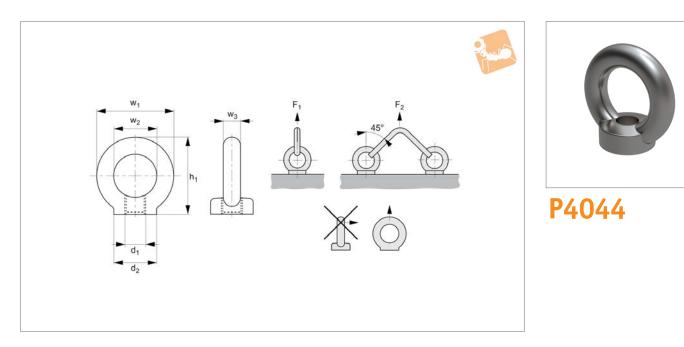


# Lifting Pins, Lifting Bolts &



### Material

Stainless steel (A4, AISI 316). CE marked.

#### **Technical Notes**

To DIN 582.

When using lifting eye bolts it is critical to ensure that the face is in firm contact with the mating surface.

These lifting bolts are generally installed and remain on a piece of equipment for the

purpose of transporting them. They are not for repeated lifting use - if this is required our swivelling lifting bolt range should be used.

#### Tips

Maximum load values are only applicable when the thread and the material, it is being used in is as least as strong as the that of the bolt.

 $F_1$  and  $F_2$  values given are for steel and cast

iron components.

#### **Important Notes**

Not to be used at lift angles of greater than 45° or with swivelling loads. Please refer to the safety documentation before using this part. Supplied with certificate and operating instructions.

Order No.	Material	$d_1$	d <sub>2</sub>	$w_1$	$h_1$	w <sub>2</sub>	w <sub>3</sub>	F <sub>1</sub> kg max.	F <sub>2</sub> kg max.	Weight kg
P4044.060-A4	A4 s/s	M 6	20	36	36	20	8	70	50	0.05
P4044.080-A4	A4 s/s	M 8	20	36	36	20	8	140	95	0.05
P4044.100-A4	A4 s/s	M10	25	45	45	25	10	230	170	0.09
P4044.120-A4	A4 s/s	M12	30	54	53	30	12	340	240	0.16
P4044.160-A4	A4 s/s	M16	35	63	62	35	14	700	500	0.24
P4044.200-A4	A4 s/s	M20	40	72	71	40	16	1200	860	0.36
P4044.240-A4	A4 s/s	M24	50	90	90	50	20	1800	1270	0.72
P4044.300-A4	A4 s/s	M30	65	108	109	60	24@	3200	2300	1.32
P4044.360-A4	A4 s/s	M36	75	126	128	70	28	4600	3300	2.08
P4044.420-A4	A4 s/s	M42	85	144	147	80	32	6300	4500	3.11
P4044.480-A4	A4 s/s	M48	100	166	168	90	38	8600	6100	5.02
P4044.060-A2	A2 s/s	M 6	20	36	31	16	8,5@	70	50	0.03
P4044.080-A2	A2 s/s	M 8	20	36	36	20	8.5	140	95	0.05
P4044.100-A2	A2 s/s	M10	25	45	45	25	10	230	170	0.09
P4044.120-A2	A2 s/s	M12	30	54	53	30	11	340	240	0.16
P4044.160-A2	A2 s/s	M16	35	63	62	35	13	700	500	0.24
P4044.200-A2	A2 s/s	M20	40	72	71	40	16	1200	860	0.36
P4044.240-A2	A2 s/s	M24	50	90	90	50	20	1800	1270	0.72
P4044.300-A2	A2 s/s	M30	65	108	109	60	25	3200	2300	1.32
P4044.360-A2	A2 s/s	M36	75	126	128	70	30	4600	3300	2.08



## Introduction

Swivel Lifting Rings and Lifting Bolts





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Threads M8 – M48 Loads 0,3 tons to 15 tons



Threads M4 – M100 Loads 0,05 tons to 50 tons



These are CE marked and are available with male or female threads in either steel or stainless steel (A4 AISI 316). They are meant only for linear loading of the bolts at a maximum angle of 45° from the thread. They are not meant for loads that might swivel.

These are supplied with a generic CE Certificate of Conformity stating that the parts have been manufactured to the relevant DIN standard and therefore suitable for lifting.

### High-tensile lifting bolts (P4054-P4055)

The High-tensile lifting bolts are similar to the standard lifting bolts but are rated at higher loads and can lift loads at up to 90° from the thread. They are not meant for loads that might swivel.

### Swivel lifting rings operating instructions. Please follow these instructions carefully.

- Ensure all lifting bolts are CE marked.
- Ensure they are handled by qualified personnel.
- Refer to the operating instructions particularly with regards to product selection,
- any possibility of the load swivelling, the effect of lifting angles on the load capacity (see relevant tables), etc.
- Never allow any personnel underneath a suspended load.
- Always heed the load rating of the lifting bolt.
- Always perform a visual inspection of the lifting rings prior to use. Checking for any damage to thread and/or swivelling system. Check for wear or corrosion, signs of stress or bending. Check CE mark and load rating.
- Ensure a yearly full service inspection is performed.
- Always ensure the full bottom face of the lifting bolts is in contact with a smooth, square surface.
- Ensure bolt is tightened to the correct torque.
- Ensure full and unrestricted movement of the lifting ring in all directions.
- Before each lift ensure the correct orientation of the shackle in the lift direction.
- Avoid using our standard steel lifting rings in corrosive environments eg sandy, chemical, acid, moisture etc. In this case consider using our stainless steel lifting rings.





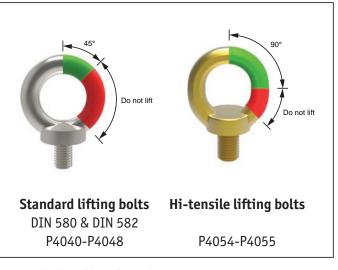
Triple swivel

Threads M8 – M56 Loads 0,3 tons to 22 tons

### Introduction to swivel lifting rings and Lifting Bolts (P4002-P4055)

Our swivel lifting rings fully comply with the EC directive 2006/42/EC. They are CE marked and are supplied with a Certificate of Conformity. There is a 100% check on anti-cracking, a proof load test of 2.5 x load limit and a safety factor of 5 on most parts. Each ring is individually marked to ensure full product traceability.

The Swivel Lifting Rings come in three main forms – depending on the number of axis required to swivel. The most popular type is the double swivel rings.



- Note the thread length requirements:
  - 1 x thread diameter for steel (ST37 min.).
  - 1.25 x thread diameter for cast iron.
  - 2 x thread diameter for aluminium.
  - 2.5 x thread diameter for other light metals.

- If fixing into low resistance material it is better to allow for a bigger

diameter thread to compensate for the lower material resistance.

Note: The full thread must be engaged. Longer thread lengths can be supplied on request or a bolt and washer/nut combination can be used.



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## **Product Overview**

Threads M8 - M30

Loads 0,3 tons to 3

P4020

tons.

### Swivel Lifting Rings



P4022

Threads M30 - M45

Loads 3,5 tons to 6 tons.

### **Temperature extremes**

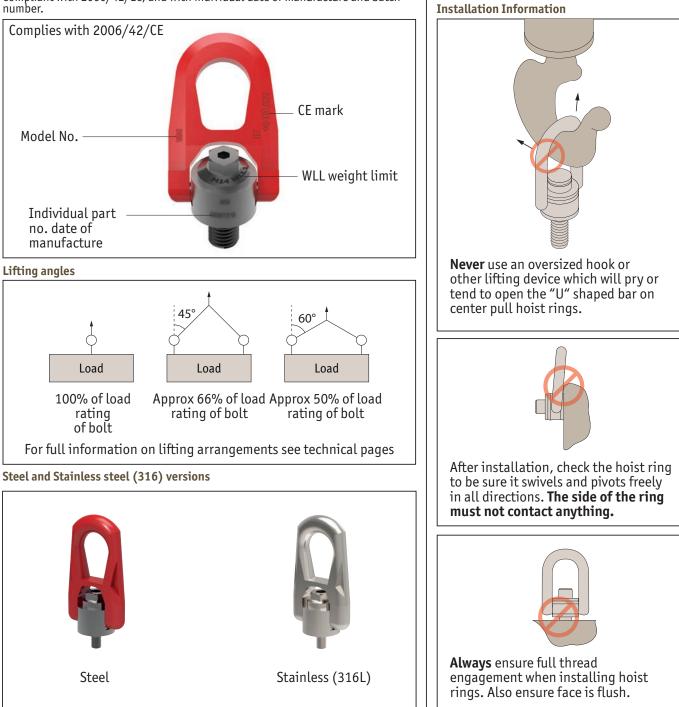
-40°C to -20°C Load rating reduces by 20%. +200°C to +300°C Load rating reduces by 10%. +300°C to +400°C Load rating reduces by 25%.

### Rugged

For harsh environments we recommend the use of our stainless steel lifting rings.

### **Product** marking

Compliant with 2006/42/EC, and with individual date of manufacture and batch number.



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# **Technical Information**

Single Swivel Lifting Rings



	P4002 Male		Ρ	4004 Female					
Lifting type		• • •	↓	P		α max. = 60°		α max. = 60°	
No. of rings		1	2	1	2	2	2	4	4
Lifting angle		0°	0°	90°	90°	45°	60°	45°	60°
Part no.	Thread								
P4002.M008 & P4004.M008	M 8	0,30 tons	0,60 tons	0,30 tons	0,60 tons	0,40 tons	0,30 tons	0,60 tons	0,30 tons
P4002.M010 & P4004.M010	M10	0,60 tons	1,20 tons	0,60 tons	1,20 tons	0,80 tons	0,60 tons	1,30 tons	0,60 tons
P4002.M012 & P4004.M012	M12	1,00 tons	2,00 tons	1,00 tons	2,00 tons	1,40 tons	1,00 tons	2,10 tons	1,00 tons
P4002.M016 & P4004.M016	M16	1,60 tons	3,20 tons	1,60 tons	3,20 tons	2,20 tons	1,60 tons	3,40 tons	1,60 tons
P4002.M020 & P4004.M020	M20	2,50 tons	5,00 tons	2,50 tons	5,00 tons	3,50 tons	2,50 tons	5,30 tons	2,50 tons
P4002.M024 & P4004.M024	M24	4,00 tons	8,00 tons	4,00 tons	8,00 tons	5,60 tons	4,00 tons	8,40 tons	4,00 tons
P4002.M030 & P4004.M030	M30	6,30 tons	12,60 tons	6,30 tons	12,60 tons	8,80 tons	6,30 tons	13,20 tons	6,30 tons
P4002.M036 & P4004.M036	M36	10,00 tons	20,00 tons	10,00 tons	20,00 tons	14,00 tons	10,00 tons	21,00 tons	10,00 tons
P4002.M042	M42	12,50 tons	25,00 tons	12,50 tons	25,00 tons	17,50 tons	12,50 tons	26,30 tons	12,50 tons
P4002.M048	M48	15,00 tons	30,00 tons	15,00 tons	30,00 tons	21,00 tons	15,00 tons	31,50 tons	15,00 tons





## **Technical Information**

### Double Swivel Lifting Rings



Lifting type A A A A A A A A A A A A A A A A B A B A B A B A B A B A B A B B A B <t< th=""><th></th></t<>	
Lifting type Image: P	
Lifting angle 0° 0° 90° 90° 90° 45° 60° 45° 60°   Part no. Thread Image: Constraint of the c	Lifting type
Lifting angle 0° 0° 90° 90° 90° 45° 60° 45° 60°   Part no. Thread Image: Constraint of the c	No. of rings
Part no. Thread Image: Constraint of the state of th	
P4005.M005 M 5 0,075 tons 0,150 tons 0,075 tons 0,100 tons 0,0075 tons 0,150 tons 0,075 tons 0,150 tons 0,075 tons 0,150 tons 0,075 tons 0,150 tons 0,075 tons 0,075 tons 0,075 tons 0,075 tons 0,075 tons 0,075 tons 0,150 tons 0,075 tons 0,150 tons 0,075 tons 0,100 tons 0,0075 tons 0,100 tons 0,200	Part no.
P4005.M006 M 6 0,100 tons 0,200 tons 0,100 tons 0,200 tons 0,140 tons 0,100 tons 0,200 tons 0,100 tons 0,200 tons 0,100 tons 0,100 tons 0,200 tons 0,300 tons 0,400 tons 0,200 tons 0,300 tons 0,400 tons 0,600 tons 1,300 tons 0,600 tons 1,000 tons 2,000 tons 1,000 tons 2,000 tons 1,000 tons 2,000 tons 1,400 tons 1,000 tons 2,700 tons <th>005.M004</th>	005.M004
P4005.M008 & P4006.M008 M 8 0,30 tons 0,60 tons 0,30 tons 0,60 tons 0,40 tons 0,30 tons 0,60 tons 0,30 tons   P4005.M010 & P4006.M010 M10 0,60 tons 1,20 tons 0,60 tons 1,20 tons 0,60 tons 0,40 tons 0,30 tons 0,60 tons 0,60 tons 0,60 tons 0,60 tons 0,60 tons 1,20 tons 1,20 tons 1,00 tons 2,10 tons 1,00 tons 2,10 tons 1,00 tons 2,10 tons 1,00 tons 2,70 tons 1,30 tons 2,70 tons 1,30 tons   P4005.M016 & P4006.M016 M16 1,60 tons 3,20 tons 1,60 tons 3,20 tons 1,60 tons 3,40 tons	005.M005
P4005.M010 & P4006.M010 M10 0,60 tons 1,20 tons 0,60 tons 1,20 tons 0,80 tons 0,60 tons 1,30 tons 0,60 tons   P4005.M012 & P4006.M012 M12 1,00 tons 2,00 tons 1,00 tons 2,00 tons 1,40 tons 1,00 tons 2,10 tons 1,00 tons   P4005.M014 & P4006.M014 M14 1,30 tons 2,60 tons 1,30 tons 2,60 tons 1,80 tons 1,30 tons 2,70 tons 1,30 tons   P4005.M016 & P4006.M016 M16 1,60 tons 3,20 tons 1,60 tons	005.M006
P4005.M012 & P4006.M012 M12 1,00 tons 2,00 tons 1,00 tons 2,00 tons 1,40 tons 1,00 tons 2,10 tons 1,00 tons   P4005.M012 & P4006.M014 M14 1,30 tons 2,60 tons 1,30 tons 2,60 tons 1,80 tons 2,70 tons 1,30 tons   P4005.M016 & P4006.M016 M16 1,60 tons 3,20 tons 1,60 tons 3,20 tons 1,60 tons 3,40 tons 1,60 tons	005.M008 & P4006.M008
P4005.M014 & P4006.M014 M14 1,30 tons 2,60 tons 1,30 tons 2,60 tons 1,80 tons 2,70 tons 1,30 tons   P4005.M016 & P4006.M016 M16 1,60 tons 3,20 tons 1,60 tons 3,20 tons 1,60 tons 3,20 tons 1,60 tons 3,40 tons 1,60 tons	005.M010 & P4006.M010
P4005.M016 & P4006.M016 M16 1,60 tons 3,20 tons 1,60 tons 3,20 tons 2,20 tons 1,60 tons 3,40 tons 1,60 tons	005.M012 & P4006.M012
	005.M014 & P4006.M014
P4005 M018 P4006 M018 M18 2 00 tons 4 00 tons 2 00 tons 4 00 tons 2 80 tons 2 00 tons 4 20 tons 2 00 tons	005.M016 & P4006.M016
	005.M018 & P4006.M018
P4005.M020 & P4006.M020 M20 2,50 tons 5,00 tons 2,50 tons 3,50 tons 2,50 tons 5,30 tons 2,50 tons	005.M020 & P4006.M020
P4005.M022 & P4006.M022 M22 3,00 tons 6,00 tons 3,00 tons 4,20 tons 3,00 tons 6,30 tons 3,00 tons	005.M022 & P4006.M022
P4005.M024 M24 4,00 tons 8,00 tons 4,00 tons 5,60 tons 4,00 tons 8,40 tons 4,00 tons	005.M024
P4005.M027 M27 5,00 tons 10,00 tons 5,00 tons 10,00 tons 7,00 tons 5,00 tons 10,50 tons 5,00 tons	005.M027
P4005.M030 M30 6,30 tons 12,60 tons 6,30 tons 12,600 tons 8,8 tons 6,30 tons 13,20 tons 6,30 tons	005.M030
P4005.I031 & P4006.I031 (UNC 5/16"-18) 650 lbs 1,300 lbs 650 lbs 1,300 lbs 910 lbs 650 lbs 1,365 lbs 650 lbs	005.I031 & P4006 I031
P4005.I037 & P4006.I037 (UNC 3/8"-16) 1,200 lbs 2,400 lbs 1,300 lbs 2,400 lbs 1,680 lbs 1,200 lbs 2,520 lbs 1,200 lbs	
P4005.I050 & P4006.I050 (UNC 1/2"13) 2,200 lbs 4,400 lbs 2,200 lbs 4,400 lbs 3,080 lbs 2,200 lbs 4,620 lbs 2,200 lbs	
P4005.I063 & P4006.I063 (UNC 5/8"-11) 3,800 lbs 7,600 lbs 3,800 lbs 7,600 lbs 5,320 lbs 3,800 lbs 7,980 lbs 3,800 lbs	
P4005.I075 & P4006.I075 (UNC 3/4"-10) 5,500 lbs 11,000 lbs 5,500 lbs 11,000 lbs 5,500 lbs 11,550 lbs 5,500 lbs	
P4005.I088 & P4006.I088 (UNC 7/8"-9) 6,600 lbs 13,200 lbs 6,600 lbs 13,200 lbs 6,600 lbs 13,200 lbs 6,600 lbs 13,860 lbs 6,600 lbs	
P4005.I100 (UNC 1"-8) 10,000 lbs 20,000 lbs 10,000 lbs 20,000 lbs 14,000 lbs 10,000 lbs 21,000 lbs 10,000 lbs	100.1000 α 1 4000.1000

