Ti
Complete
Solutions
for Today's
Titanium
Challenges
Including Taps with
NEW HRG
TECHNOLOGY
NEW Advanced
Left-Hand Flute
EMUGE
HIGH PERFORMANCE TOOLS

NEW EMUGE
Titanium Tools Program

Efficient, Economical Threading of Alloyed Titanium

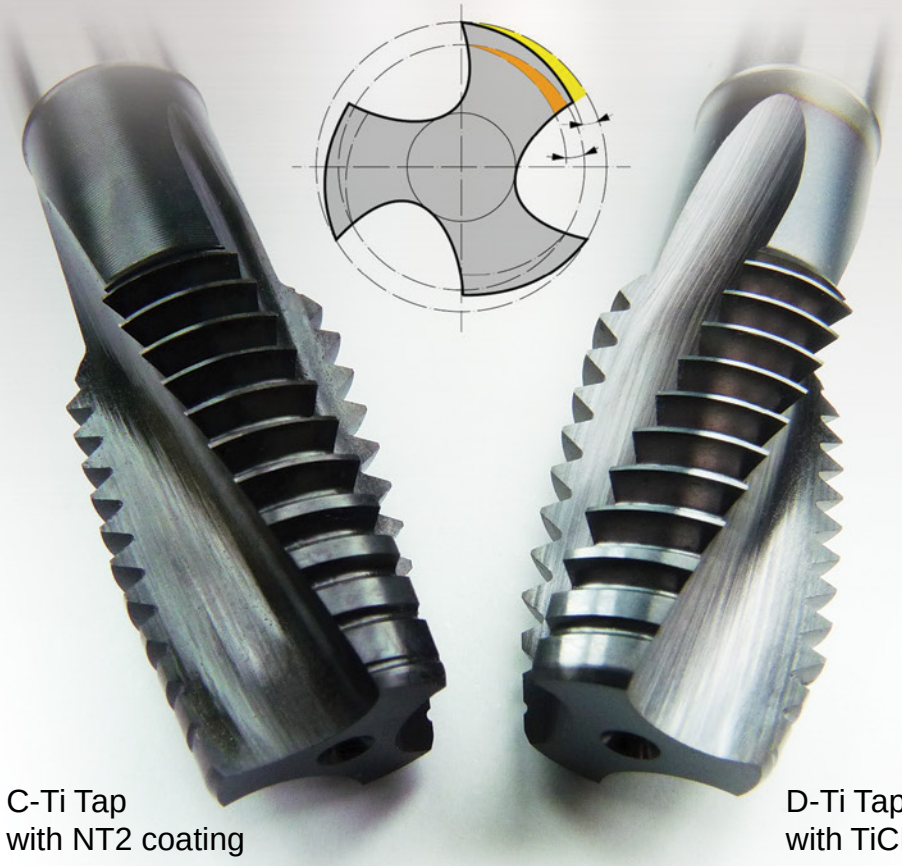
Featuring Advanced New High-Relief Geometry (HRG) Technology.

HRG TECHNOLOGY
High-Relief Geometry

Emuge has introduced a comprehensive line of high-performance tools for threading demanding alloyed titanium materials. Ranging from taps with unique new geometry designs to reliable solid carbide thread mills, the answers to your titanium challenges on Aerospace, Defense and Medical machining start here.

NEW HRG Technology with advanced High-Relief Geometry increases space between the friction surfaces for enhanced lubrication and reduced torque load in both forward and reverse direction. HRG counteracts the high compressive forces produced by the extreme elastic memory of titanium.

NEW C-Ti Taps with Advanced Left-Hand Helical Flute Form and chamfer geometry combine to optimize chip evacuation in the forward direction and add strength to the cutting teeth for enhanced tool life and process security.



C-Ti Tap
with NT2 coating

D-Ti Tap
with TiCN coating

NT2 – Nitriding + Steam treatment: Nitriding provides increased edge hardness. Steam lay over nitriding provides lubricity to prevent cold welding.

TiCN – Multi-layer PVD coating for increased edge hardness and surface lubricity.

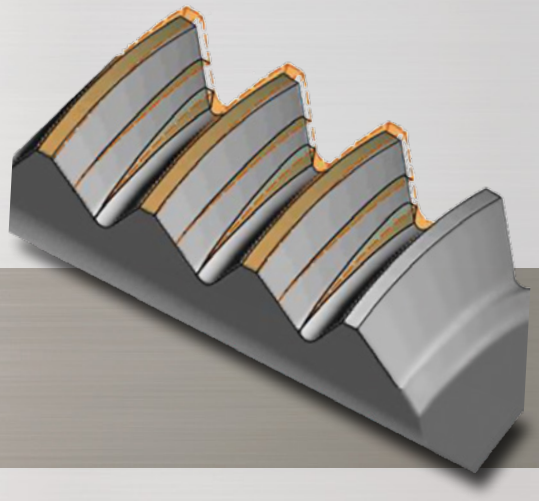
Modi ed bottoming chamfer (2-3 threads) provides reduced torque and increased tool lif

3BX class of t for internal UNJ threading applications.

DIN length for improved chip clearance in hard to-reach applications.

For optimal results, run on a CNC machine wit a synchronous spindle utilizing a tap holder with minimal compensation such as Emuge Softsynchro®

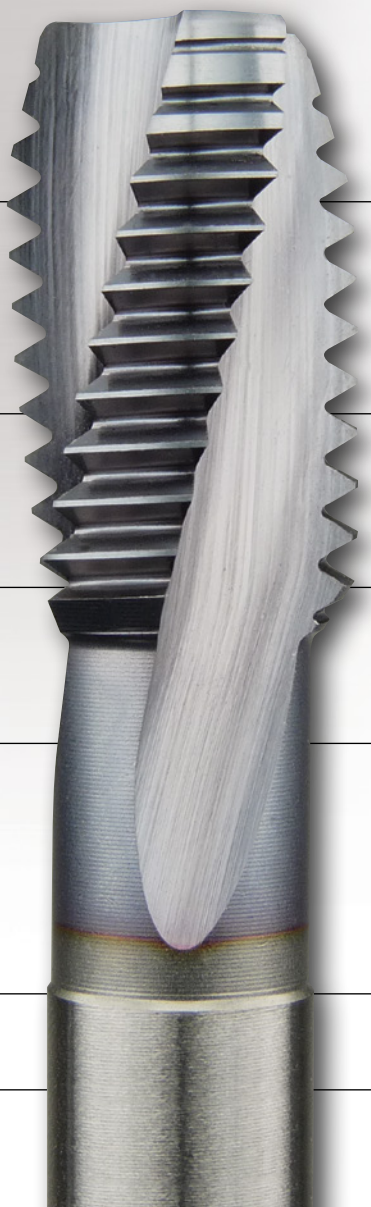
Innovative Geometry

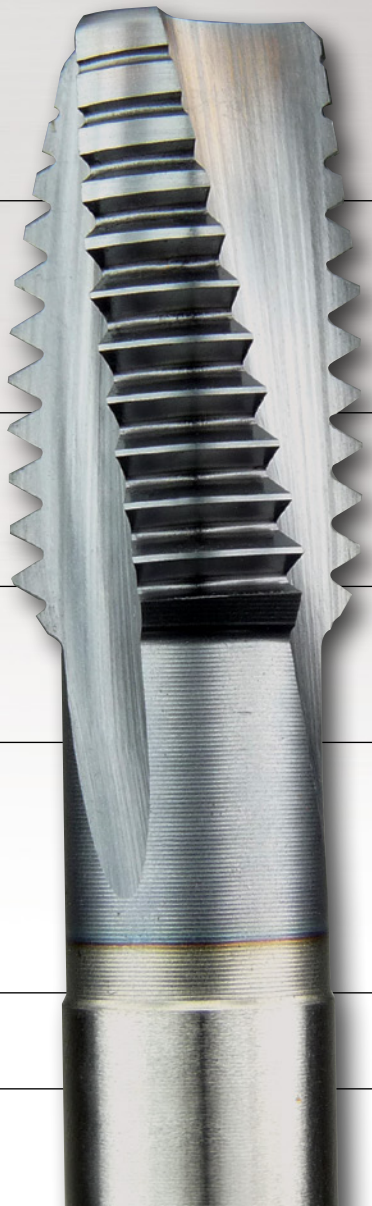


Optimized Geometries Ideal for Difficult Titanium Machining

The bene ts of HRG Technology in tough, long-chipping titaniums are extraordinary tool life, superior th excellent guiding properties for true-to-gauge t and signi cantly reduced chipped teeth or tap breakag

D-Ti Taps	HRG TECHNOLOGY	C-Ti Taps with Advanced LH Helical Flute Form
	Optimized flute angle and profile for tough, long chips that evacuate axially in one direction	
	LH helical flute form with special rake and relief to optimize chip evacuation	
	Premium HSS-E with exceptional heat and wear resistance	
	STI thread sizes for jet engine components	
	NT2 & TiCN coated options for enhanced cutting edge wear and resistance to material cold welding	





Spiral Flute Semi-Bottoming Taps

EMUGE

Rekord D-Ti Style
COARSE

HRC TECHNOLOGY

C / 2-3 Chamfer Length • 3BX Class of Fit • DIN Length / ANSI Shank

UNC / BLIND HOLE - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
1	64	2	0.141	0.110	1.772	BU4560115000
2	56	2	0.141	0.110	1.772	BU4560115001
3	48	2	0.141	0.110	1.969	BU4560115002
4	40	2	0.141	0.110	2.205	BU4560115003
5	40	2	0.141	0.110	2.205	BU4560115004
6	32	3	0.141	0.110	2.205	BU4560115005
8	32	3	0.168	0.131	2.480	BU4560115006
10	24	3	0.194	0.152	2.756	BU4560115007
12	24	3	0.220	0.165	3.150	BU4560115008
1/4	20	3	0.255	0.191	3.150	BU4560115009
5/16	18	3	0.318	0.238	3.543	BU4560115010
3/8	16	3	0.381	0.286	3.937	BU4560115011
7/16	14	3	0.323	0.242	3.937	CU4560115012
1/2	13	3	0.367	0.275	4.331	CU4560115013
9/16	12	3	0.429	0.322	4.331	CU4560115014
5/8	11	3	0.480	0.360	4.331	CU4560115015
3/4	10	3	0.590	0.442	4.921	CU4560115016
7/8	9	3	0.697	0.523	5.512	CU4560115017
1	8	3	0.800	0.600	6.299	CU4560115018

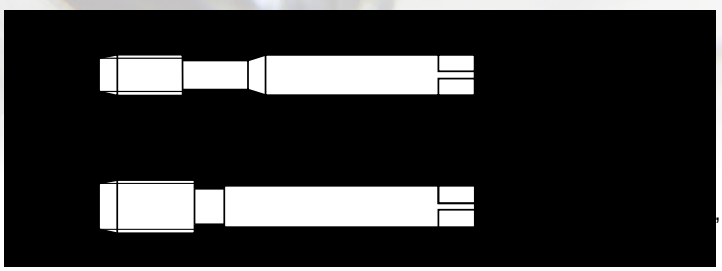
UNC / BLIND HOLE - TiCN COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
1	64	2	0.141	0.110	1.772	BU4596115000
2	56	2	0.141	0.110	1.772	BU4596115001
3	48	2	0.141	0.110	1.969	BU4596115002
4	40	2	0.141	0.110	2.205	BU4596115003
5	40	2	0.141	0.110	2.205	BU4596115004
6	32	3	0.141	0.110	2.205	BU4596115005
8	32	3	0.168	0.131	2.480	BU4596115006
10	24	3	0.194	0.152	2.756	BU4596115007
12	24	3	0.220	0.165	3.150	BU4596115008
1/4	20	3	0.255	0.191	3.150	BU4596115009
5/16	18	3	0.318	0.238	3.543	BU4596115010
3/8	16	3	0.381	0.286	3.937	BU4596115011
7/16	14	3	0.323	0.242	3.937	CU4596115012
1/2	13	3	0.367	0.275	4.331	CU4596115013
9/16	12	3	0.429	0.322	4.331	CU4596115014
5/8	11	3	0.480	0.360	4.331	CU4596115015
3/4	10	3	0.590	0.442	4.921	CU4596115016
7/8	9	3	0.697	0.523	5.512	CU4596115017
1	8	3	0.800	0.600	6.299	CU4596115018

UNC / BLIND HOLE - STI - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
4	40	3	0.141	0.110	2.205	BU4560115611
5	40	3	0.168	0.131	2.480	BU4560115612
6	32	3	0.194	0.152	2.756	BU4560115613
8	32	3	0.220	0.165	3.150	BU4560115614
10	24	3	0.255	0.191	3.150	BU4560115615
12	24	3	0.318	0.238	3.543	BU4560115616
1/4	20	3	0.318	0.238	3.543	BU4560115617
5/16	18	3	0.381	0.286	3.937	BU4560115618
3/8	16	3	0.367	0.275	3.937	CU4560115619
7/16	14	3	0.429	0.322	4.331	CU4560115620
1/2	13	3	0.480	0.360	4.331	CU4560115621
9/16	12	3	0.542	0.406	4.921	CU4560115622
5/8	11	3	0.590	0.442	4.921	CU4560115623
3/4	10	3	0.697	0.523	5.512	CU4560115624

Refer to back cover for Materials / Application Reference Table.



Spiral Flute Semi-Bottoming Taps

EMUGE

Rekord D-Ti Style
FINE

HRC TECHNOLOGY

C / 2-3 Chamfer Length • 3BX Class of Fit • DIN Length / ANSI Shank

UNF / BLIND HOLE - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
0	80	2	0.141	0.110	1.626	BU4560115033
1	72	2	0.141	0.110	1.772	BU4560115034
2	64	2	0.141	0.110	1.772	BU4560115035
3	56	2	0.141	0.110	1.969	BU4560115036
4	48	2	0.141	0.110	2.205	BU4560115037
5	44	2	0.141	0.110	2.205	BU4560115038
6	40	3	0.141	0.110	2.205	BU4560115039
8	36	3	0.168	0.131	2.480	BU4560115040
10	32	3	0.194	0.152	2.756	BU4560115041
12	28	3	0.220	0.165	3.150	BU4560115042
1/4	28	3	0.255	0.191	3.150	BU4560115043
5/16	24	3	0.318	0.238	3.543	BU4560115044
3/8	24	3	0.381	0.286	3.937	BU4560115045
7/16	20	3	0.323	0.242	3.937	CU4560115046
1/2	20	3	0.367	0.275	3.937	CU4560115047
9/16	18	3	0.429	0.322	3.937	CU4560115048
5/8	18	3	0.480	0.360	3.937	CU4560115049
3/4	16	4	0.590	0.442	4.331	CU4560115050
7/8	14	4	0.697	0.523	4.921	CU4560115051
1	12	4	0.800	0.600	5.512	CU4560115052

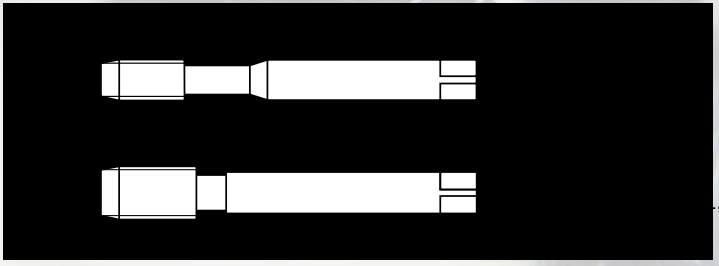
UNF / BLIND HOLE - TiCN COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
0	80	2	0.141	0.110	1.626	BU4596115033
1	72	2	0.141	0.110	1.772	BU4596115034
2	64	2	0.141	0.110	1.772	BU4596115035
3	56	2	0.141	0.110	1.969	BU4596115036
4	48	2	0.141	0.110	2.205	BU4596115037
5	44	2	0.141	0.110	2.205	BU4596115038
6	40	3	0.141	0.110	2.205	BU4596115039
8	36	3	0.168	0.131	2.480	BU4596115040
10	32	3	0.194	0.152	2.756	BU4596115041
12	28	3	0.220	0.165	3.150	BU4596115042
1/4	28	3	0.255	0.191	3.150	BU4596115043
5/16	24	3	0.318	0.238	3.543	BU4596115044
3/8	24	3	0.381	0.286	3.937	BU4596115045
7/16	20	3	0.323	0.242	3.937	CU4596115046
1/2	20	3	0.367	0.275	3.937	CU4596115047
9/16	18	3	0.429	0.322	3.937	CU4596115048
5/8	18	3	0.480	0.360	3.937	CU4596115049
3/4	16	4	0.590	0.442	4.331	CU4596115050
7/8	14	4	0.697	0.523	4.921	CU4596115051
1	12	4	0.800	0.600	5.512	CU4596115052

UNF / BLIND HOLE - STI - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
4	48	3	0.141	0.110	2.205	BU4560115633
6	40	3	0.168	0.131	2.480	BU4560115635
8	36	3	0.220	0.165	3.150	BU4560115636
10	32	3	0.255	0.191	3.150	BU4560115637
1/4	28	3	0.318	0.238	3.543	BU4560115639
5/16	24	3	0.381	0.286	3.937	BU4560115640
3/8	24	3	0.323	0.242	3.937	CU4560115641
7/16	20	3	0.367	0.275	3.937	CU4560115642
1/2	20	3	0.429	0.322	3.937	CU4560115643
9/16	18	3	0.480	0.360	3.937	CU4560115644
5/8	18	4	0.542	0.406	4.331	CU4560115645
3/4	16	4	0.652	0.489	4.921	CU4560115646

Refer to back cover for Materials / Application Reference Table.



Left-Hand Spiral Plug Taps

EMUGE

Rekord C-Ti Style with Advanced Left-Hand Helical Flute Form
COARSE

HRG TECHNOLOGY

D / 4-5 Chamfer Length • 3BX Class of Fit • DIN Length / ANSI Shank

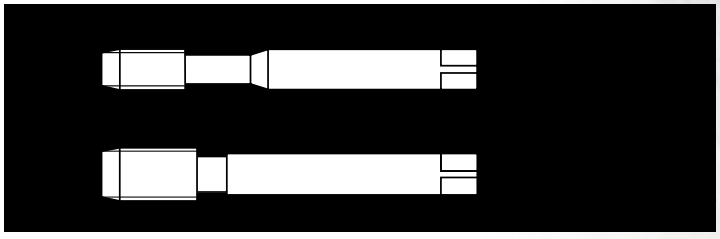
UNC / THROUGH HOLE - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
1	64	2	0.141	0.110	1.772	**BU3060115000**
2	56	2	0.141	0.110	1.722	**BU3060115001**
3	48	2	0.141	0.110	1.969	**BU3060115002**
4	40	2	0.141	0.110	2.205	**BU3060115003**
5	40	2	0.141	0.110	2.205	**BU3060115004**
6	32	3	0.141	0.110	2.205	**BU3060115005**
8	32	3	0.168	0.131	2.480	**BU3060115006**
10	24	3	0.194	0.152	2.756	**BU3060115007**
12	24	3	0.220	0.165	3.150	**BU3060115008**
1/4	20	3	0.255	0.191	3.150	**BU3060115009**
5/16	18	3	0.318	0.238	3.543	**BU3060115010**
3/8	16	3	0.381	0.286	3.937	**BU3060115011**
7/16	14	3	0.323	0.242	3.937	**CU3060115012**
1/2	13	3	0.367	0.275	4.331	**CU3060115013**
9/16	12	3	0.429	0.322	4.331	**CU3060115014**
5/8	11	3	0.480	0.360	4.331	**CU3060115015**
3/4	10	3	0.590	0.442	4.921	**CU3060115016**
7/8	9	3	0.697	0.523	5.512	**CU3060115017**
1	8	3	0.800	0.600	6.299	**CU3060115018**

UNC / THROUGH HOLE - TiCN COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
1	64	2	0.141	0.110	1.772	**BU3096115000**
2	56	2	0.141	0.110	1.772	**BU3096115001**
3	48	2	0.141	0.110	1.969	**BU3096115002**
4	40	2	0.141	0.110	2.205	**BU3096115003**
5	40	2	0.141	0.110	2.205	**BU3096115004**
6	32	3	0.141	0.110	2.205	**BU3096115005**
8	32	3	0.168	0.131	2.480	**BU3096115006**
10	24	3	0.194	0.152	2.756	**BU3096115007**
12	24	3	0.220	0.165	3.150	**BU3096115008**
1/4	20	3	0.255	0.191	3.150	**BU3096115009**
5/16	18	3	0.318	0.238	3.543	**BU3096115010**
3/8	16	3	0.381	0.286	3.937	**BU3096115011**
7/16	14	3	0.323	0.242	3.937	**CU3096115012**
1/2	13	3	0.367	0.275	4.331	**CU3096115013**
9/16	12	3	0.429	0.322	4.331	**CU3096115014**
5/8	11	3	0.480	0.360	4.331	**CU3096115015**
3/4	10	3	0.590	0.442	4.921	**CU3096115016**
7/8	9	3	0.697	0.523	5.512	**CU3096115017**
1	8	3	0.800	0.600	6.299	**CU3096115018**

Refer to back cover for Materials / Application Reference Table.



Left-Hand Spiral Plug Taps

EMUGE

Rekord C-Ti Style with Advanced Left-Hand Helical Flute Form

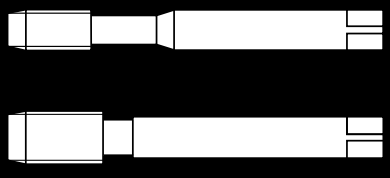
FINE

HRG TECHNOLOGY

[redacted]

UNF / THROUGH HOLE - NT2 COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
0	80	2	0.141	0.110	1.626	**BU3060115033**
1	72	2	0.141	0.110	1.772	**BU3060115034**
2	64	2	0.141	0.110	1.772	**BU3060115035**
3	56	2	0.141	0.110	1.969	**BU3060115036**
4	48	2	0.141	0.110	2.205	**BU3060115037**
5	44	2	0.141	0.110	2.205	**BU3060115038**
6	40	3	0.141	0.110	2.205	**BU3060115039**
8	36	3	0.168	0.131	2.480	**BU3060115040**
10	32	3	0.194	0.152	2.756	**BU3060115041**
12	28	3	0.220	0.165	3.150	**BU3060115042**
1/4	28	3	0.255	0.191	3.150	**BU3060115043**
5/16	24	3	0.318	0.238	3.543	**BU3060115044**
3/8	24	3	0.381	0.286	3.937	**BU3060115045**
7/16	20	3	0.323	0.242	3.937	**CU3060115046**
1/2	20	3	0.367	0.275	3.937	**CU3060115047**
9/16	18	3	0.429	0.322	3.937	**CU3060115048**
5/8	18	3	0.480	0.360	3.937	**CU3060115049**
3/4	16	4	0.590	0.442	4.331	**CU3060115050**
7/8	14	4	0.697	0.523	4.921	**CU3060115051**
1	12	4	0.800	0.600	5.512	**CU3060115052**

UNF / THROUGH HOLE - TiCN COATING

Size	T.P.I.	# Flutes	Shank Dia.	Square Width	OAL	EDP No.
0	80	2	0.141	0.110	1.626	**BU3096115033**
1	72	2	0.141	0.110	1.772	**BU3096115034**
2	64	2	0.141	0.110	1.772	**BU3096115035**
3	56	2	0.141	0.110	1.969	**BU3096115036**
4	48	2	0.141	0.110	2.205	**BU3096115037**
5	44	2	0.141	0.110	2.205	**BU3096115038**
6	40	3	0.141	0.110	2.205	**BU3096115039**
8	36	3	0.168	0.131	2.480	**BU3096115040**
10	32	3	0.194	0.152	2.756	**BU3096115041**
12	28	3	0.220	0.165	3.150	**BU3096115042**
1/4	28	3	0.255	0.191	3.150	**BU3096115043**
5/16	24	3	0.318	0.238	3.543	**BU3096115044**
3/8	24	3	0.381	0.286	3.937	**BU3096115045**
7/16	20	3	0.323	0.242	3.937	**CU3096115046**
1/2	20	3	0.367	0.275	3.937	**CU3096115047**
9/16	18	3	0.429	0.322	3.937	**CU3096115048**
5/8	18	3	0.480	0.360	3.937	**CU3096115049**
3/4	16	4	0.590	0.442	4.331	**CU3096115050**
7/8	14	4	0.697	0.523	4.921	**CU3096115051**
1	12	4	0.800	0.600	5.512	**CU3096115052**