

When high clamp load is required, Crest Cup® spring washer assembly is the solution. Its performance-engineered compression washer provides a flat and smooth bearing surface to provide higher tension, resulting in a reliable assembly for the life of the product.



#### STANDARD DESIGN GUIDELINES

**Washer Diameters:** .210" - .880"  
(5.3mm - 22.3mm)\*

**Fastener Diameters:** #2 - 5/16"  
(M2 - M8)\*

**Fastener Length:** 3/16" - 5"  
(4mm - 127mm) threaded length

**Fastener Style:** Can be used with any head, thread and point style

**Washer Material:** carbon steel or stainless steel

**Finish:** As required

\* Other washer and fastener sizes available upon request

For more information on how Crest Cup fasteners can benefit your assembly, please contact:



1304 Kerr Drive • Decorah, IA 52101-2494  
voice: 563.382.4216 • fax: 563.387.3326

**1-800-544-6117**

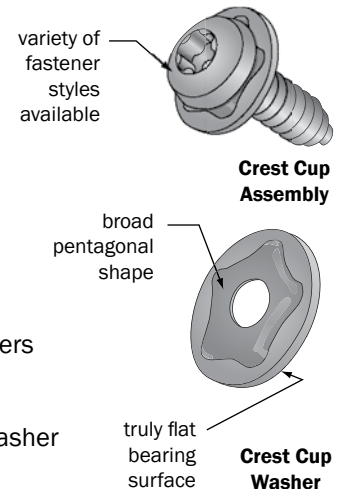
infastech.com

#### PROVIDES COMPLETE DESIGN VERSATILITY

Outstanding engineering and versatility make the Crest Cup spring washer assembly the ideal alternative to costly helical/flat washer assemblies and most other commonly used spring washers.

#### FEATURES

- Stamped into broad pentagonal shape
- Manufacturing method forms burr upwards, producing a truly flat bearing surface, free of sharp edges
- Preassembled to fasteners

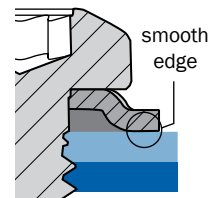


#### BENEFITS

- Can eliminate double washer combinations
- Eliminates handling of loose washers and screws
- Adapts easily to automatic assembly equipment
- Maximizes joint integrity
- Helps prevent embedding, notching and marring in application materials

#### IDEAL FOR USE WITH SOFT MATERIALS

The manufacturing process for Crest Cup washers forms the burr away from the bearing surface. This provides a smooth edge, which prevents the washer from embedding in soft materials or marring low-ductile materials.



The broad surface of the Crest Cup washer spreads clamp force over a large area, helping to retain tension even in soft materials.

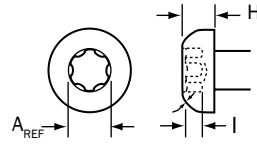
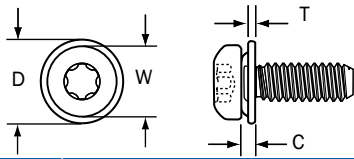
#### READY TO MEET YOUR ASSEMBLY NEEDS

Crest Cup spring washer assemblies are available in virtually any head or thread style, in inch or metric sizes to meet your specific needs.

Since Crest Cup washers are preassembled to fasteners, hand-assembly of loose washers and fasteners – and the possibility of dropped, missing or incorrect washers – is eliminated. This also simplifies inventory and ordering. The result is higher productivity and further cost savings.

Many Crest Cup assemblies are in-stock and ready for delivery. Please contact your Infastech representative for more information.

## PAN HEAD DIMENSIONAL SPECIFICATIONS

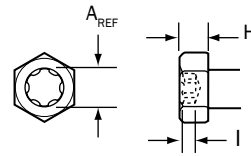
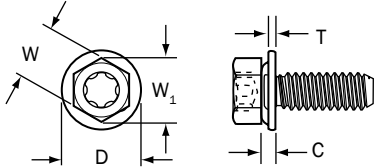


TORX PLUS® Drive System shown; specifications for other drive systems available upon request

INCH SIZES	SCREW SIZE	HEAD		DRIVE			WASHER		
		W max. - min.	H max. - min.	I max. - min.	A <sub>REF</sub>	SIZE	diameter D	thickness T	height C
	#2	.167 - .155	.062 - .053	.037 - .032	.081	7IP	.210 - .200	.020 - .010	.040 - .020
	#4	.219 - .205	.080 - .070	.051 - .043	.111	10IP	.250 - .244	.025 - .015	.050 - .030
	#6	.270 - .256	.097 - .087	.061 - .051	.132	15IP	.320 - .307	.035 - .025	.070 - .050
	#8	.322 - .306	.115 - .105	.071 - .060	.155	20IP	.380 - .370	.040 - .030	.080 - .060
	#10	.373 - .357	.133 - .122	.082 - .069	.178	25IP	.446 - .433	.040 - .030	.080 - .060
	#12	.425 - .407	.151 - .139	.092 - .078	.200	27IP	.446 - .433	.040 - .030	.080 - .060
	1/4"	.492 - .473	.175 - .162	.102 - .086	.221	30IP	.505 - .495	.050 - .040	.100 - .080
	5/16"	.615 - .594	.218 - .203	.122 - .104	.266	40IP	.880 - .870	.075 - .065	.150 - .130

METRIC SIZES	SCREW SIZE	HEAD		DRIVE			WASHER		
		W max. - min.	H max. - min.	I max. - min.	A <sub>REF</sub>	SIZE	diameter D	thickness T	height C
	M2.0	4.00 - 3.70	1.60 - 1.40	0.81 - 0.68	1.75	6IP	5.33 - 5.08	0.50 - 0.25	1.00 - 0.50
	M2.5	5.00 - 4.70	2.10 - 1.90	1.10 - 0.93	2.39	8IP	6.35 - 6.20	0.63 - 0.38	1.26 - 0.76
	M3.0	5.60 - 5.30	2.40 - 2.20	1.30 - 1.10	2.82	10IP	6.35 - 6.20	0.63 - 0.38	1.26 - 0.76
	M3.5	7.00 - 6.60	2.60 - 2.30	1.54 - 1.31	3.35	15IP	8.12 - 7.79	0.88 - 0.63	1.76 - 1.26
	M4.0	8.00 - 7.60	3.10 - 2.80	1.81 - 1.54	3.94	20IP	9.65 - 9.40	1.00 - 0.76	2.00 - 1.53
	M5.0	9.50 - 9.10	3.70 - 3.40	2.08 - 1.75	4.52	25IP	11.33 - 11.00	1.00 - 0.76	2.00 - 1.53
	M6.0	12.00 - 11.50	4.60 - 4.30	2.58 - 2.19	5.61	30IP	12.90 - 12.57	1.27 - 1.00	2.54 - 2.00
	M8.0	16.00 - 15.50	6.00 - 5.60	3.11 - 2.64	6.76	40IP	22.35 - 22.09	1.90 - 1.65	3.81 - 3.30

## HEX HEAD DIMENSIONAL SPECIFICATIONS



TORX PLUS® Drive System shown; specifications for other drive systems available upon request

INCH SIZES	SCREW SIZE	HEAD			DRIVE			WASHER		
		W max. - min.	W <sub>1</sub> min	H max. - min.	I max. - min.	A <sub>REF</sub>	SIZE	diameter D	thickness T	height C
	#4	.188 - .181	.202	.090 - .080	.046 - .038	.111	10IP	.250 - .244	.025 - .015	.050 - .030
	#6	.205 - .244	.272	.100 - .090	.054 - .045	.132	15IP	.320 - .307	.035 - .025	.070 - .050
	#8	.250 - .244	.272	.121 - .111	.064 - .053	.155	20IP	.380 - .370	.040 - .030	.080 - .060
	#10	.312 - .305	.340	.133 - .122	.073 - .061	.178	25IP	.446 - .433	.040 - .030	.080 - .060
	#12	.312 - .305	.340	.155 - .139	.082 - .068	.200	27IP	.446 - .433	.040 - .030	.080 - .060
	1/4"	.375 - .367	.409	.190 - .172	.102 - .075	.221	30IP	.630 - .610	.050 - .040	.100 - .080
	5/16"	.500 - .489	.545	.230 - .208	.109 - .090	.266	40IP	.880 - .870	.075 - .065	.150 - .130

METRIC SIZES	SCREW SIZE	HEAD			DRIVE			WASHER		
		W max. - min.	W <sub>1</sub> min	H max. - min.	I max. - min.	A <sub>REF</sub>	SIZE	diameter D	thickness T	height C
	M2.0	3.20 - 3.02	3.38	1.60 - 1.30	0.72 - 0.60	1.75	6IP	5.33 - 5.08	0.50 - 0.25	1.00 - 0.50
	M2.5	4.00 - 3.82	4.28	2.10 - 1.80	0.98 - 0.81	2.39	8IP	6.35 - 6.20	0.63 - 0.38	1.26 - 0.76
	M3.0	5.00 - 4.82	5.40	2.40 - 2.10	1.16 - 0.96	2.82	10IP	6.35 - 6.20	0.63 - 0.38	1.26 - 0.76
	M3.5	5.50 - 5.32	5.96	2.70 - 2.40	1.37 - 1.14	3.35	15IP	8.12 - 7.79	0.88 - 0.63	1.76 - 1.26
	M4.0	7.00 - 6.78	7.59	3.30 - 2.90	1.62 - 1.34	3.94	20IP	9.65 - 9.40	1.00 - 0.76	2.00 - 1.53
	M5.0	8.00 - 7.78	8.71	3.80 - 3.30	1.85 - 1.54	4.52	25IP	11.33 - 11.00	1.00 - 0.76	2.00 - 1.53
	M6.0	10.00 - 9.78	10.95	4.70 - 4.10	2.30 - 1.91	5.61	30IP	12.90 - 12.57	1.27 - 1.00	2.54 - 2.00
	M8.0	13.00 - 12.73	14.26	6.00 - 5.20	2.77 - 2.30	6.76	40IP	22.35 - 22.09	1.90 - 1.65	3.81 - 3.30