



# Huck 360<sup>®</sup> Advanced Fastening System

Free-spinning installation  
Absorbs high spike loads  
Vibration and fatigue resistant

3/8" - 1-3/8", 10mm - 36mm



# Huck 360<sup>®</sup> System

The Engineered Nut-and-Bolt Fastening System from the Leader in Vibration-Resistant Fastening, Huck

The goal was simple: to design a high-strength bolting system that resists vibration loosening, no matter how extreme the environment. This system should offer quick installation and removal with conventional tools, deliver superior fatigue strength, and hold tight under high spike loads.

The result is the Huck 360<sup>®</sup>, the most advanced nut-and-bolt fastening system you'll find on the market today. Easy to install, the Huck 360 fastening system is engineered to be virtually maintenance free and resistant to vibration, even under extreme conditions.



## The Difference is In the Design



The Huck 360<sup>®</sup> System is available in 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-3/8", 10mm, 12mm, 16mm, 20mm, and 36mm.

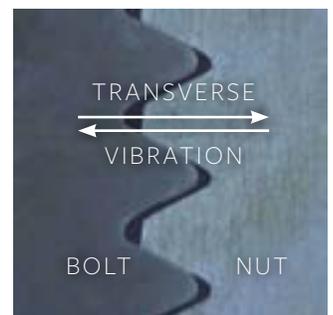
Huck 360 stays tight under severe vibration loading by eliminating the "gap" around the crest of the bolt. When tightened, the Huck 360 fills this gap, which prevents transverse motion between the 360 nut and bolt, keeping the assembly in place.

Huck 360<sup>®</sup>

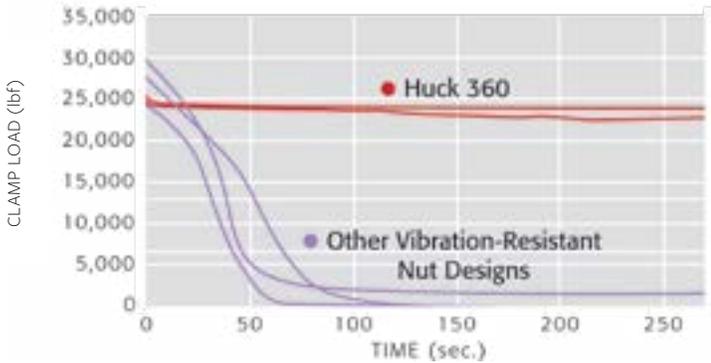


Thread flanks are locked.  
Nut cannot move relative to bolt.

Conventional Thread



Thread flanks can slide.  
Nut can move relative to bolt.



## Transverse Vibration Comparison

This chart shows that once vibration begins, clamp load quickly decays with conventional nuts and bolts, while it holds constant with Huck 360.

## Increased Life

Because the Huck 360 was designed with shallow, low-notch factor bolt threads (the grooves aren't rolled as deep as a conventional bolt), the effective area of the fastener itself is widened by as much as 20%, increasing tensile and fatigue strength. In fact, the Huck 360 thread delivers 5 times the fatigue life of a standard thread bolt.



## Improved Fatigue Performance

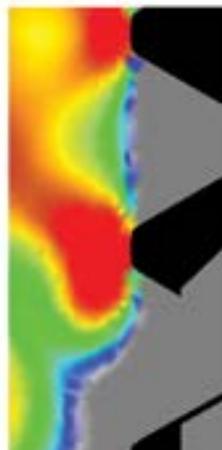
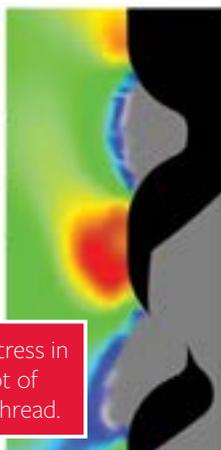
Finite Element Analysis (FEA) reveals that the shallow thread form of the Huck 360 results in 27% less axial stress in the root than conventional bolt threads. Stress concentration is the primary contributing factor leading to fatigue failures.

## Reduce Maintenance, Save Time

The Huck 360 installs faster and more easily than the nuts and bolts you're accustomed to using, and maintenance intervals can be extended. The Huck 360's superior fatigue strength has proven to increase equipment uptime and productivity.

Huck 360®

Conventional Thread



27% less stress in the root of the bolt thread.

## Huck 360 Benefits

- Resists vibration loosening
- Withstands high spike loads
- Increases equipment uptime
- Installs 300% faster than conventional locknuts
- Can be installed and removed with conventional tools

## Huck 360 Re-Usability

A Huck 360 nut and bolt can be retightened. It can be reused if the nut and bolt set remains free spinning after removal and reuse, with the same torque requirements as the first installation.

# Inch Data and Dimensions

## Inch HUCK 360 Grade 8 Bolt

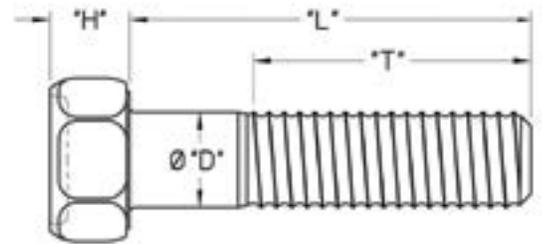
DIAMETER (INCHES)	DT(*)	A	B	H	D	T		MIN.ULT. TENSILE LBF
						6" OR SHORTER	OVER 6"	
3/8	12	0.639	0.557	0.303	0.372	1.14	1.39	11,600
7/16	14	0.710	0.619	0.361	0.435	1.3	1.55	15,900
1/2	16	0.853	0.743	0.403	0.497	1.43	1.68	21,300
5/8	20	1.067	0.930	0.504	0.622	1.71	1.96	33,900
3/4	24	1.277	1.113	0.604	0.746	1.97	2.21	50,100
7/8	28	1.491	1.299	0.706	0.871	2.24	2.49	69,300
1	32	1.704	1.485	0.790	0.995	2.51	2.76	90,900

Additional diameters available upon request.



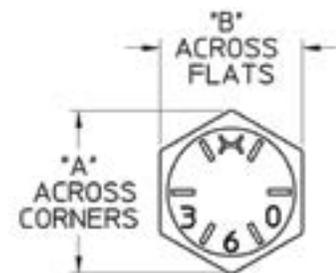
DIAMETER IN 1/32" INCREMENTS

EXAMPLE: 360H-DT12X125 IS A HUCK 360 FASTENER, HEXAGONAL HEAD, 3/8" DIAMETER, LENGTH 1-1/4".



## Lengths and Diameters

Nom. LENGTH	LENGTH CODE (***)	"L"—UNDERHEAD LENGTH (INCHES)						
		DT12	DT14	DT16	DT20	DT24	DT28	DT32
1-1/4"	X125	1.250						
1-3/8"	X137	1.375						
1-1/2"	X150	1.500	1.500					
1-5/8"	X162	1.625	1.625					
1-3/4"	X175	1.750	1.750					
1-7/8"	X187	1.875	1.875					
2"	X200	2.000	2.000	2.000				
2-1/8"	X212	2.125	2.125					
2-1/4"	X225	2.250	2.250	2.250	2.250			
2-3/8"	X237	2.375	2.375					
2-1/2"	X250	2.500	2.500	2.500	2.500			
2-5/8"	X262	2.625	2.625					
2-3/4"	X275	2.750	2.750	2.750	2.750	2.750		
2-7/8"	X287	2.875	2.875					
3"	X300	3.000	3.000	3.000	3.000	3.000	3.000	3.000
3-1/4"	X325	3.250	3.250	3.250	3.250	3.250	3.250	3.250
3-1/2"	X350	3.500	3.500	3.500	3.500	3.500	3.500	3.500
3-3/4"	X375	3.750	3.750	3.750	3.750	3.750	3.750	3.750
4"	X400	4.000	4.000	4.000	4.000	4.000	4.000	4.000
4-1/4"	X425	4.250	4.250	4.250	4.250	4.250	4.250	4.250
4-1/2"	X450	4.500	4.500	4.500	4.500	4.500	4.500	4.500
4-3/4"	X475	4.750	4.750	4.750	4.750	4.750	4.750	4.750
5"	X500	5.000	5.000	5.000	5.000	5.000	5.000	5.000
5-1/4"	X525	5.250	5.250	5.250	5.250	5.250	5.250	5.250
5-1/2"	X550	5.500	5.500	5.500	5.500	5.500	5.500	5.500
5-3/4"	X575	5.750	5.750	5.750	5.750	5.750	5.750	5.750
6"	X600	6.000	6.000	6.000	6.000	6.000	6.000	6.000
6-1/4"	X625	6.250	6.250	6.250	6.250	6.250	6.250	6.250
6-1/2"	X650	6.500	6.500	6.500	6.500	6.500	6.500	6.500
6-3/4"	X675	6.750	6.750	6.750	6.750	6.750	6.750	6.750



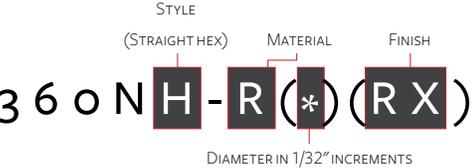
### Notes

1. Finishes: Black oiled (no suffix) or Geomet (D1 suffix)
2. Raised or depressed Huck mark, six equally spaced bars, and Huck mark as shown
3. Material: Medium carbon alloy steel

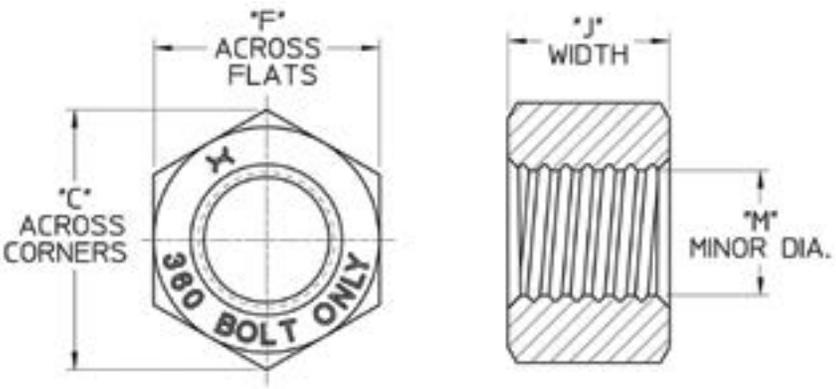
## Inch Huck 360 Nut

DIAMETER (INCHES)	R(*)	C	F	J	M	MIN.ULT. TENSILE LBF
3/8	12	0.779	0.679	0.45	0.349	11,600
7/16	14	0.848	0.739	0.525	0.407	15,900
1/2	16	0.99	0.863	0.6	0.465	21,300
5/8	20	1.202	1.047	0.75	0.581	33,900
3/4	24	1.413	1.231	0.9	0.697	50,100
7/8	28	1.625	1.416	1.04	0.805	69,300
1	32	1.836	1.6	1.2	0.93	90,900

Additional diameters available upon request.



EXAMPLE: 360NH-R12 IS A HUCK 360 STRAIGHT HEX NUT, 3/8" DIAMETER.



**Notes**

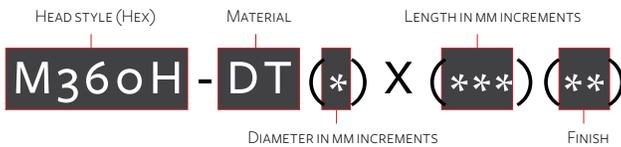
1. Hardened washers recommended per ASTM F436 or equivalent)
2. Finish: HuckGuard® coating
3. Depressed Huck mark and "360 Bolt Only" as shown for 5/8" diameter and up. Depressed Huck mark only for 1/2" diameter and under
4. Material: Low carbon steel
5. All dimensions nominal and subject to manufacturing tolerances



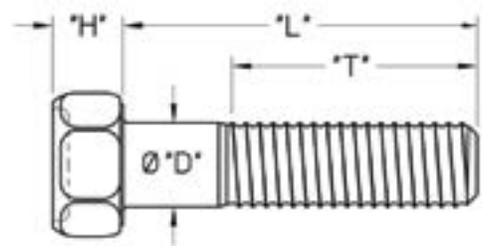
# Metric Data and Dimensions

Metric Huck 360 Class 10.9 Bolt								
DIAMETER (MM)	A	B	H	D	T			MIN. ULT. TENSILE KN
					<125 MM —(4.92 IN.)	>125 MM <200MM	>200MM (7.87 IN.)	
DT10	18	16	8	10	26	---	---	60.3
DT12	20	18	10	12	30	---	---	87.7
DT14*	24	21	11	14	34	40	---	120
DT16	27	24	13	16	38	44	---	163
DT20	34	30	16	20	46	52	---	255
DT24*	41	36	20	24	54	60	73	367
DT36	62	54	23	36	---	84	97	850

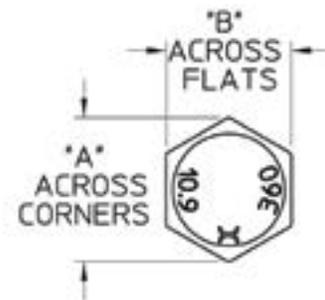
\*Check for availability. Additional diameters available upon request



EXAMPLE: M360H-DT10X045 IS A METRIC HUCK 360 FASTENER, HEXAGONAL HEAD, 10MM DIAMETER, LENGTH 45MM.



Lengths and Diameters								
NOM. LENGTH (MM)	(***)	"L" — UNDERHEAD LENGTH (MM)						
		DT10	DT12	DT14	DT16	DT20	DT24	DT36
45	X045	45						
50	X050	50	50					
55	X055	55	55					
60	X060	60	60	60				
65	X065	65	65	65	65			
70	X070	70	70	70	70			
80	X080	80	80	80	80	80		
90	X090	90	90	90	90	90	90	
100	X100	100	100	100	100	100	100	
110	X110		110	110	110	110	110	
120	X120		120	120	120	120	120	
130	X130			130	130	130	130	130
140	X140			140	140	140	140	140
150	X150				150	150	150	150
160	X160				160	160	160	160
180	X180					180	180	180
200	X200						200	200
220	X220							220
240	X240							240
260	X260							260
280	X280							280
300	X300							300



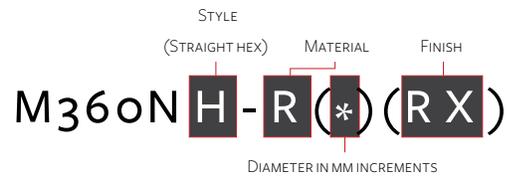
### Notes

1. Finishes: Black oiled (no suffix) or Geomet (D1 suffix)
2. Raised or depressed Huck mark, 10.9, and the number 360 as shown
3. Material: Medium carbon alloy steel
4. All dimensions nominal and subject to manufacturing tolerances

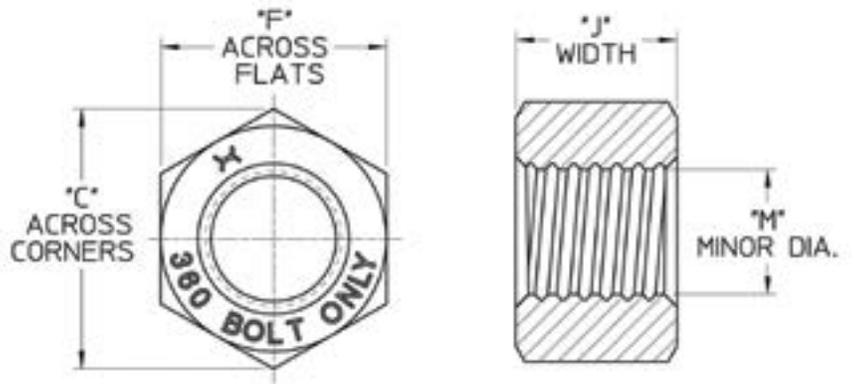
### Metric Huck 360 Nut

DIAMETER (MM)	C	F	J	M	MIN. ULT. TENSILE KN
R10	20.41	18	11.94	9.30	60.3
R12	23.52	21	14.48	11.15	87.7
R14	26.94	24	16.76	13.00	120
R16	30.38	27	19.05	14.76	163
R20	38.35	34	24.13	18.59	255
R24	46.28	41	28.70	23.30	367
R36	67.87	60	43.18	33.48	850

Additional diameters available upon request



EXAMPLE: M360NH-R10 IS A METRIC HUCK 360 NUT, STRAIGHT HEX STYLE, 10MM DIAMETER.



#### Notes

1. Hardened washers recommended (per ASTM F436 or equivalent)
2. Finish HuckGuard® coating
3. Depressed Huck Mark and "360 Bolt Only" as shown for 16mm diameter and up. Depressed Huck mark only for 14mm diameter and under
4. Material: Low carbon steel
5. All dimensions nominal and subject to manufacturing tolerances





**HOWMET  
AEROSPACE**

# Howmet Fastening Systems

## Industrial Division Brands



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### North America

#### Waco Operations

PO Box 8117  
8001 Imperial Drive  
Waco, TX 76714-8117  
Tel: +1 800-388-4825  
Fax: +1 800-798-4825  
hfs.sales.waco@howmet.com

#### Kingston Operations

1 Corporate Drive  
Kingston, NY 12401  
Tel: +1 800-278-4825  
Fax: +1 845-334-7333  
hfs.sales.kingston@howmet.com

#### Tracy Operations

1925 North MacArthur Drive  
Tracy, CA 95376  
Tel: +1 800-826-2884  
Fax: +1 800-573-2645  
hfs.sales.idg@howmet.com

### Global

#### Telford Operations

Unit C, Stafford Park 7  
Telford, Shropshire  
England TF3 3BQ  
Tel: +44 (0) 1952-290011  
Fax: +44 (0) 1952-290459  
thisales@howmet.com

#### Suzhou Operations

58 Yinsheng Road,  
SIP Suzhou, Jiangsu  
215126 China  
Tel: +86-512-62863800-8888

#### Melbourne Operations

1508 Centre Road  
Clayton, Victoria  
Australia 3168  
Tel: +613-8545-3333  
Fax: +613-8545-3390  
hfs.sales@howmet.com

#### Tokyo Operations (Japan & Korea)

1013 Hibiya U-1 Bldg.  
Uchisaiwai-cho 1-1-7  
Chiyoda-ku, Tokyo  
100-0011 Japan  
Tel: +81-3-3539-6594  
Fax: +81-3-3539-6585

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