions (mm)							Order Code IND-106
	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	
S25T MWLNR 08	25	23	11.5	300	40	17	31	-6770K
S25T MWLNL 08	25	23	11.5	300	40	17	31	-6772K
S32U MWLNR 08	32	30	15.0	350	50	22	39	-6776K
S40V MWLNR 08	40	37	18.5	400	60	27	48	-6782K

Lever Lock Boring Bars

PCLN R/L

95° approach for 80° negative rhombic inserts.

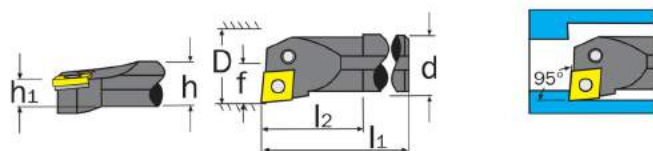


Inserts See Group 120

Sizes **09** = 0903__Sizes **12** = 1204__Sizes **16** = 1606__

CN_A

CN_G



Spares to Suit Contact your local branch for prices

							
Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-	-3050K	-0950K	-1450K	-	-	-	-1250K
-	-3100K	-1150K	-1450K	-	-	-	-1250K
-2150K	-3100K	-1260K	-1500K	-	-	-	-1300K
-2150K	-3100K	-1260K	-1500K	-	-	-	-1300K
-2860K	-3150K	-1220K	-1590K	-	-	-	-1300K

ISO Designation	Dimensions (mm)							Order Code IND-106
	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	
S25T PCLNR 09	25	23	11.5	300	33	17.0	32	-6800K
S25T PCLNR 12	25	23	11.5	300	40	17.0	31	-6820K
S25T PCLNL 12	25	23	11.5	300	40	17.0	31	-6830K
S32U PCLNR 12	32	30	15.0	350	50	22.0	39	-6840K
S32U PCLNL 12	32	30	15.0	350	50	22.0	39	-6850K
S40V PCLNR 12	40	37	18.5	400	60	27.0	48	-6860K
S40V PCLNL 12	40	37	18.5	400	60	27.0	48	-6870K
S50W PCLNR 16	50	47	23.5	450	65	35.0	61	-6880K

PDUN R/L

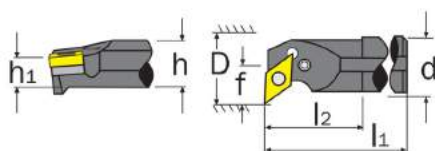
93° approach for 55° negative rhombic inserts.


Inserts See Group 120

Sizes **11** = 1104__

Sizes **15** = 1506__

DN_A

DN_G

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-2800K	-3050K	-0950K	-1300K	-	-	-	-1250K
-2250K	-3100K	-1100K	-1500K	-	-	-	-1300K
-2250K	-3100K	-1100K	-1410K	-	-	-	-1300K

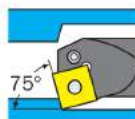
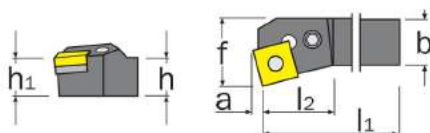
ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S25T PDUNR 11	25	25	15.0	300	50	22	30	-6940K
S32U PDUNR 15	32	30	15.0	350	50	22	39	-6960K
S40V PDUNR 15	40	37	18.5	400	60	27	48	-6980K

PSKN R

75° approach for negative square inserts.

Inserts See Group 120

Sizes **12** = 1204__

SN_G

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-	-	-1150K	-1450K	-	-	-	-1250K

ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	a	D _{min}	Order Code
S25T PSKNR 12	25	23	11.5	300	40	17	3.1	31	-7020K

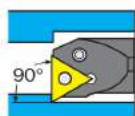
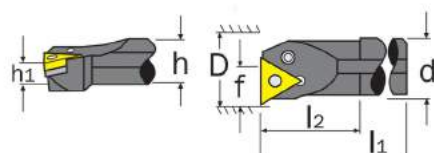
PTFN R/L

90° approach for negative triangular inserts.

Inserts See Group 120

Sizes **16** = 1604__

Sizes **22** = 2204__

TN_G

Spares to Suit Contact your local branch for prices

Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							Order Code KEN-601
-	-	-1000K	-1350K	-	-	-	-1200K
-2450K	-3050K	-0950K	-1300K	-	-	-	-1250K

ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S25T PTFNR 16	25	23	11.5	300	40	17	31	-7200K
S32U PTFNR 16	32	30	15.0	350	50	22	39	-7240K

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PWLNR R/L

95° approach for negative 80° Trigon inserts.

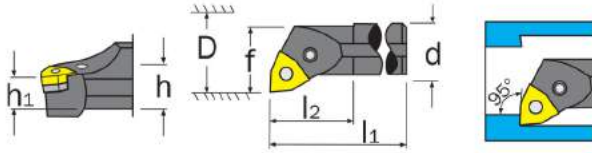


Inserts See Group 120

Sizes 06 = 0604 _

Sizes 08 = 0804 _

WN_G



ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S16R PWLNR 06	16	15	9	200	44	10	19	-7320K
S20S PWLNR 06	20	18	9	250	42	12	23	-7324K
S25T PWLNR 06	25	23	15	300	45	15.5	30	-7328K
S25T PWLNR 08	25	23	11.5	300	40	17	31	-7334K

Spares to Suit Contact your local branch for prices

							
Shim	Shim Pin	Lever	Lever Screw				Hex Key
Order Code IND-107							
-	-	-1000K	-1350K	-	-	-	-1250K
-	-	-1000K	-1350K	-	-	-	-1250K
-2083K	-3050K	-0950K	-1300K	-	-	-	-1250K
-	-	-1260K	-1500K	-	-	-	-1300K

Screw-On Boring Bars

SCLC R/L

95° approach for 7° positive 80° rhombic inserts.

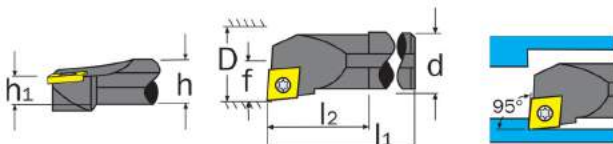


Inserts See Group 120

Sizes 06 = 0602 _

Sizes 09 = 09T3 _

CC_T



ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S08K SCLCR 06	8	7	3.5	125	16	5	11	-7380K
S08K SCLCL 06	8	7	3.5	125	16	5	11	-7390K
S10M SCLCR 06	10	9	4.5	150	25	7	13	-7400K
S10M SCLCL 06	10	9	4.5	150	25	7	13	-7410K
S12M SCLCR 06	12	11	5.5	150	30	9	17	-7435K
S12Q SCLCR 09	12	11	5.5	180	30	9	17	-7440K
S12Q SCLCL 09	12	11	5.5	180	30	9	17	-7450K
S16R SCLCR 09	16	15	7.5	200	30	11	20	-7480K
S16R SCLCL 09	16	15	7.5	200	30	11	20	-7490K
S20S SCLCR 09	20	18	9	250	35	13	24	-7500K
S20S SCLCL 09	20	18	9	250	35	13	24	-7510K
S25T SCLCR 09	25	23	11.5	300	40	17	31	-7520K

Spares to Suit Contact your local branch for prices

							
Insert Screw							Torx Key
Order Code IND-107							
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3350K	-	-	-	-	-	-5150K
-	-3350K	-	-	-	-	-	-5150K
-	-3350K	-	-	-	-	-	-5150K
-	-3350K	-	-	-	-	-	-5150K

Screw-on Boring Bars (Through Coolant)

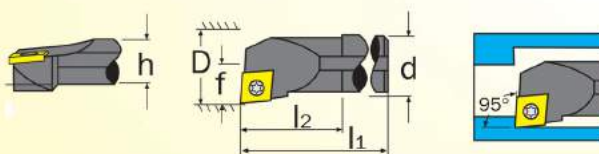
95° approach. Uses CCMT 06 inserts.

WITH
THROUGH
COOLANT

Inserts See Group 120

Sizes 06 = 0602 _

CC_T



ISO Designation	dg7	h	l ₁	l ₂	f	D _{min}	Order Code
A0608H SCLC 06	6	7	100	25	4	8	-7530K
A0810J SCLC 06	8	9	110	32	6	12	-7532K
A01012K SCLC 06	10	11	125	38	7	14	-7534K
A01216M SCLCR 06	12	15	150	50	9	18	-7536K
Set of all 4 above							-9980K

QBC-06 Quad Bore Holder Set – SCLC R

A set featuring 4 SCLCR 95° approach screw-on boring bars in 6, 8, 10 and 12mm diameter, the bars use a CCMT 06 insert. For small diameter bores on manual and CNC lathes.



Spares to Suit Contact your local branch for prices

							
Insert Screw							Torx Key
Order Code IND-107							
-	-5240K	-	-	-	-	-	-5070K

SDUC R/L

93° approach for 7° positive 55° rhombic inserts.

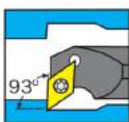
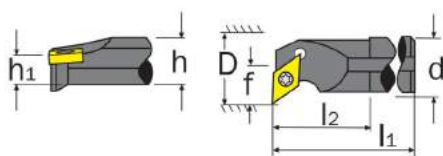
TOOLHOLDERS - ISO BORING
**GROUP
106**


Inserts See Group 120

Sizes **07** = 0702__

Sizes **11** = 11T3__

DC_T



ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S12Q SDUCR 07	12	11	5.5	180	25	9	16	-7660K
S12Q SDUCL 07	12	11	5.5	180	25	9	16	-7670K
S16R SDUCR 07	16	15	7.5	200	30	11	20	-7680K
S16R SDUCL 07	16	15	7.5	200	30	11	20	-7690K
S20S SDUCL 07	20	18	9.0	250	35	13	24	-7710K
S20S SDUCR 11	20	18	9.0	250	35	13	24	-7720K
S20S SDUCL 11	20	18	9.0	250	35	13	24	-7730K
S25T SDUCR 11	25	23	11.5	300	40	17	31	-7740K
S25T SDUCL 11	25	23	11.5	300	40	17	31	-7750K

Spares to Suit Contact your local branch for prices

Insert Screw							Torx Key
Order Code IND-107							
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3270K	-	-	-	-	-	-5150K
-	-3270K	-	-	-	-	-	-5150K

STFC R/L

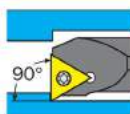
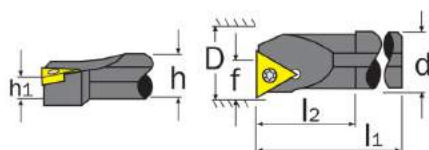
90° approach for 7° positive triangular inserts.

Inserts See Group 120

Sizes **11** = 1102__

Sizes **16** = 16T3__

TC_T



ISO Designation	dg7	h	h ₁	l ₁	l ₂	f	D _{min}	Order Code
S10K STFCR 11	10	9	4.5	125	25	7	13	-7840K
S12Q STFCR 11	12	11	5.5	180	25	9	16	-7880K
S16R STFCR 11	16	15	7.5	200	30	11	20	-7920K
S20S STFCR 11	20	18	9.0	250	35	13	24	-7940K
S25T STFCR 16	25	23	11.5	300	40	17	31	-7955K

Spares to Suit Contact your local branch for prices

Insert Screw							Torx Key
Order Code IND-107							
-	-3260K	-	-	-	-	-	-5060K
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3250K	-	-	-	-	-	-5070K
-	-3270K	-	-	-	-	-	-5150K

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SWISS+BURR Modular
Deburring Tools

An interchangeable system of handle, holders and blades designed to cover all hand applications of deburring. Made up of HSS and carbide blades, countersinks and scrapers along with ergonomically designed handles. This is one of the most comprehensive ranges available.

Blades are interchangeable with commonly available brands including Kennedy®, Noga®, Ruko®, Seco®, Snap-Tap® and Stellram®.

Application Range



Straight Edge



Hole Edge



Outer Edge



Cross Hole Both Edges



Hole Back Edge



Hole Inner Surface



Flat Surface



Sheets



Slot/Keyway



Inner Straight Corners

Industry Sectors



Mould & Dies



Construction & Trade



Railways



Automotive



General Engineering



Energy & Power



Aerospace



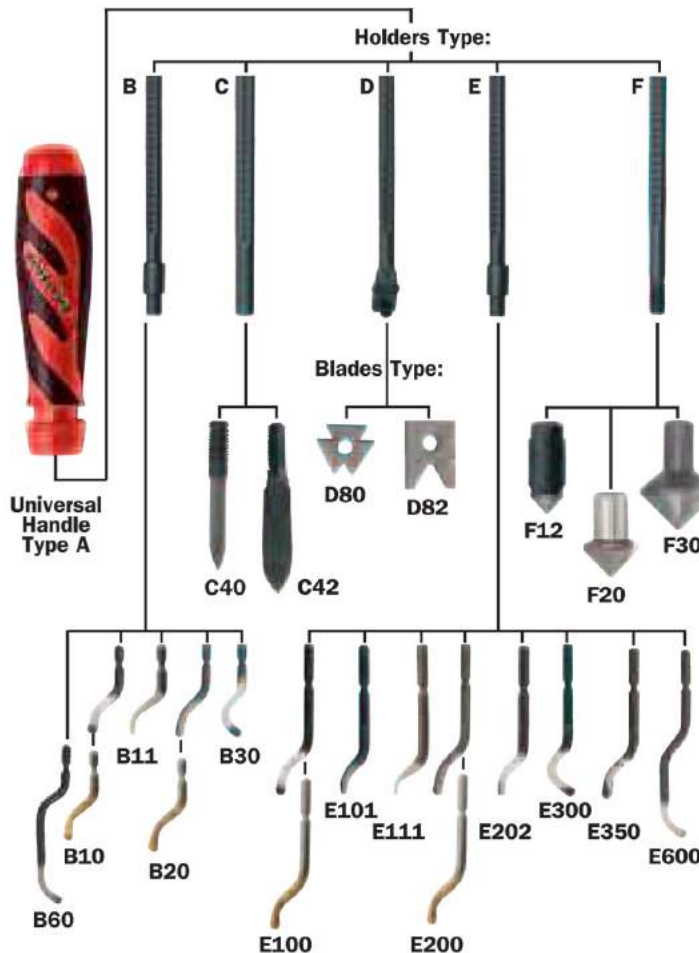
Agriculture



Oil & Gas



Medical



Material Range



Steel



Aluminium



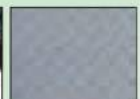
Copper



Brass



Stainless Steel



Sheet Metal



Hard Metal



Plastics



Cast



Rubber

Universal Ergonomic Handle

Modern ergonomic handle design, with an easy to use spring release mechanism. Pulling back on the locking head collar releases the telescopic blade holder for optimal length. Works with all **SWISS+BURR** holders and blades.



Type	To Suit	Weight each	Order Code
A	B, C, D, E & F Holders	130g	SWT-109 -1010A

Holders

Type	Suitable For Type	Weight each	Order Code
B	B Blades	50g	SWT-109 -1020B
C	C Scrapers	40g	-1200K
D	D Corner Chamfering Blades	50g	-1300R
E	E Blades	40g	-1400A
F	F Countersinks	50g	-1600P

Heavy Duty Slim Grip Handle
SB2000

SWISS+BURR hand deburring tools are a fast, effective and efficient way of deburring holes, slots and edges. **SWISS+BURR** is a totally modular system of interchangeable handles, holders and blades designed to cover all applications. A choice of HSS or carbide blades, countersinks and scrapers are available to suit your specific application. **SWISS+BURR** blades are also interchangeable with commonly available brands including Kennedy®, Noga®, Ruko®, Seco®, Snap-Tap® and Stellram®.



Product Number	Suitable for Type	Order Code
SB2000	E Blades	SWT-109 -6010A



Application Table (by Material)

Material Blade	Steel	Aluminium	Copper	Brass	Cast Iron	Plastics	Stainless Steel	Hardened Steels
B10	•	•	•			•		
B10 TiN	•	•	•			•	•	
B10 HSSCo	•	•	•			•	•	
B11	•	•	•			•		
B20				•	•	•		
B20 TiN				•	•	•		
B30	•	•	•			•		
B60	•	•	•			•		
C40/C42	•	•	•	•	•		•	
D80/D82	•	•	•	•	•	•	•	•
E100/E101	•	•	•			•		
E100 TiN	•	•	•			•	•	•
E111	•	•	•			•		
E200/E202				•	•	•		
E200 TiN				•	•	•		
E300	•	•	•			•		
E350				•	•			
E600	•	•	•			•		
F12/F20/F30	•	•	•	•	•	•	•	
N80	•	•	•			•	•	
N80K	•	•	•	•	•	•	•	

Light Duty Blades

B10

HSS Blade for straight and hole edge deburring.



B11

B10 geometry with thin nose for small diameter holes down to 2mm.



B20

HSS Blade for straight and hole edge deburring, blade design allows clockwise and anti-clockwise movement.



B30

HSS Blade for Cross-Hole and both edges, blade will simultaneously deburr the inside and outside of the hole. For use on holes up to 4mm thick.



B60

HSS Blade for deburring back edges on holes, will remove burrs from the back edge of holes up to 20mm thick.



Type	Description	Weight each	Order Code SWT-109
B10	Steel & Aluminium	30g/10	-1030C
B10 TiN	Steel & Aluminium	30g/10	-1031B
B10 HSSCo	Steel & Aluminium	30g/10	-1031M
B11	Steel & Aluminium	30g/10	-1032C
B20 TiN	Steel & Aluminium	30g/10	-1041B
B20	Brass & Cast Iron	30g/10	-1040D
B30	Sheet & Tubing, Front & Rear Cut	20g/10	-1050E
B60	Rear Cut - Extra Length	30g/10	-1060F

Modular Deburring Tools

Heavy Duty Blades

E100E100S



HSS heavy duty blade for use on straight and hole edges, for deburring materials with spiral chips. E100S has additional cobalt content for use on hardened materials.

E101



HSS heavy duty blade for use on straight and hole edges, E style shank with B10 cutting geometry, for use on materials with spiral chips and holes with minimum diameter of 2mm.

E111



HSS heavy duty blade is for straight and hole edge deburring, for use on materials with spiral chips, steel, aluminium, copper and plastic.

E200



HSS heavy duty blade for use on straight and hole edges, blade design allows clockwise and anti-clockwise movement for use on materials with powdery chips.

E202



HSS heavy duty blade for use on straight and hole edges, E style shank with B20 cutting geometry, blade design allows clockwise and anti clockwise movement for use on materials with powdery chips.

E300



HSS heavy duty blade for use on cross-hole and both edges, blade will simultaneously deburr the inside and outside of the hole up to 6mm thick. For use on materials with spiral chips.

E350



HSS heavy duty blade for use on straight and hole edges, blade design allows clockwise and anti-clockwise movement for use on materials with powdery chips.

E600



Heavy duty blade for removing burrs from the back edges of holes up to 20mm thick.

Type	Description	Weight each	Order Code SWT-109
E100	Steel & Aluminium	40g/10	-1420C
E100 TiN	Steel & Aluminium	40g/10	-1421B
E100S	Steel & Aluminium	40g/10	-1422C
E101	Steel & Aluminium, Extra Fine Point	50g/10	-1430D
E111	Steel & Aluminium	40g/10	-1431B
E200	Brass & Cast Iron	40g/10	-1440E
E200 TiN	Steel & Aluminium	40g/10	-1441B
E202	Brass & Cast Iron, Extra Fine Point	40g/10	-1450F
E300	Sheet & Tubing, Front & Rear Cut	50g/10	-1460G
E350	For Deburring Grooves	40g/10	-1480J
E600	Rear Cut - Extra Length	30g/ 5	-1500L

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SWISS+BURR B4 Hand Deburring Set

The **SWISS+BURR™** B4 deburring set is a popular choice for deburring holes, slots and edges on metals and plastics.

The **B4 set contains:** **SWISS+BURR™** 1x universal handle, 1x B-holder, B10 and B20 blades.

**4
PIECES**



Number
of Pieces

4

Order Code
SWT-109

-5020B

B & C Standard Duty Deburring & Scraping Set

The **SWISS+BURR™** B & C Standard Duty Deburring and Scraping Set is ideal for general deburring and scraping use on holes, slots and edges.

The set contains: **SWISS+BURR™** 1x Type A universal handle, 1x Type B Blade holder, 1x B10, 1x B11, 1x B20 TiN, 1x B30, 1x B60, 1x B70 carbide tipped, 1x Type C scraper and 1x C40 triangular scraper.

**11
PIECES**



Number
of Pieces

11

Order Code
SWT-109

-5021B

E & C Heavy Duty Deburring & Scraping Set

The **SWISS+BURR™** E & C Standard Duty Deburring and Scraping Set is ideal for intense deburring and scraping use on holes, slots and edges.

The set contains: **SWISS+BURR™** 1x Type A universal handle, 1x Type C scraper, 1x C42 triangular scraper, 1x Type E blade holder, 1x E100 TiN blade, 1x E111 blade, 1x E200 blade, 1x E300 two sided blade, 1x E600 rear cutting blade and 1x E700 blade.

**11
PIECES**



Number
of Pieces

11

Order Code
SWT-109

-5061B

E5 Heavy Duty Hand Deburring Set

For holes, slots and edges.

The **SWISS+BURR™** E-Type modular hand deburring system is supplied with high speed steel blades, and scrapers along with an ergonomically designed handle and blade holder.

The **E5 set contains:** **SWISS+BURR™** 1x universal handle, 1x E-holder, 1x E100 blade, 1x E101 blade, 1x E200 blade.

**5
PIECES**



Number
of Pieces

5

Order Code
SWT-109

-5050E

E7 Heavy Duty Hand Deburring Set

For holes, slots and edges.

Modern ergonomic handle design, with an easy to use spring release mechanism. Pulling back on the locking head collar releases the telescopic blade holder for optimal length.

Works with all **SWISS+BURR™** holders and blades.

The **E7 set contains:** **SWISS+BURR™** 1x universal handle, 1x E-holder, 1x E100 blade, 1x E101 blade, 1x E200 blade, 1x E202 blade, 1x E300 blade.

**7
PIECES**



Number
of Pieces

7

Order Code
SWT-109

-5060F

Diamond Coated Filing & Deburring Set

The set contains: **SWISS+BURR™**

1x extra close handle, 1x E100S and 1x E400 blades plus five different shaped diamond coated files: rectangular, square, triangular, round and half round.

**8
PIECES**



Number
of Pieces

8

Order Code
SWT-109

-1350Z

SWISS+BURR C3 Hand Scraper Set

Three cutting edges which when combined with a telescopic holder allow easy access to deburr small holes etc in difficult positions.

The C3 set contains: SWISS+BURR™ 1x ergonomic handle, 1x C type blade holder, and 1x C42 blade.

**3
PIECES**



Number
of Pieces
3

Order Code
SWT-109
-5030C

Scraper Blades

C40 HSS Small Triangular Scraper (4.00mm)

For precision work on back edge and inner surface of holes and flat surfaces.



C42 HSS Small Triangular Scraper (8.00mm)

For precision work on back edge and inner surface of holes and flat surfaces.



Type	Description	Weight each	Order Code SWT-109
C40	Triangular 4 x 20mm	10g	-1220M
C42	Triangular 8 x 30mm	10g	-1230N

D3 Hand Deburring Set

For scraping surfaces and deburring sheet metal up to 3mm thick.

The D3 set contains: SWISS+BURR™ 1x ergonomic handle, 1x D type blade holder and 1x D80 blade.

**3
PIECES**



Number
of Pieces
3

Order Code
SWT-109
-5040D

Corner Chamfering Blades

D80 Solid Carbide Blade

For sheet metal and flat surfaces, for scraping surfaces and deburring sheet metal up to 3mm thick.

D82 Solid Carbide Heavy Duty Blade

With double edge for deburring sheet metal, for deburring sheet metal up to 9mm thick.



Type	Description	Weight each	Order Code SWT-109
D80	Sheet up to 3mm	5g	-1340V
D82	Sheet up to 8mm	9g	-1350W

DB3 Double Burr Hand Deburring Set

For deburring materials with single or double straight edges up to 14.00mm thick. Blade holder fitted with safety hand guard.

The DB3 set contains: SWISS+BURR™ 1x ergonomic handle, 1x blade holder and 2x N80 blades.

**3
PIECES**



Number of Pieces	Description	Order Code SWT-109
3	DB3 Double Burr Hand Deburring Set	-2400K

N80 Replacement Blade

HSS double edged round blade for straight edge and sheet metal deburring on materials with spiral chips.



Type	For use with	Weight each	Order Code SWT-109
N80	Type DB3	10g/2	-2080M

DEBURRING TOOLS

GROUP
109



F3 Hand Chamfering & Countersinking Set

For hole edges up to 20.00mm.

The F3 set contains:

SWISS+BURR™ 1x ergonomic handle, 1x F type blade holder and 1x F20 countersink.

**3
PIECES**



Number
of Pieces
3

Order Code
SWT-109
-5070G

Countersinks - 90° Included Angle

F12

HSS countersink for hole edges up to 12mm dia.

F20

HSS countersink for hole edges up to 20mm dia.

F30

HSS countersink for hole edges up to 30mm dia.



Type	Description	Weight each	Order Code SWT-109
F12 (C12)	Drilled holes up to 12mm Diameter	30g/1	-1610Q
F20 (C20)	Drilled holes up to 20mm Diameter	30g/1	-1620R
F30 (C30)	Drilled holes up to 30mm Diameter	90g/1	-1630S

KB3 Keyway Burr Hand Deburring Set

3 Piece Set

For deburring and cleaning edges of internal and external keyways and slots up to 15mm.

The KB3 set contains: SWISS+BURR™ 1x ergonomic handle, 1x blade holder and 1x N80K blade.

**3
PIECES**



Number
of Pieces
3

Order Code
SWT-109
-2500M

N80K Replacement Blade

HSS blade with eight cutting edges for slots and keyways up to 15.00mm wide.



For use with	Weight each	Order Code SWT-109
Type KB3	10g/2	-2090N

Mini Burr Set

Lightweight reinforced plastic handle with easy grip and pocket clip. Handle will hold all E style heavy duty blades, supplied with 1x E100 blade. Removable cap for blade storage.

**2
PIECES**



Number
of Pieces
2

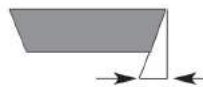
Order Code
SWT-109
-2600P

1 Shape

Symbol	Shape	Nose Angle	Figure
H	Hexagonal	120°	
O	Octagonal	135°	
P	Pentagonal	108°	
S	Square	90°	
T	Triangular	60°	
C	Rhombic	80°	
D		55°	
E		75°	
F		50°	
M		86°	
V		35°	
W	Trigon	80°	
L	Rectangular	90°	
A	Parallelogram	85°	
B		82°	
K		55°	
R	Round	-	

2 Relief Angle

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0
P	11°
O	Others



3 Accuracy

Symbol (class)	Tolerance (mm)		
	Corner Height (m)	Thickness (s)	I.C. Dia. (d)
A	±0.005	±0.025	±0.025
F	±0.005	±0.025	±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
J	±0.025	±0.13	±0.05 ±0.13
K	±0.01	±0.025	±0.05 ±0.13
L	±0.025	±0.025	±0.05 ±0.13
M	±0.08 ±0.18	±0.13	±0.05 ±0.13
N	±0.08 ±0.18	±0.025	±0.05 ±0.13
U	±0.13 ±0.38	±0.13	±0.08 ±0.25

* Details of accuracy will vary according to shape and size of insert - further details are available on request.

1 T 2 N 3 M 4 G 5 16

4 Groove and Hole

Symbol	Shape of Hole	Chipbreaker	Shape
N	Without Hole	Without	
R		Single-sided	
F		Double-sided	
A	Cylindrical Hole	Without	
M		Single-sided	
G		Double-sided	
W	With partly cylindrical hole, double-side 40° - 60°	Without	
T		Single-sided	
Q	With partly cylindrical hole, double-side 40° - 60° Countersink	Without	
U		Double-sided	
B	With partly cylindrical hole, single-side 70° - 90° Countersink	Without	
H		Single-sided	
C	With partly cylindrical hole, single-side 70° - 90° Countersink	Without	
J		Double-sided	
X	Special Type		

5 Cutting Edge Length

R		S		C		W		T		D		V		K		I.C. dia. (mm)
Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	Symbol	Length	
03	3.97	03	3.97	03	4.0	02	2.7	06	6.9	04	4.8	-	-	-	-	3.97
-	-	04	4.76	04	4.8	L3	-	08	8.2	05	5.8	-	-	-	-	4.76
05	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0
-	-	05	5.56	05	5.6	03	3.8	09	9.6	06	6.8	-	-	-	-	5.56
06	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.0
-	-	06	6.35	06	6.5	04	4.3	11	11.0	07	7.8	-	-	-	-	6.35
-	-	07	7.94	08	8.1	05	5.4	13	13.8	09	9.7	-	-	-	-	7.94
08	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0
09	9.525	09	9.525	09	9.7	06	6.5	16	16.5	11	11.6	16	16.6	16	19.7	9.525
10	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.0
12	12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.0
12	12.7	12	12.7	12	12.9	08	8.7	22	22.0	15	15.5	22	22.1	-	-	12.70
15	15.875	15	15.875	16	16.1	10	10.9	27	27.5	19	19.4	-	-	-	-	15.875
16	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.0
19	19.05	19	19.05	19	19.3	13	13.0	33	33.0	23	23.3	-	-	-	-	19.05
20	20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0
-	-	22	22.225	22	22.6	-	-	38	38.5	27	27.1	-	-	-	-	22.225
25	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.0
25	25.4	25	25.4	25	25.8	-	-	44	44.0	31	31.0	-	-	-	-	25.4
31	31.75	31	31.75	32	32.2	-	-	55	55.0	38	38.8	-	-	-	-	31.75
32	32.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32.0

Note: For the insert shape "K", the rule for the relationship between the symbol and the dimension differs from those of other shapes.

Detailed accuracy for **J, K, L, M, N, and U** classes
For inserts whose corner angle is larger than 55°

Inscribed circle	Tolerance on inscribed circle dia. (d)		Tolerance on corner height (m)		Insert Shapes applied
	J, K, L, M, N	U	J, K, L, M, N	U	
6.35	±0.05	±0.08	±0.08	±0.13	H M
9.525					O R
12.70	±0.08	±0.13	±0.13	±0.20	P
15.875	±0.10	±0.18	±0.15	±0.27	S
19.05					T
25.40	±0.13	±0.25	±0.18	±0.38	C E M

For D-type inserts whose corner angles are 55°

Inscribed circle	Tolerance on inscribed circle dia. (d)	Tolerance on corner height (m)	Insert Shapes applied
6.35	±0.05	±0.011	
9.525			
12.70	±0.08	±0.15	
15.875	±0.10	±0.11	
19.05			

Note: The tolerance for shape V may be increased more than the value above.

7a Edge Preparation (Milling Inserts)

Rake Angle	
A	14°
D	60°
E	75°
F	85°
P	90°
Special	
Relief Angle	
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z	Special

Note on insert thickness

For chipbreaker inserts, the thickness is defined as 'T' (height from the bottom face to the cutting edge) shown in the figure below



6 Thickness

Symbol	Thickness
01	1.59
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52



6 **04** **7** **08** **7a** **8** **T** **9** **N** **-** **10** **XX**

(Optional Symbols)

7 Corner Radius

Symbol	Corner Radius (mm)
00	0.03
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2



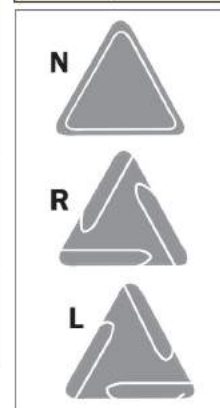
Radius (Turning Inserts)

8 Symbols of major cutting edge (Milling Inserts)

Symbol	Condition of Cutting Edge	Shape
F	Sharp Edge	
E	Honed Rounded edge	
T	Chamfered edge	
S	Combination Chamfered & honed edge	

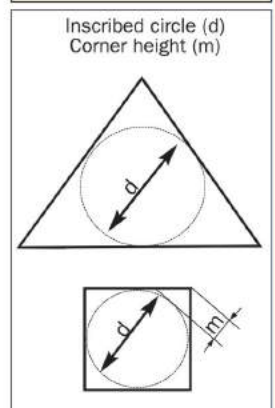
9 Hand of Insert

Symbol	Hand
R	Right
L	Left
N	Neutral



10 Chipbreaker

Chipbreakers are not part of ISO designation. Each manufacturer designates a chipbreaker in their own way.



QX500 (ISO **P10-P25**) Cermet. For high speed finishing and light cutting. Will remain a high class surface finish. Mainly used on steels and can be applied to finish some Stainless steels and Cast Irons.

QX505 (ISO **K05-K15**) Coated. Used for finishing, semi finishing and medium roughing of Cast Irons including Malleable and Nodular Irons, at high speed.

QX510 (ISO **P01-P15 M10-M15 K01-K20**) Coated. Used for finishing on Steels and Stainless Steels, suitable also for turning Cast Irons including Malleable irons at high speeds.

QX5020 (ISO **P10-P35 M10-M30 K10-K30**) CVD Coated. An excellent general purpose grade for medium roughing on Steels, Stainless and Cast Irons.

QX530 (ISO **P25-P35 M15-M25**) Coated. Turning grade for Steels, Cast Steels and Stainless Steels. A good general purpose Steel grade for roughing.

QX5030 (ISO **P20-P40 M20-M30**) CVD Coated. Medium / rough turning and intermediate cutting of steel / stainless steel. Combination of toughest substrate and alumina coating (MT-TiCN + TiC + AL2O3 + TiN) having superior chipping resistance provide wide coverage.

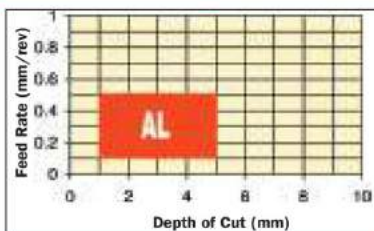
QX535S (ISO **M10-M30**) CVD Coated. For roughing and finishing turning applications on a wide variety of Stainless Steels.

QX8010 (ISO **M10 S10**) Coated. Excellent grade giving superior results on heat resistant super alloys, especially for the aerospace industry. TiAlN based coating ensures high wear resistance on these demanding materials.

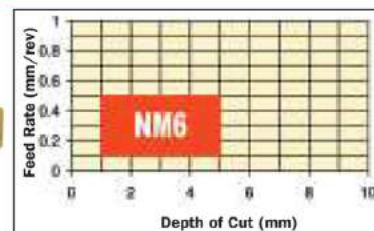
K10 (ISO **K05-K20**) Uncoated. Used in combination with a high rake geometry for matching Aluminiums, Plastics and other soft Non-Ferrous materials.

Material Group	Material Description Like Colour defines similar machineability	Brinell Hardness HB	Rockwell Hardness HRC	Tensile Strength N/mm²	Speed - m/min								
					QX500	QX505	QX510	QX5020	QX530	QX5030	QX535S	QX8010	K10
1.1	Mild, soft & free machining non-alloy low carbon steels	-130	-	400	200-270		200-300	180-350	150-200				
1.2	Non-alloy, case hardening, structural & low to medium carbon steels	-200		700	180-250		200-300	150-320	130-180	130-180			
1.3	Non alloy, plain & medium carbon steels & castings	-260	-26	850	150-220		200-300	130-280	110-150	120-150			
1.4	Generally low to medium alloy steels & castings	-260	-26	850	140-210		170-250	140-210	110-140	120-140			
1.5	Medium to high alloy steels, tool steels & steel	260-340	26-48	850-1200	140-200		140-200	130-200	100-120	100-120			
1.6	Heat treated high alloy steels & castings	340-450	36-48	1200-1500	110-180		90-180	100-170	70-90	70-90			
2.1	Soft, generally easy to machine Ferritic & Martensitic steels & castings	-230	-20	800	90-190			110-220		70-120	170-220	80-120	
2.2	Medium, reasonable to machine Austenitic stainless steels & castings	-290	-30	1000	70-160	100-220		70-140	60-100	70-120	120-170	80-120	30-60
2.3	Hard, difficult to machine Ferritic & Austenitic (duplex) stainless & castings	-340	-36	1200					50-90	50-90	70-120	80-120	30-70
3.1	Grey cast iron - soft to medium	-180			175-280	200-420	150-250	190-400					
3.2	Grey cast iron - medium to hard	180-300			160-250	160-340	100-180	150-300					
3.3	Malleable & Nodular iron - soft to medium	-220			175-280	110-300	150-250	120-250					
3.4	Malleable & Nodular irons - medium to hard	220-300			160-250	100-280	100-180	100-200					
4.1	Pure Titanium (also pure Nickel)											30-70	
4.2	Titanium alloys of a medium & hard nature											30-70	
4.3	Titanium alloys of a hard & very hard nature											30-50	
5.1	Heat resistant super alloys including iron based high temperature alloys											30-50	
5.2	Heat resistant super alloys, cobalt or nickel based, medium to hard to machine											30-50	
5.3	Heat resistant super alloys, cobalt or nickel based, hard or very hard to machine											30-50	
6.1	Copper			-500	200-250								200-500
6.2	Brass (Alpha - long chip)			-800	200-250								200-500
6.3	Brass (Beta - short chip) & soft Bronze			-800	200-250								100-500
6.4	High strength Bronze			-1200									
7.1	Unalloyed: Aluminium, Magnesium & Zinc			-150	300-500								400-700
7.2	Aluminium alloys less than 5% Si Magnesium & Zinc alloys (long chip)			150-300	300-500								400-700
7.3	Aluminium alloys 5% to 10% Si			200-500	300-500								400-600
7.4	Aluminium alloys above 10% Si (short chip)			200-500									300-500
8.1	Thermoplastics												400-700
8.2	Thermo-setting plastics												400-700
8.3	Reinforced plastics & composite materials												200-500

AL - High positive breaker specifically for aluminium alloys.

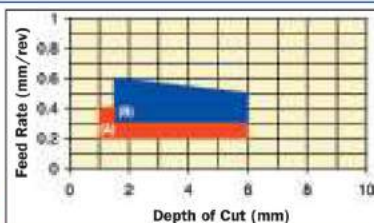


NM6 - General application medium breaker used on negative inserts with tougher grades.

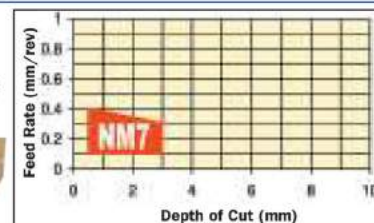


L11 / R11 - General purpose breaker for copy turning.

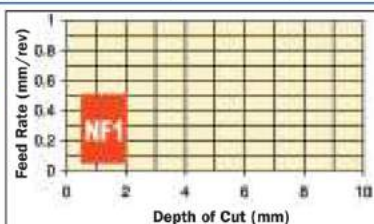
(A): 05 L/R11.
(B): 10 L/R11.



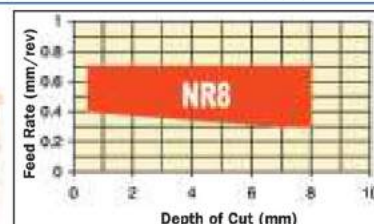
NM7 - A ripple edge breaker ideal for copy turning where cut depth varies and chip control is very important. Use with grade QX520 on steels, stainless and malleable irons.



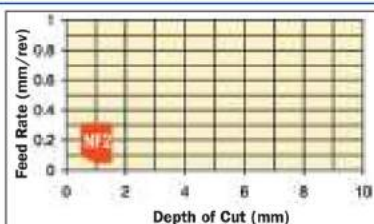
NF1 - Finishing breaker used on small VNMG 12 inserts.



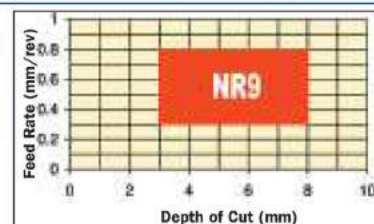
NR8 - Roughing breaker for steels and stainless with grades QX520.



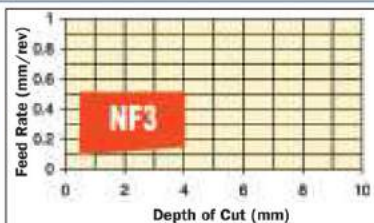
NF2 - A finishing chipbreaker associated with QX500 cermet will provide excellent surface finishes at high speeds on the majority of ferrous materials.



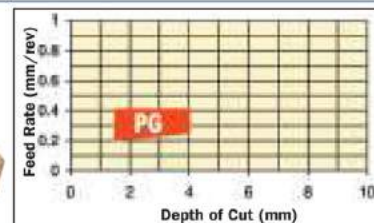
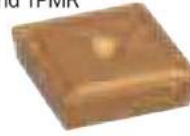
NR9 - General application roughing breaker, suitable for intermittent cuts on negative inserts.



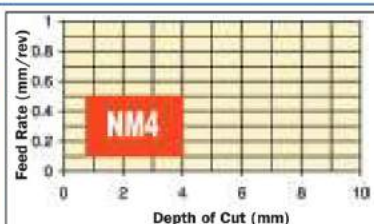
NF3 - Finishing chipbreaker for negative inserts used with QX510 for finishing steel or finish and medium cutting on cast iron.



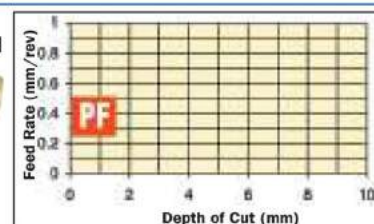
PG - General application finishing and light to medium roughing in conjunction with SPMR and TPMR positive inserts.



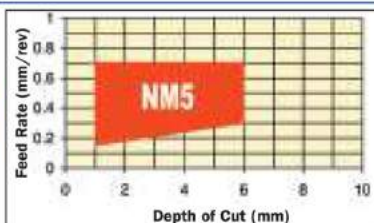
NM4 - Medium breaker used on negative inserts for light to medium roughing.



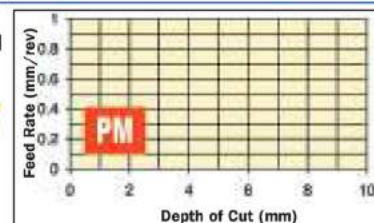
PF - Finishing breaker used on positive inserts for general application.



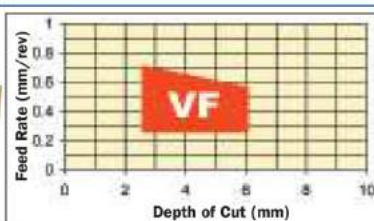
NM5 - General chipbreaker for medium roughing or semi finishing on steels and stainless in combination with grades QX510 and QX520.



PM - Medium breaker used on positive inserts for general application.



VF - General purpose chipbreaker with a radius groove, used with negative inserts. For light to medium cutting across a wide application band.



ST - Light to medium roughing breaker used in conjunction with QX535S grade for turning stainless steels.



CCGT



P	STEEL
M	STAINLESS STEEL
K	CAST IRON
N	ALUMINIUM
S	SUPER ALLOYS
H	HARDENED STEEL

Chip Breaker	Application
PF	Finish
AL	Med Cut (Alum)

Grade	ISO Designation			P	M	K	N	S	H
K10	-	-	05-20	-	-	-	✓	✓	✓
QX500	10-25	-	-	✓	✓	✓	✓	✓	✓
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX530	20-40	20-30	-	✓	✓	✓	✓	✓	✓

Suitable for External/Internal Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
CCGT			
060202	AL	K10	-0121N
	PF	QX500	-0223A
060204	PF	QX520	-0223D
	AL	K10	-0131N
09T302	AL	K10	-0151N
	PF	QX500	-0263A
09T304	PF	QX520	-0263D
	AL	K10	-0161N
09T308	AL	K10	-0169N
120402	AL	K10	-0171N
120404	AL	K10	-0181N
120408	AL	K10	-0191N

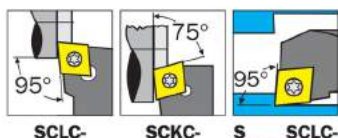
CCMT



Chip Breaker	Application
PM	Med Cut

Grade	ISO Designation			P	M	K	N	S	H
K10	-	-	05-20	-	-	-	✓	✓	✓
QX500	05-15	-	-	✓	✓	✓	✓	✓	✓
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX5020	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX5030	25-35	15-25	-	✓	✓	✓	✓	✓	✓

Suitable for External/Internal Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
CCMT			
060202	PM	QX500	-0351A
	PM	QX5020	-0351G
	PM	QX500	-0355A
060204	PM	QX520	-0355D
	PM	QX5030	-0355H
09T304	PM	QX500	-0403A
	PM	QX520	-0403D
	PM	QX5030	-0403H
09T308	PM	QX500	-0406A
	PM	QX5020	-0406G
120404	PM	QX5020	-0410G

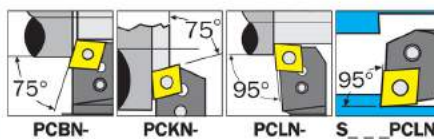
CNMG



Chip Breaker	Application
NF3	Finish
NSA	Light Cut
NM5	Med Cut
NM6	Med Cut
NM7	Med/Rough

Grade	ISO Designation			P	M	K	N	S	H
QX510	01-15	10-15	01-20	✓	✓	✓	✓	✓	✓
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX530	20-40	20-30	-	✓	✓	✓	✓	✓	✓
QX5030	25-35	15-25	-	✓	✓	✓	✓	✓	✓
QX535S	-	10-30	-	✓	✓	✓	✓	✓	✓
QX8010	10	10	10	✓	✓	✓	✓	✓	✓

Suitable for External/Internal Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
CNMG			
120404	NF3	QX520	-0707D
	NM5	QX520	-0709D
	NF3	QX520	-0717D
	NSA	QX8010	-0724K
120408	NM5	QX520	-0720D
	NM6	QX5030	-0716H
	NM7	QX520	-0718D

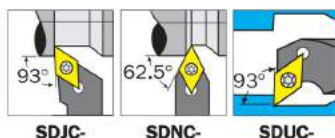
DCGT



Chip Breaker	Application
PF	Finish
AL	Med Cut (Alum)

Grade	ISO Designation			P	M	K	N	S	H
K10	-	-	05-20	-	-	-	✓	✓	✓
QX500	10-25	-	-	✓	✓	✓	✓	✓	✓
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX530	20-40	20-30	-	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
DCGT			
070204	AL	K10	-1031N
11T302	AL	K10	-1051N
11T304	PF	QX530	-1263E
	AL	K10	-1061N
11T308	AL	K10	-1071N

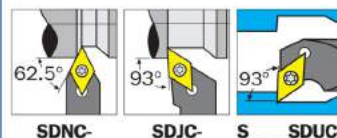
DCMT



Chip Breaker	Application
PM	Med Cut

Grade	ISO Designation			P	M	K	N	S	H
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX5030	25-35	15-25	-	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
DCMT			
070204	PM	QX520	-1314D
11T304	PM	QX520	-1328D
	PM	QX5030	-1328H
11T308	PM	QX5020	-1335G
	PM	QX5030	-1335H

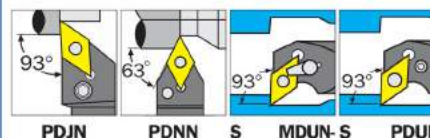
DNMG



Chip Breaker	Application
NM4	Med Cut
NM5	Med Cut
NM6	Med Cut

Grade	ISO Designation			P	M	K	N	S	H
QX505	-	-	05-15	✓	✓	✓	✓	✓	✓
QX520	10-35	10-30	10-30	✓	✓	✓	✓	✓	✓
QX530	20-40	20-30	-	✓	✓	✓	✓	✓	✓
QX5030	25-35	15-25	-	✓	✓	✓	✓	✓	✓
QX535S	-	10-30	-	✓	✓	✓	✓	✓	✓
QX8010	10	10	10	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



Insert Size	Chip-breaker	Grade	Order Code
DNMG			
110404	NM4	QX5020	-1574G
110408	NM4	QX5020	-1575G
150404	NM5	QX520	-1627D
150408	NM5	QX520	-1637D
150604	NM5	QX520	-1695D
	NM6	QX530	-1696E
150608	NM6	QX5030	-1716H



Group 106

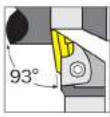
KNUX

Chip Breaker
R11 Application
Rough



Grade	ISO Designation			P	M	K	P	M	K	N	S	H
QX520	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX530	20 - 40	20 - 30	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for External Toolholders:



CKJN-

Insert Size	Chip-breaker	Grade	Order Code
160405	R11	QX520	-2213D
	R11	QX530	-2213E

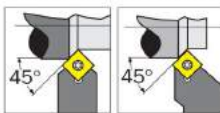
SCGT

Chip Breaker
AL Application
Medium (Alum)



Grade	ISO Designation			P	M	K	P	M	K	N	S	H
K10	-	-	05 - 20	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for External Toolholders:



SSDC- SSSC-

Insert Size	Chip-breaker	Grade	Order Code
09T308	AL	K10	-4169N



Group 445

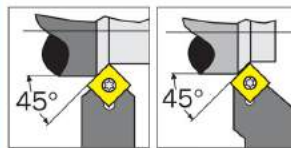
SCMT

Chip Breaker
PM Application
Medium



Grade	ISO Designation			P	M	K	P	M	K	N	S	H
QX520	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for External Toolholders:



SSDC- SSSC-

Insert Size	Chip-breaker	Grade	Order Code
09T304	PM	QX520	-0425D

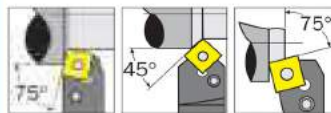
SNMG

Chip Breaker
NM6 Med Cut
NM7 Med/Rough
NR8 Rough

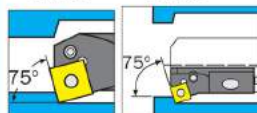


Grade	ISO Designation			P	M	K	P	M	K	N	S	H
QX510	01 - 15	10 - 15	01 - 20	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX530	20 - 40	20 - 30	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX535S	-	10 - 30	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



PSBN- PSDN- PSKN-



S _ _ PSKN- PSKN-

Insert Size	Chip-breaker	Grade	Order Code
120404	NM7	QX520	-5293D
120408	NM6	QX5030	-5336H
	NM7	QX520	-5340D
	NR8	QX520	-5339D

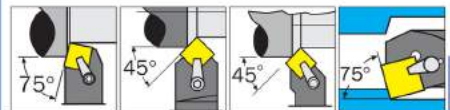
SPMR

Chip Breaker
PG Application
Medium



Grade	ISO Designation			P	M	K	P	M	K	N	S	H
QX520	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX530	20 - 40	20 - 30	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5020	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



CSBP- CSDP- CSSP- S _ _ CSKP

Insert Size	Chip-breaker	Grade	Order Code
120304	PG	QX520	-6642D
120308	PG	QX5020	-6662G
	PG	QX5030	-6662H

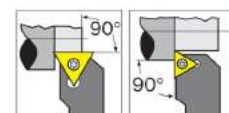
TCGT

Chip Breaker
PF Finish
AL Medium

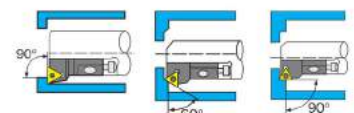


Grade	ISO Designation			P	M	K	P	M	K	N	S	H
K10	-	-	05 - 20	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5020	10 - 35	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



STFC- STGC-



STFC- STTC- STGC-

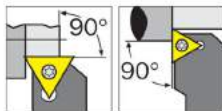
Insert Size	Chip-breaker	Grade	Order Code
110202	AL	K10	-6931N
110204	AL	K10	-6941N
16T304	PF	QX5020	-7073G
16T308	AL	K10	-6971N
	AL	K10	-6981N

PRODUCTS ARE ONLY AVAILABLE VIA YOUR DISTRIBUTOR

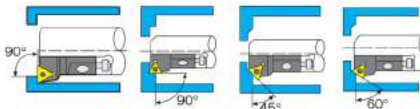
YAMALOY
YAMALOY TOOLING - JAPAN
Think **POSITIVE** . . . and **NEGATIVE**
YAMALOY
YAMALOY TOOLING - JAPAN
TCMT
 Chip Breaker
PM Application
 Med Cut


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
QX500	10 - 25	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



STFC- STGC-



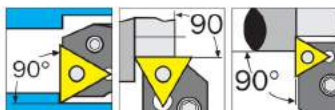
STFC- STGC- STSC- STTC-

Insert Size	Chip-breaker	Grade	Order Code
090204	PM	QX5020	-7110G
110204	PM	QX500	-7120A
	PM	QX520	-7120D
16T304	PM	QX500	-7140A
	PM	QX5020	-7140G
16T308	PM	QX5020	-7145G

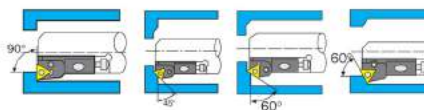
TNMG
 Chip Breaker
NF3 Application
 Finish
NM5 Med Cut
NM6 Med Cut
NM7 Med Cut
NR8 Rough
NR9 Rough


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
QX500	10 - 25	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX535S	-	10 - 30	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



S__PTFN- PTFN- PTGN-



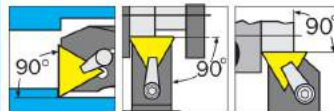
PTFN PTSN- PTTN- PTWN-

Insert Size	Chip-breaker	Grade	Order Code
160404	NM6	QX5030	-7516H
	NM7	QX520	-7518D
	NF3	QX520	-7527D
160408	NM5	QX520	-7529D
	NM6	QX5030	-7526H
	NM7	QX520	-7528D
220408	NM5	QX520	-7562D

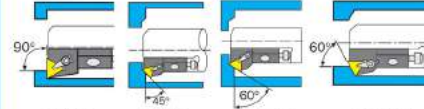
TPMR
 Chip Breaker
PG Application
 Med/Cut


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
QX520	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX530	20 - 40	20 - 30	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5020	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



S__CTFR- CTCP- CTFP-



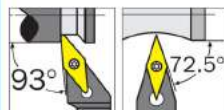
CTFP- CTSP- CTPP- CTWP-

Insert Size	Chip-breaker	Grade	Order Code
110304	PG	QX5020	-8742G
	PG	QX5030	-8742H
160304	PG	QX520	-8772D
	PG	QX530	-8772E
160308	PG	QX520	-8782D
	PG	QX5030	-8782H

VCGT
 Chip Breaker
AL Application
 Med Cut


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
K10	-	-	05 - 20	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for External Toolholders:



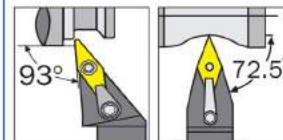
SVJC- SVVCN

Insert Size	Chip-breaker	Grade	Order Code
110302	AL	K10	-9101N
110304	AL	K10	-9111N
160404	AL	K10	-9141N
160408	AL	K10	-9151N
160412	AL	K10	-9161N

Group 447**VNMG**
 Chip Breaker
NFI Application
 Finish
VF Finish


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
QX500	10 - 25	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX530	20 - 40	20 - 30	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for External Toolholders:



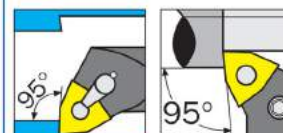
MVJNL- MVVN-

Insert Size	Chip-breaker	Grade	Order Code
12T302	NFI	QX530	-9402E
12T304	NFI	QX500	-9404A
	NFI	QX530	-9404E
12T308	NFI	QX5030	-9408H
160404	VF	QX520	-9415D

WNMG
 Chip Breaker
NSS Application
 Light/Medium
NM4 Med Cut
NM5 Med Cut
NM6 Med Cut


Grade	ISO Designation				P	M	K	P	M	K	N	S	H
QX510	01 - 15	10 - 15	01 - 20	01 - 20	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX520	10 - 35	10 - 30	10 - 30	10 - 30	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX5030	25 - 35	15 - 25	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX535S	-	10 - 30	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
QX8010	10	10	10	10	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suitable for Internal/External Toolholders:



S__MWLN- PWLN-

Insert Size	Chip-breaker	Grade	Order Code
060404	NM4	QX520	-9774D
060408	NSS	QX8010	-9780K
080404	NM5	QX520	-9827D
080408	NM6	QX5030	-9836H

Insert Geometry for Finishing & Semi-finishing of Aluminium & Aluminium Alloys

- Optimised edge and radius geometry.
- Improved surface finish.
- Improved chip control.
- 'G' Tolerance for high repeatability.
- First choice for machining pure aluminium.
- 30% longer insert life compared to uncoated grade.

Grade K10C

ISO N05-N15 PVD Coated. Micrograin carbide for machining aluminium and aluminium alloys, 30% higher tool life against uncoated grade. Smooth coating and polished surface gives better chip control.

ALC Geometry

For finishing and semi finishing of aluminium and aluminium alloys. A unique breaker design gives a sharp cutting edge and positive rake angle. Special edge preparation and surface treatment produce better surface quality and greater chip control, reduced friction and vibration. 'G' tolerance inserts for higher repeatability.

Feed Rates

For Machining Pure Aluminium
Ap. DOC = 0.02 ~ 4.80 (mm)
F = 0.05~0.50 (mm/r)

For Machining Aluminium Alloys
Ap. DOC = 0.02 ~ 3.50 (mm)
F = 0.05~0.40 (mm/r)

**30% LONGER
INSERT LIFE
COMPARED TO
UNCOATED GRADE**

CCGX

Fits the same Internal/External Toolholders as CCGT



Insert Size	Chip-breaker	Grade	Order Code
CCGX			YML-120
060202	ALC	K10C	-0312N
060204	ALC	K10C	-0314N
09T304	ALC	K10C	-0318N
09T308	ALC	K10C	-0320N
120404	ALC	K10C	-0324N
120408	ALC	K10C	-0326N

DCGX

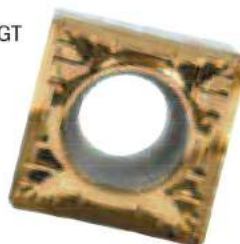
Fits the same Internal/External Toolholders as DCGT



Insert Size	Chip-breaker	Grade	Order Code
DCGX			YML-120
070204	ALC	K10C	-1282N
11T304	ALC	K10C	-1291N

SCGX

Fits the same Internal/External Toolholders as SCGT



Insert Size	Chip-breaker	Grade	Order Code
SCGX			YML-120
120408	ALC	K10C	-4173N

TCGX

Fits the same Internal/External Toolholders as TCGT



Insert Size	Chip-breaker	Grade	Order Code
TCGX			YML-120
16T308	ALC	K10C	-7096N

VCGX

Fits the same Internal/External Toolholders as VCGT

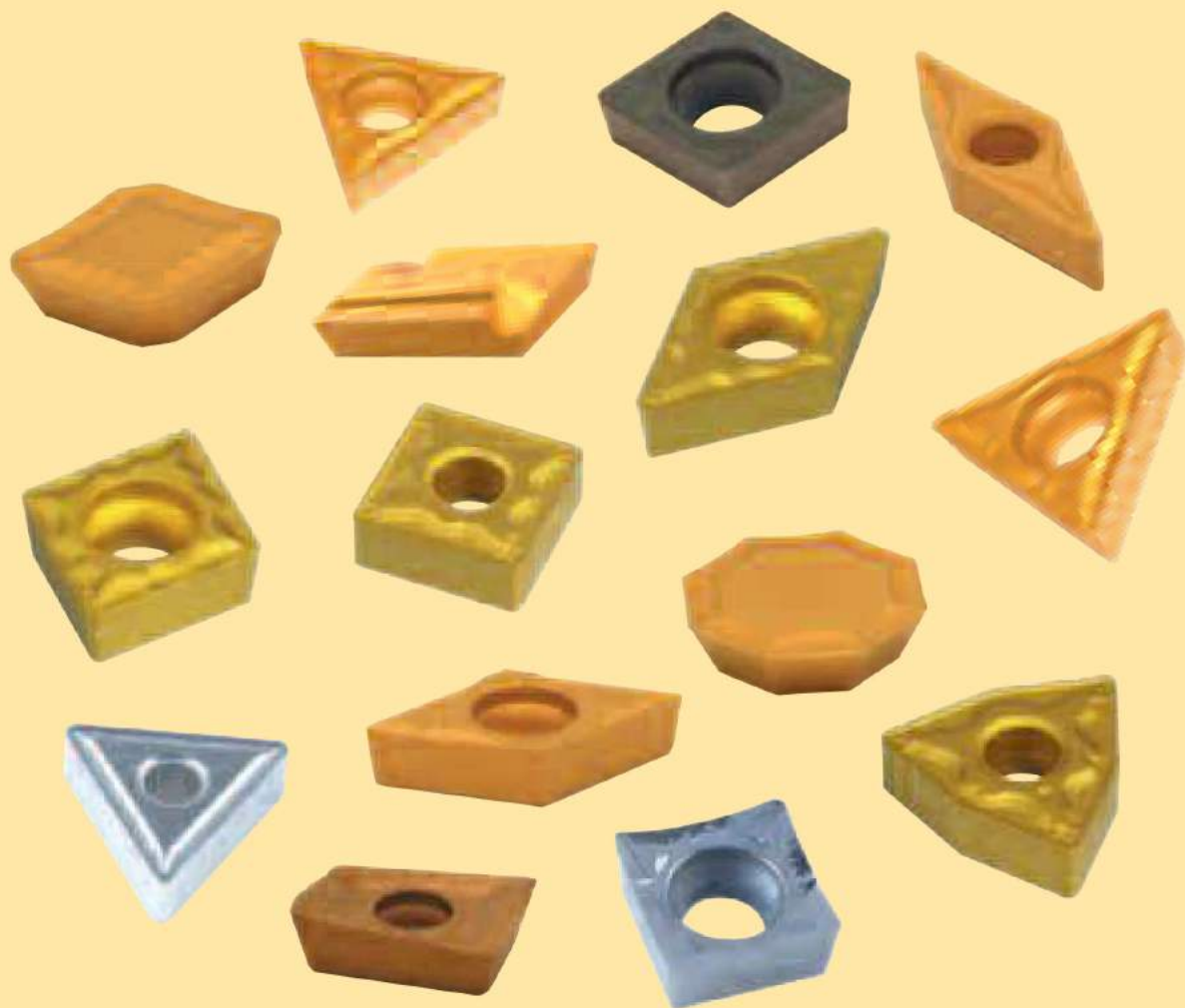


Insert Size	Chip-breaker	Grade	Order Code
VCGX			YML-120
110302	ALC	K10C	-9201N
110304	ALC	K10C	-9203N
160404	ALC	K10C	-9233N



Q-Series

Think Positive!


QX500

P10 - P25

QX505

K05 - K15

QX510

P01-15, M10-15, K01-20

QX520

P10-35, M10-30, K10-30

QX530

P20 - 40, M20 - 30

QX5355

M10 - M30

QC10

K10

QK25C

K15 - K30

QM10

P10 - M10, K10

QP25

P25

QP25C

P10 - P35

QP30P

P10 - P35

QP40

P40

QS20

P20

QX500

P10- P25

QX520

P10-35, M10-30, K10-30

QX530

P20-40, M20-30

...and Negative!

YAMALOY®

YAMALOY TOOLING • JAPAN

High Performance Carbide Tooling
Turning - Milling - Boring - Drilling

Insert Grade

K20 K20 Micrograin uncoated. For cast iron, aluminium alloy, other non-ferrous materials including titanium and nickel alloy.

QK25C QK25C (K15 - K30) Coated. For milling cast irons.

QM3535 QM3535 (P20 - P35) PVD TiAlN Coated for milling of steel. Comprehensive grade which covers wide application range due to substrate providing optimal wear resistance and toughness.

QP25 QP25 (P25) Uncoated. For medium and finish milling of steels.

QP25C QP25C (P10 - P35) CVD coated. Milling grade for steel and some stainless steels.

QP30P QP30P (P10 - P35) PVD Coated. Milling grade for steel and some stainless steels.

QP30T QP30T (P10 - P35) PVD Coated. Milling grade for steel and some stainless steels.

QP40 QP40 (P40) Uncoated. For rough medium and finish milling of tough Steels and Stainless Steels including interrupted cutting.

QX530 QX530 (P20 - P40, M20 - M30) Coated. A good general purpose steel grade for roughing. Use on steels, cast steel and stainless steel.

Chipbreaker

Chip Breaker	Application
AL	Aluminium & non Ferrous (Polished)
EM	Medium
MF	Finish/Light
MM	Medium/Light Roughing

APKT


Insert Size	Chip-breaker	Grade	Order Code
APKT			YML-120
1003PDR	EM	QK25C	-0028X
	EM	QP30P	-0028W
1604PDR	AL	K10	-0029K
	-	QP30P	-0030W
1604PDTR	-	QK25C	-0030X
	-	K20	-0031V

SEHT


Insert Size	Chip-breaker	Grade	Order Code
SEHT			YML-120
1204AFTN	-	K20	-4430V
1204AFTN	-	QP25C	-4430W
120408	-	QP25C	-4432W

SEMN


Insert Size	Chip-breaker	Grade	Order Code
SEMN			YML-120
1204-AZ	-	QM3535	-4727M

OFKR


Insert Size	Chip-breaker	Grade	Order Code
OFKR			YML-120
05T308	MF	QP25C	-2388W

SEHW


Insert Size	Chip-breaker	Grade	Order Code
SEHW			YML-120
1204AFTN05	-	K20	-4445V
	-	QP25C	-4445W

SNKN


Insert Size	Chip-breaker	Grade	Order Code
SNKN			YML-120
1204-ENN	-	QP25	-5227P

OFKT


Insert Size	Chip-breaker	Grade	Order Code
OFKT			YML-120
05T308-SN	MM	QP25C	-2384W

SEKN


Insert Size	Chip-breaker	Grade	Order Code
SEKN			YML-120
1203AFFN	-	K20	-4517V
1203AFSN	-	QM3535	-4527M
1203AFTN	-	QP25	-4527P
	-	QP40	-4527S

SPKN


Insert Size	Chip-breaker	Grade	Order Code
SPKN			YML-120
1203EDR	-	K20	-6328V
	-	QM3535	-6338M
1203EDTR	-	QP25	-6338P
	-	QP40	-6338S
1504EDTR	-	QP25	-6368P

SDMT


Insert Size	Chip-breaker	Grade	Order Code
SDMT			YML-120
12T308	-	QX530	-4280E

SEKR


Insert Size	Chip-breaker	Grade	Order Code
SEKR			YML-120
1203AFTN05	-	K20	-4617V
	-	QP25C	-4627W

TPKN

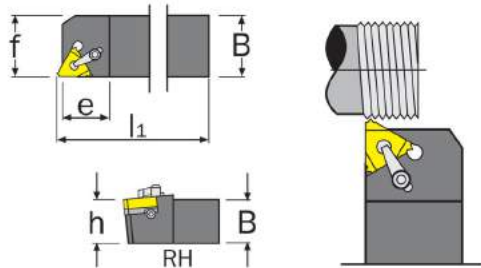

Insert Size	Chip-breaker	Grade	Order Code
TPKN			YML-120
1603PPR	-	K20	-8428V
	-	QM3535	-8438M
1603PPTR	-	QP25	-8438P
	-	QP40	-8438S
2204PDR	-	K20	-8458V
2204PDSR	-	QM3535	-8468M
2204PDTR	-	QP25	-8468P
	-	QP40	-8468S

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Example shows **DIR** - Internal, but clamping is identical to **DER/L** - External. Standard Helix is 1.5°.

External

Dual DER/L -
External.



Suitable Inserts See Next Page

ER = Right Hand **EL** = Left Hand

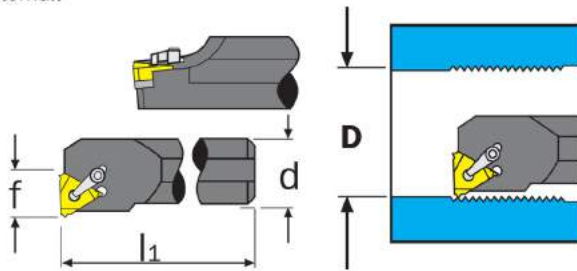
Sizes **16** = 16ER/L
22 = 22ER/L

**Spares to Suit**

Clamp Set	Anvil	Shim Screw	Insert Screw	Torx Key
Order Code IND-107	Order Code IND-107	Order Code IND-107	Order Code IND-107	Order Code IND-107
-0620K	-2930K	-3780K	-3430K	-5090K
-0620K	-2930K	-3780K	-3430K	-5150K
-0620K	-2930K	-3780K	-3430K	-5090K
-0620K	-2960K	-3780K	-3430K	-5150K
-0620K	-2930K	-3780K	-3430K	-5090K
-0620K	-2960K	-3780K	-3430K	-5150K
-0630K	-2940K	-3790K	-3440K	-5150K

Internal

Dual DIR -
Internal.



Suitable Inserts See Next Page

IR = Right Hand

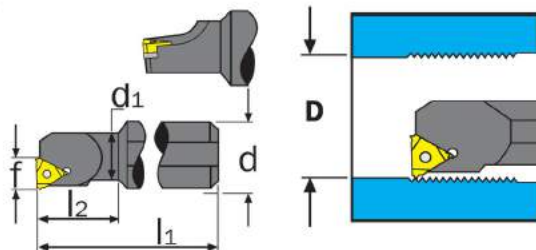
Sizes **16** = 16IR
22 = 22IR

**Spares to Suit**

Clamp Set	Anvil	Shim Screw	Insert Screw	Torx Key
Order Code IND-107	Order Code IND-107	Order Code IND-107	Order Code IND-107	Order Code IND-107
-0620K	-2960K	-3780K	-3430K	-5090K
-0620K	-2960K	-3780K	-3430K	-5100K
-0620K	-2960K	-3780K	-3430K	-5090K
-0630K	-2980K	-3790K	-3440K	-5150K
-0630K	-2980K	-3790K	-3440K	-5150K

Screw-on

SIR/L -
Internal.



Suitable Inserts See Next Page

IR = Right hand **IL** = Left Hand

Sizes **06** = 06IR/L
08 = 08IR/L
11 = 11IR/L
16 = 16IR/L
22 = 22IR/L

**Spares to Suit**

Insert Screw	Torx Key
Order Code IND-107	Order Code IND-107
-3419K	-5080K
-3420K	-5070K
-3420K	-5150K
-3420K	-5150K
-3430K	-5150K
-3430K	-5150K
-3430K	-5150K
-3440K	-5200K

ISO Designation	Dimensions							Weight each	Order Code IND-106
	d	d1	l1	l2	f	DMin			
SIR 0007K 08	16	6.6	125	18	5.3	7.8	174g	-8350K	
SIR 0010H 11	10	10	100	-	7.4	12.0	160g	-8360K	
SIR 0010K 11	16	10	125	25	7.4	12.0	175g	-8380K	
SIL 0010K 11	16	10	125	25	7.4	12.0	172g	-8390K	
SIR 0013M 16	16	13	150	32	10.2	16.0	217g	-8400K	
SIR 0016P 16	20	16	170	40	11.7	19.0	369g	-8420K	
SIL 0016P 16	20	16	170	40	11.7	19.0	364g	-8430K	
SIR 0020P 22	20	20	170	-	15.6	24.0	406g	-8440K	

Insert Grade Description
QMA (P20-P40/K20-K30) Coated.

Sintered chipbreaker with a multi layer TiAlN PVD coated sub-micrograin grade. Provides high quality threads for most materials including exotic alloys and stainless steels. Best performance is achieved at medium to high cutting speeds.

16 E R 12 UN QMA
L
06
08
11
16
22
27
33

I.C.
5/32"
3/16"
1/4"
3/8"
1/2"
5/8"
3/4"

E = EXTERNAL
I = INTERNAL

R = RIGHT HAND
L = LEFT HAND

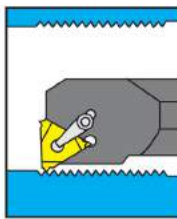
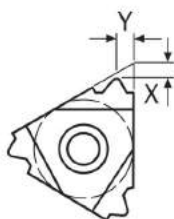
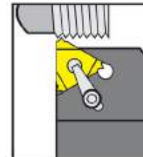
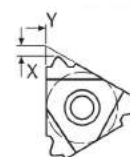
FULL PROFILES:

Pitch in mm:
0.35 - 8
or TPI
(Threads per inch)
64 - 4

ISO
UN
WHIT
NPT
NPTF
BSPT

CARBIDE GRADE
PARTIAL PROFILES

A N
G 60°
AG 55°

Partial Profiles
Internal Right Hand

Partial Profiles
External Right Hand

55°

Insert Designation	Pitch Range mm	Range TPI	X mm	Y mm	Grade	Weight per 10	Order Code YML-121
--------------------	----------------	-----------	------	------	-------	---------------	--------------------

16 ER AG55	0.5-3.0	48-8	1.2	1.7	QMA	60g	-0542A
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60°

Insert Designation	Pitch Range mm	Range TPI	X mm	Y mm	Grade	Weight per 10	Order Code YML-121
--------------------	----------------	-----------	------	------	-------	---------------	--------------------

16 ER AG60	0.5-1.5	48-16	0.8	0.9	QMA	60g	-0041Q
16 ER AG60	0.5-3.0	48-8	1.2	1.7	QMA	60g	-0042A

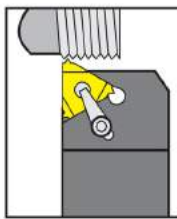
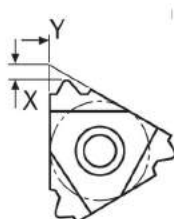
60°

Insert Designation	Pitch Range mm	Range TPI	X mm	Y mm	Grade	Weight per 10	Order Code YML-121
--------------------	----------------	-----------	------	------	-------	---------------	--------------------

16 IR AG60	0.5-3.0	48-8	1.2	1.7	QMA	60g	-0208A
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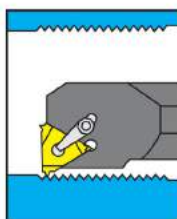
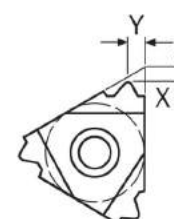
ISO Metric
External Right Hand

11 ER available on request.



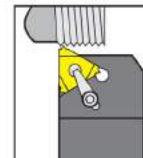
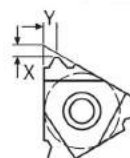
Insert Designation	TPI	X mm	Y mm	Grade	Weight per 10	Order Code YML-121
--------------------	-----	------	------	-------	---------------	--------------------

16 ER 1.00 ISO	1.00	0.7	0.7	QMA	70g	-1044Y
16 ER 1.25 ISO	1.25	0.8	0.9	QMA	70g	-1045J
16 ER 1.50 ISO	1.50	0.8	1.0	QMA	70g	-1045U
16 ER 1.75 ISO	1.75	0.9	1.2	QMA	65g	-1046E
16 ER 2.00 ISO	2.00	1.0	1.3	QMA	60g	-1046Q
16 ER 2.50 ISO	2.50	1.1	1.5	QMA	60g	-1047A
16 ER 3.00 ISO	3.00	1.2	1.6	QMA	60g	-1047L

ISO Metric
Internal Right Hand


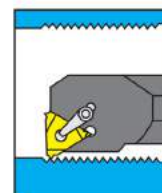
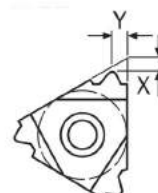
Insert Designation	TPI	X mm	Y mm	Grade	Weight per 10	Order Code YML-121
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16 IR 1.00 ISO	1.00	0.6	0.7	QMA	70g	-1210Y
16 IR 1.50 ISO	1.50	0.8	1.0	QMA	65g	-1211U
16 IR 2.00 ISO	2.00	1.0	1.3	QMA	65g	-1212U
16 IR 2.50 ISO	2.50	1.1	1.5	QMA	60g	-1213L
16 IR 3.00 ISO	3.00	1.1	1.5	QMA	60g	-1213W

UN
External Right Hand


Insert Designation	TPI	X mm	Y mm	Grade	Weight each	Order Code YML-121
--------------------	-----	------	------	-------	-------------	--------------------

16 ER 24 UN	24	0.7	0.8	QMA	7g	-1546Q
16 ER 20 UN	20	0.8	0.9	QMA	7g	-1547W
16 ER 18 UN	18	0.8	1.0	QMA	7g	-1548S
16 ER 14 UN	14	1.0	1.2	QMA	7g	-1549N
16 ER 12 UN	12	1.1	1.4	QMA	7g	-1550J
16 ER 8 UN	8	1.2	1.6	QMA	7g	-1552L

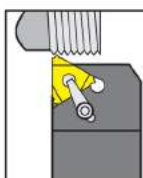
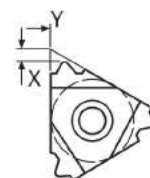
UN
Internal Right Hand


Insert Designation	TPI	X mm	Y mm	Grade	Order Code YML-121
--------------------	-----	------	------	-------	--------------------

16 IR 12 UN	12	1.1	1.4	QMA	-1750J
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Whitworth
External Right Hand

A full range of sizes are available on request.



Insert Designation	TPI	X mm	Y mm	Grade	Order Code YML-121
--------------------	-----	------	------	-------	--------------------

16 ER 14 W	14	1.0	1.2	QMA	-2049N
16 ER 11 W	11	1.1	1.5	QMA	-2051E

Whitworth
Internal Right Hand

A full range of sizes are available on request.

Insert Designation	TPI	X mm	Y mm	Grade	Order Code YML-121
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16 IR 14 W	14	1.0	1.2	QMA	-2215N
16 IR 11 W	11	1.1	1.5	QMA	-2217E

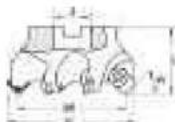
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INDEXA-SEIKI

XP-45C 'Face Hog'
Milling Cutters

Super Positive 45° approach milling cutter, angle decreases cutting forces and allows a quick feed in a limited capacity machine. Clamp style insert pocket with shim seats to protect the body in case of accident. Plasma ion coating offers longer tool life and greater hardness that is more resistant to wear. Through coolant as standard.

XP XTRA PLASMA
COATED BODY


Feed Per Tooth (mm)

0.05 - 0.20

See Page 152 for
Cutting Speed Information

Application Range



Spares to suit

			
Arbor Screw	Shim	Shim Screw	Clamp Screw
Order Code IND-107			
-5353K			
-5354K	-4960K	-5284K	-5290K
-5356K			
-5358K			

Dia (mm)	D1	d	L	Z	Order Code
63	76	22	50	5	-7600K
80	93	27	50	6	-7620K
100	113	32	50	6	-7640K
125	138	40	63	7	-7660K
160	173	40	63	8	-7680K

YAMALLOY
YAMALLOY TOOLING - JAPAN


Inserts

Designation	Grade	To Suit	Order Code
			YML-120
SEKN 1203 AFTN	K20	Face Hog	-4517V
	QP25		-4527P
	QP40		-4527S
SEKR 1203 AFTN	K20	Face Hog	-4617V
	QP25C		-4627W

Insert Grade Description

K20

(K20) Micrograin uncoated. For cast irons, aluminium alloys, other non-ferrous materials including titaniums and nickel alloys.

QP25

(P25) Uncoated. For medium and finish milling of steels.

QP25C

(P10-P35) CVD coated. Milling grade for steels and some stainless steels.

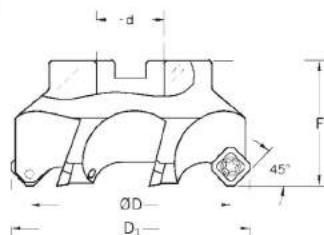
QP40

(P40) Uncoated. For rough medium and finish milling of tough steels and stainless steels including interrupted cutting.

INDEXA-SEIKI

XP-45C 'Hi Shear'
Milling Cutters

Super Positive 45° approach milling cutter, angle decreases cutting forces and allows a quick feed in a limited capacity machine. Torx screws allow for good chip evacuation. Plasma ion coating offers longer tool life and greater hardness that is more resistant to wear. Through coolant as standard.

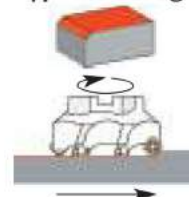
XP XTRA PLASMA
COATED BODY


Feed Per Tooth (mm)

0.05 - 0.20

See Page 152 for
Cutting Speed Information

Application Range



Spares to suit

			
Arbor Screw			Clamp Screw
Order Code IND-107			
-5353K			
-5354K			
-5356K			-5352K

Dia (mm)	D1	d	F	Z	Order Code
63	75	22	50	5	-7400K
80	92	27	50	6	-7420K
100	112	32	50	6	-7440K

YAMALLOY
YAMALLOY TOOLING - JAPAN


Inserts

Designation	Grade	Order Code
		YML-120
SEHT 1204 AFTN	K20	-4430V
	QP25C	-4430W
SEHW 1204 AFTN-05	K20	-4445V
	QP25C	-4445W

Insert Grade Description

K20

(K20) Micrograin uncoated. For cast irons, aluminium alloys, other non-ferrous materials including titaniums and nickel alloys.

QP25C

(P10-P35) CVD coated. Milling grade for steels and some stainless steels.

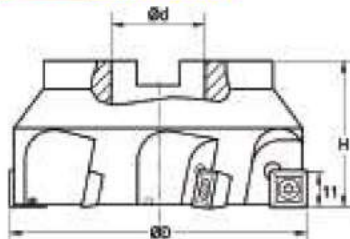


INDEXA-SEIKI

XP-90C '4 Square' 90° Shell Mills

Positive 90° cutter with an exact angle of 90°, square insert allowing depth passes and high feed per teeth. Torx style insert pocket with shim seats to protect the body in case of accident. Plasma Ion coating offers longer tool life and greater hardness that is more resistant to wear. Through coolant as standard.

XP XTRA PLASMA COATED BODY



SDMT 12



For Inserts See Below

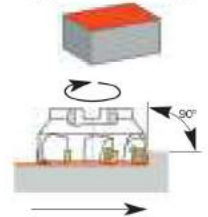


Feed Per Tooth (mm)

0.04 - 0.30

See Page 152 for Cutting Speed Information

Application Range



Spares to suit

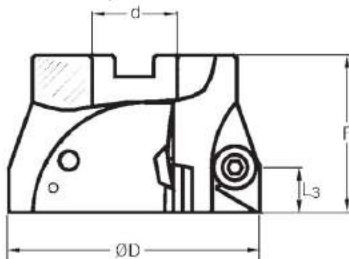
Arbor Screw	Shim	Shim Pin	Clamp Screw
Order Code IND-107			
-5354K -5354K -5356K	-2490K	-1570K	-3400K

XP-90C '4 Square' 90° Shell Mills for SDMT 12 inserts

Dia (mm)	d	H	Z	Weight each	Order Code
63	22	40	5	459g	-7500K
80	27	50	6	999g	-7520K
100	32	50	7	1669g	-7540K

'Tri Square' 90° Shell Mills

Uses top clamping triangular inserts to produce a 90° shoulder at the edge of a milled face. This is of major benefit when taking a number of cuts across a face as the shoulder produced is without steps.



For TPKN 1603



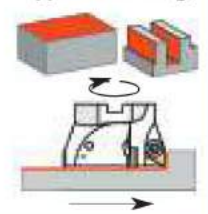
Dia (mm)	d	F	L3	Z	Weight each	Order Code
63	27	50	13	4	655g	-3400K
80	32	50	13	5	1200g	-3420K
100	40	50	13	6	1746g	-3440K

For TPKN 2204



Dia (mm)	d	F	L3	Z	Weight each	Order Code
100	40	50	18	5	1546g	-3460K
125	40	63	18	6	2777g	-3480K

Application Range



Insert Size	Feed Per Tooth (Fz) mm
TPKN 16	0.05 - 0.20
TPKN 22	0.10 - 0.30

See Page 152 for Cutting Speed Information

Spares to suit

Arbor Screw	Shim	Shim Pin	Clamp Screw	Clamp Ring
Order Code IND-107				
-5354K -5355K -5357K	-5360K	-5362K	-0050K	-0440K
Order Code IND-107				
-5357K	-5361K	-5380K	-0060K	-0500K

YAMALLOY

Inserts

Designation	Grade	To Suit	Order Code
TPKN 1603 PPR	K20	Tri-Sq	-8428V
TPKN 1603 PPTR	QP25	Tri-Sq	-8438P
TPKN 2204 PDR	K20	Tri-Sq	-8458V
TPKN 2204 PDTR	QP25	Tri-Sq	-8468P
SDMT 12T308	QX530	4 Sq	-4280E



TPKN



SDMT

Insert Grade Selection

K20 (K20) Micrograin uncoated.
For cast irons, aluminium alloys and other non-ferrous materials including titaniums and nickel alloys.

QP25 (P25) Uncoated. For medium and finish milling of steels.

QP40 (P40) Uncoated. For rough medium and finish milling of tough steels and stainless steels including interrupted cutting.

QX530 (P20-P40 M20-M30) Coated. Turning grade for steels, cast steels and stainless steels. A good general purpose steel grade for roughing.

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INDEXA-SEIKI XP-90C 'APT'
90° Shell Mills

Positive 90° approach milling cutter, using size 10/16 inserts allowing depth passes and high feed per teeth. Torx screw allows for good chip evacuation. Plasma Ion coating offers longer tool life and greater hardness that is more resistant to wear. Through coolant as standard.


XP XTRA PLASMA
COATED BODY

Insert Size	Feed Per Tooth (Fz) mm
APXT 10	0.05 - 0.20
APXT 16	0.10 - 0.30
See Page 152 for Cutting speed Information	

XP-90C End Mills For AP_T 10 Inserts

D	z	H	C	L	Inserts	Order Code IND-139
10	1	20	10	80	APKT1003	-4800K
12	1	20	12	80	or	-4820K
16	2	25	16	90	APXT1003	-4860K
20	3	25	20	110		-4900K

XP-90C End Mills For AP_T 16 Inserts

D	z	H	C	L	Inserts	Order Code IND-139
20	1	37	20	115	APKT1604	-5000K
25	2	40	25	117	or	-5020K
32	3	40	25	126	APXT1604	-5040K
40	4	50	32	136		-5060K

Spares	Arbor Screw	Clamp Screw	Flag Torx Key
To Suit	Order Code IND-107		
10-20 Dia (APKT 10)	-	-5240K	-
20-25 Dia (APKT 16)	-	-5270K	-5150K
32-40 Dia (APKT 16)	-	-5270K	-5150K

XP-90C 'APT' 90° Shell Mills

Positive 90° approach milling cutter, using size 16 inserts allowing depth passes and high feed per teeth. Torx screw allows for good chip evacuation. Plasma Ion coating offers longer tool life and greater hardness that is more resistant to wear. Through coolant as standard.


XP XTRA PLASMA
COATED BODY

Feed Per Tooth (Fz) mm
0.10 - 0.30
See Page 152 for Cutting speed Information

XP-90C Shell Mills For APKT 16 Inserts

D	z	B	C	L	Inserts	Order Code IND-139
50	4	22	10.4	50	APKT1604	-3920K
63	5	22	10.4	50	or	-3940K
80	6	27	12.7	50	APXT1604	-3960K
100	7	32	14.4	63		-3980K

Spares	Arbor Screw	Clamp Screw	Flag Torx Key
To Suit	Order Code IND-107	Order Code IND-107	
50 & 63 Dia	-5354K	-5270K	
80 Dia (APKT 16)	-5354K		
100 Dia	-5355K		

Insert Grade Description



- K20** (K20) Micrograin uncoated. For cast irons, aluminium alloys, other non-ferrous materials including titaniums and nickel alloys.
- QK25C** (K15-K30) Coated. For milling cast irons.
- QP30P** (P10-P35) PVD coated. Milling grade for steels and some stainless steels.

YAMALLOY
YAMALLOY TOOLING - JAPAN

Insert Grade Selection

Designation	Grade	To Suit	Weight each	Order Code YML-120
APKT 1003 PDR	QK25C	APT	27g	-0028X
	QP30P	Shell Mills	35g	-0028W
	K20	Combination	85g	-0031V
APXT 1604 PDTR	QK25C	End, APT	92g	-0030X
	QP30P	Shell Mills	85g	-0030W

Use the following table with the specific feed rates of the cutter used (found on the specific cutter page). Feed rates may vary according to work material and machine conditions but the following can be used as a general guide.

Steel Group	Materials Colour Defines Similar Machineability	Brinell Hardness HB	Rockwell Hardness HRC	Tensile Strength N/mm ²	Speed M/min					
					K20	QK25C	QP25/ QP30P	QP30P	QP40	QX530
1.1	Mild, soft and free machining non-alloy low carbon steels	up to 130	-	up to 400	-	-	140 - 200	180 - 250	80 - 50	150 - 200
1.2	Non-alloy, case hardening, structural and low to medium carbon steels	up to 200	-	up to 700	-	-	130 - 180	150 - 230	75 - 110	130 - 180
1.3	Non-alloy, plain and medium carbon steels and castings	up to 260	up to 26	up to 850	-	-	130 - 160	140 - 210	75 - 95	110 - 150
1.4	Generally low to medium alloy steels and castings	up to 260	up to 26	up to 850	-	-	120 - 160	130 - 200	70 - 90	110 - 140
1.5	Medium to high alloy steels, tool steels and castings	from 260 up to 340	from 26 up to 48	from 850 up to 1200	-	-	110 - 150	120 - 180	65 - 85	100 - 120
1.6	Heat treated alloy steels and castings	up to 230	up to 20	from 1200 up to 1500	-	-	80 - 120	110 - 150	60 - 80	70 - 90
2.1	Soft and generally easy to machine ferritic and martensitic stainless steels and castings	up to 290	up to 30	up to 800	-	-	130 - 180	150 - 200	70 - 100	80 - 120
2.2	Medium strength and easy to machine austenitic stainless steels and castings	up to 340	up to 36	up to 1000	-	-	120 - 170	130 - 180	70 - 100	60 - 100
2.3	Hard and generally difficult to machine ferritic and austenitic (duplex) stainless steels and castings	up to 180	-	up to 1200	-	-	-	40 - 50	25 - 40	50 - 90
3.1	Grey cast iron Hardness - soft to medium	from 180 up to 300	-	-	120 - 150	150 - 250	-	-	-	-
3.2	Grey cast iron Hardness - medium to hard	up to 220	-	-	90 - 130	120 - 200	-	-	-	-
3.3	Malleable and nodular iron - soft to medium	from 220 to 300 max	-	-	80 - 110	150 - 250	-	-	-	-
3.4	Malleable and nodular iron - medium to hard	-	-	-	70 - 100	120 - 200	-	-	-	-
4.1	Pure titanium (also pure nickel)	-	-	up to 700	200 - 300	-	-	-	-	-
4.2	Titanium alloys of a medium and hard nature	-	-	up to 900	50 - 80	-	-	-	-	-
4.3	Titanium alloys of a hard and very hard nature	-	-	from 900 up to 1250	20 - 50	-	-	-	-	-
5.1	Heat resistant super alloys including iron based high temperature alloys	-	-	up to 500	15 - 35	-	-	-	-	-
5.2	Heat resistant super alloys, cobalt or nickel based, of a medium to hard nature to machine	-	-	up to 900	15 - 35	-	-	-	-	-
5.3	Heat resistant super alloys, cobalt or nickel based, of a hard or very hard nature to machine	-	-	from 900 up to 1200	20 - 50	-	-	-	-	-
6.1	Copper	-	-	up to 500	250 - 400	-	-	-	-	-
6.2	Brass (alpha - long chip)	-	-	up to 800	200 - 400	-	-	-	-	-
6.3	Brass (beta - short chip) and soft bronze	-	-	up to 800	200 - 800	-	-	-	-	-
6.4	High strength bronze	-	-	up to 1200	50 - 120	-	-	-	-	-
7.1	Unalloyed: aluminium, magnesium & zinc	-	-	up to 150	500 - 900	-	-	-	-	-
7.2	Aluminium alloys less than 5% Si magnesium and zinc alloys (long chip)	-	-	from 150 up to 300	600 - 900	-	-	-	-	-
7.3	Aluminium alloys 5% to 10% Si	-	-	from 200 up to 500	300 - 600	-	-	-	-	-
7.4	Aluminium alloys above 10% Si (short chip)	-	-	from 200 up to 500	200 - 500	-	-	-	-	-
8.1	Thermoplastics	-	-	-	300 - 700	-	-	-	-	-
8.2	Thermo-setting plastics	-	-	-	300 - 500	-	-	-	-	-
8.3	Reinforced plastics & composite materials	-	-	-	100 - 300	-	-	-	-	-

INDEXA-SEIKI

QMC 06 Quad Milling Holder Set

Small diameter Indexable End Mills are taking a CCMT 06 insert. Ideal for use on manual and CNC milling machines where reach and clearance are required.



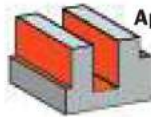
Dia. (mm)	d	L	L ₁	L ₂	Order Code IND-139
08	12	120	95	25	-9010K
10	12	120	95	25	
12	12	120	95	25	
16	16	120	95	25	

Spares

Description	To Suit	Order Code IND-107
Insert Screw	Quad	-5240K
T8 Torx Key	Mill	-5080K

Insert Grade Selection

Designation	Grade	To Suit	Order Code YML-120
CCMT060204-PM	QX500	Quad Mill	-0355A
	QX520		-0355D
CCGT060202-AL	K10	Quad Mill	-0121N
CCGT060204-AL	K10	Quad Mill	-0131N



Application
Range

Uses **CCMT 06/CCGT 06** inserts.

Feed Per Rev (mm)

0.02 - 0.10

Insert Grade Description

QX520 (P10-P35 M10-M30 K10-K30) Coated. An excellent general purpose grade for medium roughing on steels, stainless and cast irons.

K10 (K10) Uncoated. Used in combination with a high rake geometry for machining aluminium, plastics and other soft non-ferrous materials.

QX500 (QX500) (P10-P25 Cermets). For high speed finishing and light roughing. Will maintain a high class surface finish. Mainly used on steels and can be applied to finishing some stainless steels and cast irons.



Speed & Feed Recommendations for Quad Mills

Specific feed rates may vary according to work material and machine conditions but the following can be used as a general guide.

Steel Group	Materials Colour defines similar machineability	Speed-M/Min				
		Brinell Hardness HB	Rockwell Hardness HRC	Tensile Strength N/mm ²	QX500	QX520
1.1	Mild, soft and free machining non-alloy low carbon steels	up to 130	-	up to 400	200-270	180-350
1.2	Non-alloy, case hardening, structural and low to medium carbon steels	up to 200	-	up to 700	180-250	150-320
1.3	Non alloy, plain and medium carbon steels and castings	up to 260	up to 26	up to 850	150-220	130-280
1.4	Generally low to medium alloy steels and castings	up to 260	up to 26	up to 850	140-210	140-210
1.5	Medium to high alloy steels, tool steels and steel castings	from 260 up to 340	from 26 up to 48	from 850 up to 1200	140-200	130-200
1.6	Heat treated high alloy steels and castings	from 340 up to 450	from 36 up to 48	from 1200 up to 1500	110-180	100-170
2.1	Soft & generally easy to machine Ferritic & Martensitic stainless steels & castings	up to 230	up to 20	up to 800	90-190	110-220
2.2	Medium strength & reasonable to machine Austenitic stainless steels & castings	up to 290	up to 30	up to 1000	70-160	70-140
2.3	Hard & generally difficult to machine Ferritic & Austenitic (duplex) stainless steels & castings	up to 340	up to 36	up to 1200		50-90
3.1	Grey cast iron Hardness - soft to medium	up to 180	-		175-280	190-400
3.2	Grey cast iron Hardness - medium to hard	from 180 up to 300	-		160-250	150-300
3.3	Malleable and Nodular irons - soft to medium	up to 220	-		200-250	
3.4	Malleable and Nodular irons - medium to hard	from 220 up to 300	-		200-250	
6.1	Copper	-	-	up to 500	200-250	
6.2	Brass (Alpha - long chip)	-	-	up to 800	300-500	
6.3	Brass (Beta - short chip) & soft Bronze	-	-	up to 800	300-500	
7.1	Unalloyed: Aluminium, Magnesium & Zinc	-	-	up to 150	300-500	
7.2	Aluminium alloys less than 5% Si Magnesium & Zinc alloys (long chip)	-	-	from 150 up to 300		300-500
7.3	Aluminium alloys 5% to 10% Si	-	-	from 200 up to 500		400-700
7.4	Aluminium alloys above 10% Si (short chip)	-	-	from 200 up to 500		400-700
8.1	Thermoplastics					200-500
8.2	Thermo-setting plastics					
8.3	Reinforced plastics & composite materials					



INDEXABLE MILLING CUTTERS

INDEXA-SEIKI Multi-Pro Spot Drills & Chamfer Mills

A spotting drill with all the advantages of indexable inserts - reduced tool maintenance time, increased performance, lower inventory cost and no regrinding requirements. The insert clamping method ensures accurate and secure location with quick change-over times. Multi-pro has a unique geometry which allows cutting over the centre line, using carbide, without chipping of the cutting edge. This versatile tool may be used to 'spot' holes prior to drilling, as a means to guide the drill and keep the hole straight, to keep size and accurately position, relative to the datum.

NB. The 118° inclusive tool is recommended for 'spotting' prior to drilling with 118° point drills. Countersinks may be produced prior to drilling to provide a corner break on a drilled hole, a chamfer conforming to drawing specifications, a lead in for a subsequent tapping operation, or a full countersink to accommodate a screw head. Corner chamfers on edges, contours and bores can be machined as light de-burring operations or full depth chamfers. Multi-pro may be used to produce vee grooves for fluid channels, locations for round components and grip pattern or serrations on jaws and clamp pads.

Application Range



SCM1045C

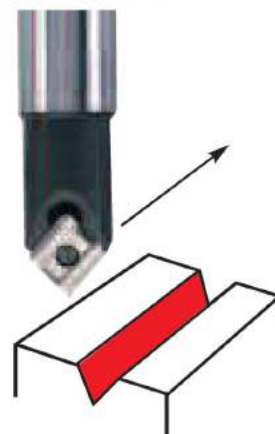
SC1645C

SC1630C

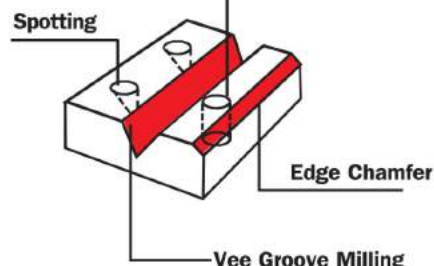


Hole Chamfer

Vee Groove Milling



Hole Chamfer



Spotting

Edge Chamfer

Vee Groove Milling

'Multi Pro Mini' - Uses C22 GUX Inserts

Designation	Cutting Diameter	Overall Length	Included Angle	Shank Diameter	Weight each	Order Code
SCM 1045C	8mm	105mm	90°	10mm	78g	-8050K

'Multi Pro Standard' - Uses C32 GUX Inserts

Designation	Cutting Diameter	Overall Length	Included Angle	Shank Diameter	Weight each	Order Code
SC 1645C	13mm	110mm	90°	16mm	174g	-8545K
SC 1630C	16mm	110mm	118°	16mm	184g	-8530K

Insert Grade Description

QM10 (ISO P10/M10/K10) Tin Coated Multi-purpose grade for general use, can cut the majority of ferrous and non-ferrous materials used in industry.



QS20 (ISO P20) Uncoated Grade for steel and stainless steel application.

QC10 (ISO K10) Uncoated Grade for cast irons, aluminums, and non-ferrous materials.

Inserts

Designation	Grade	To Suit	Order Code
C22 GUX	QM10	Multi-Pro Mini	-0080N
C32 GUX	QS20	Multi-Pro	-0102P
C32 GUX	QC10	Standard	-0100N

Spares

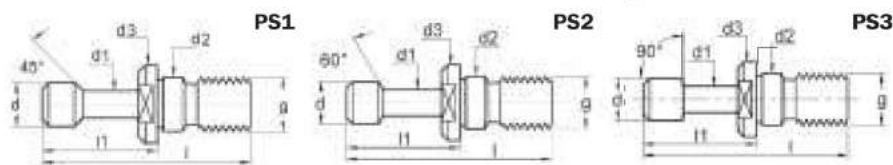
Insert Screw	Order Code
To suit SCM1045C	-3249K
To suit SC1645C & SC1630C	-4800K

Speed & Feed Recommendations for Multi-Pro

Group	Materials	Rockwell Hardness HRC	Recommended Grade	Cutting Speed M/min	Type of Operation	Feed/Rev		
						Pro Mini 105mm	Pro Standard 110mm	Pro Mini 165mm
1.1 to 1.3	Alloy Steels and castings	from 36 up to 45	QS20 QM10	80~100	Spot Drilling Chamfer Milling	0.020 0.050	0.026 0.070	0.013 0.040
1.4 to 1.6	Tool and die steels	from 45 up to 55	QS20 QM10	55~65	Spot Drilling Chamfer Milling	0.012 0.030	0.016 0.050	0.008 0.020
2.1 to 2.3	Stainless steels	up to 36	QS20 QM10	70~90	Spot Drilling Chamfer Milling	0.020 0.040	0.026 0.060	0.013 0.030
3.1 to 3.4	Cast irons	-	QC10 QM10	100~120	Spot Drilling Chamfer Milling	0.034 0.050	0.045 0.070	0.022 0.040
6.1 to 6.6	Copper alloys brass and bronze	-	QC10 QM10	120~150	Spot Drilling Chamfer Milling	0.034 0.050	0.045 0.070	0.022 0.040
7.1 to 7.4	Aluminium alloys	-	QC10 QM10	120~150	Spot Drilling Chamfer Milling	0.034 0.050	0.045 0.070	0.022 0.040

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BT-MAS 403



BT-MAS 403

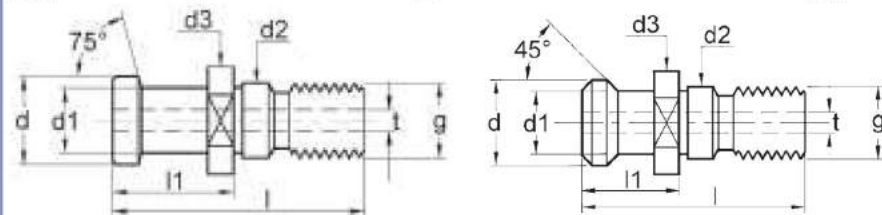
Product Number Taper - Type	Dimensions (mm)							Order Code IND-140
	l	l1	d	d1	d2	d3	g	
BT30 - PS1	43.0	23.0	11.0	7.0	12.5	16.5	M12	-9230K
BT40 - PS1	60.0	35.0	15.0	10.0	17.0	23.0	M16	-9240K
BT40 - PS2	60.0	35.0	15.0	10.0	17.0	23.0	M16	-9242K
BT40 - PS3	60.0	35.0	15.0	10.0	17.0	23.0	M16	-9243K
BT45 - PS1	70.0	40.0	19.0	14.0	21.0	31.0	M20	-9245K
BT45 - PS2	70.0	40.0	19.0	14.0	21.0	31.0	M20	-9247K
BT45 - PS3	70.0	40.0	19.0	14.0	21.0	31.0	M20	-9248K
BT50 - PS1	85.0	45.0	23.0	17.0	25.0	38.0	M24	-9250K
BT50 - PS2	85.0	45.0	23.0	17.0	25.0	38.0	M24	-9252K
BT50 - PS3	85.0	45.0	23.0	17.0	25.0	38.0	M24	-9253K

DIN 69871/A



PSA

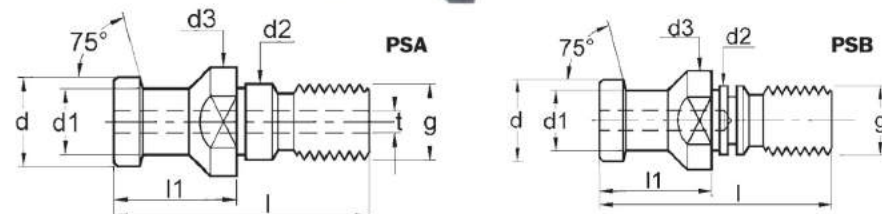
PSB



ISO 7388/2 (DIN 69871/A) (SQ = Square Shoulder)

Product Number Taper-Shoulder-Type	Dimensions (mm)							Order Code IND-140
	l	l1	d	d1	d2	d3	t	
DN40-SQ-PSB	44.5	16.4	18.9	12.9	17.0	22.5	7.5	M16
DN50-SQ-PSB	65.5	25.5	29.0	19.6	25.0	36.0	11.5	M24

DIN 69872



DIN 69872 (CH = Chamfered Shoulder)

Product Number Taper-Shoulder-Type	Dimensions (mm)							Order Code IND-140
	l	l1	d	d1	d2	d3	t	
DN40-CH-PSA	54.0	26.0	19.0	14.0	17.0	23.0	7.5	M16
DN45-CH-PSB	65.0	30.0	23.0	17.0	21.0	30.0	-	M20
DN50-CH-PSA	74.0	34.0	28.0	21.0	25.0	36.0	11.5	M24



Universal

Made from cast aluminium with machined carbon steel fittings, these fixtures are an invaluable asset in your machine shop. Universal in use, suitable for BT, DIN and CAT tool holders. Designed to give maximum protection for your tool holder whilst enabling strong gripping power to be exerted in both horizontal and vertical positions. It is tough but remains light in weight and its compact design makes it ideal for mounting on a work table or tool cart.

Overall dimensions (L x W x H)

Taper size 40: 200 x 155 x 100mm.

Taper size 50: 270 x 210 x 145mm.

Horizontal



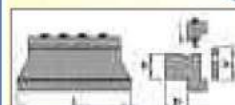
Vertical



Taper Size BT-DIN-CAT	Weight each	Order Code IND-140
30	1.9kg	-6630K
40	1.9kg	-6640K
50	4.2kg	-6650K

Tool Blocks

For use on manual and CNC lathes, this universal style tool block will accurately clamp all parting blades of the corresponding width, 26mm or 32mm. The rigid clamping method allows blades to be set securely for varying depths of cut.



Product Number	h1	L	h & b	Order Code IND-152
DPTS-2620	26	87	20	-1160K
DPTS-2625	26	87	25	-1162K
DPTS-3220	32	100	20	-1170K
DPTS-3225	32	110	25	-1172K
DPTS-3232	32	120	32	-1174K

R8 Shank Sidelock Adaptors

For Bridgeport type turret milling machine spindles to accept weldon shank (**DIN 1835B**) cutters.



Shank	Bore Size	Weight each	Order Code IND-144
R8	SL20	1209g	-3568K
R8	SL25	1952g	-3570K

R8 Shank Morse Adaptors


Shank	Bore Size	Weight each	Order Code IND-144
R8	MT1	400g	-5592K
R8	MT2	332g	-5594K
R8	MT3	881g	-5596K

FM - Face Mill Adaptors

From an extensive programme of quality spindle nose tooling, used with an extensive range of face and shell mills.

BT = BT-MAS 403 (See main picture)

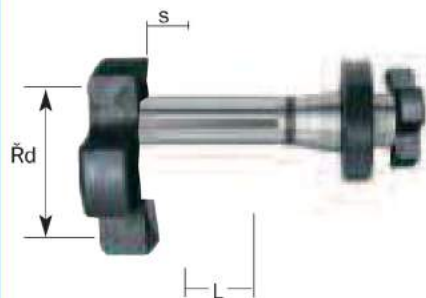
DN = DIN69871/A.....

IS = ISO/DIN 2080/

QC = ISO/DIN 2080 Quick Change.....



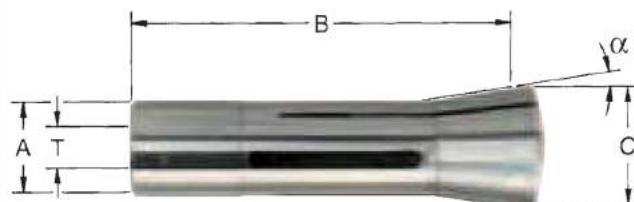
Shank	Spigot Diameter	L	D	Weight each	Order Code IND-144
DN40	FM22	60	50	1554g	-4610K
	FM22	120	40	2167g	-4612K
	FM27	60	50	1602g	-4614K
	FM27	120	48	2705g	-4616K
	FM32	60	78	2326g	-4618K
QC40	FM22	37	40	1125g	-4810K
	FM22	90	40	1845g	-4812K
	FM27	37	48	1275g	-4814K
	FM32	37	58	1558g	-4818K
	FM40	37	70	2025g	-4822K

SPINDLE NOSE TOOLING
R8 Shank Face Mill Adaptors


Shank	Spigot Size	d	s	Gauge Length (L)	Weight each	Order Code IND-144
R8	FM16	16	6	15	512g	-4970K
	FM22	22	10	15	696g	-4972K
	FM27	27	12	15	741g	-4974K
	FM32	32	16	17	938g	-4976K

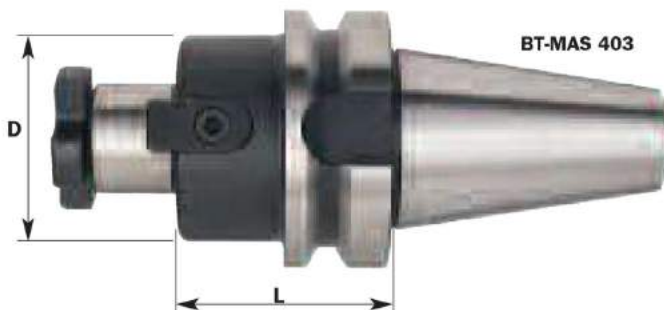
R8 Collets for Bridgeport

Used directly in the machine spindle for general purpose milling and drilling operations, collets have dedicated bores for specific cutter shank sizes.



Dimensions: A = 24.1mm, B = 102.3mm, C = 31.5mm T = 7/16" UNF. Angle: $\alpha = 8^{\circ}25'$.

Bore Size	Weight each	Order Code IND-144
3.0mm	291g	-3622K
6.0mm	298g	-3580K
8.0mm	304g	-3630K
10.0mm	297g	-3582K
11.0mm	299g	-3634K
12.0mm	295g	-3584K
14.0mm	283g	-3638K
16.0mm	275g	-3586K
20.0mm	209g	-3588K



Shank	Spigot Diameter	L	D	Weight each	Order Code IND-144
IS50	FM40	40	70	3.6kg	-4850K
	FM16	52	36	1.2kg	-4907K
	FM22	52	50	1.5kg	-4910K
	FM22	120	40	2.2kg	-4912K
BT40	FM27	52	50	1.5kg	-4914K
	FM27	120	48	2.7kg	-4916K
	FM32	52	78	2.2kg	-4918K
	FM40	60	89	2.9kg	-4922K

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ER -
Collet Chucks

Europe's most popular collet system. Collapsing collet design can be used for a range of diameters and maintains concentricity for drilling and milling. Long reach options available to give access into deep recesses.

BT = BT-MAS 403.....(See main picture)

DN = DIN69871/A.....



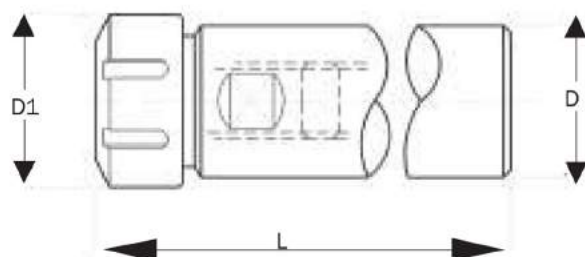
BT-MAS 403



DN = DIN 69871/A

Shank	Collet Diameter	L	D	Weight each	Order Code IND-144
DN40	ER16	100	28	929g	-2710K
	ER16	150	28	1608g	-2712K
	ER25	60	42	1119g	-2714K
	ER32	70	50	1253g	-2716K
	ER32	130	50	1744g	-2718K
	ER40	70	63	1293g	-2720K

Straight Shank - Mini Extension



Product Number	Collet Diameter	D1	L	D	Weight each	Order Code IND-144
SSE20	ER16	22	160	20	305g	-2880K

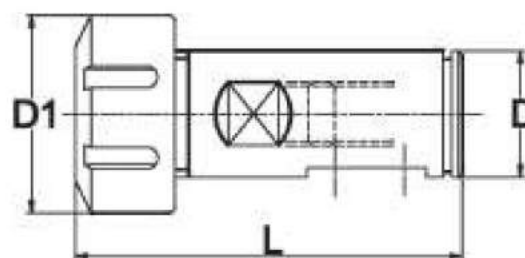
ISO = ISO/DIN 2080

Shank	Collet Diameter	L	D	Weight each	Order Code IND-144
IS50	ER32	70	50	3130g	-2782K
	ER40	60	63	3606g	-2786K

BT = BT-MAS 403

Shank	Collet Diameter	L	D	Weight each	Order Code IND-144
BT30	ER16	60	32	539g	-2792K
	ER32	60	50	1100g	-2796K
	ER16	60	32	1002g	-2798K
BT40	ER16	100	28	1240g	-2800K
	ER16	150	28	1240g	-2802K
	ER25	60	42	1155g	-2804K
	ER32	70	50	1299g	-2806K
	ER32	130	50	2177g	-2808K
	ER40	70	63	1334g	-2810K
BT50	ER16	100	28	3827g	-2816K
	ER16	150	28	4186g	-2818K
	ER32	70	50	3807g	-2832K
	ER32	130	50	4664g	-2834K
	ER40	80	63	4041g	-2836K

Straight Shank



Product Number	Collet Diameter	D1	L	D	Weight each	Order Code IND-144
SS32	ER32	50	098	32	655g	-2850K
SS40	ER32	50	118	40	913g	-2860K

For ER8/ER40 collet nuts.
Adjustable size, drop forged steel.
Single hand adjustment. One spanner will cover 35 - 105 collet nuts.

To suit collets: ER 8, 16, 25, 32 and 40.
Metric sizes: 35, 50, 60, 70, 80, 90 and 105mm.



Description	Weight each	Order Code
Adjustable	500g	-8100K

Spanners & Locknuts

Suitable for all collet chucks including straight shank.



Spanners

Chuck Type	Order Code
ER16 Mini	-5160K
ER16	-5300K
ER25	-5400K
ER32	-5450K



ER - Single Angle Collets

Manufactured from hardened and tempered high alloy steel.
Conform to **DIN 6499**.

Range mm	Weight each	Order Code
		ER11
1.00	4g	-2872K
1.50	5g	-2874K
2.00	6g	-2876K
2.50	7g	-2878K
3.00	8g	-2880K
3.50	10g	-2882K
4.00	12g	-2884K
4.50	15g	-2886K
5.00	19g	-2888K
5.50	25g	-2890K
6.00	28g	-2892K
6.50	30g	-2894K
7.00	35g	-2896K
		ER16
1.0-0.5	26g	-3200K
2.0-1.0	25g	-3210K
3.0-2.0	27g	-3220K
4.0-3.0	28g	-3230K
5.0-4.0	22g	-3240K
6.0-5.0	19g	-3250K
7.0-6.0	19g	-3260K
8.0-7.0	17g	-3270K
9.0-8.0	21g	-3280K
10.0-9.0	15g	-3290K
		ER20
3.0-2.0	41g	-3312K
4.0-3.0	40g	-3314K
5.0-4.0	40g	-3316K
6.0-5.0	42g	-3318K
7.0-6.0	44g	-3320K
8.0-7.0	25g	-3322K
9.0-8.0	36g	-3324K
10.0-9.0	36g	-3326K
11.0-10.0	32g	-3328K
12.0-11.0	31g	-3330K
13.0-12.0	25g	-3332K
		ER25
2.0-1.0	74g	-3400K
3.0-2.0	76g	-3410K
4.0-3.0	75g	-3420K
5.0-4.0	76g	-3430K
6.0-5.0	75g	-3440K
7.0-6.0	72g	-3450K
8.0-7.0	73g	-3460K
9.0-8.0	71g	-3470K
10.0-9.0	68g	-3480K
11.0-10.0	67g	-3490K

Range mm	Weight each	Order Code
		ER25 Continued
12.0-11.0	65g	-3500K
13.0-12.0	59g	-3510K
14.0-13.0	55g	-3520K
15.0-14.0	52g	-3530K
16.0-15.0	46g	-3540K
		ER32
3.0-2.0	140g	-3700K
4.0-3.0	141g	-3710K
5.0-4.0	146g	-3720K
6.0-5.0	147g	-3730K
7.0-6.0	145g	-3740K
8.0-7.0	148g	-3750K
9.0-8.0	145g	-3760K
10.0-9.0	141g	-3770K
11.0-10.0	139g	-3780K
12.0-11.0	134g	-3790K
13.0-12.0	133g	-3800K
14.0-13.0	128g	-3810K
15.0-14.0	123g	-3820K
16.0-15.0	119g	-3830K
17.0-16.0	112g	-3840K
18.0-17.0	103g	-3850K
19.0-18.0	101g	-3860K
20.0-19.0	44g	-3870K
		ER40
4.0-3.0	252g	-4000K
5.0-4.0	268g	-4010K
6.0-5.0	270g	-4020K
7.0-6.0	263g	-4030K
8.0-7.0	274g	-4040K
9.0-8.0	261g	-4050K
10.0-9.0	278g	-4060K
11.0-10.0	276g	-4070K
12.0-11.0	274g	-4080K
13.0-12.0	268g	-4090K
14.0-13.0	263g	-4100K
15.0-14.0	258g	-4110K
16.0-15.0	250g	-4120K
17.0-16.0	248g	-4130K
18.0-17.0	242g	-4140K
19.0-18.0	238g	-4150K
20.0-19.0	224g	-4160K
21.0-20.0	216g	-4170K
22.0-21.0	207g	-4180K
23.0-22.0	194g	-4190K
24.0-23.0	186g	-4200K
25.0-24.0	176g	-4210K
26.0-25.0	165g	-4220K

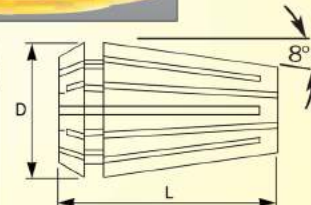
ER - Collet Sets

Manufactured from hardened and tempered high alloy steel.
All supplied in hard wearing bench cases.
Conform to **DIN 6499**.



Collet Dimensions (mm)

Type	Capacity	D	L
ER11	1.0-7.0	11.5	18.0
ER16	0.5-10	17.0	27.0
ER20	3.0-13	21.0	31.5
ER25	1.0-16	26.0	35.0
ER32	2.0-20	33.0	40.0
ER40	3.0-26	41.0	46.0



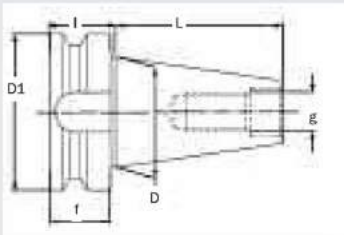
Collet Type	Number of Collets	Range Dia. (mm)	Weight each	Order Code
ER11	13	1.0 - 7.0	490g	-2898K
ER16	9	1.0 - 10.0	535g	-9010K
ER20	11	2.0 - 13.0	637g	-9015K
ER25	15	1.0 - 16.0	1207g	-9020K
ER32	18	2.0 - 20.0	4.8kg	-9030K
ER40	23	3.0 - 26.0	5.5kg	-9040K

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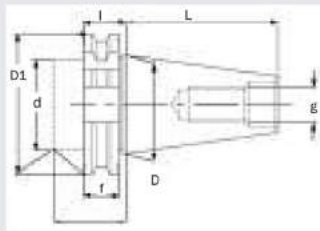
BT

Japanese Standard
BT-MAS 403

Taper	D	D1	f	g	L
30	31.75	46	20	M12	22
35	38.10	53	22	M12	24
40	44.45	63	25	M16	27
45	57.15	85	30	M20	33
50	69.85	100	35	M24	38

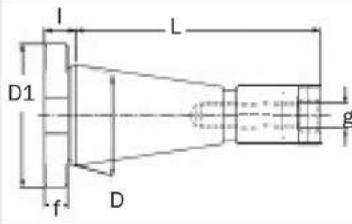
International Standards
DIN 69871/A - ISO7388/1 - NFE 62540
Commonly interchangeable with ANSI/Caterpillar Shanks

DIN



Taper	D	D1	d max	f	g	L	I	Umin
30	31.75	50	45	15.9	M12	47.8	19.1	35
40	44.45	63.55	50	15.9	M16	68.4	19.1	35
45	57.15	82.55	63	15.9	M20	82.7	19.1	35
50	69.85	97.5	80	15.9	M24	101.75	19.1	35

ISO Including Quick Change.

ISO Standard
ISO R 297-2583 - DIN 2080

ISO

Taper	D	D1	f	g	L	L1
30	31.75	50	8	M12	9.61	68.39
40	44.45	63	10	M16	11.6	93.40
45	57.15	80	12	M20	15.2	106.8
50	69.85	97.5	12	M24	15.2	126.8

Quick Change

Taper	D	D1	L	f	I	g
30	31.75	46.0	69	8.76	10.7	M12
40	44.45	63.5	93	7.96	9.9	M16

MT - Morse Taper Adaptors

With internal morse taper socket. For use on drilling machines etc. For drills, core drills, reamers etc.
Manufactured to stringent quality standards.

BT = BT-MAS 403.....(See main picture)

QC = ISO/DIN 2080
Quick Change.....

BT-MAS 403

Shank	Morse Taper	L	D	Weight each	Order Code IND-144
QC40	2	50	32	882g	-5826K
	3	65	40	1008g	-5830K
	4	95	48	1304g	-5834K

Shank	Morse Taper	L	D	Weight each	Order Code IND-144
BT40	1	50	25	1033g	-5922K
	2	50	32	1050g	-5926K
	3	70	40	1186g	-5930K
	4	95	48	1394g	-5934K
BT50	3	65	40	3750g	-5974K

ISO Taper Converters
IS40 bore.

QC = ISO/DIN 2080 Quick Change.....



BT-MAS 403

Shank	Outside Taper	L	D	Weight each	Order Code IND-144
ISO/DIN 2080	IS50	027	88.8	2.7kg	-5002K



Adjustable torque control protects against tap breakage/overload. Auto-reverse withdraws the tap without reversing the machine spindle. Each set is supplied complete with two rubber flex collets, two Morse arbors, kick bar and wrenches. Suitable for use with ISO, DIN and ANSI taps. These tapping heads are suitable for light and medium duty applications not for production machining. Range capacity is nominal sizes only and is dependent on tap shank dimensions (ISO or DIN).



**Model JSN-7
IND-144-8040K**



**Model JSN-12
IND-144-8050K**



**Model JSN-20
IND-144-8060K**

new



CUTTING TOOLS

Model	Range	Morse Taper	Recommended Max. Speed	Reverse Ratio	Body Diameter	Overall Length	Clockwise Compression	Self Feed*	Clockwise Expansion	Weight each	Order Code IND-144
JSN-7	M2-7	1 & 3	1500 RPM	01:01.6	52mm	130mm	5.0mm	3.5mm	10.0mm	2.10kg	-8040K
JSN-12	M4-12	3 & 4	1000 RPM	01:01.8	75mm	156mm	5.0mm	4.5mm	14.0mm	4.20kg	-8050K
JSN-20	M8-20	3 & 4	600 RPM	01:01.7	90mm	205mm	6.0mm	6.0mm	14.0mm	7.00kg	-8060K

Flexible Rubber Collet Sets
To suit Indexa-Seiki tapping heads. Supplied as sets of two collets.



Tapping Head	Contact Length	Cone Angle	Outside Diameter	Weight each	Order Code IND-140
JSN - 7	12mm	36°	15mm	10g	-9600K
JSN - 12	12mm	36°	22mm	20g	-9610K
JSN - 20	12mm	36°	26mm	40g	-9620K

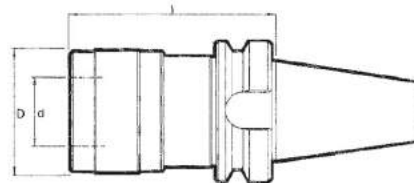
Arbors

	Order Code IND-140
JSN-20 3MT x M20 x 2.5	-9430K
4MT x M20 x 2.5	-9440K

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With axial compensation. Suitable for use on boring machines and machining centres.

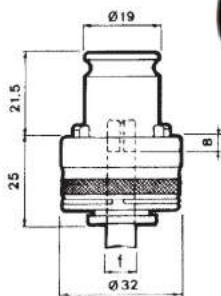
MAS 403 BT Taper Shank



Collet Size (d)	Shank Size	Dimensions D	Dimensions I	Tapping Range	Compression Range	Extension Range	Order Code IND-144
SC19	BT40	38.0	68	M3 - M12	9.0	9.0	-8610K
SC31	BT40	55.0	93	M6-M20	15.0	15.0	-8612K
	BT50	55.0	102	M6-M20	15.0	15.0	-8622K

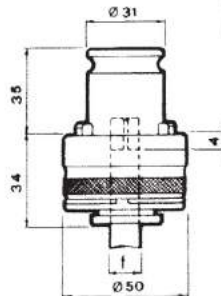
Tapping Collets

Slipping clutch type. To suit tension and compression type tapping chucks shown above.



Size (d) SC19/1	352	For DIN Taps	371	374	376	Dimensions Shank	A/F	Order Code IDX-144
335	M3	M3				3.5	2.7	-9230K
445	M4	M4				4.5	3.4	-9232K
645			M6		M6	4.5	3.4	-9234K
56	M5	M5				6.0	4.9	-9220K
6649	M6	M6				6.0	4.9	-9238K
86	M8		M8		M8	6.0	4.9	-9222K
88		M8				8.0	6.2	-9224K
997		M9				9.0	7.0	-9236K
107	M10		M10		M10	7.0	5.5	-9226K
1010		M10				10.0	8.0	-9280K
11862	M11		M11		M11	8.0	6.2	-9240K
129	M12		M12		M12	9.0	7.0	-9228K

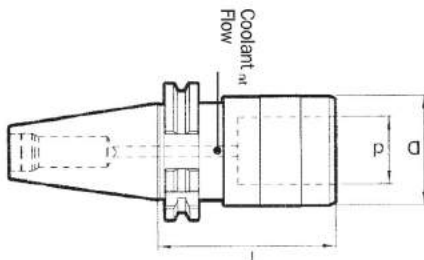
Size (d) SC19/1	Metric	For ISO 529 Taps	UNC/UNF	BSW/BSF	BA/BSP	Dimensions Shank	A/F	Order Code IDX-144
3315	M3	4 / 5	1/8"	5/32"	5BA	3.15	2.50	-9274K
0044	M4		5/32"			4.00	3.15	-9260K
0046	M4.5	8			3BA	4.50	3.55	-9262K
55	M5	10	3/16"	5/16"	2BA	5.00	4.00	-9270K
0053	M5.5	12	7/32"		1BA	5.60	4.50	-9268K
663	M6	1/4"	1/4"		OBA	6.30	5.00	-9272K
0082	M8	5/16"	5/16"			8.00	6.30	-9264K
1010	M10	3/8"	3/8"			10.00	8.00	-9280K
0121	M12	1/2"	1/2"			9.00	7.10	-9266K



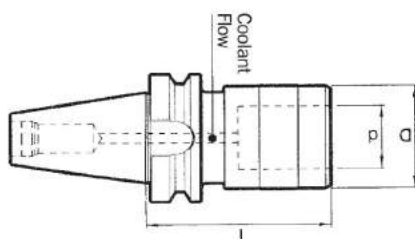
Size (d) SC31/2	352	For DIN Taps	371	374	376	Dimensions Shank	A/F	Order Code IDX-144
6649		M6				6.0	4.9	-9314K
8649	M8		M8		M8	6.0	4.9	-9316K
88		M8				8.0	6.2	-9300K
997		M9				9.0	7.0	-9306K
107	M10		M10		M10	7.0	5.5	-9302K
1010		M10				10.0	8.0	-9360K
11862	M11		M11		M11	8.0	6.2	-9318K
129	M12		M12		M12	9.0	7.0	-9304K
1411	M14		M14		M14	11.0	9.0	-9308K
1612	M16		M16		M16	12.0	9.0	-9310K
181411	M18		M18		M18	14.0	11.0	-9320K
2016	M20		M20		M20	16.0	12.0	-9312K

Size (d) SC31/2	Metric	For ISO 529 Taps	UNC/UNF	BSW/BSF	BA/BSP	Dimensions Shank	A/F	Order Code IDX-144
663	M6	1/4"	1/4"		OBA	6.3	5.0	-9346K
0082	M8	5/16"	5/16"			8.0	6.3	-9340K
1010	M10	3/8"	3/8"			10.0	8.0	-9360K
0121	M12	1/2"	1/2"			9.0	7.1	-9344K
14112	M14	9/16"	9/16"			11.2	9.0	-9352K
16125	M16	5/8"	5/8"			12.5	10.0	-9354K
1814112	M18					14.0	11.2	-9356K
2014	M20	3/4"	3/4"			14.0	11.2	-9348K
2216	M22	7/8"	7/8"			16.0	12.5	-9350K
001814	M24	1"	1"			18.0	14.0	-9342K

With through coolant. Suitable for use on CNC machines set up for rigid tapping.

ISO/DIN 69871-A Taper Shank


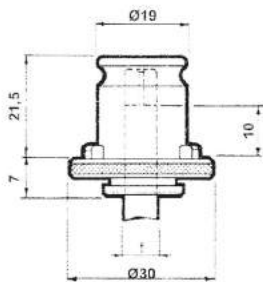
Collet Size (d)	Shank Size	Dimensions		Tapping Range	Order Code
		D	I		IND-144
SC19	DN50	33.0	75	M3-M12	-8540K
SC31	DN40	50.0	86	M6-M20	-8532K

MAS 403 BT Taper Shank


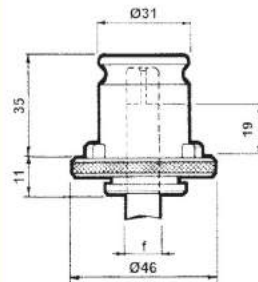
Collet Size (d)	Shank Size	Dimensions		Tapping Range	Order Code
		D	I		IND-144
SC19	BT40	33.0	67	M3-M12	-8510K
SC31	BT40	50.0	90	M6-M20	-8512K

Tapping Collets

Rigid type. To suit Rigid Type tapping chucks shown above.



Size (d)	For DIN Taps				Dimensions		Order Code
SC19/11	352	371	374	376	Shank	A/F	IND-144
31525	M3	M3	M5	M5	3.5	2.7	-9108K
4534	M4	M4			4.5	3.4	-9110K
649	M5-M8	M5-M6	M8	M8	6.0	4.9	-9102K
862		M8	M11	M11	8.0	6.2	-9106K
755	M10	M7	M10	M10	7.0	5.5	-9104K
97	M12	M9	M12	M12	9.0	7.0	-9100K
108		M10			10.0	8.0	-9140K



Size (d)	For DIN Taps				Dimensions		Order Code
SC31/12	352	371	374	376	Shank	A/F	IND-144
649	M5-M8	M5-M6	M8	M8	6.0	4.9	-9166K
862	M11	M8	M11	M11	8.0	6.2	-9170K
97	M12	M9	M12	M12	9.0	7.0	-9160K
755	M10	M10	M10	M10	7.0	5.5	-9168K
108					10.0	8.0	-9200K
119	M14		M14	M14	11.0	9.0	-9162K
129	M16		M16	M16	12.0	9.0	-9164K
1411	M18		M18	M18	14.0	11.0	-9172K
1612	M20		M20	M20	16.0	12.0	-9174K

Size (d)	For ISO 529 Taps				Dimensions		Order Code
SC19/11	Metric	UNC/UNF	BSW/BSF	BA	Shank	A/F	IND-144
31525	M3	4/5	3/8"	5BA	3.15	2.50	-9132K
0044	M4		5/32"		4.00	3.15	-9120K
0046	M4.5	8		3BA	4.50	3.55	-9122K
54	M5	10	3/16"	2BA	5.00	4.00	-9128K
635	M6		1/4"	OBA	6.30	5.00	-9130K
0082	M8/M11	5/16"	7/16"	5/16"	8.00	6.30	-9124K
0121	M9/M12	1/2"			9.00	7.10	-9126K
108	M10	3/8"	3/8"		10.00	8.00	-9140K

Size (d)	For ISO 529 Taps				Dimensions		Order Code
SC31/12	Metric	UNC/UNF	BSW/BSF	BA/BSP	Shank	A/F	IND-144
635	M6	1/4"	1/4"	OBA	6.3	5.0	-9184K
755	M7				7.0	5.5	-9186K
0082	M8/M11	5/16"	7/16"	5/16"	8.0	6.3	-9180K
0121	M9/M12	1/2"	1/2"		9.0	7.1	-9182K
108	M10	3/8"	3/8"	3/4" BSP	10.0	8.0	-9200K
1129	M14	9/16"	9/16"		11.2	9.0	-9188K
12510	M16	5/8"	5/8"	3/8" BSP	12.5	10.0	-9192K
14112	M18/M20	3/4"	3/4"		14.0	11.2	-9194K
16125	M22	7/8"	7/8"		16.0	12.5	-9196K
1814	M24	1"	1"	5/8" BSP	18.0	14.0	-9190K

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