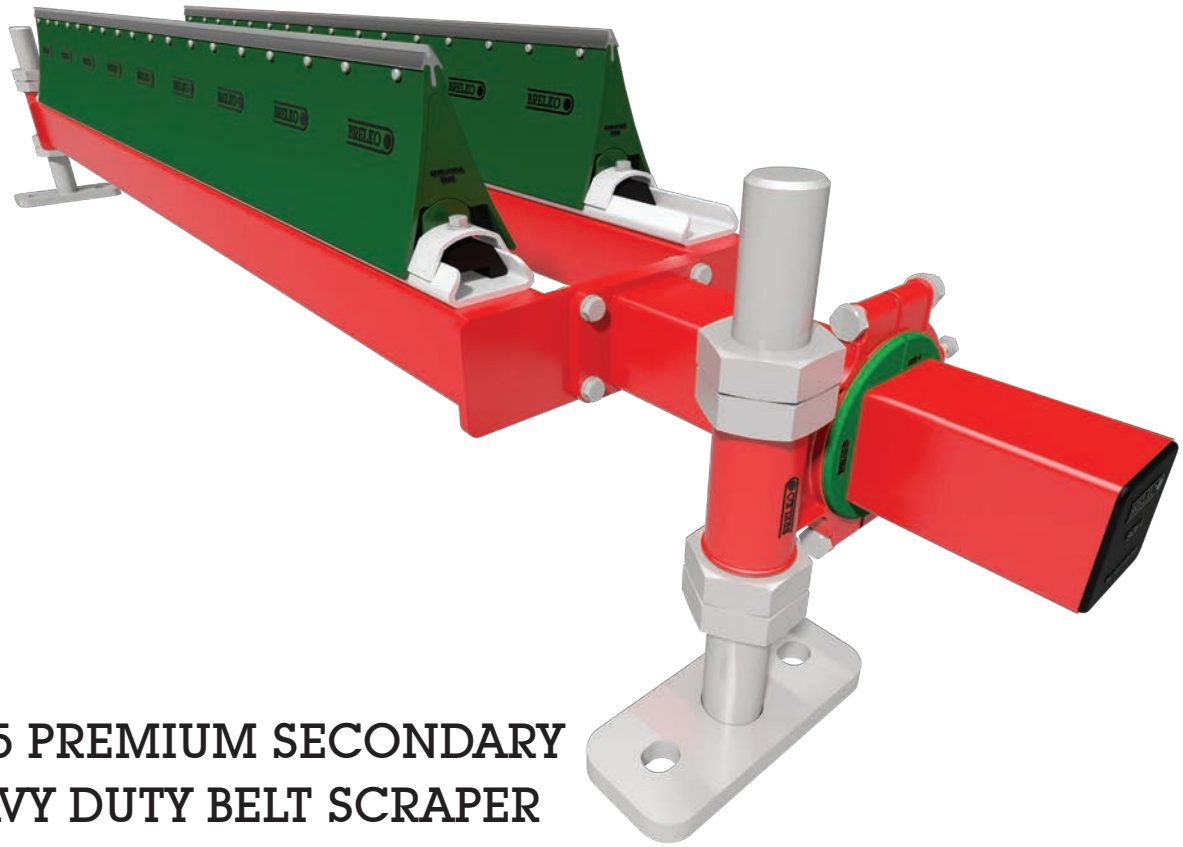
BRELKO®
CONVEYOR PRODUCTS

INSTALLATION, OPERATING & MAINTENANCE MANUAL



E355 PREMIUM SECONDARY HEAVY DUTY BELT SCRAPER

PATENTED

Model Number	:
Purchase Date	:
Purchased From	:
Installation Date	:

Model number information can be found on the Label found on the scraper carton.
This information will be helpful for any future inquiries or questions about belt scraper replacement parts, specifications or troubleshooting.

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1. Disclaimer

Brelko conveyor products (pty) ltd hereby disclaims any liability for: damage due to contamination of the material; user's failure to inspect, maintain and take reasonable care of the equipment; injuries or damage resulting from use or application of this product contrary to instructions and specifications contained herein. Brelko's liability shall be limited to repair or replacement of equipment shown to be defective.

2. Safety Note

Observe all safety rules given herein along with owner and Government standards and regulations. Know and understand lockout/tag-out procedures as defined by National Standards Institutes, National Standard for Personnel Protection - Lockout/Tag-out of Energy Sources - Minimum Safety Requirements and Occupational Health and Safety.

3. The following symbols may be used in this manual:

⚠ DANGER	**Danger:** Immediate hazards that will result in severe personal injury or death.
⚠ WARNING	**Warning:** Hazards or unsafe practices that could result in personal injury.
⚠ CAUTION	**Caution:** Hazards or unsafe practices that could result in product or property damages.
Important:	**Important:** Instructions that must be followed to ensure proper installation/operation of equipment.
Note:	**Note:** General statements to assist the reader.

4. General Information

Brelko belt scrapers are designed to operate with minimum maintenance. However, to maintain superior performance some service is required. When the scraper is installed a regular maintenance program should be set up. This program will ensure that the scraper operates at optimal efficiency and problems can be identified and fixed before the scraper stops working. All safety procedures for inspection of equipment (stationary or operating) must be observed. Secondary Scrapers operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and by observing the correct lockout/tag-out procedures.

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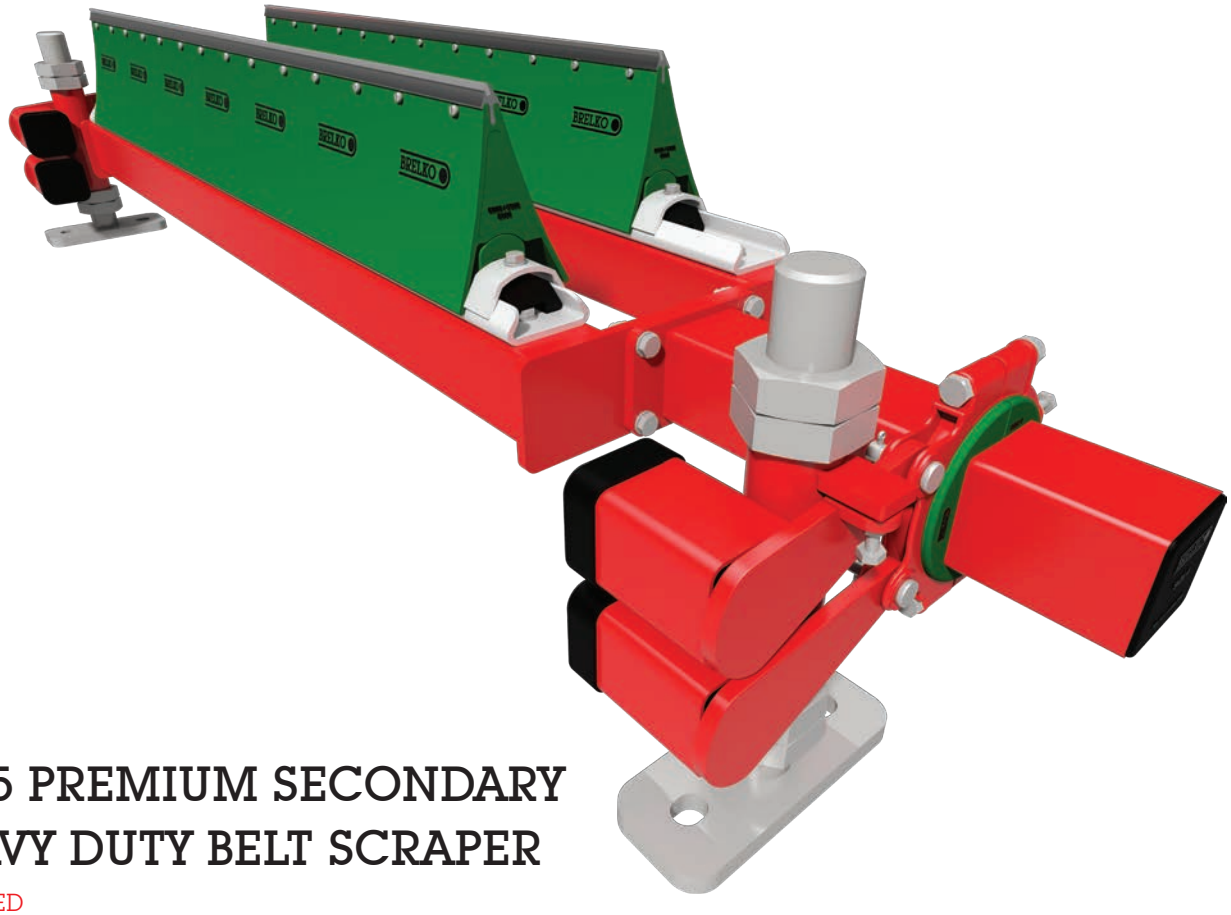

E355 PREMIUM SECONDARY HEAVY DUTY BELT SCRAPER

PATENTED

APPLICATIONS

- As a heavy duty Secondary Scraper when wet and sticky materials are conveyed, providing optimum coverage of belt surface and therefore maximum removal of carryback.
- Not suitable for mounting directly onto the head pulley.
- Use in conjunction with torsion arm mountings to accommodate different belt thicknesses on the same conveyor and excessive belt movement due to pulley eccentricity, thereby ensuring constant pressure with the belt.
- Selection of correct blade material gives optimum blade life under all operating conditions and conveyed materials.

FEATURES

- Positioning of blades in an overlapping configuration ensures that any material passing between the blades of the first row is removed by the second row.
- Patented V-base torsion holder makes blade changing quick and simple.
- Fully sealed construction of torsion holder prevents material build-up or ingress into the spring unit.
- Twin arm design of the torsion holder prevents radial and lateral blade oscillations and only allows longitudinal blade movement thus ensuring uniform and constant blade contact with the belt, irrespective of variations in belt thicknesses and surface conditions.
- Pre-tensioned blades restrict forward movement and reduces belt contact pressure for optimised cleaning, and extends belt life.
- Lightweight polymeric material used for the torsion holder ensures ease of handling, corrosion protection and minimum impact on belt surface after deflection.
- Patented blade torsion holder and blade design incorporating a deflector skirt ensures accurate assembly and a clean running scraper.
- All metal components can be made from corrosion resistant materials.
- Robust construction for longer life.

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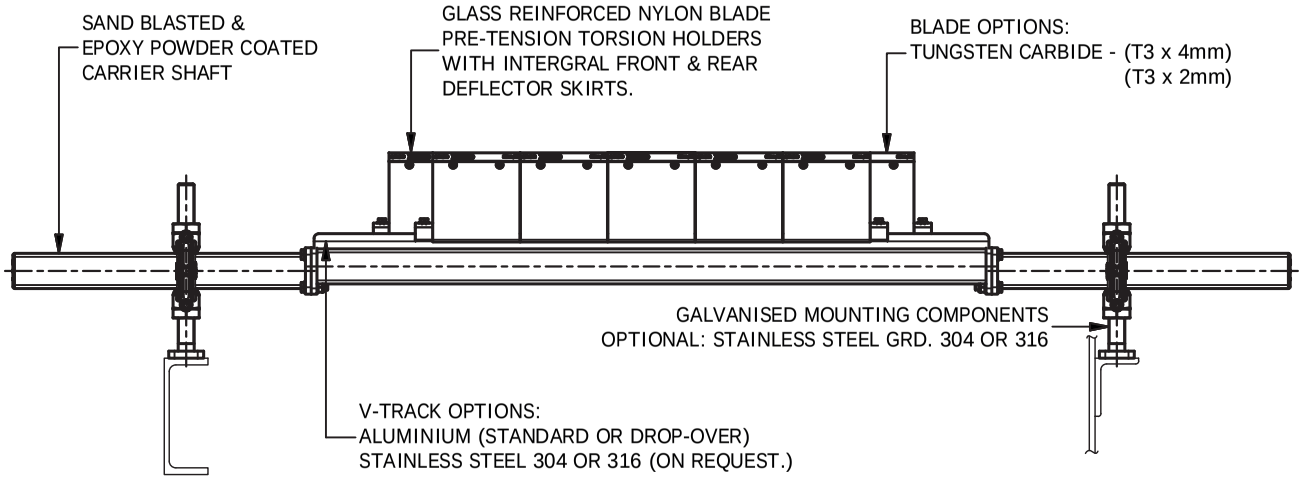
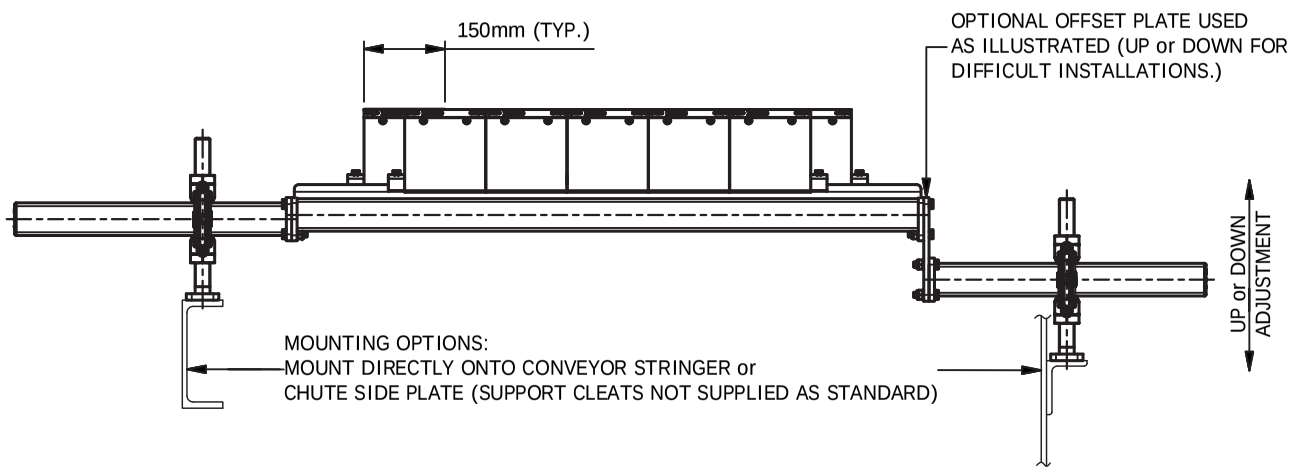
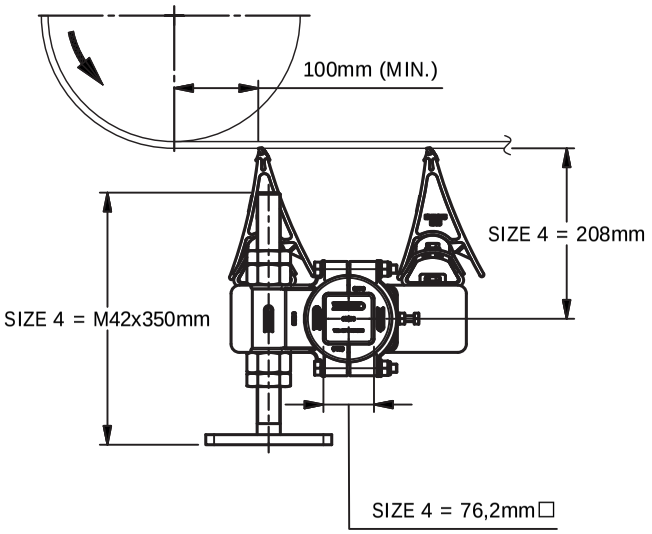
E355 PREMIUM DOUBLE ROW MULTI-BLADES SECONDARY SCRAPER



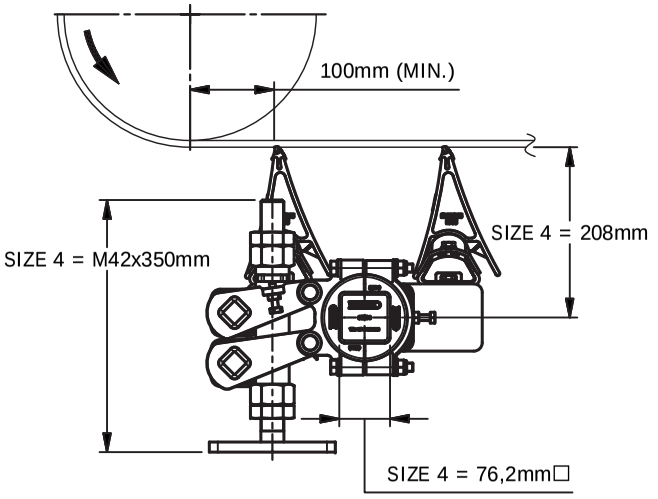
STANDARD CONSTRUCTION & FINISHES FOR BELT WIDTHS FROM

1050mm TO 1500mm





E355-S
STANDARD MOUNTING



E355-T
TORSION MOUNTING

NOTE: FEATURES & OPTIONS SHOWN:
PLEASE REFER TO DETAILED MANUAL FOR INSTALLATION INSTRUCTIONS, MAINTENANCE & SPARE PARTS

DRW. No. E355-001

REV. A

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BRELKO
CONVEYOR PRODUCTS

5. Handling

5.1. Receiving the goods

Check that the shipment contains all the products specified in the delivery note. If the goods do not match the delivery note, if the goods show any transportation damage, **list it on the freight bill.** Describe the damage and the number of wrong or faulty goods, **and contact your supplier immediately.**

Do not use defective parts under any circumstances. Claims must be made within 8 days from the arrival of goods. The factory does not cover expenses caused by exchange of product when installation was not carried out according to factory instructions.

5.2. Work Safety

Always use protective gloves and clothing. Always use a lifeline and soft-sole footwear when work will be carried out on raised platforms. Before you move a scraper or plough, check that it is securely attached to the lifting equipment. Always observe local safety regulations.

⚠ WARNING

Before removing/installing equipment, lock out/tag out energy source to conveyor, and/or conveyor accessories.

Turn off and lock out/tag out energy source according to local standards.

If equipment will be installed in an enclosed area, test gas level or duct content before using a cutting torch or welding. Using a cutting torch or welding in an area with gas or dust may cause an explosion.

If using a cutting torch or welding machine, test atmosphere for gas level or dust content.

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5.3. Handling

When scrapers are unloaded from the transportation vehicle onto customer's platform, place them on boards spaced max 1m apart at a minimum of 5cm from the ground.

5.4. Storage

Scrapers can be stored unpacked or in transportation package. Scrapers must not be stored on top of one another, protect the scrapers by storing them in a cool dry area on a flat surface.

5.5. Preparations for installing Belt Scrapers

Before installation, check all measurements and any of the other geometric design

5.6. Recommended Tools List

BELT SCRAPERS	
QTY	DESCRIPTION
2	EXTENSION CORD (20m MINIMUM)
1	PORT-A-PACK (OXY-ACETYLENE)
1	PRICKER
1	COMBINATION GAUGE (WITH SPIRIT LEVEL)
1	STRAIGHT EDGE (1M MINIMUM)
1	90° SET SQUARE
1	5M TAPE MEASURE
2	ADJUSTABLE SPANNERS
1	PIPE WRENCH (3" MINIMUM)
1	SOCKET RATCHET SET (6mm - 30mm)
2	RINGSET SPANNERS - M13, 15, 16, 17, 18, 19, 24
1	STANLEY KNIFE
2	M46 SET SPANNERS
2	M65 SET SPANNERS
1	HARD FACE HAMMER – 4pd
1	SOFT FACE HAMMER - 1KG
3M	NYLON ROPE
2	"G" CLAMPS - 6" - 8"
1	JIMMY LEVER

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6. Maintenance

Brelko belt scrapers are designed to operate with minimum maintenance. However, to maintain superior performance some service is required. When the scraper is installed a regular maintenance program should be set up. This program will ensure that the scraper operates at optimal efficiency and problems can be identified and fixed before the scraper stops working. All safety procedures for inspection of equipment (stationary or operating) must be observed. The E355 Secondary Scraper operates at the discharge end of the conveyor and is in direct contact with the moving belt. Only visual observations can be made while the belt is running. Service tasks can be done only with the conveyor stopped and by observing the correct lockout/tag-out procedures.

6.1. New Installation

After the new scraper has run for a few days a visual inspection should be made to ensure the scraper is performing properly. Make adjustments as needed.

6.2. Routine Visual Inspection (every 2~4 weeks)

- A visual inspection of the scraper and belt can determine:
- If the mounts are adjusted at the correct pressure for optimal cleaning
- If the belt looks clean or if there are areas that are dirty
- If the blade is worn out and needs to be replaced
- If there is damage to the blade or other scraper components
- If fugitive material is built up on the scraper or in the transfer area
- If there is cover damage to the belt
- If there is vibration or bouncing of the scraper on the belt
- If a snub pulley is used, a check should be made for material build-up on the pulley
- If any of the above conditions exist, a decision should be made on when the conveyor can be stopped for scraper maintenance.

6.3. Routine Physical Inspection (every 6~8 weeks)

When the conveyor is not in operation and properly locked and tagged out a physical inspection of the scraper to perform the following tasks:

- Clean material build-up off of the scraper blade and pole.
- Closely inspect the blade for wear and any damage. Replace if needed.
- Check blade for proper installation and condition. Replace if needed.
- Ensure full blade to belt contact.
- Inspect the scraper pole for damage.
- Inspect all fasteners for tightness and wear. Tighten or replace as needed.
- Replace any worn or damaged components.
- Check the pressure of the scraper blade on the belt. Adjust the pressure if necessary, refer to scraper model installation guide.

When maintenance tasks are completed, test run the conveyor to ensure the scraper is performing properly.

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PARTS LIST - REF. DRW. No.: E355-S-002

ITEM No.	DESCRIPTION	SIZE	SHAFT LENGTH (mm)	BELT WIDTH (mm)	CODE
A.	Carrier Assembly Including 3-piece shaft with double carrier, "V" track and end stops.	Size 3 Size 4	2000 2500	1200 1350-1500	2/8.2.3/3P 2/8.2.4/3P
E.	Standard Mount Assembly	Size 4	N/A	1200-1500	2/3.4
G.	Spindle Assembly	Size 4	N/A	1200-1500	2/1.4
H.	Torsion Holder Assembly c/w :-				
	Triplex Tungsten blade (2mm) -T3	150mm	N/A	1200-1500	2/5.42
	Triplex Tungsten blade (4mm) -T3	150mm	N/A	1200-1500	2/5.41
J.	Torsion Holder	120mm	N/A	1200-1500	2/5.50
K.	Blade Holder c/w :-				
	Triplex Tungsten blade (2mm) -T3	120mm	N/A	1200-1500	2/5.52
	Triplex Tungsten blade (4mm) -T3	120mm	N/A	1200-1500	2/5.53
10.	Optional off-set plates.	Size 3 Size 4	N/A N/A	1200 1350-1500	2/8.1.22 2/8.1.23

NOTE! Always quote belt width.

ASSEMBLY INSTRUCTIONS

1. All scrapers will be wrapped and clearly marked with the model number, scraper blade grade and belt width.
   - Note: - Scrapers will be supplied with all nuts and bolts to complete the assembly and installation.
2. Referring to the parts list and installation data sheet check that the correct parts and quantities have been supplied for the model and belt width of scraper ordered.
3. Normally scrapers are supplied with blades (3), torsion holders (4) and end stops (5) assembled on the carrier shaft (1). If not, assemble as shown using a lithium base grease as a lubricant to ease future removal of blades. If necessary, use a rubber mallet to tap the blades into the "V" track. Do not over-tighten end stop (5) set screws.
4. Check that the blades (3) are free to deflect forwards and backwards. If any blades foul those adjacent, slightly slacken end stop (5) set screws, and tap the torsion holders (4) sideways until the blades (3) clear each other. Tighten end stop (5) set screws.
   - Note: - There should be 0,5mm gap between blades (3).
5. Check whether the optional offset plates (10) are to be used, and if so; ensure that they are correctly assembled. Ensure that all nuts and bolts are firmly fastened.
   - Note: - Offset plates (10) are not supplied as standard and must be ordered separately.
6. Proceed with the installation as per the installation guide.

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E355-S STANDARD MOUNT PREMIUM DOUBLE ROW MULTI-BLADE SECONDARY SCRAPER

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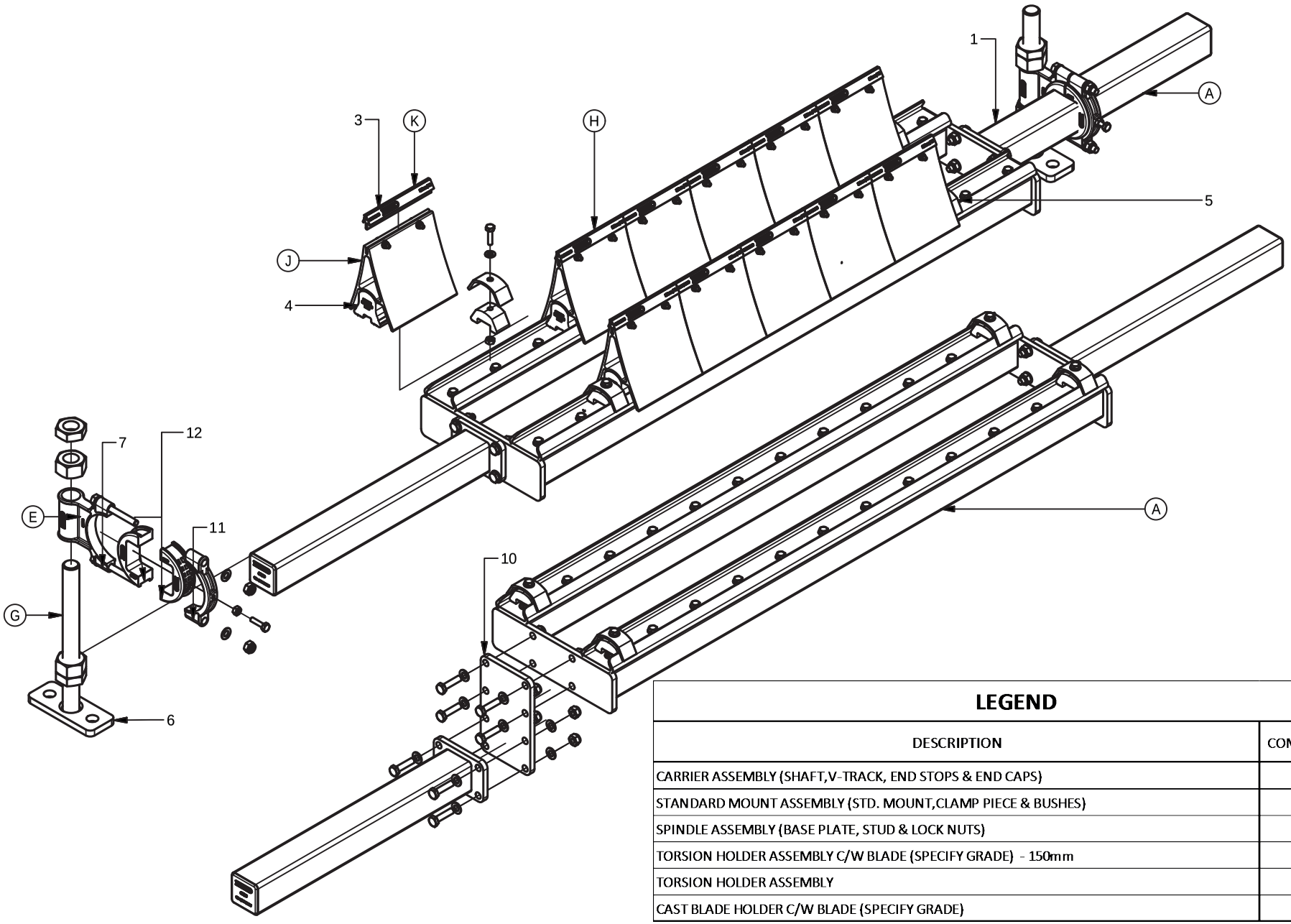

LEGEND

DESCRIPTION	COMPONENT I.D
CARRIER ASSEMBLY (SHAFT,V-TRACK, END STOPS & END CAPS)	A
STANDARD MOUNT ASSEMBLY (STD. MOUNT,CLAMP PIECE & BUSHES)	E
SPINDLE ASSEMBLY (BASE PLATE, STUD & LOCK NUTS)	G
TORSION HOLDER ASSEMBLY C/W BLADE (SPECIFY GRADE) - 150mm	H
TORSION HOLDER ASSEMBLY	J
CAST BLADE HOLDER C/W BLADE (SPECIFY GRADE)	K

PARTS LIST: FOR STANDARD MOUNT	PLEASE SPECIFY BELT WIDTH WHEN ORDERING	DRW. No. E355-002	REV. A

BRELKO® CONVEYOR PRODUCTS

INSTALLATION GUIDE - REF. DRW. No.: E355-S-004

1. Refer to the Assembly Instructions, Parts List and the Parts List Drawing to confirm that all the necessary parts have been supplied and that the scraper is correctly assembled. Then one or both of the carrier shaft end pieces can be fitted once the scraper is in position.
2. Remove the standard mount clamp piece (11), and green nylon bushes (12) from the standard mounts (7).
3. Check that the lock nuts move freely on the spindles.
4. Remove the standard mount (7) from the spindles (6).
5. Referring to the dimensions given in the table, see the Installation drawing, select the optimum position for the scraper and mark the location of the access apertures.
6. With reference to the Installation drawing, select the most convenient location for the mounting spindles. There are two possible positions but in all cases ensure that the spindles remains at 90° (± 10°) to the belt surface. If no suitable location can be found to attach the spindle foot to the conveyer structure, the optional offset plates (10) may be used as shown in the Parts List Drawing.
   - Note: - Offset plates (10) are not supplied as standard, and must be ordered separately.
7. Fix the spindles (6) firmly in position. Locate standard mount (7) on spindles as shown.
8. Check that carrier shaft end pieces and carrier shaft centrepiece are firmly bolted together.
9. Position carrier shaft underneath the conveyor belt centrally with reference to belt edges and head pulley.
10. Position carrier shaft and attached clamp piece (11) and bushes (12) on standard mount (7) as shown and fit bolts, washers and nuts. Tighten finger tight.
    - Note: - It may be necessary to adjust the location of the mount on the spindles by means of spindles nuts so that the blades are clear of the belt surface.
11. Lay a straight edge on the top face of the carrier shaft end piece and rotate the assembled carrier shaft until the straight edge is parallel to the belt surface.
    - Note: - This step must be done carefully to ensure that the angle of the blades to the belt is correct.
12. Tighten bolts and nuts. Do not over tighten!
13. By means of spindle nuts adjust the scraper towards the belt surface until all the blades contact the belt surface.
14. Adjust the scraper half a turn of the spindle nuts towards the belt.
15. Check that all nuts and bolts are firmly fastened.
16. Check that the spindle lock nuts are firmly tightened.
17. Start the conveyor and check if all blades are moving freely and scraping in full contact with the belt surface. If further adjustment is required, stop the conveyor and adjust the scraper half a turn of the spindle nuts towards the belt until all blades are scraping satisfactory.
    - Note: - Do not over adjust the scraper.
18. Check that the spindle lock nuts are firmly tightened.
19. To ensure future adjustment of the spindle nuts wrap thread with protective cloth, to protect the thread against corrosion, rust and ingress of dust.
20. It may be necessary to install stabilising rollers to keep the belt surface flat and stop belt bounce.

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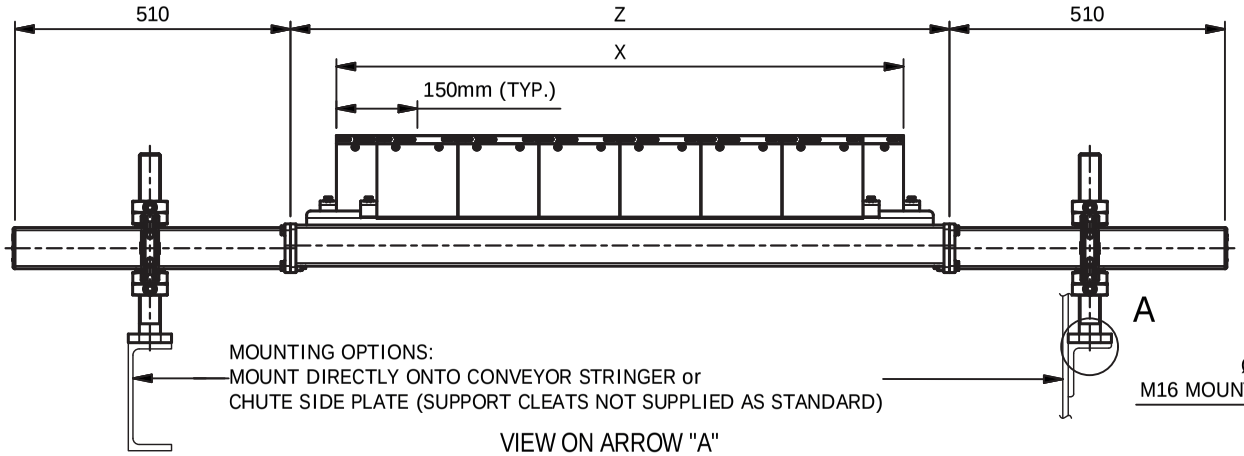
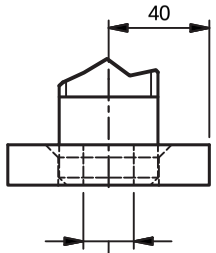
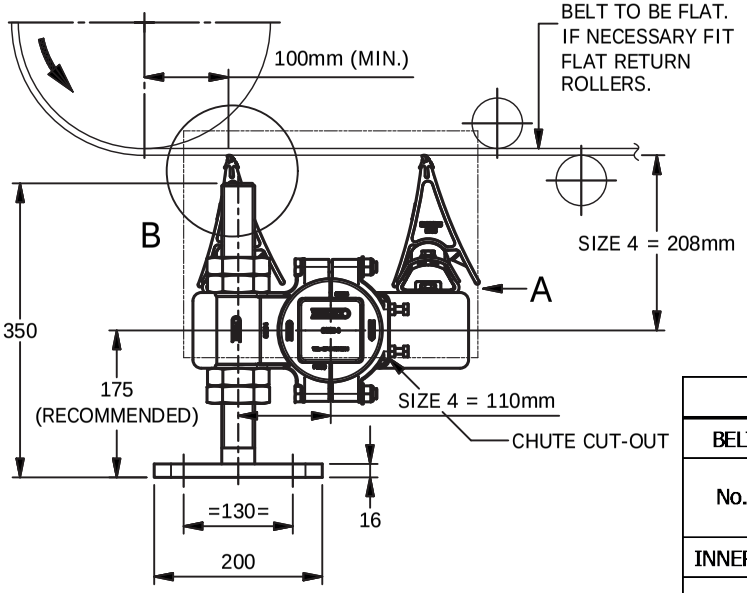


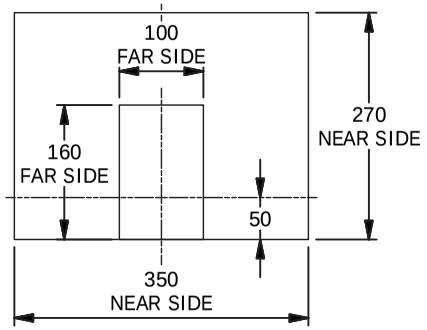
VIEW ON ARROW "A"



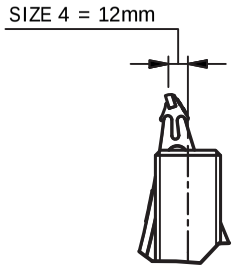
DETAIL A



SPINDLE POSITION "A"

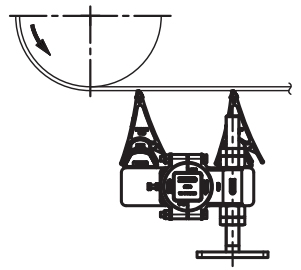


NEAR & FAR SIDE
CHUTE CUT-OUT DETAILS

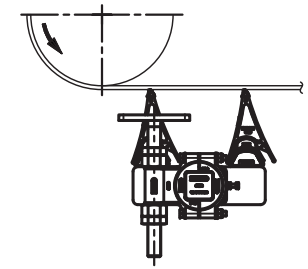


DETAIL B

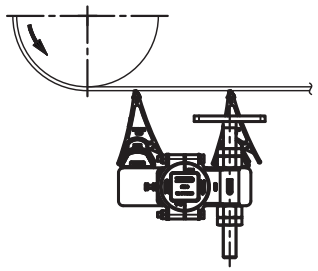
DIMENSION TABLE (mm)								
BELT WIDTH	1050		1200		1350		1500	
No. BLADES	FRONT	BACK	FRONT	BACK	FRONT	BACK	FRONT	BACK
	8	7	9	8	10	9	11	10
INNER CARRIER	3		3		4		4	
Z	1120		1220		1440		1520	
X	960		1080		1200		1320	



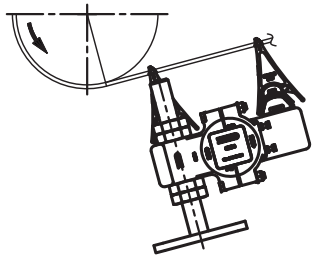
SPINDLE POSITION "B"



SPINDLE POSITION "C"



SPINDLE POSITION "D"



NOTE: FOR INCLINED BELTS SPINDLE CAN BE MOUNTED IN POSITION A or C, BUT MUST REMAIN AT 80° TO 100° BELT SURFACE.
(MAX BELT DECLINE ANGLE 15°)

BRELKO® CONVEYOR PRODUCTS

INSTALLATION DETAIL: STANDARD MOUNT.

ALWAYS SPECIFY BELT WIDTH WHEN ORDERING

DRW. No. E355-S-004

REV. A

PARTS LIST - REF. DRW. No.: E355-T-003

ITEM No.	DESCRIPTION	SIZE	SHAFT LENGTH (mm)	BELT WIDTH (mm)	CODE
A.	Carrier Assembly Including 3-piece shaft with double carrier, "V" track and end stops.	Size 3 Size 4	2000 2500	1200 1350-1500	2/8.1.3/3P 2/8.1.4/3P
F.	Torsion Mount Assembly (Double Arm / Parallel Arm)	Size 4	N/A	1200-1500	2/2.14
G.	Spindle Assembly	Size 4	N/A	1200-1500	2/1.4
H.	Torsion Holder Assembly c/w :-				
	Triplex Tungsten blade (2mm) -T3	150mm	N/A	1200-1500	2/5.42
	Triplex Tungsten blade (4mm) -T3	150mm	N/A	1200-1500	2/5.41
J.	Torsion Holder	120mm	N/A	1200-1500	2/5.50
K.	Blade Holder c/w :-				
	Triplex Tungsten blade (2mm) -T3	120mm	N/A	1200-1500	2/5.52
	Triplex Tungsten blade (4mm) -T3	120mm	N/A	1200-1500	2/5.53
10.	Optional off-set plates.	Size 3 Size 4	N/A N/A	1200 1350-1500	2/8.1.22 2/8.1.23

NOTE! Always quote belt width.

ASSEMBLY INSTRUCTIONS

1. All scrapers will be wrapped and clearly marked with the model number, scraper blade grade and belt width.
   - Note: - Scrapers will be supplied with all nuts and bolts to complete the assembly and installation.
2. Referring to the parts list and installation data sheet check that the correct parts and quantities have been supplied for the model and belt width of scraper ordered.
3. Normally scrapers are supplied with blades (3), torsion holders (4) and end stops (5) assembled on the carrier shaft (1). If not, assemble as shown using a lithium base grease as a lubricant to ease future removal of blades. If necessary, use a rubber mallet to tap the blades into the "V" track. Do not over-tighten end stop (5) set screws.
4. Check that the blades (3) are free to deflect forwards and backwards. If any blades foul those adjacent, slightly slacken end stop (5) set screws, and tap the torsion holders (4) sideways until the blades (3) clear each other. Tighten end stop (5) set screws.
   - Note: - There should be 0,5mm gap between blades (3).
5. Check whether the optional offset plates (10) are to be used, and if so; ensure that they are correctly assembled. Ensure that all nuts and bolts are firmly fastened.
   - Note: - Offset plates (10) are not supplied as standard and must be ordered separately.
6. Proceed with the installation as per the installation guide.

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E355-T TORSION MOUNT PREMIUM DOUBLE ROW MULTI-BLADE SECONDARY SCRAPER

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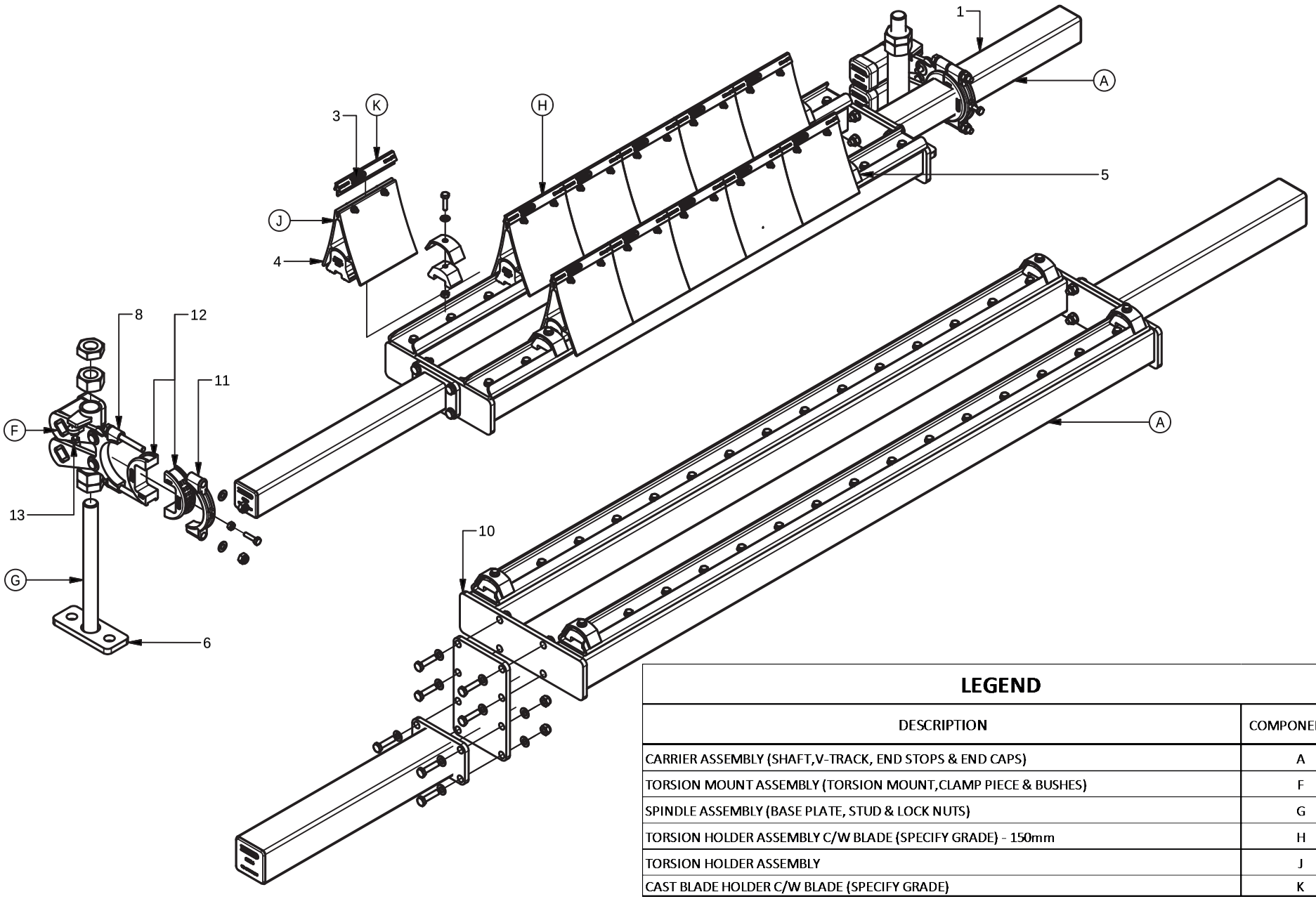

LEGEND	
DESCRIPTION	COMPONENT I.D
CARRIER ASSEMBLY (SHAFT,V-TRACK, END STOPS & END CAPS)	A
TORSION MOUNT ASSEMBLY (TORSION MOUNT,CLAMP PIECE & BUSHES)	F
SPINDLE ASSEMBLY (BASE PLATE, STUD & LOCK NUTS)	G
TORSION HOLDER ASSEMBLY C/W BLADE (SPECIFY GRADE) - 150mm	H
TORSION HOLDER ASSEMBLY	J
CAST BLADE HOLDER C/W BLADE (SPECIFY GRADE)	K

PARTS LIST: FOR TORSION MOUNT	PLEASE SPECIFY BELT WIDTH WHEN ORDERING	DRW. No. E355-T-003	REV. A

BRELKO® CONVEYOR PRODUCTS

INSTALLATION GUIDE - REF. DRW. No.: E355-T-005

1. Refer to the Assembly Instructions, Parts List and the Parts List Drawing to confirm that all the necessary parts have been supplied and that the scraper is correctly assembled. Then one or both of the carrier shaft end pieces can be fitted once the scraper is in position.
2. Remove the torsion mount clamp piece (11), and green nylon bushes (12) from torsion mounts (8).
3. Check that the lock nuts move freely on the spindles.
4. Remove the torsion mount (8) from the spindles (6).
5. Referring to the dimensions given in the table, see the Installation drawing, select the optimum position for the scraper and mark the location of the access apertures.
6. With reference to the Installation drawing, select the most convenient location for the mounting spindles. There are two possible positions but in all cases ensure that the spindles remains at 90° (± 10°) to the belt surface. If no suitable location can be found to attach the spindle foot to the conveyer structure, the optional offset plates (10) may be used as shown in the Parts List Drawing.
   - Note: - Offset plates (10) are not supplied as standard, and must be ordered separately.
7. Fix the spindles (6) firmly in position. Locate torsion mount (8) on spindles as shown.
8. Check that carrier shaft end pieces and carrier shaft centrepiece are firmly bolted together.
9. Position carrier shaft underneath the conveyor belt centrally with reference to belt edges and head pulley.
10. Position carrier shaft and attached clamp piece (11) and bushes (12) on torsion mount (8) as shown and fit bolts, washers and nuts. Tighten finger tight. Adjust set screws (13) until they just touch the torsion arm. Pre-tension the torsion mount and tighten set screws (13) four full turns.
    - Note: - It may be necessary to adjust the location of the mount on the spindles by means of spindles nuts so that the blades are clear of the belt surface.
11. Lay a straight edge on the top face of the carrier shaft end piece and rotate the assembled carrier shaft until the straight edge is parallel to the belt surface.
    - Note: - This step must be done carefully to ensure that the angle of the blades to the belt is correct.
12. Tighten bolts and nuts. Do not over tighten!
13. By means of spindle nuts adjust the scraper towards the belt surface until all the blades contact the belt surface.
14. Adjust the scraper half a turn of the spindle nuts towards the belt.
15. The blades should now rest on the belt surface.
    - Note: - Check that the set screws (13) are not touching the torsion arm. If they are still in contact with the arm continue to adjust the scraper towards the belt in increments of half a turn of the lock nuts until the set screw (13) just clears the torsion arm.
16. Slacken the set screws (13) four full turns and tighten the lock nuts.
17. Check that the complete scraper assembly can move freely up and down on the torsion mounts, and that all blades can move freely.
18. Check that all nuts and bolts are firmly fastened.
19. Check that the spindle lock nuts are firmly tightened.
20. Start the conveyor and check if all blades are moving freely and scraping in full contact with the belt surface. If further adjustment is required, stop the conveyor and adjust the scraper half a turn of the spindle nuts towards the belt until all blades are scraping satisfactory.
    - Note: - Do not over adjust the scraper.
21. Check that the spindle lock nuts are firmly tightened.
22. To ensure future adjustment of the spindle nuts wrap thread with protective cloth, to protect the thread against corrosion, rust and ingress of dust.
23. It may be necessary to install stabilising rollers to keep the belt surface flat and stop belt bounce.

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E355-T TORSION MOUNT PREMIUM DOUBLE ROW MULTI-BLADE SECONDARY SCRAPER

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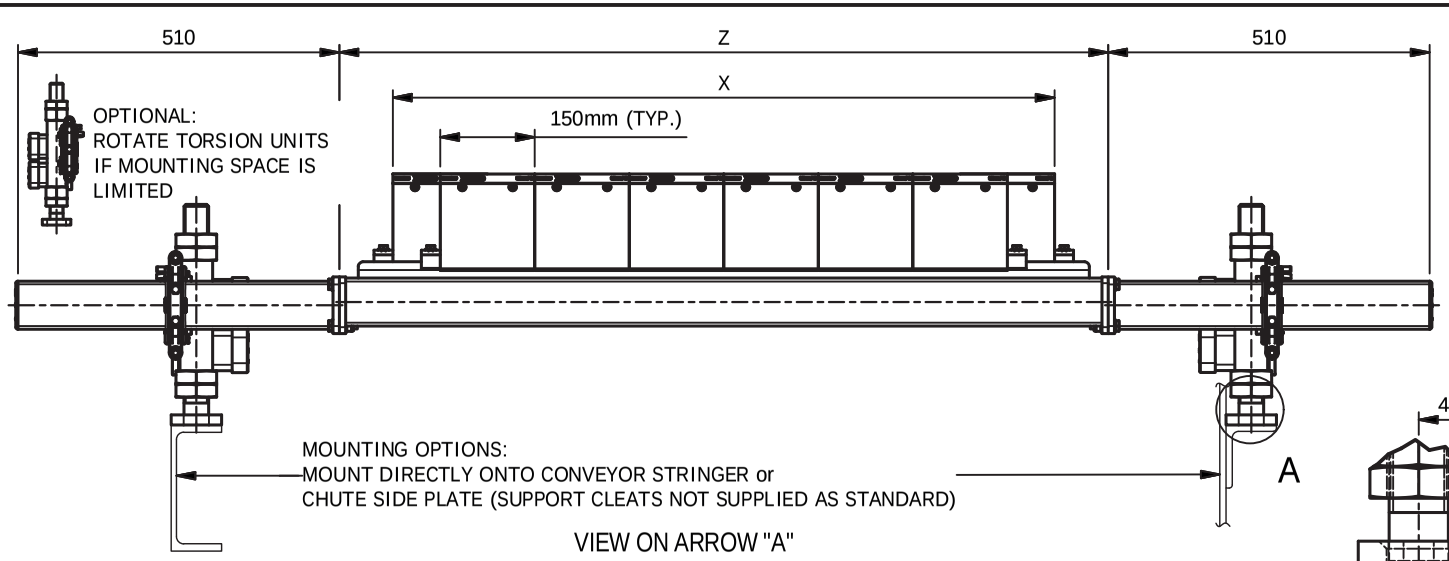
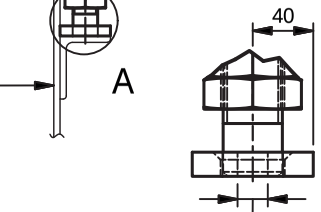
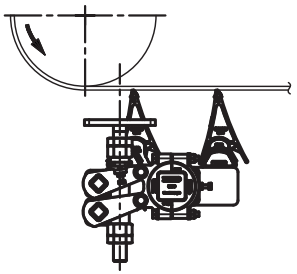


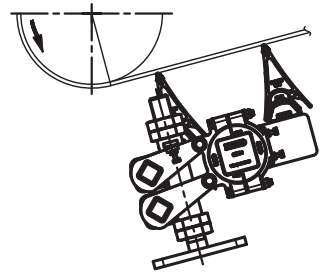
VIEW ON ARROW "A"



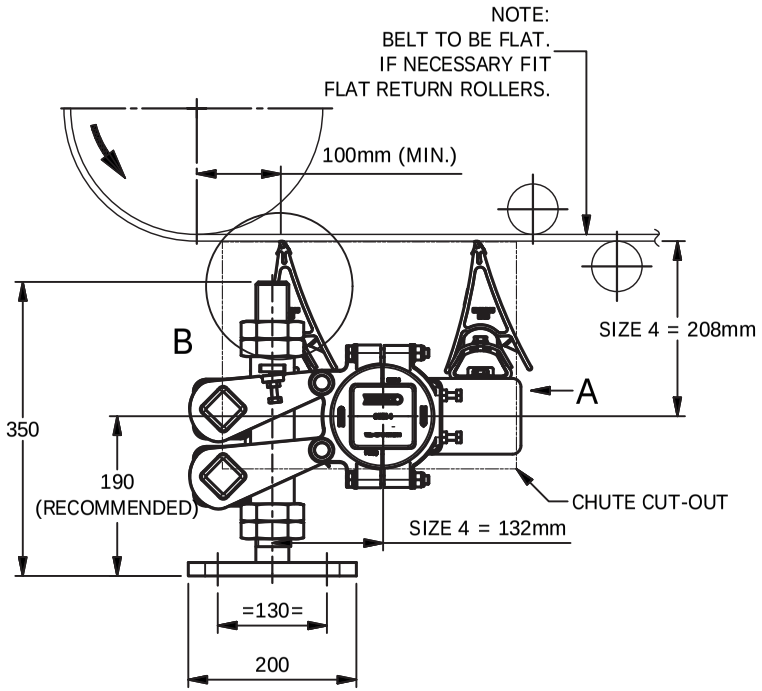
DETAIL A



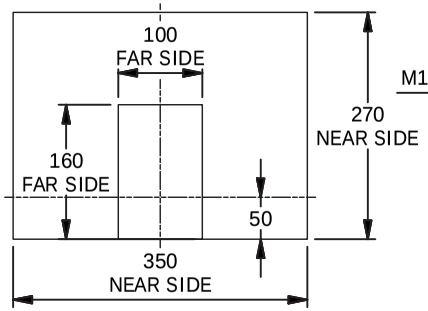
SPINDLE POSITION "B"



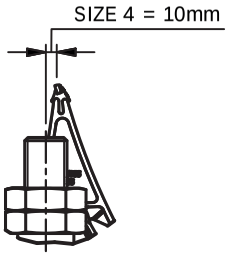
NOTE: FOR INCLINED BELTS SPINDLES CAN BE MOUNTED IN POSITION A or C, BUT MUST REMAIN AT 80° TO 100° BELT SURFACE (MAX BELT DECLINE ANGLE 15°)



SPINDLE POSITION "A"



NEAR & FAR SIDE
CHUTE CUT-OUT DETAILS



DETAIL B

DIMENSION TABLE (mm)								
BELT WIDTH	1050		1200		1350		1500	
No. BLADES	FRONT	BACK	FRONT	BACK	FRONT	BACK	FRONT	BACK
	6	5	7	6	8	7	9	8
INNER CARRIER	3		3		4		4	
Z	1120		1220		1440		1520	
X	900		1050		1200		1350	

INSTALLATION DETAIL: TORSION MOUNT.

ALWAYS SPECIFY BELT WIDTH WHEN ORDERING

DRW. No. E355-T-005

REV. A

BRELKO® CONVEYOR PRODUCTS

7. Procedure for Replacing/Repairing Scrapers

Repair/replace Belt Scraper components when, general maintenance tasks are preformed scraper damage due to accelerated blade wear, scraper damage due to blocked chutes, clip joints/emergency belt repairs etc.

7.1. Request permit to work from an authorised person, who will isolate and lock out the belt.

7.2. Open access door, if provided, and clear loose items about the spindle before commencing with work.

7.3. Loosen the locknuts and then lower/raise the scrapers, as necessary.

7.4. If replacing scrapers, insert balance pipe – which must be longer than the carrier shaft – into the one end of the shaft.

7.5. Loosen the shaft and turn it 180 degrees, that is, scraper tips pointing downward.

7.6. Remove one spindle on the intended exit end.

7.7. Slide out the scraper assembly from the intended exit end of the pipe.

7.8. Service the scraper on the platform.

7.9. Blade replacement:

Refer to Brelko installation instructions for belt scraper model in use.

Brelko nylon torsion holders have been designed to break out of the torsion holder support v-track to protect the scraper, scraper mounting components, conveyor belt and conveyor belt equipment against damage due to emergency clip joints, loose/damaged splicing, belt protrusions, chute blockages etc. If torsion holders damaged occur follow the steps below to replace individual or all of the torsion holders:

a. Remove and clean the damaged scraper to assess the amount of damage to the scraper, the scraper torsion holders and scraper components.

b. If the scraper has been working for more than 4 weeks and/or there has been significant blade wear remove and replace all the torsion holders and blades and replace with new kits, this will eliminate belt damage due to uneven scraper torsion holder and blades.

c. If the scraper has been working for 1~2 weeks replace only damaged torsion holders and blades, however assess the damage and ensure the remaining torsion holders will not cause any damage to the conveyor belt.

7.10. Scraper Adjustment:

Refer to Brelko installation instructions for belt scraper model in use.

a. Reposition using the balance pipe.

b. Obtain sanction for test, or permission to adjust for performance evaluation.

c. Tighten all nuts and ensure that belt cleaning or scraper performance is acceptable.

d. Clear up any loose items which resulted from your work.

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BRELKO®
CONVEYOR PRODUCTS

CUSTOMER: _____ CODE: [ ][ ][ ] - [ ][ ]

Nº: 25853

ATTENTION: _____ CONTACT TEL: _____

CONTRACT/ORDER No.: _____ DATE IN: _____

JOB CARD
SERVICE WAYBILL

BELT No.	BELT SIZE	EQUIPMENT TYPE	MOUNT TYPE	EQUIPMENT CONDITION (AVERAGE / GOOD / EXCELLENT)	INSPECTION FINDINGS: BELT SCRAPER / PRODUCT: PRODUCT LIFE REMAINING (LOW / MEDIUM / HIGH)	INSPECTION FINDINGS: BELT SCRAPER / PRODUCT: CLEANING (AVERAGE / GOOD / EXCELLENT)	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: TOP COVER: NEW / EVEN	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: TOP COVER: GROOVES / WORN / UNEVEN	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: TOP COVER: PROTRUSIONS (CLIPS / SPLICES / LOOSE PATCH)	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: BUILD-UP: EXCESSIVE	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: BUILD-UP: AVERAGE	INSPECTION FINDINGS: CONVEYOR BELT and CHUTE: BUILD-UP: LITTLE	WORK DONE or ACTION RECOMMENDED: SPARES FITTED Mine Spares = M / Brelko Spares = B: BLADES / HOLDERS	MOUNTS	CARRIER ASSEMBLY	SPINDLES	SKIRTING	OTHER SPARES	ADJUST SCRAPER SET	TIGHTEN LOOSE NUTS & BOLTS	FURTHER INVESTIGATION	CLEANED	IMPORTANT NOTES / COMMENTS

ALWAYS REFER THE ABOVE COMMENTS TELEPHONICALLY TO THE RELEVANT PERSON

FOR SPELLING REFER TO THE GENERAL AND CONVEYING TERMS SHEET' INCLUDED IN THE INDEX SECTION OF THIS WAYBILL BOOK.

CUSTOMER REPRESENTATIVE : _____ (please print)

CUSTOMERS SIGNATURE : _____

BRELKO REPRESENTATIVE : _____

SAFETY : _____

TIME IN: _____

TIME OUT: _____

DEKRA Certified
ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007

DOC NO.	ISSUE NO	REVISION	NOVEMBER	PAGE
FS 007	8	8	2011	1 of 2

SERVICE EXCELLENCE OVER 25 YEARS

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BRELKO®
CONVEYOR PRODUCTS

CONVEYOR BELT & EQUIPMENT CHECK LIST

CUSTOMER DETAILS

Customer Name:		Contact Number:	
Attention:		Date of Inspection	
Inspected By		Brelko Representative	

CONVEYOR DIMENSIONS

Belt Number:			Material Carried:						Belt Speed:					
Belt Length:			Belt Width :						Troughing Angle:					
Top Cover Condition:						Bottom Cover Condition:								
Splice:	Yes		No		Clip Joint:	Yes		No		Cover Strip:	Yes		No	
Conveyor Running	Yes		No		Inspection Tags:	Yes		No						
Edge Damage:	Yes		No											
Comments:														

HEAD END / HEAD CHUTE

Chute Condition:		Head Pulley Lagging:	
Snub Pulley Lagging:		Build up:	
Belt Movement:			
Comments:			

IDLER CHECK

Trough Idler Condition:		Return Idler Condition:	
Troughing Frame Condition:		Return Frame Condition:	
Comments:			

PRIMARY SCRAPER

Position Correct:	Yes		No		Type of Primary Scraper installed:									
(Contact of Scraper Blade must be between 10 to 30 degrees, under the pulley horizontal line.)														
Mounts firmly mounted:	Yes		No		All bolts, nuts tightened:					Yes		No		
Adequate Tensioning:	Yes		No		All Caps, Denso Tape in place:					Yes		No		
Housekeeping:														
Chute Material build up:														
Blade Wear:	Low		Medium		High		Cleaning:	Poor		Fair		Good		
Comments:														

SECONDARY SCRAPER #1

Type / Model of Secondary Scraper Installed:													
Positioning Correct:													
(Scraper blade must preferably be a minimum 100mm from pulley tangent.)													
All Caps, Denso Tape in Place:	Yes		No		Mounts firmly mounted:				Yes		No		
All Bolts & Nuts Tightened:	Yes		No		Adequate tension/adjustment:				Yes		No		
Angle Correct Set:	Yes		No		Carrier Frame cut to size				Yes		No		
Angle of scraper must be 90 degrees to the conveyor belt, dependant on conditions.													
Chute / Material build up:	Yes		No		Housekeeping:								
Blade wear:	Low		Medium		High		Cleaning:	Poor		Fair		Good	
Comments:													

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CONVEYOR PRODUCTS

SECONDARY SCRAPER #2

Type / Model of Secondary Scraper Installed:												
Positioning Correct:												
Scraper blade must preferably be a minimum 100mm from pulley tangent.												
All Caps, Denso Tape in Place:	Yes		No		Mounts firmly mounted:				Yes		No	
All Bolts & Nuts Tightened:	Yes		No		Adequate tension/adjustment:				Yes		No	
Angle Correct Set:	Yes		No		Carrier Frame cut to size				Yes		No	
Angle of scraper must be 90 degrees to the conveyor belt, dependant on conditions.												
Chute / Material build up:	Yes		No		Housekeeping:							
Blade wear:	Low		Medium		High		Cleaning:	Poor		Fair		Good
Comments:												

TAKE UP PULLEYS / COUNTERWEIGHT / PLOUGH

Type / Model of Plough Installed:												
Are Flat Return Idlers Installed:	(In front)		Yes		No			(Behind)		Yes		No
Any excessive belt movement:	Yes		No		Adequate space for material to fall off of conveyor belt					Yes		No
Is the Plough firmly mounted:	Yes		No		Is the Safety Chain firmly mounted and correctly adjusted:					Yes		No
Is the Plough Free moving:	Yes		No		Is the entire Blade / Nose Piece in contact with the conveyor belt:					Yes		No
Housekeeping:												
Comments:												

CONVEYOR BELT TRACKING / ALIGNMENT

Is the Belt Tracking centre:	Yes		No		Are there any Tracking Systems installed:				Troughing		Return	
Is there any visible damage to structure caused by poor belt tracking:					Yes				No			
Conveyor belt length:					Are the tracking systems correctly positioned:				Yes		No	
Are the tracking systems firmly mounted:	Yes				No		Are all bolts & nuts tightened:		Yes		No	
Are all Idlers in contact with the Belt - Adequate Tension on the system:					Yes		No		Housekeeping:			
Comments:												

LOADING / TRANSFER CHUTE

Chute Condition:	Poor		Fair		Good		Material loading in centre of conveyor belt:					
Dead Boxes:	Yes		No		Deflector Plates:		Yes		No		Drop Heights:	
Tail Pulley Condition	Good		Fair		Poor							
Comments:												

KEYSKIRTING®

Size of Keyskirt®:	1		2		3		4		Length of Keyskirt® Installed :			
Positioning of Keyskirt® :					Other Product used as Skirting		Yes		No		State	
Mounting Arrangement	Std.				Offset				Other			
All bolts & nuts securely fastened:	Yes		No		Housekeeping:							
Comments:												

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BRELKO®
CONVEYOR PRODUCTS

FEEDBOOTS

Type of Feedboot installed:	Universal		Combination		Is the system correctly positioned:				Yes		No	
					(System to be positioned centrally to the load area.)							
Drop Height:					Is the system securely mounted:				Yes		No	
All Bolts & Nuts tightened:	Yes		No		Condition of Idlers:	Poor		Fair		Good		
Lead in and lead out Idlers in place:	Yes		No		Condition of UHMW Liners:	Low		Medium		High		
Housekeeping:												
Comments:												

HI - IMPACT SYSTEM

Type of Hi - Impact system installed :												
Is the system correctly positioned:	Yes		No		Drop heights:							
System to be positioned centrally to the load area.												
Is the system securely mounted:	Yes		No		All bolts & nuts tightened:			Yes		No		
Are all Idlers in contact with the belt:	Yes		No		Idler condition:	Poor		Fair		Good		
BTA Condition:	Poor		Fair		Good		Are chains / D shackles in place & securely fastened:		Yes		No	
All Hardware in Good Condition:	Yes		No		Housekeeping:							
Comments:												

AIR CANNONS

Size of Air Cannon Installed:	5ltr		Quantity		10ltr		Quantity					
	25ltr		Quantity		50ltr		Quantity					
	100ltr		Quantity		200ltr		Quantity					
Is the Air Cannon securely fastened onto the structure:	Yes		No		Is an Air Lance installed:			Yes		No		
Size of the Air Lance:					Are the Air Cannons correctly positioned:			Yes		No		
Power supply:					Air supply:							
Operating system:	Single timer		PLC		Manual push button			Sequential				
All Bolts & Nuts securely tightened:	Yes		No		All components in good order:			Yes		No		
Distance between Air Cannon & Solenoid Valve:					Any Air Leaks in the Pipe Work:			No				
Is a Water Trap Installed:	Yes		No		Is a Lubricator installed:			Yes		No		
Distance from Air Cannon:					Distance from Air Cannon:							
Are the safety / warning signs in place and visible:	Yes		No		Housekeeping:							
Comments:												

TAIL PULLEY / PLOUGH

Type / Model of Plough Installed:												
Are Flat Return Idlers installed:	(In front)	Yes		No		(Behind)		Yes		No		
Any excessive belt movement:	Yes		No		Adequate space for material to fall off of conveyor belt:			Yes		No		
Is the Plough firmly mounted:	Yes		No		Is the Safety Chain firmly mounted and correctly adjusted:			Yes		No		
Is the Plough free moving:	Yes		No		Is the entire Blade / Nose Piece in contact with the conveyor belt:			Yes		No		
Housekeeping:												
Comments:												

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10. Trouble Shooting

Problem	Possible Cause	Possible Solution
Poor cleaning performance	Scraper under-tensioned	Adjust to correct pressure - refer installation instructions
	Scraper over-tensioned	Adjust to correct pressure - refer installation instruction
	Scraper installed in wrong location	Verify dimension - refer installation drawing
	Scraper blade worn or damaged	Replace scraper blade
Rapid Blade Wear	Tension on scraper too high/low	Adjust to correct tension - refer installation instruction
	Scraper not located correctly	Check scraper location for correct dimensions
	Blade attack angle incorrect	Check scraper location for correct dimensions
	Material too abrasive for blade	Option: switch to alternate scraper tip grade (contact Brelko for available options)
	Mechanical splice damaging blade	Repair, skive or replace splice
Centre wear on blade (smile effect)	Blade smaller than material path	Add additional blade to match material path
	Tension on scraper too high/low	Adjust to correct pressure - refer installation instruction
Unusual wear or damage to blade	Mechanical splice damaging blade	Repair, skive or replace splice
	Belt damaged or ripped	Repair or replace belt
	Scraper not correctly located	Verify dimension - refer installation drawing
	Damage to pulley or pulley lagging	Repair or replace pulley
Vibration or noise	Scraper not located correctly	Verify dimension - refer installation drawing
	Blade attack angle incorrect	Verify dimension - refer installation drawing
	Scraper running on empty belt	Use a spray pole when the belt is empty
	Scraper tension too high/low	Adjust to correct pressure or slight adjust to diminish
	Scraper locking bolts not secure	Check and tighten all bolts and nuts
	Scraper not square to head pulley	Verify dimension - refer installation drawing
	Material build-up in chute	Clean up build-up on scraper and in chute
Scraper being pushed away from pulley	Scraper tension not set correctly	Ensure correct pressure/increase tension slightly
	Sticky material is overburdening scraper	Increase pressure; add primary (head pulley) scraper
	Scraper not set up correctly	Confirm location dimensions are equal on both sides

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