



# Castle Lifting Gear Ltd.

CASTLE WORKS, PORTERSFIELD ROAD, CRADLEY HEATH, WARLEY, WEST MIDLANDS B64 7BE

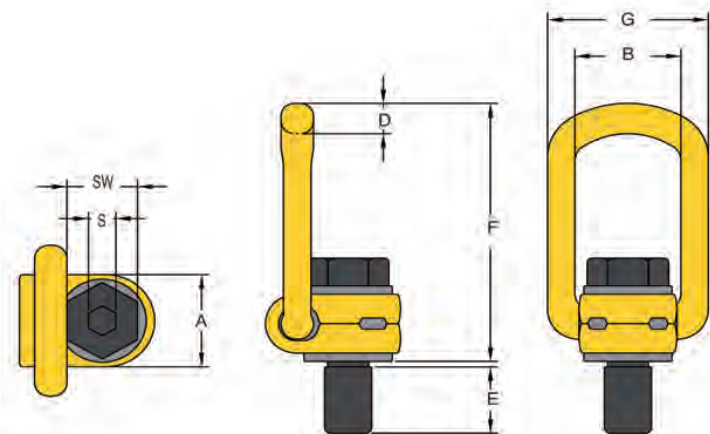
Telephone 01384 560924 Fax: 01384 566452

Web: [www.castleliftinggear.co.uk](http://www.castleliftinggear.co.uk) Email: [sales@castleliftinggear.co.uk](mailto:sales@castleliftinggear.co.uk)

## Load Attachment Products

### Lifting Point Metric Thread

- Grade 100 Lifting Points are 360° with a 90° pivot function
- Bolts are metric thread (ASME/ANSI B18.3.1M), specification is a grade 10.9 alloy socket head screw per DIN EN ISO 4762
- Proof Load individually to 2.5 times Working Load Limit and certified
- Rated at 100% at 90° angle
- 100% magnaflux crack detection
- Long shank bolts available on request



Part Code	W.L.L. Tonnes	Torque In Nm	Bolt Size	B mm	E Standard mm	E Extended mm	A mm	G mm	D mm	F mm	S mm	SW mm	N.W. Kg
8-211-003	0.3	30	M8 x 1 x 1.25 x 45	35	16	76	30	55	10.0	85	6	13	0.2
8-211-006	0.63	60	M10 x 1.50 x 50	35	18	96	30	55	10.0	85	8	17	0.3
8-211-010	1.0	100	M12 x 1.75 x 60	37	21	114	33	57	13.5	98	8	19	0.5
8-211-012	1.2	120	M14 x 2.00 x 60	37	21	-	33	57	13.5	98	10	24	0.5
8-211-015	1.5	150	M16 x 2.00 x 65	37	25	149	33	57	13.5	98	10	24	0.5
8-211-020	2.0	200	M18 x 2.00 x 75	54	28	-	50	82	16.5	140	12	30	1.3
8-211-025	2.5	250	M20 x 2.50 x 80	54	32	186	50	82	16.5	140	12	30	1.3
8-211-040	4.0	400	M24 x 3.00 x 85	54	37	221	50	82	16.5	140	14	36	1.4
8-211-042	4.0	400	M27 x 3.00 x 110	65	44	-	60	99	22.5	170	17	41	2.8
8-211-050	5.0	500	M30 x 3.50 x 115	65	49	278	60	99	22.5	170	17	46	3.1
8-211-070	7.0	700	M36 x 4.00 x 125	65	56	-	60	99	22.5	178	22	55	3.3
8-211-080	8.0	800	M36 x 4.00 x 140	85	57	222	77	124	26.5	225	22	55	5.8
8-211-100	10.0	1000	M42 x 4.50 x 150	85	66	272	77	124	26.5	225	24	65	6.3
8-211-150	15.0	1500	M42 x 4.50 x 160	104	63	264	95	158	36.0	261	24	65	10.9
8-211-200	20.0	2000	M48 x 5.00 x 170	104	73	295	95	158	36.0	261	27	75	11.6



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## Load Attachment Products

### Lifting Point Working Load Application



Number of legs	1	2	1	2	2		2	3-4		3-4
Load Direction	0°	0°	90°	90°	0-45°	45-60°	unsym	0-45°	45-60°	unsym

Item No.	Thread	W.L.L. Tonnes									
8-211-003	M8	0.3	0.6	0.3	0.6	0.42	0.3	0.3	0.63	0.45	0.3
8-211-006	M10	0.63	1.26	0.63	1.26	0.88	0.63	0.63	1.32	0.95	0.63
8-211-010	M12	1	2	1	2	1.4	1	1	2.1	1.5	1
8-211-012	M14	1.2	2.4	1.2	2.4	1.7	1.2	1.2	2.5	1.8	1.2
8-211-015	M16	1.5	3	1.5	3	2.1	1.5	1.5	3.1	2.2	1.5
8-211-020	M18	2	4	2	4	2.8	2	2	4.2	3	2
8-211-025	M20	2.5	5	2.5	5	3.5	2.5	2.5	5.2	3.7	2.5
8-211-040	M24	4	8	4	8	5.6	4	4	8.4	6	4
8-211-042	M27	4	8	4	8	5.6	4	4	8.4	6	4
8-211-050	M30	5	10	5	10	7	5	5	10.5	7.5	5
8-211-070	M36	7	14	7	14	9.8	7	7	14.7	10.5	7
8-211-080	M36	8	16	8	16	11.2	8	8	16.8	12	8
8-211-100	M42	10	20	10	20	14	10	10	21	15	10
8-211-150	M42	15	30	15	30	21	15	15	31.5	22.5	15
8-211-200	M48	20	40	20	40	28	20	20	42	30	20







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## Load Attachment Products

### Lifting Point User Instructions

#### Lifting Point Application Assembly

- After determining the loads on each Lifting Point, select the proper size Lifting Point using the Working Load Limit ratings table.
- Drill and tap the work piece to the correct size to a minimum depth of one-half the threaded shank diameter plus the threaded shank length. See rated load limit and bolt torque requirements imprinted on top of the swivel trunnion (see Working Load Limit table).
- Install Lifting Point to recommended torque with a torque wrench making sure the bushing flange meets the load (work piece) surface.
- Never use spacers between bushing flange and mounting surface.
- Always select proper load rated lifting device for use with Swivel Lifting Point.
- Attach lifting device ensuring free fit to Lifting Point bail (lifting ring) (Fig. 1).
- Apply partial load and check proper rotation and alignment. There should be no interference between load (work piece) and hoist ring bail (Fig. 2.)

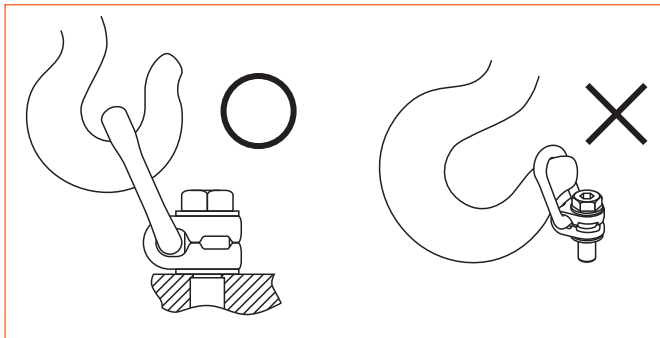


Fig. 1.

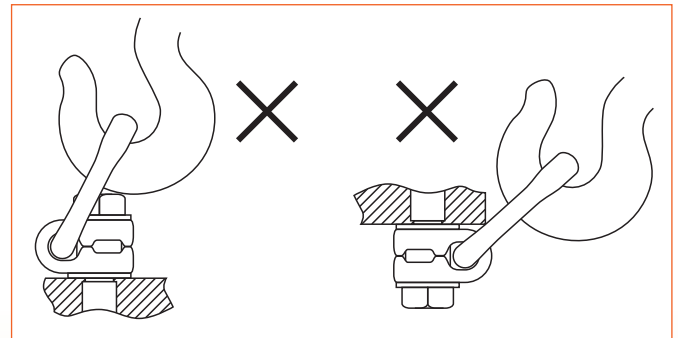


Fig. 2.

### WARNING

- Loads may slip or fall if proper Lifting Point assembly and lifting procedures are not used.
- A falling load may cause serious injury or death.
- Install Lifting Point to torque requirements listed in table 1 for the 8-211 respectively.
- Read, understand and follow all instructions and chart information.
- Do not use with damaged slings, chain or webbing. For inspection criteria see ASME B30.9.
- Use only genuine YOKE parts as replacements



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## Load Attachment Products

### Lifting Point User Instructions

#### Lifting Point Inspection and Maintenance

- Always inspect Lifting Point before use.
- Regularly inspect Lifting Point parts (Fig.3).
- Never use Lifting Point that shows signs of corrosion, wear or damage.
- Never use Lifting Point if bail is bent or elongated.
- Always be sure threads on shank and receiving hole are clean, not damaged, and fit properly.
- Always check with torque wrench before using an already installed Lifting Point.
- Always make sure there are no spacers (washers) used between bushing flange and the mounting surface. Remove any spacers (washers) before use.
- Always ensure free movement of bail. The bail should pivot 90° and swivel 360° (Fig. 4)(Fig.5).
- Always be sure total work piece surface is in contact with Lifting Point bushing mating surface. Drilled and tapped hole must be 90° to load (work piece) surface.

#### Operating Safety

- Never exceed the capacity of the swivel Lifting Point.
- When using lifting slings of two or more legs, make sure the forces in the legs are calculated using the angle from the horizontal sling angle to the leg and select the proper size swivel Lifting Point to allow for the angular forces.
- Effects of temperature:
- Due to the DIN/EN bolts that are used with the Lifting Point, the working load limit must be reduced accordingly:

Operating Temperature °C	Reduction in W.L.L. while heated	Operating Temperature °F
100°C - 200°C	15%	212°F - 392°F
200°C to 250°C	20%	392°F - 482°F
250°C to 350°C	25%	482°F - 662°F
DO NOT USE WHEN TEMPERATURES EXCEED 350°C (662°F)		

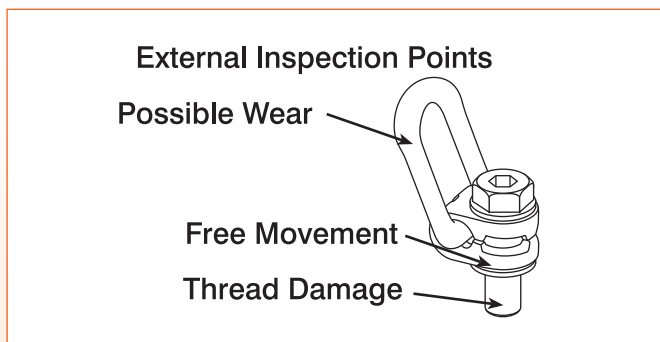


Fig. 3.

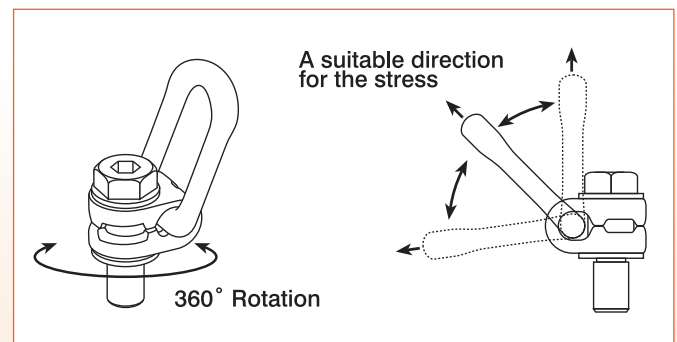


Fig. 4.

Fig. 5.



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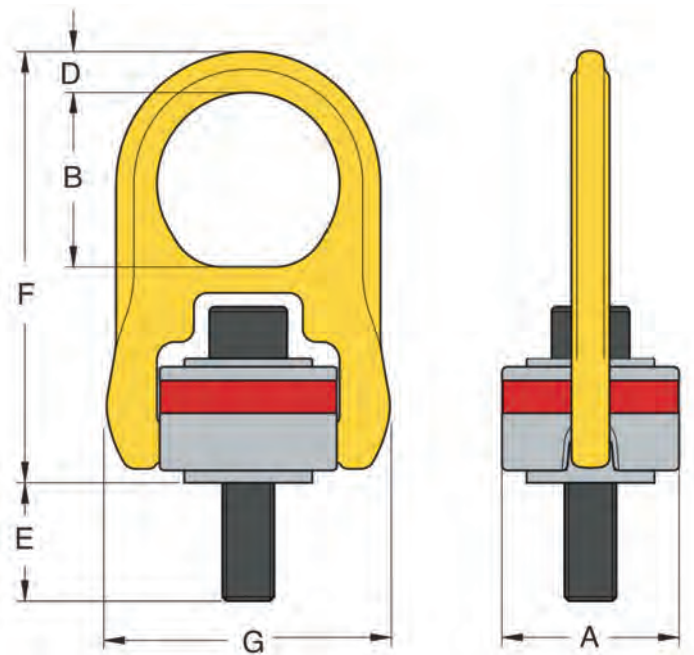
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## Load Attachment Products

### Swivel Hoist Ring with alloy steel washer - Metric

- Yoke Hoist Rings will turn 360° and pivot 180° allowing the adjustment in pull direction.
- Yoke Hoist Rings retain 100% of the rated capacity @ 90°.
- Proof Loading individually to 2.5 times Working Load Limit and certified.
- Extended shank length available on request.



Part Code	Torque Nm	Bolt Size	E mm	A mm	B mm	D mm	F mm	G mm	Mass Kg
8-203-004	10	M8x1.25x50	17.0	40	41	9	102	65	0.4
8-203-005	16	M10x1.50x45	11.0	40	41	9	102	65	0.5
8-203-010	38	M12x1.75x60	15.0	65	64	15	158	105	1.7
8-203-019	81	M16x2.00x65	20.0	65	64	15	158	105	1.8
8-203-021	136	M20x2.50x70	25.0	65	64	15	158	105	1.9
8-203-042	312	M24x3.00x80	26.0	85	79	19	204	134	4.2
8-203-070	637	M30x3.50x135	81.0	100	100	25	241	160	6.7
8-203-110	1005	M36x4.00x160	76.0	120	111	30	286	194	15.5
8-203-125	1005	M42x4.50x175	95.0	120	111	30	286	194	16.5
8-203-135	1350	M48x5.00x190	105.0	120	111	30	286	194	16.8



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## Load Attachment Products

### Swivel Hoist Ring Working Load Application



Number of legs	1	2	1	2	2		2		3-4		3-4
Load Direction	0°	0°	90°	90°	0-45°	45-60°	unsym		0-45°	45-60°	unsym

Item No.	Thread	W.L.L. Tonnes									
8-203-004	M8	0.50	1.00	0.50	1.00	0.70	0.50	0.50	1.05	0.75	0.50
8-203-005	M10	0.55	1.10	0.55	1.10	0.77	0.55	0.55	1.16	0.83	0.55
8-203-010	M12	1.30	2.60	1.30	2.60	1.82	1.30	1.30	2.73	1.95	1.30
8-203-019	M16	2.40	4.80	2.40	4.80	3.36	2.40	2.40	5.04	3.60	2.40
8-203-021	M20	2.70	5.40	2.70	5.40	3.78	2.70	2.70	5.67	4.05	2.70
8-203-042	M24	5.25	10.50	5.25	10.50	7.35	5.25	5.25	11.03	7.88	5.25
8-203-070	M30	8.75	17.50	8.75	17.50	12.25	8.75	8.75	18.38	13.13	8.75
8-203-110	M36	13.75	27.50	13.75	27.50	19.25	13.75	13.75	28.88	20.63	13.75
8-203-125	M42	15.60	31.20	15.60	31.20	21.84	15.60	15.60	32.76	23.40	15.60
8-203-135	M48	16.90	33.80	16.90	33.80	23.66	16.90	16.90	35.49	25.35	16.90





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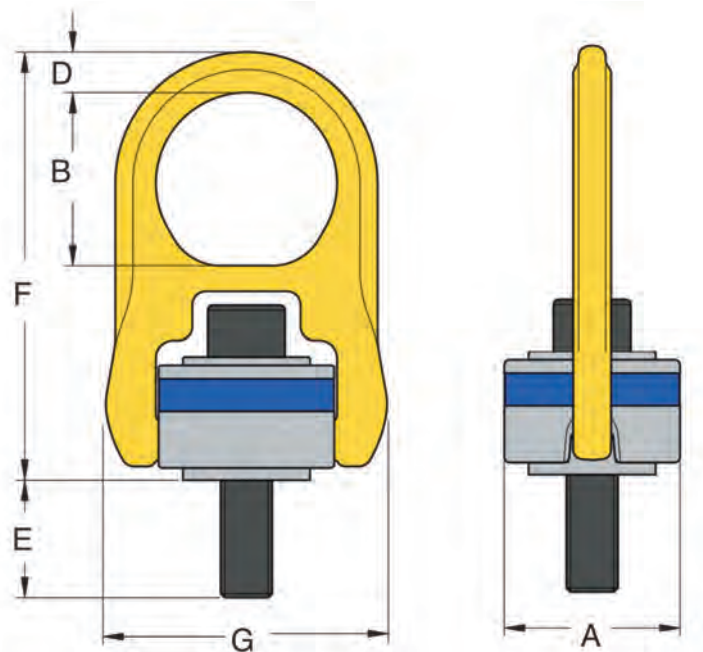
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## Swivel Hoist Ring with alloy steel washer - UNC

- Yoke Hoist Rings will turn 360° and pivot 180° allowing the adjustment in pull direction.
- Yoke Hoist Rings retain 100% of the rated capacity @ 90°.
- Proof Loading individually to 2.5 times Working Load Limit and certified.
- Extended shank length available on request.



Part Code	W.L.L. lbs	Torque Ft - lbs	Bolt Size	E mm	A mm	B mm	D mm	F mm	G mm	Mass Kg
8-204-004	800	7	5/16 - 18x2	0.68	1.57	1.61	0.35	4.02	2.56	0.4
8-204-005	1000	12	3/8 - 16 x 2	0.68	1.57	1.61	0.35	4.02	2.56	0.5
8-204-010	2500	28	1/2 - 13 x 2.5	0.69	2.56	2.32	0.59	6.26	4.13	1.7
8-204-019	4000	60	5/8 - 11 x 2.5	0.69	2.56	2.32	0.59	6.26	4.13	1.8
8-204-021	5000	100	3/4 - 10 x 2.75	0.94	2.56	2.32	0.59	6.26	4.13	1.9
8-204-042	8000	160	7/8 - 9 x 3.5	1.33	3.35	2.87	0.87	8.03	5.28	4.2
8-204-045	10000	230	1 - 8 x 3.5	1.33	3.35	2.87	0.87	8.03	5.28	6.7
8-204-070	15000	470	1-1/4 - 7 x 4.5	2.22	3.95	3.15	1.00	8.58	6.30	15.5
8-204-125	24000	800	1-1/2 - 6 x 6.5	3.15	4.72	4.29	1.38	12.09	8.66	16.5
8-204-135	30000	1100	2 - 4.5 x 6.5	3.15	4.72	4.29	1.38	12.09	8.66	16.8



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## Swivel Hoist Ring Working Load Application



Number of legs	1	2	1	2	2		2		3-4		3-4
Load Direction	0°	0°	90°	90°	0-45°	45-60°	unsym	0-45°	45-60°	unsym	

Item No.	Thread	W.L.L. lbs									
8-204-004	5/16"	800	1600	800	1600	1120	800	800	1680	1200	800
8-204-005	3/8"	1000	2000	1000	2000	1400	1000	1000	2100	1500	1000
8-204-010	1/2"	2500	5000	2500	5000	3500	2500	2500	5250	3750	2500
8-204-019	5/8"	4000	8000	4000	8000	5600	4000	4000	8400	6000	4000
8-204-021	3/4"	5000	10000	5000	10000	7000	5000	5000	10500	7500	5000
8-204-042	7/8"	8000	16000	8000	16000	11200	8000	8000	16800	12000	8000
8-204-045	1"	10000	20000	10000	20000	14000	10000	10000	21000	15000	10000
8-204-070	1-1/4"	15000	30000	15000	30000	21000	15000	15000	31500	22500	15000
8-204-125	1-1/2"	24000	48000	24000	48000	33600	24000	24000	50400	36000	24000
8-204-135	2"	30000	60000	30000	60000	42000	30000	30000	63000	45000	30000



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## Load Attachment Products

### Hoist Rings User Instructions

#### Hoist Ring Application Assembly

- After determining the loads on each hoist ring, select the proper size hoist ring using the Working Load Limit table for Metric threads.
- Drill and tap the work piece to the correct size to a minimum depth of one-half the threaded shank diameter plus the threaded shank length. See rated load limit and bolt torque requirements imprinted on top of the swivel trunnion (See Working Load Limits table).
- Install hoist ring to recommended torque with a torque wrench making sure the bushing flange meets the load (work piece) surface.
- Never use spacers between bushing flange and mounting surface.
- Always select proper load rated lifting device for use with Swivel Hoist Ring.
- Attach lifting device ensuring free fit to hoist ring bail (lifting ring) (Fig. 1).
- Apply partial load and check proper rotation and alignment. There should be no interference between load (work piece) and hoist ring bail (Fig. 2.)

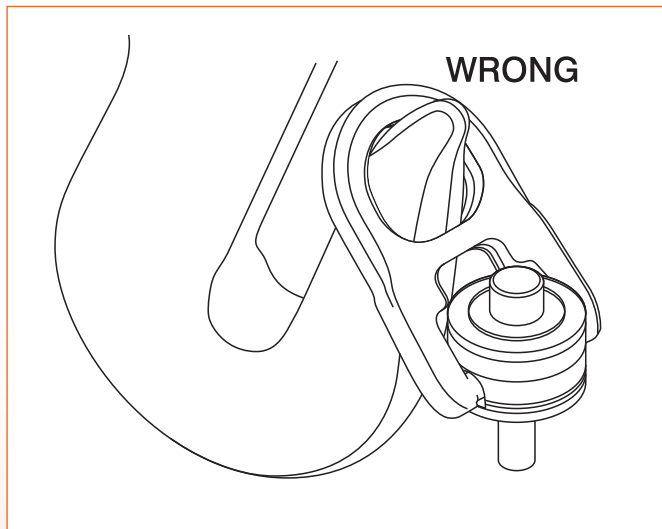


Fig. 1.

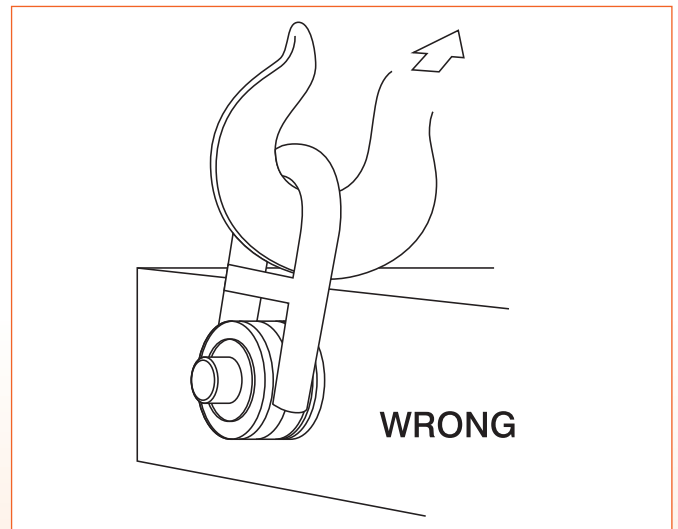


Fig. 2.

#### WARNING

- Loads may slip or fall if proper Hoist Ring assembly and lifting procedures are not used.
- A falling load may cause serious injury or death.
- Install hoist ring bolt to torque requirements listed in table 1 for the 8-203 respectively.
- Read, understand and follow all instructions and chart information.
- Do not use with damaged slings, chain or webbing. For inspection criteria see ASME B30.9.
- Use only genuine YOKE parts as replacements.

**Special Note:** When a Hoist Ring is installed with a retention nut, the nut must have a full thread engagement and must meet one of the following standards to develop the Working Load Limit.

- |                |                          |
|----------------|--------------------------|
| 1. ASTM A-563  | A. Grade D Hex Thick 1.  |
|                | B. Grade DH Standard Hex |
| 2. SAE Grade 8 | Standard Hex             |



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## Load Attachment Products

### Hoist Rings User Instructions

#### Hoist Ring Inspection and Maintenance

- Always inspect hoist ring before use.
- Regularly inspect hoist ring parts (Fig. 3).
- Never use hoist ring that shows signs of corrosion, wear or damage.
- Never use hoist ring if bail is bent or elongated.
- Always be sure threads on shank and receiving hole are clean, not damaged, and fit properly.
- Always check with torque wrench before using an already installed hoist ring.
- Always make sure there are no spacers (washers) used between bushing flange and the mounting surface. Remove any spacers (washers) and retorquer before use.

- Always ensure free movement of bail. The bail should pivot 180° and swivel 360° (Fig. 4).
- Always be sure total work piece surface is in contact with hoist ring bushing mating surface. Drilled and tapped hole must be 90° to load (work piece) surface.

#### Operating Safety

- Never exceed the capacity of the swivel hoist ring, see Table 1 for Metric threads.
- When using lifting slings of two or more legs, make sure the forces in the legs are calculated using the angle from the horizontal sling angle to the leg and select the proper size swivel hoist ring to allow for the angular forces.

#### External Inspection Points

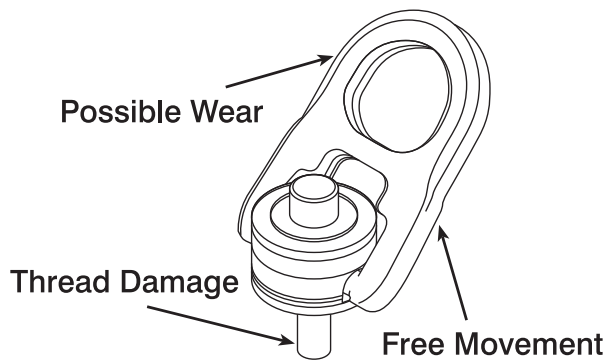


Fig. 3.

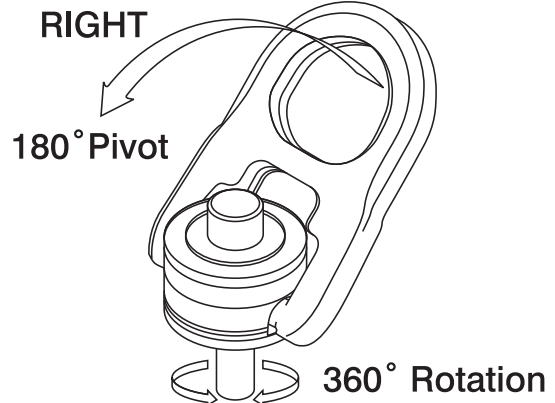
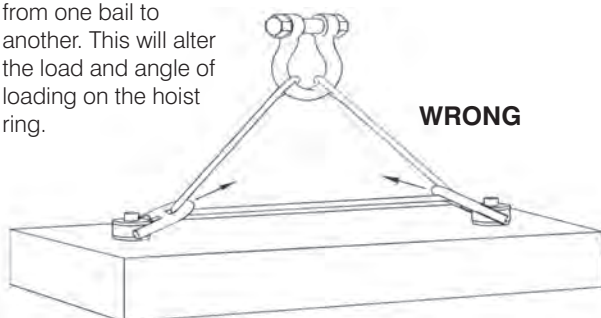
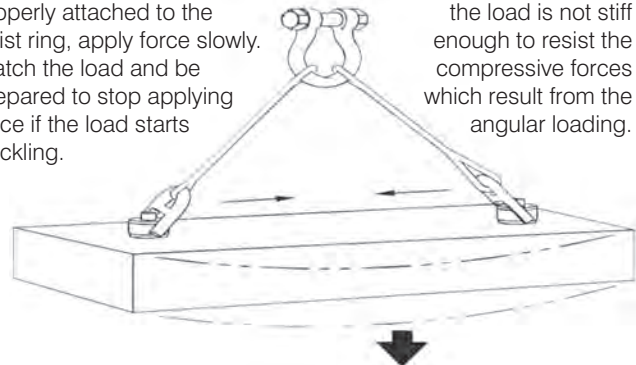


Fig. 4.

Do not reeve slings from one bail to another. This will alter the load and angle of loading on the hoist ring.



After slings have been properly attached to the hoist ring, apply force slowly. Watch the load and be prepared to stop applying force if the load starts buckling.



Buckling may occur if the load is not stiff enough to resist the compressive forces which result from the angular loading.







