

## HYTORC GALL-FREE NUT

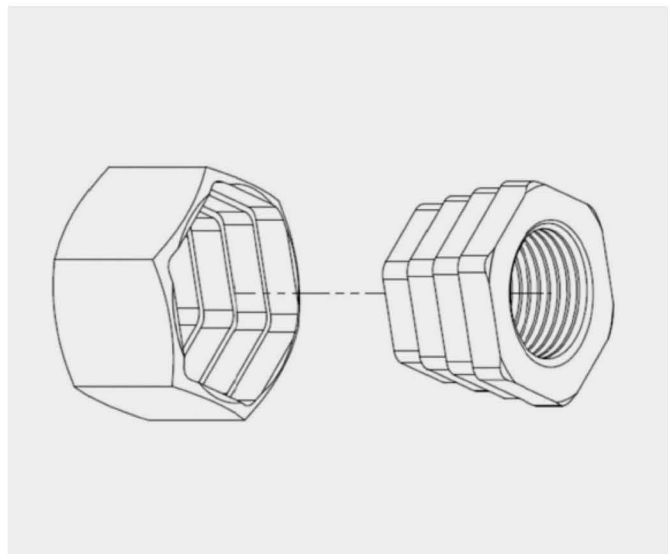
The HYTORC Gall-Free Nut eliminates thread failure and seizing, allowing bolted joints to be safely removed and reused without destroying the joint surface. Galled bolt threads are a costly by-product of high friction and temperatures that makes your fasteners non-reusable and joint disassembly a labor-intensive ordeal.

The HYTORC Gall-Free Nut offers anti-galling performance in a standard hex nut geometry in all common hex sizes, and can be customized for non-standard application constraints as well. Its patent-pending design geometry and unique material conditioning can eliminate galling even on fine high-alloy threads operating at elevated loads and temperatures without lubricant or anti-seize.

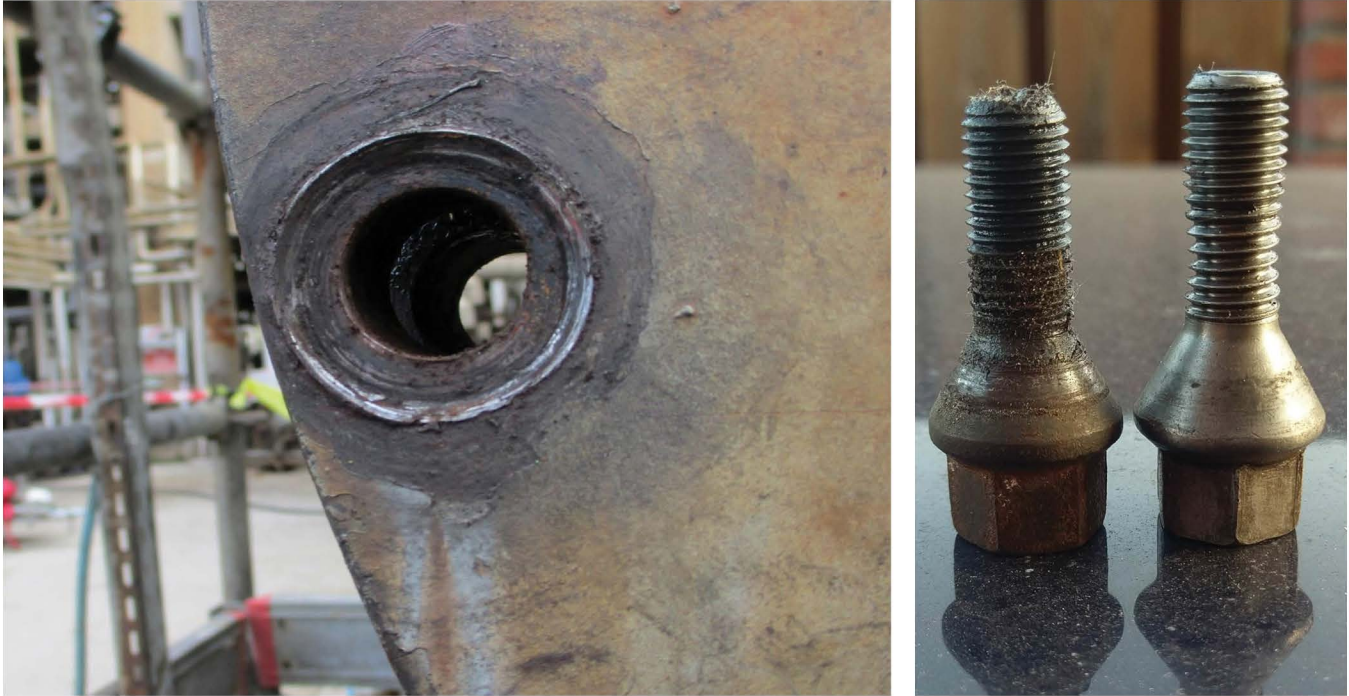
### GALLING EXAMPLES



### TWO PIECE GEOMETRY



## ANTI-GALLING PROPERTIES



The HYTORC Gall-Free Nut coated thread design eliminates the microscopic material corrosion that occurs when fasteners are subjected to high temperatures and increased friction over extended time periods. This technology counters the galling effect of plastic deformation and micro-scale material transfer of thread surfaces.

## MATERIALS AND DESIGN



The two-part design consists of interlocking inner and outer sleeves with tapered threads that integrate advanced anti-galling properties. Compatible with standard bolt threads, the HYTORC Gall-Free Nut can be finished in a variety of coatings and materials to suit your specific applications.

## LOADING SURFACE

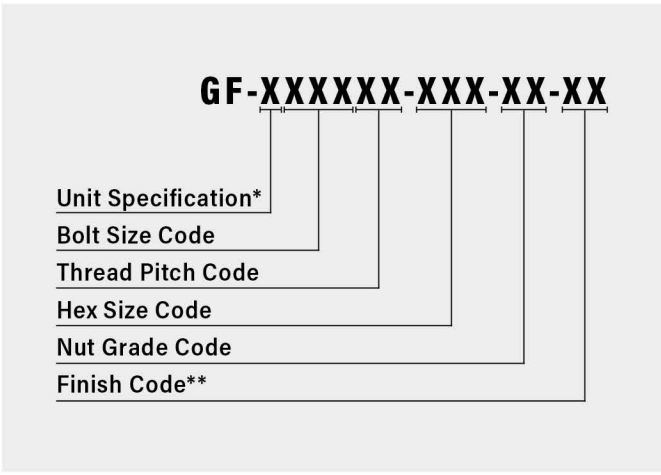
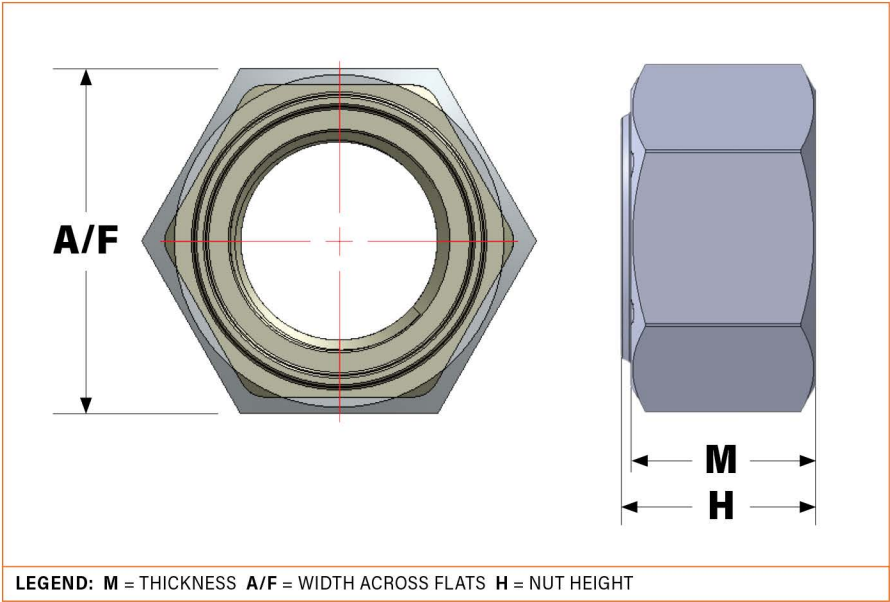


1



2

The HYTORC Gall-Free Nut is installed with the load bearing surface (1) facing the flange. The top-side indicator ring (2) helps to ensure that the nut is installed properly.



**SERVICE AND SUPPORT**

**HYTORC STANDARD**



With over 50 years of experience focused entirely on developing the highest quality industrial bolting systems, HYTORC remains committed to higher performance and offers superior technology, quality, and customer support.

**HY-CARE**



**HY-CARE Service Plans\*** provide peace of mind protection and offer a no deductible plan to protect you from unexpected bolting equipment repair costs and downtime after your standard equipment warranty expires. On average, a tool with HY-CARE lasts up to five times longer in service. Never settle for less.

\*May not be available in all locations. Please contact your local HYTORC representative for more information.

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- hytorc.com/about-us

**GF - NUT DIMENSIONS (IMPERIAL)**

STUD DIAMETER	BOLT SIZE CODE	A/F NOMINAL	HEX SIZE CODE	M	H
				Max (in.)	
7/8	<b>014</b>	1-7/16	<b>107</b>	0.859	0.906
1	<b>100</b>	1-5/8	<b>110</b>	0.984	1.031
1-1/8	<b>102</b>	1-13/16	<b>113</b>	1.109	1.156
1-1/4	<b>104</b>	2	<b>200</b>	1.219	1.282
1-3/8	<b>106</b>	2-3/16	<b>203</b>	1.344	1.407
1-1/2	<b>108</b>	2-3/8	<b>206</b>	1.469	1.532
1-5/8	<b>110</b>	2-9/16	<b>209</b>	1.594	1.672
1-3/4	<b>112</b>	2-3/4	<b>212</b>	1.719	1.797
1-7/8	<b>114</b>	2-15/16	<b>215</b>	1.844	1.922
2	<b>200</b>	3-1/8	<b>302</b>	1.969	2.062
2-1/4	<b>204</b>	3-1/2	<b>308</b>	2.203	2.296
2-1/2	<b>208</b>	3-7/8	<b>314</b>	2.453	2.546

**GF - NUT DIMENSIONS (METRIC)**

STUD DIAMETER	BOLT SIZE CODE	A/F NOMINAL	HEX SIZE CODE	M	H
				Max (mm)	
M20	<b>020</b>	30	<b>030</b>	18.00	18.80
M22	<b>022</b>	32	<b>032</b>	19.40	20.20
M24	<b>024</b>	36	<b>036</b>	21.50	22.30
M27	<b>027</b>	41	<b>041</b>	23.80	24.60
M30	<b>030</b>	46	<b>046</b>	25.60	26.40
M33	<b>033</b>	50	<b>050</b>	28.70	29.50
M36	<b>036</b>	55	<b>055</b>	31.00	31.80
M39	<b>039</b>	60	<b>060</b>	33.40	34.40
M42	<b>042</b>	65	<b>065</b>	34.00	35.00
M45	<b>045</b>	70	<b>070</b>	36.00	37.00
M48	<b>048</b>	75	<b>075</b>	38.00	39.00
M52	<b>052</b>	80	<b>080</b>	42.00	43.00
M56	<b>056</b>	85	<b>085</b>	45.00	46.00
M60	<b>060</b>	90	<b>090</b>	48.00	49.00
M64	<b>064</b>	95	<b>095</b>	51.00	52.00

**LEGEND:** M = THICKNESS A/F = WIDTH ACROSS FLATS H = NUT HEIGHT

**THREAD PITCH CODE**

IMPERIAL (IN)		METRIC (MM)	
THREADS PER INCH	PITCH CODE	MM PER THREAD	PITCH CODE
4	<b>04</b>	1	<b>01</b>
4-1/2	<b>45</b>	3	<b>03</b>
8	<b>08</b>	3.5	<b>35</b>
12	<b>12</b>	6	<b>06</b>

**NUT GRADE CODE**

IMPERIAL*		METRIC**	
NUT GRADE	GRADE CODE	NUT GRADE	GRADE CODE
2H	<b>01</b>	8.8	<b>04</b>
7	<b>02</b>	10.9	<b>05</b>
8	<b>03</b>	12.9	<b>06</b>

\* Imperial follows ASTM A194; \*\* Metric follows ISO 898-1

**IMPERIAL EXAMPLE**

**G F - I 1 0 6 0 8 - 2 0 3 - 0 1**

GALL FREE NUT IMPERIAL 1-3/8 NUT DIAMETER WITH 8 TPI, 2-3/16 HEX SIZE, 2H STEEL GRADE, BLACK OXIDE COATING

**METRIC EXAMPLE**

**G F - M 0 3 6 0 4 - 0 5 5 - 0 5**

GALL FREE NUT METRIC M36X4 NUT DIAMETER WITH 4 THREAD PITCH, 55 HEX SIZE, 10.9 STEEL GRADE, BLACK OXIDE COATING

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