

Blanks for toolmakers

CERATIZIT is a high-tech engineering group specialized in tooling and hard material technologies.

Tooling the Future

www.ceratizit.com

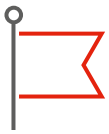
The CERATIZIT Group

For over **95 years**, CERATIZIT has been a **pioneer** developing exceptional hard material products for cutting tools and wear protection.

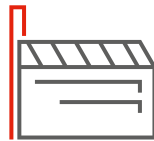
The privately owned company, based in Mamer, Luxembourg, develops and manufactures highly specialised carbide cutting tools, inserts and rods made of hard materials as well as wear parts.

The CERATIZIT Group is the **global market leader** in several wear part application areas, and successfully develops new types of cemented carbide, cermet and ceramic grades which are used for instance in the wood, metal and stone working industries.

Facts and figures



1 headquarters
Mamer (Luxembourg)



33
production sites



> 50
sales subsidiaries



> 9,000
employees



> 100,000
different products



> 600
patents and
utility models



> 100
employees in R&D



> 10
innovation awards



30%
of products developed
in the last 5 years

Dear Valued Customers,

The CERATIZIT USA is committed to delivering the highest quality blanks in the industry.

Our high-performance manufacturing facility is designed to deliver your desired products through our optimal processes including large quantities in 2-3 weeks.

At CERATIZIT USA we deliver the highest quality carbide grades. Beyond our standard offering you may select from our extensive selection. All of our products are "Made in the USA" and are produced directly at

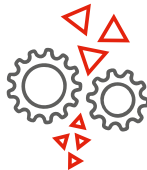
our site in Warren, Michigan. As part of the CERATIZIT Group we can also offer additional innovative products that are produced at different locations for the global market.

Just get in touch! No matter what the application, we already have the right solution for you!

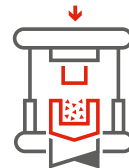
Passion for carbide – from the ore to the ready-to-use tool



mineral extraction



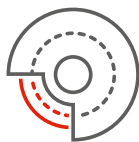
preparation and mixing of the raw materials



forming/pressing



sintering



grinding



quality assurance



dispatch

Production site

Warren (USA)

The CERATIZIT USA Headquarters center of excellence provides localized manufacturing support and international warehoused products to the North American market. CERATIZIT supports the industry's requirements for cutting tool products, rods (solid and coolant) along with the capability for complex preforms for rotary cutting tools.

CERATIZIT USA controls the process from the beginning of powder production to producing finished rods and preforms, all made in the USA. Our international inventory of coolant rods, solid carbide long rods and Economy line are warehoused in our Michigan facility for quick delivery to the North American market.



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Insert Code Key System Turning

Included angle rhombus	35°	V
	55°	D
	75°	E
	80°	C
	86°	M
Included angle rhomboid	55°	K, N
	82°	B
	85°	A, X
Other shapes	90°	L
	108°	P
	120°	H
	135°	O
	-	R
	90°	S
	60°	T
	80°	W

3°	A	25°	F
5°	B	30°	G
7°	C	0°	N
15°	D	11°	P
20°	E		

Clearance angles not included within the standard for which particular information is necessary } O

	d ±	m ±	s ±
A	.001	.0002	.001
F	.0005	.0002	.001
C	.001	.0005	.001
H	.0005	.0005	.001
E	.001	.001	.001
G	.001	.001	.005
J	.002-.005	.002	.001
K	.002-.005	.0005	.001
L	.002-.005	.001	.001
M	.002-.005	.002-.005	.005
R	.010	+.010-.030	+.010-.020
S	.002-.005	.002-.005	+.010-.020
U	.005-.010	.005-.012	.005

A	
B	
D	
E	
F	
G	
H	
M	
N	
P	
Q	
R	
S	
T	

C 1	N 2	M 3	G 4
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Form of top surface

U	
W	
Z	

ANSI Code No.	Decimal in.	Fractional in.
0.5	.0625	1/16
1.2 (5)	.15625	5/32
1.5 (6)	.1875	3/16
1.8 (7)	.21875	7/32
2	.25	1/4
2.5	.3125	5/16
3	.375	3/8
3.5	.4375	7/16
4	.5	1/2
4.5	.5625	9/16
5	.625	5/8
5.5	.6875	11/16
6	.75	3/4
6.5	.8125	13/16
7	.875	7/8
8	1	1
10	1.25	1-1/4

Inscribed circle size

ANSI Code No.	Decimal in.	Fractional in.	mm
.5 (1)	0.03125	1/32	0.79
.6	0.040		1.00
1 (2)	0.0625	1/16	1.59
1.2	0.078	5/64	1.98
1.5 (3)	0.094	3/32	2.38
	0.109	7/64	2.78
2	0.125	1/8	3.18
2.5	0.156	5/32	3.97
3	0.187	3/16	4.76
	0.219	7/32	5.56
4	0.25	1/4	6.35
5	0.313	5/16	7.9
6	0.375	3/8	9.53
8	0.5	1/2	12.7

Insert thickness

ANSI Code No.	Decimal in.	Fractional in.	mm
Null	Wiper flat	Wiper flat	Wiper flat
.6	0.040		1.00
V	0	0	0
0.2	0.004		0.1
X	0.004		0.1
0.5	0.008		0.2
0	0.008		0.2
Y	0.008		0.2
1	0.016	1/64	0.4
	0.020		0.5
2	0.031	1/32	0.8
	0.040		1.02
3	0.047	3/64	1.2
4	0.062	1/16	1.6
5	0.078	5/64	2
6	0.094	3/32	2.4
7	0.109	7/64	2.9
8	0.125	1/8	3.2

Corner radius

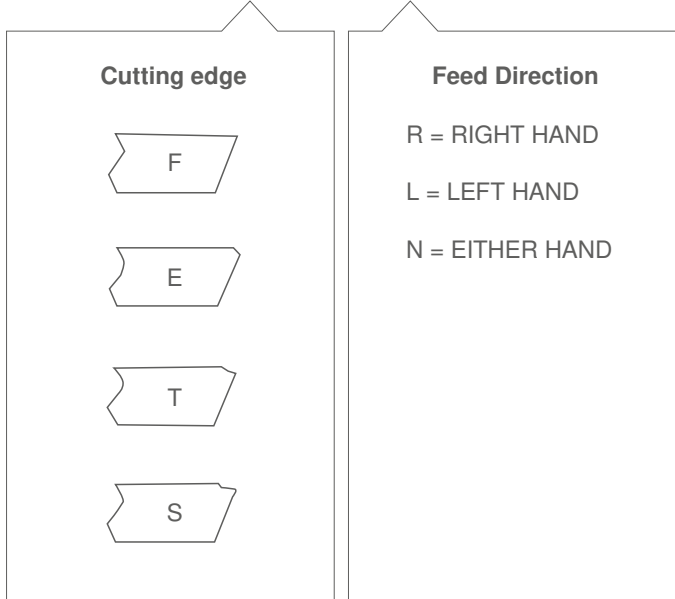
Manufacturers optional symbol consisting of maximum three characters (numbers or letters); shall be separated from the standardized designation by a dash (-).

Manufacturers option



Grind stock specifications
 NOTE: blanks with grind stock on top and bottom surfaces only. I.C. tolerances = +/- .002 +/- .010 depending on the blank size

Grind stock for standard style inserts:
 I.C. smaller than 1": Thickness = .010/.018; I.C. = .012/.020
 I.C. larger than 1": Thickness = .015/.025; I.C. = .020/.030
 I.C. grind stock for triangles = .018/.030.



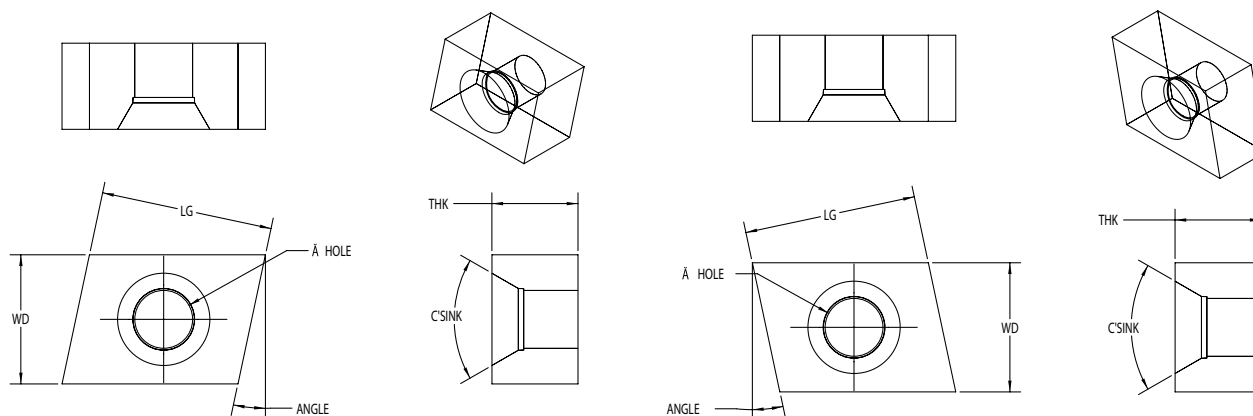
Standard Insert Blanks

Description	Material Number	Description	Material Number
CNR-421 CTF12E	6142352	SNR-630 CTM18U	6143415
CNR-421 CTS12L	11805265	SNR-630 CTF12H	6143414
CNRA-431 CTF12E	6142355	SNR-640 CTF12E	6143423
CNRW-21.50 CTF12E	11896949	SNR-640 CTM18U	6143424
CNRW-32.50 CTF12E	11189822	SNR-840 CTF12E	6143427
CNRW-431 CTF11H	6142360	SNR-840 CTM18U	6143429
CPR-420 CTF12E	6142383	SNRW-21.50 CTF12H	11224761
CPR-420 CTM18U	11874206	SNRW-2.520 CTF12H	11188349
CPR-420 CTF11H	11913606	SNRW-32.50 CTM12U	6143445
DNRA-430 CTF12E	6142746	SNRW-32.50 CTF22U	11239158
DNRA-430 CTM18U	6285872	SNRW-32.50 CTF11H	6143443
HPR-630 CTF11H	6142846	SNRW-32.50 CTF12H	11283057
HPR-630 CTF12H	6142847	SNRW-430 CTF12E	6271184
RNR-32 CTF12E	6143058	SNRW-430 CTM12U	6143448
RNR-43 CTF12E	6143060	SNRW-430 CTF11H	6143446
RNR-63 CTF12E	6143061	SNRW-640 CTF12E	6280647
SD-420P-RM CTF12H	11283813	SPR-320 CTF12E	6143530
SNR-320 CTF12E	6143385	SPR-320 CTM18U	6143535
SNR-320 CTM18U	6143387	SPR-320 CTF12H	6143532
SNR-330 CTS20Z	6267981	SPR-420 CTF12E	6143537
SNR-330 CTM18U	6143391	SPR-420 CTM18U	6143541
SNR-420 CTF12E	6143392	SPR-420 CTF11H	6143538
SNR-420 CTM18U	6143394	SPR-430 CTF12E	6143543
SNR-420 CTM12U	12058666	SPR-430 CTM18U	6143547
SNR-430 CTF12E	6143400	SPR-530 CTM18U	6143553
SNR-430 CTM18U	6143403	SPR-530 CTF12H	6143552
SNR-430 CTS20Z	6281703	SPR-630 CTF12E	6143557
SNR-530 CTF12E	6143406	SPR-630 CTM18U	6143560
SNR-530 CTM18U	6143407	SPR-630 CTF22U	6143561
SNR-530 CTS12L	6277059	SPR-630 CTF11H	11938013
SNR-540 CTF12E	6143408	SPR-630 CTF12H	6143558
SNR-630 CTF12E	6143412		

Description	Material Number
TD-6PRM CTS15L	6287378
TD-6PRM CTF12E	6143875
TNR-220 CTF12E	6144059
TNR-220 CTM18U	6144062
TNR-320 CTF12E	6144072
TNR-320 CTM18U	6144074
TNR-320 CTM15U	6144075
TNR-330 CTF12E	6144081
TNR-330 CTM18U	6144083
TNR-430 CTF12E	6144096
TNR-430 CTM18U	6144099
TNR-540 CTF12E	6144116
TNR-540 CTM18U	6144117
TNRA-320 CTF12E	6144121
TNRA-320 CTM18U	6144122
TNRA-430 CTF12E	6144125
TNRA-430 CTM18U	6144127
TNRA-430 CTM12U	6144130
TNRA-540 CTF12E	11219880
TNRA-540 CTM18U	6144133
TNRA-540 CTS20Z	6274923
TNRA-660 CTM18U	6144138
TNRA-660 CTM12U	11497921

Description	Material Number
TNRA-660 CTS20Z	12088403
TNRC-320 CTF12E	6144177
TNRC-320 CTM18U	6144178
TNRC-430 CTF12E	6144184
TNRC-430 CTS12L	11196627
TNRC-430 CTM12U	6144190
TNRC-430 CTS20Z	6291432
TNRC-430 CTM18U	6144186
TNRC-440 CTS20Z	11269618
TNRC-440 CTM18U	6144192
TNRC-540 CTF12E	6144197
TNRC-540 CTM18U	6144199
TNRC-540 CTM12U	6144200
TNRC-540 CTS20Z	6286344
TNRC-640 CTM18U	6144208
TNRC-640 CTS20Z	11468093
TNRC-660 CTM18U	6144210
TNRC-660 CTS20Z	6279116
TNRW-21.50 CTF11H	6144212
TNRW-2.520 CTF11H	6144211
TNRW-32.50 CTF11H	6144215
TNRW-32.50 CTF12H	6271871
TNRW-430 CTF11H	6144218
TPR-220 CTF12E	6144277
TPR-220 CTM18U	6144278
TPR-320 CTF12E	6144281
TPR-320 CTM18U	6144283
TPR-320 CTF11H	6144282
TPR-430 CTF12E	6144287
TPR-430 CTM18U	6144289
TPR-542 CTM18U	6144293
TPR-542 CTM12U	11224763
VNRA-331-CTF12E	6144353
VNRA-331 CTS20Z	6144354

On Edge Blank Sizes



Description	Material Number	Thickness	Width	Length Over Parallel	Hole	C'sink
CCDR-313-L01 CTF12H	12033660	0.203	0.462	0.395	0.168	1 X 60 deg
CCDR-313-R03 CTF12H	6142456	0.203	0.395	0.395	0.168	1 X 60 deg
CCDR-322-L02 CTF12H	6142466	0.166	0.395	0.520	0.168	1 X 60 deg
CCDR-322-R02 CTF12H	6142470	0.166	0.395	0.520	0.168	1 X 60 deg
CCDR-323-L01 CTF12H	6142477	0.203	0.395	0.520	0.168	1 X 60 deg
CCDR-323-R01 CTF12H	6142486	0.203	0.395	0.520	0.168	1 X 60 deg
CCDR-323-L30 CTF12H	6142481	0.203	0.395	0.708	0.168	1 X 60 deg
CCDR-323-R30 CTF12H	6142489	0.203	0.395	0.708	0.168	1 X 60 deg
CCDR-334-L04 NEG CTF12H	6142496	0.265	0.395	0.770	0.168	1 X 60 deg
CCDR-334-R04 CTF12H	6142498	0.265	0.395	0.770	0.168	1 X 60 deg
CCDR-424-R01 CTF12H	6142507	0.265	0.582	0.520	0.213	1 X 82 deg
CCDR-424-L30 CTF12H	6142505	0.265	0.582	0.707	0.213	1 X 82 deg
CCDR-424-R30 CTF22U	6142513	0.265	0.582	0.707	0.213	1 X 82 deg

Description	Material Number	Thickness	Width	Length	Hole	C'sink
CLNR-323-01 CTF12H	6142595	0.203	0.395	0.645	0.168	2 X 60 deg
CLNR-323-01 CTF22U	6142597	0.203	0.395	0.645	0.168	2 X 60 deg
CLNR-324-01 CTF12H	6142600	0.265	0.395	0.645	0.168	2 X 60 deg
CLNR-324-01 CTF22U	6142601	0.265	0.395	0.645	0.168	2 X 60 deg
CLNR-424-02 CTF12H	6142608	0.265	0.520	0.645	0.213	2 X 82 deg
CLNR-424-02 CTF22U	6142609	0.265	0.520	0.645	0.213	2 X 82 deg
CLNR-425-01 CTF12H	6142613	0.327	0.520	0.645	0.213	2 X 82 deg
CLNR-425-01 CTF22U	6142614	0.327	0.520	0.645	0.213	2 X 82 deg
CLNR-433-20 CTF12H	6142617	0.203	0.520	0.770	0.213	2 X 82 deg
CLNR-434-02 CTF12H	6142620	0.265	0.582	0.770	0.213	2 X 82 deg
CLNR-434-02 CTF22U	6142621	0.265	0.582	0.770	0.213	2 X 82 deg
CLNR-434-20 CTF12H	6142622	0.265	0.520	0.770	0.213	2 X 82 deg
CLNR-443-20 CTF12H	6142627	0.203	0.520	1.020	0.213	2 X 82 deg
CLNR-444-20 CTF12H	6142630	0.265	0.520	1.020	0.213	2 X 82 deg
CLNR-446-01 CTF12H	6142635	0.390	0.582	1.145	0.213	2 X 82 deg
CLNR-446-01 CTF22U	6142636	0.390	0.582	1.145	0.213	2 X 82 deg

Description	Material Number	Thickness	I.C.	Hole	C'sink
CNSR-33-L/R13 CTF12H	6142770	0.203	0.395	0.168	2 X 60 deg
CNSR-44-L/R13 CTF12H	6142774	0.265	0.520	0.168	2 X 60 deg

Description	Material Number	Thickness	Width	Length Over Parallel	Hole	C'sink
CSPR-33-R01 CTF12H	6142777	0.203	0.457	0.457	0.168	2 X 60 deg

On Edge Cross Reference

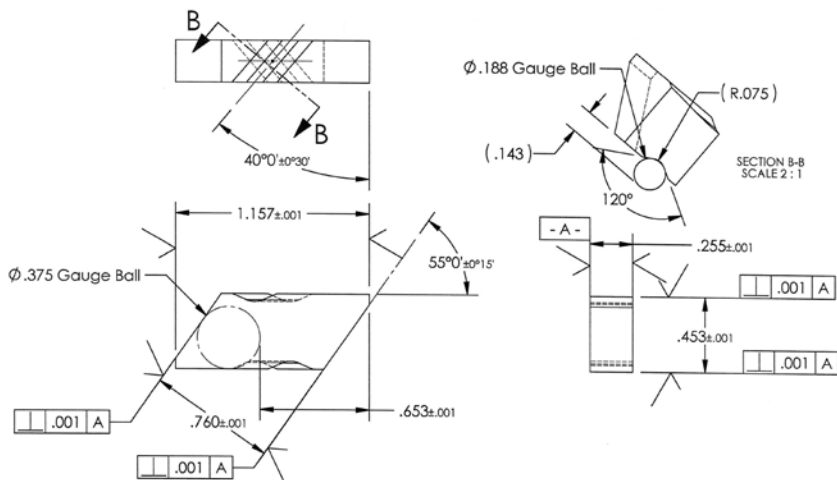
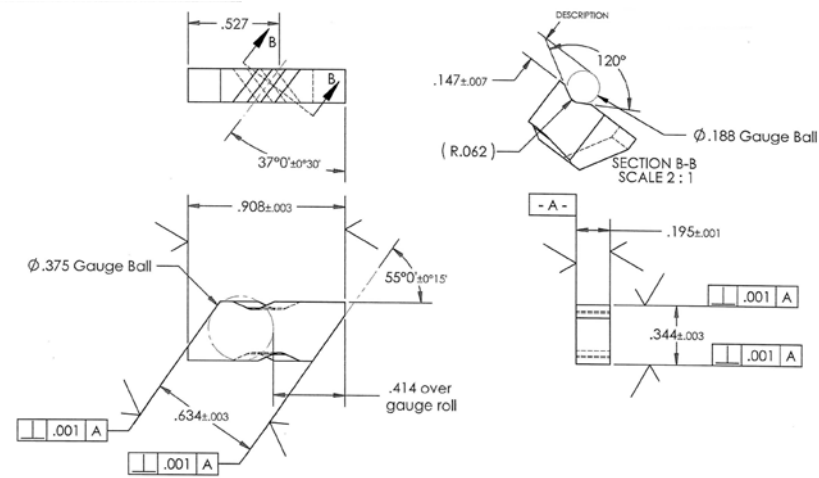
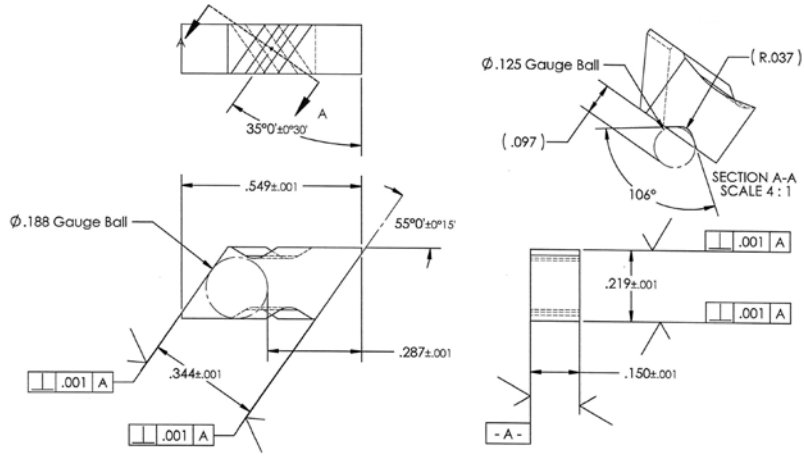
To make this	Order this	To make this	Order this
BDE-223-R01	CBDR-223-R01	CDE-313-L44	CCDR-313-R01
BDE-323-L01	CCDR-323-L01	CDE-313-L50	CCDR-313-L50
BDE-323-L02	CCDR-323-L01	CDE-313-L51	CCDR-313-L50
BDE-323-R01	CCDR-323-R01	CDE-313-L52	CCDR-313-L50
BDE-323-R02	CCDR-323-R01	CDE-313-L53	CCDR-313-L50
BDE-323-R03	CCDR-323-R01	CDE-313-L54	CCDR-313-L50
BDE-323-R04	CCDR-323-R01	CDE-313-R01	CCDR-313-R01
BDE-323-R05	CCDR-323-R05	CDE-313-R03	CCDR-313-R03
BDE-324-r02	CCDR-324-R02	CDE-313-R15	CCDR-313-R01
BDE-434-r01	CCDR-434-R01	CDE-313-R20	CCDR-313-R20
		CDE-313-R21	CCDR-313-R20
CDE-212-L01	CCDR-212-L01	CDE-313-R22	CCDR-313-R20
CDE-212-L02	CCDR-212-L02	CDE-313-R23	CCDR-313-R20
CDE-313-L01	CCDR-313-L01	CDE-313-R24	CCDR-313-R20
CDE-313-L02	CCDR-313-L01	CDE-313-R30	CCDR-313-R03
CDE-313-L03	CCDR-313-R03	CDE-313-R31	CCDR-313-R03
CDE-313-L04	CCDR-313-R01	CDE-313-R32	CCDR-313-R03
CDE-313-L20	CCDR-313-L20	CDE-313-R33	CCDR-313-R03
CDE-313-L21	CCDR-313-L20	CDE-313-R34	CCDR-313-R03
CDE-313-L22	CCDR-313-L20	CDE-313-R40	CCDR-313-L01
CDE-313-L23	CCDR-313-L20	CDE-313-R41	CCDR-313-L01
CDE-313-L24	CCDR-313-L20	CDE-313-R42	CCDR-313-L01
CDE-313-L30	CCDR-313-R03	CDE-313-R43	CCDR-313-L01
CDE-313-L31	CCDR-313-R03	CDE-313-R44	CCDR-313-L01
CDE-313-L32	CCDR-313-R03	CDE-313-R50	CCDR-313-R05
CDE-313-L33	CCDR-313-R03	CDE-313-R52	CCDR-313-R05
CDE-313-L34	CCDR-313-R03	CDE-313-R53	CCDR-313-R05
CDE-313-L40	CCDR-313-R01	CDE-313-R54	CCDR-313-R05
CDE-313-L41	CCDR-313-R01	CDE-313-R64	CCDR-313-R01
CDE-313-L42	CCDR-313-R01	CDE-313-R67	CCDR-313-R01
CDE-313-L43	CCDR-313-R01	CDE-314-L20	CCDR-314-L20

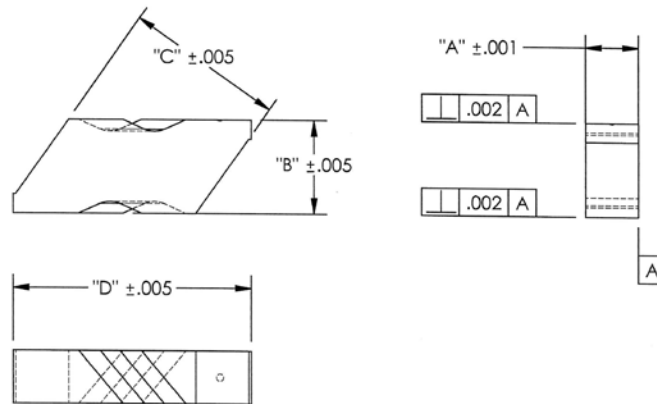
To make this	Order this	To make this	Order this
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CDE-314-L22	CCDR-314-L20	CDE-323-R01	CCDR-323-R01
CDE-314-L23	CCDR-314-L20	CDE-323-R05	CCDR-323-R01
CDE-314-L24	CCDR-314-L20	CDE-323-R09	CCDR-323-R01
CDE-314-L25	CCDR-314-L20	CDE-323-R22	CCDR-323-R01
CDE-314-L26	CCDR-314-L20	CDE-323-R23	CCDR-323-R01
CDE-314-R20	CCDR-314-R20	CDE-323-R24	CCDR-323-R01
CDE-314-R21	CCDR-314-R20	CDE-323-R30	CCDR-323-R30
CDE-314-R22	CCDR-314-R20	CDE-323-R31	CCDR-323-R30
CDE-314-R23	CCDR-314-R20	CDE-323-R32	CCDR-323-R30
CDE-314-R24	CCDR-314-R20	CDE-323-R33	CCDR-323-R30
CDE-314-R25	CCDR-314-R20	CDE-323-R34	CCDR-323-R30
CDE-314-R26	CCDR-314-R20	CDE-324-L20	CCDR-324-L20
CDE-322-L02	CCDR-322-L02	CDE-324-L21	CCDR-324-L20
CDE-322-L03	CCDR-322-L02	CDE-324-L22	CCDR-324-L20
CDE-322-L04	CCDR-322-L02	CDE-324-L23	CCDR-324-L20
CDE-313-R04	CCDR-313-L01	CDE-324-L24	CCDR-324-L20
CDE-313-R05	CCDR-313-R05	CDE-324-L25	CCDR-324-L20
CDE-313-R07	CCDR-313-R01	CDE-324-L26	CCDR-324-L20
CDE-313-R08	CCDR-313-R01	CDE-324-R20	CCDR-324-R20
CDE-322-R03	CCDR-322-R02	CDE-324-R21	CCDR-324-R20
CDE-322-R04	CCDR-322-R02	CDE-324-R22	CCDR-324-R20
CDE-322-R05	CCDR-322-R02	CDE-324-R23	CCDR-324-R20
CDE-322-R10	CCDR-322-R02	CDE-322-L05	CCDR-322-L02
CDE-323-L01	CCDR-323-L01	CDE-322-L10	CCDR-322-L02
CDE-323-L02	CCDR-323-L01	CDE-322-L14	CCDR-322-L14
CDE-323-L05	CCDR-323-L01	CDE-322-R02	CCDR-322-R02
CDE-323-L09	CCDR-323-L01	CDE-334-L04	CCDR-334-L04
CDE-323-L22	CCDR-323-L01	CDE-334-R04	CCDR-334-R04
CDE-323-L23	CCDR-323-L01	CDE-334-R09	CCDR-334-R04
CDE-323-L24	CCDR-323-L01	CDE-424-L20	CCDR-424-L20
CDE-323-L30	CCDR-323-L30	CDE-424-L21	CCDR-424-L20
CDE-323-L31	CCDR-323-L30	CDE-424-L22	CCDR-424-L20
CDE-323-L32	CCDR-323-L30	CDE-424-L23	CCDR-424-L20

To make this	Order this	To make this	Order this
CDE-424-L24	CCDR-424-L20	CDE-333-R08	CCDR-333-R01
CDE-424-L25	CCDR-424-L20	LNE-323-01	CLNR-323-01
CDE-424-L26	CCDR-424-L20	LNE-323-02	CLNR-323-01
CDE-424-L30	CCDR-424-L30	LNE-323-04	CLNR-323-01
CDE-424-L31	CCDR-424-L30	LNE-323-19	CLNR-323-01
CDE-424-L32	CCDR-424-L30	LNE-323-30	CLNR-323-01
CDE-424-L33	CCDR-424-L30	LNE-323-44	CLNR-323-01
CDE-424-L34	CCDR-424-L30	LNE-323-60	CLNR-323-01
CDE-424-L35	CCDR-424-L30	LNE-323-91	CLNR-323-01
CDE-424-L36	CCDR-424-L30	LNE-324-01	CLNR-324-01
CDE-424-R01	CCDR-424-R01	LNE-324-02	CLNR-324-01
CDE-424-R03	CCDR-424-R01	LNE-324-03	CLNR-324-01
CDE-424-R04	CCDR-424-R01	LNE-324-04	CLNR-324-01
CDE-424-R05	CCDR-424-R01	LNE-324-05	CLNR-324-01
CDE-424-R06	CCDR-424-R01	LNE-324-11	CLNR-324-01
CDE-424-R20	CCDR-424-R01	LNE-414-08	CLNR-414-08
CDE-424-R21	CCDR-424-R01	LNE-423-20	CLNR-423-20
CDE-424-R22	CCDR-424-R01	LNE-424-02	CLNR-424-02
CDE-424-R23	CCDR-424-R01	LNE-424-20	CLNR-424-02
CDE-424-R24	CCDR-424-R01	LNE-425-01	CLNR-425-01
CDE-424-R25	CCDR-424-R01	LNE-425-02	CLNR-425-01
CDE-424-R26	CCDR-424-R01	LNE-425-13	CLNR-425-01
CDE-424-R30	CCDR-424-R30	LNE-425-16	CLNR-425-01
CDE-424-R31	CCDR-424-R30	LNE-425-20	CLNR-425-01
CDE-424-R32	CCDR-424-R30	LNE-425-25	CLNR-425-01
CDE-424-R33	CCDR-424-R30	LNE-425-60	CLNR-425-01
CDE-424-R34	CCDR-424-R30	LNE-433-20	CLNR-433-20
CDE-424-R35	CCDR-424-R30	LNE-434-02	CLNR-434-02
CDE-424-R36	CCDR-424-R30	LNE-434-05	CLNR-434-02
CDE-324-R24	CCDR-324-R20	LNE-434-20	CLNR-434-20
CDE-324-R25	CCDR-324-R20	LNE-434-31	CLNR-434-02
CDE-324-R26	CCDR-324-R20	LNE-443-01	CLNR-443-01
CDE-333-R01	CCDR-333-R01	LNE-443-20	CLNR-443-20
CDE-333-R06	CCDR-333-R01	LNE-444-20	CLNR-444-20

To make this	Order this
LNE-445-20	CLNR-445-20
LNE-446-01	CLNR-446-01
JPE-33-L01	CJPR-33-L01
JPE-33-L02	CJPR-33-L01
JPE-33-R01	CJPR-33-R01
JPE-33-R02	CJPR-33-R01
JPE-33-R04	CJPR-33-R01
LSE-323-L02	CLNR-323-01
LSE-323-R02	CLNR-323-01
LSE-434-R01	CLNR-434-02
LSE-434-R02	CLNR-434-02
LSE-446-R01	CLNR-446-01
SNE-33-L13	CSNR-33-L/R13
SNE-33-R13	CSNR-33-L/R13
SNE-44-L13	CSNR-44-L/R13
SNE-44-R13	CSNR-44-L/R13
SNE-55-L13	CSNR-55-L/R13
SNE-55-R13	CSNR-55-L/R13
SPE-33-L02	CSPR-33-R01
SPE-33-R01	CSPR-33-R01
SPE-33-R02	CSPR-33-R01
SPE-33-R05	CSPR-33-R01
SPE-33-R07	CSPR-33-R01
SPE-33-R15	CSPR-33-R01
SPE-55-L04	CSPR-55-R02
SPE-55-R02	CSPR-55-R02
LNE-446-03	CLNR-446-01

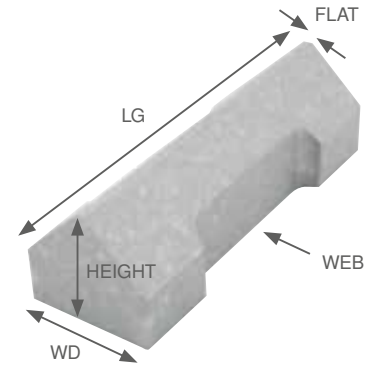
Standard CeraNotch Sizes





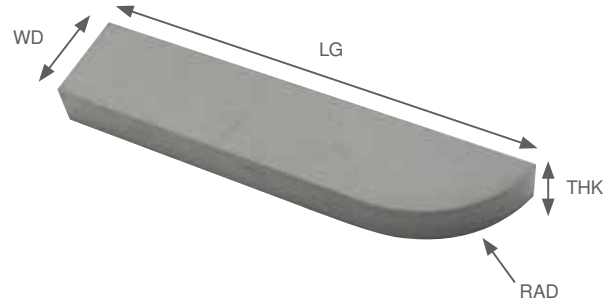
Description	Material Number	Width	Height	Over Parallel	Length
CNB2L CTS12L	6142644	0.150	0.233	0.370	0.587
CNB2L CTM18U	6142642	0.150	0.233	0.370	0.587
CNB2L Semi-Finished CTS12L	11817270	0.150	0.219	0.344	0.549
CNB2R CTS12L	6142648	0.150	0.233	0.370	0.587
CNB2R CTM18U	6142646	0.150	0.233	0.370	0.587
CNB2R Semi-Finished CTS12L	11817269	0.150	0.219	0.344	0.549
CNB3L CTS12L	6142652	0.195	0.365	0.670	0.990
CNB3L CTM18U	6142650	0.195	0.365	0.670	0.990
CNB3L Semi-Finished CTS12L	11806129	0.195	0.344	0.634	0.908
CNB3R CTS12L	6142658	0.195	0.365	0.670	0.990
CNB3R CTM18U	6142655	0.195	0.365	0.670	0.990
CNB3R Semi-Finished CTS12L	11806128	0.195	0.344	0.634	0.908
CNB4L CTS12L	6142662	0.255	0.473	0.790	1.186
CNB4L CTM18U	6142660	0.255	0.473	0.790	1.186
CNB4L Semi-Finished CTS12L	11817105	0.255	0.453	0.760	1.157
CNB4R CTS12L	6142666	0.255	0.473	0.790	1.186
CNB4R CTM18U	6142664	0.255	0.473	0.790	1.186
CNB4R Semi-Finished CTS12L	11817104	0.255	0.453	0.760	1.157
CNB6L CTS12L	6142680	0.383	0.474	0.785	1.160
CNB6R CTS12L	6142684	0.383	0.474	0.785	1.160

Standard Dog Bone Blanks



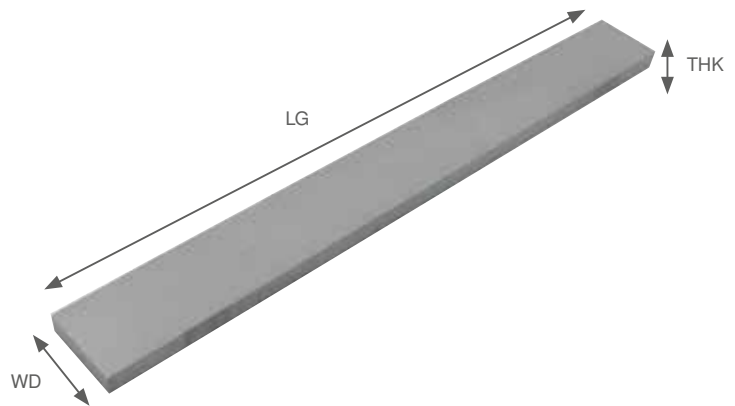
Description	Material Number	Length	Width	Height	Web	Flat
CDB-125A CTF12E	6142517	1.155	0.145	0.257	0.106	0.025
CDB-156A CTF12E	6142522	1.155	0.176	0.257	0.106	0.025
CDB-188A CTF12E	6142527	1.155	0.208	0.257	0.144	0.025
CDB-218A CTF12E	6142531	1.155	0.238	0.257	0.144	0.025
CDB-250A CTF12E	6142536	1.155	0.270	0.257	0.144	0.025
CDB-250B CTF12E	6142541	1.155	0.270	0.337	0.144	0.025
CDB-281B CTF12E	6142547	1.155	0.301	0.337	0.202	0.025
CDB-281B CTM18U	6142549	1.155	0.301	0.337	0.202	0.025
CDB-312B CTF12E	6142553	1.155	0.332	0.337	0.202	0.025
CDB-375B CTF12E	6142559	1.155	0.395	0.337	0.276	0.025
CDB-375B CTM18U	6142560	1.155	0.395	0.337	0.276	0.025

Standard RT Blanks



Description	Material Number	Thickness	Width	Length	Radius
RT1 CTS20Z	11196385	1/32	1/16	1/2	1/4
RT2 CTS20Z	11206234	3/64	3/32	1/2	1/4
RT3 CTS20Z	11185051	3/64	3/32	5/8	1/4
RT4 CTS20Z	11180201	1/16	1/8	3/4	1/4
RT5 CTS20Z	11207703	5/64	5/32	7/8	1/4
RT6 CTS20Z	6271279	3/32	3/16	7/8	5/16
RT7 CTS20Z	6289360	1/16	13/64	3/4	5/16
RT8 CTS20Z	11183217	1/16	17/64	3/4	3/8
RT9 CTS20Z	11207705	1/16	5/16	3/4	3/8
RT10 CTS20Z	11206233	1/16	3/8	3/4	3/8
RT11 CTS20Z	11205723	3/64	3/32	7/8	1/4
RT11A CTS20Z	11207704	3/64	3/32	1	1/4
RT12 CTS20Z	11207706	1/16	1/8	1	1/4
RT20 CTS20Z	11207081	1/8	1/4	1 1/4	3/8
RT21 CTS20Z	11207707	1/8	1/4	1 1/2	3/8
RT30 CTS20Z	11204734	1/32	1/18	1	1/4
RT50 CTS20Z	11207709	1/16	1/8	1 1/2	3/8

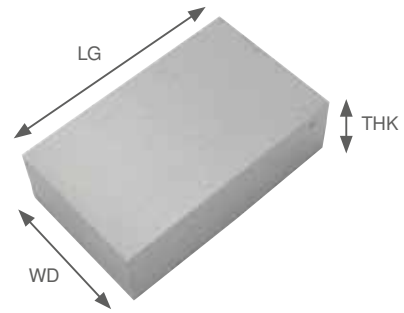
Standard STB Blanks



Description	Material Number	Description	Material Number
STB13A - 3/64 X 3/32 X 13/16 - WF10	11777981	STB363 - 3/32 X 3/16 X 3 - WF10	11778015
STB13 - 3/64 X 3/32 X 1 - WF10	11777982	STB38A - 3/32 X 1/4 X 1 - CTS20Z	6143698
STB14 - 5/64 X 1/8 X 1 1/8 - WF10	11777993	STB38D - 3/32 X 1/4 X 5 - WF10	11777998
STB24E - 1/16 X 1/8 X 3/4 - WF10	11777983	STB310A - 3/32 X 5/16 X 2 - WF10	11778018
STB24A - 1/16 X 1/8 X 1 - WF10	11777984	STB310B - 3/32 X 5/16 X 3 - CTS20Z	6273482
STB24C - 1/16 X 1/8 X 1 1/4 - WF10	11777985	STB310C - 3/32 X 5/16 X 5 - WF10	11778016
STB24D - 1/16 X 1/8 X 1 1/2 - WF10	11777986	STB310 - 3/32 X 5/16 X 6 - WF10	11778017
STB24B - 1/16 X 1/8 X 3 - WF10	11777987	STB312 - 3/32 X 3/8 X 6 - WF10	11778020
STB26A - 1/16 X 3/16 X 1 - WF10	11777988	STB316 - 3/32 X 1/2 X 6 - WF10	11778008
STB26C - 1/16 X 3/16 X 3 - WF10	11777989	STB320 - 3/32 X 5/8 X 6 - WF10	11778009
STB206 - 1/16 X 3/16 X 6 - WF10	11778004	STB324 - 3/32 X 3/4 X 6 - WF10	11778010
STB28A - 1/16 X 1/4 X 1 - WF10	11777990	STB328 - 3/32 X 7/8 X 6 - WF10	11778011
STB28B - 1/16 X 1/4 X 1 1/4 - WF10	11777991	STB332 - 3/32 X 1 X 6 - WF10	11778012
STB28D - 1/16 X 1/4 X 3 - WF10	11777992	STB336 - 3/32 X 1 1/8 X 6 - WF10	11778013
STB208 - 1/16 X 1/4 X 6 - WF10	11778005	STB340 - 3/32 X 1 1/4 X 6 - WF10	11778014
STB210 - 1/16 X 5/16 X 6 - WF10	11778006	STB348 - 3/32 X 1 1/2 X 6 - WF10	11778157
STB212 - 1/16 X 3/8 X 6 - WF10	11778007	STB46 - 1/8 X 3/16 X 6 - WF10	11778033
STB216 - 1/16 X 1/2 X 6 - WF10	11778000	STB48A - 1/8 X 1/4 X 1 - CTS20Z	6143758
STB220 - 1/16 X 5/8 X 6 - WF10	11778001	STB48B - 1/8 X 1/4 X 1 1/4 - CTS20Z	6143760
STB224 - 1/16 X 3/4 X 6 - WF10	11778002	STB48C - 1/8 X 1/4 X 2-1/4 - CTS20Z	6148360
STB228 - 1/16 X 7/8 X 6 - WF10	11778003	STB48E - 1/8 X 1/4 X 6 - WF10	11778035
STB34 - 3/32 X 1/8 X 5 - WF10	11777995	STB410A - 1/8 X 5/16 X 1 1/2 - CTS20Z	6282819
STB 36B - 3/32 x 3/16 x 1 - CTS20Z	6143693	STB410 - 1/8 X 5/16 X 6 - WF10	11778039
STB36A - 3/32 X 3/16 X 1 1/4 - CTS20Z	6143691	STB412D - 1/8 X 3/8 X 1 - CTS20Z	6143718

Description	Material Number	Description	Material Number
STB412A - 1/8 X 3/8 X 2 - CTS20Z	6148358	STB624 - 3/16 X 3/4 X 6 - WF10	11778049
STB412B - 1/8 X 3/8 X 3 - CTS20Z	6143714	STB628 - 3/16 X 7/8 X 6 - WF10	11778050
STB412C - 1/8 X 3/8 X 6 - WF10	11778041	STB632 - 3/16 X 1 X 6 - WF10	11778051
STB416A - 1/8 X 1/2 X 1 - CTS20Z	6143723	STB636 - 3/16 X 1 1/8 X 6 - WF10	11778052
STB416B - 1/8 X 1/2 X 1 1/2 - CTS20Z	6143725	STB640 - 3/16 X 1 1/4 X 6 - WF10	11778053
STB416C - 1/8 X 1/2 X 3 - CTS20Z	6148359	STB648 - 3/16 X 1 1/2 X 6 - WF10	11778054
STB416 - 1/8 X 1/2 X 6 - WF10	11778021	STB 8121 - 1/4 x 3/8 x 1 - CTS20Z	6143811
STB420 - 1/8 X 5/8 X 6 - WF10	11778025	STB812 - 1/4 X 3/8 X 6 - WF10	11778065
STB424A - 1/8 x 3/4 x 1 - CTS20Z	6143736	STB816 - 1/4 X 1/2 X 6 - WF10	11778060
STB424 - 1/8 X 3/4 X 6 - WF10	11778026	STB820 - 1/4 X 5/8 X 6 - WF10	11778061
STB428 - 1/8 X 7/8 X 6 - WF10	11778028	STB824 - 1/4 X 3/4 X 6 - WF10	11778062
STB432 - 1/8 X 1 X 6 - WF10	11778029	STB832 - 1/4 X 1 X 6 - WF10	11778063
STB436 - 1/8 X 1 1/8 X 6 - WF10	11778030	STB840 - 1/4 X 1 1/4 X 6 - WF10	11778064
STB440 - 1/8 X 1 1/4 X 6 - WF10	11778031		
STB448 - 1/8 X 1 1/2 X 6 - WF10	11778032		
STB464 - 1/8 X 2 X 6 - WF10	11778034		
STB510 - 5/32 X 5/16 X 6 - WF10	11775120		
STB512 - 5/32 X 3/8 X 6 - WF10	11778046		
STB516 - 5/32 X 1/2 X 6 - WF10	11775111		
STB520 - 5/32 X 5/8 X 6 - WF10	11775112		
STB524 - 5/32 X 3/4 X 6 - WF10	11775113		
STB528 - 5/32 X 7/8 X 6 - WF10	11778045		
STB532 - 5/32 X 1 X 6 - WF10	11775114		
STB536 - 5/32 X 1 1/8 X 6 - WF10	11775115		
STB540 - 5/32 X 1 1/4 X 6 - WF10	11775116		
STB548 - 5/32 X 1 1/2 X 6 - WF10	11775117		
STB556 - 5/32 X 1 3/4 X 6 - WF10	11775118		
STB564 - 5/32 X 2 X 6 - WF10	11775119		
STB681 - 3/16 X 1/4 X 1 CTS20Z	6143804		
STB68 - 3/16 X 1/4 X 6 - WF10	11778055		
STB610 - 3/16 X 5/16 X 6 - WF10	11778057		
STB612 - 3/16 X 3/8 X 6 - WF10	11778058		
STB616 - 3/16 X 1/2 X 6 - WF10	11778047		
STB620 - 3/16 X 5/8 X 6 - WF10	11778048		

Standard Style 1000 Blanks



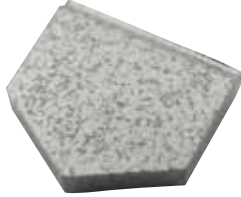
Description	Material Number	Thickness	Width	Length
1010 - CTS20Z	6141332	1/16	1/8	5/8
1020 - CTS20Z	6141335	1/16	3/16	1/4
1030 - CTS20Z	6141338	1/16	1/4	5/16
1030 - CTM18U	6141337	1/16	1/4	5/16
1040 - CTS20Z	6141341	3/32	3/16	5/16
1050 - CTS20Z	6141351	3/32	3/16	1/2
1060 - CTS20Z	6141359	3/32	1/4	3/8
1070 - CTS20Z	6141363	3/32	1/4	1/2
1080 - CTS20Z	6148304	3/32	5/16	3/8
1080 - CTM18U	6141365	3/32	5/16	3/8
1090 - CTS20Z	6141371	3/32	3/8	3/8
1090 - CTM18U	6141370	3/32	3/8	3/8
1100 - CTS20Z	6255885	3/32	3/8	1/2
1110 - CTS20Z	6271836	1/8	3/16	3/4
1110 - CTM18U	6141395	1/8	3/16	3/4
1120 - CTS20Z	6141399	1/8	1/4	1/2
1130 - CTS20Z	6148306	1/8	1/4	5/8
1140 - CTS20Z	6148307	1/8	1/4	3/4
1150 - CTS20Z	6141405	1/8	5/16	7/16
1160 - CTS20Z	6141407	1/8	5/16	1/2
1170 - CTS20Z	6148308	1/8	5/16	5/8
1180 - CTS20Z	6141411	1/8	3/8	1/2
1190 - CTS20Z	6268168	1/8	3/8	3/4
1190 - CTM18U	6141413	1/8	3/8	3/4

Description	Material Number	Thickness	Width	Length
1200 - CTS20Z	6141417	1/8	1/2	1/2
1200 - CTM18U	6141416	1/8	1/2	1/2
1210 - CTS20Z	6141422	1/8	1/2	3/4
1215 - CTS20Z	6280724	1/8	3/4	3/4
1220 - CTS20Z	6141001	5/32	3/8	9/16
1230 - CTS20Z	11204108	5/32	3/8	3/4
1240 - CTS20Z	6141433	5/32	5/8	5/8
1250 - CTS20Z	6269563	3/16	5/16	7/16
1250 - CTM18U	6141435	3/16	5/16	7/16
1260 - CTS20Z	6141439	3/16	5/16	5/8
1270 - CTS20Z	6272693	3/16	3/8	1/2
1280 - CTS20Z	6279303	3/16	3/8	5/8
1290 - CTS20Z	6141446	3/16	3/8	3/4
1290 - CTM18U	6141445	3/16	3/8	3/4
1300 - CTS20Z	6286525	3/16	7/16	5/8
1310 - CTS20Z	11251882	3/16	7/16	13/16
1320 - CTS20Z	6148309	3/16	1/2	1/2
1330 - CTS20Z	6277346	3/16	1/2	3/4
1330 - CTM18U	6141453	3/16	1/2	3/4
1340 - CTS20Z	6269172	3/16	3/4	3/4
1350 - CTS20Z	6285549	1/4	3/8	9/16
1360 - CTS20Z	6141459	1/4	3/8	3/4
1380 - CTS20Z	6141463	1/4	1/2	3/4
1380 - CTM18U	6141462	1/4	1/2	3/4
1400 - CTS20Z	6141465	1/4	5/8	5/8
1405 - CTS20Z	6282108	1/4	3/4	3/4
1410 - CTS20Z	6270055	1/4	3/4	1
1415 - CTS20Z	6141473	1/4	1	1
1430 - CTS20Z	6280228	5/16	7/16	15/16
1440 - CTS20Z	11231203	5/16	1/2	3/4
1450 - CTS20Z	6273371	5/16	1/2	1
1460 - CTS20Z	6141481	5/16	5/8	1

Description	Material Number	Thickness	Width	Length
1470 - CTS20Z	11391394	5/16	3/4	3/4
1475 - CTS20Z	6271668	5/16	3/4	1
1480 - CTS20Z	6286526	5/16	3/4	1 1/4
1480 - CTM18U	6141490	5/16	3/4	1 1/4
1490 - CTS20Z	6268517	3/8	1/2	3/4
1500 - CTS20Z	6141496	3/8	1/2	1
1500 - CTM18U	11177598	3/8	1/2	1
1510 - CTS20Z	6271069	3/8	5/8	1
1520 - CTS20Z	6141501	3/8	3/4	1 1/4
1525 - CTS20Z	6274900	3/8	3/4	1 1/2
1530 - CTS20Z	11236435	1/2	3/4	1
1530 - CTM18U	6141505	1/2	3/4	1
1540 - CTS20Z	11424805	1/2	3/4	1 1/4
1540 - CTM18U	6141507	1/2	3/4	1 1/4
1550 - CTS20Z	11246857	1/2	3/4	1 1/2

Standard TD Blanks

Style 1



Style 2



Description	Material Number	Blank Style	Drill Range
TD-1C CTS20Z	6271004	1	1/16 - 1/8
TD-2C CTS20Z	6286850	1	1/8 - 5/32
TD-3C CTS20Z	6271067	1	5/32 - 3/16
TD-4C CTS20Z	6286851	1	3/16 - 7/32
TD-5C CTS20Z	6286852	1	7/32 - 1/4
TD6 CTS20Z	6143874	2	1/4 - 9/32
TD7 CTS20Z	6143876	2	9/32 - 5/16
TD8 CTS20Z	6143877	2	5/16 - 11/32
TD9 CTS20Z	6143878	2	11/32 - 3/8
TD10 CTS20Z	6143856	2	3/8 - 13/32
TD11 CTS20Z	6143857	2	13/32 - 7/16
TD12 CTS20Z	6143858	2	7/16 - 15/32
TD13 CTS20Z	6143859	2	15/32 - 1/2
TD14 CTS20Z	6143860	2	1/2 - 9/16
TD15 CTS20Z	6143861	2	9/16 - 5/8
TD16 CTS20Z	6143862	2	5/8 - 11/16
TD17 CTS20Z	6143863	2	11/16 - 3/4
TD18 CTS20Z	6143864	2	3/4 - 13/16
TD19 CTS20Z	6143865	2	13/16 - 7/8
TD20 CTS20Z	6143867	2	7/8 - 15/16
TD21 CTS20Z	6143868	2	15/16 - 1
TD22 CTS20Z	6143869	2	1 - 1 1/8
TD23 CTS20Z	6143870	2	1 1/8 - 1 1/4

Available Grades

CERATIZIT Grade	Old Designation	ANSI Code	ISO Code	Percent WC	Percent Co	Percent (Ta,Nb,Ti)C	Density g/cm ³	Hardness Ra
Sub-Micron								
CTS12D	CTS12D	C-3/C-4	K10	94.00%	6.00%	0.00%	14.80	93.1
CTS12L	MG12 / HC10	C-3/C-4	K10	94.00%	6.00%	0.00%	14.85	93.0
CTS15L	MG15	C-2/C-3	K15	92.50%	7.50%	0.00%	14.70	92.6
CTS20Z	TSM33 / MG18	C-2	K20	90.00%	10.00%	0.00%	14.45	91.9
CTS20D	CTS20D	C-2	K20	90.00%	10.00%	0.00%	14.38	91.9
WF10	WF10	C-2	K20	90.00%	10.00%	0.00%	14.35	92.3
CTS22E	NP45	C-1	K25	88.80%	11.20%	0.00%	14.35	91.3
CTS23H	NP44	C-2	K20	88.50%	11.50%	0.00%	14.28	91.8
CTS24Z	CTS24Z	C-1/C-2	K25	88.00%	12.00%	0.00%	14.10	91.7
CTS30D	CTS30D	C-10/C-11	K35	85.00%	15.00%	0.00%	13.84	90.6
CTS30E	MG30 / TSM50	C-11/C-12	K40	85.00%	15.00%	0.00%	13.95	90.0
Fine								
CTF07F	N40	C-6/C-7	P10	95.50%	3.50%	1.00%	15.10	93.3
CTF11H	DU22	C-2/C-3	K15	91.50%	5.50%	3.00%	14.80	92.5
CTF12A	CTF12A	C-2	K20	94.00%	6.00%	0.00%	14.95	92.1
CTF12E	HC20	C-2	K20	94.00%	6.00%	0.00%	14.95	92.1
CTF12H	DU26	C-1/C-2	K25	88.00%	6.00%	6.00%	14.57	91.6
CTF18F	H30T / HC25	C-1	K30	91.00%	9.00%	0.00%	14.55	91.0
CTF22A	N311	C-11/C-12	K40	89.00%	11.00%	0.00%	14.43	89.4
CTF22U	S4X7	C-5	P35	77.80%	11.00%	11.20%	13.00	90.9
CTF24E	GC20 / HC40	C-11/C-12	K40	88.00%	12.00%	0.00%	14.30	89.7
CTF28Q	N1325	C-13/C-14	P45/P50	61.00%	14.00%	25.00%	12.85	89.0
Medium								
CTM12U	SY	C-5/C-6	P15	86.80%	5.80%	7.40%	13.95	91.9
CTM12A	N406	C-1	K30	94.00%	6.00%	0.00%	14.95	90.7
CTM15U	N60	C-5	P20	80.45%	7.50%	12.05%	13.05	91.7
CTM18U	S3X7	C-5	P25	74.60%	9.00%	16.40%	12.40	91.4
CTM22U	N52	C-5	P35	70.60%	10.30%	19.10%	12.05	91.0
CTM25U	N51	C-5	P45	76.00%	12.00%	12.00%	12.70	90.2
Coarse (Extra Coarse)								
CTE20A	GC32 / CE51	C-14	K40	90.00%	10.00%	0.00%	14.55	87.6

Grade Classification

CERATIZIT Grade	ANSI Designation	ISO Designation
(H30T, HC25) – CTF18F	C-1	K25
(NP45) – CTS22E	C-1	K25
(N406) – CTM12A	C-1	K30
CTS24Z	C-1 / C-2	K25
(DU26) – CTF12H	C-1 / C-2	K25
(HC20) – CTF12E	C-2	K20
(MG18, TSM33) – CTS20Z	C-2	K20
CTS20D	C-2	K20
(NP44) – CTS23H	C-2	K20
CTF12A	C-2	K20
WF10	C-2	K20
(DU22) – CTF11H	C-2 / C-3	K15
(MG15) – CTS15L	C-2 / C-3	K15
CTS12D	C-3 / C-4	K10
(HC10, MG12) – CTS12L	C-3 / C-4	K10
(N60) – CTM15U	C-5	P20
(S3X7) – CTM18U	C-5	P25
(S4X7) – CTF22U	C-5	P35
(N52) – CTM22U	C-5	P35
(N51) – CTM25U	C-5	P45
(SY) – CTM12U	C-5 / C-6	P15
(N40) – CTF07F	C-6 / C-7	P10
(N40) – CTF07F	C-9	P10
(HC10, MG12) – CTS12L	C-9	K10
(HC25) – CTF18F	C-10	K25
CTS30D	C-10 / C-11	K35
(GC20, HC40) – CTF24E	C-11 / C-12	K35
(MG30, TSM50) – CTS30E	C-11 / C-12	K35
(N1325) – CTF28Q	C-13 / C-14	K35
(GC32, CE51) – CTE20A	C-14	K40
(S3X7) – CTM18U	C-15	P25

Chip Removal Application

C-1	Roughing Cuts – Cast Iron and Non-Ferrous Materials
C-2	General Purpose – Cast Iron and Non-Ferrous Materials
C-3	Light Finishing – Cast Iron and Non-Ferrous Materials
C-4	Precision Boring – Cast Iron and Non-Ferrous Materials
C-5	Rough Cuts – Steel
C-6	General Purpose – Steel
C-7	Finishing Cuts – Heavy Feeds; Steel
C-7A	Finishing Cuts – Fine Feeds; Steel
C-15	Light Cuts – Hot Flash Weld Removal

Impact Applications

C-12	Impact – Light
C-13	Impact – Medium
C-14	Impact – Heavy

Wear Applications

C-9	Wear Surface – No Shock
C-10	Wear Surface – Light Shock
C-11	Wear Surface – Heavy Shock

Headquarters

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