

Forged Eye Bolts



G-291
Regular Nut
Eye Bolt



WESTECH RIGGING SUPPLY

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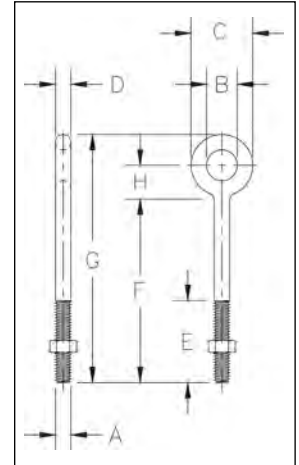
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4140 West 11th Avenue
Eugene, Oregon 97402

2439 McGilchrist St SE
Salem, Oregon 97302

- Forged Steel - Quenched and Tempered.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- All Bolts Hot Dip galvanized after threading (UNC).
- Furnished with standard Hot Dip galvanized hex nuts.
- Recommended for in-line pull.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these bolts meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



Fatigue Rated



G-291 Regular Nut Eye Bolts

Shank Dia. & Length (in.)	G-291 Stock No.	Working Load Limit (lbs.)*	Weight Per 100 (lbs.)	Dimensions (in.)							
				A	B	C	D	E	F	G	H
1/4 x 2	1043230	650	8.20	.25	.50	1.00	.25	1.50	2.00	3.06	.56
1/4 x 4	1043258	650	11.70	.25	.50	1.00	.25	2.50	4.00	5.06	.56
5/16 x 2-1/4	1043276	1200	13.30	.31	.62	1.25	.31	1.50	2.25	3.56	.69
5/16 x 4-1/4	1043294	1200	25.00	.31	.62	1.25	.31	2.50	4.25	5.56	.69
3/8 x 2-1/2	1043310	1550	23.30	.38	.75	1.50	.38	1.50	2.50	4.12	.88
3/8 x 4-1/2	1043338	1550	29.50	.38	.75	1.50	.38	2.50	4.50	6.12	.88
3/8 x 6	1043356	1550	35.20	.38	.75	1.50	.38	2.50	6.00	7.62	.88
1/2 x 3-1/4	1043374	2600	50.30	.50	1.00	2.00	.50	1.50	3.25	5.38	1.12
1/2 x 6	1043392	2600	66.10	.50	1.00	2.00	.50	3.00	6.00	8.12	1.12
1/2 x 8	1043418	2600	82.00	.50	1.00	2.00	.50	3.00	8.00	10.12	1.12
1/2 x 10	1043436	2600	88.00	.50	1.00	2.00	.50	3.00	10.00	12.12	1.12
1/2 x 12	1043454	2600	114.20	.50	1.00	2.00	.50	3.00	12.00	14.12	1.12
5/8 x 4	1043472	5200	103.10	.62	1.25	2.50	.62	2.00	4.00	6.69	1.44
5/8 x 6	1043490	5200	118.20	.62	1.25	2.50	.62	3.00	6.00	8.69	1.44
5/8 x 8	1043515	5200	135.10	.62	1.25	2.50	.62	3.00	8.00	10.69	1.44
5/8 x 10	1043533	5200	153.60	.62	1.25	2.50	.62	3.00	10.00	12.69	1.44
5/8 x 12	1043551	5200	167.10	.62	1.25	2.50	.62	4.00	12.00	14.69	1.44
3/4 x 4-1/2	1043579	7200	168.60	.75	1.50	3.00	.75	2.00	4.50	7.69	1.69
3/4 x 6	1043597	7200	184.50	.75	1.50	3.00	.75	3.00	6.00	9.19	1.69
3/4 x 8	1043613	7200	207.90	.75	1.50	3.00	.75	3.00	8.00	11.19	1.69
3/4 x 10	1043631	7200	235.00	.75	1.50	3.00	.75	3.00	10.00	13.19	1.69
3/4 x 12	1043659	7200	257.50	.75	1.50	3.00	.75	4.00	12.00	15.19	1.69
3/4 x 15	1043677	7200	298.00	.75	1.50	3.00	.75	5.00	15.00	18.19	1.69
7/8 x 5	1043695	10600	270.00	.88	1.75	3.50	.88	2.50	5.00	8.75	2.00
7/8 x 8	1043711	10600	308.00	.88	1.75	3.50	.88	4.00	8.00	11.75	2.00
7/8 x 12	1043739	10600	400.00	.88	1.75	3.50	.88	4.00	12.00	15.75	2.00
1 x 6	1043757	13300	421.00	1.00	2.00	4.00	1.00	3.00	6.00	10.31	2.31
1 x 9	1043775	13300	468.50	1.00	2.00	4.00	1.00	4.00	9.00	13.31	2.31
1 x 12	1043793	13300	540.00	1.00	2.00	4.00	1.00	4.00	12.00	16.31	2.31
1 x 18	1043819	13300	650.00	1.00	2.00	4.00	1.00	7.00	18.00	22.31	2.31
1-1/4 x 8	1043837	21000	750.00	1.25	2.50	5.00	1.25	4.00	8.00	13.38	2.88
1-1/4 x 12	1043855	21000	900.00	1.25	2.50	5.00	1.25	4.00	12.00	17.38	2.88
1-1/4 x 20	1043873	21000	1210.00	1.25	2.50	5.00	1.25	6.00	20.00	25.38	2.88

*Ultimate Load is 5 times the Working Load Limit. Working Load Limit shown is for in-line pull. Maximum Proof Load is 2 times the Working Load Limit.

FORGED EYE BOLT

WARNINGS & APPLICATION INSTRUCTIONS



Regular Nut Eye Bolt G-291

Shoulder Nut Eye Bolt G-277

Machinery Eye Bolt S-279 / M-279

Important Safety Information - Read & Follow

Inspection/Maintenance Safety:

- Always inspect eye bolt before use.
- Never use eye bolt that shows signs of wear or damage.
- Never use eye bolt if eye or shank is bent or elongated.
- Always be sure threads on shank and receiving holes are clean.
- Never machine, grind, or cut eye bolt.

Assembly Safety:

- Never exceed load limits specified in Table 1 & Table 2.
- Never use regular nut eye bolts for angular lifts.
- Always use shoulder nut eye bolts (or machinery eye bolts) for angular lifts.
- For angular lifts, adjust working load as follows:

Direction of Pull (from In-Line)	Adjusted Working Load
45 degrees	30% of rated working load
90 degrees	25% of rated working load

- Never undercut eye bolt to seat shoulder against the load.
- Always countersink receiving hole or use washers with sufficient I.D. to seat shoulder.
- Always screw eye bolt down completely for proper seating.
- Always tighten nuts securely against the load.

Size (in.)	Working Load Limit (lbs.)
1/4	650
5/16	1,200
3/8	1,550
1/2	2,600
5/8	5,200
3/4	7,200
7/8	10,600
1	13,300
1-1/8	15,000
1-1/4	21,000
1-1/2	24,000
1-3/4	34,000
2	42,000
2-1/2	65,000

⚠ WARNING

- Load may slip or fall if proper eye bolt assembly and lifting procedures are not used.
- A falling load can seriously injure or kill.
- Read and understand these instructions, and follow all eye bolt safety information presented here.
- Read, understand, and follow information in diagrams and charts below before using eye bolt assemblies.

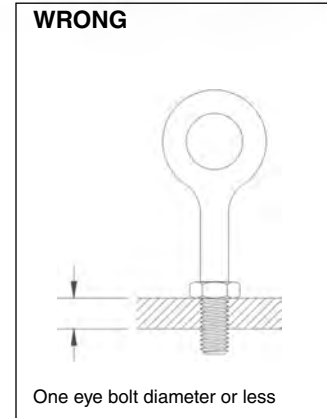
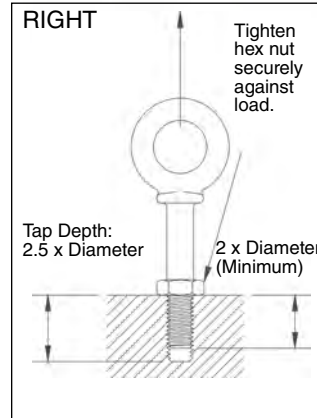
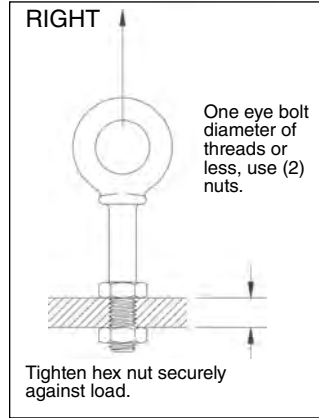
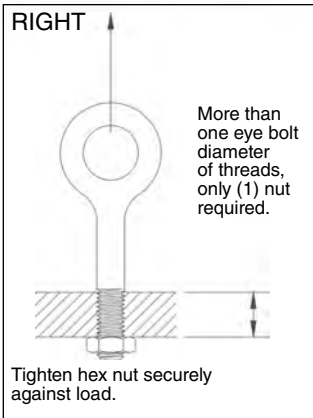
Shoulder Nut Eye Bolt – Installation for Angular Loading

- The threaded shank must protrude through the load sufficiently to allow full engagement of the nut.
- If the eye bolt protrudes so far through the load that the nut cannot be tightened securely against the load, use properly sized washers to take up the excess space BETWEEN THE NUT AND THE LOAD.
- Thickness of spacers must exceed this distance between the bottom of the load and the last thread of the eye bolt.
- Place washers or spacers between nut and load so that when the nut is tightened securely, the shoulder is secured flush against the load surface.

Figure 1

Metric Size	Working Load Limit - kg
m6	200
m8	400
m10	640
m12	1000
m16	1800
m20	2500
m24	4000
m27	5000
m30	6000
m36	8500
m42	14000
m48	17300
m64	29500

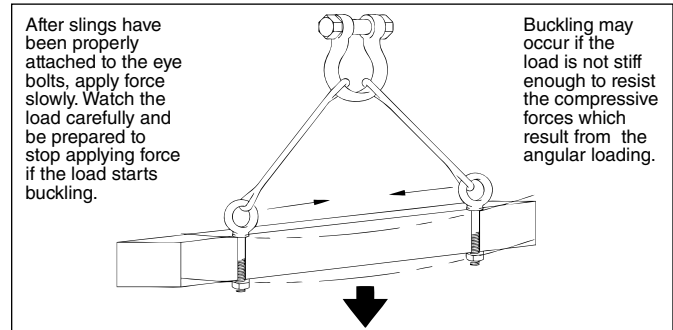
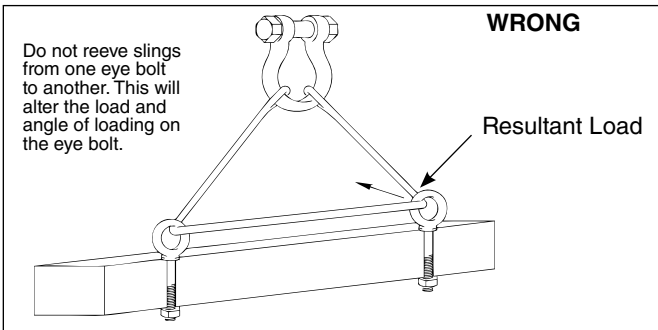
Important – Read and understand these instructions before using eye bolts. Regular Nut & Shoulder Nut Eye Bolt – Installation for In-Line Loading



Operating Safety

- Always stand clear of load.
- Always lift load with steady, even pull – do not jerk.
- Always apply load to eye bolt in the plane of the eye – not at an angle.

- Never exceed the capacity of the eye bolt—see Table 1 & 2.
- When using lifting slings of two or more legs, make sure the loads in the legs are calculated using the angle from the vertical sling angle to the leg and properly size the shoulder nut or machinery eye bolt for the angular load.



Machinery Eye Bolt - Installation for In-Line & Angular Loading

These eye bolts are primarily intended to be installed into tapped holes.

1. After the loads on the eye bolts have been calculated, select the proper size eye bolt for the job.

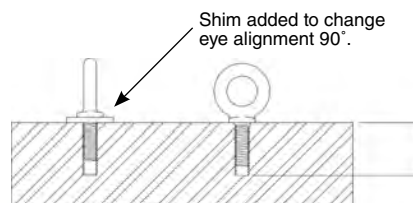
For angular lifts, adjust working load as follows:

Direction of Pull (from In-Line)	Adjusted Working Load
45 degrees	30% of rated working load
90 degrees	25% of rated working load

2. Drill and tap the load to the correct sizes to a minimum depth of one-half the eye bolt size beyond the shank length of the machinery eye bolt.
3. Thread the eye bolt into the load until the shoulder is flush and securely tightened against the load.
4. If the plane of the machinery eye bolt is not aligned with the sling line, estimate the amount of unthreading rotation necessary to align the plane of the eye properly.
5. Remove the machinery eye bolt from the load and add shims (washers) of proper thickness to adjust the angle of the plane of the eye to match the sling line. Use Table 3 to estimate the required shim thickness for the amount of unthreading rotation required.

Table 3

Eye Bolt Size (in.)	Shim Thickness Required to Change Rotation 90° (in.)	Eye Bolt Size (mm)	Shim Thickness Required to change Rotation 90° (mm)
1/4	.0125	M6	.25
5/16	.0139	M8	.31
3/8	.0156	M10	.38
1/2	.0192	M12	.44
5/8	.0227	M16	.50
3/4	.0250	M20	.62
7/8	.0278	M24	.75
1	.0312	M27	.75
1-1/8	.0357	M30	.88
1-1/4	.0357	M36	1.00
1-1/2	.0417	M42	1.13
1-3/4	.0500	M48	1.25
2	.0556	M64	1.50
2-1/2	.0625	—	—



Minimum tap depth is basic shank length plus one-half the nominal eye bolt diameter.