



FASTENERS

FNW®

We trace our roots to Familian Northwest, established in Portland, Oregon, in 1969. In the late '70s, some industrious sales associates, responding to a demand from the pulp and paper industry, developed the first all-cast stainless steel knife gate valve in the country. Since that day, we've been steadily expanding our offerings to meet the needs of customers across a wide range of industries.

OUR PROMISE



1

QUALITY

Our products are held to a high standard of quality and meet or exceed all applicable specifications.

2

DIVERSIFICATION

We offer a diversified portfolio, including a variety of specialized and everyday products.

3

CONSISTENCY

We're proud to offer products that customers around the world count on each and every day.

4

TRUST

Every product we create is done so with the end goal of obtaining and maintaining our customers' trust.

COMMERCIAL



INDUSTRIAL



RESIDENTIAL



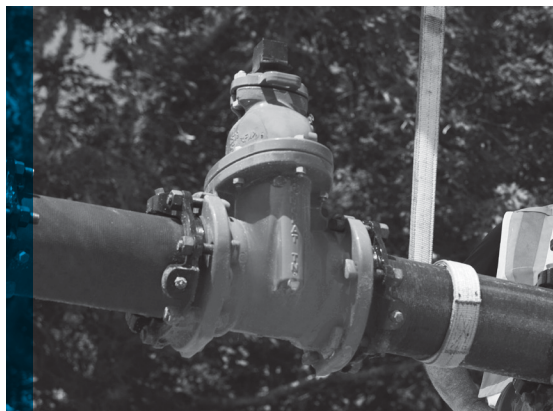
FIRE & FABRICATION



HVAC



WATERWORKS



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GRADE A, ZINC

PRODUCT SPECIFICATIONS

Specification

- ASME B18.2.2

Material & Mechanical Properties

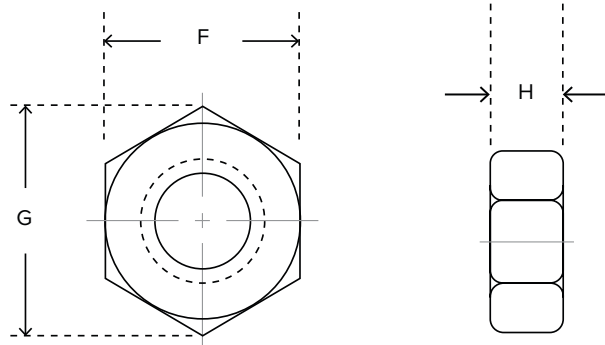
- Grade A per ASTM A563

Thread Requirements

- ASME B1.1, UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size or Basic Diameter of Thread (in.)		F: Width Across Flats (in.)			G: Width Across Corners (in.)		H: Heavy Hex Nut Thickness (in.)			Threads Per Inch (TPI)	Pack Qty
			Basic	Max	Min	Max	Min	Basic	Max	Min		
FNWHHNGAZ38	3/8	0.3750	11/16	0.688	0.669	0.794	0.763	23/64	0.377	0.341	16	50
FNWHHNGAZ12	1/2	0.5000	7/8	0.875	0.850	1.010	0.969	31/64	0.504	0.464	13	12
FNWHHNGAZ58	5/8	0.6250	1-1/16	1.062	1.031	1.227	1.175	39/64	0.631	0.587	11	12
FNWHHNGAZ34	3/4	0.7500	1-1/4	1.250	1.212	1.443	1.382	47/64	0.758	0.710	10	12
FNWHHNGAZ78	7/8	0.8750	1-7/16	1.438	1.394	1.660	1.589	55/64	0.885	0.833	9	12

GRADE 2, ZINC

PRODUCT SPECIFICATIONS

Specification

- ASME B18.2.2

Material & Mechanical Properties

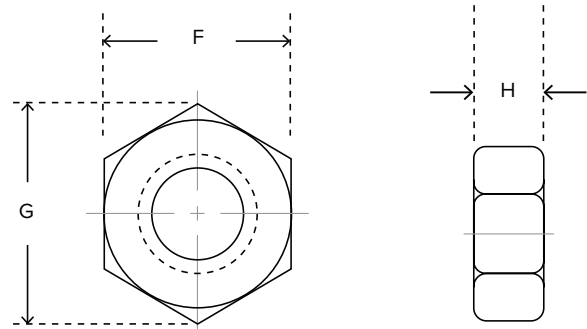
- Grade 2 per SAE J995

Thread Requirements

- ASME B1.1, UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size or Basic Diameter of Thread (in.)		F: Width Across Flats (in.)		G: Width Across Corners (in.)		H: Nut Thickness (in.)		Threads Per Inch (TPI)	Pack Qty
			Max	Min	Max	Min	Max	Min		
FNWHNG2Z14	1/4	0.2500	0.438	0.428	0.505	0.488	0.226	0.212	20	50
FNWHNG2Z516	5/16	0.3125	0.500	0.489	0.577	0.557	0.273	0.258	18	50
FNWHNG2Z38	3/8	0.3750	0.563	0.551	0.650	0.628	0.337	0.320	16	50
FNWHNG2Z12	1/2	0.5000	0.750	0.736	0.866	0.840	0.448	0.427	13	50
FNWHNG2Z58	5/8	0.6250	0.938	0.922	1.083	1.051	0.559	0.535	11	12
FNWHNG2Z34	3/4	0.7500	1.125	1.088	1.299	1.240	0.665	0.617	10	12
FNWHNG2Z78	7/8	0.8750	1.312	1.269	1.516	1.447	0.776	0.724	9	12

ZINC

PRODUCT SPECIFICATIONS

Specification

- ASME B18.2.2

Material

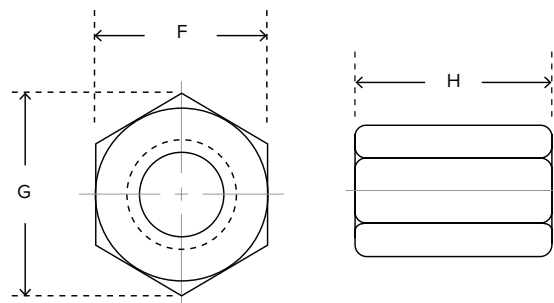
- Carbon Steel

Thread Requirements

- ASME B1.1 UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size (in.)	F: Width Across Flats (in.)	G: Width Across Corners (in.)		H: Nut Thickness (in.)	Style	Pack Qty
		Basic	Plus	Minus	Basic		
FNWRCZ14	1/4	7/16	0.505	0.488	7/8	–	10
FNWRCLZ38	3/8	9/16	0.650	0.628	1-3/8	Long	10
FNWRCZ38	3/8	9/16	0.650	0.628	1-1/4	–	10
FNWRCLZ12	1/2	11/16	0.794	0.756	1-3/8	Long	10
FNWRCZ12	1/2	11/16	0.794	0.756	1-1/4	–	10
FNWRCZ58	5/8	13/16	0.939	0.891	2-1/8	–	12
FNWRCZ34	3/4	1	1.155	1.097	2-1/4	–	4
FNWRCZ78	7/8	1-1/4	1.443	1.382	2-1/2	–	4

REDUCING ROD COUPLINGS

Item #	Nominal Size (in.)		F: Width Across Flats (in.)	G: Width Across Corners (in.)		H: Nut Thickness (in.)	Style	Pack Qty
	Size 1	Size 2	Basic	Plus	Minus	Basic		
FNWRCRZ3814	1/4	3/8	9/16	0.650	0.628	1	Reducing	10
FNWRCRZ1238	3/8	1/2	11/16	0.794	0.756	1-1/4	Reducing	10
FNWRCRZ5812	1/2	5/8	13/16	0.939	0.891	1-1/4	Reducing	10

ZINC

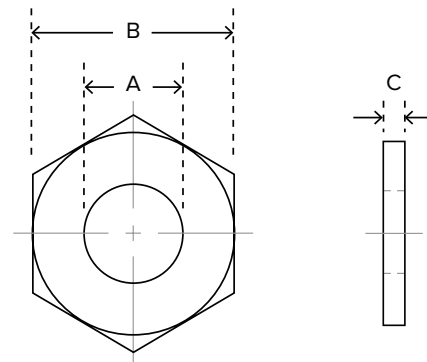
PRODUCT SPECIFICATIONS

Specification

- ASME B18.21.1

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size ID x OD (in.)	A: Inside Diameter (in.)			B: Outside Diameter (in.)			C: Thickness (in.)			Pack Qty
		Basic	Max	Min	Basic	Max	Min	Basic	Max	Min	
FNWFENWZ12112	1/2 x 1-1/2	0.535	0.525	0.545	1.500	1.492	1.529	0.065	0.047	0.080	25
FNWFENWZ122	1/2 x 2	0.535	0.525	0.545	2.000	1.992	2.029	0.065	0.047	0.080	25
FNWFENWZ141	1/4 x 1	0.285	0.275	0.295	1.000	0.992	1.029	0.065	0.047	0.080	50
FNWFENWZ14112	1/4 x 1-1/2	0.285	0.275	0.295	1.500	1.492	1.529	0.065	0.047	0.080	50
FNWFENWZ14114	1/4 x 1-1/4	0.285	0.275	0.295	1.250	1.242	1.279	0.065	0.047	0.080	50
FNWFENWZ3161	3/16 x 1	0.190	0.213	0.233	1.000	0.992	1.018	0.065	0.047	0.080	50
FNWFENWZ316114	3/16 x 1-1/4	0.190	0.213	0.233	1.250	1.242	1.279	0.065	0.047	0.080	50
FNWFENWZ342	3/4 x 2	0.823	0.804	0.841	2.000	1.992	2.029	0.065	0.047	0.080	25
FNWFENWZ38112	3/8 x 1-1/2	0.410	0.400	0.420	1.500	1.492	1.529	0.065	0.047	0.080	25
FNWFENWZ38114	3/8 x 1-1/4	0.410	0.400	0.420	1.250	1.242	1.279	0.065	0.047	0.080	50
FNWFENWZ382	3/8 x 2	0.410	0.400	0.420	2.000	1.992	2.029	0.065	0.047	0.080	25
FNWFENWZ516112	5/16 x 1-1/2	0.348	0.338	0.358	1.500	1.492	1.529	0.065	0.047	0.080	25
FNWFENWZ516114	5/16 x 1-1/4	0.348	0.338	0.358	1.250	1.242	1.279	0.065	0.047	0.080	25

USS TYPE A, ZINC

PRODUCT SPECIFICATIONS

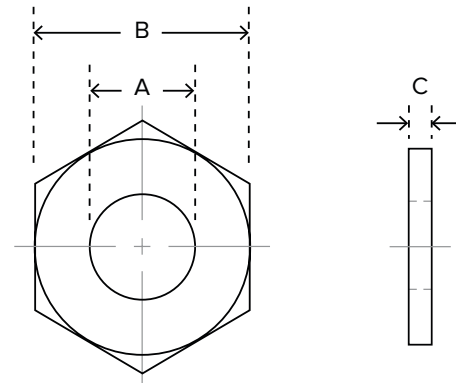
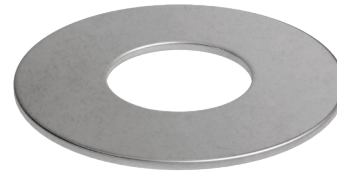
Specification

- ASME B18.21.1

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M

Manufactured to United States Standard (USS) specification and are suitable for use in industrial application such as manufacturing, maintenance and repair.



REFERENCE CHART

Item #	Nominal Size (in.)	A: Inside Diameter (in.)			B: Outside Diameter (in.)			C: Thickness (in.)			Pack Qty
		Basic	Tolerance		Basic	Tolerance		Basic	Max	Min	
			Plus	Minus		Plus	Minus				
FNWFLWZ14	1/4	0.312	0.015	0.005	0.734	0.015	0.007	0.065	0.080	0.051	100
FNWFLWZ516	5/16	0.375	0.015	0.005	0.875	0.030	0.007	0.083	0.104	0.064	100
FNWFLWZ38	3/8	0.438	0.015	0.005	1.000	0.030	0.007	0.083	0.104	0.064	50
FNWFLWZ12	1/2	0.562	0.015	0.005	1.375	0.030	0.007	0.109	0.132	0.086	50
FNWFLWZ58	5/8	0.688	0.030	0.007	1.750	0.030	0.007	0.134	0.160	0.108	50
FNWFLWZ34	3/4	0.812	0.030	0.007	2.000	0.030	0.007	0.150	0.177	0.122	25
FNWFLWZ78	7/8	0.938	0.030	0.007	2.250	0.030	0.007	0.165	0.192	0.136	10
FNWFLWZ1	1	1.062	0.030	0.007	2.500	0.030	0.007	0.165	0.192	0.136	10
FNWFLWZ118	1-1/8	1.250	0.030	0.007	2.750	0.030	0.007	0.165	0.192	0.136	10
FNWFLWZ114	1-1/4	1.375	0.030	0.007	3.000	0.030	0.007	0.165	0.192	0.136	10
FNWFLWZ112	1-1/2	1.625	0.045	0.010	3.500	0.045	0.100	0.165	0.213	0.153	10

GRADE A, ZINC

PRODUCT SPECIFICATIONS

Specification

- ASME B18.5
- Bolts less than or equal to 6" in length shall be fully threaded
- Bolts longer than 6" shall have 6" of fully formed threads

Material & Mechanical Properties

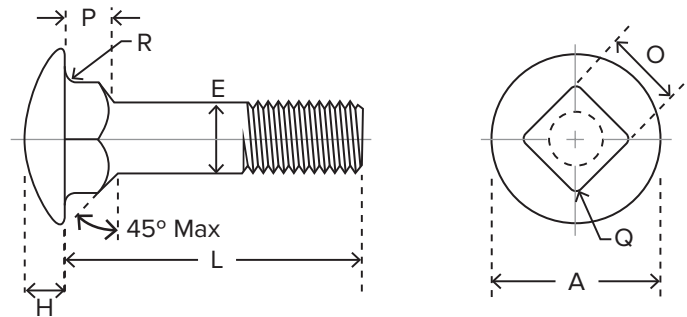
- Grade A per ASTM A307

Thread Requirements

- ASME B1.1, UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHARTS

Nominal Size or Basic Bolt Diameter		E: Body Diameter (in.)		A: Head Diameter (in.)		H: Head Height (in.)		O: Square Width (in.)		P: Square Depth (in.)		Q: Corner Radius on Square (in.)	R: Fillet Radius (in.)
		Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Max
3/8	0.375	0.388	0.329	0.844	0.782	0.208	0.188	0.388	0.368	0.219	0.188	0.047	0.031
1/2	0.500	0.515	0.444	1.094	1.032	0.270	0.250	0.515	0.492	0.281	0.250	0.047	0.031

Item #	Diameter (in.)	L: Nominal Length (in.)	Pack Qty
FNWCBZ381	3/8	1	10
FNWCBZ38112		1-1/2	10
FNWCBZ383		3	10
FNWCBZ384		4	10
FNWCBZ123	1/2	3	4
FNWCBZ124		4	4
FNWCBZ125		5	4
FNWCBZ127		7	4

ZINC

PRODUCT SPECIFICATIONS

Specification

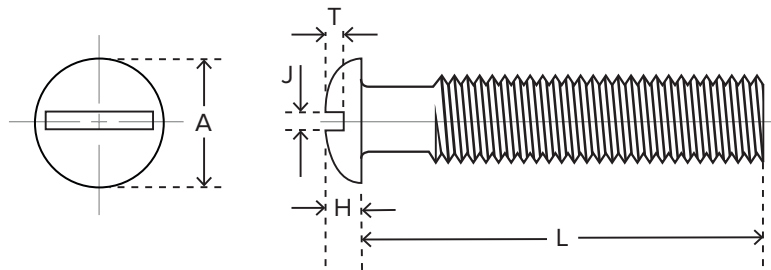
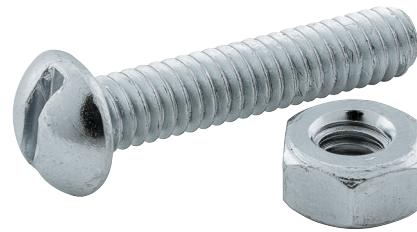
- ASME B18.6.3

Thread Requirements

- ASME B11, UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size or Basic Bolt Diameter (in.)		L: Bolt Length (in.)	Drive Type	Head	A: Head Diameter (in.)		H: Head Height (in.)		J: Slot Width (in.)		T: Slot Depth (in.)		Pack Qty
						Max	Min	Max	Min	Max	Min	Max	Min	
FNWSBRHZ1434			0.75											25
FNWSBRHZ14114	1/4	0.25	1.25	Slotted	Round	0.472	0.443	0.175	0.160	0.075	0.064	0.109	0.082	25
FNWSBRHZ141			1.00											25

GRADE 2/5, ZINC

PRODUCT SPECIFICATIONS

Specification

- ASME B18.2.1

Material & Mechanical Properties

- Grade 2 / 5 per SAE J429

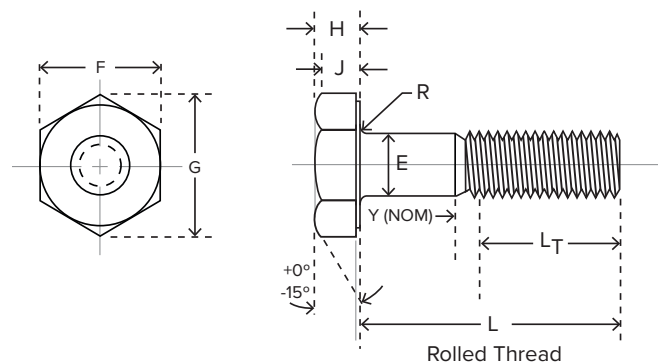
Thread Requirements

- ASME B1.1, UNC

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M

Hex head cap screws feature a washer face under the head and a chamfered point, whereas a hex bolt does not have a washer face or chamfered threads.



REFERENCE CHARTS

Nominal Size or Basic Product Diameter (in.)	E: Body Diameter (in.)		F: Width Across Flats (in.)			G: Width Across Corners (in.)		H: Head Height (in.)		J: Wrenching Height (in.)		L _T : Thread Length (in.)		Y: Transition Thread Length (in.)	Total Runout Bearing Surface (in.)	
	Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	Min	6" and less	Over 6"			Ref
3/8	0.375	0.375	0.369	9/16	0.562	0.551	0.650	0.628	0.234	0.243	0.226	0.160	1.000	1.250	0.312	0.012
1/2	0.500	0.500	0.493	3/4	0.750	0.736	0.866	0.840	0.313	0.323	0.302	0.215	1.250	1.500	0.385	0.014
5/8	0.625	0.625	0.617	15/16	0.938	0.922	1.083	1.051	0.391	0.403	0.378	0.269	1.500	1.750	0.455	0.017
3/4	0.750	0.750	0.741	1-1/8	1.125	1.100	1.299	1.254	0.469	0.483	0.455	0.324	1.750	2.000	0.500	0.020
7/8	0.875	0.875	0.866	1 5/16	1.312	1.285	1.516	1.465	0.547	0.563	0.531	0.378	2.000	2.250	0.556	0.023

Identification Grade Mark	Specification	Fastener Description	Material	Nominal Size Range (in.)	Mechanical Properties		
					Proof Load (psi)	Yield Strength Min (psi)	Tensile Strength Min (psi)
	SAE J429 Grade 2	Bolts & Cap Screws	Low or Medium Carbon Steel	1/4–3/4 over 3/4–1-1/2	55,000 33,000	57,000 36,000	74,000 60,000
	SAE J429 Grade 5	Bolts & Cap Screws	Medium Carbon Steel, Quenched & Tempered	1/4–3/4 over 3/4–1-1/2	85,000 74,000	92,000 81,000	120,000 105,000

REFERENCE CHARTS

Grade 2			
Item #	Diameter (in.)	L: Nominal Length (in.)	Pack Qty
FNWCSG2Z3812	3/8	1/2	25
FNWCSG2Z3834		3/4	25
FNWCSG2Z381		1	25
FNWCSG2Z38114		1-1/4	25
FNWCSG2Z38112		1-1/2	25
FNWCSG2Z382		2	25
FNWCSG2Z38212		2-1/2	25
FNWCSG2Z383		3	25
FNWCSG2Z121		1/2	1
FNWCSG2Z12112	1-1/2		10
FNWCSG2Z122	2		10
FNWCSG2Z12212	2-1/2		4
FNWCSG2Z12234	2-3/4		4
FNWCSG2Z123	3		4
FNWCSG2Z58112	5/8	1-1/2	4
FNWCSG2Z58134		1-3/4	4
FNWCSG2Z582		2	4
FNWCSG2Z58214		2-1/4	4
FNWCSG2Z58212		2-1/2	4
FNWCSG2Z58234		2-3/4	4
FNWCSG2Z583		3	4
FNWCSG2Z58312		3-1/2	4
FNWCSG2Z584		4	4
FNWCSG2Z58412		4-1/2	2
FNWCSG2Z585		5	2
FNWCSG2Z34134		3/4	1-3/4
FNWCSG2Z342	2		4
FNWCSG2Z34214	2-1/4		4
FNWCSG2Z34212	2-1/2		4
FNWCSG2Z34234	2-3/4		4
FNWCSG2Z343	3		4
FNWCSG2Z34314	3-1/4		2
FNWCSG2Z34312	3-1/2		2
FNWCSG2Z34334	3-3/4		2
FNWCSG2Z344	4		2
FNWCSG2Z34412	4-1/2		2
FNWCSG2Z345	5		2
FNWCSG2Z34512	5-1/2		2

Grade 2			
Item #	Diameter (in.)	L: Nominal Length (in.)	Pack Qty
FNWCSG2Z78214	7/8	2-1/4	2
FNWCSG2Z78212		2-1/2	2
FNWCSG2Z78234		2-3/4	2
FNWCSG2Z783		3	2
FNWCSG2Z78312		3-1/2	2
FNWCSG2Z78334		3-3/4	2
FNWCSG2Z784		4	2
FNWCSG2Z78412		4-1/2	2
FNWCSG2Z78512		5-1/2	2
Grade 5			
Item #	Diameter (in.)	L: Nominal Length (in.)	Pack Qty
FNWCSG5Z381	3/8	1	25
FNWCSG5Z38114		1-1/4	25
FNWCSG5Z38112		1-1/2	25
FNWCSG5Z38212		2-1/2	25
FNWCSG5Z383		3	25
FNWCSG5Z384	4	25	
FNWCSG5Z121	1/2	1	10
FNWCSG5Z12112		1-1/2	10
FNWCSG5Z122		2	10
FNWCSG5Z12212		2-1/2	4
FNWCSG5Z12312		3-1/2	4
FNWCSG5Z58112	5/8	1-1/2	4
FNWCSG5Z58134		1-3/4	4
FNWCSG5Z582		2	4
FNWCSG5Z58212		2-1/2	4
FNWCSG5Z58234		2-3/4	2
FNWCSG5Z583		3	2
FNWCSG5Z58312		3-1/2	4
FNWCSG5Z34134	3/4	1-3/4	4
FNWCSG5Z342		2	4
FNWCSG5Z34214		2-1/4	4
FNWCSG5Z34212		2-1/2	4
FNWCSG5Z343		3	4
FNWCSG5Z34312		3-1/2	2
FNWCSG5Z34312		3-1/2	2
FNWCSG5Z344	4	2	
FNWCSG5Z34412	4-1/2	2	
FNWCSG5Z78212	7/8	2-1/2	2
FNWCSG5Z783		3	2
FNWCSG5Z78312		3-1/2	2
FNWCSG5Z784		4	2

HEX HEAD TAP BOLT GRADE A307A ZINC-PLATED

PRODUCT SPECIFICATIONS

Specification

- ASME B18.2.1

Material & Mechanical Properties

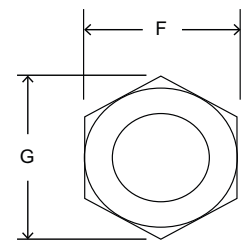
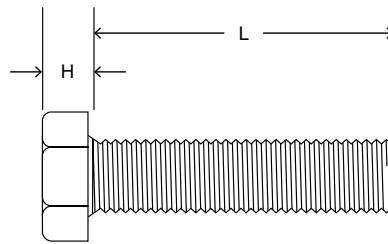
- ASTM A307A

Thread Requirements

- ASME B1.1, UNC
- Fully threaded for L dimension when less than 6"

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHARTS

Nominal Size or Basic Product Diameter		F: Width Across Flats (in.)			G: Width Across Corners (in.)		H: Head Height (in.)		
		Nom	Max	Min	Max	Min	Nom	Max	Min
3/8	0.375	9/16	0.562	0.544	0.650	0.620	1/4	0.268	0.226
1/2	0.500	3/4	0.750	0.725	0.866	0.826	11/32	0.364	0.302
5/8	0.625	15/16	0.938	0.906	1.083	1.033	27/64	0.444	0.378

Item #	Nominal Size	L: Bolt Length (in.)	Pkg Qty
FNWTBGA3Z381	3/8 - 16	1	25
FNWTBGA3Z38112	3/8 - 16	1-1/2	25
FNWTBGA3Z382	3/8 - 16	2	25
FNWTBGA3Z38212	3/8 - 16	2-1/2	25
FNWTBGA3Z383	3/8 - 16	3	25
FNWTBGA3Z12112	1/2 - 13	1-1/2	10
FNWTBGA3Z122	1/2 - 13	2	10
FNWTBGA3Z123	1/2 - 13	3	4
FNWTBGA3Z58112	5/8 - 11	1-1/2	4
FNWTBGA3Z58134	5/8 - 11	1-3/4	4
FNWTBGA3Z582	5/8 - 11	2	4
FNWTBGA3Z58212	5/8 - 11	2-1/2	4
FNWTBGA3Z583	5/8 - 11	3	4

ZINC

PRODUCT SPECIFICATIONS

Wing Material & Mechanical Properties

- Low carbon steel

Screw Material & Mechanical Properties

- Low carbon steel

Wing Threads

- ASME B1.1, 2B

Screw Threads

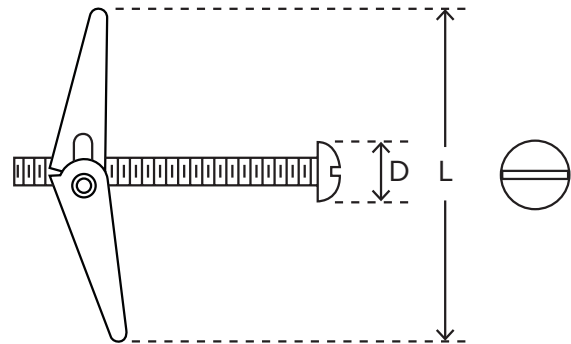
- ASME B1.1, 2A

Product Marking

- Wing marked with thread size

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size	D: Diameter (in.)		L: Length (in.)		Screw Length (in.)	Drill Size (in.)	Pack Qty
		Max	Min	Max	Min			
FNWTBZ143	1/4-20	0.443	0.472	2.067	2.185	3.000	5/8	25
FNWTBZ144	1/4-20	0.443	0.472	2.067	2.185	4.000	5/8	25
FNWTBZ146	1/4-20	0.443	0.472	2.067	2.185	6.000	5/8	25
FNWTBZ383	3/8-16	0.670	0.708	2.894	3.012	3.000	7/8	10
FNWTBZ384	3/8-16	0.670	0.708	2.894	3.012	4.000	7/8	10
FNWTBZ386	3/8-16	0.670	0.708	2.894	3.012	6.000	7/8	10

ZINC

PRODUCT SPECIFICATIONS

Material

- Low carbon steel

Thread Requirements

- ASME B11, 2B

Screw Threads

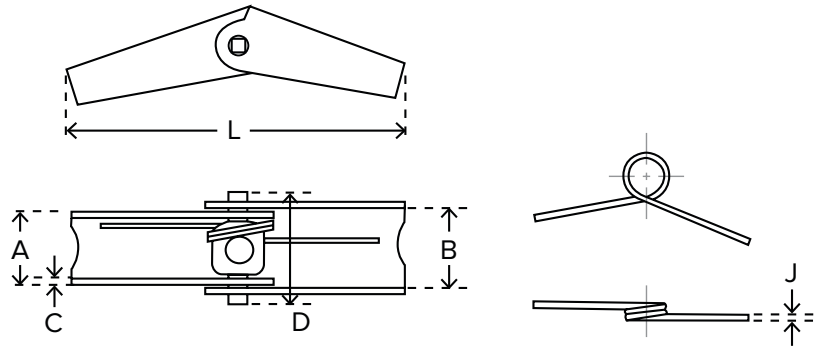
- ASME B11, 2A

Product Marking

- Product marked with thread size

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size	A (in.)		B (in.)		C (in.)		D (in.)		L (in.)		J (in.)		Drill Size (in.)	Pack Qty
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
FNWTWZ14	1/4-20	0.421	0.445	0.453	0.503	0.028	0.033	0.661	0.689	2.067	2.185	0.020	0.026	5/8	25
FNWTWZ38	3/8-16	0.677	0.701	0.709	0.759	0.035	0.041	0.996	1.024	2.894	3.012	0.028	0.033	7/8	25

BLACK PHOSPHATE

PRODUCT SPECIFICATIONS

Material & Mechanical Properties

- Low carbon steel

Performance

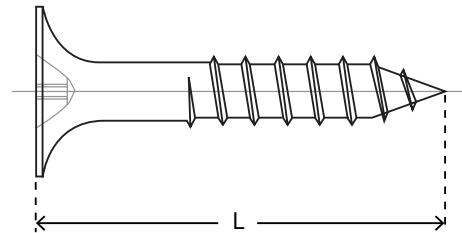
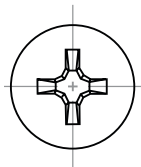
- ASTM C1002

Thread Requirements

- ASME B18.6.1

Finish

- Black phosphate; 48 hours to red rust



REFERENCE CHART

Item #	Nominal Size	Head	Drive Type	L: Length (in.)	Thread Type	Net Weight
FNWDWSCB61	#6	Bugle	Phillips	1	Coarse	1 lb
FNWDWSCB6118		Bugle	Phillips	1-1/8	Coarse	1 lb
FNWDWSCB6114		Bugle	Phillips	1-1/4	Coarse	1 lb
FNWDWSCB6158		Bugle	Phillips	1-5/8	Coarse	1 lb
FNWDWSFB6158		Bugle	Phillips	1-5/8	Fine	1 lb
FNWDWSCB62		Bugle	Phillips	2	Coarse	1 lb
FNWDWSFB62		Bugle	Phillips	2	Fine	1 lb
FNWDWSCB8212		#8	Bugle	Phillips	2-1/2	Coarse
FNWDWSFB8212	Bugle		Phillips	2-1/2	Fine	1 lb
FNWDWSCB83	Bugle		Phillips	3	Coarse	1 lb
FNWDWSFB83	Bugle		Phillips	3	Fine	1 lb

GRADE 1, ZINC

PRODUCT SPECIFICATIONS

Specification

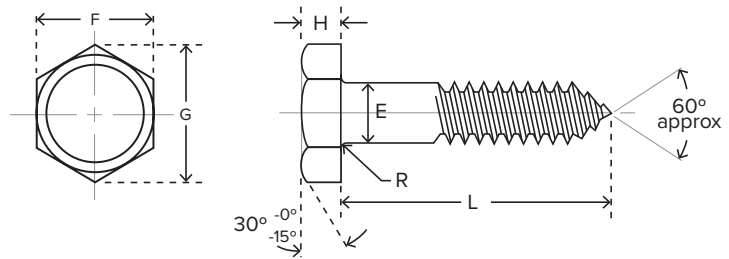
- ASME B18.2.1

Material & Mechanical Properties

- Grade 1 per SAE J429

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHARTS

Nominal Size or Basic Bolt Diameter (in.)	E: Body or Shoulder Diameter (in.)		F: Width Across Flats (in.)			G: Width Across Corners (in.)		H: Head Height (in.)			R: Fillet Radius (in.)		
	Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	Max	Min	
1/4	0.250	0.260	0.237	7/16	0.438	0.425	0.505	0.484	11/64	0.188	0.150	0.030	0.010
3/8	0.375	0.388	0.360	9/16	0.562	0.544	0.650	0.620	1/4	0.268	0.226	0.030	0.010
1/2	0.500	0.515	0.482	3/4	0.750	0.725	0.866	0.826	11/32	0.364	0.302	0.030	0.010

Item #	Diameter (in.)	L: Length (in.)	Pack Qty
FNWLSZ14112	1/4	1-1/2	12
FNWLSZ142		2	12
FNWLSZ14212		2-1/2	12
FNWLSZ143		3	12
FNWLSZ381	3/8	1	12
FNWLSZ38112		1-1/2	12
FNWLSZ382		2	12
FNWLSZ38212		2-1/2	12
FNWLSZ383	1/2	3	12
FNWLSZ122		2	12
FNWLSZ123		3	12
FNWLSZ124		4	12

HEX WASHER HEAD, UNSLOTTED

PRODUCT SPECIFICATIONS

Specification

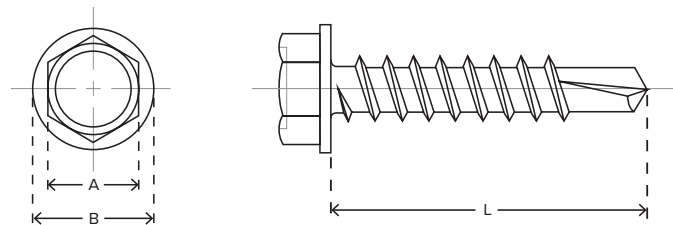
- ASME B18.6.3

Material & Mechanical Properties

- SAE J78

Finish

- Fe/Zn 3AN per ASTM F1941/F1941M



REFERENCE CHART

Item #	Nominal Size	Head	A: Hex Drive (in.)	B: Washer Diameter (in.)	Drive Type	L: Length (in.)	Threads Per Inch (TPI)	Material Finish	Pack Qty
FNWTEKHWZ812	#8	Hex Washer	1/4	1/3	Hex	1/2	18	Zinc Plating	50
FNWTEKHWZ81	#8	Hex Washer	1/4	1/3	Hex	1	18	Zinc Plating	50
FNWTEKHWZ1034	#10	Hex Washer	5/16	2/5	Hex	3/4	16	Zinc Plating	50
FNWTEKHWZ101	#10	Hex Washer	5/16	2/5	Hex	1	16	Zinc Plating	50
FNWTEKHWZ10112	#10	Hex Washer	5/16	2/5	Hex	1-1/2	16	Zinc Plating	50
FNWTEKHWZ141	#14	Hex Washer	3/8	1/2	Hex	1	14	Zinc Plating	50
FNWTEKHWZ14114	#14	Hex Washer	3/8	1/2	Hex	1-1/4	14	Zinc Plating	50
FNWTEKHWZ14112	#14	Hex Washer	3/8	1/2	Hex	1-1/2	14	Zinc Plating	50

FLAT HEAD

PRODUCT SPECIFICATIONS

Material & Mechanical Properties

- ASME B18.6.1

Performance

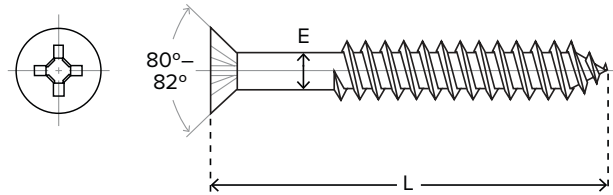
- ASTM C1002

Thread Requirements

- ASME B18.6.1

Finish

- Zinc: Fe/Zn 3AN per ASTM F1941/F1941M
- Brass: Copper content 57%, maximum alloying elements 5%, remainder zinc



REFERENCE CHART

Item #	E: Nominal Size	Head	Drive Type	L: Length (in.)	Thread Type	Material/Finish	Pack Qty
FNWWSZ10112	#10	Flat	Phillips #3	1-1/2	Coarse	Carbon Steel Zinc Plating	50
FNWWSB102	#10	Flat	Phillips #3	2	Coarse	Brass	50
FNWWSZ102	#10	Flat	Phillips #3	2	Coarse	Carbon Steel Zinc Plating	50
FNWWSB12112	#12	Flat	Phillips #3	1-1/2	Coarse	Brass	50
FNWWSZ12112	#12	Flat	Phillips #3	1-1/2	Coarse	Carbon Steel Zinc Plating	50
FNWWSB122	#12	Flat	Phillips #3	2	Coarse	Brass	50
FNWWSZ122	#12	Flat	Phillips #3	2	Coarse	Carbon Steel Zinc Plating	50
FNWWSB12212	#12	Flat	Phillips #3	2-1/2	Coarse	Brass	25
FNWWSZ12212	#12	Flat	Phillips #3	2-1/2	Coarse	Carbon Steel Zinc Plating	25
FNWWSZ14112	#14	Flat	Phillips #3	1-1/2	Coarse	Carbon Steel Zinc Plating	50
FNWWSZ1422	#14	Flat	Phillips #3	2	Coarse	Carbon Steel Zinc Plating	50
FNWWSZ1423	#14	Flat	Phillips #3	3	Coarse	Carbon Steel Zinc Plating	25

Brand Prefix + Product type + Size

Example 1: FNW + CBZ + 38 1

FNW Carriage Bolt (zinc) $\frac{3}{8}$ " diameter 1" long

Example 2: FNW + FLWZ + 12

FNW Flat Washer (zinc) $\frac{1}{2}$ " size

NOTES



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