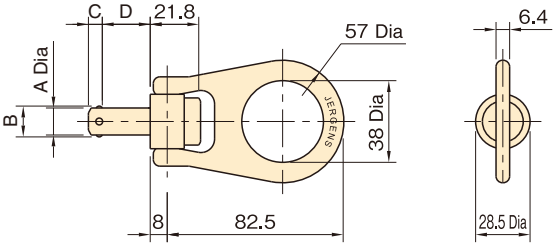
LP KWIK-LOK LIFTING PINS

RoHS 200°C SUS



[Lifting Ring]
Material : SUS630 stainless steel
Heat treated

[Body(Shank)]
Material : SUS630 stainless steel

[Balls]
Material : SUS630 stainless steel

[Release Button]
Material : SUS303 stainless steel

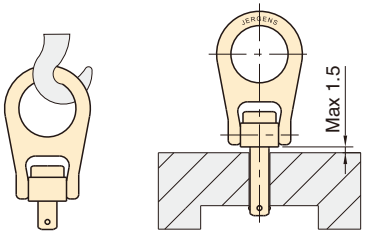
[Spring]
Material : SUS302 stainless steel

Strength Factor 5:1

Part Number	A $(^{-0.04}_{-0.08})$	B (±0.25)	C $(^{0}_{-1.0})$	D $(^{+0.5}_{0})$	Required Hole Dia. $(^{+0.1}_{0})$	Load Capacity (kN)	Weight (kg)
LP10×15	10	12	9	15	10	4.4	0.24
LP10×20				20			0.24
LP10×25				25			0.24
LP10×30				30			0.25
LP10×35				35			0.25
LP10×40				40			0.25
LP10×50				50			0.26
LP10×75				75			0.28
LP12×15	12	14.27	10	15	12	5.5	0.24
LP12×20				20			0.25
LP12×25				25			0.25
LP12×30				30			0.26
LP12×35				35			0.26
LP12×40				40			0.27
LP12×50				50			0.28
LP12×75				75			0.30
LP16×15	16	19	14	15	16	6.2	0.27
LP16×20				20			0.28
LP16×25				25			0.28
LP16×30				30			0.29
LP16×35				35			0.29
LP16×40				40			0.30
LP16×50				50			0.32
LP16×75				75			0.36

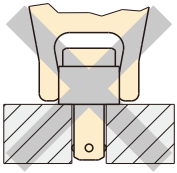
A certificate of proof test accompanies the product.

How To Use



Notes:

Before use, review all operating instructions that are included in the packaging.
If the required hole size cannot be achieved or when lifting a part with tensile strength of 550N/mm^2 or less, you are recommended to use Kwik-Lok Pin Threaded Receptacles shown below.



Features:

Ball-lock lifting pin that allows for easy, quick installation and removal
Resists corrosion in harsh environments
Designed to help prevent accidental actuation of ball release button.
Forged lifting ring with large opening that accommodates a wide range of lifting hooks/hardware.

Technical Information

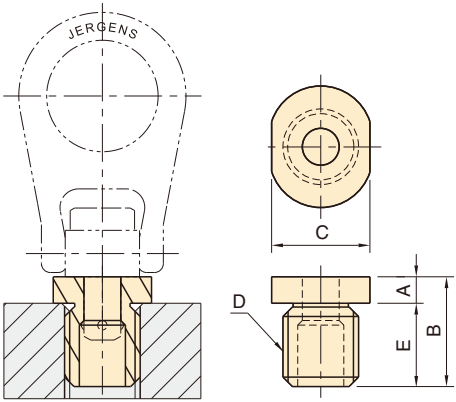
Heat resistance : Max. 204°C

To Be Ordered Separately

LPS KWIK-LOK PIN THREADED RECEPTACLES

RoHS SUS

Material : SUS630 stainless steel
Heat treated



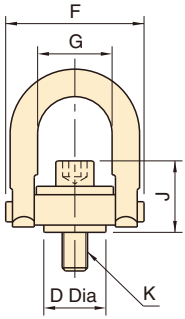
Part Number	A	B	C	D	E	Weight (g)	Kwik-Lok Lifting Pins
LPS10×15	7	29	26	M20x2.5	22	70	LP10x15
LPS12×15	9	37	30	M22x2.5	28	90	LP12x15
LPS16×15	10	41	32	M27x3	31	140	LP16x15

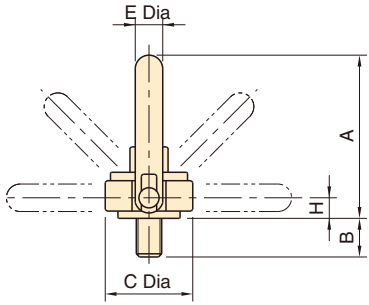
Feature:

Use if the required hole size cannot be achieved or when lifting a part with tensile strength of 550N/mm^2 or less.

HR / HRB HOIST RINGS, Center-Pull Style

RoHS 200°C





[HR Type]
Material : SCM440 steel
Finish : Black oxide

[HRB Type]
Material : SCM440 steel
Finish : Nickel-based coating

* HR48, HR64 and all HRBs are not stock items.

Strength Factor 5:1

Part Number		A	B	C	D	E	F	G	H	J	K	Load Capacity (N)	Weight (kg)
HR 6	HRB 6	67.8	12	25.4	19	9.7	46.7	21.8	8.7	24	M 6x1	2,000	0.15
HR 8	HRB 8		12.5							26	M 8x1.25	4,000	0.17
HR10	HRB10		17.5							28	M10x1.5	4,500	0.17
HR12	HRB12	123	19	57.3	38.1	19	89.4	44.7	15.7	43.5	M12x1.75	10,500	1.1
HR12L	–	170.7											1.3
HR16	HRB16	123	29							47.5	M16x2	19,000	1.1
HR16L	–	170.7								45.5			1.3
–	HRB20S	123	34							51.5		21,500	1.2
HR20	HRB20	163	32	82.7	58.7	25.4	130.6	71.1	19.4	64.5	M20x2.5	30,000	3
HR20L	–	206								79.5			3.3
HR24	HRB24	163	37							68.5	M24x3	42,000	3.1
–	HRB30S	221.7	46	104.5	81	31.7	165.1	88.9	25.3	82.5	M30x3.5	70,000	6.3
HR30	HRB30		66										6.4
HR36	HRB36	316.7	68	133.7	106.4	44.4	217.2	114.3	33.3	106	M36x4	110,000	15.5
HR42	HRB42									112	M42x4.5	125,000	16
HR48	HRB48		88							118	M48x5	135,000	16.8
HR64	HRB64	419.1	96	185.7	146	57.15	297.6	152.4	48.5	152	M64x6	225,000	40

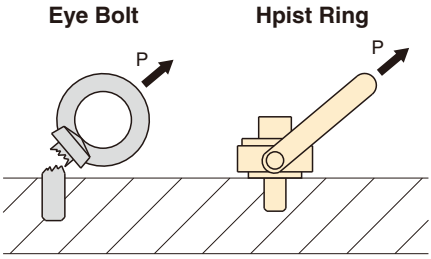
Bolt replacement kits are available.
A certificate of proof test accompanies the product.

Technical Information

Heat resistance : Max. 204°C

Features:

The U-bar allows lifting a weight safely with full swivel (360°) and pivot (180°) action.



Stated load capacity applies to lifting in all directions.
U-bar, bolt, pins, base, washer and bushing are magnetic particle inspected.
Rated load capacity and proper screw torque are stamped on each Hoist Ring.
HRB type is over 10 times as corrosion-proof as HR type.

Important!

In multipoint lift applications, the applied load changes with sling angles. The applied load on each Hoist Ring must be less than the stated load capacity.

How To Calculate

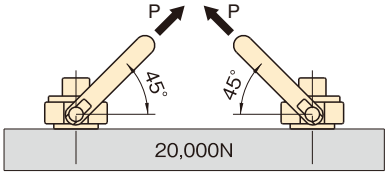
$$P = \frac{\frac{W}{N}}{\text{Sin } A}$$

P : Applied load on each Hoist Ring(N)
W : Weight to be lifted(N)
N : Number of Hoist Rings
A : Sling angle(°)

Sample Calculation:

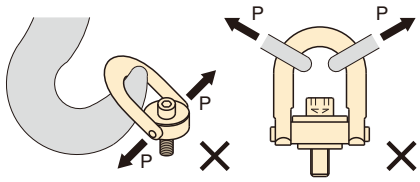
W : 20,000N, N : 2, A : 45°

$$P = \frac{\frac{20{,}000}{2}}{\text{Sin } 45°} = 14{,}142N$$

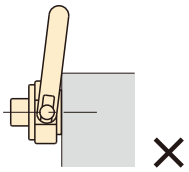


Installation Instructions

Ensure that a hoist ring swivels and pivots freely in all directions.
Never use a hook or other lifting device that will pry or tend to open the U-bar on Hoist Rings.
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 aluminum, the minimum effective thread engagement should be 2 times the thread diameter. When installing in steel, thread engagement should be 1-1/2 times the thread diameter.
Do not apply shock loads.



The side of the U-bar must not contact anything!



HR-A / HR-B BOLT REPLACEMENT KITS

RoHS

To Be Ordered Separately

HR HRB

[HR-A Type]
Material : SCM440 steel
Finish : Black oxide

[HR-B Type]
Material : SCM440 steel
Finish : Nickel-based coating

HR-A ∗ HR48-A and HR64-A are not stock items.

Part Number	Weight (g)	Part Number	Weight (g)	Part Number	Weight (g)
HR 6-A	8	**HR16-A**	120	**HR36-A**	1,520
HR 8-A	20	**HR20-A**	230	**HR42-A**	2,750
HR10-A	30	**HR24-A**	400	HR48-A	3,270
HR12-A	60	**HR30-A**	790	HR64-A	15,700

HR-B ∗All HR-Bs are non-stock items.

Part Number	Weight (g)	Part Number	Weight (g)	Part Number	Weight (g)
HR 6-B	8	HR20-BS	210	HR36-B	1,520
HR 8-B	20	HR20-B	230	HR42-B	2,750
HR10-B	30	HR24-B	400	HR48-B	3,270
HR12-B	60	HR30-BS	790	HR64-B	7,120
HR16-B	120	HR30-B	910	–	–

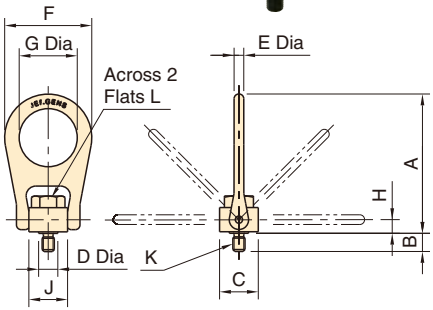
Features:

Contains a set of replacement bolt and retaining ring.
The bolt is magnetic particle inspected.

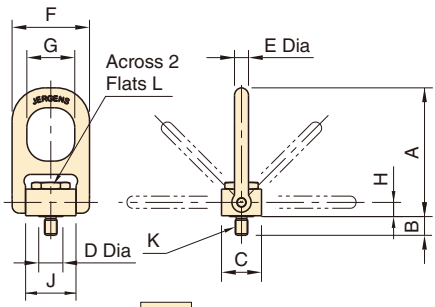
HRE HOIST RINGS, Forged Center-Pull Style

RoHS 200°C

Material : SCM440 steel
Finish : Black oxide



HRE 8 - 20



HRE 24 - 48L

∗ HRE48 and HRE48L are not stock items.

Strength Factor 5:1

Part Number	A	B	C	D	E	F	G	H	J	K	L	Load Capacity (N)	Weight (kg)
HRE 8	91.3	12	25.4	12.7	6.3	57.2	38.1	8.7	25.4	M 8x1.25	19	3,600	0.27
HRE10		15								M10x1.5		4,000	0.27
HRE12	161.9	18	38.1	25.4	19	112.7	76.2	14.3	50.8	M12x1.75	32	9,400	1.64
HRE16		24								M16x2		17,000	1.64
HRE20		30								M20x2.5		19,300	1.7
HRE24	245.3	35.7	76.2	47.6	31.7	147.6	91.3	27	96	M24x3	63.5	37,800	7.1
HRE24L		47.6											7.2
HRE30		44.8								M30x3.5		63,000	7.3
HRE30L		60											7.4
HRE36	351.6	53.6	114.3	63.5	44.5	196.1	114.3	36.5	123.8	M36x4	82.6	99,000	19.1
HRE36L		71.4											19.3
HRE42		62.7								M42x4.5		112,000	19.4
HRE42L		83.3											19.6
HRE48		71.4								M48x5		121,000	19.7
HRE48L		95.3											20

A certificate of proof test accompanies the product.

Feature:

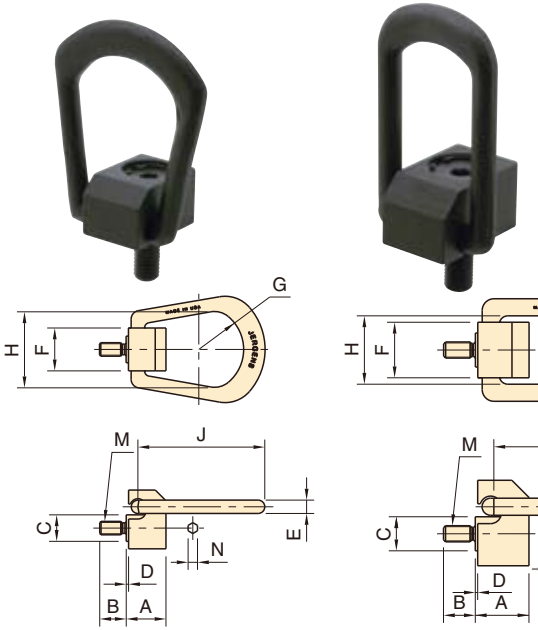
Center-brace design of lifting ring eliminates the possibility of spreading the lifting ring in misapplications.
Design that eliminates the possibility of spreading the lift ring in misapplications.
Full (over center) 360° swivel and 180° pivot action

Technical Information

Heat resistance : Max. 204°C

SHR HOIST RINGS, Side-Swivel Style

RoHS



Material : SCM440 steel
Finish : Black oside

SHR 8,10 **SHR 12 - 20**

Strength Factor 5:1

Part Number	A	B	C	D	E	F	G	H	J	M	N	Load Capacity (N)	Weight (kg)
SHR 8	23.8	15.8	15.8	1.6	7.9	25.4	25.4	44.5	75.4	M 8×1.25	6	2,900	0.27
SHR10		19.8								M10×1.5		4,500	0.27
SHR12	40.1	23.8	25.4	2	12.7	41.3	38.1	50.8	120.7	M12×1.75	10	6,500	1.14
SHR16		31.8								M16×2		12,600	1.14
SHR20		39.7								M20×2.5		20,600	1.18

A certificate of proof test accompanies the product.

How To Use

Top Pull

Features:

Perfect for permanent installation on OEM products, molds or fixtures.
The body swivels 360° and the ring pivots 180°.

Note:

The load capacity can be reduced depending on applications.