



A Boutique Forged Eyebolts Manufacturer & Exporter



www.fongyien.com



ISO 9001
18QMA11626



On Shelf in Amazon

目前宏盈可以提供產品為ASME B18.15吊環螺絲、JIS B1168/1169吊環螺絲/吊環螺帽、DIN 444單眼螺絲、特殊單眼螺絲、特殊冷鍛扣件以及精密車修扣件。主要市場遍及歐洲、日本以及美國，並於2008年獲得ISO 9001國際品質保證制度認證。

Currently, the company's specialty products are ASME B18.15 Forged Eyebolts, JIS B1168/1169 Eyebolts/Eyenuts, DIN 444 Eyebolts, custom-made eye bolts, custom-made cold headed fasteners and precision machined components which are marketed in Europe, Japan and the North America. Since 2008, we have been proudly ISO 9001 certified.

- 空氣鍛造機
- 4模4沖螺絲打頭機
- 沖床
- 鑽孔/攻牙機
- 軋牙機
- 環帶式研掃機
- 自動鋼棒切斷機
- 電爐
- CNC車床
- 螺旋式空氣壓縮機

- Air Drop Hammer
- 4 Dies-4 Blows Bolts Former
- Press Machine
- Drilling/Tapping Machine
- Thread Rolling Machine
- Endless-Belt-Type Shotblasting Machine
- Automatic Steel Bar Cutting Machine
- Induction Furnace
- CNC Turning Lathe
- Screw Air Compressor



生產作業、全程自主
開發新品、求新求變
永續經營、品質為先

Independent in-House Full Manufacturing Ability
Strong New Production Development Capability
Esg-Driven in Improving Quality and Sustainability

ASME B18.15

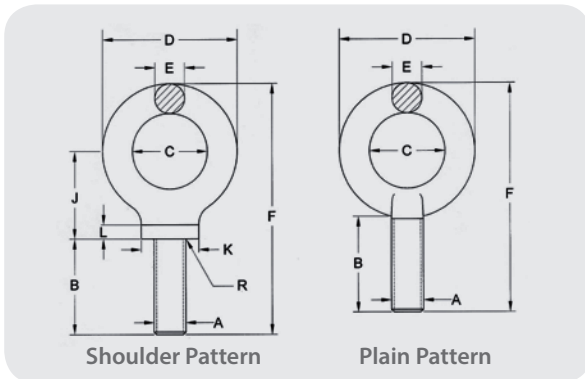
Industrial Grade Forged Eyebolts

ASTM A489-18 Fully Threaded

Material : Carbon Steel, Stainless Steel

Thread : UNC/UNF-2A, Metric

Finish : Self-Colored, Plated, Polished



Dimensions in inch

	A		B	C	D	E	F		J	K	L	R	Weight Lbs.	
	Thread size UNC-2A	(Fully Threaded) Shank Dia.	Shank Length	Eye I.D.	Eye O.D.	Eye Sect. Dia.	Shoulder	Plain	Centerline Eye to Shoulder	Shoulder Dia.	Shoulder Height	Radius Under Shoulder	Shoulder	Plain
1/4 x 1	1/4-20	0.25	1.00	0.69	1.19	0.19	2.22	2.06	0.69	0.50	0.12	0.015	0.06	0.06
			1.06	0.81		0.25	2.53	2.38	0.81	0.56	0.19	0.025		
5/16 x 1-1/8	5/16-18	0.31	1.12	0.81	1.44	0.25	2.66	2.44	0.88	0.56	0.12	0.015	0.11	0.10
			1.19	0.94		0.31	2.97	2.75	1.00	0.62	0.19	0.025		
3/8 x 1-1/4	3/8-16	0.38	1.25	0.94	1.69	0.31	3.09	2.81	1.06	0.62	0.12	0.015	0.17	0.15
			1.38	1.06		0.38	3.47	3.19	1.19	0.69	0.19	0.025		
7/16 x 1-3/8	7/16-14	0.44	1.38	1.00	1.81	0.34	3.41	3.06	1.19	0.75	0.19	0.015	0.24	0.18
			1.50	1.12		0.41	3.78	3.44	1.31	0.81	0.25	0.025		
1/2 x 1-1/2	1/2-13	0.50	1.50	1.12	2.12	0.44	3.81	3.50	1.31	0.88	0.19	0.015	0.40	0.32
			1.62	1.25		0.50	4.19	3.88	1.44	0.94	0.25	0.025		
9/16 x 1-5/8	9/16-12	0.56	1.62	1.19	2.25	0.47	4.19	3.75	1.50	0.94	0.22	0.020	0.49	0.45
			1.75	1.31		0.53	4.56	4.12	1.62	1.00	0.28	0.045		
5/8 x 1-3/4	5/8-11	0.62	1.75	1.31	2.56	0.56	4.56	4.19	1.59	1.00	0.25	0.020	0.71	0.61
			1.88	1.44		0.62	4.94	4.56	1.72	1.06	0.31	0.045		
3/4 x 2	3/4-10	0.75	2.00	1.44	2.81	0.62	5.06	4.69	1.72	1.12	0.25	0.020	1.01	0.98
			2.12	1.56		0.69	5.50	5.06	1.91	1.25	0.31	0.045		
7/8 x 2-1/4	7/8-9	0.88	2.25	1.56	3.19	0.75	5.75	5.31	2.03	1.31	0.31	0.040	1.57	1.53
			2.38	1.69		0.81	6.19	5.69	2.22	1.44	0.38	0.065		
1 x 2-1/2	1-8	1.00	2.50	1.69	3.56	0.88	6.44	5.94	2.22	1.50	0.38	0.060	2.32	2.06
			2.62	1.81		0.94	6.88	6.31	2.41	1.62	0.44	0.095		
1 1/8 x 2-3/4	1 1/8-7	1.12	2.75	1.94	4.06	1.00	7.31	6.69	2.59	1.69	0.44	0.060	3.42	2.96
			2.88	2.06		1.06	7.75	7.06	2.78	1.81	0.50	0.095		
1 1/4 x 3	1 1/4-7	1.25	3.00	2.12	4.44	1.09	8.00	7.31	2.84	1.88	0.50	0.060	4.56	4.11
			3.12	2.25		1.16	8.44	7.69	3.03	2.00	0.56	0.095		
1 1/2 x 3-1/2	1 1/2-6	1.50	3.50	2.44	5.19	1.31	9.22	8.56	3.19	2.12	0.50	0.060	7.77	6.73
			3.62	2.56		1.38	9.72	8.94	3.44	2.25	0.62	0.095		
1 3/4 x 3-3/4	1 3/4-5	1.75	3.75	2.75	6.00	1.50	10.50	9.50	3.88	2.50	0.50	0.060	11.35	11.00
			3.88	3.00		1.62	11.12	10.12	4.12	2.62	0.62	0.095		
2 x 4	2-4 1/2	2.00	4.00	3.06	6.88	1.75	11.53	10.56	4.25	2.88	0.62	0.060	16.70	16.25
			4.12/4.25	3.44		1.88	12.22	11.44	4.50	3.00	0.75	0.095		
2 1/2 x 5	2 1/2-4	2.50	5.00	3.81	8.50	2.19		13.19						28.00
			5.25	4.19		2.31		14.06						

On Shelf in Amazon (FY Industrial)

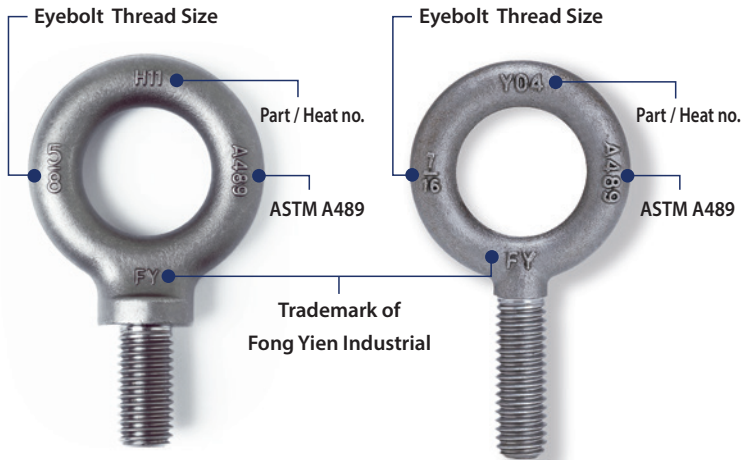


ASME B18.15

Industrial Grade Forged Eyebolts

We manufacture Eyebolts met with ASME B18.15 and passed with ASTM A489 specifications.

Traceability Markings



Shoulder Type (Front View)

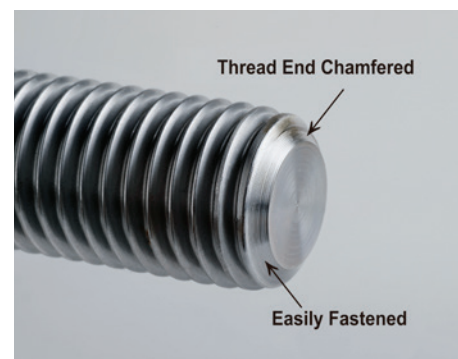
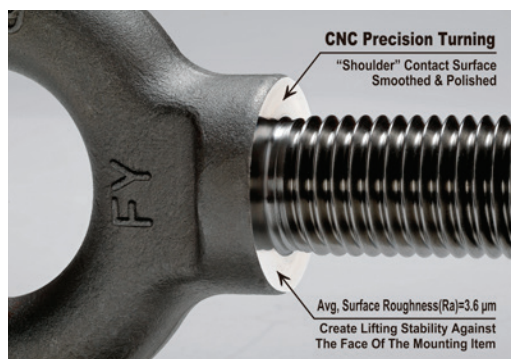
Plain Type (Front View)

Material Data

Conform to ASTM A489-18

Material:	Carbon Steel		
Heat Treatment:	Quenched and Tempered		
Chemical Composition:	Element	Heat Analysis	Product Analysis
	Carbon	0.48 max	0.51 max
	Manganese	1.00 max	1.06 max
	Phosphorus	0.040 max	0.048 max
	Sulfur	0.050 max	0.058 max
	Silicon	0.15-0.35	0.12-0.38
Grain Size:	5 or Finer		
Tensile Strength:	65,000-90,000 psi		
Yield Strength:	30,000 psi		
Elongation in 4D:	30% min.		
Reduction of Area:	60% min.		

CNC Precision Turning & Thread Rolling



Test Reports



Breaking & Proof Load Test



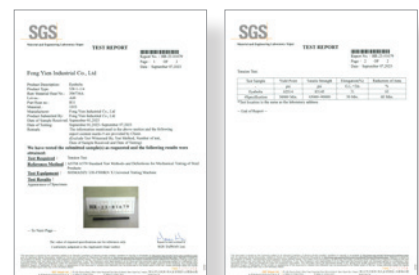
Breaking Load = 5 x Rated Capacity
Proof Load = 2 x Rated Capacity

Grain Size Test



Metallography Observing
Grain Size 5 or Finer

Tensile Properties Test



Tensile Strength, Yield Strength, Elongation, Reduction

We make each production lots of third party lab or in-house test reports with its size in order to meet the standard of ASTM A489. Rated Capacity is heavy duty which is higher than ASME B18.15 specifications. Eyebolts are tested and passed by safety factor 5.

On Shelf in Amazon (FY Industrial)

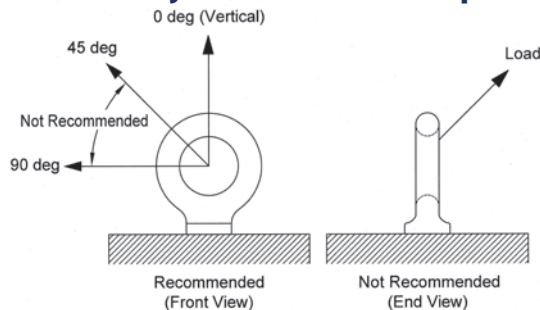


ASME B18.15

Industrial Grade Forged Eyebolts Heavy Duty Lifting Eyebolts

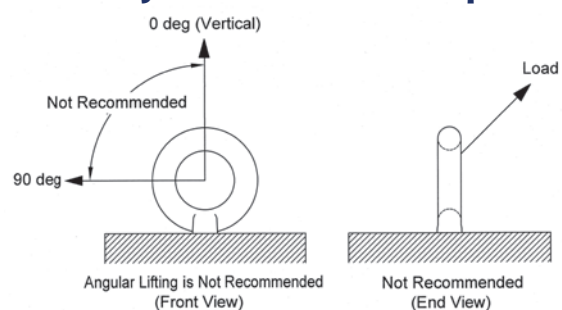


Shoulder Eyebolts Rated Capacities



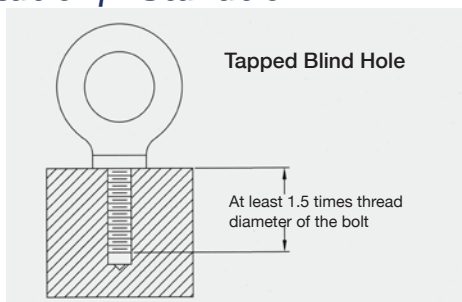
Size	0 deg	45 deg
1/4	500	125
5/16	900	225
3/8	1,300	325
7/16	1,800	450
1/2	2,400	600
9/16	3,200	800
5/8	4,000	1,000
3/4	5,000	1,250
7/8	7,000	1,750
1	9,000	2,250
1 1/8	12,000	3,000
1 1/4	15,000	3,750
1 1/2	21,000	5,250
1 3/4	28,000	7,000
2	38,000	9,500

Plain Eyebolts Rated Capacities

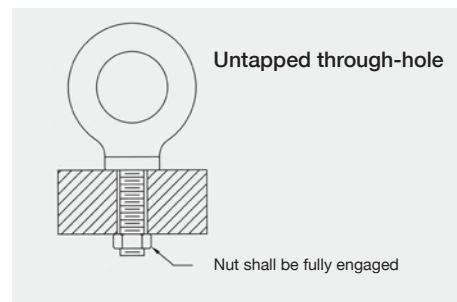


Size	0 deg
1/4	500
5/16	900
3/8	1,300
7/16	1,800
1/2	2,400
9/16	3,200
5/8	4,000
3/4	5,000
7/8	7,000
1	9,000
1 1/8	12,000
1 1/4	15,000
1 1/2	21,000
1 3/4	28,000
2	38,000
2 1/2	56,000

Application/Installation



When used in a tapped blind hole, the effective thread length shall be at least 1.5 times thread diameter of the bolt for engagement in steel.



When used in an untapped through-hole, the nut under the load shall be fully engaged.

- When used in a tapped through-hole of less than one diameter thickness, a nut shall be used under the load and fully engaged and tightened securely against the load.
- Eyebolts should be tightened or otherwise secured against rotation during lifting or load handling activities.
- Shoulder Eyebolts must be firmly seated and flush against the mating surface; otherwise, the rated capacity is reduced significantly.
- When using eyebolts for angular load handling, the plane of the eyebolts shall be aligned with the direction of pull. Steel flat washers may be used under the shoulder to position the plane of the eye.
- Eyebolts shall be in good working condition prior to use.
- Shock loading should be avoided.

Safety Inspection

Before each use lifting Eyebolts should be inspected and replaced if any of the following is detected:

- Obvious Wear
- Elongated or Bent Eye Section
- Nicks or Gouges
- Worn, Corroded, and/or Distorted Threads
- Elongated or Bent Shank

On Shelf in Amazon (FY Industrial)



JIS B1168

Eyebolts

吊環螺絲 アイボルト

鍛造品 台湾製造
Drop Forged Made in Taiwan

在庫表/在庫表/Stock list

尺寸/材質 Size/Material	SUS304不鏽鋼 ステンレス Stainless Steel	SS400鐵 鉄 Steel
M6-1.0P	O	—
M8-1.25P	O	O
M10-1.5P	O	O
M12-1.75P	O	O
M16-2.0P	O	O
M20-2.5P	O	O
M24-3.0P	O	O
M30-3.5P	O	O
W3/8"-16	O	O
W1/2"-12	O	O
W5/8"-11	O	—

O 現貨供應

O は在庫充分用意しております

O Held in stock and available for fast delivery

材質:SS400鐵、SUS304不鏽鋼

材質:SS400鐵、SUS304 ステンレス

Material : SS400 Steel, SUS 304 Stainless Steel

藍色 (■) JIS標準規格

青帯 (■) JIS規格寸法です 単位: mm

Blue (■) JIS Standard Unit: mm

SUS304不鏽鋼

SUS304 ステンレス

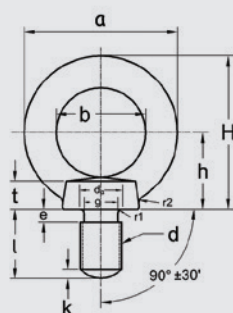
SUS304 Stainless Steel

SS400鐵

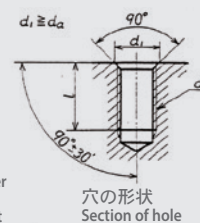
SS400鐵

SS400 Steel

寸法図/Dimensions



首下には必ずr1以上の丸みを付けること
A radius of r1 or over shall be provided under the neck joint



穴の形状
Section of hole



垂直ぐり
Vertical lift



45度ぐり
(2個につき)
45 degree lift

(d)	a	b	c	D	t	h	H (参考) Info	l	e	g (最小) Min.	r1 (最小) Min.	da (最大) Max.	r2 (約) Approx.	k (約) Approx.	使用荷重 Working load		重量 Weight
															垂直ぐり 45度ぐり (2個につき) Vertical lift 45° lift (for 2 bolts)		
															kgf	kN	
M6-1.0P	26	16	5	13	6	15	28	14	2	4.6	0.5	7.2	1	1.2	60	0.588	0.018
M8-1.25P	32.6	20	6.3	16	5	17	33.3	15	3	6	1	9.2	4	1.2	80	0.785	0.032
M10-1.5P	41	25	8	20	7	21	41.5	18	4	7.7	1.2	11.2	4	1.5	150	1.47	0.061
M12-1.75P	50	30	10	25	9	26	51	22	5	9.4	1.4	14.2	6	2	220	2.16	0.12
M16-2.0P	60	35	12.5	30	11	30	60	27	5	13	1.6	18.2	6	2	450	4.41	0.218
M20-2.5P	72	40	16	35	13	35	71	30	6	16.4	2	22.4	8	2.5	630	6.18	0.4
M24-3.0P	90	50	20	45	18	45	90	38	8	19.6	2.5	26.4	12	3	950	9.32	0.8
M30-3.5P	110	60	25	60	22	55	110	45	8	25	3	33.4	15	3.5	1500	14.7	1.54
M36-4.0P	133	70	31.5	70	26	65	131.5	55	10	30.3	3	39.4	18	4	2300	22.6	2.83
M42-4.5P	151	80	35.5	80	30	75	150.5	65	12	35.6	3.5	45.6	20	4.5	3400	33.3	4.1
M48-5.0P	170	90	40	90	35	85	170	70	12	41	4	52.6	22	5	4500	44.1	5.88
M64-6.0P	210	110	50	110	42	105	210	90	14	55.7	5	71	25	6	9000	88.3	11.6
M80-6.0P	266	140	63	130	50	130	263	105	14	71	5	87	35	6	15000	147	21.5
W3/8"-16	41	25	8	20	7	21	41.5	18	4	7.2	1.2	10.7	4	1.5	150	1.47	0.061
W1/2"-12	50	30	10	25	9	26	51	22	5	9.8	1.4	14.6	6	2	220	2.16	0.12
W5/8"-11	60	35	12.5	30	11	30	60	27	5	12.6	1.6	17.8	6	2	450	4.41	0.218

JIS B1169

Eyenuts

吊環螺帽 アイナット

鍛造品 台湾製造
Drop Forged Made in Taiwan

庫存表/在庫表/Stock list

尺寸/材質 サイズ/材質 Size/Material	SUS304不鏽鋼 ステンレス Stainless Steel	SS400鐵 鉄 Steel
M6-1.0P	○	—
M8-1.25P	○	○
M10-1.5P	○	○
M12-1.75P	○	○
M16-2.0P	○	○
M20-2.5P	—	○
M24-3.0P	—	○

○ 現貨供應

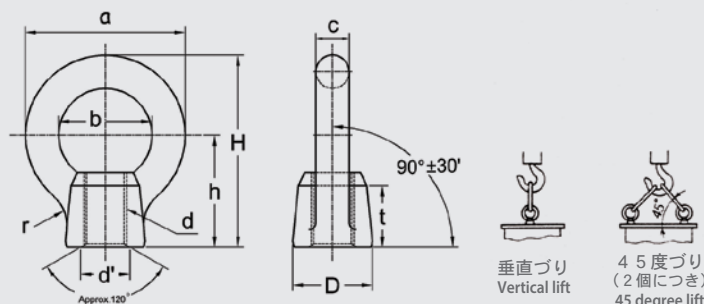
○ は在庫充分用意しております

○ Held in stock and available for fast delivery



SUS304不鏽鋼
SUS304 ステンレス
SUS304 Stainless Steel

寸法図/Dimensions



材質:SS400鐵、SUS304不鏽鋼

材質:SS400鐵、SUS304 ステンレス

Material : SS400 Steel, SUS 304 Stainless Steel

藍色(■) JIS標準規格

青帯(■) JIS規格寸法です 単位:mm

Blue(■) JIS Standard Unit : mm

(d)	a	b	c	D	t	h	H	r	d'	使用荷重 Working load		重量 Weight
							(参考) Info	(約) Approx.	(約) Approx.	垂直つり Vertical lift		
										45度つり(2個につき) 45° lift (for 2 bolts)		
										kgf	kN	
M6-1.0P	26	16	5	13	11	21	34	1	7.5	60	0.588	0.02
M8-1.25P	32.6	20	6.3	16	12	23	39.3	8	8.5	80	0.785	0.033
M10-1.5P	41	25	8	20	15	28	48.5	10	10.6	150	1.47	0.063
M12-1.75P	50	30	10	25	19	36	61	12	12.5	220	2.16	0.126
M16-2.0P	60	35	12.5	30	23	42	72	14	17	450	4.41	0.222
M20-2.5P	72	40	16	35	28	50	86	16	21.2	630	6.18	0.4
M24-3.0P	90	50	20	45	38	66	111	25	25	950	9.32	0.8
M30-3.5P	110	60	25	60	46	80	135	30	31.5	1500	14.7	1.58
M36-4.0P	133	70	31.5	70	55	95	161.5	35	37.5	2300	22.6	2.75
M42-4.5P	151	80	35.5	80	64	109	184.5	40	45	3400	33.3	4.1
M48-5.0P	170	90	40	90	73	123	208	45	50	4500	44.1	5.9

JIS B1168/1169 Mark Explanation Steel Eyebolts

鐵吊環螺絲 標示名稱解釋
鉄アイボルト 刻印説明

正面 (SS400 鐵)
正面 (SS400鉄) Front (SS400 steel)



安全使用荷重
0.63T(630kg)
Safe working load
0.63T(630kg)

製造年份2014
製造年号2014
Manufacture year
2014

背面(SS400 鐵)
背面(SS400鉄) Back (SS400 steel)



宏盈公司英文名稱縮寫(製造商)
弊社の英語社名第一文字(メーカー)
Trade mark of manufacturer

Precaution for use :

吊環螺絲、吊環螺帽使用上の注意事項:
アイボルト、アイナット使用上の注意事項

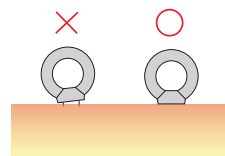


1 請依照JIS規範或吊環上所刻印的使用荷重來正確承載被懸吊物，請勿超過所規定的使用荷重

JISの規定に基づき又は製品上の刻印使用荷重量が、正確対象物の重量を超えないように

The eyebolt loading shall never exceed the marked Safe Working Load (SWL) value. Used for vertical and angular lifts; when used for angular lifts the Safe Working Load (SWL) is to be down rated.

2

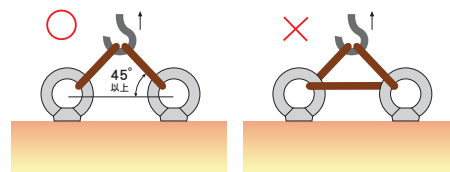


使用時請務必將吊環旋緊並確實緊貼被懸吊物的表面，若有彎曲或無法緊貼的狀況，則嚴禁再繼續使用

使用の際は必ずにリングをしっかり回してると、確實対象物の面を密着させること、表面が曲がったり又は密着出来ない時には、絶対に使用しないで下さい

Shoulder must be installed flush with the surface and screw.

4



當使用2個吊環時，懸吊的鋼索務必與水平面大於45度；並且不可同一條鋼索同時穿過2個吊環來使用

2個のアイボルト使用する際には、物体を吊る角度は水平面45度以上が望ましい、一つのロープは同時に二つのアイボルトを使用しないように

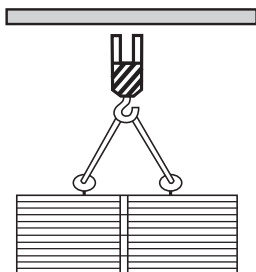
Angular pulls more than 45 degrees from vertical are prohibited. Do not lift or pull loads with slings reeved from eyebolt to another. This will change the angle of loading on the eyebolts and create added tension.

3

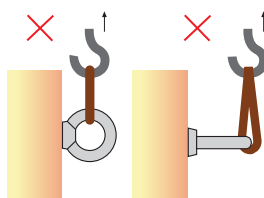
使用2或4個吊環來承載被懸吊物，如果負載鋼索跟水平面不是90度，負載不是直接增加1或4倍，必須依照鋼索與水平面的角度來適當乘以角度因數做負載減損。

2個あるいは4個のアイボルトを使い吊り物を吊りますもし負荷(荷重)ワイヤーと水平面の角度は90度では無い場合、荷重は直接1倍か4倍を増やすのではなく、荷重損失として、ワイヤーと水平面の角度により、角度因数をかけます。

When using lifting slings of two or four legs, shoulder eyebolt rated capacities are not multiplied accordingly but reduced. Make sure the loads in the legs are calculated using the angle from the vertical to the leg and properly size the shoulder nut or machinery eye bolt for the angular load.



5

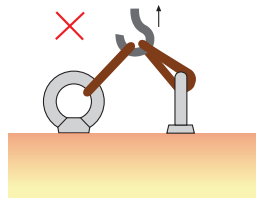


禁止使用橫吊

橫吊りに使用禁止

Side-lifts or turnovers of load are not safe and prohibited.

6

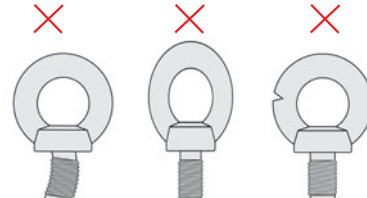


當同時使用2個吊環時，必須維持同一個水平面

2つのアイボルトを使用する時、必ず同一水平面にしなければならない

When lifting with more than one eye bolt, aligning the eye parts is necessary.

7

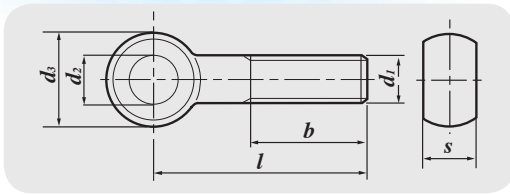


在使用吊環時，若外觀有破裂、彎曲、變形時，應禁止再使用

リングを使用する際に、表面が曲がったり、割れ、変型、キズ等が発生した場合は使用してはならない

Prior to use, a visual inspection shall be performed by the user or other designated person to verify compliance with applicable provisions.

DIN 444 Eyebolts



Materials:

Stainless steel: • AISI 304/A2-70, AISI 316/A4-70

The tensile strength of all stainless steel eyebolts is class 70

Low carbon steel : • Property class 4.6

Screw thread d_1	M5	M6	M8	M10	M12	M16	M20	M24
Pitch of thread	0.8	1	1,25	1,5	1,75	2	2,5	3
$b \pm \frac{2P}{0}$	$l \leq 125$	16	18	22	26	30	38	46
	$125 < l \leq 200$	-	-	28	32	36	44	52
	$l > 200$	-	-	-	-	49	57	65
d_2	H9	5	6	8	10	12	16	18
d_3	Type A.B. max.	12	14	18	20	25	32	40
	Type A min.	10,9	12,9	16,9	18,7	23,7	30,4	38,4
	Type B min.	11,57	13,57	17,57	19,48	24,48	31,38	39,38
S	Type A	max.	8	9	11	14	17	19
		min.	7,52	8,52	10,3	13,3	16,3	18,16
	Type B	max.	6	7	9	12	14	17
		min.	5,88	6,85	8,85	11,82	13,82	16,82



Special Eyebolts

特殊單眼螺絲

特殊單眼螺絲是屬於客製化的單眼螺絲。

我們能依照特殊單眼螺絲所需要的加工方式，提供冷鍛、熱鍛、合模冷鍛等…各種鍛造方式的需求，並配合各種二次加工，提供客戶低成本、高品質的產品。

Special Eye Bolts

Special eye bolts are customized eye bolts.

We can provide all kinds of needs in eye bolts process methods such as cold heading/forming, hot forging and open-die heading, and combine with all kinds of secondary processes to offer customers high quality, yet low cost products.



Other Special Bolts and Parts

其他特殊螺絲與部件

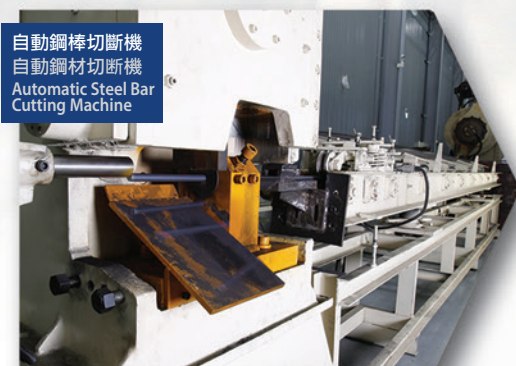
為了因應客戶各種特殊的需求，宏盈公司發展出一個高效率、高品質、優良設備的衛星加工體系，來補足我們的生產能力。舉凡冷鍛、熱鍛、合模鍛造、CNC車修、鑽孔/攻牙、研磨、滾溝.....等等主要以及二次加工。

Special Bolts and Parts

In order to meet all kinds of customers' needs, Fong Yien has developed a satellite network of high efficiency, well-qualified and well-equipped sub-contractors to complement our capabilities of primary and secondary processes such as cold heading/forming, hot forging, open-die heading, CNC machining, drilling/tapping, grinding and slotting.



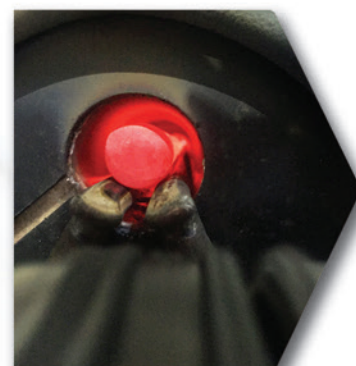
吊環螺絲、吊環螺帽主要生產過程及設備 アイボルト、アイナット主な生産過程と設備 Lifting Eyebolts, Eyenuts Manufacturing Process Flow and Equipments



剪料 材料切断 Steel Bar Cutting



材料加熱 Heating



材料加熱 Heating



熱鍛 熱間鍛造 Hot Forging



熱鍛 熱間鍛造 Hot Forging



切邊 バリ抜き Trimming



噴砂 ショット Sand Blasting



噴砂 ショット Sand Blasting



CNCの機械加工 Machining

生産設備

- ・ 空気鍛造機
- ・ 沖床
- ・ 輾牙機
- ・ 環带式研掃機
- ・ 自動鋼棒切断機
- ・ 電爐
- ・ CNC車床

生産設備

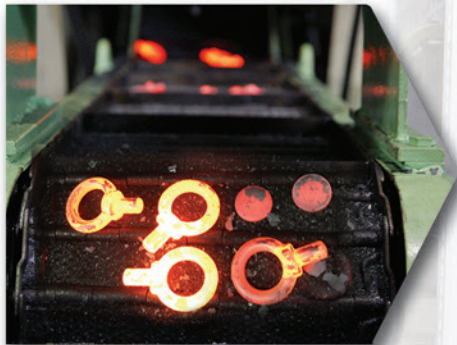
- ・ エアー鍛造機
- ・ パンチ
- ・ ねじ転造機
- ・ ローラ式ショット機
- ・ 自動鋼材切断機
- ・ 高周波加熱炉
- ・ CNC車床

Manufacturing Facilities

- ・ Air Drop Hammer
- ・ Press Machine
- ・ Thread Rolling Machine
- ・ Endless-Belt-Type Shotblasting Machine
- ・ Automatic Steel Bar Cutting Machine
- ・ Induction Furnace
- ・ CNC Turning Lathe



材料加熱 材料加熱 Heating



切邊 バリ抜き Trimming



搓牙機
ねじ転造機
Thread Rolling
Machine

滾牙 ねじ転造 Thread Rolling



空気鍛造機
エアー鍛造機
Air Drop Hammer



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