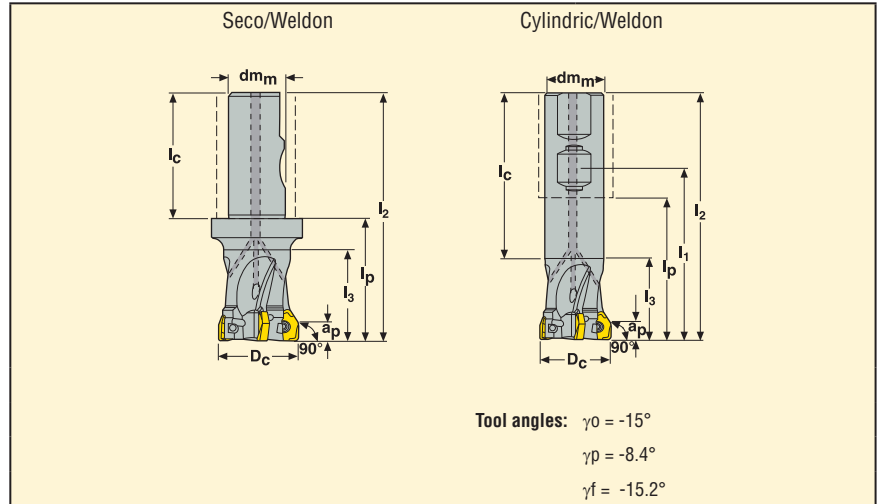


Square 6 – R217.96-08A



- For insert selection and cutting data recommendations, see pages 16-17.
- For insert program, see page 18.
- For plunging, see 2009 Navigator Update Catalog.



Part No.	Dimensions in inch/mm									Weight lbs/kg		Type of mounting	
	D _c	d _m	l ₁	l ₂	l _p	l ₃	l _c	a _p					
inch													
R217.96 -01.50.3-08-3A	1.50	1.25	–	4.5	–	1.15	3.35	.295	3	1.32	11800	Cyl/Weldon	XNEX 0806..
mm													
R217.96 -3240.3S-08-3A	40	32	–	120	60	50	60	7.5	3	0.8	11800	Seco/Weldon	XNEX 0806..
-3240.3S-08-4A	40	32	–	120	60	50	60	7.5	4	0.8	11800	Seco/Weldon	XNEX 0806..
R217.96 -3240.3-08-3A	40	32	84	120	60	35	85	7.5	3	0.6	11800	Cyl/Weldon	XNEX 0806..
-3240.3-08-4A	40	32	84	120	60	35	85	7.5	4	0.6	11800	Cyl/Weldon	XNEX 0806..

Spare parts

For cutter	Locking screw	Key*
R217.96 -1.50..	C04011-T15P	T15P-4
R217.96 -3240..	C04011-T15P	T15P-4

Please check availability in current price and stock-list.

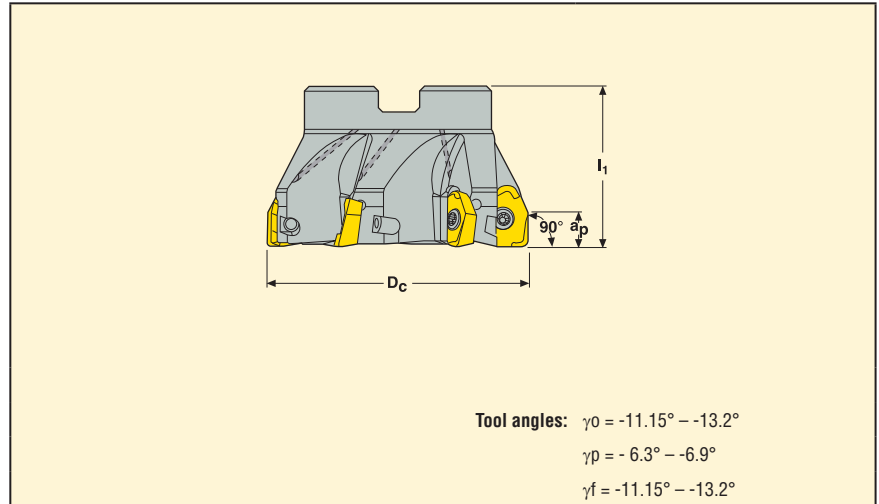
*Key torque value 31 in/lbs (3.5 Nm). Dynamometric keys available, see the MN Milling Catalog.

Square 6 – R220.96-08A

Normal pitch



- For insert selection and cutting data recommendations, see pages 16-17.
- For insert program, see page 18.
- For plunging, see 2009 Navigator Update Catalog.



Pitch	Part No.	Dimensions in inch/mm				Weight lbs/kg			
		D _c	l ₁	a _p					
Normal	inch								
	R220.96	-02.00 - 08- 4A	2.00	1.57	.295	4	0.66	10600	XNEX 0806..
		-02.50 - 08 - 6A	2.50	1.57	.295	6	0.88	9400	XNEX 0806..
		-03.00 - 08 - 7A	3.00	1.97	.295	7	2.20	8400	XNEX 0806..
		-04.00 - 08 - 8A	4.00	1.97	.295	8	3.31	7500	XNEX 0806..
		-05.00 - 08 - 11A	5.00	2.48	.295	11	6.17	6700	XNEX 0806..
		-06.00 - 08 - 12	6.00	2.48	.295	12	10.58	5900	XNEX 0806..
	mm								
	R220.96	-0050-08-4A	50	40	7.5	4	0.3	10600	XNEX 0806..
		-0063-08-6A	63	40	7.5	6	0.4	9400	XNEX 0806..
		-0080-08-7A	80	50	7.5	7	1	8400	XNEX 0806..
		-0100-08-8A	100	50	7.5	8	1.5	7500	XNEX 0806..
		-0125-08-11A	125	63	7.5	11	2.8	6700	XNEX 0806..
		-0160-08-12	160	63	7.5	12	4.8	5900	XNEX 0806..

Spare parts

	Locking screw	Key*	Arbor screw
For cutter inch/mm			
R220.96-02.00/02.50	C04011-T15P	T15P-4	UC6S 3/8UNFx1
R220.96-03.00	C04011-T15P	T15P-4	UC6S 1/2UNFx1 1/4
R220.96-04.00/05.00	C04011-T15P	T15P-4	UC6S 3/4UNFx1 1/4
R220.96-06.00	C04011-T15P	T15P-4	-
R220.96-0050	C04011-T15P	T15P-4	220.17-696
R220.96-0063	C04011-T15P	T15P-4	220.17-692
R220.96-0080-8160	C04011-T15P	T15P-4	-

* Key torque value 31 in/lbs (3.5 Nm).

Dynamometric keys available, see the MN Milling Catalog.

Mounting dimensions

For cutter	Dimensions in inch/mm				
	dm _m	D _{5m}	B _{kw}	c	d _{hc1}
R220.96-02.00 - 2.50	0.75	1.85	0.32	0.19	-
R220.96-03.00	1.00	2.44	0.38	0.22	-
R220.96-04.00 - 5.00	1.50	3.54	0.63	0.38	-
R220.96-06.00	2.00	4.33	0.76	0.44	-
R220.69-0050-0063	22	47	10.4	6.3	-
R220.69-0080	27	62	12.4	7	-
R220.69-0100	32	77	14.4	8	-
R220.69-0125	40	90	16.4	9	-
R220.69-8160	40	90	16.4	9	66.7

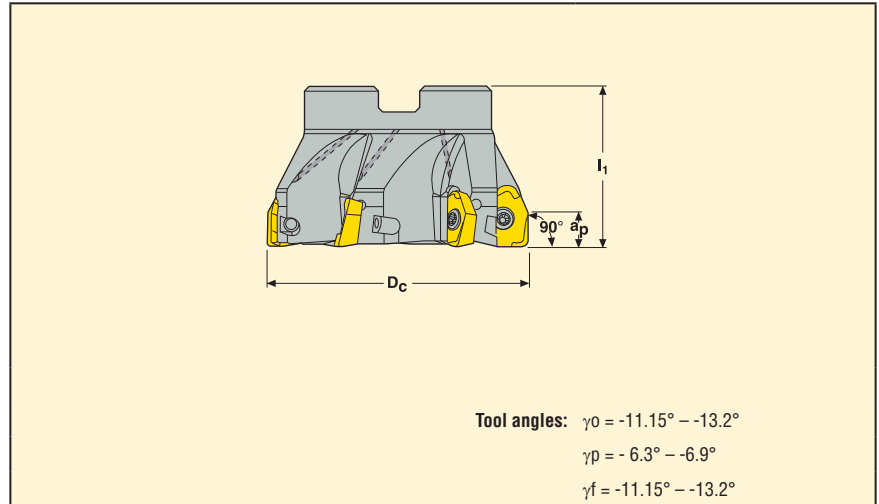
Please check availability in current price and stock-list.

Square 6 – R220.96-08A

Close pitch



- For insert selection and cutting data recommendations, see pages 16-17.
- For insert program, see page 18.
- For plunging, see 2009 Navigator Update Catalog.



Pitch	Part No.	Dimensions in inch/mm				Weight lbs/kg			
		D _c	l ₁	a _p					
Close	inch								
	R220.96 -02.00-08-5A	2.00	1.57	.295	5	0.66	10600	XNEX 0806..	
	-02.50-08-7A	2.50	1.57	.295	7	0.88	9400	XNEX 0806..	
	-03.00-08-9A	3.00	1.97	.295	9	2.20	8400	XNEX 0806..	
	-04.00-08-11A	4.00	1.97	.295	11	3.31	7500	XNEX 0806..	
	-05.00-08-14A	5.00	2.48	.295	14	6.17	6700	XNEX 0806..	
	-06.00-08-16	6.00	2.48	.295	16	10.50	5900	XNEX 0806..	
	mm								
	R220.96 -0050-08-5A	50	40	7.5	5	0.3	10600	XNEX 0806..	
	-0063-08-7A	63	40	7.5	7	0.4	9400	XNEX 0806..	
	-0080-08-9A	80	50	7.5	9	1.0	8400	XNEX 0806..	
	-0100-08-11A	100	50	7.5	11	1.5	7500	XNEX 0806..	
	-0125-08-14A	125	63	7.5	14	2.8	6700	XNEX 0806..	
	-8160-08-16	160	63	7.5	16	4.8	5900	XNEX 0806..	

Spare parts

For cutter inch/mm	Locking screw	Key*	Arbor screw
R220.96-02.00 - 2.50	C04011-T15P	T15P-4	UC6S 3/8UNFx1
R220.96-03.00	C04011-T15P	T15P-4	UC6S 1/2UNFx1 1/4
R220.96-04.00 - 5.00	C04011-T15P	T15P-4	UC6S 3/4UNFx1 1/4
R220.96-06.00	C04011-T15P	T15P-4	-
R220.96-0050	C04011-T15P	T15P-4	220.17-696
R220.96-0063	C04011-T15P	T15P-4	220.17-692
R220.96-0080-8160	C04011-T15P	T15P-4	-

* Key torque value 31 in/lbs (3.5 Nm).

Dynamometric keys available, see the MN Milling Catalog.

Mounting dimensions

For cutter	Dimensions in inch/mm				
	dm _m	D _{5m}	B _{kw}	c	d _{hc1}
R220.96-02.00 - 2.50	0.75	1.85	0.32	0.19	-
R220.96-03.00	1.00	2.44	0.38	0.22	-
R220.96-04.00 - 5.00	1.50	3.54	0.63	0.38	-
R220.96-06.00	2.00	4.33	0.76	0.44	-
R220.69-0050-0063	22	47	10.4	6.3	-
R220.69-0080	27	62	12.4	7	-
R220.69-0100	32	77	14.4	8	-
R220.69-0125	40	90	16.4	9	-
R220.69-8160	40	90	16.4	9	66.7

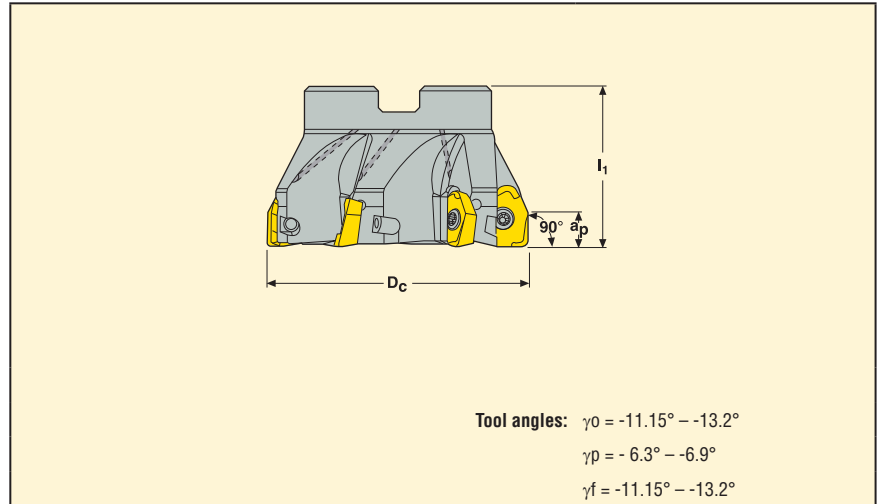
Please check availability in current price and stock-list.

Square 6 – R220.96-08A

Coarse pitch



- For insert selection and cutting data recommendations, see pages 16-17.
- For insert program, see page 18.
- For plunging, see 2009 Navigator Update Catalog.



Pitch	Part No.	Dimensions in inch/mm				Weight lbs/kg		
		D _c	l ₁	a _p				
Coarse	inch							
	R220.96 -02.50-08-4A	2.50	1.57	.295	4	0.88	9400	XNEX 0806..
	-03.00-08-5A	3.00	1.97	.295	5	2.20	8400	XNEX 0806..
	-04.00-08-6A	4.00	1.97	.295	6	3.31	7500	XNEX 0806..
	-05.00-08-7A	5.00	2.48	.295	7	6.17	6700	XNEX 0806..
	mm							
	R220.96 -0063-08-4A	63	40	7.5	4	0.4	9400	XNEX 0806..
	-0080-08-5A	80	50	7.5	5	1.0	8400	XNEX 0806..
	-0100-08-6A	100	50	7.5	6	1.5	7500	XNEX 0806..
	-0125-08-7A	125	63	7.5	7	2.8	6700	XNEX 0806..

Spare parts

For cutter inch/mm	Locking screw	Key*	Arbor screw
R220.96-02.50	C04011-T15P	T15P-4	UC6S 3/8UNFx1
R220.96-03.00	C04011-T15P	T15P-4	UC6S 1/2UNFx1 1/4
R220.96-04.00 - 5.00	C04011-T15P	T15P-4	UC6S 3/4UNFx1 1/4
R220.96-0063	C04011-T15P	T15P-4	220.17-692
R220.96-0080-0125	C04011-T15P	T15P-4	-

* Key torque value 31 in/lbs (3.5 Nm).

Dynamometric keys available, see the MN Milling Catalog.

Mounting dimensions

For cutter	Dimensions in inch/mm			
	dm _m	D _{5m}	B _{kw}	c
R220.96-02.50	1.00	0.75	0.32	0.19
R220.96-03.00	1.50	1.00	0.38	0.22
R220.96-04.00 - 5.00	2.00	1.50	0.63	0.38
R220.96-0063	22	47	10.4	6.3
R220.69-0080	27	62	12.4	7
R220.69-0100	32	77	14.4	8
R220.69-0125	40	90	16.4	9

Please check availability in current price and stock-list.

Square 6 – 217/220.96-08A

Universal insert: XNEX 080608-M13 MP2500

Seco Material Group No.	Recommended feed fz in/tooth	First choice	Difficult operations
1	.004-.010	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 T350M
2	.004-.010	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 T350M
3	.004-.009	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
4	.004-.008	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
5	.004-.007	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
6	.004-.007	XNEX 080608TR-MD15 MP1500	XNEX 080608TR-MD15 MP2500
7	.003-.006	XNEX 080608TR-MD15 MP1500	XNEX 080608TR-MD15 MP3000
8	.004-.008	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 T350M
9	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 T350M
10	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 F40M
11	.004-.006	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 F40M
12	.004-.012	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
13	.004-.010	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
14	.004-.008	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
15	.004-.007	XNEX 080608TR-M13 MP1500	XNEX 080608TR-MD15 MP1500
16	.004-.008	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M
17	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M
20	.003-.005	XNEX 080608TR-ME09 T350M	XNEX 080608TR-ME09 F40M
21	.003-.003	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 MP3000
22	.003-.005	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M

Cutting data - Full engagement width ($a_e/D_c = 100\%$)

Seco Material Group No.	Grades														
	MP1500			MP2500			MP3000			T350M			F40M		
	Feed f_z in/tooth														
	.003	.007	.012	.003	.007	.012	.003	.007	.012	.003	.007	.012	.003	.007	.012
1	1560	1200	1015	1380	1065	900	1295	1000	855	1200	935	785	1050	805	675
2	1360	1050	885	1200	935	785	1130	885	740	1050	805	690	920	705	590
3	1130	870	740	1000	770	655	950	740	625	870	675	575	755	590	490
4	1035	805	675	920	705	590	870	675	575	805	625	525	690	540	460
5	835	655	540	740	575	490	705	540	460	655	510	425	560	445	360
6	605	475	-	540	425	-	510	395	-	475	360	-	410	310	-
7	195	150	-	165	115	-	150	115	-	150	115	-	130	100	-
8	1000	770	655	785	605	525	785	605	510	740	575	475	675	525	445
9	870	675	-	690	540	-	675	525	-	640	490	-	590	460	-
10	740	575	-	590	460	-	575	445	-	540	425	-	490	395	-
11	575	445	-	460	360	-	460	345	-	425	330	-	395	295	-
12	900	705	590	805	625	525	755	590	490	705	540	460	605	475	395
13	805	625	525	720	560	475	675	525	445	625	475	410	540	425	360
14	740	575	490	655	510	425	625	475	410	575	445	375	490	395	330
15	605	460	-	525	410	-	510	395	-	460	360	-	410	310	-
16	-	-	-	3725	2885	2430	3525	2740	2295	3250	2510	2115	2820	2180	1835
17	-	-	-	3000	2330	1970	2855	2200	1855	2625	2035	1705	2280	1770	1495
20	-	-	-	215	165	-	195	165	-	195	150	-	180	130	-
21	-	-	-	130	100	-	130	100	-	115	100	-	115	80	-
22	-	-	-	215	165	-	195	165	-	195	150	-	180	130	-

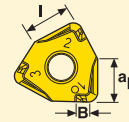
Cutting data - Side milling

Operations	a_e/D_c	Recommended feed f_z in./tooth (mm/tooth)			Speed factor
Full engagement	100%	.003 (0.07)	.007 (0.18)	.012 (0.30)	1.00
Side milling	25%	.004 (0.09)	.009 (0.24)	.016 (0.40)	1.30
	10%	.006 (0.14)	.015 (0.37)	.024 (0.61)	1.50
	5%	.008 (0.20)	.020 (0.52)	.034 (0.86)	1.60
Average chip thickness hm		.002 (0.04)	.004 (0.11)	.007 (0.19)	-

Choose suitable feed. Multiply speed value from basic cutting data by speed factor.

Dimensions in inch (mm)

Insert size	Max D.O.C. a_p	Wiper flat width B
080616	.295 (7.5)	.020 (0.5)



Square 6 – 217/220.96-08A

Universal insert: XNEX 080608-M13 MP2500

Seco Material Group No.	Recommended feed fz in/tooth	First choice	Difficult operations
1	.004-.010	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 T350M
2	.004-.010	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 T350M
3	.004-.009	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
4	.004-.008	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
5	.004-.007	XNEX 080608TR-M13 MP2500	XNEX 080608TR-M13 T350M
6	.004-.007	XNEX 080608TR-MD15 MP1500	XNEX 080608TR-MD15 MP2500
7	.003-.006	XNEX 080608TR-MD15 MP1500	XNEX 080608TR-MD15 MP3000
8	.004-.008	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 T350M
9	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 T350M
10	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 F40M
11	.004-.006	XNEX 080608TR-ME09 F40M	XNEX 080608TR-M13 F40M
12	.004-.012	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
13	.004-.010	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
14	.004-.008	XNEX 080608TR-M13 MK1500	XNEX 080608TR-MD15 MK2000
15	.004-.007	XNEX 080608TR-M13 MP1500	XNEX 080608TR-MD15 MP1500
16	.004-.008	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M
17	.004-.007	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M
20	.003-.005	XNEX 080608TR-ME09 T350M	XNEX 080608TR-ME09 F40M
21	.003-.003	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 MP3000
22	.003-.005	XNEX 080608TR-ME09 F40M	XNEX 080608TR-ME09 F40M

Cutting data - Full engagement width ($a_e/D_c = 100\%$)

Seco Material Group No.	Grades									
	MK1500			MK2000			MK3000			Feed fz in/tooth
	.003	.007	.012	.003	.007	.012	.003	.007	.012	Feed fz in/tooth
	Cutting speed, vc (sfm)									
1	-	-	-	1360	1050	885	1265	950	820	
2	-	-	-	1180	920	770	1100	820	720	
3	-	-	-	985	770	640	920	690	605	
4	-	-	-	900	705	590	835	625	540	
5	-	-	-	740	575	475	690	510	445	
6	-	-	-	540	410	-	490	375	-	
7	-	-	-	165	130	-	165	115	-	
8	-	-	-	870	675	575	785	590	510	
9	-	-	-	755	590	-	675	510	-	
10	-	-	-	655	510	-	575	425	-	
11	-	-	-	510	395	-	460	345	-	
12	1130	885	740	785	605	510	740	560	475	
13	1015	785	655	705	540	460	655	490	425	
14	935	720	605	655	510	425	605	460	395	
15	755	590	-	525	410	-	490	360	-	
16	-	-	-	3675	2840	2395	3410	2560	2230	
17	-	-	-	2970	2295	1935	2755	2065	1805	
20	-	-	-	230	180	-	195	150	-	
21	-	-	-	150	115	-	130	100	-	
22	-	-	-	230	180	-	195	150	-	

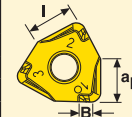
Cutting data - Side milling

Operations	a_e/D_c	Recommended feed fz in./tooth (mm/tooth)			Speed factor
Full engagement	100%	.003 (0.07)	.007 (0.18)	.012 (0.30)	1.00
Side milling	25%	.004 (0.09)	.009 (0.24)	.016 (0.40)	1.30
	10%	.006 (0.14)	.015 (0.37)	.024 (0.61)	1.50
	5%	.008 (0.20)	.020 (0.52)	.034 (0.86)	1.60
Average chip thickness hm		.002 (0.04)	.004 (0.11)	.007 (0.19)	-

Choose suitable feed. Multiply speed value from basic cutting data by speed factor.

Dimensions in inch (mm)

Insert size	Max D.O.C. a_p	Wiper flat width B
080616	.295 (7.5)	.020 (0.5)



SQUARE 6™ - INSERTS



XNEX 0806

Tolerances (±inch/mm)

	l	s
XNEX	.001 (0.025)	.001 (0.025)

Size	Dimensions in inch (mm)	
	L	s
0806	.491 (12.48)	.250-.255 (6.37-6.47)

Inserts	Part No.	r _c inch	r _c mm	Cutting rake	Grades																			
					Coated											Uncoated								
					MH1000	MK1500	MK2000	MK3000	MP1500	MP2500	MP3000	T150M	T25M	T250M	T350M	MS2500	F15M	F17M	F20M	F25M	F30M	F40M	HX	H15
	XNEX 080608TR-ME09	.031	0.8	27°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	080608TR-M13	.031	0.8	22°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	080608TR-MD15	.031	0.8	17°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	XNEX 080616TR-ME09	.063	1.6	27°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	080616TR-M13	.063	1.6	22°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	080616TR-MD15	.063	1.6	17°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

■ Stock standard
Subject to change refer to current price and stock-list

Steel

SMG No.		BHN	$k_c 1.1$	m_c
1	Very soft low-carbon steels. Low carbon and purely ferritic mild steels.	<135	196	.21
2	Free cutting steels, excluding stainless steels.	120 <210	218	.22
3	Machine steels and carbon steels. Plain carbon steels with low to medium carbon content (< 0.5%C).	135 <165	218	.25
4	High-carbon and ordinary low-alloy steels. Medium-hard quenching and tempering steels. High-carbon steels (>0.5%C). Ferritic and martensitic stainless steels.	165 <210	247	.24
5	Normal tool steels. Harder quenching and tempering steels. Martensitic stainless steels.	210 <270	276	.24
6	Difficult tool steels. High-alloy, high-hardness steels. Martensitic stainless steels.	270 <360	290	.24
7	Difficult high-strength, high-hardness steels. Hardened steels from material groups 3–6. Martensitic stainless steels.	>360	421	.22

Stainless steel

8	Easy-cutting stainless steels. Free-cutting stainless steels. Calcium-treated stainless steels.		254	.22
9	Moderately difficult stainless steels. Austenitic and duplex stainless steels.		276	.20
10	Difficult stainless steels. Austenitic and duplex stainless steels.		297	.20
11	Very difficult stainless steels. Austenitic and duplex stainless steels.		312	.20

Cast iron

12	Moderately hard cast iron. Grey iron.		167	.22
13	Low-alloy cast iron. Malleable cast iron. SG iron.		178	.25
14	Moderately difficult alloy cast iron. Moderately difficult malleable iron. SG iron.		196	.28
15	Difficult high-alloy cast iron. Difficult malleable iron. SG iron.		213	.30

Other materials

16	Non-ferrous alloys. Aluminum with <16% Si. Brass, zinc and magnesium.		101	.25
17	Non-ferrous alloys. Aluminum with >16% Si. Aluminum, bronze and copper-nickel.		101	.27
20	Nickel-, cobalt- and ferrous superalloys with hardness of <30 HRc. Incoloy 800 and Inconel 601, 617 and 625. Monel 400.		377	.24
21	Nickel-, cobalt- and ferrous superalloys with hardness of >30 HRc. Inconel 718 and 750-X and Incoloy 925, Monel K-500.		479	.24
22	Titanium-based alloys. Ti-6Al-4V.		210	.23

$k_{c1.1}$ -values with 0 degree effective cutting rake angle. For other rake angles, reduce the $k_{c1.1}$ -value by 1% for every degree increase in the cutting rake angle and vice versa. Bear in mind that the BHN-value is only an aid in the selection of the material group when the material has been worked by rolling, drawing, heat treatment or other methods that increase the strength of the material.