

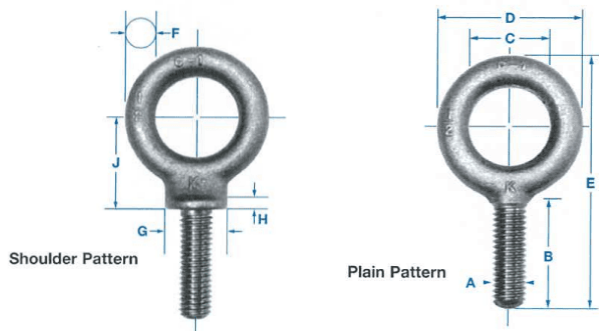
PRODUCT DATA SHEET

Lifting Eyes – Inch Series



MADE IN THE U.S.A.

1.0 Dimensions & Rated Capacities As per ASME B18.15 (inches)



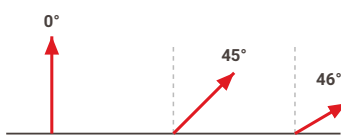
- **Also known as:** machinery eyebolts or forged eyebolts.
- **Shoulder pattern:** the shoulder seats flush against the work and is required for any angular lift.
- **Plain pattern:** no shoulder – for vertical (0°) lifts only.
- **Forged carbon steel**, quenched and drawn. Dimensions as per ASME B18.15.
- **Fine thread (UNF) shoulder pattern also stocked:** 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 9/16-18, 5/8-18, 3/4-16, 7/8-14, 1-14, 1-12, 1-1/4-12.

Thread Size UNC-2A	Stock No.		A		B	C	D	E – Overall Length		F	G	H	J	Rated Capacity (lbs.)*
	Shoulder	Plain	Shank Dia.		Shank Length	Eye I.D.	Eye O.D.	Shoulder	Plain	Eye Sect. Dia.	Shoulder Dia.	Shoulder Thick.	Location	
1/4-20	LES1420	LE1420	0.25	MIN	1.00	0.69	1.19	2.22	2.06	0.19	0.50	0.12	0.69	500
				MAX	1.06	0.81		2.53	2.38	0.25	0.56	0.19	0.81	
5/16-18	LES51618	LE51618	0.31	MIN	1.12	0.81	1.44	2.66	2.44	0.25	0.56	0.12	0.88	900
				MAX	1.19	0.94		2.97	2.75	0.31	0.62	0.19	1.00	
3/8-16	LES3816	LE3816	0.38	MIN	1.25	0.94	1.69	3.09	2.81	0.31	0.62	0.12	1.06	1,300
				MAX	1.38	1.06		3.47	3.19	0.38	0.69	0.19	1.19	
7/16-14	LES71614	LE71614	0.44	MIN	1.38	1.00	1.81	3.41	3.06	0.34	0.75	0.19	1.19	1,800
				MAX	1.50	1.12		3.78	3.44	0.41	0.81	0.25	1.31	
1/2-13	LES1213	LE1213	0.50	MIN	1.50	1.12	2.12	3.81	3.50	0.44	0.88	0.19	1.31	2,400
				MAX	1.62	1.25		4.19	3.88	0.50	0.94	0.25	1.44	
9/16-12	LES91612	LE91612	0.56	MIN	1.62	1.19	2.25	4.19	3.75	0.47	0.94	0.22	1.50	3,000
				MAX	1.75	1.31		4.56	4.12	0.53	1.00	0.28	1.62	
5/8-11	LES5811	LE5811	0.62	MIN	1.75	1.31	2.56	4.56	4.19	0.56	1.00	0.25	1.59	4,000
				MAX	1.88	1.44		4.94	4.56	0.62	1.06	0.31	1.72	
3/4-10	LES3410	LE3410	0.75	MIN	2.00	1.44	2.81	5.06	4.69	0.62	1.12	0.25	1.72	5,000
				MAX	2.12	1.56		5.50	5.06	0.69	1.25	0.31	1.91	
7/8-9	LES789	LE789	0.88	MIN	2.25	1.56	3.19	5.75	5.31	0.75	1.31	0.31	2.03	7,000
				MAX	2.38	1.69		6.19	5.69	0.81	1.44	0.38	2.22	
1-8	LES18	LE18	1.00	MIN	2.50	1.69	3.56	6.44	5.94	0.88	1.50	0.38	2.22	9,000
				MAX	2.62	1.81		6.88	6.31	0.94	1.62	0.44	2.41	
1-1/8-7	LES1187	LE1187	1.12	MIN	2.75	1.94	4.06	7.31	6.69	1.00	1.69	0.44	2.59	12,000
				MAX	2.88	2.06		7.75	7.06	1.06	1.81	0.50	2.78	
1-1/4-7	LES1147	LE1147	1.25	MIN	3.00	2.12	4.44	8.00	7.31	1.09	1.88	0.50	2.84	15,000
				MAX	3.12	2.25		8.44	7.69	1.16	2.00	0.56	3.03	
1-1/2-6	LES1126	LE1126	1.50	MIN	3.50	2.44	5.19	9.22	8.56	1.31	2.12	0.50	3.19	21,000
				MAX	3.62	2.56		9.72	8.94	1.38	2.25	0.62	3.44	
1-3/4-5	LES1345	LE1345	1.75	MIN	3.75	2.75	6.00	10.50	9.50	1.50	2.50	0.50	3.88	28,000
				MAX	3.88	3.00		11.12	10.12	1.62	2.62	0.62	4.12	
2-4-1/2	LES2412	LE2412	2.00	MIN	4.00	3.06	6.88	11.53	10.56	1.75	2.88	0.62	4.25	38,000
				MAX	4.25	3.44		12.22	11.44	1.88	3.00	0.75	4.50	
2-1/2-4	LES2124	LE2124	2.50	MIN	5.00	3.81	8.50	14.59	13.19	2.19	3.62	0.88	5.50	56,000
				MAX	5.25	4.19		15.40	14.06	2.31	3.75	1.00	5.75	

*Rated capacity is for 0° vertical pulls – angular lifts reduce capacity, see Rated Capacities on page 2. Two lines per size give the minimum and maximum reference dimensions. Reference ASME B18.15 for additional dimensions.

2.0 Material Data

Property	Carbon Steel Lifting Eyes
Material	Carbon steel
Heat treatment	Quench and draw
Grain size	5 or finer
Tensile strength	65,000 psi min – 90,000 psi max
Yield strength	30,000 psi min
Elongation	30% min
Reduction of area	60% min
Thread	UNC-2A (coarse); shoulder pattern also stocked in UNF (fine)
Origin	Made in the U.S.A. 



Angle of pull is measured from the axis of the shank. Rated capacity drops to about 25% at 45°; beyond 45° eyebolts are not rated – use safety swivel hoist rings.

3.0 Rated Capacities

Size (in.)	0° lbs.	45° lbs.	46° + lbs.
1/4"	500	125	SAFETY SWIVEL HOIST RINGS RECOMMENDED
5/16"	900	225	
3/8"	1,300	325	
7/16"	1,800	450	
1/2"	2,400	600	
9/16"	3,000	800	
5/8"	4,000	1,000	
3/4"	5,000	1,250	
7/8"	7,000	1,750	
1"	9,000	2,250	
1-1/8"	12,000	3,000	
1-1/4"	15,000	3,750	
1-1/2"	21,000	5,250	
1-3/4"	28,000	7,000	
2"	38,000	9,500	
2-1/2"	56,000	14,000	

4.0 Application & Installation

- The receiving hole should be counter-sunk and be free and clear of any debris to assure proper seating.
- LOADS SHOULD ALWAYS BE ALIGNED TO THE PLANE OF THE EYE, not at an angle to the plane. A steel washer or spacer may be used in conjunction with Shoulder Eyebolts to attain proper load alignment. The thickness of the steel washer or spacer must not exceed one thread pitch.
- Angular lifting should be avoided. Angular lifts significantly reduce rated capacities (see Rated Capacities table).
- Check seating after applying an angular lift since the initial lift may cause the bolt to back away from the load. If such occurs, the Eyebolt should be unloaded & properly resealed.
- For applications with untapped through-holes, longer length Shoulder Eyebolts are recommended, using a steel washer and nut for the required thread length of engagement.
- Shoulder Eyebolt tapped holes are to have a threaded length which allows for full length of shank engagement and clearance for the unthreaded portion of shank.
- Shoulder Eyebolts must be firmly seated and flush against the mating surface; otherwise, the rated capacity is reduced significantly. The use of a steel washer or spacer is permissible and may be required; however, the thickness must not exceed one thread pitch.
- Plain Eyebolt tapped holes are to be threaded for full length engagement of the Eyebolt.
- Plain Eyebolts must have full thread shank engagement, allowing for one-half turn for proper eye-alignment to obtain rated capacities.

5.0 Inspection & Maintenance

- Eyebolts should be inspected and installed by a competent person who is knowledgeable about the application and installation of Eyebolts.
- Each Eyebolt must be completely inspected BEFORE each use for possible defects such as: distortion, bent shank/threads, or incomplete/incorrectly formed threads. Periodic inspection of Eyebolts is highly recommended.
- Eyebolts should not be painted or otherwise coated when used for lifting; such coatings make it difficult to inspect for defects or wear indicators.
- Eyebolts should not be left where they can incur mechanical damage or corrosion.
- Destroy Eyebolts when signs of bend, elongation, wear or damage are visible. Such signs indicate that the Eyebolt has been stressed (overloaded) beyond rated capacity. Never attempt to repair a stressed Eyebolt.
- Destroy Eyebolts when they show any signs of alteration. Signs include: gouging, undercutting, welding, etc.
- Proper destruction of an Eyebolt: crushing or cutting clear across the eye of the Eyebolt.

6.0 Safety Precautions

- DO NOT work, stand or crawl around the load of the Eyebolt. Ensure a safe distance from the load.
- DO NOT use wrenches, crowbars, etc. to tighten Eyebolts. Hand tightening is recommended.
- DO NOT use a single Eyebolt to lift a load that can rotate. Safety Swivel Hoist Rings are recommended for such loads.
- DO NOT force hooks or any other fittings into the eye; they must fit freely.
- DO NOT exceed the Rated Capacity.
- DO NOT SHOCK LOAD EYEBOLTS. Gradually increase lifting of the load to minimize load-shock.
- DO NOT weld Eyebolts, or perform any weld-repair on Eyebolts.
- DO NOT machine Eyebolts on the shank or shoulder to achieve proper seating.
- DO NOT expose Eyebolts to extreme environmental conditions, as they may adversely affect the Rated Capacity.

Disclaimer: The above is a compilation of data from various industry standards. The Nutty Company, Inc. has made every effort to present the data accurately. However, The Nutty Company, Inc. cannot be held liable for any claim traceable to any errors, typographical or otherwise, contained herein.



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