

ROBERTS ENGINEERING C&R EQUIPMENT PRODUCT CATALOGUE



Development Member

TODAYS SOLUTIONS FOR TOMORROWS WORLD >>



Lifting Equipment Engineers New Zealand

ROBERTS ENGINEERING

INCORPORATING **C&R EQUIPMENT**

PRODUCT CATALOGUE

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- ➔ **MANUFACTURING ENGINEERS**
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- ➔ **PROFILE CUTTING**
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GENERAL CAUTIONS AND WARNINGS

- All C&R Equipment products manufactured by Roberts Engineering are sold with the express understanding that the purchaser is thoroughly familiar with the safe and proper use and application of the product. Responsibility for the application and use of the products rests with the user.
- Failure of the product can occur due to misapplication, abuse or improper maintenance. Product failure could allow the load to become out of control, resulting in possible property damage, personal injury or death.
- There are numerous government and industry standards that cover products made by Roberts Engineering. This catalogue may not reference them but we do design our product to meet the standards.
- Ratings shown in Roberts Engineering / C&R Equipment literature are applicable only to new or in "as new" condition products. The recommended Proof Load on all items in this catalogue is twice the Working Load Limit unless otherwise shown. Load Limit ratings indicate the greatest force or load a product can carry under usual environmental conditions. Shock loading and extraordinary conditions must be taken into account when selecting products for use in a system.
- In general, the products displayed in Roberts Engineering / C&R Equipment literature are used as parts of a system being employed to accomplish a task. Therefore we can only recommend the use of products within the Working Load Limits, or other stated limitations, for this purpose.
- The Working Load Limit, Design Factor or Efficiency Rating of each C&R Equipment product may be affected by wear, misuse, overloading, corrosion, deformation, intentional alteration and other use conditions.
- Regular inspection must be conducted to determine whether use can be continued at either the catalogue assigned WLL or a reduced WLL, or whether the product must be withdrawn from service.
- C&R Equipment products generally are intended for tension or pull. Side loading must be avoided, as it exerts additional force or loading which the product is not designed to accommodate.
- Welding C&R Equipment load support parts or products can be hazardous. Knowledge of materials, heat treatment and welding procedures is necessary for proper welding. Roberts Engineering should be consulted for information.
- Test Plaques should be periodically inspected and cleaned. Test Plaques should be replaced when they are no longer legible. The product should be returned to Roberts Engineering or an authorised agent so that it can be inspected and tested to see that it meets the specifications on the test plaque.

Block Maintenance

Blocks must be regularly inspected, lubricated, and maintained for peak efficiency and extended usefulness. Their proper use and maintenance is equal in importance as for other mechanical equipment. The frequency of inspection and lubrication is dependent upon frequency and periods of use, environmental conditions and the user's good judgment.

Inspection: As a minimum, the following points should be considered:

- Wear on pins or axles, rope grooves, side plates, bushing or bearings, and fittings. Excessive wear may be a cause to replace parts or remove the block from service.
- Deformation in side plates, pins and axles, fitting attachment points, trunnions, etc. Deformation can be caused by abusive service and/or overload and may be a reason to remove the block from service.
- Misalignment or wobble in sheaves.
- Security of nuts, bolts, circlips and other locking methods, especially after reassembly following a tear down inspection. The original securing method should be used e.g. lock washer, set screw, split pin, tension pin.
- Proper positioning and running clearance for sheave bearings / bushes.
- Hook, eye, or tongue to cross head clearance is set at the factory. Excessive clearance can result from component wear and necessitates disassembly for further inspection.
- Hook, hook nut and latch for correct fit and absence of deformation, corrosion.
- Welded side plates for weld corrosion or weld cracking.

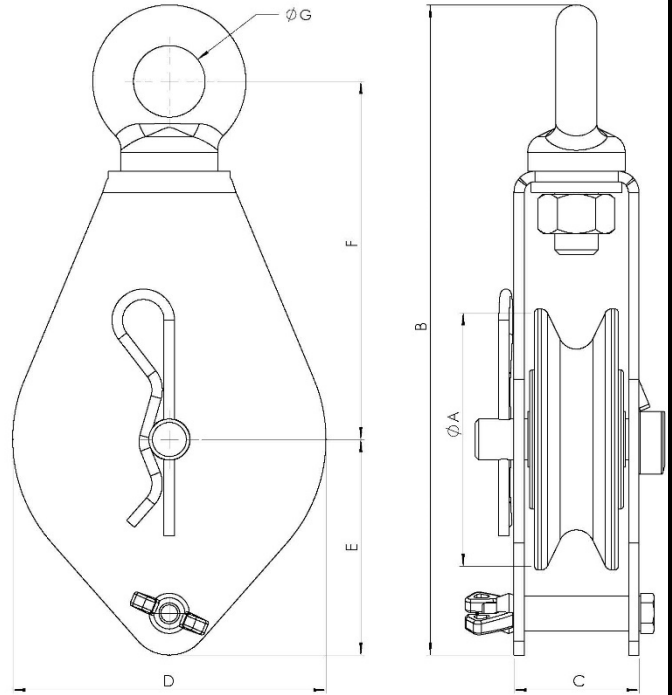
Lubrication: The frequency of lubrication depends upon frequency and period of product use as well as environmental conditions, which are dependent upon the user's good judgment. Assuming normal product use, the following schedule is suggested when using multipurpose grease of a medium consistency.

1. Sheave Bearings

- Bronze Bushings: Every 8 hours of continuous operation or every 14 days of intermittent operation.
- Ball / Roller Bearings: Every 24 hours of continuous operation or every 14 days of intermittent operation.
- Tapered Roller Bearings: Every 40 hours of continuous operation or every 30 days of intermittent operation.

2. Hook / Eye / Tongue Thrust Bearings

- Bronze Thrust Bushing / No Bearing: Every 16 hours for frequent swivelling; every 21 days for infrequent swivelling.
- Ball / Roller Thrust: Every 14 days for frequent swivelling; every 45 days for infrequent swivelling.

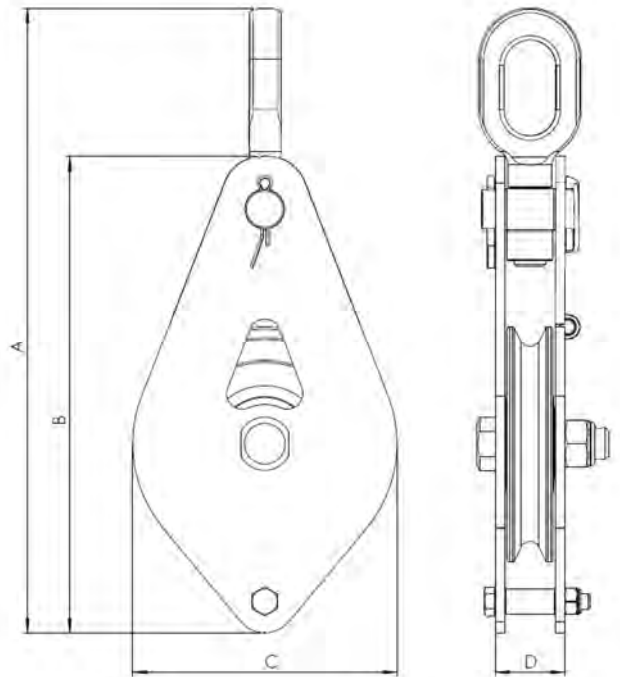


Special Features:

- Compact
- Light weight
- Zinc plated for corrosion resistance
- 500kg WLL proof loaded to 1000kg
- Standard plain bearing sheave grooved for 8mm rope
- Available in single or double sheave configuration
- Can be supplied with ball bearing sheaves and grooved for other rope sizes
- Other options available on request

PRODUCT CODE		SHEAVE ϕ Amm	B mm	C mm	D mm	E mm	F mm	G ϕ mm	WEIGHT \approx kg
7-101-050	Single	50	160	36	60	45	92	20	0.75
7-120-050	Double	50	160	65	60	45	92	20	1.1
7-101-075	Single	75	185	36	90	50	100	20	1.26
7-120-075	Double	75	185	65	90	50	100	20	2.1

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.



Special Features:

- Light weight zinc plated block
- Moving WLL 1 tonne & 2 tonne with 4:1 safety factor
- Snatch and non snatch configuration and can be fitted with swiveling crosshead
- Quick action single snatch facilitates ease of rope reeving
- Oval eye fitted as standard, forged hook can be fitted on request
- Also available in 2 and 3 sheave non-snatch configuration
- 100mm Sheave – Plain or Ball Bearing
- 150mm Sheave – Plain or Ball bearing

SINGLE SHEAVE BLOCK

SHEAVE Ø	A mm	B mm	C mm	D mm	NON-SNATCH EYE	SNATCH EYE	NON-SNATCH HOOK	SNATCH HOOK
100	313	232	120	39	7-101-100	7-105-100	7-102-100	7-106-100
150	380	300	168	39	7-101-150	7-105-150	7-102-150	7-106-150

DOUBLE SHEAVE BLOCK

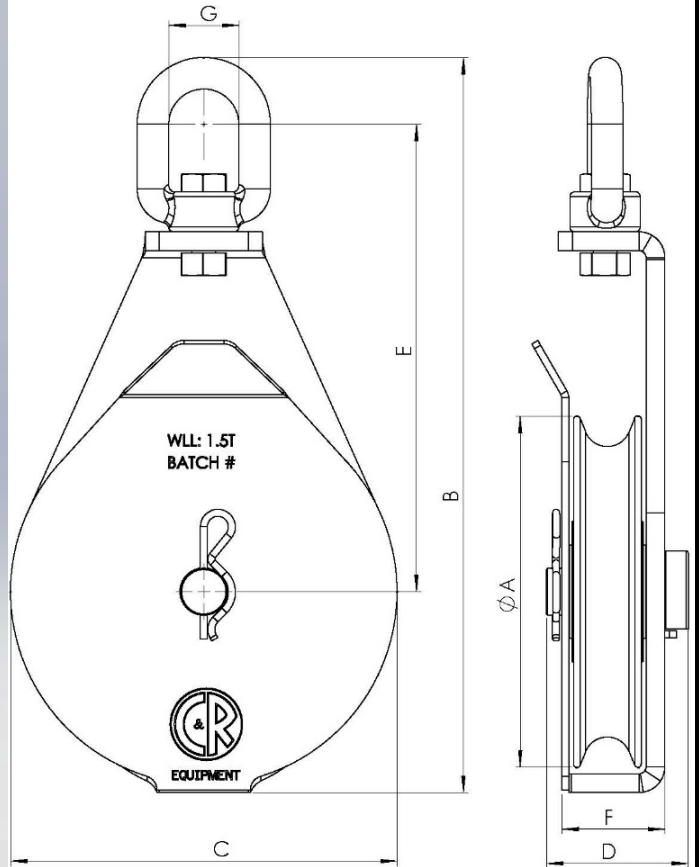
100					7-120-100		7-121-100	
150					7-123-150		7-124-150	

TRIPPLE SHEAVE BLOCK

100					7-125-100		7-126-100	
150					7-125-150		7-126-150	

SPECIFY BEARING REQUIRED WHEN PLACING ORDER.

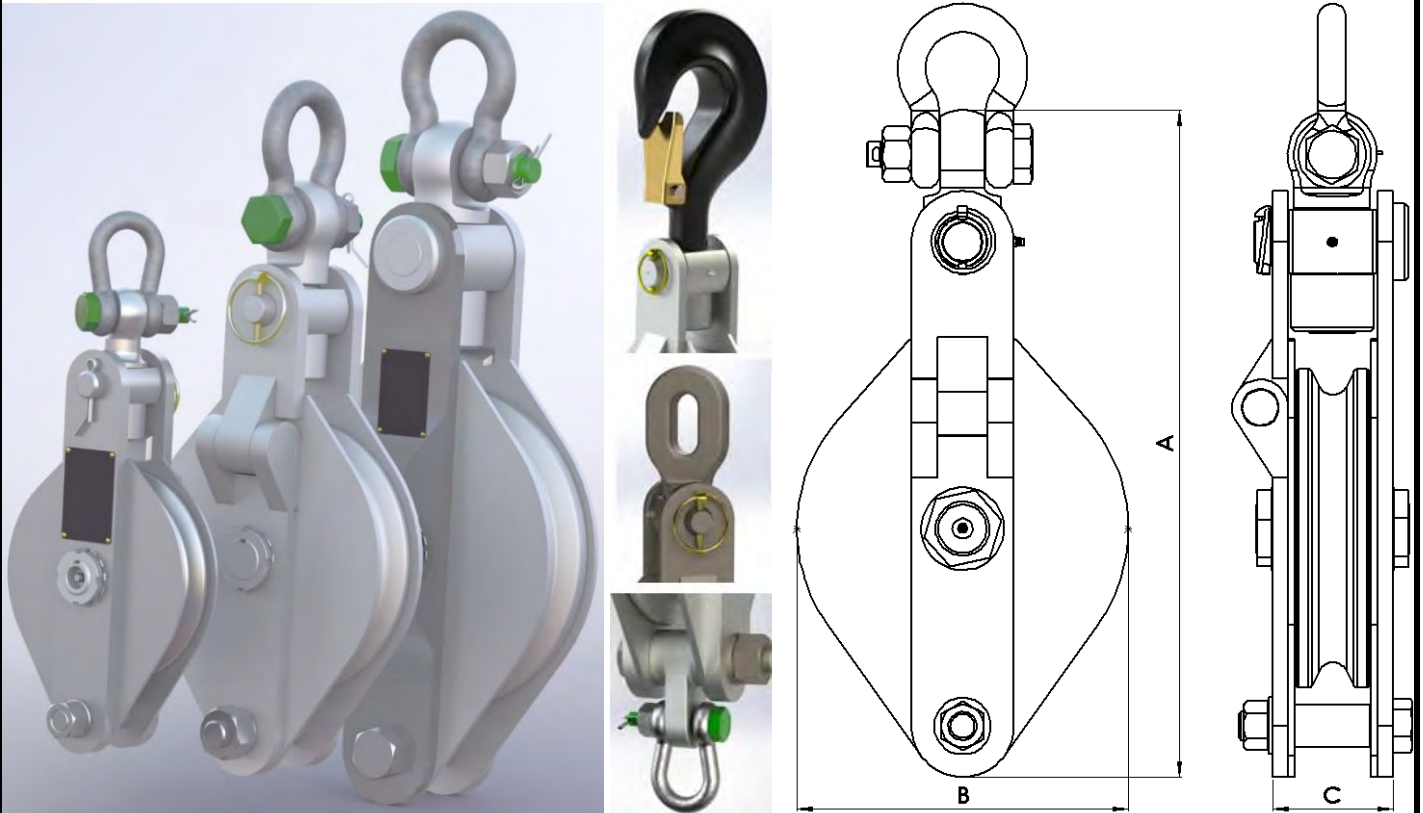
FOR 2 TONNE BLOCKS ADD 2T ON END OF CODE



Special Features:

- Full 316 S/S construction for best protection in marine environments
- Can be supplied with 316 S/S or Nylon sheave
- Plain bearing sheave standard with ball bearing option available on request
- Fitted with swivelling eye as standard
- Open side plate allows fast rigging for simple winch lifts
- W.L.L 1.5 tonne proof loaded to 3tonne
- 5:1 Safety factor

PRODUCT CODE	SHEAVE Ø A mm	B mm	C mm	D mm	E mm	F mm	G mm
7-500-075	75	250	90	58	150	40	30
7-500-150	150	314	165	60	200	44	30



Manufactured in accordance with: B.S. 4018: 1966 A.S. B298-1871

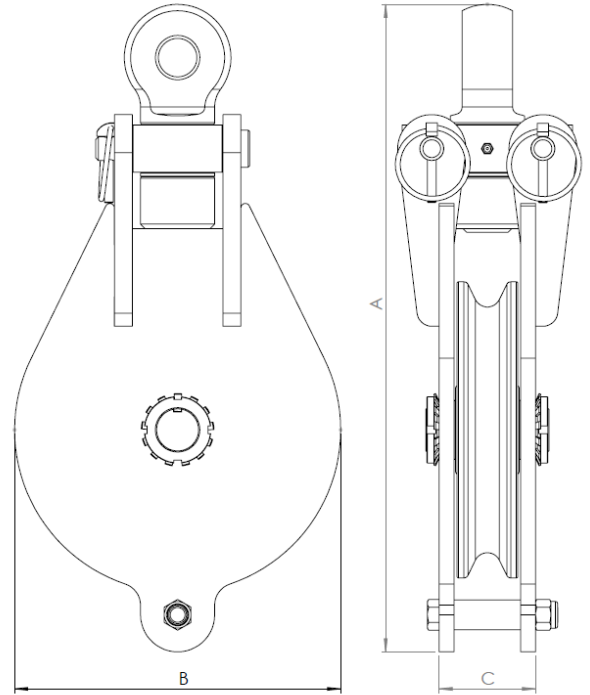
Special Features:

- Tested and certified with easy to read W.L.L plate
- Quick action single snatch facilitates ease of rope reeving with positive location and locking
- Swivelling crosshead
- Fitted with high load green pin shackle
- Fully machined sheave with greaseable, bronze bushed hub
- Wide shoulder sheave profile ensures maximum rope guiding and added sheave protection
- Stepped axle fully locked for block rigidity
- Zinc plated hardware for maximum corrosion resistance
- Becket for third fall of rope
- D.L.L Australia (Victoria) approved

Other Options Available on request:

- Oval eye
- Hook
- Nylon sheaves
- SS Axles
- 3 sheave configurations
- Altered rope grooves
- Shackle becket

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ø mm	WIRE ROPE Ø mm	A mm	B mm	C mm	≈ BLOCK WEIGHT kg
150mm	1	2	4	150	12	337	160	59	7
200mm	2	4	8	200	16	429	212	79	17
250mm	3	6	12	250	20	524	260	94	39
BLOCK PRODUCT CODES	SIZE	PLAIN BEARING	BALL BEARING	2 SHEAVE					
	150mm	7-145-150	7-146-150	7-147-150					
	200mm	7-145-200	7-146-200	7-147-200					
	250mm	7-145-250	7-146-250	7-147-250					

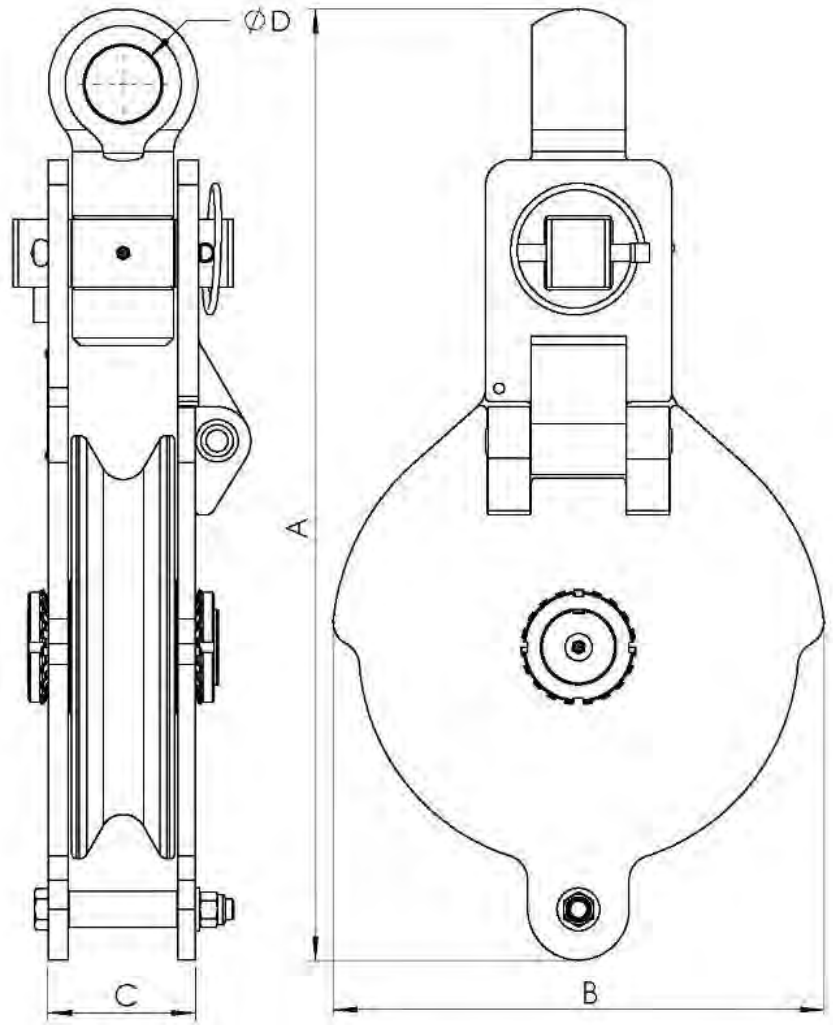


Special Features:

- 316 stainless steel
- Fully machined sheave with greasable bronze bushed hub
- Wide shoulder sheave profile ensures maximum rope guiding and added sheave protection
- Stepped axle fully locked for block rigidity
- Becket for third fall of rope
- Easy rope reeving snatch facilities

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ømm	WIRE ROPE Ømm	A mm	B mm	C mm	BLOCK WEIGHT kg	PRODUCT CODE
150	1	2	4	150	12	327	164	50	8.3	7-145-150-SS
200	2	4	6	200	16	438	220	65	18.5	7-145-200-SS
250	3	6	8	250	20	538	270	84	36.4	7-145-250-SS

Manufactured in accordance with: B.S.



4018: 1966 A.S. B298-1871

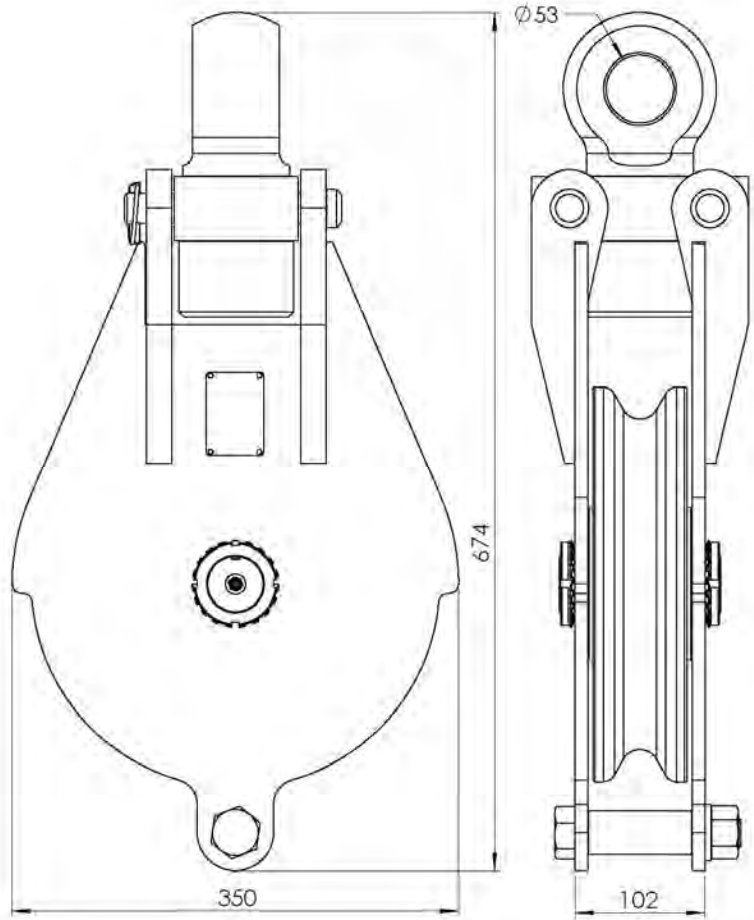
Special Features:

- Tested and Certified with easy to read W.L.L plate
- Quick action single snatch facilitates ease of rope reeving with positive location and locking
- Swivelling crosshead
- Fitted with high load green pin shackle (optional)
- Fully machined sheave with greaseable bronze bearing hub
- Wide shoulder sheave profile ensures maximum rope guiding and added sheave protection
- Powdercoated side plates with zinc plated hardware for maximum corrosion resistance
- Stepped axle is fully locked for block rigidity
- Becket for third fall of rope
- D.L.L Australia (Vict.) approved Available in 1 or 2 sheave configurations

PRODUCT CODES	
150mm	7-155-150
200mm	7-155-200
250mm	7-155-250

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ø mm	WIRE ROPE Ø mm	A mm	B mm	C mm	D Ø mm	WEIGHT ≈ kg
150mm	5	10	20	150	20	462	195	87	37	20
200mm	6	12	24	200	22	513	248	87	37	26
250mm	7.5	15	30	250	26	562	290	87	45	33

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.

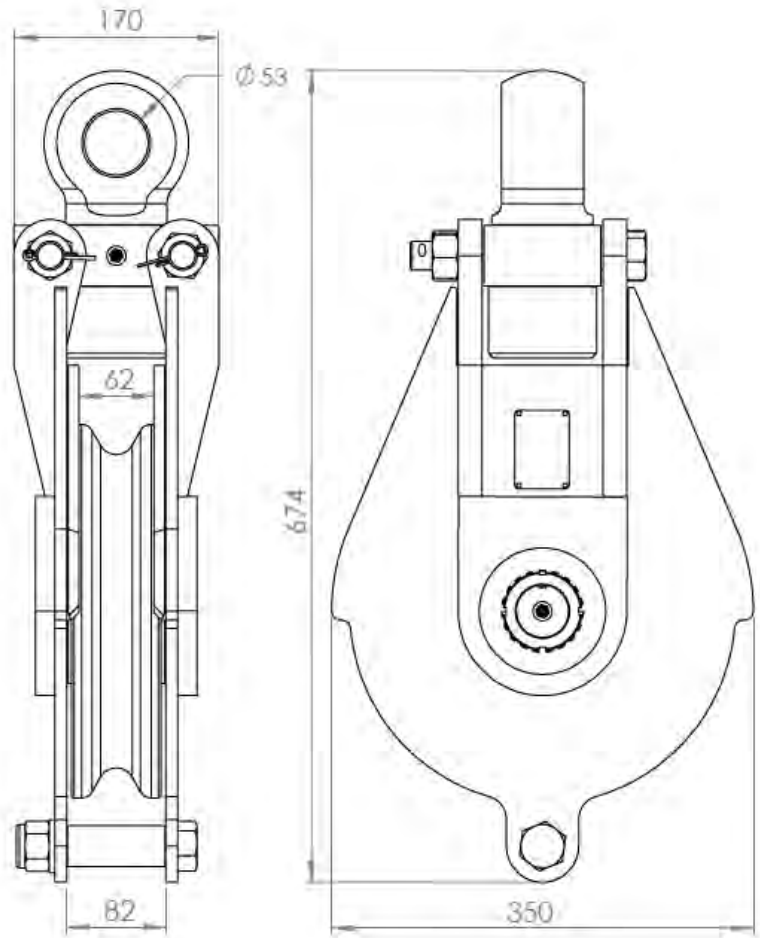


Manufactured in accordance with: **BS MA47. 1977**

Special Features:

- Tested and Certified with easy to read W.L.L plate
- Quick action double snatch facilitates ease of rope reeving with positive location and locking
- Swivelling crosshead
- Fitted with high load green pin shackle (optional)
- Fully machined sheave with greaseable bronze bearing hub
- Wide shoulder sheave profile ensures maximum rope guiding and added sheave protection
- Stepped axle is fully locked for block rigidity
- Bucket for third fall of rope
- D.L.L Australia (Vict.) approved
- Available in 1 or 2 sheave configurations
- Powdercoated side plates with zinc plated hardware for maximum corrosion resistance

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ø mm	WIRE ROPE Ø mm	WEIGHT ≈ kg	PRODUCT CODE
300mm	10	20	40	300	28	65	7-155-300

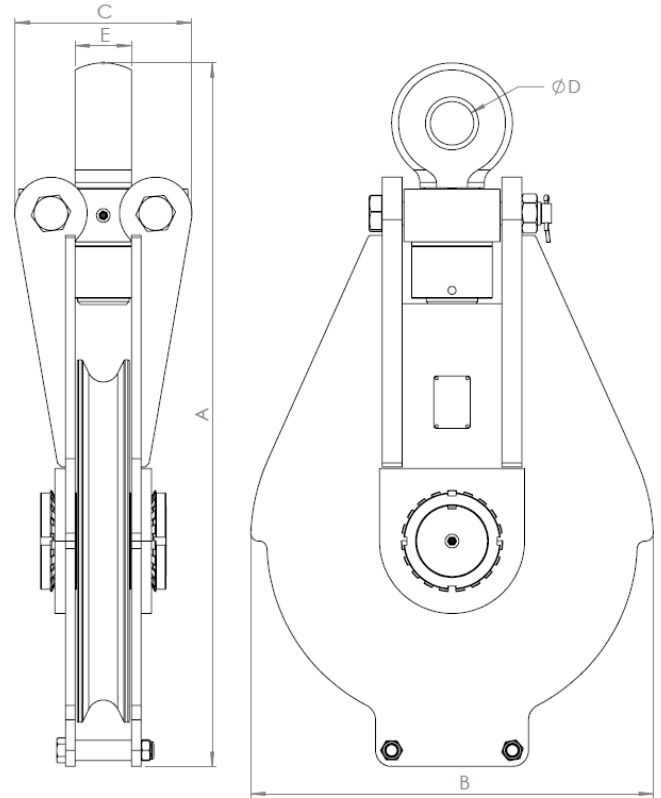


Manufactured in accordance with: BS MA47. 1977

Special Features:

- Tested and Certified with easy to read W.L.L plate
- Quick action double snatch facilitates ease of rope reeving with positive location and locking
- Swivelling crosshead
- Fully machined sheave with greaseable bronze bearing hub
- Added side plate guide ensures maximum rope guiding and added sheave protection
- Outer brace plate protects the axle nut
- Stepped axle is fully locked for block rigidity
- Bucket for third fall of rope
- D.L.L Australia (Vict.) approved
- Powdercoated side plates with zinc plated hardware for maximum corrosion resistance

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ø mm	WIRE ROPE Ø mm	WEIGHT ≈ kg	PRODUCT CODE
300mm	10.5	21	42	300	28	68	7-155-300H



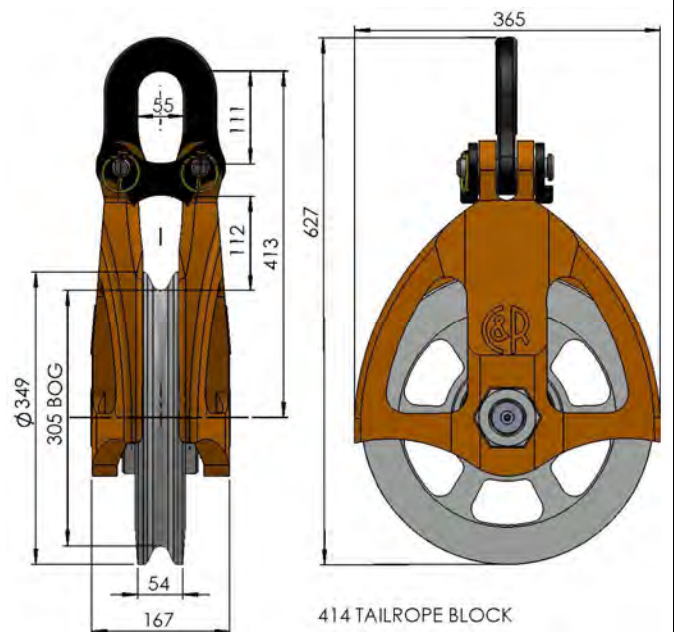
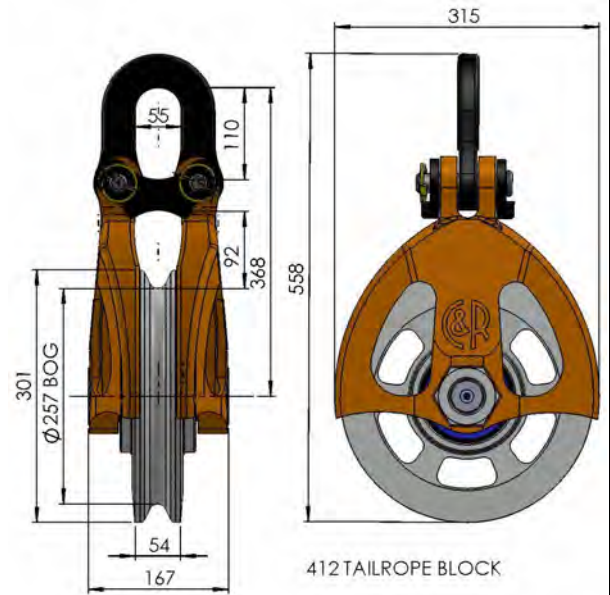
Manufactured in accordance with: B.S. 4018: 1966 A.S. B298-1871

Special Features:

- Tested and Certified with easy to read W.L.L plate
- Quick action double snatch facilitates ease of rope reeving with positive location and locking
- Swivelling crosshead
- Fitted with high load green pin shackle (optional)
- Fully machined sheave with greaseable bronze bearing hub
- Wide shoulder sheave profile ensures maximum rope guiding and added sheave protection
- Stepped axle is fully locked for block rigidity
- Bcket for third fall of rope
- Powdercoated side plates with zinc plated hardware for maximum corrosion resistance
- D.L.L Australia (Vict.) approved

BLOCK SIZE	WLL FIXED tonne	WLL MOVING tonne	PROOF LOAD tonne	SHEAVE Ø mm	A mm	B mm	C mm	D Ø mm	
25T	12.5	25	50	450	874	500	220	54	
30T	15	30	60	450	874	500	220	60	
50T	25	50	100	605	1061	640	290	71.5	

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.



C & R development based on the well known Canadian Opsal block.

A rugged block designed for high speed applications.

The side plates are cast from NI/CHR/MO alloy steel with the sheave and shackle made from high tensile steel. Fitted with a fabricated rope guard and removable pins for easy rope loading.

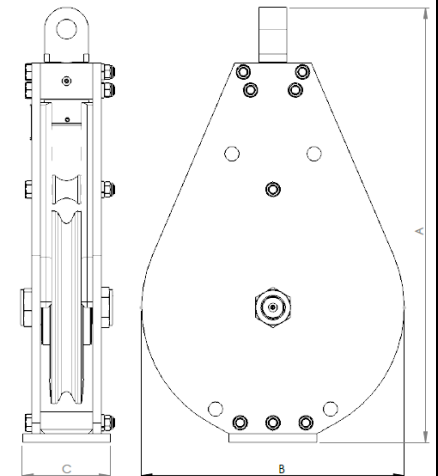
412 x 300mm		414 X 350mm	
BLOCK WEIGHT	38kg	BLOCK WEIGHT	47kg
PROOF LOAD	25t	PROOF LOAD	25t
ROPE SIZE	20mm	ROPE SIZE	22mm
PRDUCT CODE	7 - 170 - 300	PRDUCT CODE	7 - 170 - 350

NOTE: These blocks ARE NOT certifiable under regulations for lifting but a private Certificate of Test is available on request at a nominal charge.



Special Features:

- Fully machined sheave with grooves to suit rope size
- Heavy duty bearings
- Weighted sideplates and guide roller to prevent upending
- Proof loaded to twice SWL
- Fully dismantable
- Rope attachment points for various rigging systems
- Swivel tongue with high load shackle
- Can be made to suit specific requirements



BLOCK SIZE	WIL tonne	PROOF LOAD	SHEAVE Ømm	WIRE ROPE Ømm	A mm	B mm	C mm	BLOCK WEIGHT ≈ kg	PRODUCT CODE
250mm	8	16	250	20mm	652	290	140	48	7-175-250
305mm	12	24	300	20mm	748	360	160	81	7-175-305
360mm	12	24	355	22mm	793	480	160	109	7-175-360
508mm	15	30	508	28mm	1047	650	220	193	7-175-508

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.

SINGLE & MULTI SHEAVE CRANE BLOCKS

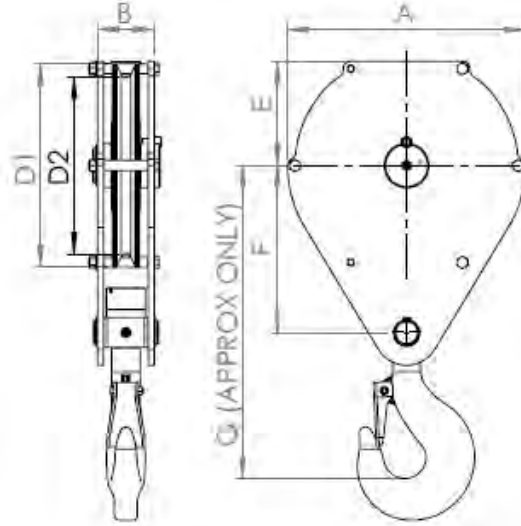
All designs are approved by M.O.T Marine Division and proof load tested to meet specification



Range covers from 1Tonne to 70 Tonne and includes

- Single sheave
- Multiple sheave
- Plain phosphor bronze bearing
- SKF ball or roller bearing
- Rope guided sheave
- Safety latch on hook
- All steel construction with billet sheave as standard
- Powder coated sideplates with zinc plated hardware for maximum corrosion resistance
- Plain phosphor bronze or SKF thrust bearing

Custom designs or block types may be built to order with design approval obtained and unit tested to meet standard.

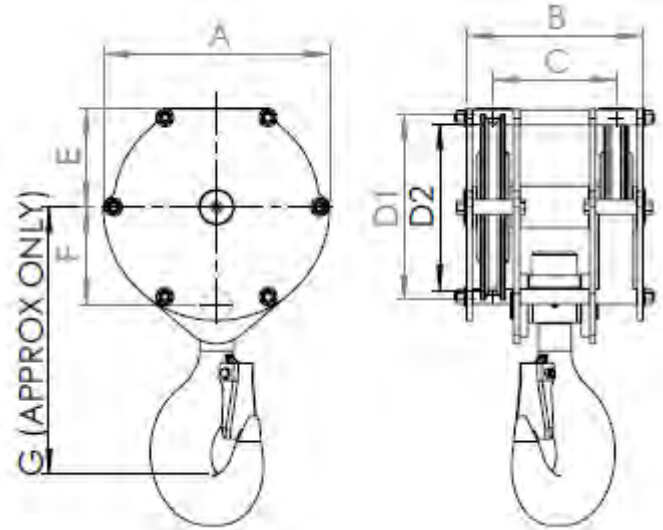


Special Features:

- SKF ball or roller bearing
- Rope guided sheave
- Safety latch on hook
- All steel construction with billet sheave as standard
- Powder coated sideplates with zinc plated hardware for maximum corrosion resistance
- Plain phosphor bronze or SKF thrust bearing

Custom designs or block types may be built to order with design approval obtained and unit tested to meet standard.

CAPACITY	ROPE Ø	A	B	D1	D2	E	F	G	APPROX KG	PRODUCT CODE
1,000KG	9	250	68	200	170	116	170	265	17	593320
1,250KG	9	250	68	200	170	116	170	280		
1,600KG	9	250	68	200	170	116	170	290		
2,500KG	13	324	76	265	225	140	215	340	28	593520
3,200KG	13	324	76	265	225	140	215	365		
4,000KG	16	400	95	340	280	175	280	435	58	593720
5,000KG	16	400	95	340	280	175	280	450		
5,000KG	20	490	114	430	370	225	335	500	90	580140
6,300KG	20	490	114	430	370	225	335	520		
8,000KG	20	490	114	430	370	225	335	540		
8,000KG	26	620	134	535	460	280	400	610	130	580640
10,00KG	26	620	134	535	460	280	400	630		
12,500KG	26	620	134	535	460	280	400	650		



Special Features:

- SKF ball or roller bearing
- Rope guided sheave
- Safety latch on hook
- All steel construction with billet sheave as standard
- Powder coated sideplates with zinc plated hardware for maximum corrosion resistance
- Plain phosphor bronze or SKF thrust bearing

Custom designs or block types may be built to order with design approval obtained and unit tested to meet standard.

CAPACITY	ROPE Ø	A	B	C	D1	D2	E	F	G	APPROX KG	PRODUCT CODE
1,000KG	6.5	176	182	120	130	110	70	90	110	25	593140
2,000KG	6.5	176	182	120	130	110	70	90	125		
2,000KG	9	244	220	152	200	170	106	100	130	35	593340
3,200KG	9	244	220	152	200	170	106	100	165		
4,000KG	13	324	256	180	265	225	140	140	175	60	593540
5,000KG	13	324	256	180	265	225	140	140	195		
6,300KG	13	324	256	180	265	225	140	140	220		
6,300KG	16	400	324	229	340	280	175	160	225	105	593740
10,000KG	16	400	324	229	340	280	175	160	250		
10,000KG	20	510	414	300	430	370	225	220	280	150	580240
12,500KG	20	510	414	300	430	370	225	220	310		
16,00KG	20	510	414	300	430	370	225	220	330		
20,000KG	26	630	463	350	540	455	285	275	390	285	580740
25,000KG	26	630	463	350	540	455	285	275	420		



Features:

- Light weight pull blocks
- Revolving side plates for easy rope placement
- 50mm and 125mm blocks fit over towballs
- Zinc plated for maximum corrosion resistance
- 2 sheave versions can be made on request

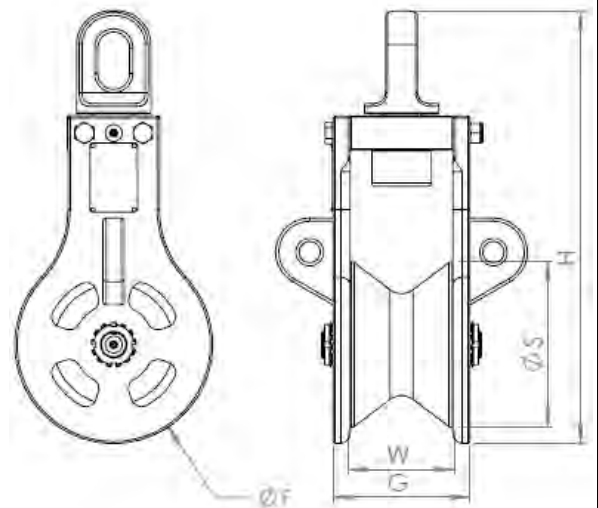
PLEASE NOTE: These blocks are not rated for lifting

RECOVERY BLOCKS	SHEAVE Ømm	MAX ROPE Ømm	MAX PULL TONNE	MIN BREAK TONNE	PRODUCT CODE
75mm QUAD BIKE	75	8	1.5	2.25	7-128-075
100mm	100	10	6	10	7-128-100
125mm 4WD	125	11	8	12	7-128-125
150mm HD 4WD	150	22	15	24	7-128-150



Features:

- 5 Tonne capacity
- Fully machined sheave with bronze bush or roller bearings
- Safety chain lugs optional
- Zinc plated hardware for maximum corrosion resistance
- Powdercoated finish available if required



ØF mm	G mm	H mm	ØS mm	W mm		Product Code
186	129	407	156	100	Bronze Bush	7-160-156
186	129	407	156	100	Roller Bearing	7-161-156

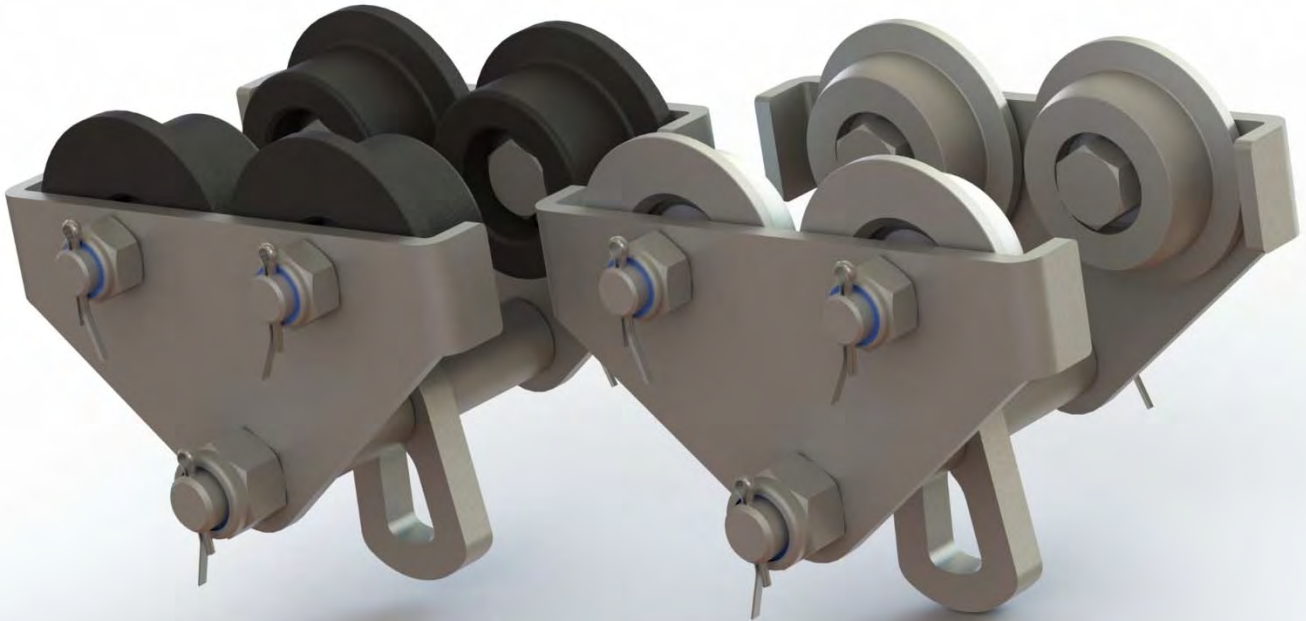


Features:

- 15 to 20 Tonne capacity
- Fully machined Ø350 or Ø450 by 150mm wide sheave
- Fixed or swivel crosshead with rotating tongue
- Sheave fitted with roller bearings
- Fitted with lugs for safety chains
- Zinc plated hardware for maximum corrosion resistance
- Powdercoated finish available if required

Contact us and we will endeavour to supply a block to suit your required specifications.

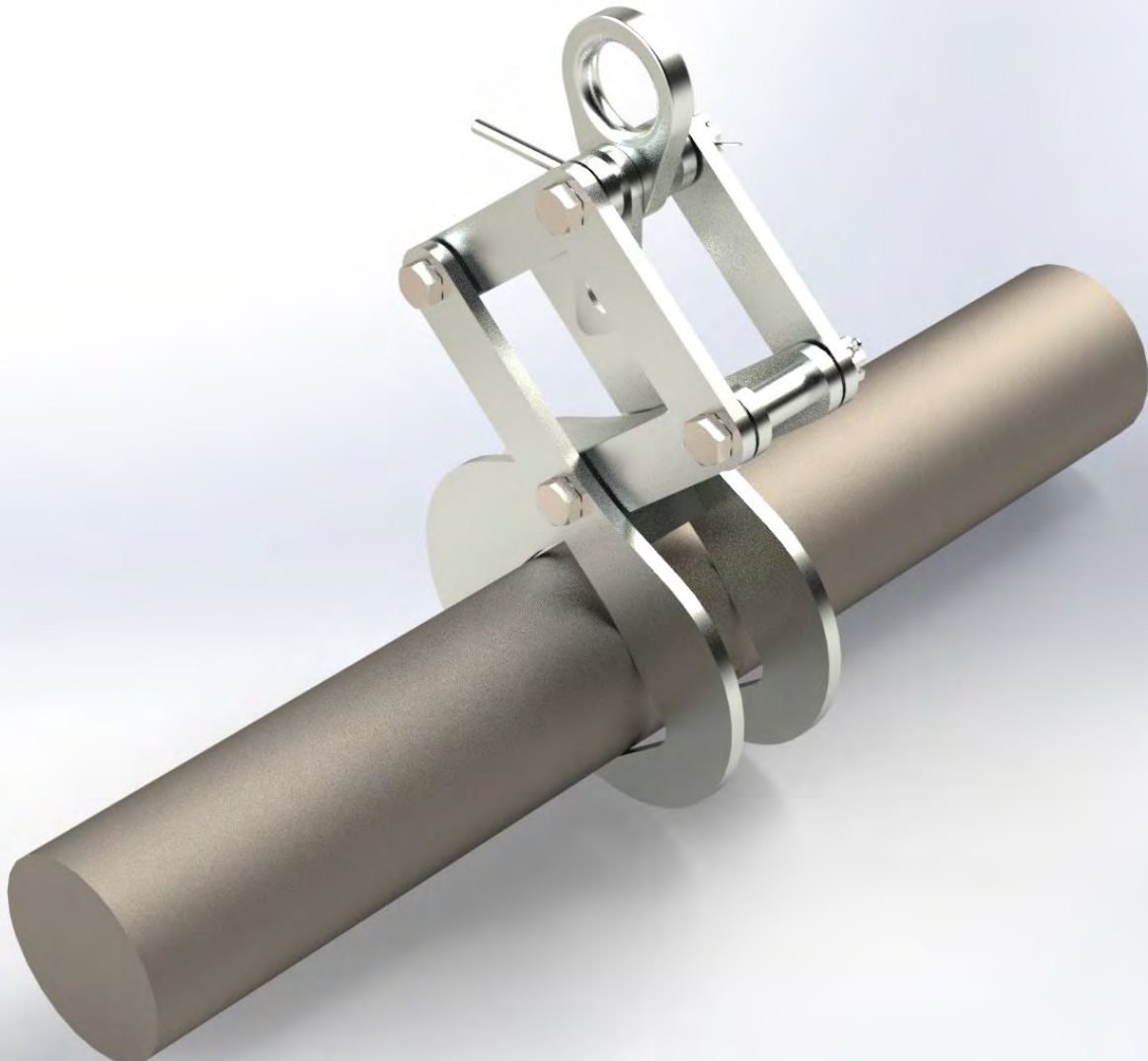
Current Designs			
CAPACITY	SHEAVE Ø	CROSSHEAD	APPROX HEIGHT
15T	350mm	SWIVEL	640mm
20T	350mm	FIXED	670mm
20T	450mm	FIXED	810mm



Features:

- Compact and light
- Fully adjustable width
- Ball bearing wheels
- Contoured steel wheel to suit taper flange or universal beams
- Plastic wheels available on request
- Anti-derailment lugs on steel sideplates
- Corrosion resistant electro-galv finish
- Can be altered to suit specific applications

SWL Tonne	Beam Width mm	Trolley length mm	Product Code
0.5	59 – 130	246	7-450-050
1	76 – 172	246	7-450-100
2	89 - 210	300	7-450-200



Features:

Bar lift clamps are specifically designed to lift round or cylindrical loads (pipe, tube, bars, etc.) A leg contoured to suit the load diameter engages below the center-point of the load where not only is the load cradled by the legs, but also securely clamped on the outside diameter.

Each Bar lift clamp is designed for a specific size range; it is very important that Roberts Engineering understands the maximum and minimum diameters to be handled. Some Bar lift clamps use multiple legs for lifting long, slender materials, thereby reducing deflection and improving handling. It is also possible to lift multiple rounds as stacked bundles. Single clamps are well suited for short loads, or when compact size is important. Multi Bar lift clamps are the right choice when handling long loads. Our bar lift clamps are custom-designed to suit your specific range of diameters and lengths. Our design is for horizontal handling applications.

Contact us with your requirements:

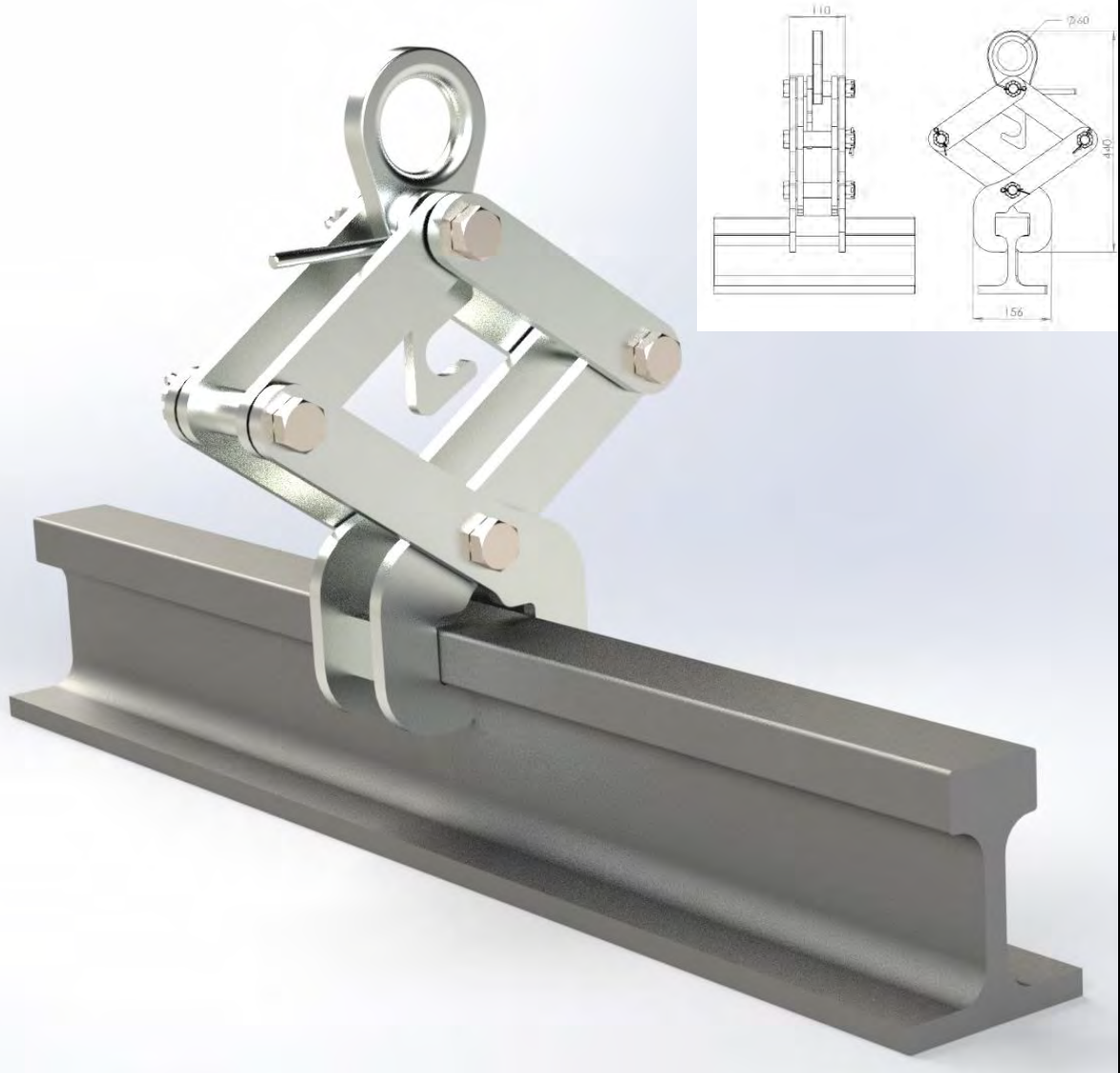
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E sales@robertseng.co.nz W www.robertseng.co.nz



Features:

Rail lift clamps are specifically designed to lift rail sizes from 41 to 68kg rail. Multi Rail lift clamps on a spreader beam are the right choice when handling long loads. Our design is for horizontal handling applications.

Working load limit: 2000kg

Weight: 14kg

Contact us with your requirement:

ROBERTS ENGINEERING LTD

Precision Engineers / CNC Machining

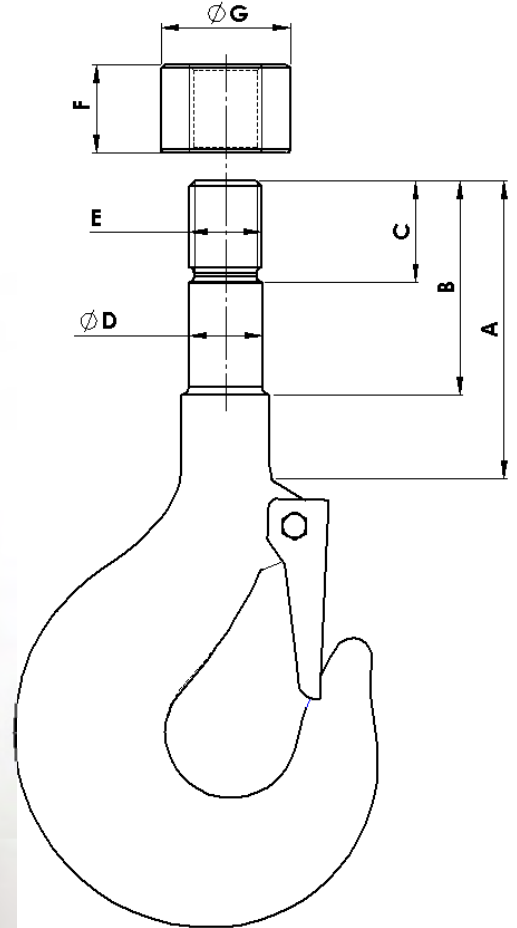
Unit 3D 200 Maces Road, PO Box 19966, Christchurch, New Zealand

T +64 3 384 4360 **M** +64 29 384 4360 **F** +64 3 384 4371

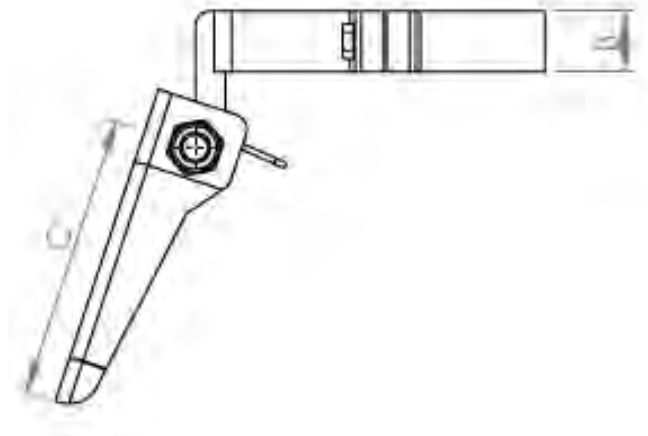
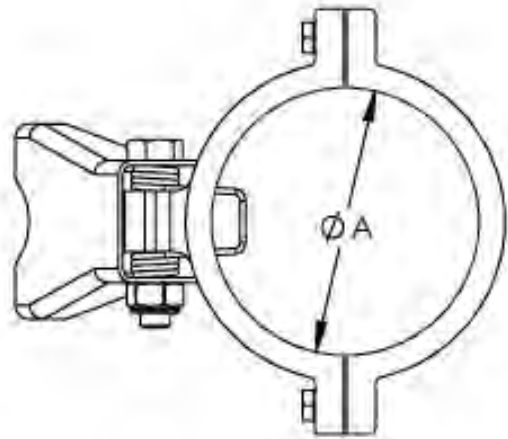
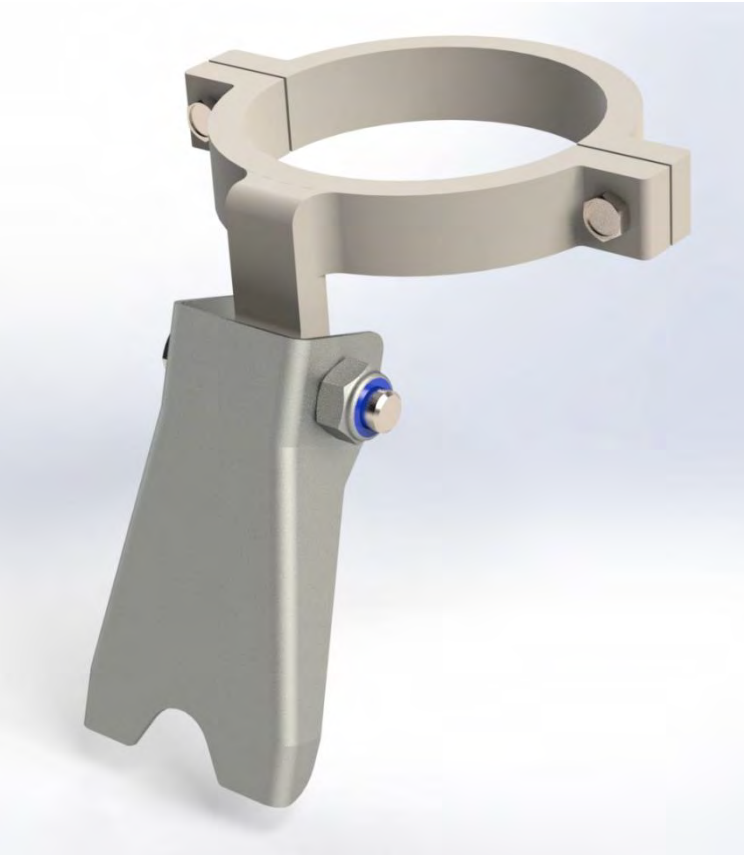
E sales@robertseng.co.nz **W** www.robertseng.co.nz

DROP FORGED SINGLE HOOK TO DIN 15401 & BS 2903

	SPECIFY DIMENSION
A mm	
B mm	
C mm	
SHANK Ø D mm	
THREAD Ø Emm	
THREAD PITCH	
NUT LENGTH F mm	
NUT Ø G mm	
WLL tonne	



Fill in dimensions and send to:
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Ø A mm	
B mm	
C mm	

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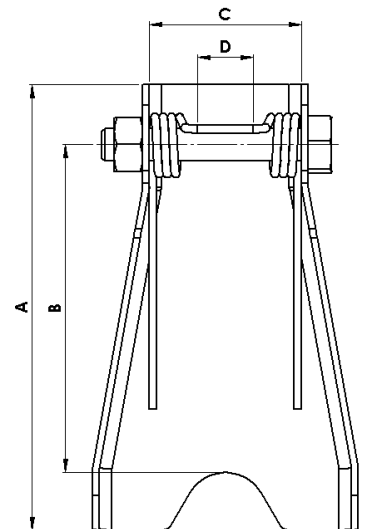
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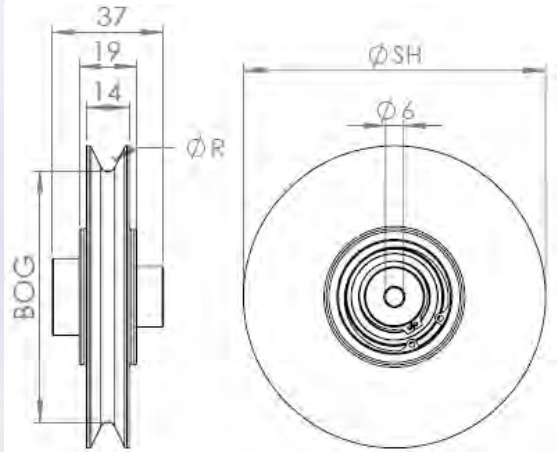
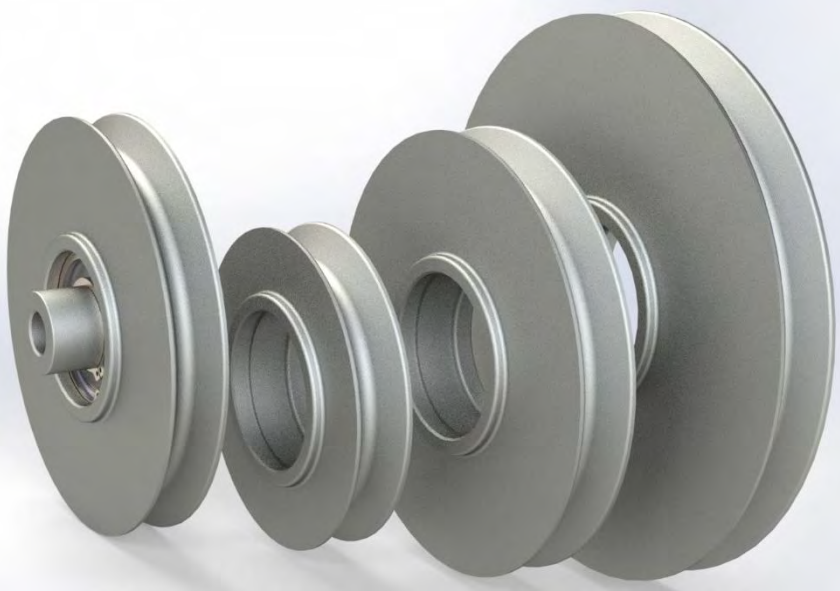


Features:

- Supplied in kit form, with bolt & spring
- Springs available seperately
- Custom sizes can be made to order
- Zinc plated for corrosion resistance



Hook Size Tonne	A mm	B mm	C mm	D mm	Safety Latch Kit Product code	Spring Only Product Code
3	50	40	20	15	7-804-03SC	7-804-03S
5	77	74	23	17	7-804-05SC	7-804-05S
10	108	80	37	22	7-804-100SC	7-804-100S
16	138	110	37	26	7-804-160SC	7-804-160S



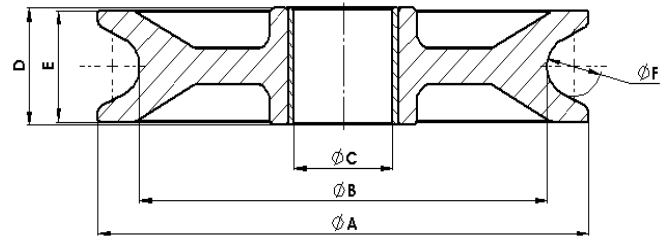
Features:

- Machined steel sheave
- Grooved to suit 3 to 5mm Ø rope
- Rope groove can be machined to suit other rope sizes
- Comes with bearing, circlips and bush
- Bush can be bored out to required size (Bearing ID 20mm)
- Bush length can also be machined to suit
- Zinc plated for maximum corrosion resistance
- Custom sheaves can be manufactured to any specification

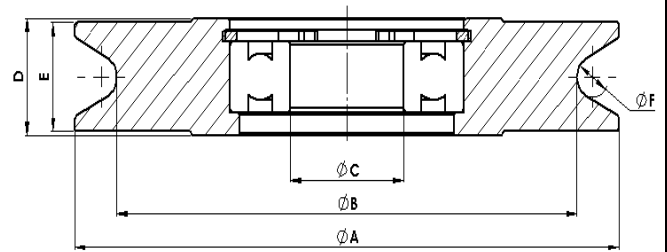
SHEAVE Ømm (SH)	ROPE Ømm (R)	BOG mm	PRODUCT CODE (WITH BEARING)	PRODUCT CODE (WITH BEARING & INSERT)
75	3 - 5	57.9	7-131-075N	7-131-075I
100	3 - 5	82.9	7-131-100N	7-131-100I
125	3 - 5	107.9	7-131-125N	7-131-125I



PLAIN BUSH - PB



BALL BEARING - BB

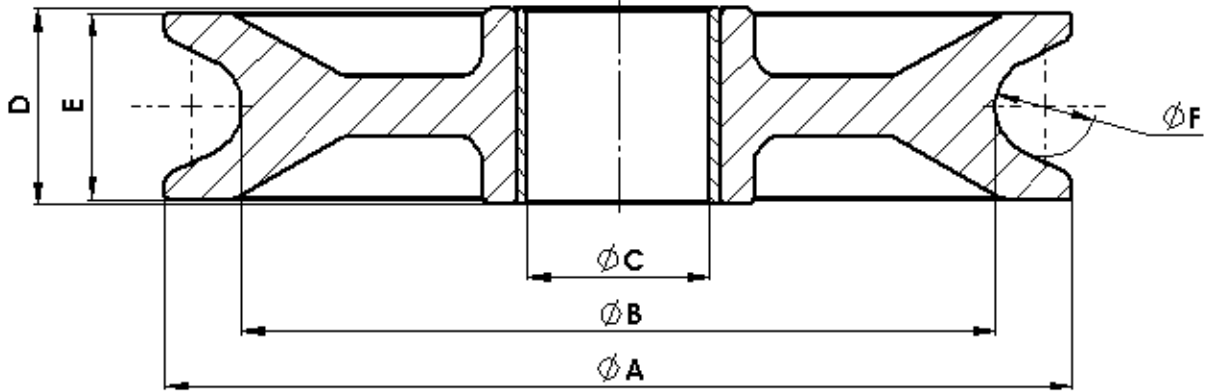


Wire Rope Size

(mm)	(in)
5	3/16
6-7	1/4
8	5/16
9-10	3/8
12-13	1/2
14-15	9/16
16	5/8
18-19	3/4
20-22	7/8
24-26	1
28-30	1 1/8
32	1 1/4
38	1 1/2
52	2

Special Features:

- Fully machined from billet
- Rope groove can be machined to suit other rope sizes
- Steel sheaves are zinc plated for maximum corrosion resistance
- Supplied with bronze or nylon plain bearing or
- SKF Single row deep groove ball bearing installed and circlipped as standard
- Custom sheaves can be made to any specification



	SPECIFY DIMENSION
OUTSIDE Ø A mm	
B.O.G. Ø B mm	
SHAFT Ø C mm	
BUSH SIZE AND TYPE	
HUB WIDTH D mm	
RIM WIDTH E mm	
ROPE Ø F mm	
FINISH	



Fill in dimensions and send to:

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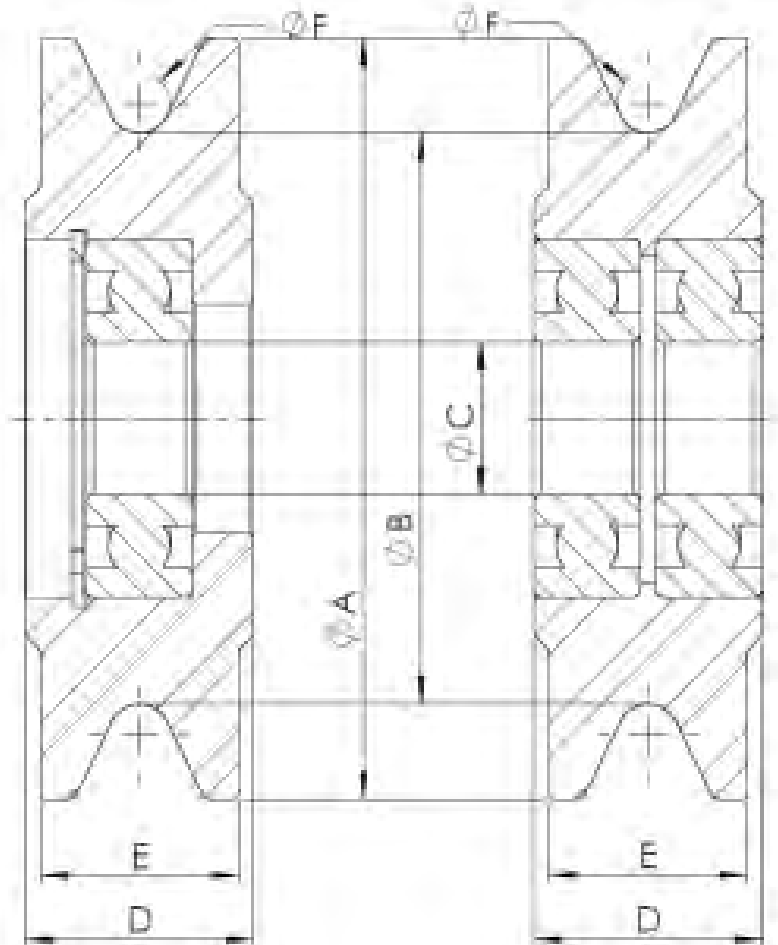
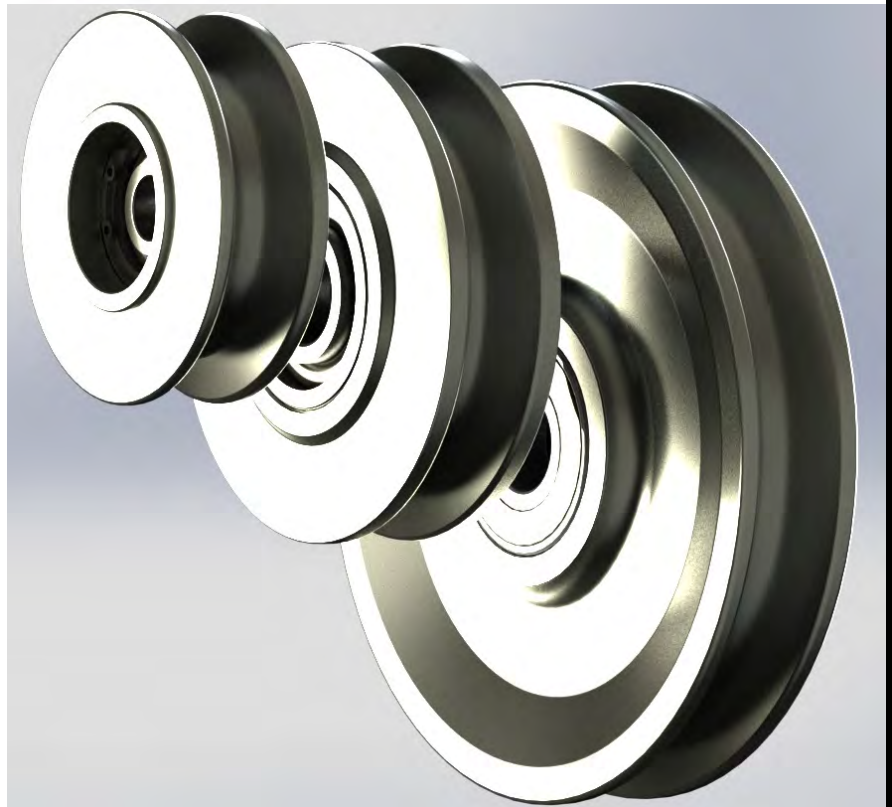
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	SPECIFY DIMENSION
OUTSIDE \varnothing A mm	
B.O.G. \varnothing B mm	
SHAFT \varnothing C mm	
HUB WIDTH D mm	
RIM WIDTH E mm	
ROPE \varnothing F mm	
BEARING TYPE	
ONE/TWO BEARINGS	
FINISH	



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We offer a range of standard hooks and dogs as well as designing models for particular purposes.

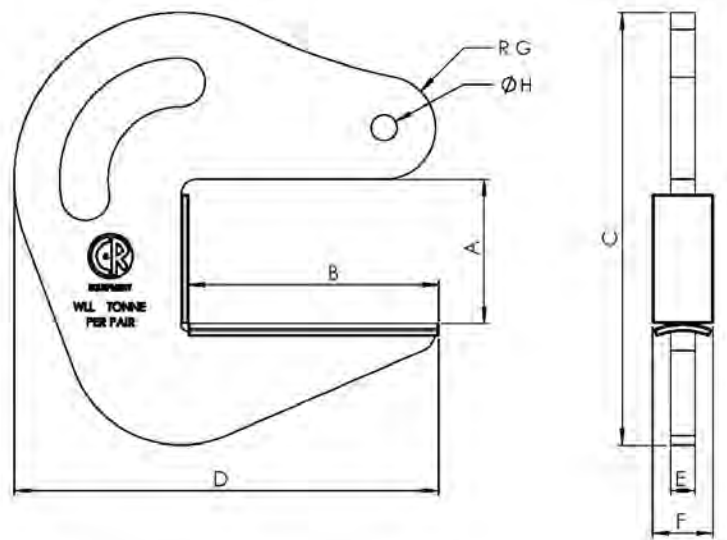
Special Features:

- Safe and easy to use
- Specified working load limits
- Handles to protect hands
- Painted in bright safety colours or specified finish

	HIGH	WIDE	LONG		APPROX WEIGHT
ANGLE HANDLING HOOK	385	20	118	250 x 48 OPENING	3KG
PLATE DOG 1	154.5	150	310	25 MAX PLATE	15KG
PLATE DOG 2	176	60	275	16 MAX PLATE	9KG



Pipe Hooks are designed for lifting pipes using a 2 legged sling so that at the correct sling angle (75° to 90°) the forces generated keep the hooks in place.



STOCK CODE	WLL/Pr (TONNE)	TARE Ea (Kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
7-425-010	1	2.5	75	125	220	210	12	40	25	14
7-425-020	2	5.5	95	165	285	280	16	40	34	17
7-425-047	4.75	9	108	190	320	315	20	40	40	24
7-425-065	6.5	14	109	210	350	360	25	40	50	26

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.

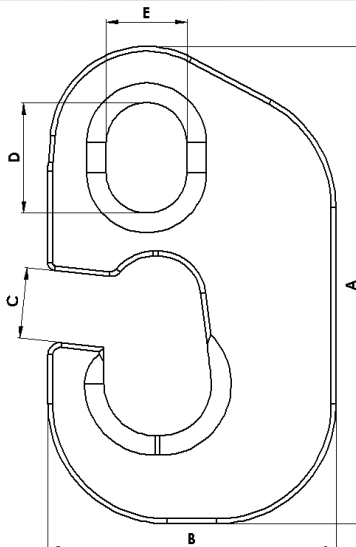
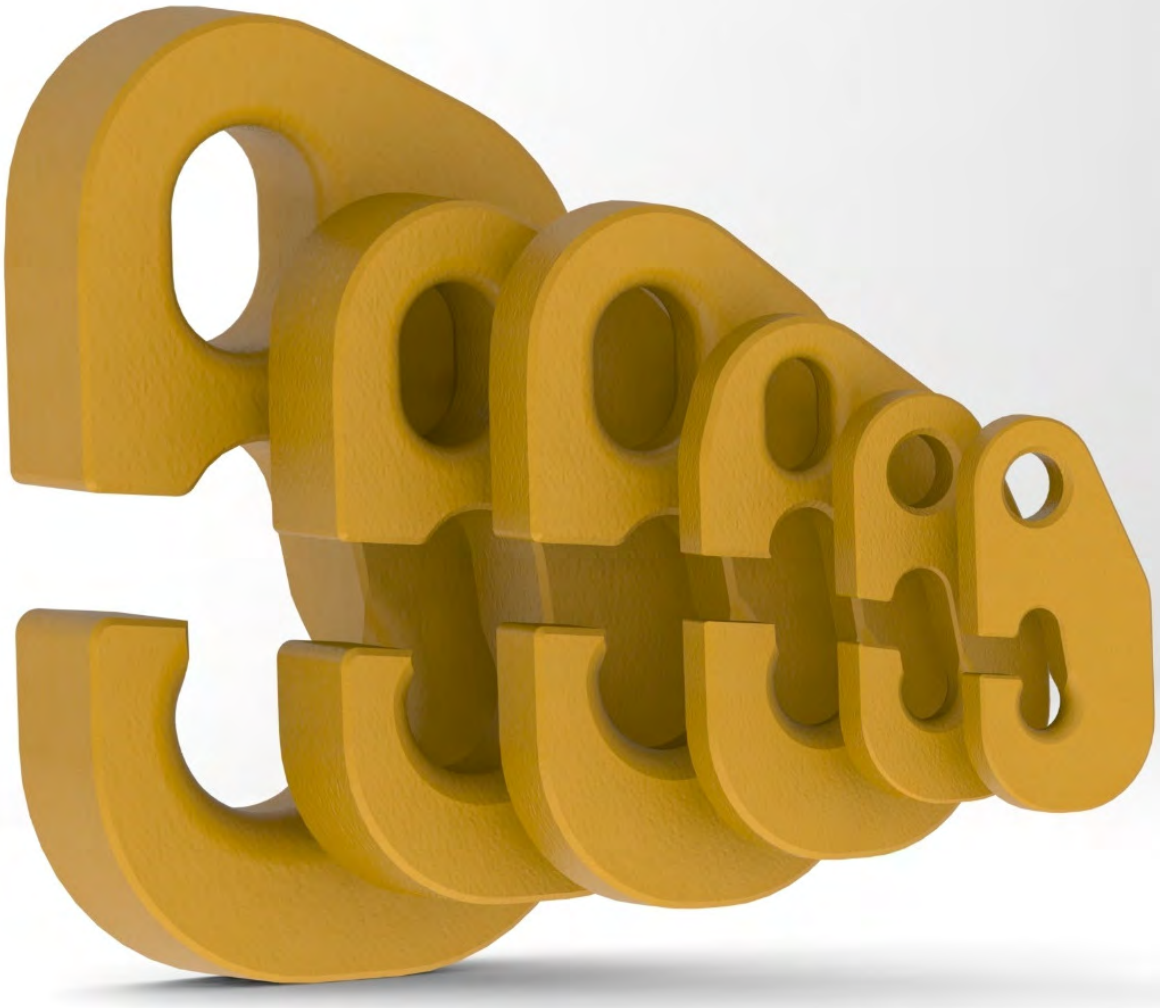
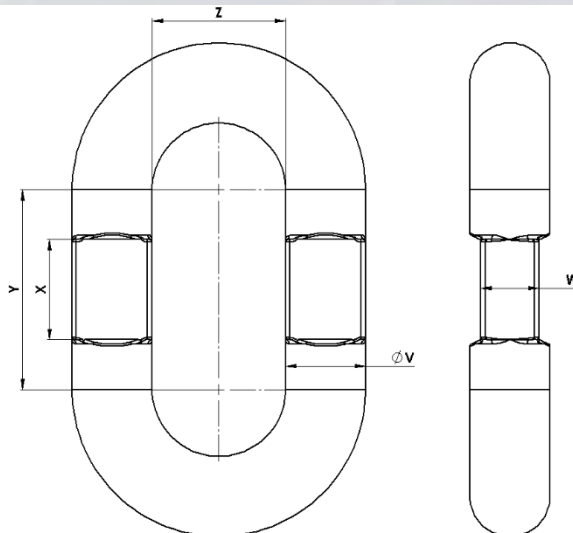


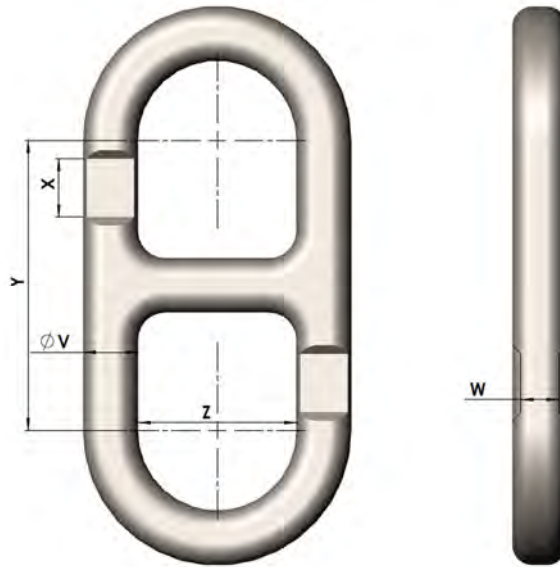
PLATE mm	A mm	B mm	C mm	D mm	E mm	WEIGHT ≈ kg	PRODUCT CODE	RECESS LINK	SIZE
12mm	110	55	10.5	19	19	0.4	7-515-012	7-520-012	12mm
14mm	92	60	12	20.5	20.5	0.5	7-515-014	7-520-016	16mm
16mm	151	90	18	31	21	1.15	7-515-016	7-520-022	22mm
25mm	195	107	23	45	33	2.7	7-515-026	7-520-032	32mm
40mm	195	118	29	45	33	7.9	7-515-040	7-520-036	36mm
45mm	230	130	33	60	46	10.3	7-515-045	7-520-038	39mm

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.

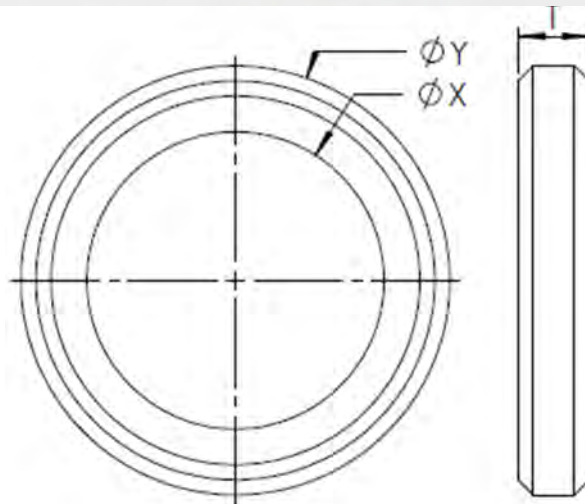


SIZE	ØV mm	W mm	X mm	Y mm	Z mm	WEIGHT ≈ kg	PRODUCT CODE	G HOOK	SIZE
12mm	12	10	15	85	45	0.3	7-520-012	7-515-012	12mm
16mm	16	10.2	17	85	45	0.6	7-520-016	7-515-014	14mm
22mm	22	15	20	100	50	1.3	7-520-022	7-515-016	16mm
32mm	32	19	30	125	50	3.1	7-520-032	7-515-026	25mm
36mm	36	26	45	90	62	4.2	7-520-036	7-515-040	40mm
38mm	39	30	50	100	62	6	7-520-038	7-515-045	45mm

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.



SIZE	ØV mm	W mm	X mm	Y mm	Z mm	WEIGHT ≈ kg	PRODUCT CODE	G HOOK	SIZE
12mm	12	10	15	85	42	0.4	7-510-012	7-520-012	12mm
16mm	16	11	17	127.5	43	0.9	7-510-016	7-520-014	14mm
22mm	24	16.5	27	105	52	1.9	7-510-022	7-520-016	16mm



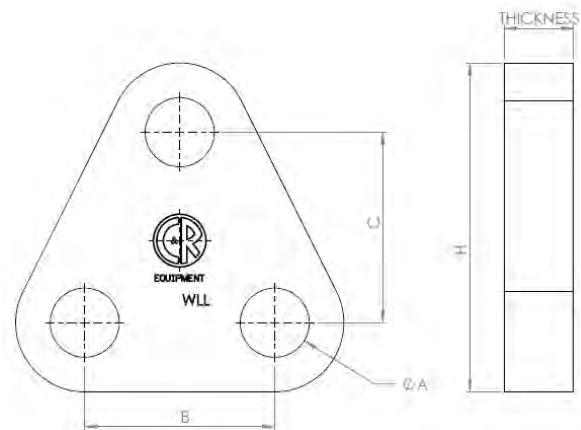
SIZE	X ϕ mm	Y ϕ mm	T mm	MWL	PRODUCT CODE
90x16	58	90	16	1.5T	7-470-016
80x20	79	114	19	4T	7-470-020
90x25	89	136	19	5T	7-470-025
100x32	101	165	24	6.5T	7-470-032



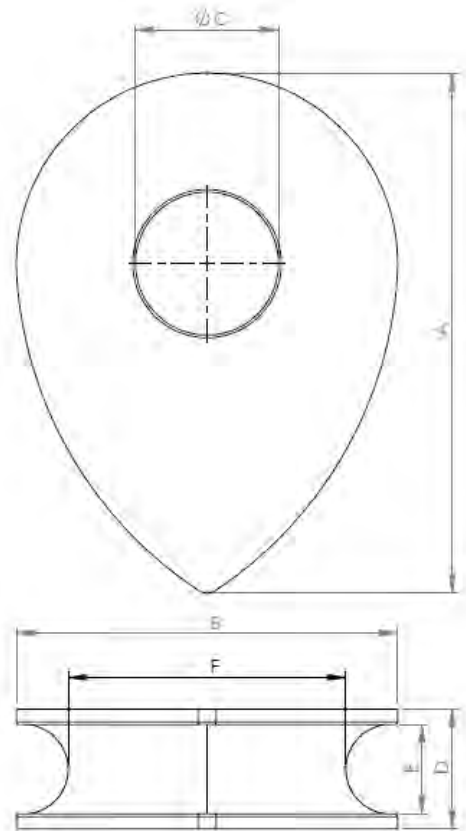
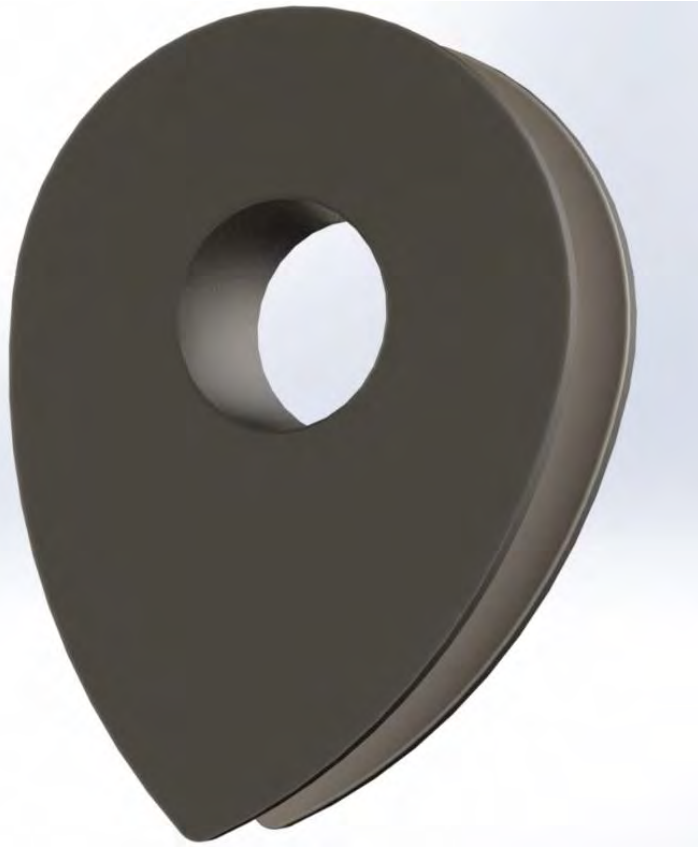
Features:

- Profile cut triangle plates
- Standard plate has 3 holes
- Zinc plated finish

We can make delta plates to other specifications on request. Please contact us with your requirements and we will come up with a solution.



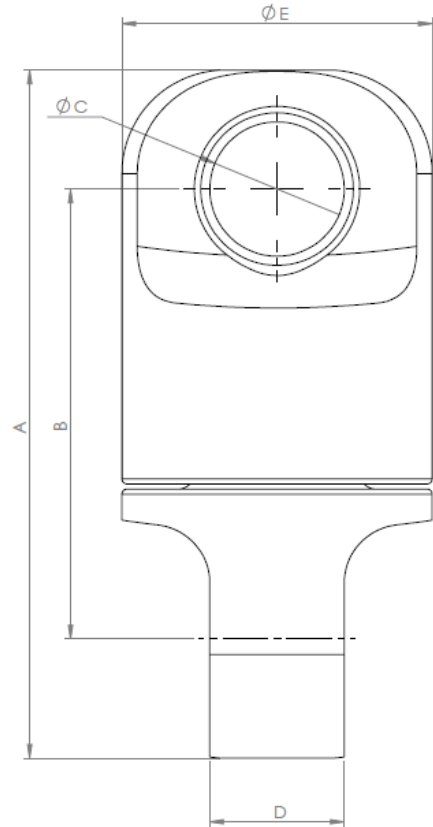
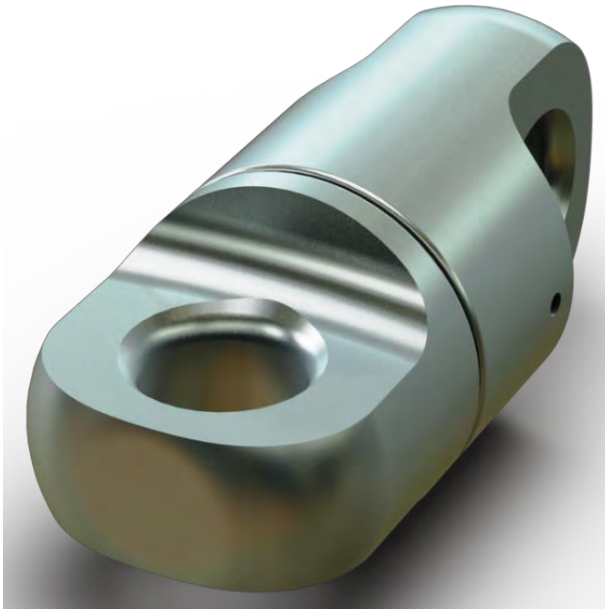
T WLL	THICKNESS	ØA mm	B mm	C mm	H mm	W mm	Product Code
	12mm	40	107	118	210	196	7-525-012
	20mm	40	107	118	210	196	7-525-020
9.5	40	34	100	100	170	170	7-526-095
12	40	37	110	110	190	190	7-526-120
13.5	50	41	120	120	205	205	7-526-135
17	50	45	130	130	230	230	7-526-170
25	50	55	140	140	270	270	7-526-250
35	60	62	150	150	290	290	7-526-350
55	80	75	180	180	350	350	7-526-550
85	100	90	220	220	440	440	7-526-850



Special Features:

- Machined from solid material – 1040 steel, stainless steel, cast iron.
- Zinc plated or galvanised finish on steel products
- Sizes can be altered on request

ROPE Ømm (Øin)	A mm	B mm	C Ømm	D mm	E mm	F mm	PRODUCT CODE
8 (5/16)	48	35	13	11	8	25	7-540-008
10 (3/8)	57	44	16	14	11	32	7-540-010
11 (7/16)	70	52	19	17	13	38	7-540-011
14 (9/16)	83	60	22	21	14	44	7-540-014
16 (5/8)	95	70	25	22	16	50	7-540-016
18 (11/16)	105	79	29	25	19	57	7-540-018
21 (13/16)	117	86	32	29	22	64	7-540-021
22 (7/8)	127	95	35	32	24	70	7-540-022
24 (15/16)	140	105	38	33	25	76	7-540-024
26 (1)	152	114	41	37	27	83	7-540-026
29 (1 1/8)	165	124	44	40	30	89	7-540-029
32 (1 1/4)	191	140	51	44	33	102	7-540-032
35 (1 3/8)	210	156	57	50	38	114	7-540-035
38 (1 1/2)	235	171	64	57	41	127	7-540-038



Special Features:

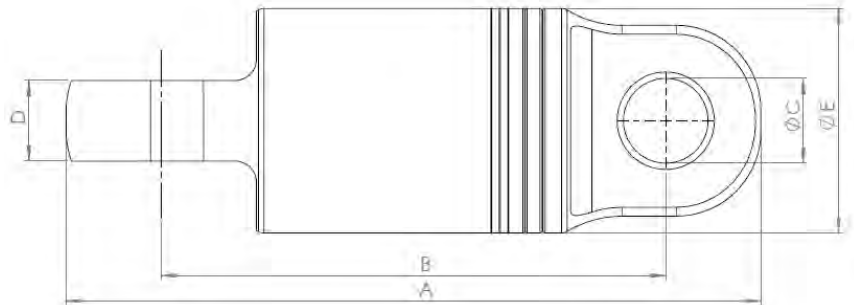
- Fully machined 316 Stainless steel construction for maximum corrosion resistance
- Fully ball raced for smooth swivel action and long service life
- Greaseable
- Eyes accept shackles
- 5:1 Safety factor
- Compact and durable design

SWIVEL WLL tonne	PROOF LOAD tonne	A mm	B mm	Ø C mm	D mm	Ø E mm	WEIGHT kg	PRODUCT CODE
0.5	1	66.5	43.5	13	13	30	0.2	7-250-010



Special Features:

- Compact & Rugged design
- 5:1 Safety factor
- Fully sealed & greaseable
- SKF Thrust bearing
- Proof loaded to two times W.L.L
- Zinc plated for corrosion resistance
- Holes to suit High Load Bow Shackles
- Higher capacity swivels available on request



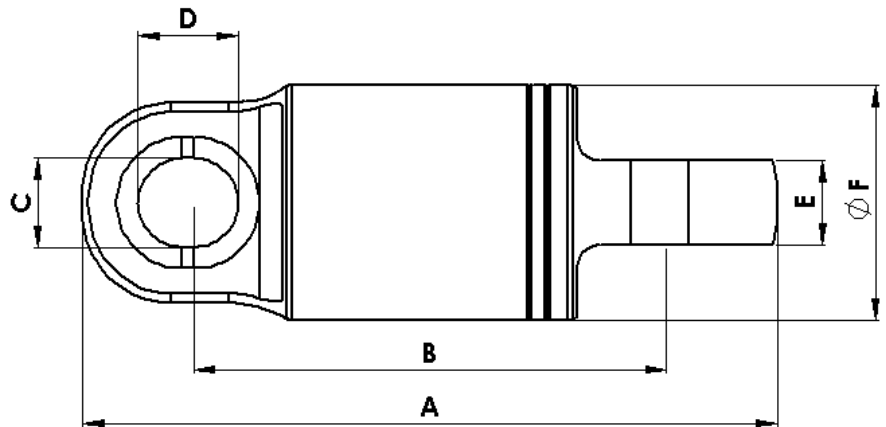
SWIVEL WLL tonne	PROOF LOAD tonne	A mm	B mm	ØC mm	D mm	ØE mm	WEIGHT kg	PRODUCT CODE
1.5	3	129.5	80.5	16.5	16	40	0.6	7-260-015
3	6	215.5	155.5	28.5	20	64.5	3	7-260-030
5	10	261.5	187.5	30	30	85	7	7-260-050
6	12	261.5	187.5	30	30	85	7	7-261-060
7.5	15	312.5	212.5	40	38	106	14	7-260-075
10	20	328.5	238.5	31	38	106	12.8	7-260-100
12	24	328.5	238.5	40	38	106	12.8	7-260-120
15	30	328.5	238.5	44	38	106	12.8	7-260-150
20	40	535	405	53	70	150	56	7-260-200
26	52	623.5	473.5	55	70	170	69	7-260-260
37.75	75.5	787	605	60	57	200		7-260-377

NOTE: All product dimensions mentioned in this catalogue are nominal dimensions. Product design, materials and/or specifications may be changed without prior notification.



Special Features:

- Compact & Rugged design
- 5:1 Safety factor
- Greaseable
- Fully sealed
- SKF Thrust bearing
- Available with plain bearing
- Proof loaded to two times W.L.L
- Zinc plated for corrosion resistance
- Eyes will accept Shackles and Hammerlocks
- Also available in Clevis-Eye or Clevis-Clevis configurations (Eye-Eye shown)
- Higher capacity available on



swivels request

SWIVEL WLL tonne	PROOF LOAD tonne	A mm	B mm	C mm	D mm	E mm	ØF mm	WEIGHT kg	PRODUCT CODE
1.5	3	129.5	80.5	16.5	19	16	40	0.6	7-265-015
3	6	215.5	147.6	28.5	32.5	20	64.5	2.8	7-265-030
6	12	252.5	168.5	34	39	30	85	6	7-265-060
10	20	312.5	212.5	40	45	38	106	12	7-265-100
15	30	312.5	212.5	40	45	38	106	12	7-265-150

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Special Features:

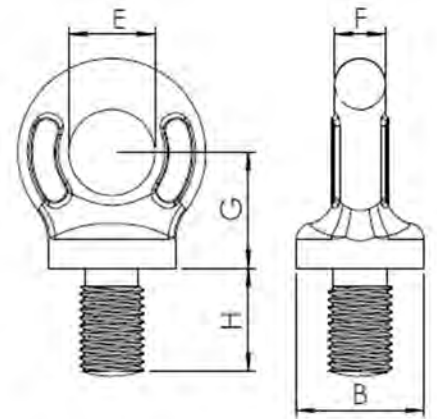
- Fully machined with heat treated and ground tip
- Manufactured in New Zealand from 4140 high tensile round bar and zinc plated
- Range of sizes available to meet individual requirements for wire rope splicing
- Available lengths, 200mm, 260mm, 300mm, 450mm, 600mm & 800mm

NOMINAL LENGTH mm	PRODUCT CODE
200	7-205-200
260	7-205-260
300	7-205-300
450	7-205-450
600	7-205-600
800	7-205-800



Features:

- Complies with BS 4278: 1984 Table 1
- Hardened and tempered material
- Metric coarse threads
- Various sizes from M8 to M48
- Non-standard thread pitches available upon request
- Capacities (SWL - Safe working Load) from 150kg up to 10T
- S.W.L. shown at 0° (vertical) angle of lift.
- Safety Note: Eyebolts under M12 are not recommended for lifting

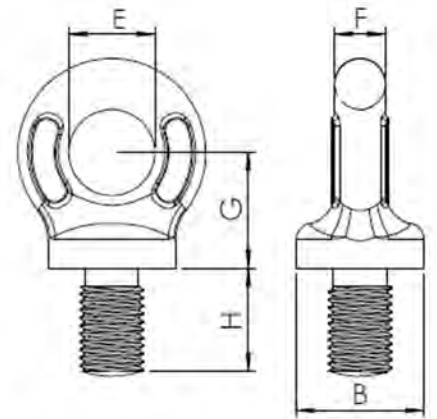


Thread Size	SWL Tonnes	B mm	E mm	F mm	G mm	H mm	Weight ea Kgs	Product Code
M8	0.15	22	15	9	20	18	0.06	7-602-M8
M12	0.4	22	15	9	20	18	0.07	7-602-M12
M14	0.5	29	20	12	26	23	0.15	7-602-M14
M16	0.8	29	20	12	26	23	0.16	7-602-M16
M18	1.0	36	24	14	32	28	0.28	7-602-M18
M20	1.6	40	27	16	36	32	0.44	7-602-M20
M22	1.6	45	30	18	40	35	0.56	7-602-M22
M24	2.5	52	35	21	46	40	0.86	7-602-M24
M30	4.0	65	44	26	58	51	1.66	7-602-M30
M33	4.0	72	48	29	64	56	2.24	7-602-M33
M36	6.3	81	54	32	72	63	3.17	7-602-M36
M42	8.0	101	68	40	90	79	6.00	7-602-M42
M48	10.0	101	68	40	90	79	9.00	7-602-M48



Features:

- Complies with BS 4278: 1984 Appendix 'A' Table 4
- Hardened and tempered material
- Imperial threads. Whitworth and UNC
- Various sizes from 1/4" to 2"
- Non-standard thread pitches available upon request
- Capacities (SWL - Safe working Load) from 80kg up to 12T
- S.W.L. shown at 0° (vertical) angle of lift.

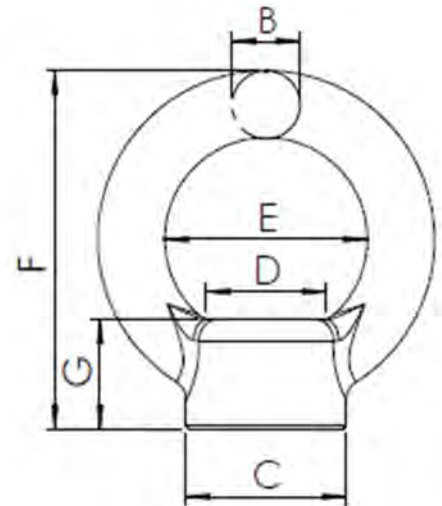


Thread Size		SWL Tonnes	B mm	E mm	F mm	G mm	H mm	Weight ea Kgs	Product Code
3/8	BSW-UNC	0.25	22	15	9	20	18	0.08	7-600-038
1/2	BSW	0.5	29	20	12	26	23	0.14	7-600-012
1/2	UNC	0.5	29	20	12	26	23	0.14	7-601-012
5/8	BSW-UNC	0.9	36	24	14	32	28	0.38	7-600-058
3/4	BSW-UNC	1.4	45	30	18	40	35	0.60	7-600-034
7/8	BSW-UNC	2.0	52	35	21	46	40	0.78	7-600-078
1	BSW-UNC	2.75	58	39	23	52	46	1.67	7-600-100
1 1/8	BSW-UNC	3.5	65	44	26	58	51	1.78	7-600-112
1 1/4	BSW-UNC	4.5	72	48	29	64	56	2.24	7-600-125
1 1/2	BSW-UNC	6.5	81	54	32	72	63	3.17	7-600-150
1 3/4	BSW-UNC	9.0	101	68	40	90	79	6.00	7-600-175
2	BSW	12.0	115	76	46	102	89	9.00	7-600-200



Features:

- Complies with BS 970
- Hardened and tempered material
- Metric coarse threads
- Various sizes from M10 to M24
- Non-standard thread pitches available upon request
- Capacities (SWL - Safe working Load) from 300kg up to 2.2T
- S.W.L. shown at 0° (vertical) angle of lift.



Thread Size	SWL Tonnes	B mm	C mm	D mm	E mm	F mm	G mm	Weight ea Kgs	Product Code
M10	0.3	13	29	19	44	78	22	0.3	7-605-M10BS
M12	0.5	13	29	19	44	78	22	0.3	7-605-M12BS
M16	0.8	13	29	19	44	78	29	0.3	7-605-M16BS
M20	1.2	16	38	29	48	86	26	0.4	7-605-M20BS
M24	2.2	19	44	35	54	105	38	0.8	7-605-M24BS



Product	Description
BOLT ON LIFTING POINTS	
9105101	YOKE LIFTING POINT M8 0.3T
9105101LB	YOKE LIFTING POINT M8 0.3T LONG BOLT
9105103	YOKE LIFTING POINT M10 0.63T
9105103LB	YOKE LIFTING POINT M10 .63T LONG BOLT
9105105	YOKE LIFTING POINT M12 1.0T
9105105LB	YOKE LIFTING POINT M12 1.0T LONG BOLT
9105107	YOKE LIFTING POINT M16 1.5T
9105107LB	YOKE LIFTING POINT M16 1.5T LONG BOLT
9105109	YOKE LIFTING POINT M20 2.5T
9105109LB	YOKE LIFTING POINT M20 2.5T LONG BOLT
9105111	YOKE LIFTING POINT M24 4.0T
9105111LB	YOKE LIFTING POINT M24 4.0T LONG BOLT
9105113	YOKE LIFTING POINT M30 5.0T
9105113LB	YOKE LIFTING POINT M30 5.0T LONG BOLT
9105115	YOKE LIFTING POINT M36 7.0T
9105117	YOKE LIFTING POINT M36 8.0T
9105117LB	YOKE LIFTING POINT M36 8.0T LONG BOLT
9105119	YOKE LIFTING POINT M42 10T
9105119LB	YOKE LIFTING POINT M42 10T LONG BOLT
9105121	YOKE LIFTING POINT M42 15T
9105121LB	YOKE LIFTING POINT M42 15T LONG BOLT
9105123	YOKE LIFTING POINT M48 20T
9105123LB	YOKE LIFTING POINT M48 20T LONG BOLT

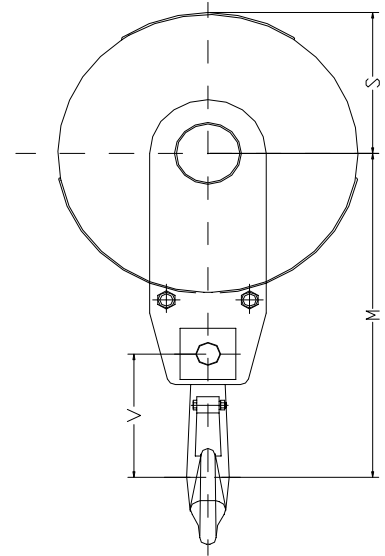
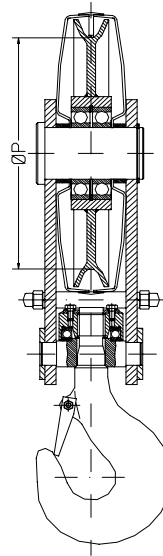
KEY EYE POINTS	
9105201	YOKE KEY EYE BOLT M8 0.3T
9105203	YOKE KEY EYE BOLT M10 0.4T
9105205	YOKE KEY EYE BOLT M12 0.75T
9105207	YOKE KEY EYE BOLT M16 1.5T
9105209	YOKE KEY EYE BOLT M20 2.3T
9105211	YOKE KEY EYE BOLT M24 3.2T
9105213	YOKE KEY EYE BOLT M30 4.5T
9105215	YOKE KEY EYE BOLT M36 7.0T

BALL BEARING SUPER POINTS	
9105303	YOKE SUPER POINT M10 0.5T
9105305	YOKE SUPER POINT M12 0.7T
9105307	YOKE SUPER POINT M16 1.4T
9105309	YOKE SUPER POINT M20 2.5T
9105311	YOKE SUPER POINT M24 4.0T
9105313	YOKE SUPER POINT M30 6.7T
9105315	YOKE SUPER POINT M36 10.0T
9105317	YOKE SUPER POINT M42 12.5T
9105319	YOKE SUPER POINT M48 17.0T

BOLT-ON LIFTING / LASHING POINT	
9105401	BOLT-ON LIFTING/LASHING PT 1T
9105403	BOLT-ON LIFTING/LASHING PT 3T
9105405	BOLT-ON LIFTING/LASHING PT 5T

WELD-ON LIFTING / LASHING POINT	
9105501	YOKE WELD-ON LIFTING POINT 1T
9105503	YOKE WELD-ON LIFTING POINT 3T
9105505	YOKE WELD-ON LIFTING POINT 5T
9105507	YOKE WELD-ON LIFTING POINT 8T
9105509	YOKE WELD-ON LIFTING POINT 10T
9105513	YOKE WELD-ON LIFTING POINT 20T

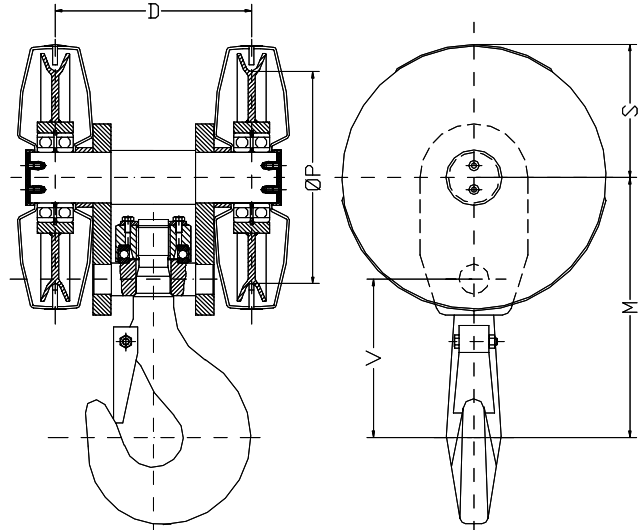
Hook Block Single Sheave



WEIGHT (kg)	GENERAL DIMENSIONS							DRIVE GROUPS & LOADS (KG)					
	Hook Num.	Rope Diam.	ØP	D	V	M	S	1Bm M3	1Am M4	2m M5	3m M6	4m M7	5m M8
12	0.8	7	160	-	120	285	105	2000	1600	1250	1000	800	630
20	1.6	10	200	-	140	345	131	4000	3200	2500	2000	1600	1250
36	2.5	15	280	-	155	435	180	6300	5000	4000	3200	2500	2000
79	5	16	355	-	195	520	223	12500	10000	8000	6300	5000	4000
126	6	22	450	-	240	631	274	16000	12500	10000	8000	6300	5000

NOTE: Hooks assembled in these blocks are forged hooks according to DIN 15401 standard (Material: Ste 355).

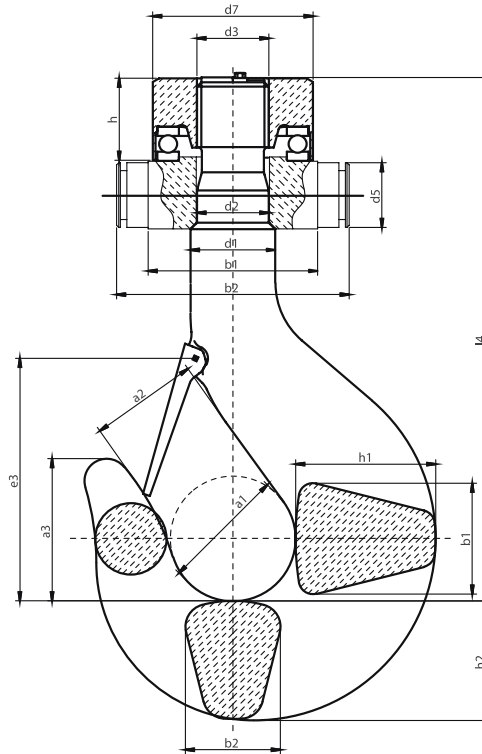
Hook Block Two Sheave



WEIGHT (kg)	GENERAL DIMENSIONS							DRIVE GROUPS & LOADS (KG)					
	Hook Num.	Rope Diam.	ØP	D	V	M	S	1Bm M3	1Am M4	2m M5	3m M6	4m M7	5m M8
18	1,6	7	160	162	140	240	105	4000	3200	2500	2000	1600	1250
30	2,5	10	200	194	150	260	131	6300	5000	4000	3200	2500	2000
66	5	15	280	242	195	335	180	12500	10000	8000	6300	5000	4000
142	8	16	355	327	265	435	223	20000	16000	12500	10000	8000	6300
257	12	22	450	379	315	525	274	32000	25000	20000	16000	12500	10000

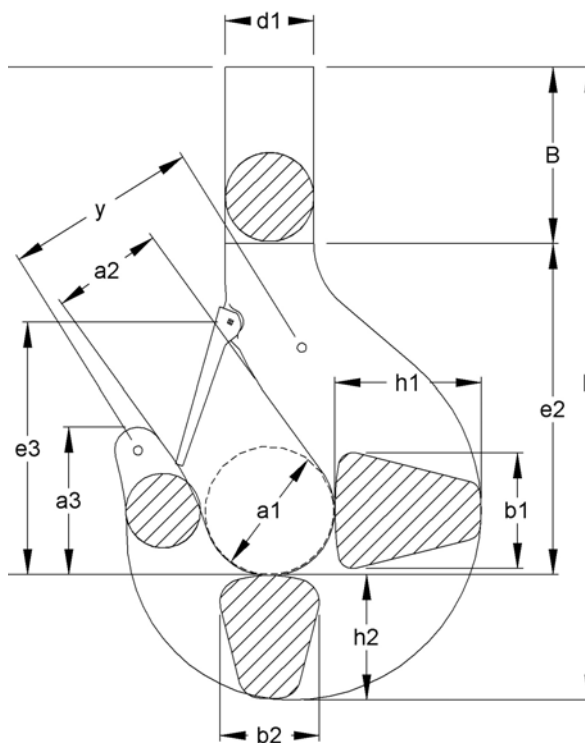
NOTE: Hooks assembled in these blocks are forged hooks according to DIN 15401 standard (Material: Ste 355).

Crane Hook Machined



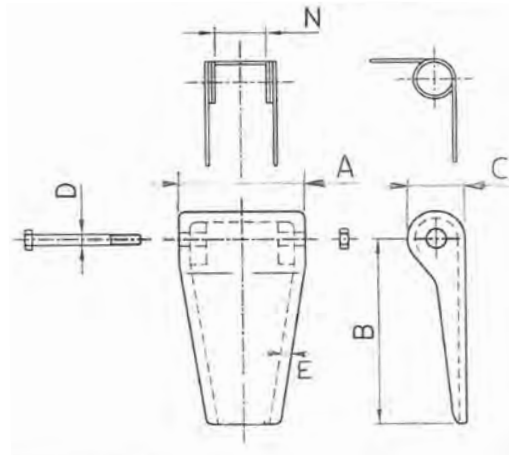
Hook - DIN 15401											Trunnion - DIN 15412			Nut - DIN 15413			
N.º	a1	a2	a3	b1	b2	d1	e3	h1	h2	d2	d3	b1	b2	d5	d7	h1	l4
2.5	63	50	72	53	45	42	132	67	58	36	M36	80	125	30	70	44	250
4	71	56	80	63	53	48	148	80	67	42	M42	90	140	35	80	49	281.5
5	80	63	90	71	60	53	165	90	75	45	M45	100	155	40	95	56	314.5
6	90	71	101	80	67	60	185	100	85	50	Rd50x6	125	185	45	115	60	375
8	100	80	113	90	75	67	210	112	95	56	Rd56x6	140	210	50	125	67	413
10	112	90	127	100	85	75	221	125	106	64	Rd64x8	160	230	55	145	76	446
12	125	100	143	112	95	85	252	140	118	72	Rd72x8	180	265	60	165	87	504.5
16	140	112	160	125	106	95	280	160	132	80	Rd80x10	190	275	70	175	91	576
20	160	125	180	140	118	106	330	180	150	90	Rd90x10	200	295	80	185	102	645
25	180	140	202	160	132	118	360	200	170	100	Rd100x12	220	318	90	205	113	716
32	200	160	225	180	150	132	400	224	190	110	Rd110x12	260	378	100	240	131	788
40	224	180	252	200	170	150	447	250	212	125	Rd125x14	285	415	110	270	144	885
50	250	200	285	224	190	170	485	280	236	140	Rd140x16	335	465	125	320	153	969
63	280	224	320	250	212	190	550	315	265	160	Rd160x18	380	522	140	360	181	1100
80	315	250	358	280	236	212	598	355	300	180	Rd180x20	420	565	160	400	198	1245
100	355	280	402	315	265	236	688	400	335	200	Rd200x22	470	645	180	445	228	1388
125	400	315	450	355	300	265	750	450	375	225	Rd225x24	510	685	200	490	246	1565
160	450	355	505	400	335	300	825	500	425	250	Rd250x28	550	750	220	530	274	1761
200	500	400	565	450	375	335	900	560	475	280	Rd280x32	610	810	240	590	343	2012
250	560	450	635	500	425	375	980	630	530	320	Rd320x36	700	920	260	680	383	2272

Crane Hook Unmachined



Hook - DIN 15401										
N.º	a1	a2	a3	b1	b2	d1	e3	h1	h2	L
2.5	63	50	72	53	45	42	132	67	58	310
4	71	56	80	63	53	48	148	80	67	385
5	80	63	90	71	60	53	165	90	75	410
6	90	71	101	80	67	60	185	100	85	430
8	100	80	113	90	75	67	210	112	95	520
10	112	90	127	100	85	75	221	125	106	540
12	125	100	143	112	95	85	252	140	118	675
16	140	112	160	125	106	95	280	160	132	745
20	160	125	180	140	118	106	330	180	150	865
25	180	140	202	160	132	118	360	200	170	935
32	200	160	225	180	150	132	400	224	190	1100-1200
40	224	180	252	200	170	150	447	250	212	1105-1205
50	250	200	285	224	190	170	485	280	236	1190-1290
63	280	224	320	250	212	190	550	315	265	1320-1420
80	315	250	358	280	236	212	598	355	300	1470-1570
100	355	280	402	315	265	236	688	400	335	1615-1715
125	400	315	450	355	300	265	750	450	375	1890-1990
160	450	355	505	400	335	300	825	500	425	-
200	500	400	565	450	375	335	900	560	475	-
250	560	450	635	500	425	375	980	630	530	-

Safety Latch



CODE	MEASURES (MM)						FOR HOOK TYPE		WEIGHT kg
	A	B	C	D	E	N	DIN 15401	DIN 15402	
SO.8	35	65	20	5	3	18	0.8	-	0.070
S1.6 & S2.5	35	75	23	6	3	20	1.6 & 2.5	-	0.085
S4	45	85	23	6	3	23	4		0.160
S5D6	45	95	31	10	2	23	5	6	0.160
S6D8	56	105	33	10	3	27	6	8	0.220
S8D10	65	120	37	12	3	27	8	10	0.375
S10D12	70	130	37	12	3	27	10	12	0.405
S12D16	80	150	43	16	3	35	12	16	0.610
S16D20	92	170	47	16	4	35	16	20	1
S20D25	97	200	66	16	4	35	20	25	1.180
S25D32	105	215	68	16	4	50	25	32	1.365
S32D40	120	240	68	20	5	60	32	40	2.130
S40D50	135	280	58	20	5	60	40	50	2.460
S50D63	135	320	60	24	5	60	50	63	2.965
S63D80	125	350	58	24	5	60	63	80	3.165
S80D100	125	380	68	24	5	60	80	100	3.290
S100D125	145	430	73	24	5	60	100	125	4.015

NOTE: S means "suitable for single hook" & D means "suitable for ramshorn hook"

Drive Group Table



The table below specifies the drive group as a function of hook strength class, and the lifting capacity as a function of hook number. It does not make specifications for hooks whose lifting capacity is under 100 kg or over 500,000 kg. Where such hooks are to be used in exceptional cases, the lifting capacity shall be selected in accordance with the R10 series of preferred numbers specified in DIN 323 Part 1.

STRENGTH CLASS	DRIVE GROUP 1)										STRENGTH CLASS
M	-	-	-	-	1B _m / M3	1A _m / M4	2 _m / M5	3 _m / M6	4 _m / M7	5 _m / M8	M
P	-	-	-	1B _m / M3	1A _m / M4	2 _m / M5	3 _m / M6	4 _m / M7	5 _m / M8	-	P
S	-	-	1B _m / M3	1A _m / M4	2 _m / M5	3 _m / M6	4 _m / M7	-	-	-	S
T	-	1B _m / M3	1A _m / M4	2 _m / M5	3 _m / M6	4 _m / M7	-	-	-	-	T
V	1B _m / M3	1A _m / M4	2 _m / M5	3 _m / M6	4 _m / M7	-	-	-	-	-	V
HOOK NUMBER	LIFTING CAPACITY (kg)										HOOK NUMBER
006	320	250	200	160	125	100	-	-	-	-	006
010	500	400	320	250	200	160	125	100	-	-	010
012	630	500	400	320	250	200	160	125	100	-	012
020	1000	800	630	500	400	320	250	200	160	125	020
025	1250	1000	800	630	500	400	320	250	200	160	025
04	2000	1600	1250	1000	800	630	500	400	320	250	04
05	2500	2000	1600	1250	1000	800	630	500	400	320	05
08	4000	3200	2500	2000	1600	1250	1000	800	630	500	08
1	5000	4000	3200	2500	2000	1600	1250	1000	800	630	1
1.6	8000	6300	5000	4000	3200	2500	2000	1600	1250	1000	1.6
2.5	12500	10000	8000	6300	5000	4000	3200	2500	2000	1600	2.5
4	20000	16000	12500	10000	8000	6300	5000	4000	3200	2500	4
5	25000	20000	16000	12500	10000	8000	6300	5000	4000	3200	5
6*	32000	25000	20000	16000	12500	10000	8000	6300	5000*	4000	6
8	40000	32000	25000	20000	16000	12500	10000	8000	6300	5000	8
10*	50000	40000	32000	25000	20000	16000	12500	10000	8000*	6300	10
12*	63000	50000	40000	32000	25000	20000	16000	12500*	10000*	8000	12
16*	80000	63000	50000	40000	32000	25000	20000	16000*	12500	10000	16
20*	100000	80000	63000	50000	40000	32000	25000	20000*	16000	12500	20
25	125000	100000	80000	63000	50000	40000	32000	25000	20000	16000	25
32*	160000	125000	100000	80000	63000	50000	40000*	32000*	25000	20000	32
40*	200000	160000	125000	100000	80000	63000	50000*	40000	32000	25000	40
50	250000	200000	160000	125000	100000	80000	63000	50000	40000	32000	50
63*	320000	250000	200000	160000	125000	100000	80000*	63000	50000	40000	63
80*	400000	320000	250000	200000	160000	125000	100000*	80000	63000	50000	80
100*	500000	400000	320000	250000	200000	160000	125000*	100000	80000	63000	100
125*	-	500000	400000	320000	250000	200000	160000*	125000	100000	80000	125
160*	-	-	500000	400000	320000	250000	200000*	160000	125000	100000	160
200*	-	-	-	500000	400000	320000	250000*	200000	160000	125000	200
250	-	-	-	-	500000	400000	320000	250000	200000	160000	250

NOTE: Hooks used in a drive group lower than 1B_m / M3 are not included here.

* Hooks to be used on cranes such as, are used in steel works and rolling mills.

1) In accordance with subclause 4.1 of the February 1974 edition of DIN 15 020 Part 1 and AS1418.1 - 2002.

FIXED VERSUS MOVING BLOCK EXAMPLE

Fixed Block – Load approaches block

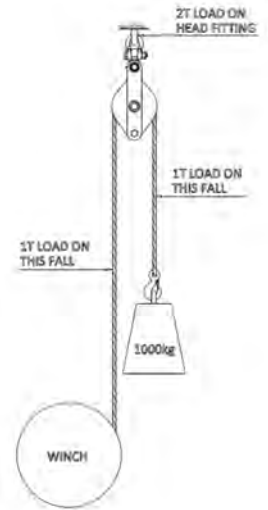
If the load approaches block then the block needs to have a WLL of at least twice the load weight.

1T load is supported by 1 fall of rope

1T line pull

2T WLL block (minimum)

Load is lifted at the same speed as winch drum rotation



Moving Block – Block shifts with load

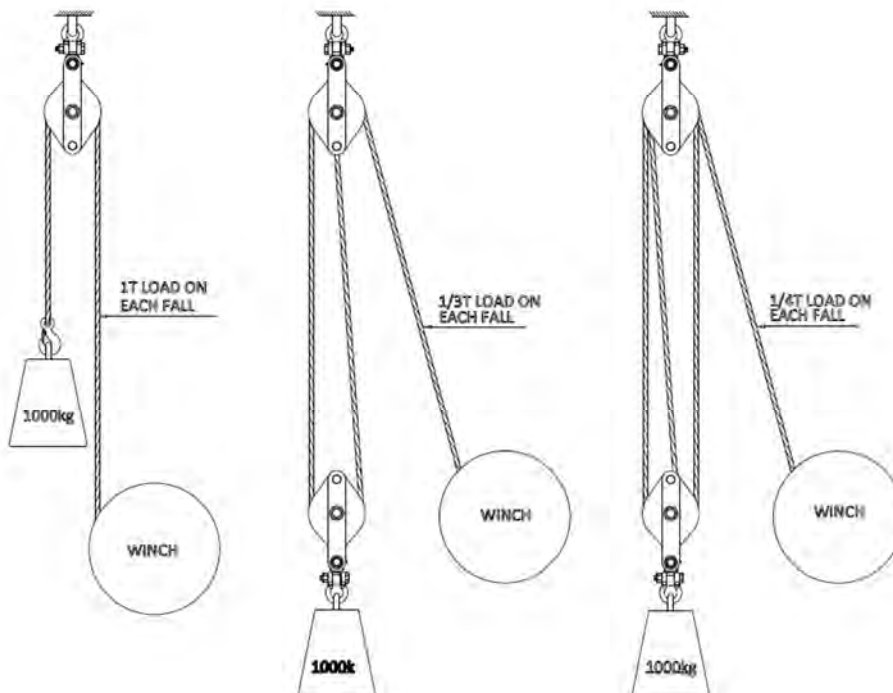
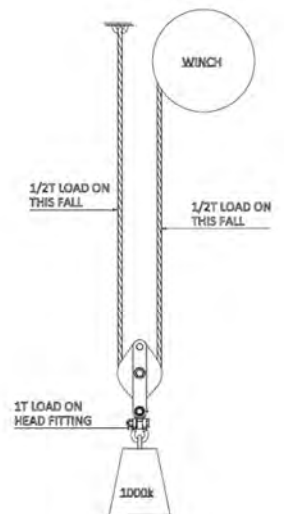
If the load shifts with block then the block needs to have a WLL of at least the load weight.

1T load is supported by 2 falls of rope

1/2T line pull

1T WLL block (minimum)

Load is lifted at the half the speed of winch drum rotation

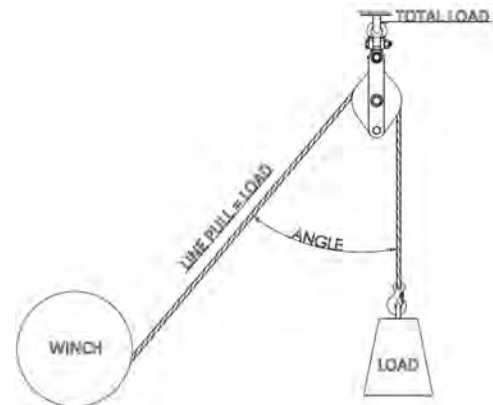


Loads on Blocks

The Working Load Limit (WLL) for blocks indicates the maximum load that should be exerted on the block and its connecting fitting. The connecting fitting being a hook, shackle, eye etc. This total load value may be different from the weight being lifted or pulled by a hoisting or hauling system. It is necessary to determine the total load being imposed on each block in the system to properly determine the rated capacity block to be used. A single sheave block used to change load line direction can be subjected to total loads greatly different from the weight being lifted or pulled. The total load value varies with the angle between the incoming and departing lines to the block.

The following chart indicates the factor to be multiplied by the line pull to obtain the total load on the block.

Angle Factor Multipliers			
Angle	Factor	Angle	Factor
0°	2.00	100°	1.29
10°	1.99	110°	1.15
20°	1.97	120°	1.00
30°	1.93	130°	0.84
40°	1.87	135°	0.76
45°	1.84	140°	0.68
50°	1.81	150°	0.52
60°	1.73	160°	0.35
70°	1.64	170°	0.17
80°	1.53	180°	0.00
90°	1.41		



Example A: A gin pole truck lifting 1,000kgs

(Calculations for determining total load on single line system.)

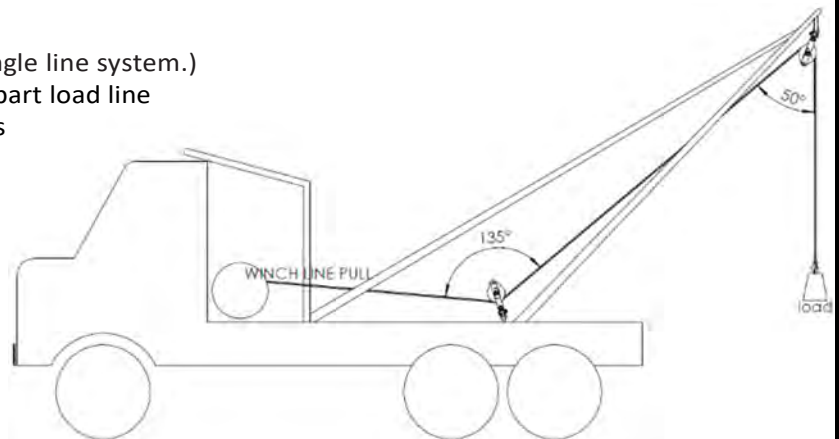
There is no mechanical advantage to a single part load line system, so winch line pull is equal to 1,000kgs or the weight being lifted.

To determine total load on snatch block A:

A = 1,000kgs (line pull)
x 1.81 (factor 50° angle) = 1,810kgs.

To determine total load on toggle block B:

B = 1,000kgs (line pull)
x 0.76 (factor 135° angle) = 760kgs.



Example B: Hoisting system using a traveling block to lift a weight of 1,000kgs.

(Calculation for determining total load value for mechanical advantage system.)

The mechanical advantage of traveling block C is 2 because 2 parts of load line support the 1,000kg weight so the Line Pull = 1000kgs ÷ 2.00 = 500kgs.

Total load on C = 500kgs (line pull) x 2.0 (angle factor 0°) = 1,000kgs.

To determine total load on stationary block shown as D

= 500kgs (dead end load) + 500kgs (line pull)
x 1.87 (Factor 40° angle) = 1,435kgs.

To determine total load on block shown as E

= 500kgs (line pull) x .84 (Factor 130° angle) = 420kgs.

To determine total load on block shown as F

= 500kgs (line pull) x 1.41 (Factor 90° angle) = 705kgs.

