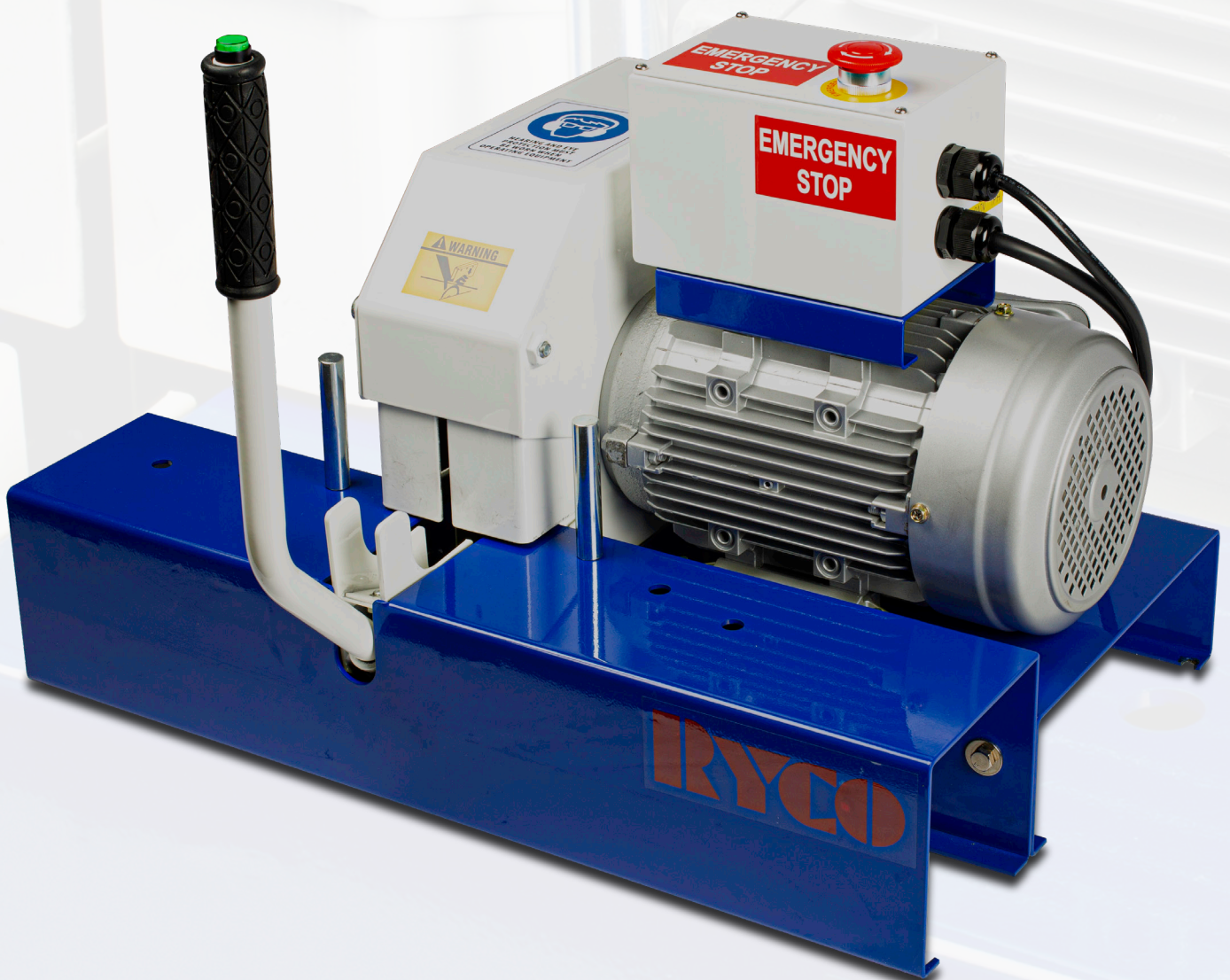




RYCS10 Cut-Off Saw

OPERATION MANUAL



RYCO CLEAN KIT

The ideal
accessory for your
RYCO RYCS10
Cut-Off Saw



RYCO CLEAN Hand Launcher Kit

The RYCO CLEAN Kit is an easy to use, low-cost solution to eliminate hydraulic contamination from the inside of hose, tube, and pipe. It is designed to clean the internal surfaces of hose, tube, and pipe effectively and efficiently. It comprises of a pneumatic hand launcher, an adaptor ring, and a range of specially designed nozzles to accommodate different sizes of hose, tube, and pipe.

The optimum air input pressure range for the RYCO CLEAN Hand Launcher to operate effectively is between 87 psi (6 bar) and 110 psi (7,5 bar).

Includes:

- 1 x Pneumatic hand held Launcher
- 1 x Adaptor ring
- 1 x Tough case
- 10 x nozzle to suit 1/4" – 2" ID hose, tube and pipe

Features & Benefits:

- Light-weight ergonomic design
- Easy to use and operate
- Pneumatic pistol-grip Launcher
- Multiple nozzle sizes to suit a range of hoses, tubes and pipes
- Heavy-duty carrying case for added protection



RYCO CLEAN Hand Launcher Kit

Part Number: RCPS-HLK

Contact your nearest RYCO representatives for more information about the RYCO CLEAN Hand Launcher Kit.

RYCS10 CUT-OFF SAW

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We reserve the right to alter the design or discontinue any of the company's products or services without notice. Whilst every effort has been made to ensure the accuracy of the information contained in this publication, our Company Policy of continual research and product development necessitates changes and refinements which may not be reflected in these pages. If in doubt, please contact your nearest RYCO sales office.

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RYCO RYCS10 CUT-OFF SAW

GENERAL INFORMATION

1. GENERAL INFORMATION

Do not unpack nor operate the RYCS10 Cut-Off Saw until you have thoroughly read and understood the contents of this operation manual.

This operation manual:

- Should be stored and kept in a good condition for future use
- Provides all necessary information relating to the safe operation and usage of the RYCS10 cut-off saw.

The information contained within this operation manual is for operators who can safely operate the RYCS10 Cut-Off Saw without being a risk to:

- Themselves
- Other persons
- Property
- The machine; or,
- The environment.

Also, all operators must have a proven understanding of:

- Performing machine inspections; and,
- Safe hose making practices and procedures in compliance with:
 - This operation manual
 - Appropriate Work Safe legislation within their location; and,
 - RYCO Hydraulics' Safe Work Instructions.

Contact RYCO Hydraulics or your nearest authorised RYCO distributor for a replacement operation manual or if additional information on the RYCS10 Cut-Off Saw is required.

The RYCS10 Cut-Off Saw has been designed:

- For the safe, clean, and efficient cutting of textile or wire braided, suction, and multi-spiralled hydraulic hoses
- To only cut hydraulic hoses of maximum size and construction as specified herein; and,
- For use in workshop and/or mobile service van environments.

2. WARRANTY INFORMATION

These products are supplied in accordance with "RTS" (RYCO Terms of Sale". The warranty on the RYCS10 Cut-Off Saw is for one (1) calendar year from date of purchase and only under the condition that the instructions contained within this operation manual have been strictly adhered to.

The warranty on the RYCS10 Cut-Off Saw covers:

- Any defect materials or parts
- Any faulty workmanship in its manufacture or assembly; and,
- The cost of repairs and the replacement of any defect parts, including labour.

The warranty on the RYCS10 Cut-Off Saw does not cover any:

- Improper or incorrect use
- Wear and tear through normal or regular use
- Travel, shipment, or time costs incurred; or any,
- Lost income due to this machine not working.

3. WARRANTY CLAIMS

Contact RYCO Hydraulics for any warranty claims.

4. LIABILITY INFORMATION

RYCO Hydraulics is not liable for any injury or damage to persons, machinery, or property due to any:

- Improper use
- Prohibited modifications made to the RYCS10 Cut-Off Saw; or,
- Misinterpreting the contents of this operation manual.

5. WARNINGS AND SAFETY INSTRUCTIONS

Establishing a safe working environment and safe working practices is common sense.

Operators are to read the following before operation:

- Extreme caution must be exercised when operating the RYCS10 Cut-Off Saw to avoid damage to the machine or its Steel Cut-Off Blade, or personal injury
- Disconnect electrical power supply to the RYCS10 Cut-Off Saw before performing any inspection, maintenance, or service tasks. Secure a Safety Hazard "Do Not Operate" tag to the equipment
- Make sure the RYCS10 Cut-Off Saw is securely mounted and in serviceable condition before use
- Regularly inspect the Steel Cut-Off Blade for nicks, cracks, distortion, missing sections from the cutting edge, or other damage; and replace Blade immediately if damaged
- Wear eye, ear and hand protection when using the RYCS10 Cut-Off Saw
- Loose fitting clothing and jewellery should not be worn near the RYCS10 Cut-Off Saw
- Always work in a clean, dry, well-lit workspace with adequate ventilation for removal of smoke and fumes
- Keep appendages clear of moving parts and cutting blades, and hands well clear of cutting zone
- If the cutting hose has been used in service any fluid that has been in the hose may cause toxic fumes when cut. Wear breathing protection when necessary. Also, when ignited some hydraulic fluids can explode and / or cause fire – therefore, ensure all adequate safety measures are taken
- Only switch ON the Cut-Off Saw immediately before use; and switch OFF the Cut-Off Saw immediately after cutting is complete
- The hose ends may be hot after cutting, and hot fragments may emit from the cutting zone when cutting. Be careful to avoid burns
- Electricity used to drive the RYCS10 Cut-Off Saw motor can create sparks that may cause fire, explosion, or electrocution
- Do not attempt to cut larger sizes of hose than those specified within this Operations Manual
- Do not smoke in the vicinity when cutting RYCO RTH1 Teflon hose or similar hoses, because fumes created may mix with tobacco smoke and become toxic
- Do not use the RYCS10 Cut-Off Saw to cut materials other than hose
- Do not operate the RYCS10 Cut-Off Saw with any Safety Guards removed
- Before commencing any cut ensure the blade has reached its full speed; and,
- When using:
 - Mains Voltage versions: do not use extension cords as low voltage can cause damage to the saw motor
 - Portable power sources: ensure power can be consistently delivered as low voltage can cause damage to the saw motor

RYCO RYCS10 CUT-OFF SAW

MACHINE LAYOUT

6. MACHINE LAYOUT

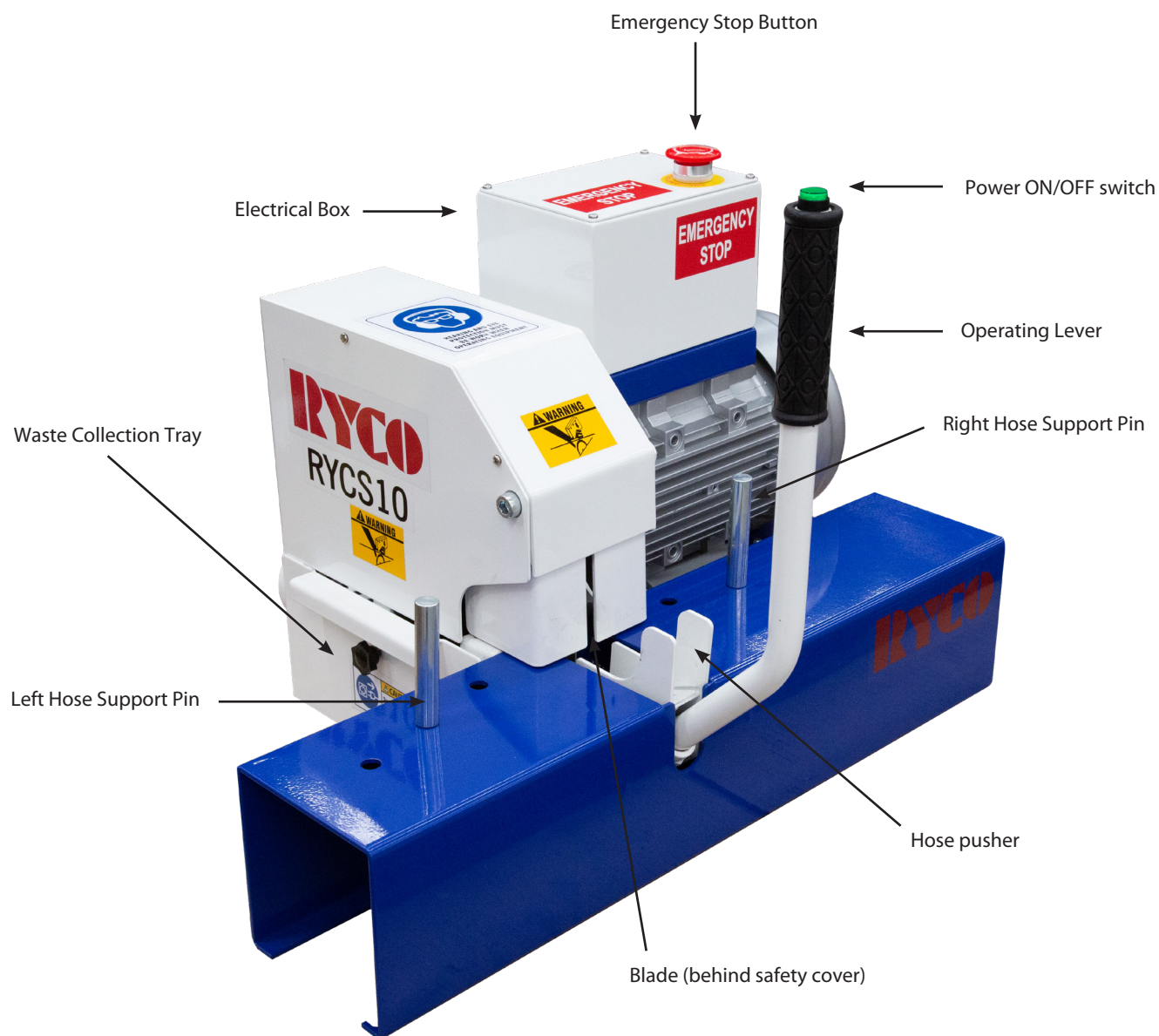


Figure 1 – Machine Layout

7. DANGER ZONES AND WARNING LABELS

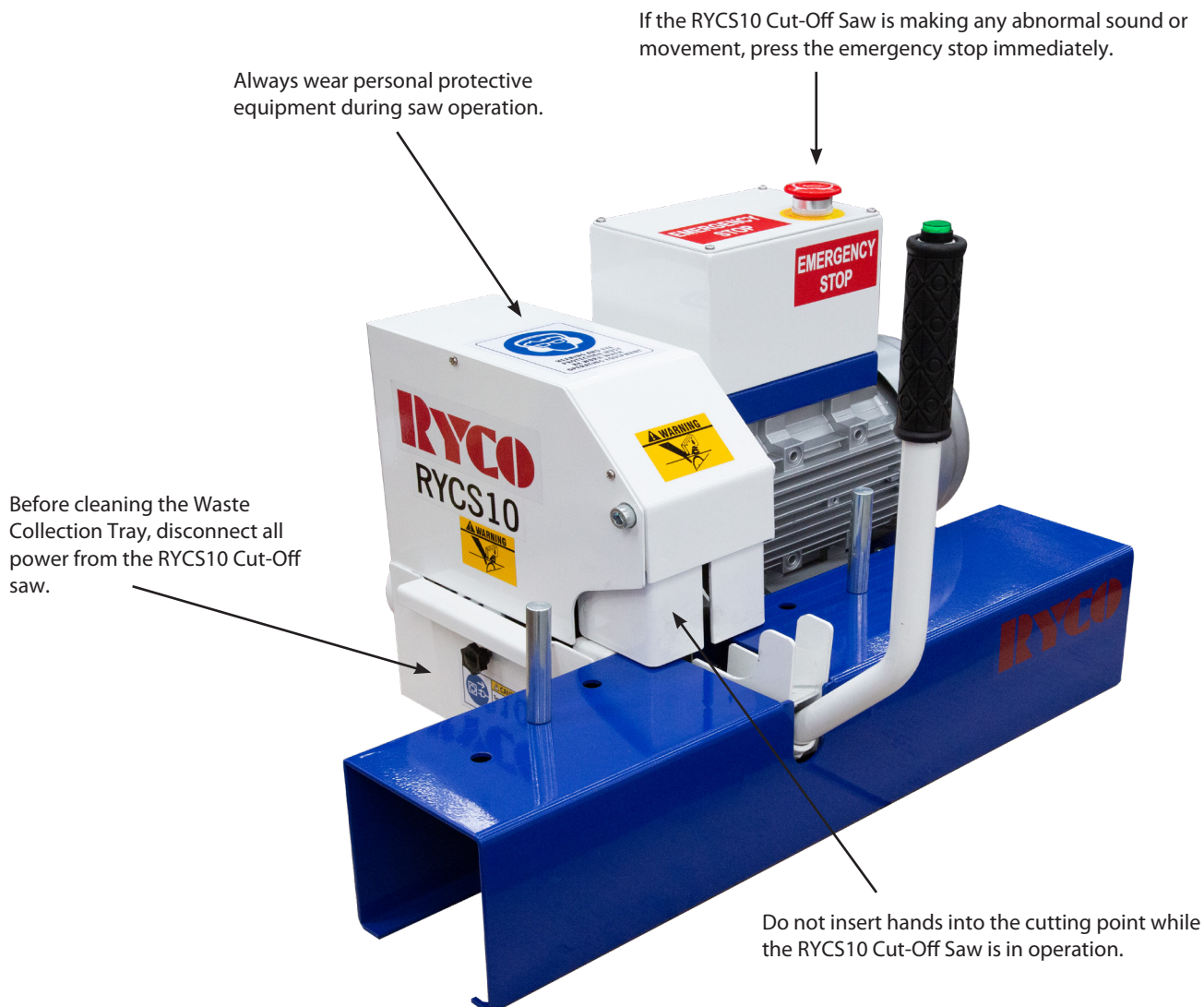


Figure 2 – Danger Zones

	Always wear personal protective equipment during saw operation.
	If the RYCS10 Cut-Off Saw is making any abnormal sound or movement, press the emergency stop immediately.
	Do not insert hands into the cutting point while the RYCS10 Cut-Off Saw is in operation.
	Before cleaning the Waste Collection Tray, disconnect all power from the RYCS10 Cut-Off saw.

RYCO RYCS10 CUT-OFF SAW

INSTALLATION AND COMMISSIONING

8. INSTALLATION

Before installing and using the RYCS10 Cut-Off Saw, RYCO recommends thoroughly:

- Reading the contents of this operation manual
- Ensure all cords are new, intact, and suitable for the relevant power source; and,
- Inspecting the machine to ensure it displays:
 - 2 x RYCO (logo) Labels
 - 1 x RYCS10 (logo) Label
 - 2 x Emergency Stop Labels
 - 1 x Warning Label
 - 1 x Hearing and Eye protection Label; and,
 - 1 x Caution Label.

The RYCS10 Cut-Off Saw must:

- Be installed on a firm, stable, and level work surface with adequate clearance for safe working
- Be secured to the work surface using suitable M8 size bolts, washers, and nuts fastened through the mounting holes in the Cut-Off Saw base as dimensioned in the figure below; and,
- Have clear, easy to access surroundings to allow operators to conduct any approved or suitable cleaning or maintenance.

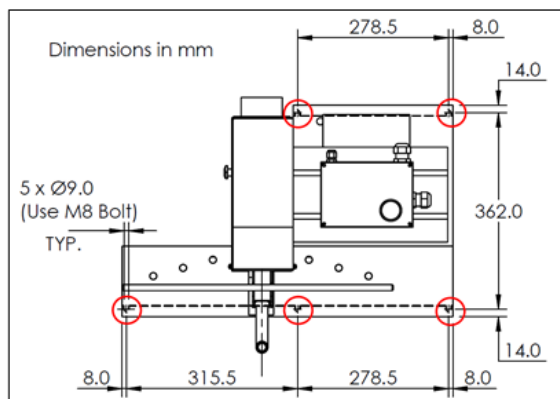


Figure 3 – RYCS10 Mounting Holes

9. COMMISSIONING

The RYCS10 Cut-Off Saw is shipped fully assembled and wired, ready for use.

After removing from its secure wooden box packaging, the RYCS10 Cut-Off Saw only requires mounting to the work surface, and connection of the electrical plug to the appropriate mains power.

The RYCS10 Cut-Off Saw is intended for use in mobile service vehicles and/or workshop environments mounted to the work surface.

Prior to use, operators must check:

- All fasteners and the nut securing the Steel Cut-Off Blade to the shaft to ensure that it has not become loose in transit
- To ensure that no damage has occurred in transit
- The Steel Cut-Off Saw Blade is mounted centrally with no axial or radial run out, and that it rotates easily; and,
- Ensure that the direction of rotation is so that when viewed from the front Operating Handle side of the Cut-Off Saw, the Cut-Off Saw Blade rotates in a direction from the top of saw to bottom of saw.

10. USAGE BY OPERATORS

The RYCS10 Cut-Off Saw should only be used by persons who are familiar with the correct and safe usage of this machine as outlined within the contents of this operations manual.

To avoid personal injury, all hands, feet, loose clothing, jewellery, and all other body parts must be kept well away from the RYCS10 Cut-Off Saw during operation.

Do not exceed the operational rating of the RYCS10 Cut-Off Saw as overloading will cause equipment failure and potential injury.

11. SAFE OPERATION REQUIREMENTS

Before safely operating the RYCS10 Cut-Off Saw, operators must:

- Read and understand the contents of this operation manual
- Be fully trained in its operation
- Be fully competent in its operation
- Be fully alert
- Not be fatigued or affected by medication, alcohol, or drugs; and,
- Ensure the working area is well properly lit and ventilated.

12. CONDITIONS OF USAGE

The RYCS10 Cut-Off Saw must be installed and only used within the following conditions:

- Supply voltage: 0.9 - 1.1 nominal supply voltage
- Source frequency: 0.99 - 1.01 nominal frequency
- Ambient temperature: 5°C - 40°C (40°F - 104°F)
- Altitude: shall be at altitudes up to 1000m above sea level
- Relative humidity: not exceed 50% at 40°C (104°F); and,
- Atmosphere: free from excessive dust, acid fumes, corrosive gases, and salt.

The RYCS10 Cut-Off Saw should not be exposed to any:

- Direct sunlight, heat rays or flames
- Damp or wet conditions, including being exposed to rain and/or moisture
- Explosive environment
- Equipment with a temperature above 50°C (122°F); or any,
- Area where children, animals, and/or other adults are in (close) proximity.

The RYCS10 Cut-Off Saw should not:

- Be modified in a way; nor,
- Be used for any application other than for which it was intended as listed within the contents of this operations manual.

For optimum performance, the RYCS10 Cut-Off Saw must be kept and in a continually clean and safe working order.

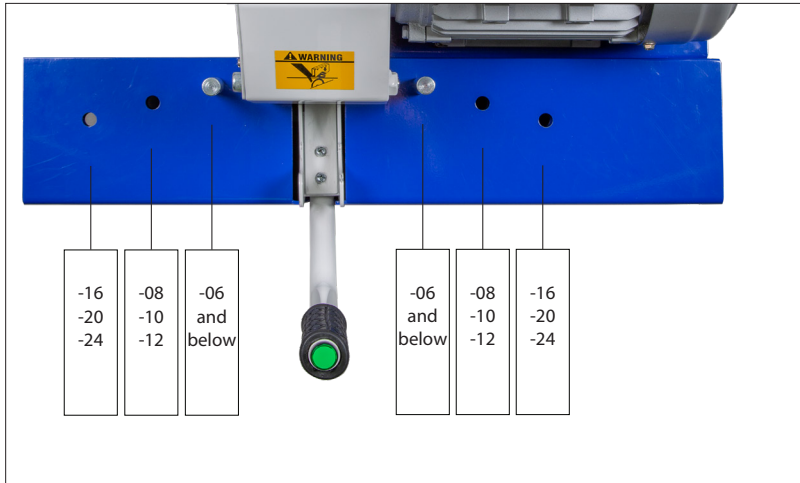
RYCO RYCS10 CUT-OFF SAW

OPERATING PROCEDURE

13. OPERATING PROCEDURE

1. Position the Hose Support Pins to suit the hose size and type to be cut, as shown in the diagram below. These positions are a guide only, different Hose Series may require the Hose Support Pins to be moved inwards or outwards to achieve a square cut.

NOTE: the Hose Support Pins on either side of the blade must be an equal distance from the blade.



The Hose Support Pins, together with the Support Notch at the bottom of the Operating Lever, remove the need for hand contact on the hose during cutting.

Figure 4 – RYCS10 Hose Support Pin locations

2. Move the Operating Lever into the back position
3. Mark the hose cut location on the hose, then position the hose to be cut so that:
 - i) it is lying flat on the bed of the Saw
 - ii) it is in contact with both Hose Support Pins; and,
 - iii) the cut position marked on the hose is aligned with the blade guard slot

NOTE: Do not attempt to cut or trim short pieces from hose. The hose must be in contact with both Hose Support Pins during the entire cutting cycle.

4. Start the Cut-Off Saw rotation by pressing the Power ON/OFF Switch at the top of the Operating Lever using your thumb.



NOTE: The RYCS10 Cut-Off Saw motor operates only while the Power ON/OFF Switch is depressed.

EMERGENCY STOP BUTTON

5. Move the Operating Lever towards the hose ensuring that the hose is located against the Hose Support Pins
6. Ensure the hose is in the Support Notch at the bottom of the Operating Lever. The Blade Safety Guard moves with the Operating Lever to expose the Blade to enable cutting to commence.
7. Continue to move the Operating Lever forward until the hose contacts the Steel Cut-Off Blade.
8. Maintain an even pushing force on the Operating Lever

NOTE: **Do not push too forcefully**; this may be indicated by the motor labouring or decreasing in RPM or stalling. Excessive pushing force can damage the Steel Cut-Off Blade or cause the hose to become distorted/burnt. It may be necessary to pause cutting for several seconds to allow the blade to cool sufficiently before continuing the cut.

9. When cutting is complete, release the Power ON/OFF Switch and move the Operating Lever to the fully back position.
10. Carefully remove the cut hose from the Saw Bed area.
11. Inspect the hose to ensure that the cut is clean and square at 90° to axis of hose.

Never leave the RYCS10 Cut-Off Saw machine powered on or running while unattended. To prevent any unintentional activation, ensure the RYCS10 Cut-Off Saw is electrically isolated at the power source, and the EMERGENCY STOP button is depressed.

14. EMERGENCY STOP BUTTON

Should electrical power to the RYCS10 Cut-Off Saw motor need to be cut immediately in the event of a dangerous/unsafe or emergency situation, the operator must press the Emergency Stop button.

Emergency or unsafe situations can include (but are not limited to) overheating of work-piece or saw components, the hose or any other item (i.e., clothing, body parts, jewellery, etc.) becoming jammed or caught against the blade, or any other potentially unsafe circumstances as deemed by the personnel using the equipment.

The Emergency Stop is located on the top of the RYCS10 Cut-Off Saw (see Figure 1 – Machine Layout) and is identified by two red Emergency Stop labels (see Figure 2 – Danger Zones and Warning Labels)

Once the Emergency Stop button has been pressed, all power to the RYCS10 Cut-Off Saw must be disconnected by unplugging the machine from its power source (i.e., power socket).



15. SPECIFICATIONS

RYCS10 - SPECIFICATIONS													
PART NUMBER	ELECTRICAL					PHYSICAL DIMENSIONS							
	VOLTAGE	PHASE	MOTOR POWER		SPEED	WIDTH		DEPTH		HEIGHT		WEIGHT	
			kW	hp	RPM	mm	inch	mm	inch	mm	inch	kg	lb
RYCS10-1-240	240	1	1.5	2.0	2850	610	24.0	404	15.9	450	17.7	45	99

RYCS10 - TECHNICAL INFORMATION													
PART NUMBER	BLADE SIZE		NOMINAL CUTTING CAPACITY										
			WIRE BRAID		SUCTION		4 SPIRAL		6 SPIRAL		MAX HOSE O.D.		
	mm	inch	Dash	inch	Dash	inch	Dash	inch	Dash	inch	mm	inch	
RYCS10-1-240	250	10	-24	1.1/2	-24	1.1/2	-20	1.1/4	-20	1.1/4	55	2.1/8	

RYCO RYCS10 CUT-OFF SAW

MAINTENANCE AND INSPECTION

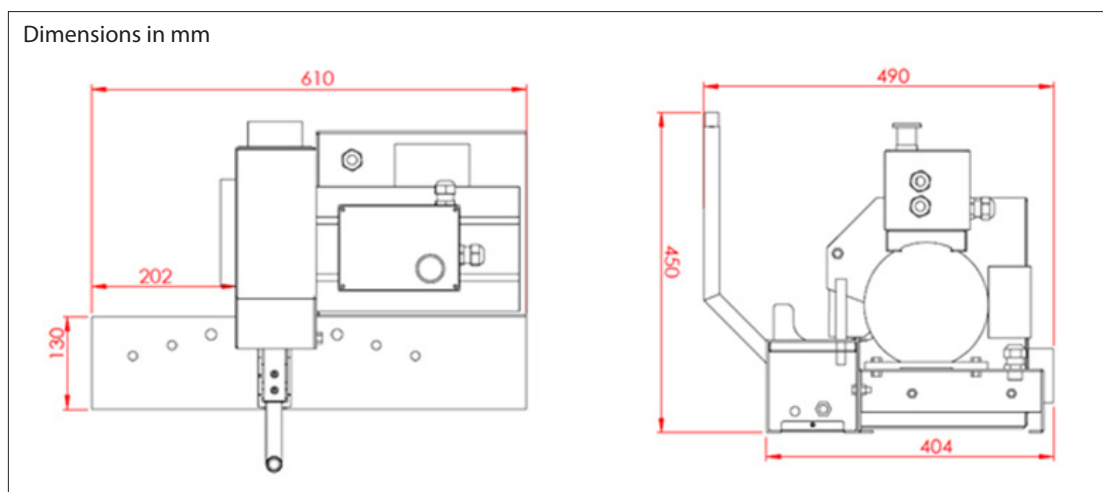


Figure 5 – RYCS10 basic dimensions

Notes: Illustrations are not to scale and are indicative only.

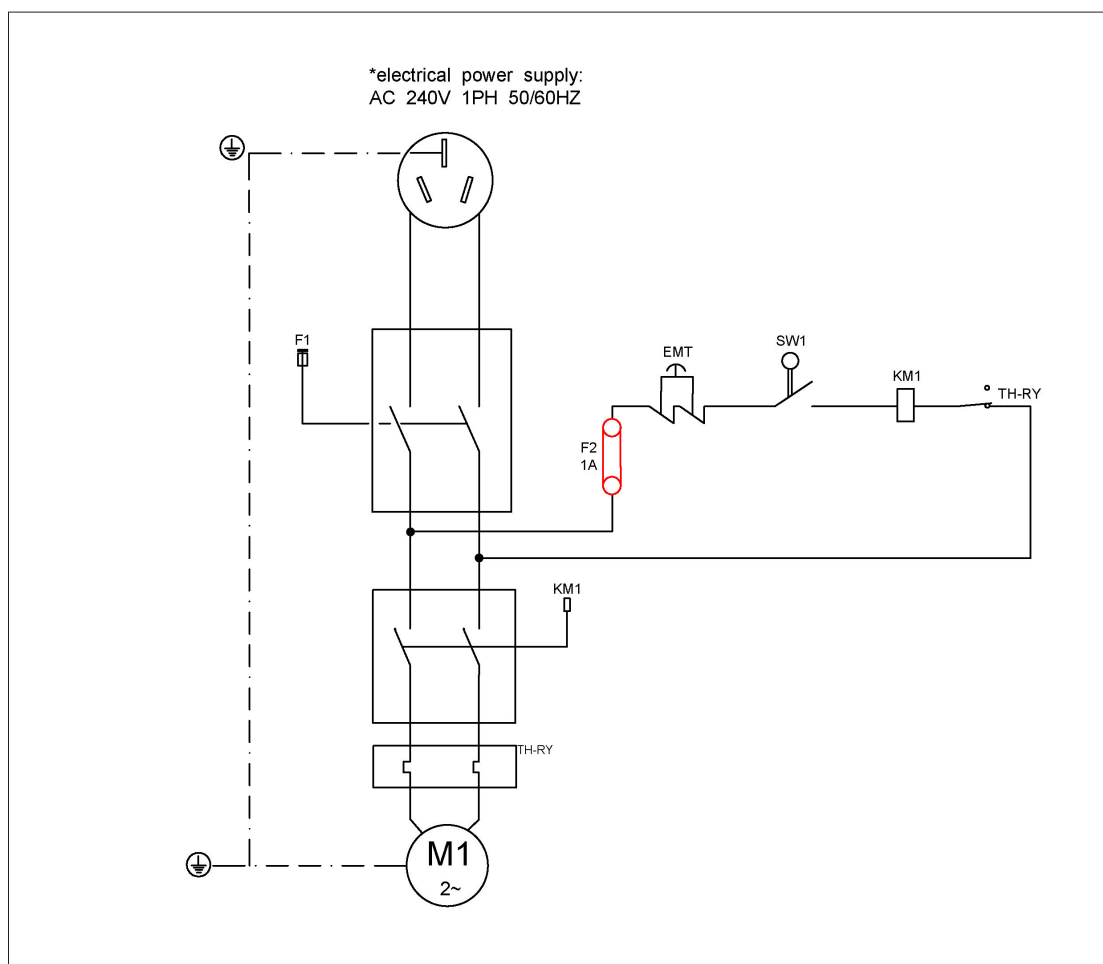


Figure 6 – RYCS10-1-240 Electrical Schematic

16. GENERAL NOTICE ON MAINTENANCE AND INSPECTION

To keep the accuracy and maintain the best condition of the RYCS10 Cut-Off Saw, correctly maintaining and inspecting this machine is important.

Machine power must be off before any maintenance is carried out while all electrical maintenance must be conducted by a qualified technician.

Other important notes on maintenance:

- Disconnect the electrical power supply from the Cut-Off Saw and depress the EMERGENCY STOP button before performing any inspection, maintenance, or service tasks. Secure a Safety Hazard "Do Not Operate" tag and a maintenance lockout device to the equipment
- Regularly check all fasteners, and the nut securing the Blade to the shaft, to ensure that they have not become loose
- Lubrication oil should be added in a timely and correct fashion
- Prior to use, inspect the Steel Cut-Off Saw Blade for nicks, cracks, distortion, missing sections from the cutting edge, or other damage; and replace Blade immediately if damaged
- Inspect to ensure that the Steel Cut-Off Saw Blade is mounted centrally, with no axial or radial run out. Also inspect for any vibrations when the Saw is running; and,
- To assist with breaking in and conditioning the blade for long life, feed the blade slowly through a medium size hose for the first five cuts

- **Daily maintenance of the RYCS10 Cut-Off Saw should include:**
 - Checking the control box, electricity door and components
 - Clean the worktable and electrical box cover by a clean cloth
 - Check to ensure the RYCS10 Cut-Off Saw is securely mounted and in serviceable condition
 - Clean the working environment around the RYCS10 Cut-Off Saw
 - Regularly remove any build-up of cutting debris; and,
 - Lubrication oil should be added in a correct fashion where required.

- **Weekly maintenance of the RYCS10 Cut-Off Saw should include:**
 - Always check for any abnormal sound or vibration when operation
 - Check for damage or deterioration to the external electric cable
 - Check warning labelling is clean or not. If they become unclear or disappear, contact your nearest RYCO representatives for replacements; and,
 - Check safety cover for any damage.

RYCO RYCS10 CUT-OFF SAW

BLADE CHANGING PROCEDURE

The following are indications that the Cut-Off Blade may require sharpening:

- Tube of hose separated from the reinforcement
- Wire reinforcement changed colour to blue due to excessive heat
- Wire reinforcement not cleanly cut
- Excessive force required for cutting; and,
- Blade cutting edge turned blue from heat or the blade being warped.

17. BLADE CHANGING PROCEDURE

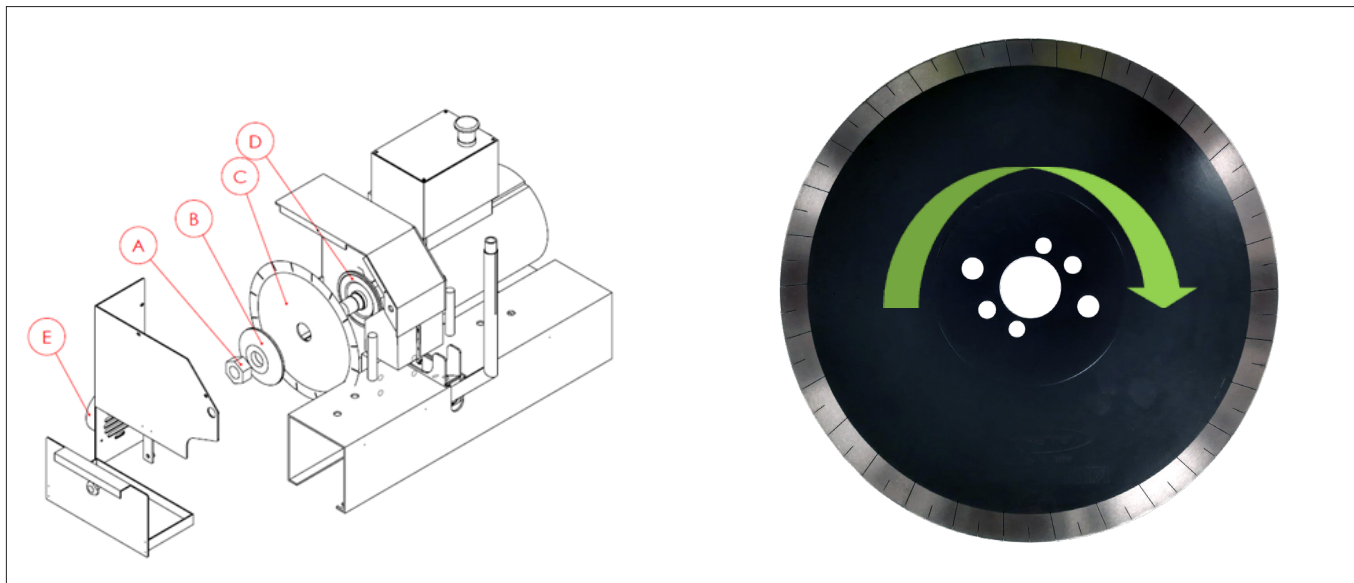


Figure 7 – RYCS10 blade change schematic

1. Disconnect the electrical power supply from the Cut-Off Saw. Secure a Safety Hazard "Do Not Operate" tag to the equipment.
2. Wearing safety gloves remove screws from left side saw blade shroud - E.
3. Remove blade shroud from saw
4. Using appropriately sized spanner hold blade shaft D, loosen the nut A holding the Steel Cut-Off Saw Blade, and remove the Blade. Take extreme care when handling Steel Cut-Off Saw Blades to avoid personal injury.
5. When blade is removed ensure hub and shaft are clean and free from debris.
6. Replacement is in the reverse order to removal, ensure blade is installed straight and true. Note the direction of rotation of the blade and the correct direction of the teeth. Inspect all components to ensure there is no wear or damage; replace as necessary. Ensure that the nut holding the Blade is tightened to correct torque.
7. Securely re-install left side blade shroud.
8. Remove Safety Hazard "Do Not Operate" tag.
9. Reconnect the electrical power supply to the RYCS10 Cut-Off Saw.
10. Inspect to ensure that the Cut-Off Saw Blade is mounted centrally, with no axial or radial run out. Also inspect for any vibrations. If there is any run out or vibrations, immediately turn off the Cut-Off Saw and repeat Steps 1 to 9.

REPLACEMENT PART NUMBER	BLADE SIZE	
	mm	inch
RYCSW10	250	10

18. SAFE REMOVAL OF THE WASTE COLLECTION TRAY

Remove any excess hose cutting waste from the Waste Collection Tray of the RYCS10 Cut-Off Saw by following the procedure below:

1. Ensure all power to the RYCS10 Cut-Off Saw is disconnected from its source.
2. Ensure the EMERGENCY STOP button is depressed.
3. Unscrew the black screw until completely removed
4. Remove and empty the Waste Collection Compartment (see direction of arrow).
5. Ensure all waste is correctly disposed in line with local environmental regulations.
6. Insert the Waste Collection Compartment back into the RYCS10 Cut-Off Saw before re-tightening the black screw.



Figure 8 – Waste Collection Tray

19. SAFE TRANSPORTATION

The RYCS10 Cut-Off Saw should be transported via its secure wooden packing box fitted with carry slings whilst adhering to all Occupational, Health, and Safety (i.e., OH&S) regulations.

After unpacking, and due to its net weight of 45kg, the RYCS10 Cut-Off Saw should only be lifted using an approved, appropriately rated lifting sling.

20. SAFE MACHINE STORAGE

If not be operated for long periods, the RYCS10 Cut-Off Saw should be:

- Stored in its secure wooden packing box
- Stored in an environment free of dust, exposed sunlight, and moisture; and,
- Have all power fully disconnected.

21. CORRECT DISPOSAL OF PACKAGING

Check local environmental regulations before disposing of any packing or shipment materials, including investigating opportunities to avoid disposal within landfill.



RYCO LOCATIONS

AUSTRALIA

+61 1300 111 247

RYCO GLOBAL HEAD OFFICE - MELBOURNE AUSTRALIA
99 Calarco Drive, Derrimut, VIC 3026

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97 Northlink Place,
Northgate, QLD 4013

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Canning Vale, WA 6155

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Richmond, SA 5033

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Via L. Bizzarri, 19 - 40012 Calderara di Reno (Bologna), Italy



RYCO 24•7 SERVICE CENTRES

AUSTRALIA

133•24•7

NEW SOUTH WALES

Bellingen
Batemans Bay
Casino
Dubbo
Goulburn
Ingleburn
Mascot
Newcastle
Penrith
Wallerawang
Wetherill Park

QUEENSLAND

Brisbane
Blackwater
Charter Towers
Dalby
Emerald
Fraser Coast
Northside

SOUTH AUSTRALIA

Cowell
North Adelaide
Richmond
Roxby Downs
Whyalla

VICTORIA

Bendigo
Carrum Downs
Melbourne

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Kalgoorlie
Karratha
Newman
Port Hedland
Wangara

NORTHERN TERRITORY

Darwin

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