

HOIST RINGS



HOIST RINGS - Quality Standards

For Centre-Pull and Side-Pull Style Hoist Rings

Load Bearing Components

- All material is USA manufactured certified alloy steel.
- All components are machined prior to manufacture to remove any surface defects.
- All components are heat treated and certified to manufacturing specifications.
- Bolts are:

METRIC

Grade 12.9

Tensile Strength

- 1220 MPa
- (177,000 psi)

100% Magnetic particle inspected to ASTM E709-80

INCHES

Socket Screw Grade

Tensile Strength

- 18,000 psi - ½" or smaller
- 170,000psi - over ½"

100% Magnetic particle inspected to ASTM E709-80

- All other load bearing components are magnetic particle inspected based upon ASTM E709-80 and MIL-STD-105 with zero defects permissible.
- Bolt torque and hoist ring load limit permanently marked on washer.

Assembly Data

- All hoist ring assemblies are pull-tested and certified to 200% of rated load capacity and stamped with identifying date code.
- All hoist rings are designed for 5:1 strength factor.
- Hoist rings are colour coded for easy identification: silver washer denotes metric sizes, gold washer denotes inch sizes.
- Finished assembly is black oxide plated (with the exception of the washer).
- Special plating or marking is available upon customer's request.
- Proper warning label is affixed to each clevis.
- Proof load testing, magnafluxing, heat treating and material certification are available on request from Brauer at cost.
- The finished hoist ring product is individually boxed.
- NOTE: Specifications for side pull style hoist rings are identical to centre pull style with the exception that the clevis is of precision cast alloy material which is serialised and conforms to X-ray specifications

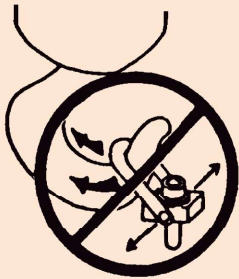
Jergens <small>Cleveland, Ohio</small>		Certificate of Proof Test			
(1) Distinguishing Mark	(2) Description of Item Tested	(3) Quantity Tested	(4) Date Tested	(5) Load Applied	(6) Rated Load
JH	23462 HOIST RING	1	10/13/2000	2,100 KG	1,050 KG
(7) Name and address of supplier		Jergens, Inc., 15700 S. Waterloo Rd., Cleveland, OH 44110			
(8) Name and address of Company performing test:		Jergens, Inc., 15700 S. Waterloo Rd., Cleveland, OH 44110			
(9) Position of signatory in company:		Quality Assurance Manager			
We hereby certify that Jergens, Inc. Test Procedure 1001 requires all hoist rings to be proof tested and examined; and that this form is evidence that the test operator completed all procedures as required.					
MAB		(Signature) <i>James Klingenberg</i>			
In substantial agreement with (OSHA) 29 CFR 1918 & 1919 Form NO. 4					

*All products are CE approved

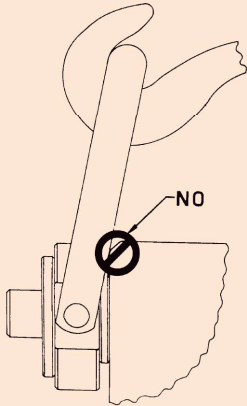
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Installation Data - HOIST RINGS

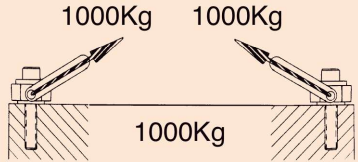
- Select the proper Hoist Ring for the job. Do not attempt to apply more than the rated load capacity. *The load capacity is stamped on the Hoist Ring*
- Drill and tap the workpiece so that the hoist ring bolt is installed perpendicular to the surface of the workpiece. countersink the tapped hole to prevent “swelling” of the top thread when the hoist ring bolt is torqued. The workpiece surface must be flat, providing complete contact for the hoist ring bushing.
- Do not use spacers between the hoist ring bushing and the workpiece surface.
- When installing in soft metal, such as aluminium, the minimum effective thread engagement should be two times the diameter of the thread.
- Always *tighten the bolt to the proper torque value*, which is stamped on the Hoist Ring.
- Loosening of the *bolt* may develop during use. *Re-tightening to the required torque must be done whenever the bolt loosens*. The proper tightening is stamped on the Hoist Ring.
- When lifting, apply force gradually. **DO NOT APPLY SHOCK LOADS.**



Never use a hook or other lifting device which will pry or tend to open the “U” shaped bar on Centre-Pull Hoist Rings.



After installation, check the Hoist Ring to be sure it swivels and pivots freely in all directions. **The side of the ring must not contact anything.**



Depending upon the sling angle, **the applied load may be more than the weight being lifted.** Two point lifting of a 1000Kg weight, with a sling angle of 30°, will result in an applied load of 1000Kg to **each** hoist ring



*All products are CE approved

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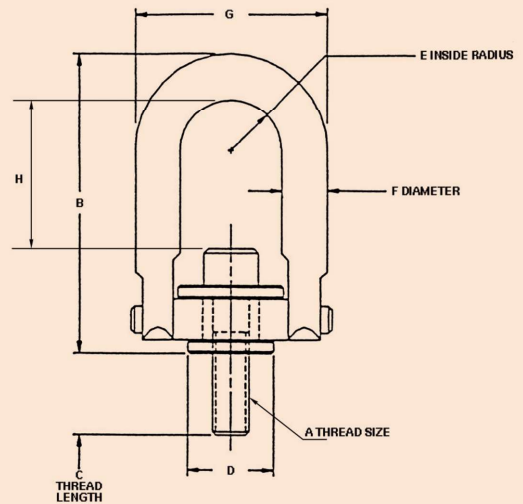
HOIST RINGS - Centre Pull Style



- Full Swivel and Pivot Action
- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Finish: Black Oxide (Except Washer)

- Clevis, Bolt, Pins, Base, Washer and Bushing are magnetic particle inspected
- Washer: Zinc Plated with clear conversion coating
- Proof Tested to 200% of Rated Load Capacity
- All products are **CE** marked

Available with Envirolox™ protective finish.



Metric Centre-Pull Hoist Rings

THREAD SIZE A	LOAD ¹ CAPACITY (Kg)	STD. CLEVIS		LONG CLEVIS		ENVIROLOX PART NUMBER ⁴	THREAD LENGTH					STD. CLEVIS H	LONG CLEVIS H	TORQUE ² (Kg m.)	WT. (Kg)
		PART NUMBER	B	PART NUMBER	B		C	D	E	F	G				
M8x1.25	400	23456	67.8	—	—	23356	12.5	19.0	10.9	9.7	46.7	32	—	1.0	.17
M10x1.50	450	23458	67.8	—	—	23358	17.5	19.0	10.9	9.7	46.7	30	—	1.7	.17
M12x1.75	1050	23462	121.4	23562	170.7	23362	19.0	38.1	22.4	19.0	89.4	60.5	108	3.8	1.08
M16x2.0	1900	23465	121.4	23565	170.7	23365	29.0	38.1	22.4	19.0	89.4	56.5	106	8.2	1.12
M20x2.5	1250	23468	121.4	23568	170.7	23368	34.0	38.1	22.4	19.0	89.4	52.5	101	13.6	1.19
M20x2.5	3000	23471	165.6	23571	206.0	23371	32.0	58.7	35.6	25.4	130.6	73	101	13.6	3.03
M24x3.0	4200	23474	165.6	23574	206.0	23374	37.0	58.7	35.6	25.4	130.6	69	111	31.0	3.10
M30x3.5	7000	23478	221.7	—	—	23378	41.9	81.0	44.5	31.7	165.1	107.4	—	60.0	6.3
M30x3.5	7000	23479	21.7	—	—	23379	61.7	81.0	44.5	31.7	165.1	107.4	—	60.0	6.4
M36x4.0	11000	23483	316.7	—	—	23383	63.5	106.4	57.2	44.4	217.2	166.5	—	100.0	15.5
M42x4.5	12500	23484	316.7	—	—	23384	68.0	106.4	57.2	44.4	217.2	160.5	—	100.0	16.0
M48x5.0	13500	23485	316.7	—	—	23385	88.0	106.4	57.2	44.4	217.2	154.5	—	100.0	16.8
M64x6.0	22500	23488	419.1	—	—	23388	96.0	146.0	76.2	57.15	297.6	210	—	290.0	40.0

Replacement Bolt Kits³

PART NUMBER	WT. (Kg)
23656	.01
23658	.01
23662	.03
23665	.05
23668	.09
23671	.10
23674	.18
23678	.36
23679	.41
23683	.69
23684	1.25
23685	1.5
23688	7

All dimensions are in millimetres.

¹ Stated load capacity is based upon specific thread torques shown in chart.

² It is recommended that these torques be used when installing hoist rings.

³ Replacement Bolt Kit contains bolt and retaining ring. Bolt Kits for Envirolox Hoist Rings available upon request.

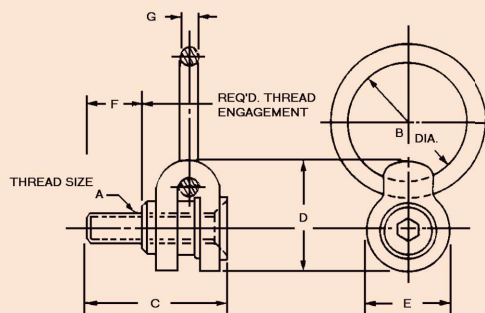
⁴ Available from stock as Standard Clevis.

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Side Pull Style - HOIST RINGS

- Convenient Part Handling
- Rated at 5:1 strength factor
- Bushing: Zinc plated silver passivate
- Material: Alloy Steel
- Clevis, Ring, Bushing and Cap Screw are magnetic particle inspected
- Available with Envirolox Protective Finish upon request.
- Clevis is x-rayed
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity
- All products are CE marked



Metric Side-Pull Hoist Rings

PART NUMBER	LOAD ¹ CAPACITY (Kg)	A	B	C	D	E	F	G	THREAD ² TORQUE (Kg m.)	WT. (Kg)
47351	325	M 8 X 1.25	50.8	61	50.8	38.1	16	9.5	0.43	0.12
47352	500	M 10 X 1.50	50.8	63	50.8	38.1	20	9.5	0.60	0.12
47353	725	M 12 X 1.75	76.2	85	81	60.3	24	15.9	2.00	1.47
47354	1400	M 16 X 2.0	76.2	94	81	60.3	31	15.9	3.50	1.47
47355	2290	M 20 X 2.5	101.6	133	125.4	95.3	40	25.4	7.00	5.10
47356	3050	M 24 X 3.0	101.6	147	125.4	95.3	47	25.4	12.50	5.22
47357	4850	M 30 X 3.5	127.0	173.8	173.0	117.5	43.6	31.7	34.6	12.61

Replacement Bolts

PART NUMBER	THREAD SIZE	WT. (Kg)
47391	M 8	0.02
47392	M 10	0.03
47393	M 12	0.07
47394	M 16	0.14
47395	M 20	0.32
47396	M 24	0.53
47397	M 30	1.03

All dimensions are in millimetres.

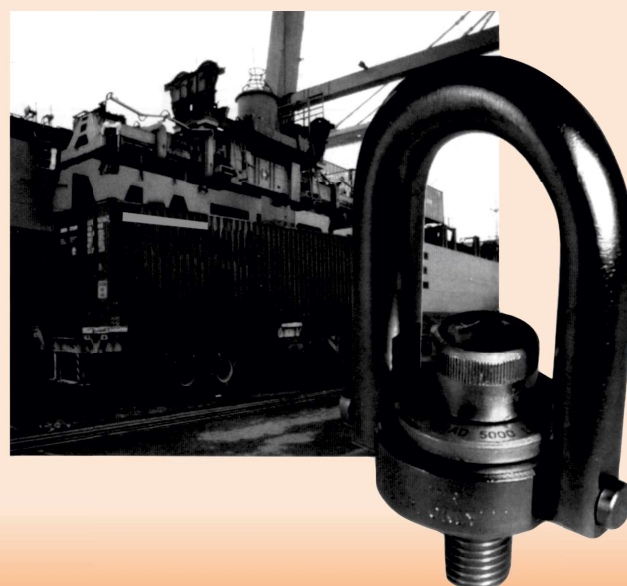
¹ Stated load capacity is based upon specific thread torques shown in charts.

² It is recommended that these torques be used when installing hoist rings.

The Envirolox™ Protective Finish

The Envirolox™ Protective Finish is a *proprietary coating that helps to prevent rusting and other environmental hazards from affecting the Hoist Rings*. This coating is *environmentally friendly* and is proven to be *effective in extreme conditions*. Envirolox Protective Finish is available as a standard on Centre-Pull Style Hoist Rings. It is also available on the Side-Pull Style Hoist Rings upon special request. It is not recommended for the Swivel Eyebolt or the SP 2000 products.

- Available as standard on Centre-Pull Style Hoist Rings
- Available upon request for Side-Pull Style
- Prevents rusting
- Environmentally safe



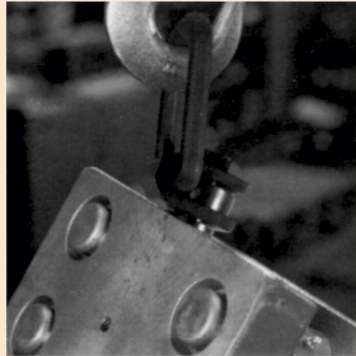
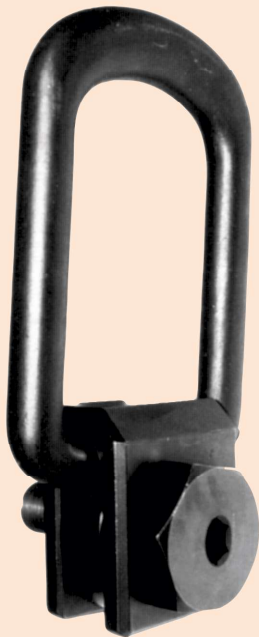
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HOIST RINGS - Side Pull 2000 Style

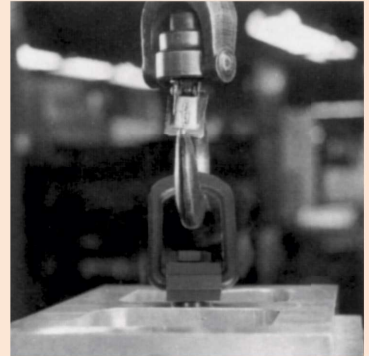


The SP2000 Side-Pull Style Hoist Ring is ideal for flipping fixtures, dies and moulds. The hoist ring is low profile and has a unique bolt retention design. The oversized forged bale easily adapts to larger hoist hooks. Its relatively light weight makes it easier to handle than similar hoist rings and the installation is conveniently done with external wrenching (47581, 47582) or internal/external wrenching (all other sizes). All parts are made in the USA.

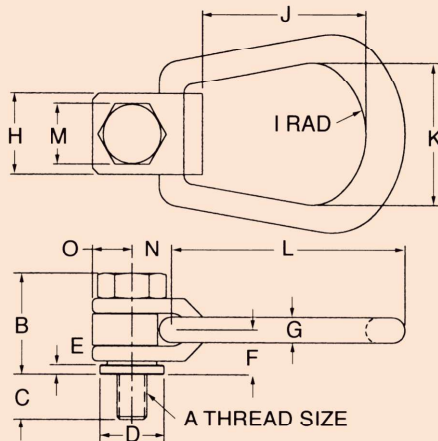
- Can be used for top lifts
- Full swivel and pivot action
- Rated at 5:1 strength factor
- All products are CE marked
- Material: Alloy Steel
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity



SIDE PULL APPLICATION

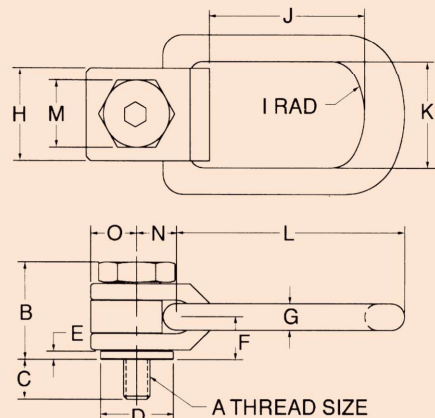


TOP PULL APPLICATION



47581
47582

EXTERNAL WRENCH MOUNTING



47583
47584
47585
47586
47587
47588
47589

INTERNAL/EXTERNAL WRENCH MOUNTING

Metric SP2000 Side-Pull Hoist Rings

PART NUMBER (Kg)	LOAD CAPACITY	THREAD SIZE															HEX SIZE	WT. (Kg)
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
47581	325	M 8 X 1.25	33	16	21	3	14	8	25	25	52	44	76	19	13	13	—	.25
47582	500	M 10 X 1.5	33	20	21	3	14	8	25	25	52	44	76	19	13	13	—	.25
47583	725	M 12 X 1.75	48	24	35	4	21	13	44	38	75	51	110	32	19	22	6	1
47584	1400	M 16 X 2	48	32	35	4	21	13	44	38	75	51	110	32	19	22	8	1
47585	2290	M 20 X 2.5	59	40	48	6	26	16	57	51	102	67	145	44	25	29	10	2
47586	3050	M 24 X 3	59	48	48	6	26	16	57	51	102	67	145	44	25	29	12	2
47587	4850	M 30 X 3.5	90	60	83	9	42	27	95	76	196	111	265	76	49	48	19	9
47588	7500	M36 X 4	90	72	83	9	42	27	95	76	196	111	265	76	49	48	19	9
47589	10000	M48 X 5	90	96	83	9	42	27	95	76	196	111	265	76	49	48	19	10

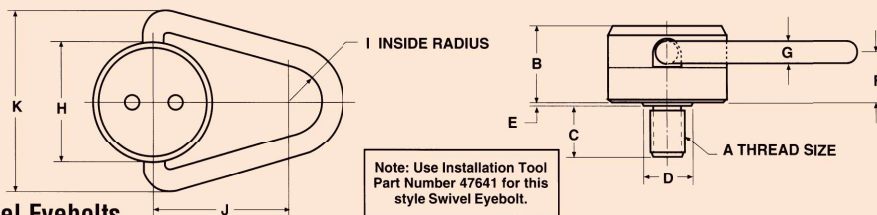
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SWIVEL EYEBOLT

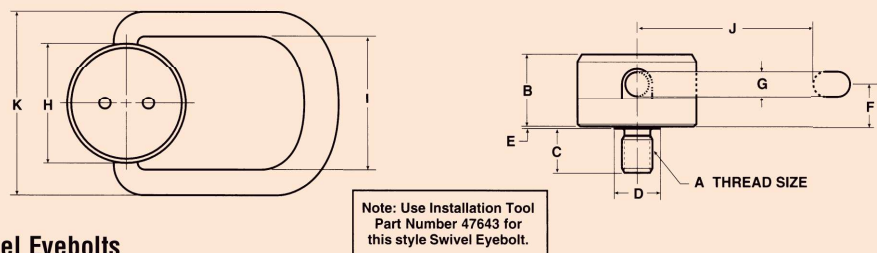
The Swivel Eyebolt lifting product has a full swivel and pivoting action that allows for the flipping and turning of the part without unhooking. The patented tamper resistant design is ideal for permanent mounting on OEM applications or on moulds, dies and fixtures.

- Tamper resistant design
- Swivels 360°, Pivots 180°
- Eliminates bending (of eyebolt) problem
- Forged, oversized, one-piece lift ring
- Rated at 5:1 strength factor
- All products are CE marked
- Load capacities to 2000Kg
- Economically priced
- Material: Alloy steel or 316 stainless steel
- Finish: Black oxide or passivated (SS)



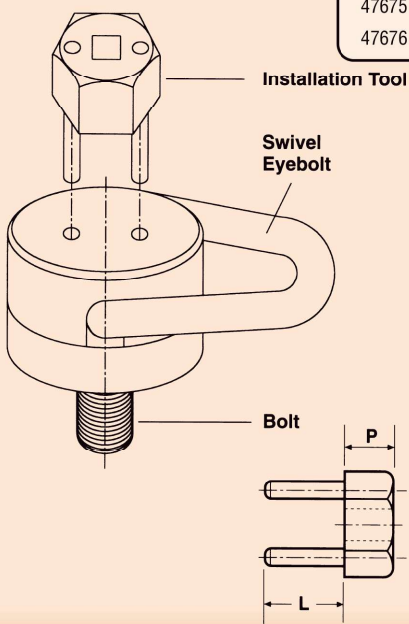
Metric Swivel Eyebolts

PART NUMBER		LOAD CAPACITY(Kg)		THREAD SIZE A	B	C	D	E	F	G	H	I	J	K
ALLOY STEEL	STAINLESS STEEL	ALLOY STEEL	STAINLESS STEEL											
47671	47681	500	250	M10 X 1.5	27.8	14.6	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7
47672	47682	700	350	M12 X 1.75	27.8	19.1	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7



Metric Swivel Eyebolts

PART NUMBER		LOAD CAPACITY(Kg)		THREAD SIZE A	B	C	D	E	F	G	H	I	J	K
ALLOY STEEL	STAINLESS STEEL	ALLOY STEEL	STAINLESS STEEL											
47675	47683	1500	750	M16 X 2.0	38.5	23.8	22.2	.8	22.6	12.7	63.5	70.0	88.9	96.8
47676	47684	2000	1000	M20 X 2.5	38.5	30.2	25.4	.8	22.6	12.7	63.5	70.0	88.9	96.8



Installation Tool Information

INSTALLATION TOOL PART NUMBER	PIN LENGTH L (mm)	HEAD THICKNESS P (mm)	HEX SIZE Q (in)	SQUARE DRIVE R (in)
47641	17.5	14	5/16	1/4
47643	28.5	16.5	1/4	3/8

Installation Tool Information

SWIVEL EYEBOLT PART NUMBER	INSTALLATION TOOL PART NUMBER	RECOMMENDED TORQUE	MAXIMUM COUNTERSINK DIAMETER N
47671	47641	10 N•m	13mm
47672	47641	25 N•m	16mm
47681	47641	10 N•m	13mm
47682	47641	25 N•m	16mm
47675	47643	50 N•m	19mm
47676	47643	80 N•m	22mm
47683	47643	50 N•m	19mm
47684	47643	80 N•m	22mm

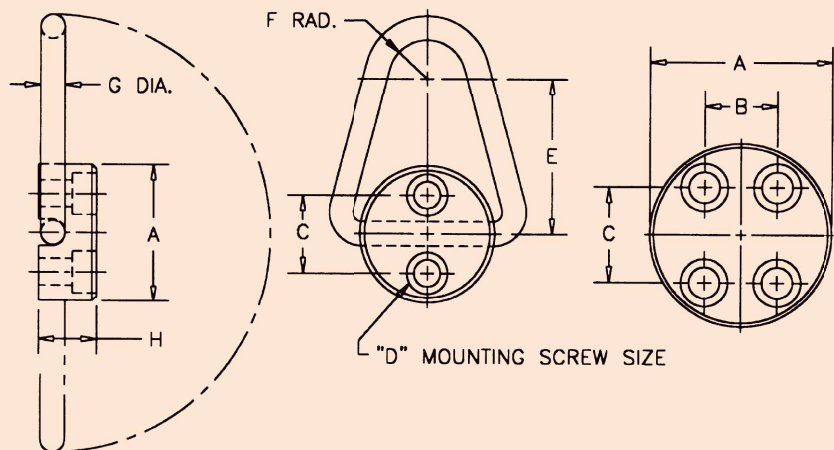
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PIVOTING LIFT RING



The Pivoting Lifting Ring is a low profile lifting device that pivots 180°. It is one of the most economical lifting devices available and is ideal for applications that do not require a rotating action. This Lift Ring is easy to install and is available in five sizes. Load ratings range from 900Kg - 9,000Kg. The product is manufactured from alloy steel, heat treated and magnafluxed.

- Base: Precision machined alloy steel
- Ring: Alloy steel forging, heat treated, magnafluxed and certified
- Finish: Black oxide
- Rated at 6:1 strength factor
- All products are **CE** marked



Pivoting Lifting Rings

PART NUMBER	LOAD CAPACITY (Kg)	RECOMMENDED SCREW SIZE							
		A	B	C	D	E	F	G	H
47411	900	45	—	25	M8 X 1.25 X 35	51	13	8	19
47412	1100	57	—	28.5	M10 X 1.5 X 40	63.5	16	9.5	22
47413	2250	63.5	—	38	M12 X 1.75 X 45	76	19	13	28.5
47414*	5400	79	32	41	M12 X 1.75 X 65	102	22	19	35
47415*	9000	92	32	52	M16 X 2.0 X 65	127	25	25	48

*The larger load capacity rings have four mounting holes.

Optional Mounting Screws

LIFTING RING PART NUMBER	SCREW PART NUMBER	SCREW SIZE
47411	47471	M8 X 1.25 x 35
47412	47472	M10 X 1.5 x 40
47413	47473	M12 X 1.75 x 45
47414	47474	M12 X 1.75 x 65
47415	47475	M16 X 2.0 x 65

* Note: Mounting Screws must be ordered separately.

* Recommend using socket head cap screws.

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