

USER MANUAL

EVO DUO POWER SHEAR

CIDAN
CIDAN MACHINERY GROUP

Original instructions

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CIDAN
MACHINERY GROUP

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1. PRODUCT LIABILITY

Limitation of Liability:

(a) IN NO EVENT SHALL CIDAN BE LIABLE TO BUYER OR ANY THIRD PARTY FOR ANY LOSS OF USE, REVENUE OR PROFIT OR LOSS OF DATA OR DIMINUTION IN VALUE, OR FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGES WERE FORESEEABLE AND WHETHER OR NOT CIDAN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE.

(b) IN NO EVENT SHALL CIDAN'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED THE TOTAL OF THE AMOUNTS PAID TO CIDAN FOR THE EQUIPMENT SOLD HEREUNDER.

(c) The limitation of liability set forth in Section (b) above shall not apply to (i) liability resulting from CIDAN's gross negligence or willful misconduct and (ii) death or bodily injury resulting from CIDAN's acts or omissions.

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2. INTRODUCTION

2.1. DOCUMENT DESCRIPTION

This operation and maintenance manual describes the safe operation and maintenance of:

EVO DUO 32, EVO DUO 41.

WARNING! Read and understand the manual before you use the product.

2.1.1. UNITS

Both the metric system and the imperial system are used in this document to describe the different measurement units. The metric system is stated first, followed by the imperial system.

2.1.2. RELATED DOCUMENTS

- Control system manual, refer to information provided by CIDAN Machinery.
- Pre installation and transportation guide, refer to information provided by CIDAN Machinery.
- Order confirmation document, refer to information provided by CIDAN Machinery.
- Electrical schematic, refer to information provided by CIDAN Machinery upon delivery.
- Declaration of Conformity, refer to information provided by CIDAN Machinery.
- CE-certificates, refer to information provided by CIDAN Machinery.

NOTE! Save this document for future reference. Speak to CIDAN Machinery if you lose this document or if you do not have the listed documents.

2.2. PRODUCT DESCRIPTION

2.2.1. INTENDED USE

This product is intended for the shearing (cutting) of sheet metal. Do not use other forms of metal as this can cause damage to the product. Refer to product specifications for more information.

CAUTION! Do not use the product to cut flat or round bars, or to shear thicker sheets than specified. Do not use the product for tasks that are not intended.

Do not modify the product and do not use spare parts that are not approved by CIDAN Machinery.

This product is intended to be operated by personnel that have been trained to operate the product safely and have knowledge of the safety equipment on the product.

All maintenance must be done according to the instructions in this manual by personnel that have been trained to do maintenace procedures.

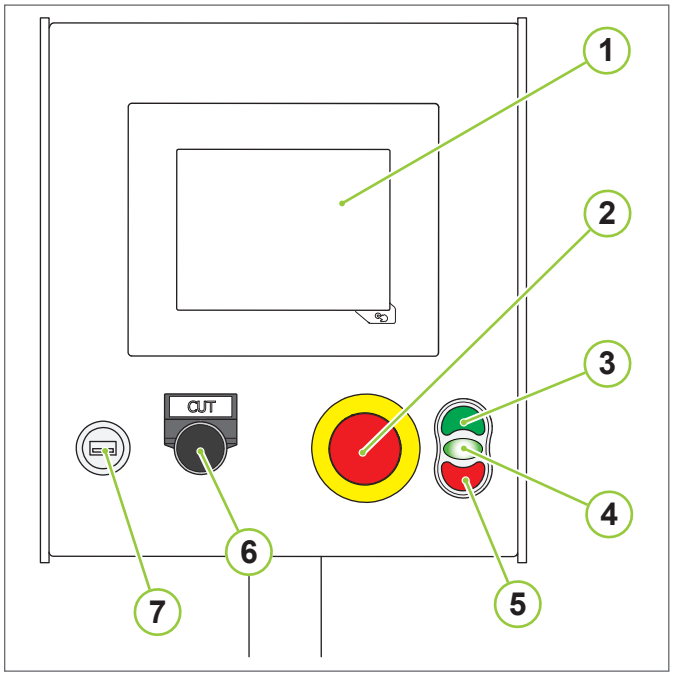
All advanced maintenance, service and repairs that are not described in this manual must be done by personnel that are authorized by CIDAN Machinery.

CAUTION! CIDAN Machinery cannot guarantee that the product fulfills the intended use if the requirements described above are not met.

2.2.2. PRODUCT DELIVERY

Make sure that the delivery includes everything specified in your order confirmation.

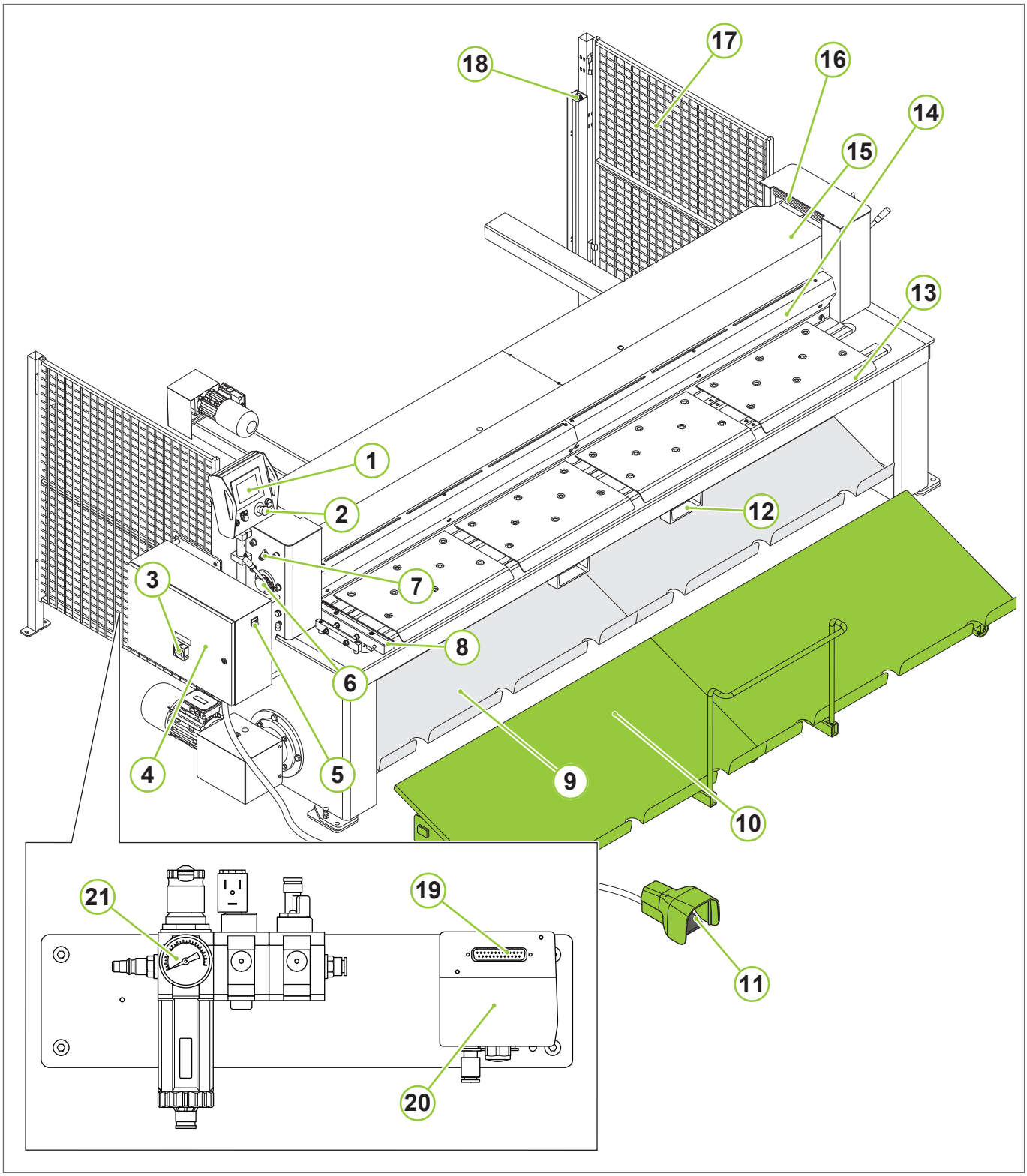
2.3. CONTROL PANEL OVERVIEW



1. Monitor for control system.
2. Emergency stop button.
3. Start button (green).
4. Status light.
5. Stop button (red).
6. Cut button.
7. USB port.

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2.4. PRODUCT OVERVIEW

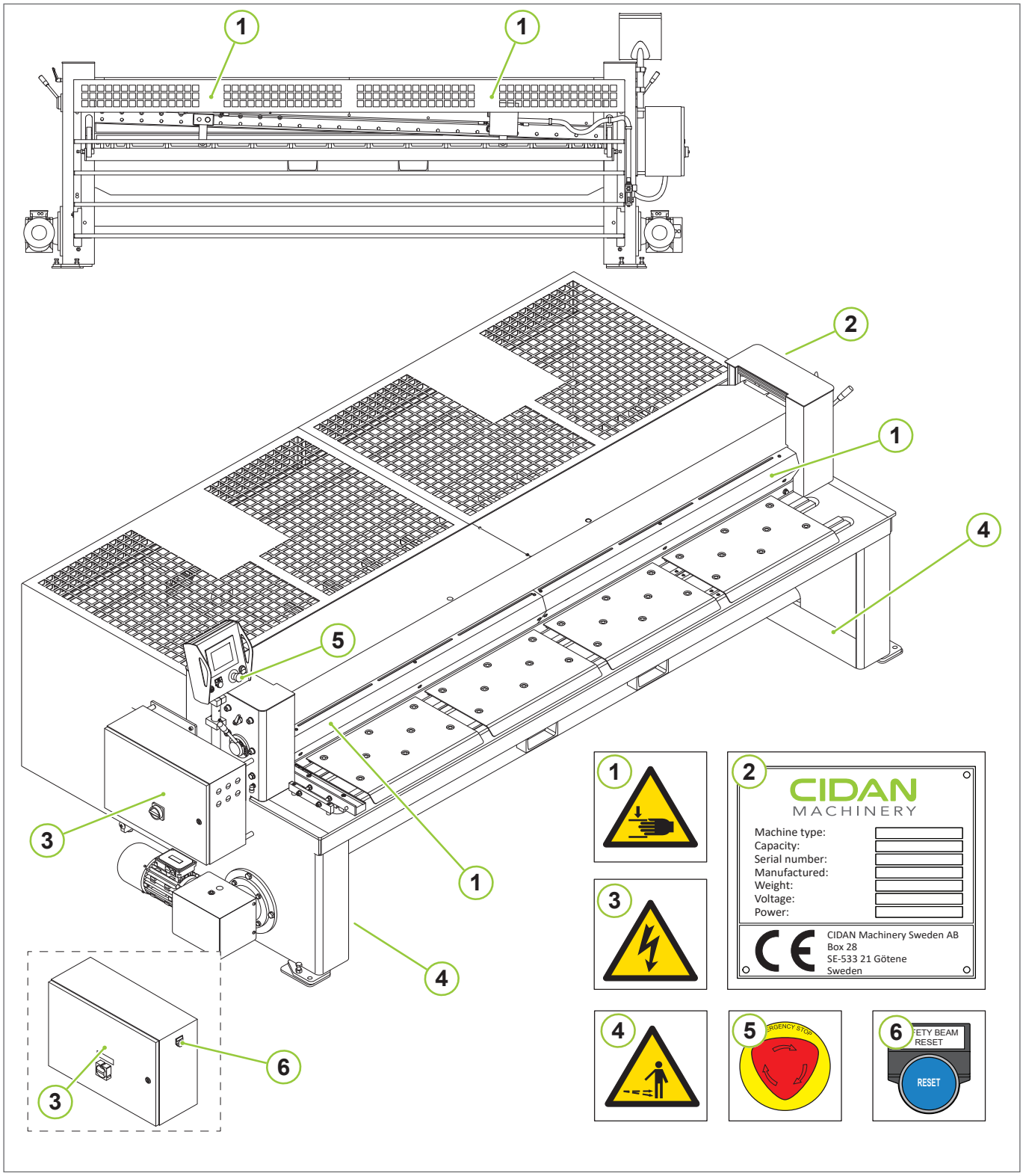


NOTE! The illustration above shows an Evo Duo with rear delivery.

PART	OPERATION
1. Control panel with control system	Monitors the product by manual operation or automatic programs.
2. Emergency stop button	
3. Main switch	
4. Electrical cabinet	
5. Safety light beam (optional) reset button	Used when there is a need to reset the safety light beam (optional)
6. Blade gap graduated adjustment lever	Used when blade gap must be adjusted.
7. Lock screw for cutting beam	Locks the cutting beam in position after blade gap adjustment.
8. Squaring arm 400 mm	Used to square the metal sheet before cutting.
9. Attached blank table (standard)	Attached on the front side of the product to collect cut blanks.
10. Movable blank wagon (optional)	Located on the front side of the product to collect cut blanks.
11. Foot pedal unit	Controls the movement of the hold-down beam and cutting beam.
12. Forklift lifting frames	Used when the product is lifted with a forklift.
13. Movable table plates	Table plates that can be moved as needed to support the material before cutting.
14. Hold-down beam with rubber	Clamps down the material, the rubber protects the material from markings.
15. Cutting beam	Moves up and down to shear the material.
16. Safety curtain	
17. Back gauge guards	Back gauge protection that covers the back gauge risk area on the standard model, or is uncovered when a safety light beam is installed.
18. Safety light beam (optional)	Safety for the back gauge side of the product.
19. Cable connection	
20. Pneumatic valve assembly	
21. Filter regulator with manometer	

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2.5. SYMBOLS ON THE PRODUCT



NOTE! The illustration above shows an Evo Duo with front delivery.

1. Warning; crushing of hands and risk of crush injury
2. Machine data plate
3. Warning; electricity
4. Warning; ejecting objects
5. Emergency stop button
6. Safety light beam reset button

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3. SAFETY

3.1. INTRODUCTION

WARNING! You must read and understand all safety instructions before you work or stay in the vicinity of the product. Keep the manual near the product for future reference and as a safety precaution.

WARNING! If you do not obey the safety instructions given in this manual, it can cause serious personal injury or damage to the product. CIDAN Machinery is not liable for personal injury or damage caused by work that deviates from the instructions given in this manual.

WARNING! If the product does not work as expected, do not use the product. Speak to CIDAN Machinery for support.

3.2. SAFETY DEFINITIONS

3.2.1. WARNING

A Warning is used if there is a risk of personal injury or death for the operator or persons that work near the product. Example:

WARNING! Read and understand the safety chapter before you use the product.

3.2.2. CAUTION

A Caution is used if there is a risk of damage to the product. Example:

CAUTION! Do not exceed the maximum capacity of the product.

3.2.3. NOTE

A Note is used to give information that is good to have in a certain situation. Example:

NOTE! The product stops automatically after the set amount of cuts have been made.

3.3. PERSONAL PROTECTIVE EQUIPMENT

WARNING! Use personal protective equipment during commissioning, operation and maintenance of the product to decrease the risk of personal injury. The product and working material contain sharp edges.



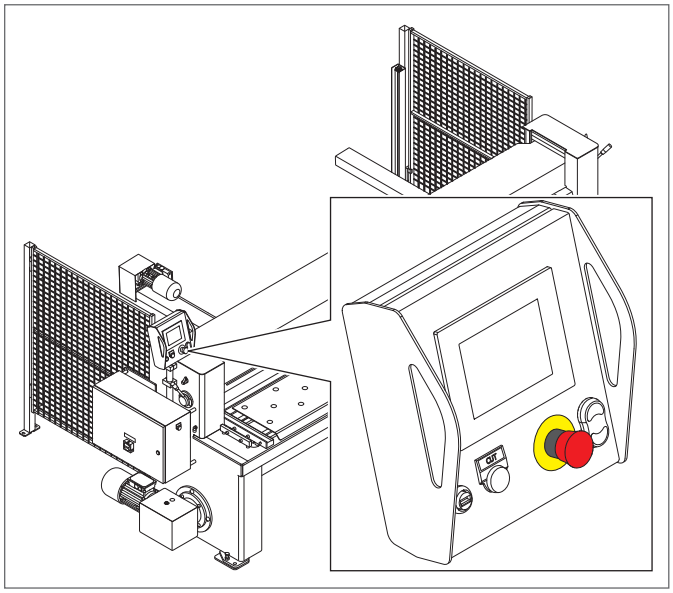
Use the approved personal protective equipment that follows:

- Hearing protection
- Protective gloves
- Protective footwear

3.4. SAFETY EQUIPMENT

3.4.1. EMERGENCY STOP BUTTON

The product has 1 emergency stop button that can be used if it is necessary to stop the product immediately. The emergency stop button is located on the control panel.



3.4.2. HOLD-DOWN BEAM

The hold-down beam and its gap of 6 mm/ 0.24 in. are designed to prevent crush injuries to fingers and body parts.

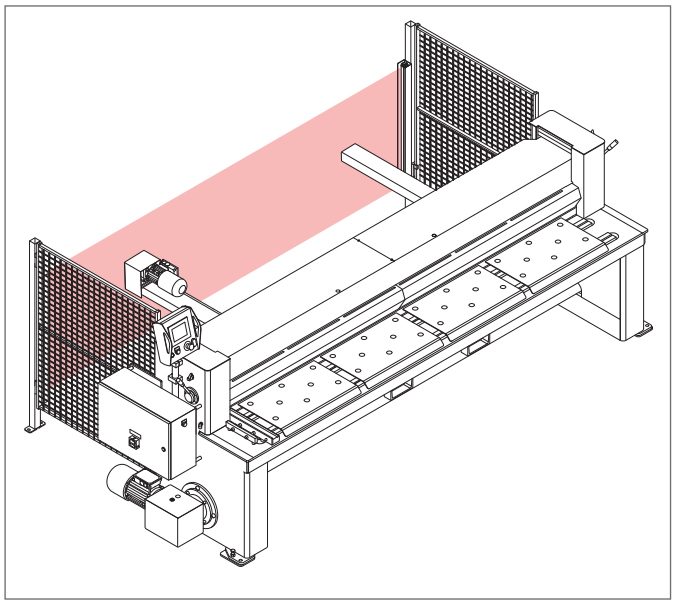
3.4.3. BACK GAUGE GUARDS

The product has back gauge guards installed to prevent crush injuries to fingers and body parts.

3.4.4. SAFETY LIGHT BEAM (OPTIONAL)

The safety light beam (optional on all product models) is installed on the back gauge side of the product. It identifies movements from persons or objects within the risk area of the product. If movement is detected, the product stops automatically.

WARNING! If the safety light beam does not operate correctly, it is not approved to operate the product.



3.5. SAFETY FOR INSTALLATION

WARNING! Read and understand the warning instructions that follow before installation of the product.

- Only installation personnel approved by CIDAN Machinery are approved to perform installation procedures on the product.
- Only a certified electrician is approved to connect the power supply to the product.
- The owner of the product is responsible to establish routines and regular checks to ensure there is no risk for falling, slipping of stumbling accidents around the product.
- The owner of the product is responsible to ensure that the work environment has sufficient lighting around the product.
- Do not do any installation procedures or adjustments to the product without a written approval from CIDAN Machinery. Activities that are not approved may void the warranty.

3.6. SAFETY FOR OPERATION

WARNING! Read and understand the warning instructions that follow before operation of the product.

- Only personnel authorized by CIDAN Machinery, with training and expertise in accordance with the safety instructions, are approved to operate and be near the product.
- Make sure that the product is approved for operation by CIDAN Machinery and that all parts are properly installed.

WARNING! Only use a product that has a hold-down beam installed, to prevent personal injury.

- Make sure that no person enters the product from the back gauge side when a product operates.
- Do not sit during operation.
- The operational sound level is <70 dB. During shearing procedures, the sound level may exceed 70 dB.
- Do not leave tools or other objects on the product before operation. These can cause damage to the product.
- Do not put fingers or body parts into moving parts of the product.
- Do not perform shearing procedures that requires greater force than the capacity of the product. Refer to "11.2. Product capacity" on page 26.

WARNING! To use material that requires greater force that the capacity of the product can cause personal injury and damage the product.

- Be aware of ejecting objects when the product cuts material.

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3.7. SAFETY FOR MAINTENANCE



WARNING! Read and understand the warning instructions that follow before maintenance of the product.

- Only authorized personnel with training and expertise in accordance with the safety instructions are approved to do maintenance on the product.
- Put the power switch to the OFF position and stop the power supply according to local regulations before you do maintenance on the electrified systems.
- Vent the pneumatic system before you do maintenance on pressurized systems.
- Be aware of components preloaded with springs. These can cause personal injury.
- Disconnect the quick coupling for the incoming air supply when you do maintenance on the pneumatic system.

4. LIFTING, TRANSPORTATION AND STORAGE

4.1. TO PREPARE THE PRODUCT FOR TRANSPORTATION OR LIFTING



WARNING! Persons involved in transportation of the product must be certified for transportation of heavy machinery. This procedure can cause serious injury or death.

1. Speak to CIDAN Machinery for support regarding transportation or lifting of the product.
2. Provide the supplied pre-installation and transportation guide to the persons involved in the transportation and lifting of the product.

Note! The pre-installation guide is supplied from CIDAN Machinery before delivery.

4.2. TO PREPARE THE PRODUCT FOR STORAGE



WARNING! Transportation and lifting must be performed by persons certified for transportation of heavy machinery. Refer to "11. Technical data" on page 25 for product weight.

- Make sure that the product is not put in storage outdoors in different weather conditions. This can cause damage to the product.
- Make sure that the product is put in storage in a closed environment with a temperature range of 15-30 C°, with a maximum variation of +/- 5 C° during the day.

5. PRE INSTALLATION

5.1. TO PREPARE FOR INSTALLATION

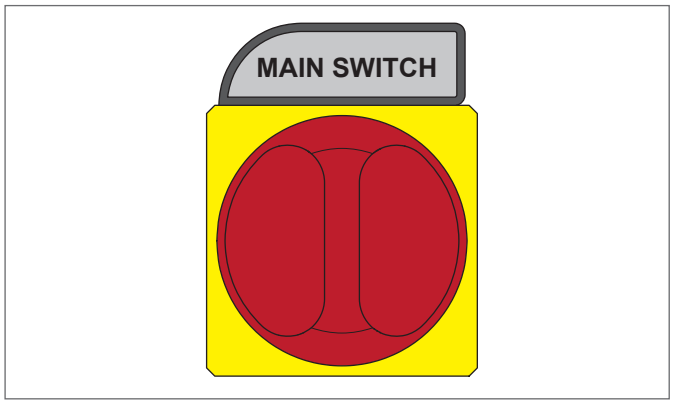
To prepare for installation of the product, refer to the Pre installation and transportation guide supplied before delivery of the product. Speak to CIDAN Machinery for support.

6. OPERATION

WARNING! Read and understand the safety chapter before you use the product.

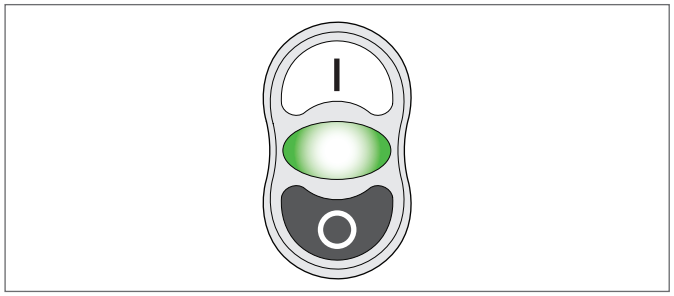
6.1. TO START THE PRODUCT

1. Do a check of the emergency stop button and make sure that it is not pushed in. Refer to "3.4.1. Emergency stop button" on page 8 for the location of the emergency stop button.
2. Make sure that there are no tools, objects or materials, such as metal sheets, on the product.
3. Make sure that the product has sufficient air pressure. Refer to "8.11. To do maintenance on the pneumatic assembly" on page 19.
4. Make sure that you have the correct personal protective equipment. Refer to "3.3. Personal protective equipment" on page 8.
5. Set the main switch to the ON position. Refer to "2.4. Product overview" on page 5 for the position of the main switch.



NOTE! Let the product and the control panel do the initial start-up for a few minutes.

6. Push the start button (green) on the control panel. Refer to "2.3. Control panel overview" on page 4 for the location of the start button.



7. Acknowledge any alarms displayed on the screen.
8. Press the Return button on the display touch screen to go back to the main screen.

The screen may display a popup message that prompts the user to do a back gauge start up calibration.

9. Press OK on the back gauge start up calibration popup message.

When the back gauge calibration is done, the product is ready to use.

6.2. TO CHOOSE OPERATION CONDITIONS

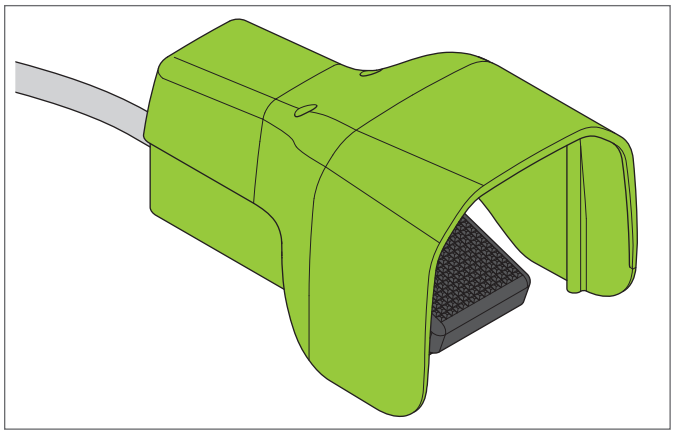
The product is operated from the front (shearing) side of the product. To shear a sheet, start the product, push the metal sheet to the back gauge rail, and press the pedal to complete the cut.

6.2.1. TO USE THE PEDAL UNIT

The pedal unit has 1 pedal.

- Press the pedal down with normal force and release it. This makes the product complete one cut of the metal sheet.

NOTE! The hold-down beam goes automatically back to its 6 mm/0.24 in. gap after a cut.



6.2.2. TO SHEAR A SHEET IN MANUAL MODE

WARNING! Read and understand the safety chapter before you use the product. Refer to "3. Safety" on page 8.

1. Start the product. Refer to "6.1. To start the product" on page 11.
2. Go to the the control panel. Refer to the control system manual for detailed information.
   A. Press the Length (A) value on the display touch screen to set the length of the cut.
   B. Enter the new cut length value with the number pad

that pops up.

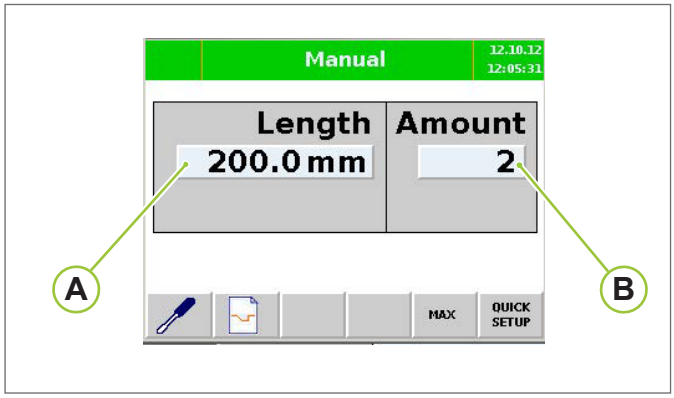
C. Press the green checkmark on the number pad to confirm the new Length value. The back gauge will move to the new position as soon as the new value is entered.

D. Press the Amount (B) value to set the amount of pieces that should be cut.

E. Enter the Amount value with the number pad that pops up.

F. Press the green checkmark on the number pad to confirm the new Amount value.

NOTE! The amount of pieces can be set to count up or count down. Refer to the control system manual for more information.



3. Start the shearing procedure.

A. Put the metal sheet on the table.

B. Push the metal sheet carefully forward until it reaches the back gauge rail.

C. Push the Cut button or push the foot pedal down and release it to make the hold-down beam go down and hold the metal sheet in place. The cutting beam comes down and shears the piece of sheet metal.

D. If you have set the amount of cuts to more than 1 piece, push the metal sheet to the back gauge rail immediately after a cut has been made. Push the cut button or foot pedal and release it for each cut. Do this until the set amount of pieces have been cut.

NOTE! The product stops automatically after the set amount of cuts have been made.

The cut pieces of metal are transfered to the front or to the back of the product. Refer to the configuration of the product for information on the transfer side.

NOTE! The hold-down beam and cutting beam move to their initial positions automatically after the shearing procedure has finished.

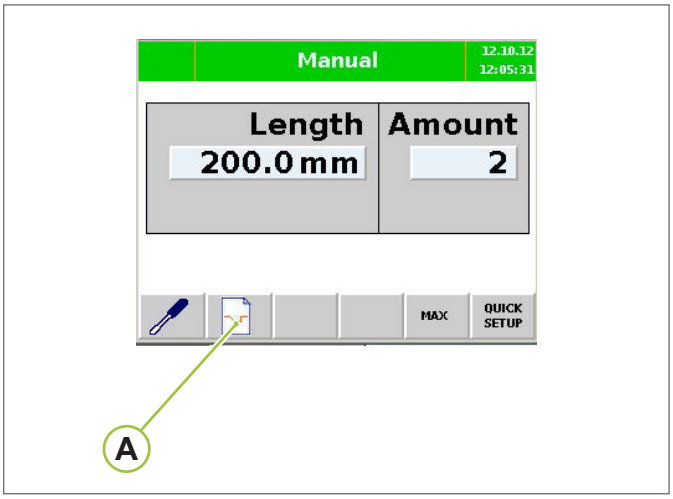
NOTE! For information about error messages on the control panel, refer to the control system manual.

6.2.3. TO SHEAR A SHEET IN AUTOMATIC MODE

WARNING! Read and understand the safety chapter before you use the product. Refer to "3. Safety" on page 8.

1. Start the product. Refer to "6.1. To start the product" on page 11.
2. Go to the the control system unit.

A. Press the Automatic icon (A) on the display touch screen to set the control system unit to automatic mode.



B. Press the New program button (B).

C. Press the Length (C) field in the first line on the display touch screen to set the length of the first cut.

D. Enter the cut length value with the number pad that pops up.

E. Press the green checkmark on the number pad to confirm the new Length value.

F. Press the Amount (D) field in the first line to set the amount of cuts for the set length.

G. Enter the Amount value with the number pad that pops up.

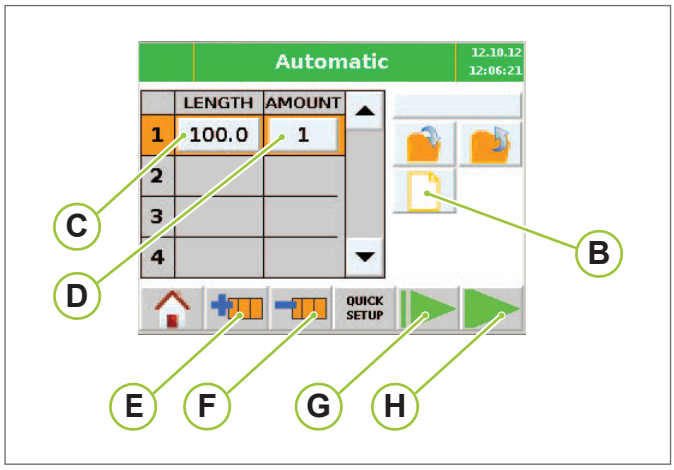
H. Press the green checkmark to confirm the new Amount value.

I. Press the New line button (E) to add a new line to the program.

J. Repeat steps C-F for each new line to enter the next cut length and amount for the automatic program.

You can enter up to 10 lines to a program.

K. To remove a line from a program, press the line you want to remove to make it active. Press the Remove line button (F) to remove the active line.



3. Start the shearing procedure.
   A. Press the Start button (H) on the display touch screen to start the program from line 1. If you want to start the program from an active line, press the line you want to start from to make it active, then press the Resume (G) button.
   B. Put the metal sheet on the table.
   C. Push the metal sheet carefully forward until it reaches the rail.
   D. Push the Cut button or push the foot pedal down and release it to make the hold-down beam go down and hold the metal sheet in place. The cutting beam comes down and shears the piece of sheet metal.
   E. If you have set the amount of cuts to more than 1 piece, push the metal sheet to the rail immediately after a cut has been made. Push the cut button or foot pedal and release it for each cut. Do this until the set amount of lengths and pieces have been cut.

NOTE! The product restarts the program from line 1 after the set amount of lengths for each row have been cut.

The cut pieces of metal are transfered to the front or to the back of the product. Refer to the configuration of the product for information on the transfer side.

NOTE! The hold-down beam and cutting beam move to their initial positions automatically after the shearing procedure is finished.

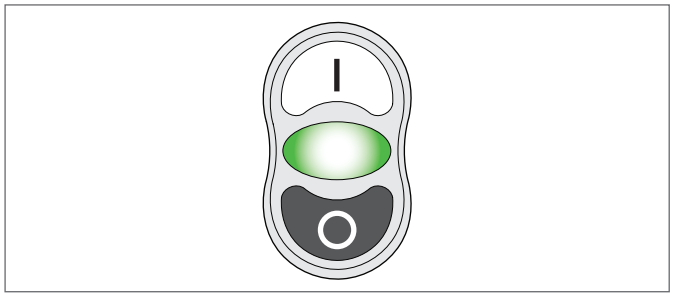
NOTE! For information about error messages on the control panel, refer to the control system manual.

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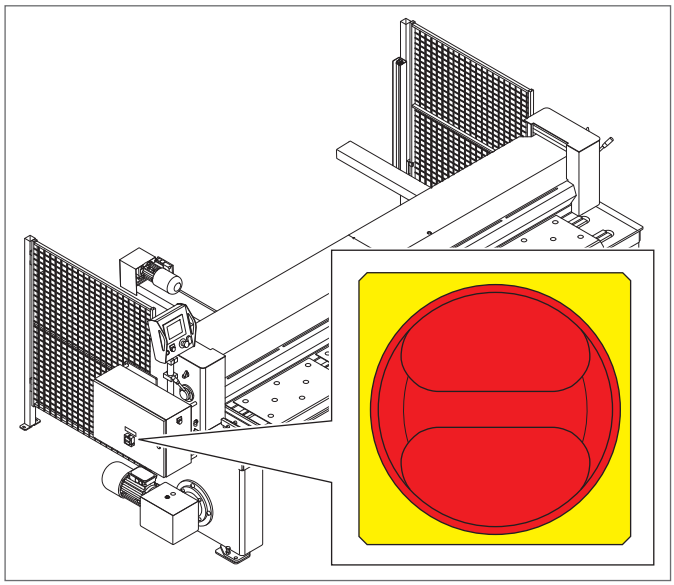
6.3. TO STOP THE PRODUCT

6.3.1. TO STOP THE PRODUCT DURING NORMAL OPERATION

1. Push the stop button (red) on the control panel. Refer to "2.4. Product overview" on page 5 for the location of the stop button.



2. Set the main switch to the OFF position. Refer to "2.4. Product overview" on page 5 for the location of the main switch.



6.3.2. TO STOP THE PRODUCT IN AN EMERGENCY

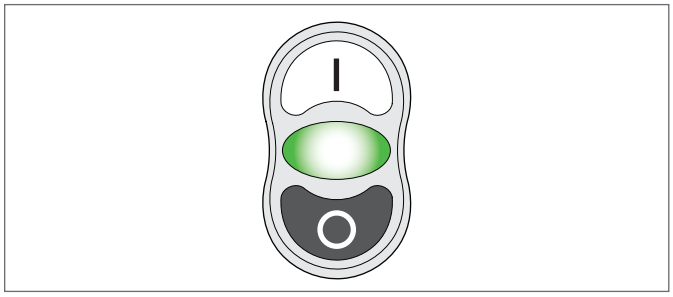
1. Push the emergency stop button on the product to stop the product in its current position. Refer to "3.4.1. Emergency stop button" on page 8 for the location of the emergency stop button.

WARNING! When an emergency button is pushed, the product stops in its current position and it is not possible to operate the product.

6.3.3. TO RESTART THE PRODUCT AFTER A STOP

When the product has been stopped in an emergency or due to a power outage, the product must be restarted.

1. Do a check of the emergency stop button and twist it back to normal position if it has been pushed in. Refer to "3.4.1. Emergency stop button" on page 8 for the location of the emergency stop button.
2. Acknowledge any alarms displayed on the screen.
3. Push the start button (green) on the control panel. Refer to "2.3. Control panel overview" on page 4 for the location of the start button.



4. Press the Home button on the display touch screen to resume operation.

6.3.4. TO RESTART THE PRODUCT AFTER AN EMERGENCY STOP DURING SHEARING

When the emergency stop button has been pressed in an emergency during shearing, the product must be restarted with a knife reverse.

1. Twist the emergency stop button back to normal position if it has been pushed in. Refer to "3.4.1. Emergency stop button" on page 8 for the location of the emergency stop button.
2. Push the start button (green) on the control panel. Refer to "2.3. Control panel overview" on page 4 for the location of the start button.
3. Press the Error display icon in the upper right corner on the display touch screen to go to the Active alarms screen.
4. Press the green checkmark in the lower right corner of the screen to go to knife reversing mode.
5. When the screen displays the message "Reversing active", press the foot pedal to reverse the knife. When the knife reverse procedure is done, the screen displays the message "Reversing not possible".
6. Press the Home button in the lower left corner of the screen.

The product is now ready for use.

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7. ADJUSTMENTS

7.1. THICKNESS CHART FOR METAL SHEETS

The table shows the maximum thickness for the specified material type.

MODEL	WORKING LENGTH	STEEL[1]	STAINLESS STEEL[2]	ALUMINUM[3]	CONTINUOUS CUTS/MIN	MOTORS
EVO DUO 32	3200 mm	4 mm	2.25 mm	5.5 mm	28	2 x 3 kW (8 hp)
	126 in.	9 ga	14 ga	0.217 in.	28	2 x 3 kW (8 hp)
EVO DUO 41	4100 mm	2.5 mm	1.6 mm	3.7 mm	28	2 x 3 kW (8 hp)
	161 in.	14 ga	18 ga	0.146 in.	28	2 x 3 kW (8 hp)

1 Ultimate tensile strength 400 N/mm²/400 MPa
2 Ultimate tensile strength 600 N/mm²/600 MPa
3 Ultimate tensile strength 200 N/mm²/200 MPa

CAUTION! Do not exceed the maximum capacity of the product.

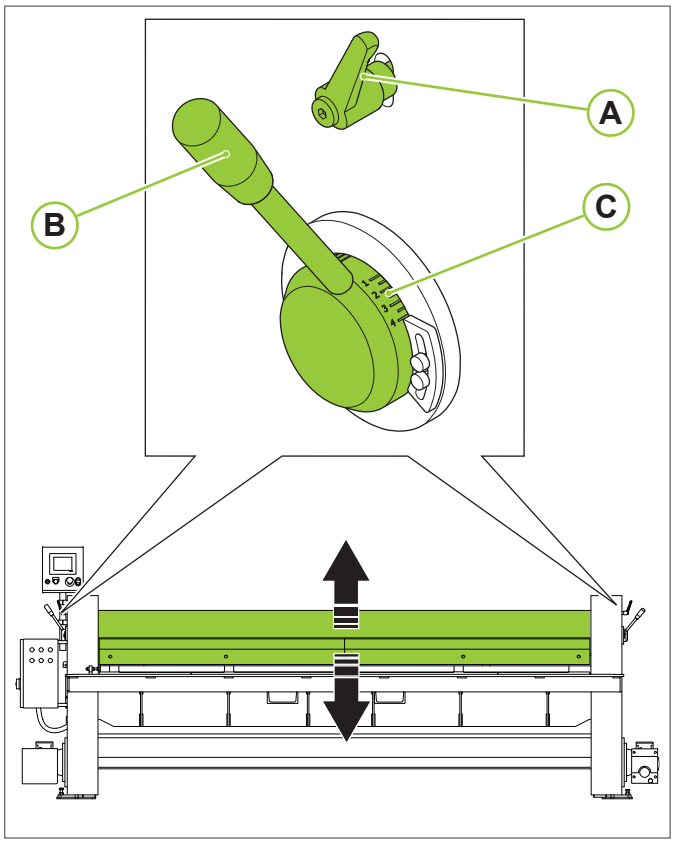
7.2. TO ADJUST THE BLADE GAP

MATERIAL THICKNESS	1	1.5	2	2.5	3	3.5	4	4.5
Gap in mm	0.05	0.09	0.13	0.18	0.22	0.26	0.31	0.35
Gap in inches	0.002	0.004	0.005	0.007	0.009	0.010	0.012	0.014

The blade gap increases in a linear movement. It should be approximately 5% of the sheet thickness.

NOTE! Different material with the same thickness could require an adjustment of the blade gap to get the best result.

1. Loosen the lock screw (A) on the right side and the left side of the product.
2. Use the graduated adjustment lever (B) on the right side and the left side to set the required blade gap on the scale (C). The 2 adjustment levers must be set to the same blade gap.
3. Lock the blade gap with the lock screw (A) on the right side and left side of the product.



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8. MAINTENANCE

8.1. TO PREPARE FOR MAINTENANCE



WARNING! Read and understand the safety chapter before you do maintenance on the product.

Do the safety procedures that follow before you do maintenance on the product.

1. Set the main switch to OFF to stop the power supply to the product.
2. Disconnect the quick coupling for the incoming air supply to the product to vent the pneumatic system.
3. If repairs or service are necessary, speak to CIDAN Machinery for support.

8.2. MAINTENANCE SCHEDULE

NOTE! If the machine is within its warranty period, the annual inspection by a CIDAN Machinery technician is required to maintain the warranty. Speak to CIDAN Machinery for more information.

ACTION	EACH DAY	EACH WEEK	EACH MONTH	EACH 3 MONTHS	EACH 6 MONTHS	EACH YEAR
Clean around the product and back gauge	✓					
Clean the electrical cabinet			✓			✓*
Do a check of the main switch			✓			✓*
Do a check of the start and stop button						✓*
Do an inspection of the pedal unit	✓					✓*
Do a check of the pedal unit cable	✓					✓*
Do a functional test of the shearing procedure	✓					✓*
Do an inpection of the safety signs and risk area markings			✓			
Do a check of the emergency stop button			✓			✓*
Do a check of the safety light beam		✓				✓*
Do an inspection of the safety curtain			✓			
Do an inspection of the table plates				✓		
Do an inspection of the cables and hoses under the back gauge				✓		
Do maintenance on the pneumatic valve					✓	✓*
Lubricate the eccentric unit			✓			✓*
Lubricate the eccentric shaft bearings						✓*
Lubricate the back gauge ball screws (2 screws)				✓		✓*
Do maintenance on the electrical cabinets						✓*
Do an inspection to make sure the product is level						✓*

*** Done by CIDAN Machinery during annual inspection.**

8.3. MAINTENANCE EQUIPMENT

EQUIPMENT
Floor cleaning equipment
Lint-free cloth
Metal sheet for making cuts
Grease gun
Lubricant (Mobil SHC Polyrex 462 NLGI 2.0 or equivalent)

8.4. TO DO A FUNCTIONAL TEST OF THE SHEARING PROCEDURE

Follow the procedure "6.2.2. To shear a sheet in manual mode" on page 11 or "6.2.3. To shear a sheet in automatic mode" on page 12 to do the functional test. If the product does not operate correctly, speak to CIDAN Machinery for support.

8.5. TO CLEAN AROUND THE PRODUCT

1. Make sure that there are no objects or tools left on the product or in the risk area.
2. Make sure that it is not possible to slip or fall around the product.
3. Clean the floor around the product and any other area that has dust or dirt.
4. Clean the back gauge from dirt and dust with a lint-free cloth. Refer to "2.4. Product overview" on page 5 for the position of the back gauge.

8.6. TO DO AN INSPECTION OF THE PEDAL UNIT

1. Start the product. Refer to "6.1. To start the product" on page 11.
2. Set a cut on the control panel. Refer to "6.2. To choose operation conditions" on page 11.
3. Push the foot pedal down and release it.
4. Make sure that a cut is made, and that there are no abnormalities in this procedure.



WARNING! If the pedal does not operate correctly, stop the product and disconnect the power supply. Speak to CIDAN Machinery for support.

8.7. TO DO AN INSPECTION OF THE TABLE PLATES

1. Lift each plate and inspect it for damage and deformation. Replace the table plates if it is necessary.

8.8. TO DO AN INSPECTION OF THE SAFETY EQUIPMENT

8.8.1. TO DO AN INSPECTION OF THE SAFETY SIGNS AND RISK AREA MARKINGS

1. Make sure that the safety signs on the product are not damaged.
2. Make sure the risk area markings on the floor are not damaged.

For replacement of safety signs, speak to CIDAN Machinery.

8.8.2. TO DO AN INSPECTION OF THE EMERGENCY STOP BUTTON

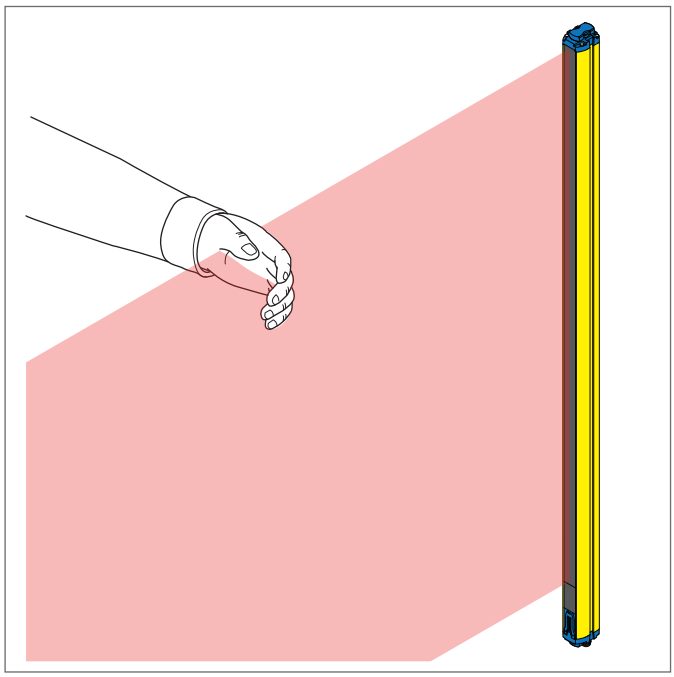
1. Start the product. Refer to "6.1. To start the product" on page 11.
2. Push the emergency stop button. Refer to "2.4. Product overview" on page 5 for the location of each emergency stop button.
3. Make sure that an alarm appears on the screen of the control system.
4. Turn the emergency stop button clockwise to deactivate it.

8.8.3. TO DO AN INSPECTION OF THE SAFETY LIGHT BEAM (OPTIONAL)

1. Start the product. Refer to "6.1. To start the product" on page 11.
2. Make sure that the light of the safety light beam is lit. Refer to "2.4. Product overview" on page 5 for the location of the safety light beam. Refer to "10.2. To reset the safety light beam (optional)" on page 24 or the location of the safety light beam status light.

NOTE! If the status light is red and there is no person or object in the risk area, the safety beam lights can be incorrectly aligned or the product operates incorrectly. Speak to CIDAN Machinery for support.

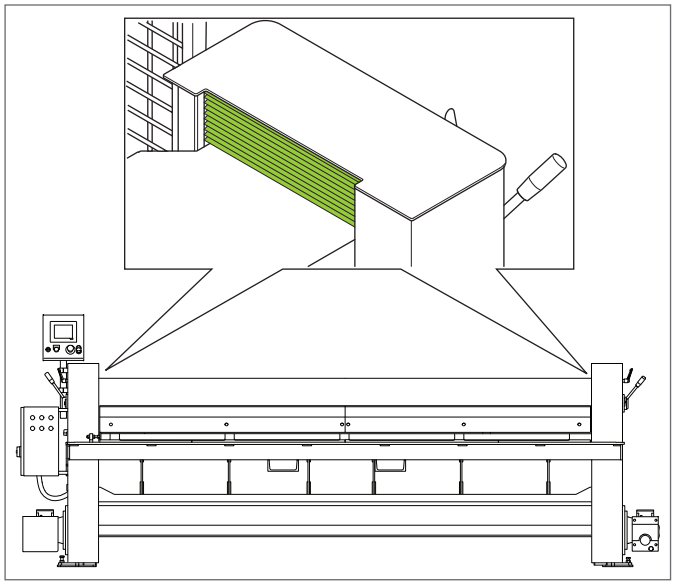
3. Move into the risk area and make sure the product stops.



8.8.4. TO DO AN INSPECTION OF THE SAFETY CURTAIN

- Do a visual inspection of the safety curtains. If the safety curtain is damaged, it must be replaced. Speak to CIDAN Machinery for support.

WARNING! Do not touch a damaged safety curtain. Risk of personal injury if the safety curtain is not intact.



8.9. TO DO AN INSPECTION OF THE ELECTRICAL SYSTEM

WARNING! Maintenance on the electrical system that is not described in this manual must be done by a certified electrician.

CAUTION! The back gauge sheet support folds down on its own when the electrical system or pneumatic valve is disconnected.

8.9.1. TO DO AN INSPECTION OF THE MAIN SWITCH

1. Set the main switch to the ON position and make sure that the power supply is on. Refer to "2.4. Product overview" on page 5 for the location of the main switch.
2. Set the main switch to the OFF position and make sure that the power supply is off.
3. Open the electrical cabinet and make sure that no parts are damaged or loose.

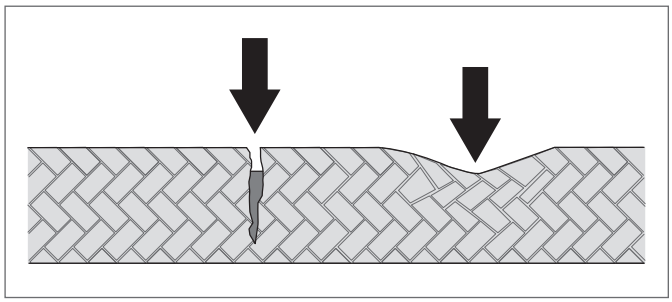
8.9.2. TO DO AN INSPECTION OF THE START BUTTON

1. Set the main switch to the ON position. Refer to "2.4. Product overview" on page 5 for the position of the main switch.
2. Make sure that the emergency stop buttons are not activated.
3. Press the start button (green).
4. Make sure that the start button and the status light are lit and that the product starts. Refer to "2.3. Control panel overview" on page 4 for the position of the start button and the status light.

8.9.3. TO DO AN INSPECTION OF THE PEDAL UNIT CABLE

1. Use a lint-free cloth to clean the pedal unit cable from dirt and dust.
2. Do an inspection of the pedal unit cable for damage or deformation.

CAUTION! Do not use a product with a damaged pedal unit cable.

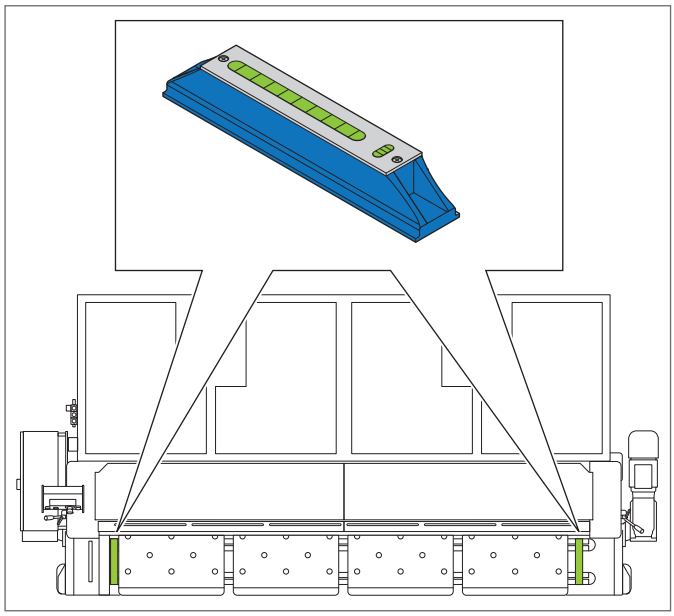


3. Replace the cable if it is necessary.

8.10. TO DO AN INSPECTION OF THE LEVELING OF THE PRODUCT

After installing the product, you must check the leveling each 12 months or when you think the product is not level.

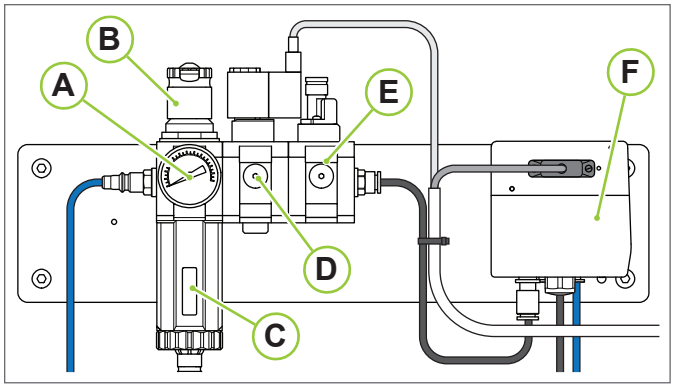
1. Put a high-precision spirit level on top of the left side of the shear table.
2. Read the high-precision spirit level to make sure that the product is level.
3. Put the high-precision spirit level on top of the right side of the shear table.
4. Read the high-precision spirit level to make sure that the product is level.
5. If the product is not level, speak to CIDAN Machinery for support.



8.11. TO DO MAINTENANCE ON THE PNEUMATIC ASSEMBLY

CAUTION! The back gauge sheet support folds down on its own when the electrical system or pneumatic valve is disconnected.

1. When the system is pressurized, inspect the pressure that shows on the manometer (A) at the filter regulator. The pressure should show approximately 6 bar/87 psi. If the pressure is incorrect, adjust the pressure as follows:



   A. Pull the adjustment knob (B) up to unlock it.
   B. Rotate the adjustment knob until the correct value shows in the manometer.
   C. Push the adjustment knob down to lock it.
2. Clean the cup (C) under the filter regulator.
   A. Disconnect the quick coupling for the incoming air supply to the product to depressurize the pneumatic system.
   B. Turn the lower part of the filter regulator counterclockwise to remove it.
   C. Remove and clean the cup under the filter regulator.
   D. Install the cup and the lower part. Turn the lower part clockwise.
   E. Reconnect the quick coupling for the incoming air supply.

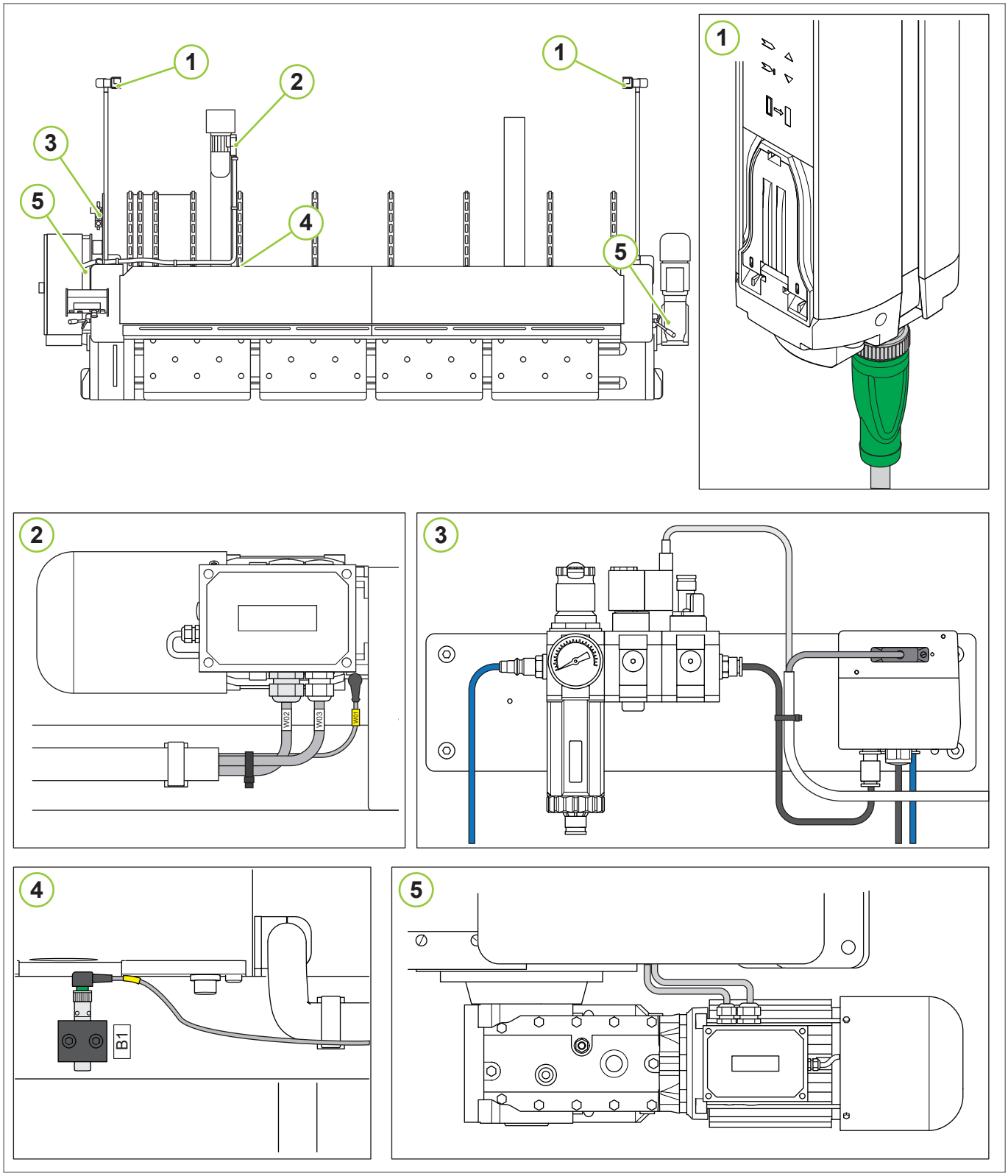
8.12. TO DO AN INSPECTION OF THE CABLES AND HOSES UNDER THE BACK GAUGE

Refer to the overview illustration that follows for the location of cables and hoses connected to the back gauge.

- Make sure that there are no damaged, discolored or burned cables or hoses.
- Make sure that cables and hoses do not get caught in moving parts of the product.
- Make sure that all cables and hoses are connected.

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8.12.1. INSPECTION POINTS FOR CABLES AND HOSES



1. Safety light beam on left side and right side.
2. Back gauge motor.
3. Filter regulator with manometer and pneumatic valve assembly.
4. Back gauge reference sensor.
5. Cutting motor on left side and right side of product.

8.13. LUBRICATION

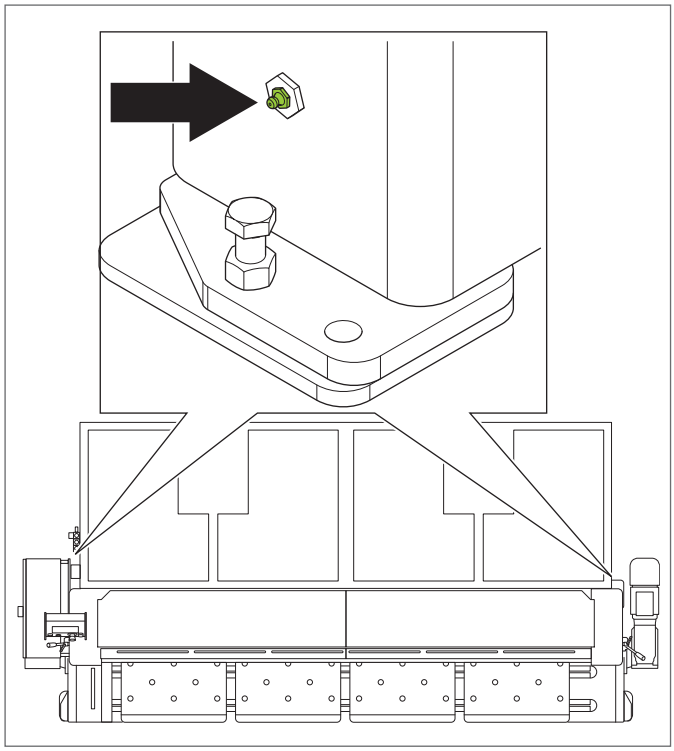
8.13.1. TO LUBRICATE PRODUCT PARTS

1. Make sure that the product is stopped and the power supply is set to OFF before you lubricate the parts. Refer to "6.3. To stop the product" on page 14.
2. Use food grade lubricant Mobil SHC Polyrex 462 NLGI 2.0 or equivalent for all lubrication parts.

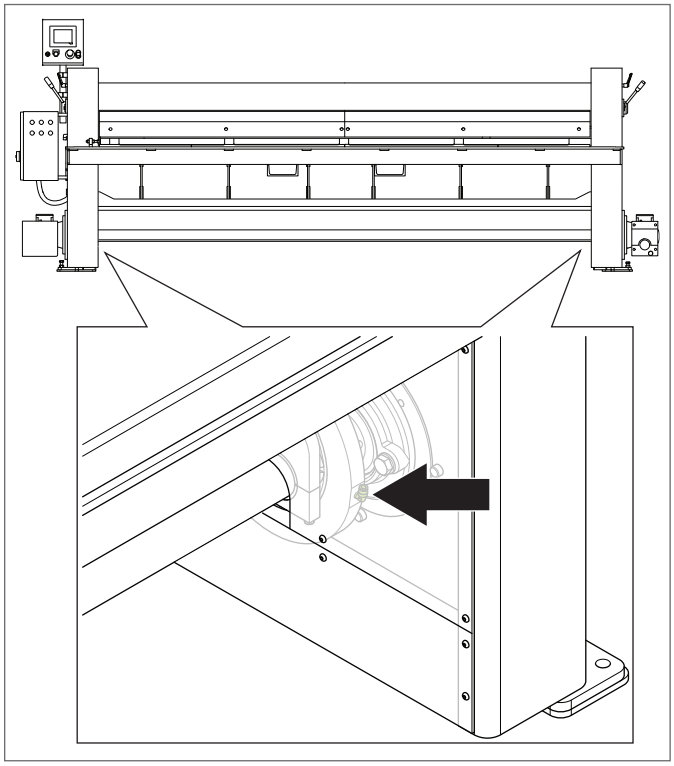
8.13.2. LUBRICATION POINTS OVERVIEW

Refer to the overviews that follow to locate each lubrication point of the product. Refer to "8.13.6. Lubrication intervals" on page 22 for the correct lubrication interval.

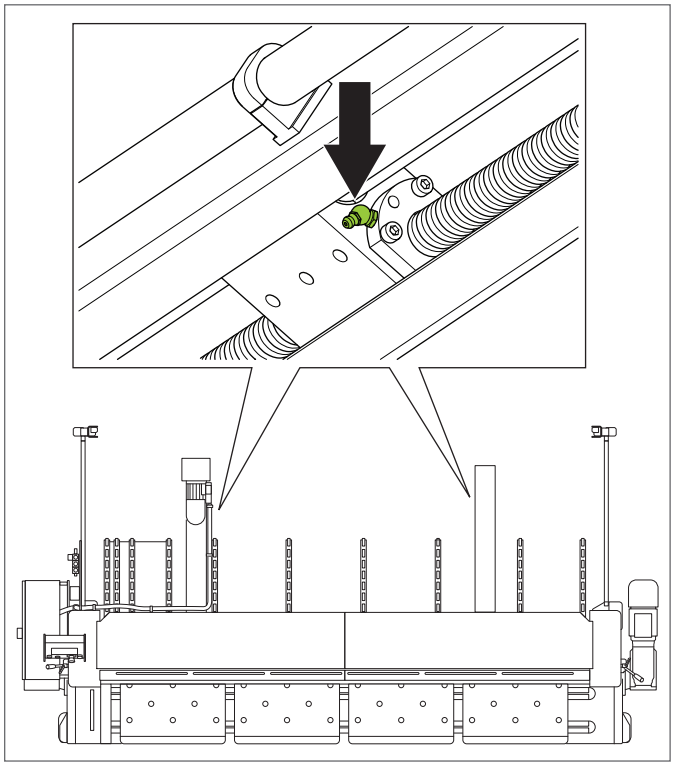
1. Eccentric unit lubrication nipples.



2. Eccentric shaft bearings.



3. Back gauge ball screws (2 screws)



8.13.3. TO LUBRICATE THE ECCENTRIC UNIT

1. Find the eccentric unit lubrication nipples at the back of the right side and left side frames. Refer to "8.13.2. Lubrication points overview" on page 21 for the location of the lubrication nipples.
2. Lubricate the nipples on the right side and left side.
3. Start the product
4. Operate the shear for a few cuts
5. Stop the product.
6. Lubricate the nipples a little more.

8.13.4. TO LUBRICATE THE ECCENTRIC SHAFT BEARINGS

1. Find the eccentric shaft bearings' lubrication nipples behind the plates on the right side and left side frames. Refer to "8.13.2. Lubrication points overview" on page 21 for the location of the lubrication nipples.
2. Press the lubrication nipples gently to lubricate, to prevent damage to the nipples.
3. Use less grease than for the eccentric unit.

8.13.5. TO LUBRICATE THE 2 BALL SCREWS ON THE BACK GAUGE

1. Lubricate the 2 ball screws on the back gauge. Refer to "8.13.2. Lubrication points overview" on page 21 for the location of the ball screws.
2. Start the product.
3. Change the length of the cut touch screen display at least 3 times to move the back gauge back and forth. Refer to "6.2.2. To shear a sheet in manual mode" on page 11.

8.13.6. LUBRICATION INTERVALS

POINT NUMBER	LUBRICATION POINT	LEFT SIDE	RIGHT SIDE	MOBIL SHC POLYREX 462	EACH HOURS
1	Eccentric unit	1 point	1 point	✓	160
2	Eccentric shaft bearings	1 point	1 point	✓	2000
3	Back gauge ball screws (2 screws)	1 point	1 point	✓	500

NOTE! Lubrication point 1 has monthly lubrication intervals.

9. DISPOSAL

9.1. TO DISCARD THE PRODUCT

Discard the product according to local regulations.

10. TROUBLESHOOTING

10.1. TO TROUBLESHOOT SHEARING

Speak to CIDAN Machinery if the product shows signs of malfunction or damage, or if a maintenance inspection is not approved.



WARNING! Do not use a product that is damaged or has a malfunction.

PROBLEM	POSSIBLE CAUSE	SOLUTION
A metal sheet is trapped in the cutting beam.	There is a is a fault in the material feed.	To release a trapped metal sheet: 1. Change the direction of rotation from the control panel to reverse. Refer to the control system manual. 2. Wait for the metal sheet to be released. 3. Remove the metal sheet. 4. Change the direction of rotation back to normal rotation from the control panel.
The motion of the shear suddenly stops.	A metal sheet is trapped in the cutting beam.	Refer to the instructions above for how to release a trapped metal sheet.
	The blade gap is incorrect.	1. Refer to the instructions above for how to release a trapped metal sheet. 2. Set the blade gap to the correct gap for the material. Refer to "7.2. To adjust the blade gap" on page 15 for how to adjust the blade gap.
	The shearing blades are worn.	1. Refer to the instructions above for how to release a trapped metal sheet. 2. Speak to CIDAN Machinery for support.
	The clearance between the guides is incorrect.	1. Refer to the instructions above for how to release a trapped metal sheet. 2. Speak to CIDAN Machinery for support.
	The brake operates incorrectly.	1. Refer to the instructions above for how to release a trapped metal sheet. 2. Speak to CIDAN Machinery for support.
	The thermal cutoff switch of the cut motor stops the motor because of high motor temperature.	
Burrs, or not cutting the maximum sheet thickness	The blade gap is incorrect.	Set the blade gap to the correct gap for the material. Refer to "7.2. To adjust the blade gap" on page 15 for how to adjust the blade gap.
	There is too much play in the guides.	Speak to CIDAN Machinery for support.
	The shearing blades are worn.	Speak to CIDAN Machinery for support.
The upper beam does not stop in top position	The top position switch is activated too late or too early.	Speak to CIDAN Machinery for support.

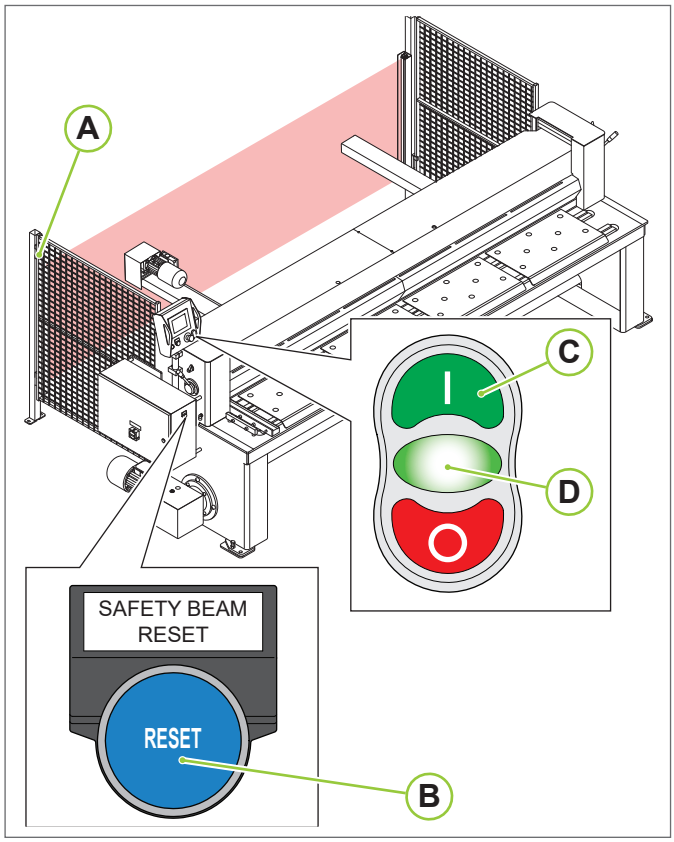
10.2. TO RESET THE SAFETY LIGHT BEAM (OPTIONAL)

If a product has a safety light beam installed and the product main switch has been set to ON, but the product cannot be started:

1. Make sure that the risk area of the safety light beam has no equipment or personnel in it.
2. Make sure that the product main switch is set to ON.
3. Check if the safety light beam (A) status light is lit with a green light.

NOTE! If the safety light beam status light is lit with a red light, push the Safety beam reset button (B) for 1 second. Repeat step 3.

4. Push the start button (C) to start the product.
5. Make sure that the status light of the product is lit (D).
6. Make sure that the product is operational.



11. TECHNICAL DATA

11.1. PRODUCT DATA

		EVO DUO 32	EVO DUO 41
Weight without packaging, kg/lb		3000/6650	3500/7750
Working length, mm/in.		3200/126	4100/161
Measurements	Length, mm/in.	4208/166	5108/201
	Depth with 750 mm /30 in. gauge, mm/in. [1]	1709/67	1709/64
	Depth with 1000 mm/39 in. gauge, mm/in.[2]	1959/77	1959/77
	Depth with safety light beam and curtain, mm/in	2070/82	2070/82
	Height, mm/in.	1535/60	1535/60
	Work table height, mm/in.	868/34	868/34
Back gauge length	mm/in	750/30	750/30
	mm/in	1000/39	1000/39
Floor quality, minimum thickness, mm/in.		100/4	100/4
Blade gap range	mm	0.05 - 0.35	0.05 - 0.35
	in.	0.002 - 0.013	0.002 - 0.013
Cutting motor 1, kW		3	3
Cutting motor 2, kW		3	3
Sound level during operation, dB [3]		88 - 116	88 - 116
Voltage, 3-phase, 50 Hz, V		400	400
Fuse, A		35	35
Air pressure, bar/psi		5-7/73-100	5-7/73-100
Maximum relative humidity, RH		60%	60%
Operating temperature	˚C	15-30	15-30
	˚F	59-86	59-86
Permitted temperature difference during operation	˚C	+/- 5	+/- 5
	˚F	+/- 9	+/- 9
Storage temperature	˚C	15-30	15-30
	˚F	59-86	59-86
Maximum variation of storage temperature	˚C	+/- 5	+/- 5
	F	+/- 9	+/- 9

1 With motor-driven 750 mm/30 in. back gauge

2 With motor-driven 1000 mm/39 in. back gauge

3 The figures quoted are for noise emission levels that are not necessarily safe levels for a working environment. The factors that influence the actual level of exposure of the work force include the characteristics of the work room and other sources of noise such as, the number och machines, other adjacent processes, and the length of time the operator is exposed to the noise. The permissible exposure may vary from country to country. Even though there is a correlation between noise emission and exposure levels, these figures cannot be used reliably to determine whether further precautions are required. They may however be used to assist the user of the machine to make a better hazard and risk evaluation

11.2. PRODUCT CAPACITY

		EVO DUO 32	EVO DUO 41
Shear capacity, maximum	Steel, mm/in. [1]	4.0/0.16	2.5/0.1
	Stainless steel, mm/in. [2]	2.25/0.09	1.6/0.06
	Aluminum, mm/in. [3]	5.5/0.22	3.7/0.15
Continuous cut, cuts/min		28	28

1 Ultimate tensile strength 400 N/mm^2/400 MPa
2 Ultimate tensile strength 600 N/mm^2/600 MPa
3 Ultimate tensile strength 200 N/mm^2/200 MPa

11.3. PRODUCT CONFORMITY

STANDARD/DIRECTIVE	NUMBER
Machinery Directive	2006/42/EC
The EMC Directive (electromagnetic compatibility)	2014/30/EU, EMC
Safety of machinery, general principles for design	SS EN ISO 12100:2010
Electrical equipment of machines	EN 60204-1
Machine tools - Safety - Guillotine shears	SS EN 13985 + A1: 2009

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