CRUXWELD®

INDUSTRIAL EQUIPMENTS PVT. LTD.

DRYO 5

Portable Electrode Dryer

5 kg rods up to 450 mm | AC 220 – 240 V or DC 60 – 110 V from the welder | 2.8 kg



USER MANUAL

Please read this manual carefully before installing and using the machine.

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This manual describes the installation, use and care of the Cruxweld DRYO 5 portable electrode dryer. Read it before using the dryer and keep it for future reference. Cruxweld improves its products continuously; the contents of this manual may be revised without prior notice.

Signs used in this manual

Sign	Meaning
▲ **WARNING**	A potential hazard which may cause death or serious injury if it is not avoided.
▲ **CAUTION**	A hazard which may cause injury or damage to the dryer if it is not avoided.
Note	Useful information for correct use.

1 Safety precautions

1.1 Electrical safety

▲ WARNING

Connect the dryer only to an **earthed** AC 220 – 240 V, 50/60 Hz socket with the mains cord, or to the output terminals of a welding machine (DC 60 – 110 V) with the clamp lead. Never connect both at the same time. Do not use a damaged cord, lead or plug.

- Keep the dryer, the power inlet and the cables away from water, rain and spatter. Do not use the dryer in rain.
- Unplug the dryer (or remove the clamp lead from the welder) before cleaning or when it is not in use.
- Do not open the body or repair the heating element yourself. Repairs must be made by Cruxweld or a qualified electrician.

1.2 Hot surfaces and fire

▲ CAUTION

The chamber, the mouth ring, the lid and the electrodes become hot. Wear welding gloves when taking out rods and when handling the dryer after use. Keep the dryer away from flammable materials and do not cover it.

- Stand the dryer on a dry, level, non-flammable surface, or on its folding stand.
- Carry it only by the handle with the lid closed.
- Keep children and unauthorised persons away.

1.3 Correct use

- Use the dryer only for holding welding electrodes warm and dry. Do not heat anything else in it.
- Do not load more than 5 kg or electrodes longer than 450 mm; otherwise the lid cannot close and seal.

2 General description

The Cruxweld DRYO 5 is a portable, electrically heated electrode quiver. It keeps up to 5 kg of welding electrodes warm and dry at the point of use and carries them to the welder.

The flux coating of an electrode takes up moisture from the air within hours of the packet being opened. In the arc the water splits into hydrogen, which is trapped in the weld as pores and, in thick or restrained joints, can cause cold cracks. Keeping the rods warm and sealed until the moment they are used prevents porosity and hydrogen cracking and helps give sound, high-quality welds.



Fig. 2.1 DRYO 5 with the lid open



Fig. 2.2 Tilted on the folding stand

2.1 Features

- **Insulated, heated chamber** with a stainless mouth ring and insulating cover; holds rods up to 450 mm upright.
- **Linked lid and handle:** press the handle and the lid swings open while the rods rise about 30 mm for pick-up; release and it closes.
- **Two power options:** AC 220 – 240 V mains through an IEC inlet, or DC 60 – 110 V from the output terminals of the welding machine through the clamp lead.
- **Indicator lamps:** green for power, red for heating.
- **Folding wire stand** to tilt the dryer towards the welder; folds flat for carrying.
- **Light and portable:** 2.8 kg, carried by the top handle.

2.2 Applications

Structural fabrication, site and outdoor welding (especially in humid or monsoon conditions), maintenance welding, shipyards and tank work, training centres and small workshops.

3 Technical specifications

Parameter	DRYO 5
General	
Model	DRYO 5
Type	Portable heated electrode quiver / dryer
Heating	Electric element in insulated cylinder
Capacity	
Electrode capacity	5 kg
Maximum electrode length	450 mm
Maximum temperature	250 ± 20 °C
Electrical	
Supply, mains	AC 220 – 240 V, 50 / 60 Hz, via IEC inlet and mains cord
Supply, from welder	DC 60 – 110 V from the welding machine output terminals, via clamp lead
Indicators	Green: power on. Red: heating
Construction	
Body	Cylindrical steel, blue finish, stainless mouth ring and insulating cover
Lid	Linked lid and handle; lid opens and rods lift about 30 mm for pick-up
Stand	Folding wire stand for inclined use
Carrying	Top handle, lid closed
Weight	2.8 kg

All values are for reference; the rating plate on the dryer applies. Specifications may change without notice as a result of continuous improvement.

3.1 Scope of supply

No.	Item
1	DRYO 5 electrode dryer with linked lid and carry handle
2	Folding wire stand for inclined use
3	Mains cord for 220 – 240 V socket (IEC connector)
4	Clamp lead for welding-machine output terminals, DC 60 – 110 V
5	User manual

Not included: electrodes and the welding machine.

4 Machine overview



Fig. 4.1 Main parts of the DRYO 5

No.	Part	No.	Part
1	Lid	6	Insulated heated body
2	Handle (opens the lid)	7	Power inlet with green and red lamps
3	Lid linkage	8	Clamp lead for the welding machine
4	Chamber mouth (stainless ring)	9	Mains cord
5	Rating plate		



Fig. 4.2 Power inlet with indicator lamps



Fig. 4.3 Chamber with insulating cover

5 Installation and power supply

Unpack the dryer and check it, the stand and the two cables for transport damage. Stand the dryer upright on a dry, level surface, or fit the folding stand and tilt it towards the welder (Fig. 2.2).

5.1 Mains supply (workshop)

1. Plug the mains cord into the inlet at the base of the dryer.
2. Plug the other end into an earthed AC 220 – 240 V socket. The green lamp lights.

5.2 Supply from the welding machine (site)

1. Switch off the welding machine.
2. Plug the clamp lead into the inlet at the base of the dryer.
3. Clip the two clamps to the output (secondary) terminals of the welding machine – for example the cable plugs at the “+” and “−” sockets.
4. Switch on the welding machine. The green lamp lights. Leave the dryer connected through the shift.

> **Note:** The welder’s open-circuit voltage must be between 60 and 110 V. While the welder is welding, the voltage at its terminals is lower, so the dryer heats mainly between welds. Connect the clamp lead before striking the first arc.

> **▲ CAUTION**
> Use only one supply at a time. Never connect the clamp lead to the mains, and never connect it to a voltage above 110 V.

6 Operation

6.1 Loading



Fig. 6.1 Loading the chamber

1. Press the handle to open the lid.
2. Load up to 5 kg of electrodes, not longer than 450 mm, straight from a freshly opened packet or from a re-drying oven.
3. Release the handle so that the lid closes, and connect the supply (Chapter 5). The red lamp shows that the dryer is heating.
4. Allow time for the rods to warm through before use.

6.2 Taking out electrodes



Fig. 6.2 Linked lid and handle

1. Press the handle: the lid opens and the electrodes rise about 30 mm out of the tube.
2. Take out one electrode (wear gloves).
3. Release the handle and push the lid shut.

Keep the lid closed between rods; every opening lets damp air in.

6.3 Carrying and storing

- Close the lid and carry the dryer by its top handle (Fig. 6.3).
- Fold the stand flat for transport.
- After work, disconnect the supply, let the dryer cool and store it in a dry place.



Fig. 6.3 Carrying the dryer, lid closed

7 Electrode guide

Holding is not re-baking. The DRYO 5 keeps electrodes that are already in good condition warm and dry at the point of use for the whole shift. Low-hydrogen electrodes that have been exposed to air for hours, or have become wet, must first be re-dried in a re-drying oven at the temperature and time given on the electrode packet; then transfer them to the DRYO 5.

Electrode	Coating	Moisture sensitivity	Use the DRYO 5 for
E6013	Rutile	Low	Keeping opened packets dry on humid days; smoother arc start
E7018 / E7016	Basic, low hydrogen	High	Holding rods warm between oven and arc; required on code work
E7024	Rutile iron powder	Low to medium	Holding at the bench through the shift
E308L / E316L	Stainless rutile-basic	Medium	Keeping stainless rods dry to avoid porosity
E6010 / E6011	Cellulosic	Keep as packed	Not for heating: store sealed, do not dry
Hardfacing	Basic	High	Holding after re-drying, as for low hydrogen

- Always follow the electrode manufacturer’s storage and re-drying instructions.
- Limit the number of re-drying cycles.
- Do not expect the dryer to rescue soaked rods.

8 Maintenance

> **▲ WARNING**
> Disconnect the supply and let the dryer cool down before any cleaning or maintenance.

Interval	Work
Regularly	Empty the chamber and remove flux dust and broken coating. Wipe the outside with a dry cloth.
Before each use	Check the mains cord, clamp lead, plug and inlet for damage; replace damaged cables.
Regularly	Check that the lid closes fully and that the linkage moves freely; tighten loose screws.

- Do not wash the dryer with water or immerse it.
- Store the dryer in a dry place.
- Use only genuine Cruxweld spare parts (cables, stand, lid and linkage).

9 Troubleshooting

Fault	Possible cause	Remedy
Green lamp off	No supply; plug not fully in the inlet; welder switched off; clamps not on the output terminals	Check the socket and plug; switch on the welder; reconnect the clamps
Green lamp on, dryer does not warm up	Heating element or thermostat faulty	Contact Cruxweld service
Heats slowly when used on the welder	Welder output voltage drops while welding	Normal; the dryer heats mainly between welds. Use the mains supply where available
Lid does not close	Overloaded; rods longer than 450 mm; linkage bent or loose	Remove rods; use rods up to 450 mm; straighten or tighten the linkage
Porosity still in the weld	Rods were already damp when loaded; lid left open	Re-dry low-hydrogen rods in an oven first; keep the lid closed

If the fault cannot be cleared, contact Cruxweld service and state the model and the serial number from the rating plate.

10 Warranty

Cruxweld warrants the DRYO 5 against defects in material and workmanship for the period stated on the quotation and invoice. During this period Cruxweld will repair or replace parts that are found to be defective due to faulty material or workmanship.

The warranty does not cover cables, the stand and other wearing parts, or damage caused by incorrect supply voltage, water, falls, overloading, use not in line with this manual, or repair by unauthorised persons.

Model	DRYO 5
Serial number	
Invoice no. / date	
Customer	
Dealer stamp	

For service and spare parts please contact:

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