

Indexable Carbide Insert End Mills

3 Piece Set

Size including 1, 1-1/4, 1-1/2"

Order No. 242-3201



3 Piece Set

Size including 1-3/4, 2, 2-1/2"

Order No. 242-3202

Shank	Cutter Dia.	Inserts	Order No.
R8	1"	2 inserts TP.-22	242-3205
R8	1-1/4	2 inserts TP.-32	242-3210
R8	1-3/8	3 inserts TP.-32	242-3215
R8	1-1/2	3 inserts TP.-32	242-3220
R8	1-5/8	3 inserts TP.-32	242-3225
R8	1-3/4	3 inserts TP.-32	242-3230
R8	2	3 inserts TP.-43	242-3235
R8	2-1/2	3 inserts TP.-43	242-3240
R8	3	3 inserts TP.-43	242-3245

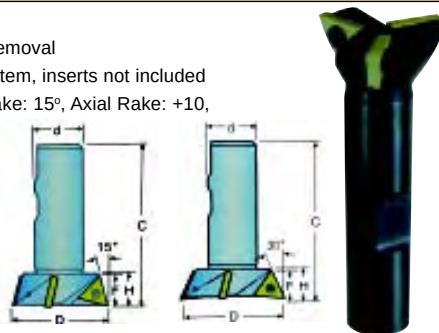
Straight Shank



Shank Dia.	Cutter Dia.	Insert	Order No.
3/4"	3/4"	1 insert TP.-21	242-3005
3/4	7/8	2 inserts TP.-21	242-3010
3/4	1	2 inserts TP.-32	242-3015
3/4	1-1/4	2 inserts TP.-32	242-3020
3/4	1-3/8	2 inserts TP.-32	242-3025
3/4	1-1/2	3 inserts TP.-32	242-3030
3/4	1-5/8	3 inserts TP.-32	242-3035
3/4	1-3/4	3 inserts TP.-32	242-3040
3/4	2	3 inserts TP.-43	242-3045
1	1	2 inserts TP.-22	242-3105
1	1-1/4	2 inserts TP.-32	242-3110
1	1-3/8	2 inserts TP.-32	242-3115
1	1-1/2	3 inserts TP.-32	242-3120
1	1-5/8	3 inserts TP.-32	242-3125
1	1-3/4	3 inserts TP.-32	242-3130
1	2	3 inserts TP.-43	242-3135

15° & 60° Dovetail Mills

- Weldon shank
 - High rate of material removal
 - Torx screw locking system, inserts not included
- Tool Angle: Cutting Rake: 15°, Axial Rake: +10,
Radial Rake: 14.



15° Dovetail Mills

Cutter	Insert	TiN-Coated
D d F H C	No. & Style	Order No. Order No.
1/2" 3/8" .359 .420 2.42	1 TDGW21.5	243-3011 243-3111
1 1/2 .359 .420 2.42	3 TDGW21.5	243-3012 243-3112
1-7/8 7/8 .550 .750 3.20	3 TDGW32.	243-3013 243-3113
2-1/2 1 .750 1.00 3.75	3 TDGW43.	243-3014 243-3114

60° Dovetail Mills

Cutter	Insert	TiN-Coated
D d F H C	No. & Style	Order No. Order No.
1/2 3/8 .325 .142 2.39	1 TDGW21.5	243-3001 243-3101
3/4 3/8 .325 .282 2.39	2 TDGW21.5	243-3002 243-3102
1 1/2 .325 .375 2.375	3 TDGW21.5	243-3003 243-3103
1-3/8 5/8 .510 .550 2.862	3 TDGW32	243-3004 243-3104
1-7/8 7/8 .510 .550 3	3 TDGW32	243-3005 243-3105
2-1/4 1 .700 .750 3.5"	3 TDGW43	243-3006 243-3106
2-1/2 1 .700 .750 3.5"	3 TDGW43	243-3007 243-3107

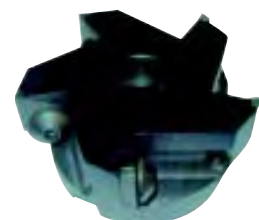
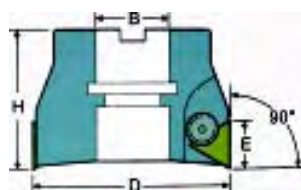
1/2" Shank Mini Indexable End Mills



Cutter Dia.	Overall Length	Body Length	Insert	Order No.
1/2"	3"	1"	TPG22	320-0820
9/16	3	1	TPG22	320-0825
5/8	3	1	TPG22	320-0830

No. of Pieces	Include	Order No.
3 Pcs/set	1/2", 9/16, 5/8"	320-0835

Square Shoulder Face Mills

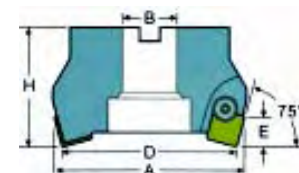


90° Clamp Style

Cutter	No. of	TiN-Coated
D B H E	Flutes Inserts Screws	Order No. Order No.
1-1/2" .50 1.57 .511 3	TP..322 MS6075	243-3021 243-3121
2 .75 1.57 .511 3	TP..322 MS6075	243-3022 243-3122
2-1/2 .75 1.57 .511 4	TP..322 MS6075	243-3023 243-3123
3 1.00 1.97 .511 5	TP..322 MS6075	243-3024 243-3124
4 1.50 1.97 .700 5	TP..432 MS810	243-3025 243-3125
5 1.50 2.48 .700 6	TP..432 MS810	243-3026 243-3126
6 2.00 2.48 .700 7	TP..432 MS810	243-3027 243-3127

Cutter	No. of	TiN-Coated
D B H E	Flutes Inserts Screws	Order No. Order No.
40mm 16 42 14.5 3	TP..1603 MS6075	243-3031 243-3131
50 22 45 14.5 4	TP..1603 MS6075	243-3032 243-3132
63 27 48 14.5 4	TP..1603 MS6075	243-3033 243-3133
80 27 48 14.5 5	TP..1603 MS6075	243-3034 243-3134
100 32 48 18 5	TP..2204 MS810	243-3035 243-3135
125 40 50 18 6	TP..2204 MS810	243-3036 243-3136
160 40 50 18 7	TP..2204 MS810	243-3037 243-3137

75° Clamp Style



Cutter	No. of	TiN-Coated
D B H A E	Flutes Inserts	Order No. Order No.
2-1/2" 3/4 1.57 2.98 .354 4	SP..42	243-3041 243-3141
3 1 1.97 3.65 .354 5	SP..42	243-3042 243-3142
4 1-1/2 1.97 4.43 .354 6	SP..42	243-3043 243-3143
5 1-1/2 2.48 5.42 .354 6	SP..42	243-3044 243-3144

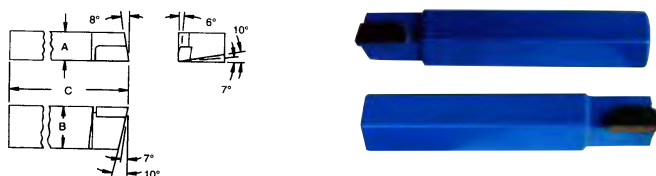
Cutter	No. of	TiN-Coated
D B H A E	Flutes Inserts	Order No. Order No.
50mm 22 45 56 9 4	SP..1203	243-3051 243-3151
63 27 48 69 9 4	SP..1203	243-3052 243-3152
80 27 48 86 9 5	SP..1203	243-3053 243-3153
100 32 48 106 9 6	SP..1203	243-3054 243-3154
125 40 50 131 9 6	SP..1203	243-3055 243-3155

Carbide Tipped Tool Bits

Grade C-2 for Cast Iron and Non-Ferrous Materials, Grade C-6 for Steel and Steel Alloys Premium Carbide

Style AR & AL

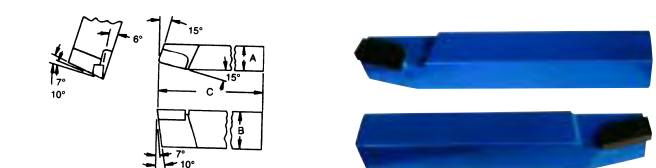
Straight Turning-for general machining applications such as turning, boring, facing and chamfering. Suitable for machining to a 90° shoulder.



Square	Length	R.H		L.H	
		Industry C-2	Order No.	Industry C-6	Order No.
1/4"	2"	AR-4	383-0012	AL-4	383-0112
5/16	2-1/4	AR-5	383-0022	AL-5	383-0122
3/8	2-1/2	AR-6	383-0032	AL-6	383-0132
7/16	3	AR-7	383-0042	AL-7	383-0142
1/2	3-1/2	AR-8	383-0052	AL-8	383-0152
5/8	4	AR-10	383-0062	AL-10	383-0162
3/4	4-1/2	AR-12	383-0072	AL-12	383-0172
1	6	AR-16	383-0082	AL-16	383-0182

Style BR & BL

Lead Angle turning - for general applications on turning, boring, and facing where a lead angle is either required or acceptable.



Square	Length	R.H		L.H	
		Industry C-2	Order No.	Industry C-6	Order No.
1/4"	2"	BR-4	383-1012	BL-4	383-1112
5/16	2-1/4	BR-5	383-1022	BL-5	383-1122
3/8	2-1/2	BR-6	383-1032	BL-6	383-1132
7/16	3	BR-7	383-1042	BL-7	383-1142
1/2	3-1/2	BR-8	383-1052	BL-8	383-1152
5/8	4	BR-10	383-1062	BL-10	383-1162
3/4	4-1/2	BR-12	383-1072	BL-12	383-1172
1	6	BR-16	383-1082	BL-16	383-1182

Style C

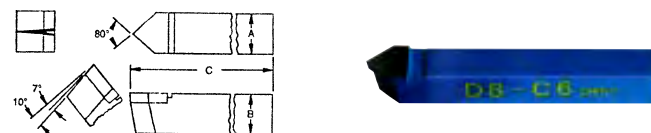
Broad nose - a general purpose tool of great utility for facing, chamfering, and turning. This tool is generally used for making special form tools.



Square	Length	C-2		C-6	
		Industry No.	Order No.	Industry No.	Order No.
1/4"	2"	C-4	383-2002	C-5	383-2006
5/16	2-1/4	C-5	383-2012	C-6	383-2016
3/8	2-1/2	C-6	383-2022	C-7	383-2032
7/16	3	C-7	383-2032	C-8	383-2042
1/2	3-1/2	C-8	383-2042	C-10	383-2052
5/8	4	C-10	383-2052	C-12	383-2062
3/4	4-1/2	C-12	383-2062	C-16	383-2072
1	6	C-16	383-2072		

Style D

80° Round nose - an 80° included angle round nose tool for turning, boring, facing, chamfering and other miscellaneous machining operations.



Square	Length	Industry No.	C-2	C-6
			Order No.	Order No.
1/4"	2"	D-4	383-3012	383-3016
5/16	2-1/4	D-5	383-3022	383-3026
3/8	2-1/2	D-6	383-3032	383-3036
7/16	3	D-7	383-3042	383-3046
1/2	3-1/2	D-8	383-3052	383-3056
5/8	4	D-10	383-3062	383-3066
3/4	4-1/2	D-12	383-3072	383-3076
1	6	D-16	383-3082	383-3086

Style E

Threading - conforms with the U.S. Standard 60° included angle thread, also used for V-grooving chamfering, turning, boring and facing.



Square	Length	Industry No.	C-2	C-6
			Order No.	Order No.
1/4"	2"	E-4	383-4002	383-4006
5/16	2-1/4	E-5	383-4012	383-4016
3/8	2-1/2	E-6	383-4022	383-4026
7/16	3	E-7	383-4032	383-4036
1/2	3-1/2	E-8	383-4042	383-4046
5/8	4	E-10	383-4052	383-4056
3/4	4-1/2	E-12	383-4062	383-4066
1	6	E-16	383-4072	383-4076

Style ER-Right AND EL-Left

60° Offset Tool, Right hand for facing to square shoulder. Used mainly for turret lathe operations. Right and left hand tools are used together for straddle facing. Left hand for turning.



E	D	H	L	R.H.	ER.R.H	ER.R.H.
				Industry No.	C-2 Order No.	C-6 Order No.
1/16"	1/4"	1/4"	2"	ER-4	383-6202	383-6206
1/16	5/16	5/16	2-1/4	ER-5	383-6232	383-6236
1/16	3/8	3/8	2-1/2	ER-6	383-6212	383-6216
3/32	1/2	1/2	3-1/2	ER-8	383-6222	383-6226
3/32	5/8	5/8	4	ER-10	383-6242	383-6246

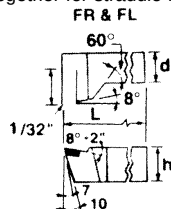
E	D	H	L	L. H.	EL.L.H.	EL.L.H.
				Industry No.	C-2 Order No.	C-6 Order No.
1/16"	1/4"	1/4"	2"	EL-4	383-6302	383-6306
1/16	5/16	5/16	2-1/4	EL-5	383-6332	383-6336
1/16	3/8	3/8	2-1/2	EL-6	383-6312	383-6316
3/32	1/2	1/2	3-1/2	EL-8	383-6322	383-6326
3/32	5/8	5/8	4	EL-10	383-6342	383-6346

Carbide Tipped Tool Bits

Grade C-2 for Cast Iron and Non-Ferrous Materials, Grade C-6 for Steel and Steel Alloys Premium Carbide

Style FR-Right and FL-Left

End Cutting Offset Tool, right hand for facing to square shoulder. Used mainly for turret lathe operations. Right and left hand tools are used together for straddle facing. Left hand for turning.



E	D	H	L	R. H. Industry No.	FR.R.H C-2 Order No.	FR.R.H. C-6 Order No.
1/32"	1/2"	1/2"	3-1/2"	FR-8	383-8002	383-8006
1/32	5/8	5/8	4	FR-10	383-8012	383-8016
1/32	3/4	3/4	4-1/2	FR-12	383-8022	383-8026
1/32	1	1	7	FR-16	383-8032	383-8036

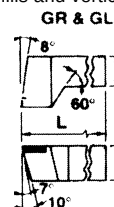
E	D	H	L	L. H. Industry No.	FL.L.H. C-2 Order No.	FL.L.H. C-6 Order No.
1/32"	1/2"	1/2"	3-1/2"	FL-8	383-8102	383-8106
1/32	5/8	5/8	4	FL-10	383-8112	383-8116
1/32	3/4	3/4	4-1/2	FL-12	383-8122	383-8126
1/32	1	1	7	FL-16	383-8132	383-8136

Style GR-Right and GL-Left

Right, left hand for facing to square shoulder.

Side cutting offset tools.

Ideal for facing work close to chuck jaws on engine lathes, turret lathes, boring mills and vertical turret lathes.



E	D	H	L	R. H. Industry No.	GR.R.H C-2 Order No.	GR.R.H. C-6 Order No.	L. H. Industry No.	GL.L.H. C-2 Order No.	GL.L.H. C-6 Order No.
1/32"	1/2"	1/2"	3-1/2"	GR-8	383-8202	383-8206	GL-8	383-8302	383-8306
1/32	5/8	5/8	4	GR-10	383-8212	383-8216	GL-10	383-8312	383-8316
1/32	3/4	3/4	4-1/2	GR-12	383-8232	383-8236	GL-12	383-8332	383-8336
1/32	1	1	7	GR-16	383-8222	383-8226	GL-16	383-8322	383-8326

Style TSC

For boring to a square shoulder in a 30° boring bar, or internal Chamfering (30°) in a 0°.



Style TSE

For boring to square shoulder in a 45° boring bar, or boring with a 15° lead angle in a 30° boring bar.



Style TSC				Style TSE			
Size	Radius	Industry No.	Order No.	Size	Radius	Industry No.	Order No.
5/1"	1/64"	TSC5	383-8502	5/1"	1/64"	TSE5	383-8602
3/8	1/64	TSC6	383-8512	3/8	1/64	TSE6	383-8612
1/2	1/32	TSC8	383-8522	1/2	1/32	TSE8	383-8622
5/8	1/32	TSC10	383-8532	5/8	1/32	TSC10	383-8532
3/4	1/32	TSC12	383-8542	3/4	1/32	TSC12	383-8542

Style TSA

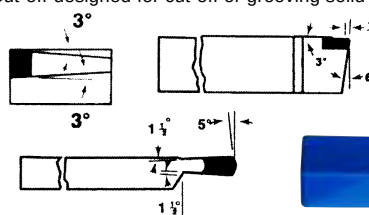
Square Shank Boring Tools for boring to a square shoulder in 90° boring bars.



Size	Radius	Industry No.	Style TSA C-2 Order No.	Style TSA C-6 Order No.
5/16"	1/64"	TSA5	383-8402	383-8406
3/8	1/64	TSA6	383-8412	383-8416
1/2	1/32	TSA8	383-8422	383-8426
5/8	1/32	TSA10	383-8432	383-8436
3/4	1/32	TSA12	383-8442	383-8446

Styles CTR & CTL

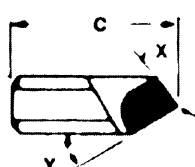
Cut-off-designed for cut-off or grooving solid bars and tube parting.



Shank Size	Tip Dia.	Overall Length	R. H. C-2 Order No.	R. H. C-6 Order No.
1/2 x 1"	1/8"	5"	CTR-111	383-4602
1/2 x 1	3/16	5	CTR-122	383-4612
1/2 x 1	5/16	5	CTR-120	383-4622
1/2 x 1	1/4	5	CTR-121	383-4632
5/8 x 1-1/4	3/8	5	CTR-130	383-4642
3/4 x 1-1/2	3/8	6	CTR-140	383-4652

Shank Size	Tip Dia.	Overall Length	L. H. C-2 Order No.	L. H. C-6 Order No.
1/2 x 1"	1/8"	5"	CTL-111	383-4702
1/2 x 1	3/16	5	CTL-122	383-4712
1/2 x 1	5/16	5	CTL-120	383-4722
1/2 x 1	1/4	5	CTL-121	383-4732
5/8 x 1-1/4	3/8	5	CTL-130	383-4742
3/4 x 1-1/2	3/8	6	CTL-140	383-4752

Style TRC & TRE



Round Boring Tools. For boring to a square shoulder in 45° boring bars or with 15° lead angle in 30° boring bars. For recessing and internal chamfering in 90° boring bar.

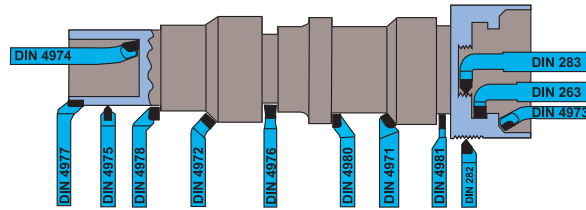


Type	Description
TRC	For Boring to Square Shoulder in 30° Bars
TRE	For Boring to a Square Shoulder in 45° Bars or with 15° Lead in 30° Bars.

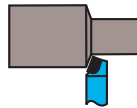
Size	Radius	Dia.	Length	Industry Number	C - 2 Order No.	C - 6 Order No.
.3120"	1/64"	5/16"	1-1/2"	TRC 5	383-8702	383-8706
.3745	1/64	3/8	1-3/4	TRC 6	383-8712	383-8716
.4995	1/64	1/2	2-1/2	TRC 8	383-8722	383-8726

Size	Radius	Dia.	Length	Industry Number	C - 2 Order No.	C - 6 Order No.
.3120"	1/64"	5/16"	1-1/2"	TRE 5	383-8802	383-8806
.3745	1/64	3/8	1-3/4	TRE 6	383-8812	383-8816
.4995	1/64	1/2	2-1/2	TRE 8	383-8822	383-8826

DIN & ISO Carbide Tipped Tool Bits

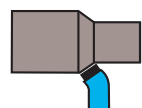


Carbide Tipped Tool Bits, DIN4971-ISO1



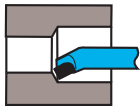
Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4971-0001	4971-1001	4971-2001	4971-3001
12x12x100mm	4971-0003	4971-1003	4971-2003	4971-3003
16x16x110mm	4971-0005	4971-1005	4971-2005	4971-3005
20x20x125mm	4971-0007	4971-1007	4971-2007	4971-3007
25x25x140mm	4971-0009	4971-1009	4971-2009	4971-3009
32x32x170mm	4971-0011	4971-1011	4971-2011	4971-3011

Carbide Tipped Tool Bits, DIN4972-ISO2



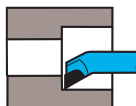
Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4972-0001	4972-1001	4972-2001	4972-3001
12x12x100mm	4972-0003	4972-1003	4972-2003	4972-3003
16x16x110mm	4972-0005	4972-1005	4972-2005	4972-3005
20x20x125mm	4972-0007	4972-1007	4972-2007	4972-3007
25x25x140mm	4972-0009	4972-1009	4972-2009	4972-3009
32x32x170mm	4972-0011	4972-1011	4972-2011	4972-3011

Carbide Tipped Tool Bits, DIN4973-ISO8



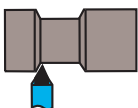
Size	K10/20 Order No.	P25/30 Order No.
8x8x14x125mm	4973-0001	4973-2001
10x10x18x150mm	4973-0003	4973-2003
12x12x21x180mm	4973-0005	4973-2005
16x16x27x210mm	4973-0007	4973-2007
20x20x34x250mm	4973-0009	4973-2009
25x25x43x300mm	4973-0011	4973-2011
32x32x52x355mm	4973-0013	4973-2013

Carbide Tipped Tool Bits DIN4974-ISO9



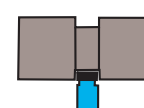
Size	K10/20 Order No.	P25/30 Order No.
8x8x14x125mm	4974-0001	4974-2001
10x10x18x150mm	4974-0003	4974-2003
12x12x21x180mm	4974-0005	4974-2005
16x16x27x210mm	4974-0007	4974-2007
20x20x34x250mm	4974-0009	4974-2009
25x25x43x300mm	4974-0011	4974-2011
32x32x52x355mm	4974-0013	4974-2013

Carbide Tipped Tool Bits. DIN 4975-ISO10



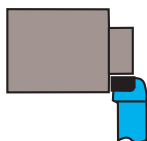
Size	K10/20 Order No.	P25/30 Order No.
26x10x110mm	4975-0001	4975-2001
20x12x125mm	4975-0003	4975-2003
25x16x140mm	4975-0005	4975-2005
32x20x170mm	4975-0007	4975-2007

Carbide Tipped Tool Bits. DIN 4976-ISO4



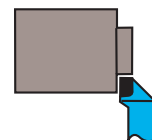
Size	K10/20 Order No.	P25/30 Order No.
10x10x90mm	4976-0001	4976-2001
12x12x100mm	4976-0003	4976-2003
16x16x110mm	4976-0005	4976-2005
20x20x125mm	4976-0007	4976-2007
25x25x140mm	4976-0009	4976-2009
32x32x170mm	4976-0011	4976-2011

Carbide Tipped Tool Bits. DIN 4977-ISO5



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
16x16x110mm	4977-0001	4977-1001	4977-2001	4977-3001
20x20x125mm	4977-0003	4977-1003	4977-2003	4977-3003
25x25x140mm	4977-0005	4977-1005	4977-2005	4977-3005
32x32x170mm	4977-0007	4977-1007	4977-2007	4977-3007

Carbide Tipped Tool Bits. DIN 4978-ISO3



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
16x10x110mm	4978-0001	4978-1001	4978-2001	4978-3001
20x12x125mm	4978-0003	4978-1003	4978-2003	4978-3003
25x16x140mm	4978-0005	4978-1005	4978-2005	4978-3005
32x20x170mm	4978-0007	4978-1007	4978-2007	4978-3007

DIN & ISO Carbide Tipped Tool Bits continued

Carbide Tipped Tool Bits. DIN 4980-ISO6



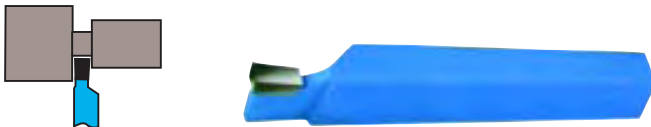
Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
10x10x90mm	4980-0001	4980-1001	4980-2001	4980-3001
12x12x100mm	4980-0003	4980-1003	4980-2003	4980-3003
16x16x110mm	4980-0005	4980-1005	4980-2005	4980-3005
20x20x125mm	4980-0007	4980-1007	4980-2007	4980-3007
25x25x140mm	4980-0009	4980-1009	4980-2009	4980-3009
32x32x170mm	4980-0011	4980-1011	4980-2011	4980-3011

Carbide Tipped Tool Bits. DIN 282-60 Degree



Size	K10/20 Order No.	P25/30 Order No.
10x10x100mm	2820-0001	2820-2001
12x12x110mm	2820-0003	2820-2003
16x16x125mm	2820-0005	2820-2005
20x20x140mm	2820-0007	2820-2007
25x25x160mm	2820-0009	2820-2009
32x32x180mm	2820-0011	2820-2011

Carbide Tipped Tool Bits. DIN 4981-ISO7



Size	K10/20 right Order No.	K10/20 left Order No.	P25/30 right Order No.	P25/30 left Order No.
12x8x100mm	4981-0001	4981-1001	4981-2001	4981-3001
16x10x110mm	4981-0003	4981-1003	4981-2003	4981-3003
20x12x125mm	4981-0005	4981-1005	4981-2005	4981-3005
25x16x140mm	4981-0007	4981-1007	4981-2007	4981-3007
32x20x170mm	4981-0009	4981-1009	4981-2009	4981-3009

Carbide Tipped Tool Bits. DIN 283-60 degree



Size	K10/20 Order No.	P25/30 Order No.
10x10x24x140mm	2830-0001	2830-2001
12x12x30x160mm	2830-0003	2830-2003
16x16x36x180mm	2830-0005	2830-2005
20x20x45x210mm	2830-0007	2830-2007
25x25x55x250mm	2830-0009	2830-2009
32x32x70x300mm	2830-0011	2830-2011

Carbide Tipped Tool Bits. DIN 263



Size	K10/20 Order No.	P25/30 Order No.
10x10x25x140mm	2821-0001	2821-2001
12x12x30x160mm	2821-0003	2821-2003
16x16x40x180mm	2821-0005	2821-2005
20x20x50x210mm	2821-0007	2821-2007
25x25x60x250mm	2821-0009	2821-2009
32x32x85x300mm	2821-0011	2821-2011

Carbide Tipped Tool Bit Sets



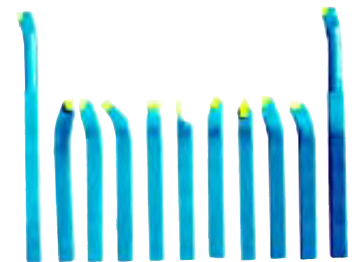
3/8" Shank 6 Pieces Tool Bit Set

Description	Shank Size	Overall Length	Order No.
45° Left Angle	3/8x3/8"	3-1/2"	383-4261
45° Right Angle	3/8x3/8	3-1/2	
30° Angle	3/8x3/8	3-1/2	
3/16 Wide, 60° Point	3/8x3/8	3-3/4	
1/8x5/16 Straight Point	3/8x1/2	4	
15° Angle	3/8x3/8	5-3/4	

1/2" Shank 6 Pieces Tool Bit Sets

Description	Shank Size	Overall Length	Order No.
45° Left Angle	1/2x1/2"	4"	383-4262
45° Right Angle	1/2x1/2	4	
30° Angle	1/2x1/2	4	
1/4 Wide, 60° Point	1/2x1/2	4-3/8	
5/32x3/8 Straight Point	3/8x5/8	4-1/2	
15° Angle	1/2x1/2	7-1/4	

11 Piece Carbide Tipped Tool Bit Sets



Pieces	Shank Size	Description	Order No.
11	8x8mm	one each of DIN4971R, DIN4972R, DIN4973R, DIN4974R, DIN4975, DIN4976, DIN4977R, DIN4978R, DIN4980L, DIN4980R, DIIN4981R	387-1811