William Hackett

SS-C4 QP ATEX CHAIN HOIST

USER MANUAL

A LONG LASTING **CONNECTION**

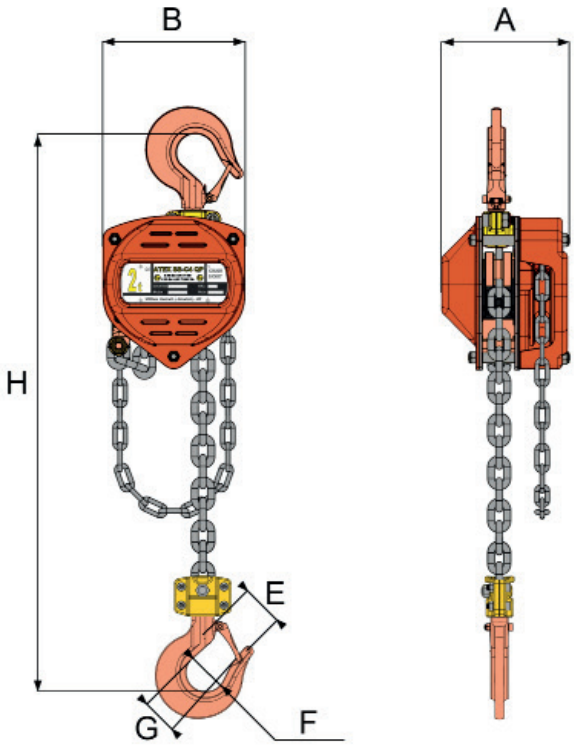

3.2t

Contents

This Manual is designed to provide you with clear, concise, and comprehensive information of (product/ service/solution). For further assistance, please don't hesitate to contact us.

Dimensions and Specifications

Single Fall



Multi-Fall

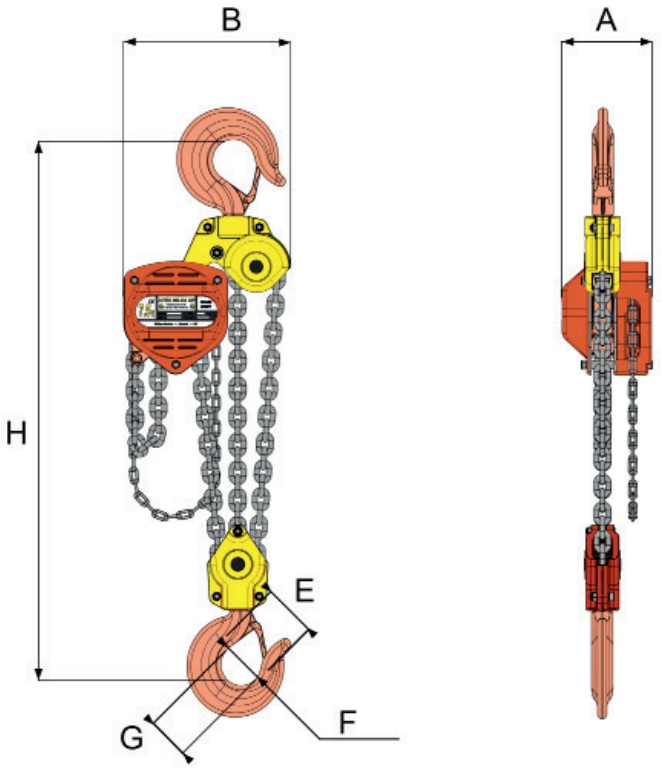


Table 1: Product specification, dimensions and WLL for William Hackett SS-C4 QP ATEX chain hoists

PART CODE	WLL t	NO. OF FALLS	LOAD CHAIN SIZE mm	Hand Chain m	STD. LIFT m	A mm	B mm	E mm	F mm	G mm	H min mm	MASS kg 3m HOL	EXTRA WEIGHT per m (kg)
025.ATEX.SS.053	0.5	1	6.0 x 18	5 x 25	3	134	155	49.0	40	25.5	350	11.1	1.7
025.ATEX.SS.103	1.0	1	6.0 x 18	5 x 25	3	134	155	49.0	40	25.5	350	11.1	1.7
025.ATEX.SS.203	2.0	1	8.0 x 24	5 x 25	3	157	185	54.5	44	30.0	410	16.8	2.2
025.ATEX.SS.32D3	3.2	2	8.0 x 24	5 x 25	3	157	235	61.0	48	37.5	495	24.2	3.6
025.ATEX.SS.503	5.0	2	10.0 x 30	5 x 25	3	180	262	85.0	60	43.0	635	38.4	5.2
025.ATEX.SS/1003	10.0	4	10.0 x 30	5 x 25	3	180	406	89.0	83	53.0	815	68.9	9.6
025.ATEX.SS/1503	15.0	6	10.0 x 30	5 x 25	3	210	406	-	108	80.0	1000	116.7	13.9
025.ATEX.SS/2003	20.0	8	10.0 x 30	5 x 25	3	225	550	-	108	80.0	1100	149.5	19.2
025.ATEX.SS/3003	30.0	12	10.0 x 30	5 x 25	3	460	800	-	140	112.0*	1550	340.0	27.9
025.ATEX.SS/5003	50.0	20	10.0 x 30	5 x 25	3	580	840	-	180	140.0*	2000	750.0	45.2

Hoist Selection

In accordance with statutory requirements (e.g. The Lifting Operations and Lifting Equipment Regulations 1998), all lifts using chain block assemblies should be planned by a competent person; require risk assessment and the production of a task method statement; and be subject to execution by suitably trained operatives under the supervision of a responsible person. The specification of the lever hoist assemblies required to achieve a safe lifting operation must be determined by a competent person.

It is not intended that the recommendations in this manual take precedence over existing plant safety rules and regulations or OSHA regulations. In the event that conflict exists between a rule set forth in this publication and a similar rule already set by an individual company, the more stringent of the two should take precedence.

Careful consideration should be given to the mass of the load being lifted and any dynamic factors that may be likely to affect the load on the hoist. Select the hoist capacity equal to or greater than the load. Ideally chain hoists should not be used to lift loads below 10% of their rated WLL limit.

William Hackett SS-C4 QP ATEX chain hoists are assembled, chained and tested to the height of lift specified by the end user. Careful consideration should be given to the headroom required to lift the load and the position of the operator before specifying the length of load chain and the hoist model.

The configuration of chain hoist assemblies are demonstrated on page 4, and are in accordance with the product specification, dimensions and working load limit (WLL) recorded in Table 1 (also on page 4).

William Hackett SS-C4 QP ATEX chain hoists are designed for use in a variety of industries and environments where there is a risk of explosion from dust, gases or other combustible substances.

William Hackett SS-C4 QP ATEX chain hoists can be used within an operating temperature range of -40°C to +120°C.

A thorough study of the information in this manual should provide a better understanding of safe operating procedures and afford a greater margin of safety for people and equipment.

William Hackett SS-C4 QP ATEX chain hoists are designed for use in fleeting applications for both lifting or pulling. If multiple chain hoists are to be used in fleeting operations, the lift should be assessed by a competent person taking into account fleeting advice.

Pre-use Checks

Before the SS-C4 QP ATEX chain hoist is issued from the designated storage location, a competent person must ensure that the appropriate certification for the SS-C4 QP ATEX chain hoist is in place.

Safe use instructions and operating instructions should be made available.

Conducting thorough and consistent checks on a chain hoist immediately prior to use will help identify problems due to accidental damage, internal corrosion, brake contamination or inappropriate storage. Recommended checks include:

1. If necessary the hoist should be cleaned before inspection.
2. Name Plate – details clear and visible
3. Hook latches in good working order
4. Is the load chain worn or damaged. In particular attention should be given to the wear which occurs on the bearing surfaces inside the links and to damage in the form of bent, notched, stretched, or corroded links and the chain should move freely.
5. Obvious signs of hooks opening out increase in throat opening or any other form of distortion in the hooks or suspension fittings.
6. Top and bottom hooks free to rotate with no load applied.
7. With no load applied turning the hand chain clockwise should produce a clear and positive clicking sound as the brake ratchet activates.
8. On multiple fall hoists check that all chain sheaves are free to rotate whilst no load is applied.
9. Check all fixings are in place and in good condition, split pins or nyloc nuts.
10. Obvious signs of damage to the hoist slack end chain anchor.
11. General damage to the hoist body, this can be an indicator of neglect throughout the hoist.
12. The load chain wheel should be checked for damage or debris
13. Chain guides and strippers should be free of debris and in good condition.

If any of these points are not satisfied the hoist MUST NOT be used.

Hoist Attachment / Mounting

Check the correct engagement of the top and bottom hooks. The hooks should be free to articulate fully when engaged with the load attachment points without overcrowding or point loading that is detrimental to the hook in any way.

Ensure that the suspension structure has sufficient load bearing strength and capacity to support the load being lifted.

If more than one hoist is to be used in a fleeting arrangement, load attachment equipment should be chosen that allows for the angles of the lift.

The chain hoist is a lifting appliance and additional lifting accessories should be incorporated into the lift plan to facilitate attachment to the load.

Make sure that the load chain is free from any twists or knotting. In the case of multi-fall chain hoists ensure that the bottom hook has not been capsized causing chain twist.

Safe Use Information

Do not attempt lifting operations unless you understand the use of the equipment, the lifting and slinging
procedures and you have been suitably trained.

William Hackett SS-C4 QP ATEX chain hoists are not designed for lifting people and should not be used for that purpose.

Use appropriate personal protective equipment (PPE).

Check the correct engagement of the top and bottom hooks. The hooks should be free to articulate within the load attachment points without overcrowding.

Always inspect the chain hoist prior to use, and if any damage is apparent the block should be quarantined for inspection by a competent person. Labels should clearly show the identification and other data for the hoist.

Ensure that the suspension structure has sufficient load bearing strength and capacity to support the load.

The chain hoist is a lifting appliance and additional lifting accessories should be incorporated into the lift plan to facilitate a safe lifting operation.

Establish a clearly defined zone around the area of the lifting operation.

Always be aware of the load when operating the hoist and ensure that no one enters the lift zone unintentionally during the lifting operation.
Ensure that the load and hand chains are not twisted, particular care should be taken when using multi-fall chain hoists.

During the lift the load and hand chains should be straight and should not contact any angles or edges.

Take the load steadily and avoid shock loads.

Do not expose chain hoist assemblies to chemicals or corrosive solutions (whether immersed in such solutions or used in atmospheres in which fumes are present), particularly acidic or strongly alkaline environments without consulting the supplier or manufacturer.

Do not leave suspended loads unattended. In an emergency cordon off the working area and establish safe exclusion zones.

Never return a damaged chain hoist to stores; it should be reported to a competent person.

Spare Parts Inspection Category

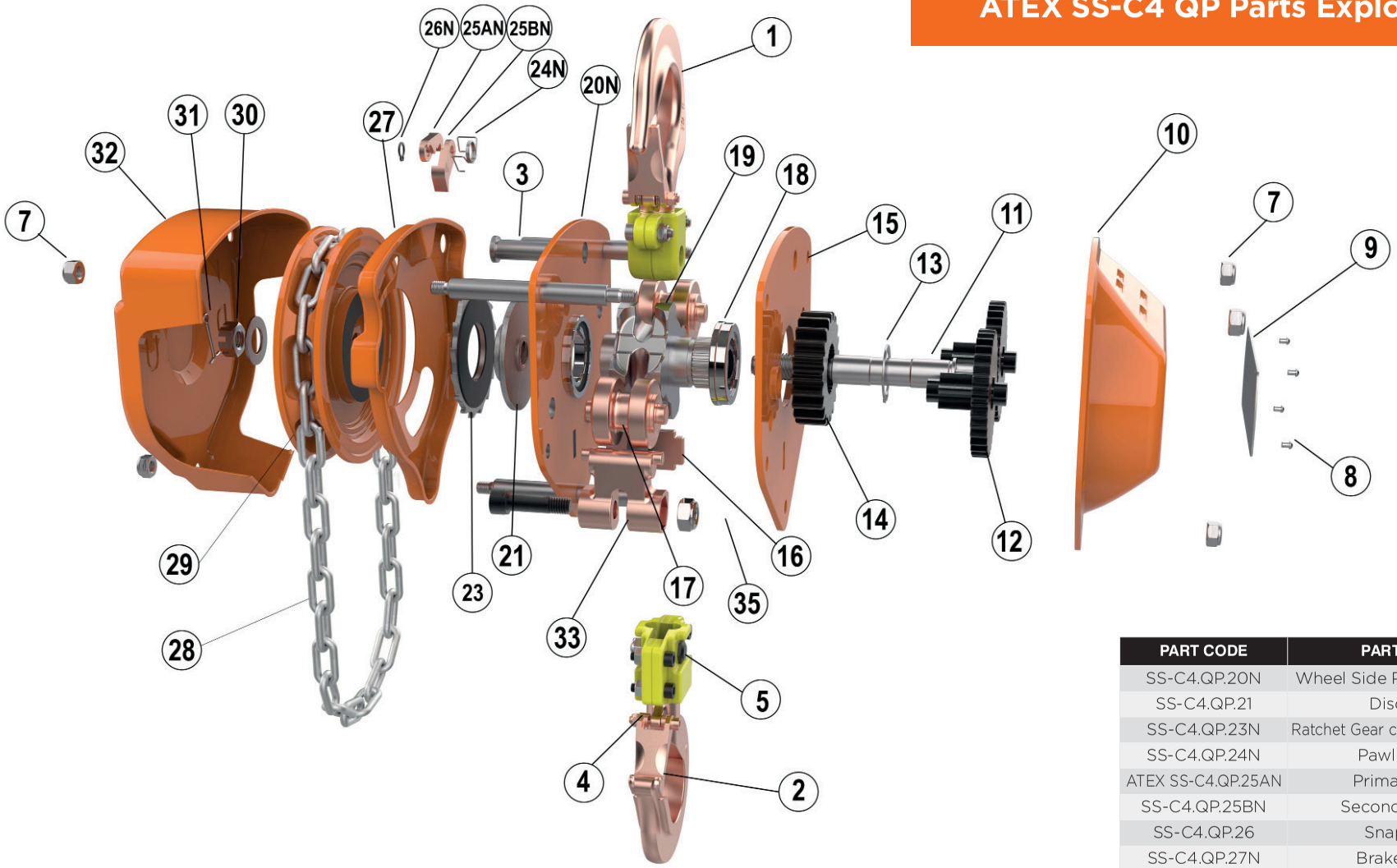
SPECIAL INSPECTION - Type 1	Corrosion Protected / Stainless Steel / Copper Components (Do Not Shotblast)
STANDARD INSPECTION - Type 2	**Non-Corrosion Protected or Painted Components**

PART CODE	QTY.	DESCRIPTION	INSPECTION TYPE (1 OR 2) SS-C4 QP
ATEX SS-C4.QP.01	1	Top Hook Assembly	2
ATEX SS-C4.QP.02	2	Latch Kit	1
SS-C4.QP.03	1	Top Hook Pin	2
ATEX SS-C4.QP.04	1	Bottom Hook Assembly	2
SS-C4.QP.05	1	Chain Fixing Pin	2
SS-C4.QP.07	6	Nut	1
SS-C4.QP.08	4	Label Rivets	N/A
SS-C4.QP.09	1	Label	1
SS-C4.QP.10	1	Gear Cover Assembly	2
SS-C4.QP.11	1	Pinion Shaft	1
SS-C4.QP.12	2	Pinion Gear (pair)	2
SS-C4.QP.13	1	Snap Ring	2
SS-C4.QP.14	1	Load Gear	2
SS-C4.QP.15	1	Gear Side Plate	2
ATEX SS-C4.QP.16	1	Stripper	1
ATEX SS-C4.QP.17	2	Guide Roller	1
SS-C4.QP.18	2	Caged Roller Bearings	2
SS-C4.QP.19	1	Load Sheave	1
SS-C4.QP.20N	1	Wheel Side Plate Assembly	2
SS-C4.QP.21	1	Disc Hub	1
SS-C4.QP.23N	1	Ratchet Gearc/w Sintered Friction Discs	1
SS-C4.QP.24N	2	Pawl Spring	1
ATEX SS-C4.QP.25AN	2	Primary Pawl	1
ATEX SS-C4.QP.25BN	2	Secondary Pawl	1
SS-C4.QP.26	2	Snap Ring	N/A
SS-C4.QP.27	1	Brake Cover	2
SS-C4.QP.28	1	Hand Chain (5 x 25mm)	1
SS-C4.QP.29	1	Hand Chain Wheel	2
SS-C4.QP.29L	1	Overload Limiter	2
SS-C4.QP.30	1	Pinion Nut	1
SS-C4.QP.31	1	Cotter Pin	N/A
SS-C4.QP.32	1	Hand Wheel Cover	2
ATEX SS-C4.QP.33	1	Chain Anchor Plate	1
SS-C4.QP.35	1	Chain Anchor Pin	2
SS-C4.QP.36	1	Top Hook Pin and Lock Nut	2

Parts List

PART CODE	PART NAME	SS-C4 QP ATEX FINISH
ATEX SS-C4.QP.01	Top Hook Assembly	Copper Plated
ATEX SS-C4.QP.02	Latch Kit	Copper Plated
SS-C4.QP.03	Top Hook Pin	Self Colour
ATEX SS-C4.QP.04	Bottom Hook Assembly	Copper Plated
SS-C4.QP.05	Chain Fixing Pin	Zinc Flake
SS-C4.QP.07	Nut	Stainless Steel
SS-C4.QP.08	Label Rivets	Stainless Steel
SS-C4.QP.09	Label	Stainless Steel
SS-C4.QP.10	Gear Cover Assembly	Marine Powder Coating
SS-C4.QP.11	Pinion Shaft	Zinc Flake
SS-C4.QP.12	Pinion Gear (pair)	Self Colour
SS-C4.QP.13	Snap Ring	Self Colour
SS-C4.QP.14	Load Gear	Self Colour
SS-C4.QP.15	Gear Side Plate	Zinc Flake
ATEX SS-C4.QP.16	Stripper	Copper Plated
ATEX SS-C4.QP.17	Guide Roller	Copper Plated
SS-C4.QP.18	Caged Roller Bearings	Steel
SS-C4.QP.19	Load Sheave	Zinc Flake
SS-C4.QP.20N	Wheel Side Plate Assembly	Zinc Flake
SS-C4.QP.21	Disc Hub	Zinc Flake
SS-C4.QP.23N	Ratchet Gear	Zinc Flake
SS-C4.QP.24N	Pawl Spring	Stainless Steel
ATEX SS-C4.QP.25AN	Primary Pawl	Copper Plated
ATEX SS-C4.QP.25BN	Secondary Pawl	Copper Plated
SS-C4.QP.26	Snap Ring	Stainless Steel
SS-C4.QP.27	Brake Cover	Marine Powder Coating
SS-C4.QP.28	Hand Chain (5 x 25mm)	Zinc, Zinc Flake or Stainless Steel
SS-C4.QP.29	Hand Chain Wheel	Marine Powder Coating
SS-C4.QP.29L	Overload Limiter	N/A
SS-C4.QP.30	Pinion Nut	Stainless Steel
SS-C4.QP.31	Cotter Pin	Stainless Steel
SS-C4.QP.32	Hand Wheel Cover	Marine Powder Coating
ATEX SS-C4.QP.33	Chain Anchor Plate	Copper Plated
SS-C4.QP.35	Chain Anchor Pin	Zinc Flake
SS-C4.QP.36	Top Hook Pin and Lock Nut	Zinc Flake and Stainless Steel

ATEX SS-C4 QP Parts Explosion



PART CODE	PART NAME
ATEX SS-C4.QP.01	Top Hook Assembly
ATEX SS-C4.QP.02	Latch Kit
SS-C4.QP.03	Top Hook Pin
ATEX SS-C4.QP.04	Bottom Hook Assembly
SS-C4.QP.05	Chain Fixing Pin
SS-C4.QP.07	Nut

PART CODE	PART NAME
SS-C4.QP.08	Label Rivets
SS-C4.QP.09	Label
SS-C4.QP.10	Gear Cover Assembly
SS-C4.QP.11	Pinion Shaft
SS-C4.QP.12	Pinion Gear (pair)
SS-C4.QP.13	Snap Ring

PART CODE	PART NAME
SS-C4.QP.14	Load Gear
SS-C4.QP.15	Gear Side Plate
ATEX SS-C4.QP.16	Stripper
ATEX SS-C4.QP.17	Guide Roller
SS-C4.QP.18	Caged Roller Bearings
SS-C4.QP.19	Load Sheave

PART CODE	PART NAME
SS-C4.QP.20N	Wheel Side Plate Assembly
SS-C4.QP.21	Disc Hub
SS-C4.QP.23N	Ratchet Gear c/w Sintered Discs
SS-C4.QP.24N	Pawl Spring
ATEX SS-C4.QP.25AN	Primary Pawl
SS-C4.QP.25BN	Secondary Pawl
SS-C4.QP.26	Snap Ring
SS-C4.QP.27N	Brake Cover
SS-C4.QP.28	Hand Chain (5 x 25mm)
SS-C4.QP.29	Hand Chain Wheel
SS-C4.QP 29L	Overload Limiter
SS-C4.QP.30	Pinion Nut
SS-C4.QP.31	Cotter Pin
SS-C4.QP.32	Hand Wheel Cover
ATEX SS-C4.QP.33	Chain Anchor Plate
SS-C4.QP.35	Chain Anchor Pin
SS-C4.QP.36	Top Hook Pin and Lock Nut

Hoist Disassembly

SS-C4 QP ATEX Servicing Tool Requirements	
Metric spanners or socket set 5mm-19mm	Long nose pliers
Circlip pliers	Nylon/Dead blow hammer
Ball Pein hammer	Solvent free brake cleaner
120-180 grit Sandpaper	Cross head screw driver
Metric Allen Key set 3mm-12mm	Vernier caliper
Pop Rivet Gun	Drill (for speed link removal)

The following procedures should only be performed by a competent person.

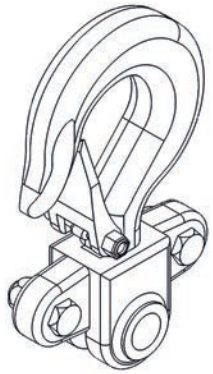
It is a responsibility of the owner/user to install, operate, inspect and maintain product in accordance with all applicable Standards and Regulations. If the product is installed as part of a lifting system, it is also the responsibility of the owner/user to comply with the applicable standards that address other types of equipment used.

Disassembly

1. On single fall chain hoists remove bottom hook #4 and disassemble for inspection including latch.
2. Depending on model remove either split or bolt and locking nut from chain anchor #33.
3. The load chain can now be fed out from the hoist body using the hand chain, this is easiest when the hoist is hung from its top hook, take care that the chain does not catch or jam between the guides and sheave on removal #17 & 19.
4. On multiple fall hoists remove the chain end fixing #36 and feed the chain from the hook sheaves.
5. Loosen and remove the 3pcs of nyloc nuts from the hand wheel cover#32.
6. Remove hand chain for inspection, pay attention to the pop riveted speed link connection.
7. Remove and discard the split pin #31.
8. Remove castle nut #30.
9. The handle wheel #29 can now be rotated counter clockwise and removed from the pinion shaft.
10. Lift the brake cover from the hoist body.
11. Lift the ratchet gear c/w friction material from the disc hub, #22 (2pcs) and 23.
12. The Disc hub is removed by turning counter clockwise. Tip- after the hoist has been loaded the disc hub can become tight to remove, this can be freed with a gentle tap using a nylon hammer, whilst holding the pinion shaft tap the disc hub in the counter clockwise direction.
13. Remove the pawl circlips #26.

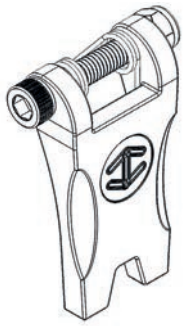
NOTE: At this point it is advisable to take notice of how the pawls (#25) are tensioned and located to the ratchet disc (#23)

14. Lift the pawls and pawl springs #24 &25).
15. Remove the top hook pin #3 and lift the top hook #4 from the hoist body.
16. Turn the hoist over and remove 3pcs nylon nut #7 then lift the gear cover #10 from the hoist body.
17. Remove pinion gears #12 (2pcs).
18. Lift the pinion shaft #11 from the sheave #19.
19. Remove the load gear circlip #13 then lift the load gear #14 from the sheave.
20. Gear side plate #15 can now be removed, it is recommended to make a note of the position of each component within the side plates.
21. Remove guides, stripper, sheave and anchor, #16, 17, 19 & 33, disassembly complete.



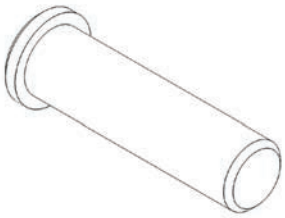
ATEX SS-C4.QP.01 Top Hook Assembly

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1
	Check for distortion, damage, fractures and stretching. The hook shall be free and smooth to rotate, the hook to housing contact points should have even wear, check top hook bolt hole to diagram.
ACTION	Shotblast and repaint or replace if required.



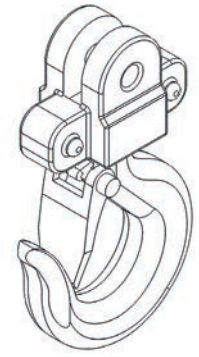
ATEX SS-C4.QP.02 Latch Kit

INSPECTION TYPE	Visual
QUANTITY	2
	Latch assemblies shall be secure and free/smooth to open and close.
ACTION	Replace if necessary.



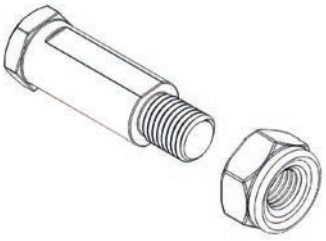
SS-C4.QP.03 Top Hook Pin

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1
	Check dimensionally and visually for damage or wear.
ACTION	Replace if necessary.



ATEX SS-C4.QP.04 Bottom Hook Assembly

INSPECTION TYPE	Visual and Dimensional - contact manufacturer
QUANTITY	1
	Check for distortion, damage, fractures and stretching. The hook shall be free and smooth to rotate, the hook to housing contact points should have even wear.
ACTION	Shotblast and repaint or replace if required.

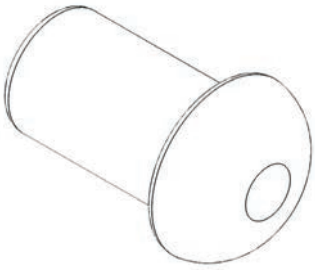


SS-C4.QP.05 Bottom Hook Chain Fixing Pin

INSPECTION TYPE	Visual
QUANTITY	1
	Check for damage or wear.
ACTION	Check and replace if necessary.

SS-C4.QP.07 Nut

INSPECTION TYPE	Not Applicable
QUANTITY	6
ACTION	Discard and replace.

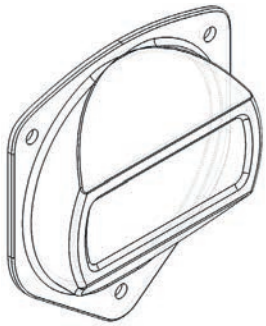


SS-C4.QP.08 Label Rivets

INSPECTION TYPE	Not Applicable
QUANTITY	4
ACTION	Discard and replace.

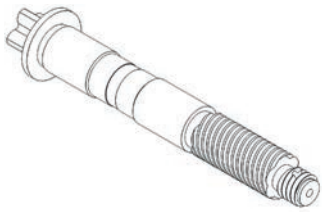
SS-C4.QP.09 Label

INSPECTION TYPE	Visual
QUANTITY	1
	Check nameplate is secure and in good condition, the unique hoist Ser no, WLL, HOL, chain grade and dimension should all be legible.
ACTION	Check and replace if necessary.



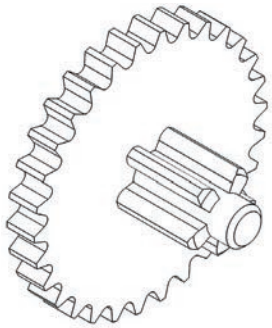
SS-C4.QP.10 Gear Cover Assembly

INSPECTION TYPE	Visual
QUANTITY	1
	Examine for cracks, distortion, damaged or broken parts, check gear bushings are secure and in good condition.
ACTION	Shotblast and repaint or replace if necessary.



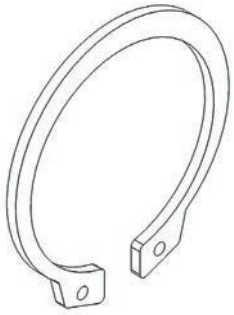
SS-C4.QP.11 Pinion Shaft

INSPECTION TYPE	Visual
QUANTITY	1
	Check for wear and damage
ACTION	Clean or replace.



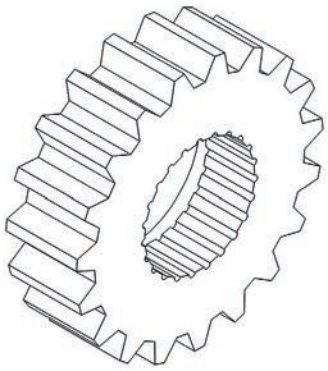
SS-C4.QP.12 Pinion Gear (pair)

INSPECTION TYPE	Visual
QUANTITY	2
	Examine gears for wear, fractures and alignment.
ACTION	Clean, reapply grease or replace if necessary.



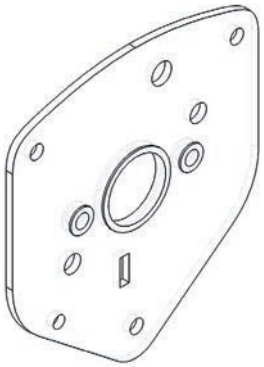
SS-C4.QP.13 Snap Ring

INSPECTION TYPE	Visual
QUANTITY	1
	Examine for cracks, distortion or damage.
ACTION	Replace it if necessary.



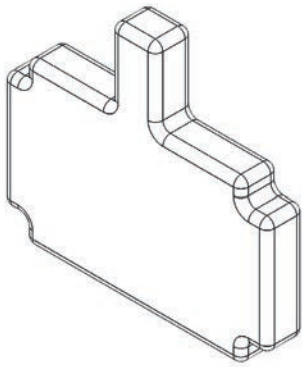
SS-C4.QP.14 Load Gear

INSPECTION TYPE	Visual
QUANTITY	1
	Examine gear for wear, fracture and alignment.
ACTION	Clean, reapply grease or replace if necessary.



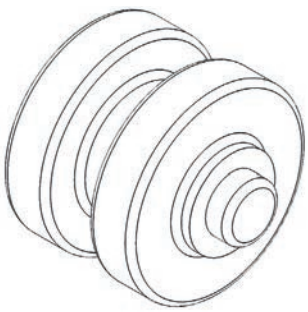
SS-C4.QP.15 Gear Side Plate

INSPECTION TYPE	Visual
QUANTITY	1
	Examine gear/right side plates for alignment and ensure they are free from excessive wear and distortion, examine load pin, guide, stripper and stay bolt holes for signs of wear and stretch, check gear bushings are secure and in good condition.
ACTION	Shotblast and repaint or replace if necessary.



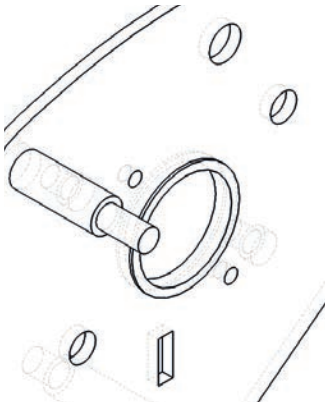
ATEX SS-C4.16 Stripper

INSPECTION TYPE	Visual
QUANTITY	1
	Examine chain stripper for wear and damage.
ACTION	Replace if necessary.



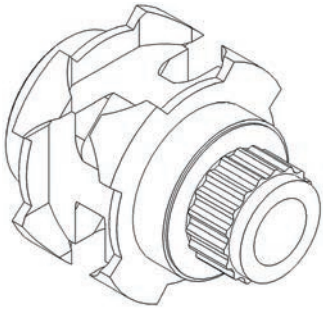
ATEX SS-C4.QP.17 Guide Roller

INSPECTION TYPE	Visual
QUANTITY	2
	Examine chain guide for wear and damage.
ACTION	Replace it if necessary.



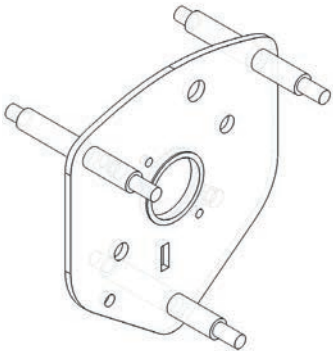
SS-C4.QP.18 Caged Roller Bearings

INSPECTION TYPE	Visual
QUANTITY	2 Examine bearings for excessive condition and wear, the bearings should be smooth and free to operate when a slight pressure is applied.
ACTION	Clean, reapply grease or replace if necessary.



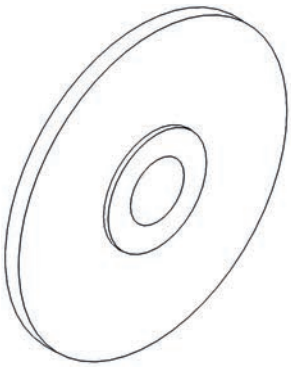
SS-C4.QP.19 Load Sheave

INSPECTION TYPE	Visual
QUANTITY	1 Check load chain pockets for wear and damage, ensuring satisfactory seating of load chain in pockets.
ACTION	Clean, reapply grease or replace if necessary.



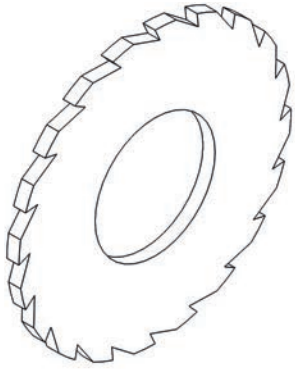
SS-C4.QP.20N Wheel Side Plate Assembly

INSPECTION TYPE	Visual
QUANTITY	1 Examine chain stripper for wear and damage. Examine body plates for alignment and ensure they are free from wear and distortion, examine load pin, guide and stripper holes for signs of wear and stretch, check stay bolts and pawl stands are secure and free from defects.
ACTION	Shotblast and repaint or replace if necessary.



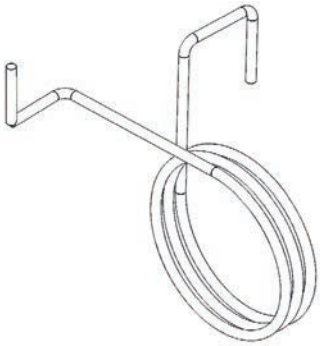
SS-C4.QP.21 Disc Hub

INSPECTION TYPE	Visual
QUANTITY	1 Check splines and ensure the component mating surfaces are smooth, flat and without excessive corrosion.
ACTION	Replace it if necessary.



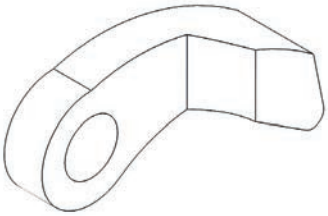
SS-C4.QP.23N Ratchet Gear

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	1
	Examine ratchet teeth and brake component surfaces ensuring they are smooth and flat.
ACTION	Replace if any defects found or below tolerance.



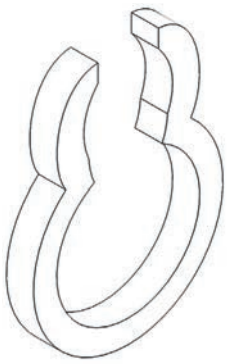
SS-C4.QP.24N Pawl Spring

INSPECTION TYPE	Visual
QUANTITY	2
	Examine pawl springs for corrosion and fractures, ensure the spring is in good working order and not deformed or stretched.
ACTION	Replace it if necessary.



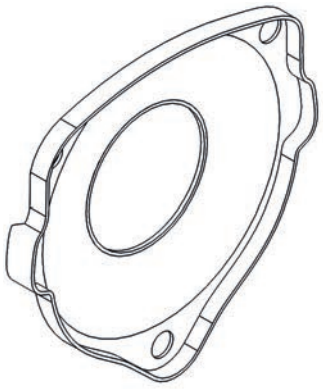
ATEX SS-C4.QP.25AN/BN Primary and Secondary Pawl

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	2
	Check pawl for wear ensuring pawl is free to move on pawl shaft.
ACTION	Replace if any defects found or below tolerance.



SS-C4.QP.26 Snap Ring

INSPECTION TYPE	Not Applicable
QUANTITY	2
ACTION	Discard and replace.

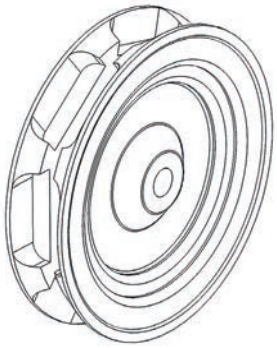


SS-C4.QP.27 Brake Cover

INSPECTION TYPE	Visual
QUANTITY	1 Examine for wear, damage and fractures.
ACTION	Shotblast and repaint or replace if necessary.

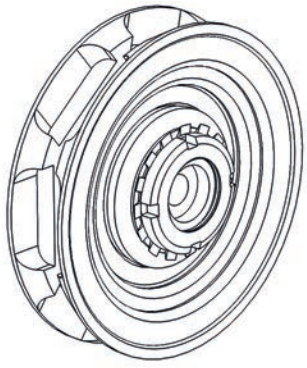
SS-C4.QP.28 Hand Chain

INSPECTION TYPE	Visual and Dimensional - see miscellaneous
QUANTITY	1 Examine hand chain for damaged or distorted links, sharp edges, corrosion. Check condition of speed link if present.
ACTION	Replace it if necessary.



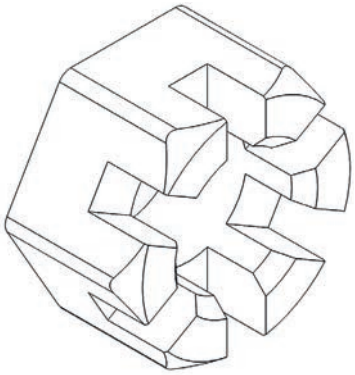
SS-C4.QP.29 Hand Chain Wheel

INSPECTION TYPE	Visual
QUANTITY	2 Check handwheel for damage, fractures, ensure brake surfaces are smooth and free from defects.
ACTION	Shotblast and repaint or replace if necessary. Ensure threads and brake surfaces are free from paint or powder coating if reconditioning.



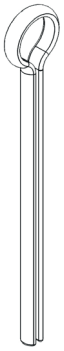
SS-C4.CP.29L Overload Limiter Assembly

INSPECTION TYPE	Not Applicable
QUANTITY	1
ACTION	Contact manufacturer.



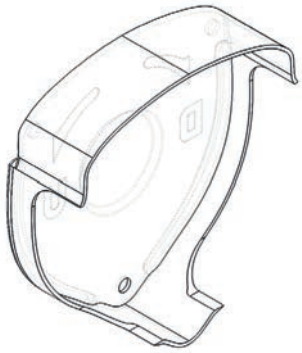
SS-C4.QP.30 Pinion Nut

INSPECTION TYPE	Visual
QUANTITY	1
	Check thread condition, check for wear or fractures.
ACTION	Replace it if necessary.



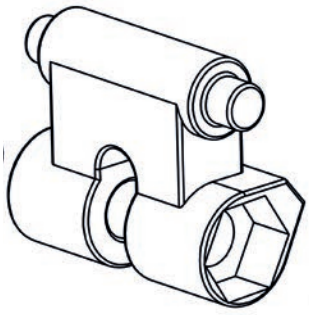
SS-C4.QP.31 Cotter Pin

INSPECTION TYPE	Not Applicable
QUANTITY	1
ACTION	Discard and replace.



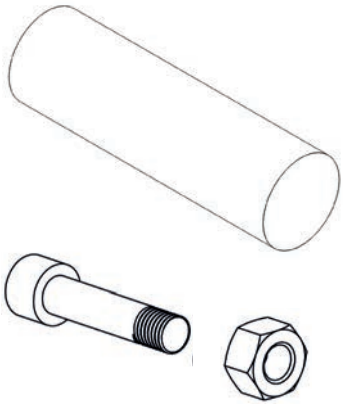
SS-C4.QP.32 Hand Wheel Cover

INSPECTION TYPE	Visual
QUANTITY	1
	Examine for cracks, distortion, damage or wear and the coveris of good condition and secure. Check cover assembly fixings.
ACTION	Shotblast and repaint or replace if necessary. Ensure threads and brake surfaces are free from paint or powder coating if reconditioning.



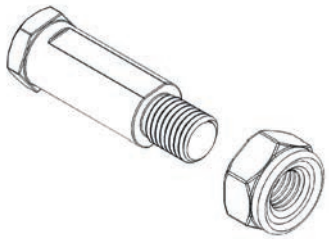
ATEX SS-C4.QP.33 Chain Anchor Plate

INSPECTION TYPE	Visual
QUANTITY	1
	Check for damage and wear on all components of the anchor, pay attention to chain contact points including load pin.
ACTION	Shotblast and repaint or replace if necessary.



SS-C4.QP.35 Chain Anchor Pin

INSPECTION TYPE	Visual
QUANTITY	1
	Check for damage and wear on all components of the anchor, pay attention to chain contact points including load pin.
ACTION	Check and replace it if necessary.



SS-C4.QP.36 Top Hook Pin and Lock Nut

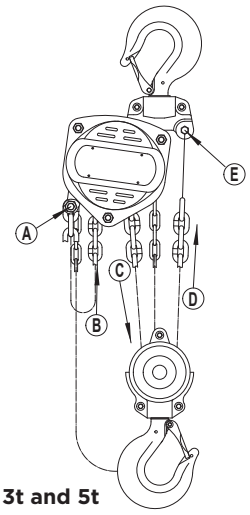
INSPECTION TYPE	Visual
QUANTITY	1
	Check for damage or wear.
ACTION	Check and replace it if necessary.

Assembly instructions

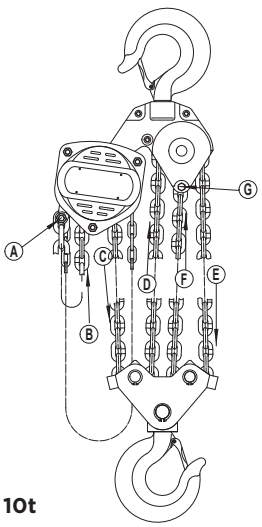
1. With the wheel side plate facing pawl stands down, lubricate the sheave to bush contact points and insert the load sheave #19 with the splined section upwards.
2. Install chain guides, stripper and chain anchor #16, 17 & 33.
3. Again lubricate the sheave to bush contact points and install gear side plate #15 ensuring correct alignment with wheel side plate.
4. Lubricate and install load gear #14, refit circlip ensuring it is secure and fully seated in its recess.
5. Lubricate the pinion shaft taking care not to apply excessive amounts around the threaded/splined brake section then insert through load gear.
6. Install the pinion gears making sure the alignment marks are correctly positioned, apply a liberal amount of grease to the assembly then secure the gear cover using 3 nylon locking nuts.
7. Turn the hoist over so that the brake side faces upwards then reinstall the top hook, ensure the top hook pin is fully seated.
8. Install the pawl assemblies lightly greasing the pawl shafts, ensure the pawl springs are secured correctly and the circlip is seated firmly in its recess.
9. Install the disc hub #21 by rotating clockwise on to the pinion shaft.
10. Fit the ratchet gear assembly ensuring the ratchet tooth profile matches that of the pawls.
11. Install the brake cover #27.
12. Hold the end of the pinion shaft with a set of pliers and wind the load limiter/handwheel down the pinion shaft in a clockwise direction by hand until the load limiter comes to a stop.
13. Line up the castellated nut with the threaded pinion shaft and fasten by hand in a clockwise direction until the castellated nut comes into contact with the handwheel or load limiter shim/washer as applicable. Rotate the castellated nut anti-clockwise until one of the castellated slots in the nut aligns with the drilled hole located near the end of the pinion shaft so that a new split pin can be inserted. The drilled hole should align with the first or second available castellated slot. Insert and secure split pin. Ensure the handwheel rotates freely in both a clockwise and anti-clockwise direction.
14. Insert the split pin through both the castellated slot in the nut and the drilled hole of the pinion shaft, ensuring these are aligned. The split pin used should be size 3/32 x 1. The head of the split pin should be seated inside the slot of the castellated nut, with the eye of the split pin sitting in the vertical plane. The top leg of the split pin should be folded over and positioned flat on top of the pinion shaft. The bottom leg should be shortened with a cutting tool and folded down the edge of the castellated nut. Ensure that the legs of the split pin do not interact or interfere with any other components, including the shim/washer.
15. The hoist is now ready for chain installation.

Chain Installation

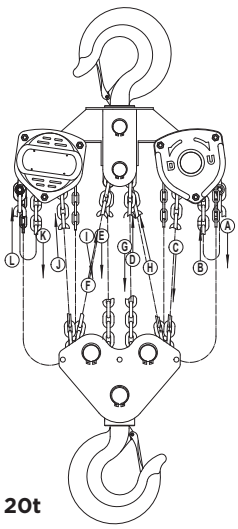
The Chain shall be installed with the weld facing away from the main hoist sheave in a vertical plain.



3t and 5t



10t



20t

RAISING THE LOAD

To raise load, pull the right side of hand chain (A, Figure 1) so that the wheel turns clockwise. To lower the load, pull left side of hand chain (B, Figure 1) so that wheel turns anti-clockwise. Important: Make sure the hoist has an adequate length of load chain to raise or lower the load in a safe manner. Do not attempt to lower the hoist beyond its limit.

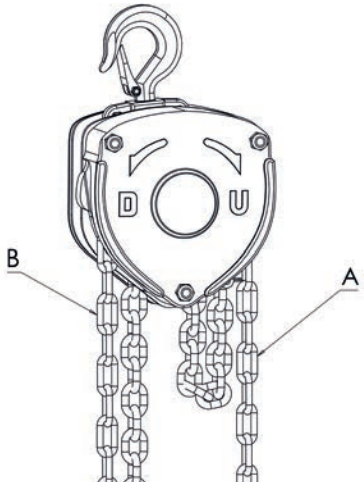
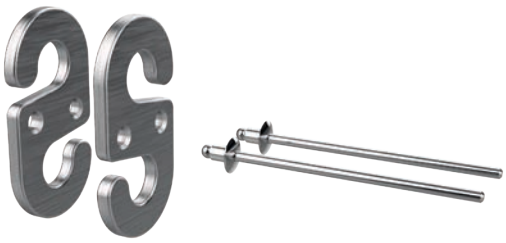


Figure 1

HAND CHAIN: JOINING AND INSTALLING

1. Cut the required length of 5mm x 25mm hand chain so that the links at either end plain in the same direction.



2. Make sure the chain is not twisted and bring the two ends together.

3. Join the two ends of hooking speed links over each side making sure that the chamfered edge of the speed link is to the outside.

4. Fix the two halves of the speed link together with two 2.4mm x 6mm stainless steel pop rivets.

Note: The indicated 'speed links' must only be used on hand chain which fully complies with the dimensional detail indicated within this script. The hand chain runs over a specific calibrated pocket wheel and the chain is also calibrated to suit this particular pocket wheel.

LOAD AND WEAR LIMITS

Alloy Steel Chain

Carefully inspect the entire load chain. Measure five consecutive links with calipers to measure the length. Check every metre and especially where excessive wear is indicated. Any load chain that shows noticeable deformation or heat influence must be replaced with a new one. Never extend the load chain by welding a second piece to the original.

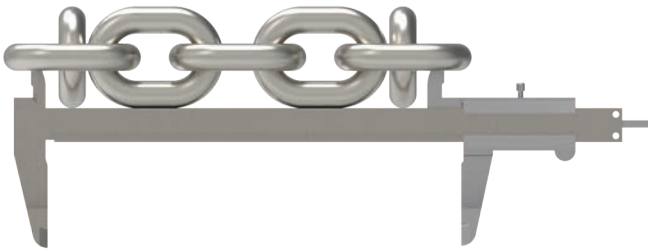


Figure 2

CAPACITY t	5 LINKS Normal mm	5 LINKS LIMIT Replace if more than:
0.5	75	77.3
1.0	90	92.6
1.6	120	123.4
2.0	120	123.4
3.2	120	123.4
5.0 - 50.0	150	154.3

BRAKE DISC

Replacement limits for brake disc

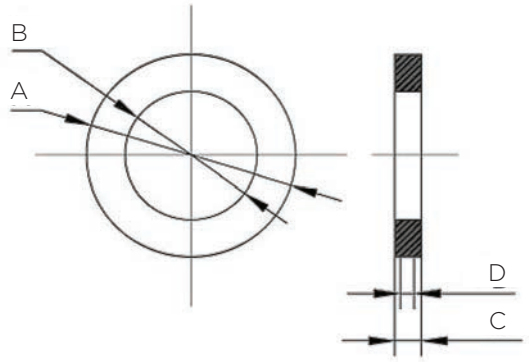


Figure 3

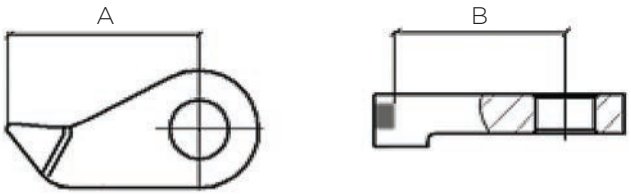
CAPACITY t	A mm	B mm	C mm	D mm
0.5	60	30.5	2.5	2
1.0	60	30.5	2	1.5
1.6	68	35.5	2	1.5
2.0	68	35.5	2	1.5
3.2	68	35.5	2	1.5
5.0	85	45.5	2.5	2

B = inner diameter C = normal measurement

A = outer diameter D = replacement limit

Table 1

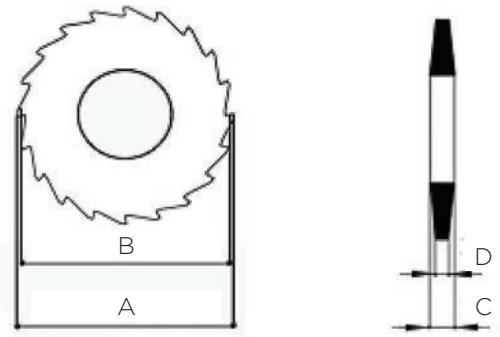
Replacement limits for Pawl



CAPACITY t	A mm	B min mm
0.5	14.5	13.5
1.0	25	23.5
1.6 - 3.2	30	27.5
5.0	35	33.5

Table 2

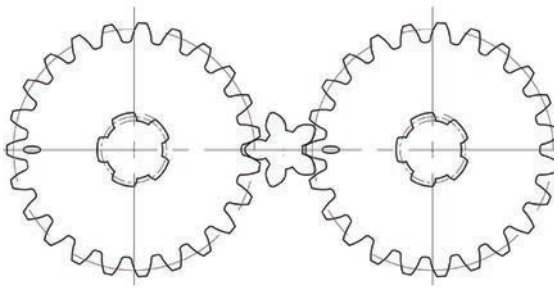
Replacement limits for Ratchet Brake System



CAPACITY t	A mm	B min mm	C mm	D min mm
0.5	68	66	2	1.5
1.0	68	67	2	1.5
1.6 - 3.2	80	78	2	1.5
5.0	100	98	2.5	2

Table 3

Gear Alignment



0.5t - 50t

Figure 5

LUBRICATION

C4 Chain Hoist

Recommended lubricant type: Mobilgrease XHP™ 222

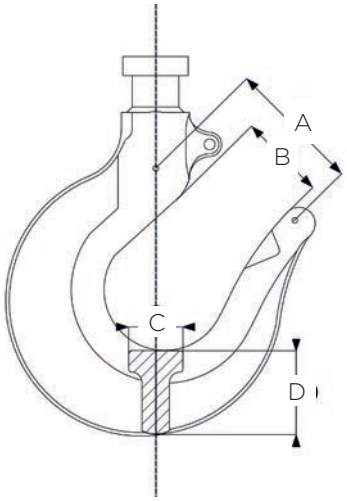
C4 Chain Hoist Load Chain

Recommended Lubricant: Lear Chem ACF-50 fluid or Lear Chem Corrosion Block Fluid

TORQUE VALUE TABLE

Bolt/nut size	Min Nm	Max Nm
M5	5	6
M6	6	8
M8	20	22
M10	22	24
M12	25	27

C4 DIMENSIONS AND DISCARD CRITERIA



CAPACITY t	A (mm)		B (mm)		C (mm)		D (mm)	
	NOMINAL	DISCARD	NOMINAL	DISCARD	NOMINAL	DISCARD	NOMINAL	DISCARD
0.5	42.5	46.8	26.5	29.2	14.2	12.8	20.0	18.0
1.0	49.0	53.9	32.5	35.8	15.0	13.5	21.1	19.0
1.6	51.5	56.7	34.5	38.0	19.0	17.1	26.5	23.9
2.0	54.5	60.0	34.0	37.4	19.5	17.6	27.8	25.0
3.2	61.0	67.1	42.5	46.8	24.4	22.0	31.2	28.1
5.0	85.0	93.5	52.6	57.9	34.0	30.6	45.4	40.9
7.5	89.0	97.9	63.5	69.9	40.0	36.0	60.4	54.4
10.0	89.0	97.9	63.5	69.9	40.0	36.0	60.4	54.4
15.0	-	-	83.0	91.3	56.0	50.4	84.8	76.3
20.0	-	-	83.0	91.3	56.0	50.4	84.8	76.3

Warranty

When supplied new the SS-C4 QP ATEX chain hoist will be supplied with a Declaration of Conformity which sanctions the use of the product for a maximum period of 12 months before re-certification is required by a competent person.

Providing that the use, storage, routine maintenance and servicing instructions contained in this document are followed, the SS-C4 QP ATEX can be used for multi immersions

The SS-C4 QP ATEX is a lifting appliance and should be thoroughly examined by a competent person at least every 12 months, or following each period of deployment.

Only original William Hackett spare parts should be used.

William Hackett guarantee the performance of the SS-C4 QP ATEX chain hoist for a period of 12 months from the date of sale subject to the purchaser and users complying with the safe use, storage, routine maintenance and servicing instructions, and there being no excessive wear and tear or misuse of the product.

These points do not affect the purchasers statutory rights.

SS-C4 QP ATEX CHAIN HOIST

USER MANUAL

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WH-C4 CHAIN HOIST USER MANUAL
WHM-0041 REV. 1