



STORAGE & HANDLING RECOMMENDATIONS FOR FILLER METALS



**COVERED ELECTRODES, SOLID MIG/MAG WIRES, CORED WIRES,
TIG RODS, SAW WIRES, STRIPS, AND FLUXES.**

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DISCLAIMER

While all reasonable efforts have been made to ensure the accuracy of the information contained in this handbook at the time of publication, ESAB gives no warranty with regard to its accuracy or completeness. It is the responsibility of the reader to check the accuracy of the information contained in this handbook, read product labels and equipment instructions and comply with current regulations. If the reader has doubt with regard to the proper use of any technology, they should contact the manufacturer or obtain alternative expert advice. ESAB accepts no responsibility or liability for any injury, loss or damage incurred as a result of any use or reliance upon the information contained in this handbook.

Information provided in this brochure are recommendations only. If followed, best possible storage conditions for the filler materials can be obtained and the lifetime maximised. This brochure shall not be treated as an official guarantee or statement from ESAB that recommended storage conditions have been fulfilled at all times for a filler material before it reaches an end user.

Nothing in this guide should be interpreted as attempting to supersede any warranty/guarantee terms and conditions, all of which shall take precedence over the terms of this brochure in the event of any conflict.



STORAGE, HANDLING AND WELD QUALITY

Storage Conditions

This guide provides information about optimal storage conditions for filler materials. Following the storage conditions will extend the durability of the filler materials.

There is no specific maximum time limit before which filler materials should be used. If stored under ideal storage conditions the time limit is extended and filler materials can be used many years after the date of supply. The reverse is also true i.e. tough and severe storage conditions shorten the durability of the products.

Products no longer covered by any warranty agreements should be thoroughly checked before use. If a decision is taken to use such products in production it will be the sole responsibility of the user.

Please refer to ESAB's standard Terms and Conditions of Sale.

General Handling

Handle all filler materials with care. Do not touch wires with bare hands, but use gloves.

UV Radiation

Long time exposure to UV radiation may bleach the label information. Therefore, avoid storing filler materials where they are exposed to UV radiation or direct sunlight.

Weld Quality

Porosity is formed by entrapment of discrete pockets of gas in the solidifying weld pool. The gas may originate from poor gas shielding, surface contaminants such as moisture, rust or grease, or insufficient deoxidants in the parent metal, electrode or filler wire. A particularly severe form of porosity called 'wormholes', is caused by gross surface contamination or welding with damp electrodes.

Characteristically, wormholes are elongated pores, which produce a herring bone appearance on the radiograph. Wormholes are indicative of a large amount of gas being formed, which is then trapped in the solidifying weld metal.

Hydrogen can contribute to cracks in welds or the HAZ (heat affected zone). Hydrogen, in combination with residual tensile stresses and crack sensitive steels, can cause cold cracking several hours or days after welding. High strength steels and weldments with high levels of residual tension are more sensitive to hydrogen cracking. For these applications, ESAB recommends using methods and filler metals that give low hydrogen levels together with adequate procedures for pre-heating, work temperature and post weld heat treatment.

It is important to note that there can be other significant sources of hydrogen, e.g. moisture from the atmosphere or from the material where processing or service history has left the steel with a significant level of hydrogen.

Hydrogen may also be derived from the surface of the material or the consumable, or from oil and paint etc.

The table below shows the relative humidity at which detrimental water condensation will form for a number of given differential temperatures. For example - if the relative humidity in the weld area is 70%, the base metal and electrode must be no colder than 5°C below the air temperature to prevent moisture condensation.

This can happen when plates or electrodes come from a colder workshop, warehouse or from outside.

Dew point conditions versus relative humidity

Air Temp - Metal Temp* °C	Relative Humidity %	Air Temp - Metal Temp* °C	Relative Humidity %
0	100	12	44
1	93	13	41
2	87	14	48
3	81	15	36
4	75	16	34
5*	70*	18	30
6	66	20	26
7	61	22	23
8	57	24	21
9	53	26	18
10	50	28	16
11	48	30	14

The storage condition should be kept as stable as possible to avoid huge fluctuations in both moisture content level and temperature. Stable conditions minimise the risk of reaching the dew point at which condensation and formation of water occurs on packages etc. Hot air can contain significantly more water than colder air. As an example, air with a temperature of 15°C can contain up to 13 g/m³ water, while the corresponding amount at 25°C is 23.5g/m³ i.e. a massive increase of 78%. It is therefore much more critical to apply proper welding techniques in hot and humid welding conditions compared to when welding is done in somewhat colder conditions.

Disposal

When we develop our packaging solutions we always have sustainability and recyclability in mind. Any product, residue (slag), disposable container, liner or other packaging should be disposed of in an environmentally acceptable manner, in full compliance with federal and local regulations. Please address your local disposal company for prescribed disposal. Information on product and residues are given in the Safety Data Sheets available through www.esab.com.

COVERED MMA ELECTRODES

ESAB electrodes can be supplied in different packaging types depending on the type and grade.

- Shrink film paper boxes are not completely airtight, so moisture from the surrounding atmosphere can enter the box and be picked up by the coating
- Plastic capsules have a lid and tape; moisture will permeate through at very low rates and be picked up by electrode coatings
- VacPac™ vacuum-sealed packaging provides complete protection against moisture provided the package is intact (vacuum maintained). If this is the case, no re-drying is needed before use.

If there is any doubt about whether an electrode is dry enough, it should be re-dried according to instructions shown on the label before use.

Storage Conditions

All covered electrodes are sensitive to moisture pick-up. High moisture contents in the coating can cause porosity or hydrogen cracking or reduced welding performance. However, the pick up rate will be very slow when stored under correct climatic conditions:

- 5 - 15 °C: max 60% RH
- 15 - 25 °C: max 50% RH
- >25 °C: max 40% RH

At low temperatures, the humidity level can be maintained at low levels by ensuring a storage temperature of at least 10°C above the outside temperature. Cold packages should be allowed to reach ambient temperature before being opened.

At high temperatures, low humidity levels can be maintained by air dehumidification.

Actions Required in Case of a Deflated VacPac

- If the application is critical, always re-dry the electrodes before use

Re-Drying & Storage Time

- Low hydrogen covered basic electrodes should be re-dried before use whenever there are application requirements relating to weld metal hydrogen content and/or radiographic soundness (not needed for VacPac)
- Acid rutile stainless electrodes and all types of basic electrodes may produce pores in the weld metal if they have not been stored in sufficiently dry conditions. Re-drying the electrodes will restore their usability.
- Mild steel rutile and acid electrodes normally need no re-drying
- Cellulose electrodes must not be re-dried
- Electrodes, which are seriously damaged by moisture cannot be restored to their original condition by baking and should be discarded

Tin Cans

- Hermetically sealed package which allows welding without prior re-drying
- Tin cans do not provide any warning of leakage, so electrodes should always be checked concerning dryness prior to welding

Re-Drying Conditions

- Re-drying and holding temperatures and holding times are specified on the package label
- The re-drying temperature is the temperature in the bulk of the electrodes
- The re-drying time is measured from the point at which the re-drying temperature has been reached
- Do not stack electrodes more than four layers deep in the re-drying oven
- Re-drying is recommended up to a maximum of three times
- A summary of recommended re-drying conditions for ESAB electrodes is given in the table on the next page

COVERED MMA ELECTRODES

Recommended re-drying temperatures, holding time two hours for OK and Exaton brands, B2 SC & B3 SC materials

80 °C	120 °C	200 °C	250 °C	300 °C	350 °C	350 °C
OK NiCu 1	OK AlMn1	OK Femax 39.50	OK Femax 33.60	Exaton 22.9.3.LB	OK Femax 38.65	Exaton 19.9.LR
	OK AISi5		OK Femax 33.80	Exaton 22.12.HTR	OK Femax 38.95	Exaton 19.9.NbR
	OK AISi12	Exaton 22.9.3.LB		Exaton 25.10.4.LB		Exaton 19.12.3.LR
			Exaton 20.25.5.LCuR	Exaton 25.10.4.LR	Filarc 56 S	Exaton 22.9.3.LR
		Exaton Ni59			Filarc 75S	Exaton 23.12.2.LR
		Exaton Ni60	OK 67.13	OK 62.53	Filarc 76S	Exaton 24.13.LR
			OK 68.53	OK 68.82	Filarc 88S	Exaton 27.31.4.LCuR
		OK 13Mn	OK 68.55		Filarc 98S	
		OK 61.25	OK 69.33	OK Weartrode 40	Filarc 118	OK 61.20
		OK 61.35		OK Weartrode 45		OK 61.30
		OK 61.35 Cryo	OK 92.55	OK Weartrode 50	OK 48.00	OK 61.80
		OK 61.50	OK 94.35	OK Weartrode 50 T	OK 48.04	OK 61.81
		OK 61.85		OK Weartrode 60 T	OK 48.05	OK 61.86
		OK 63.35	OK Ni-1	OK Weartrode 65 T	OK 48.08	OK 63.20
		OK 63.85	OK NiCrFe-2		OK 48.15	OK 63.30
		OK 67.15		OK 94.25	OK 48.50	OK 63.34
		OK 67.45	OK Weartrode 62		OK 48.60	OK 63.41
		OK 67.55			OK 53.05	OK 63.80
		OK 67.75			OK 53.16 Spezial	OK 64.30
		OK 68.15			OK 53.68	OK 67.43
						OK 67.50
		OK 69.25			OK 53.70	OK 67.60
		OK 310Mo-L			OK 55.00	OK 67.70
					OK 67.43	
					OK 73.08	OK 68.17
		OK Ni-Cl			OK 73.15	OK 68.81
		OK NiCrFe-3			OK 73.68	
		OK NiCrMo-3			OK 73.79	OK 14MnNi
		OK NiCrMo-13			OK 74.46	OK NiCrMo-5
		OK NiCu-7			OK 74.70	
		OK NiFe-Cl			OK 74.78	OK Weartrode 30 HD
		OK NiFe-Cl-A			OK 74.86 Tensitrode	OK Weartrode 35
					OK 75.75	
		OK Weartrode 30			OK 75.78	
		OK Weartrode 55 HD			OK B2 SC	
		OK Weartrode 60			OK 76.18	
					OK B3 SC	
		OK Tooltrode 50			OK 76.28	
		OK Tooltrode 60			OK 76.35	
					OK 76.96	
					OK 76.98	
					OK 78.16	
					Pipeweld 80 DH	
					Pipeweld 90 DH	
					Pipeweld 100 DH	

COVERED MMA ELECTRODES IN VACPAC™



No Re-Baking, No Holding Ovens, No Quivers.

MMA electrodes in a VacPac can be used straight from the package without the need to re-bake them and store them temporarily in holding ovens and quivers. Upon opening, fresh and dry electrodes are guaranteed when the vacuum is maintained.

Many of the un-alloyed and low alloyed electrodes have H4 or H5 classification which means the requirement of maximum 4.0 or 5.0 ml diffusible hydrogen/100g weld metal is met. Diffusible hydrogen classes are not applicable for stainless and high alloyed electrodes.

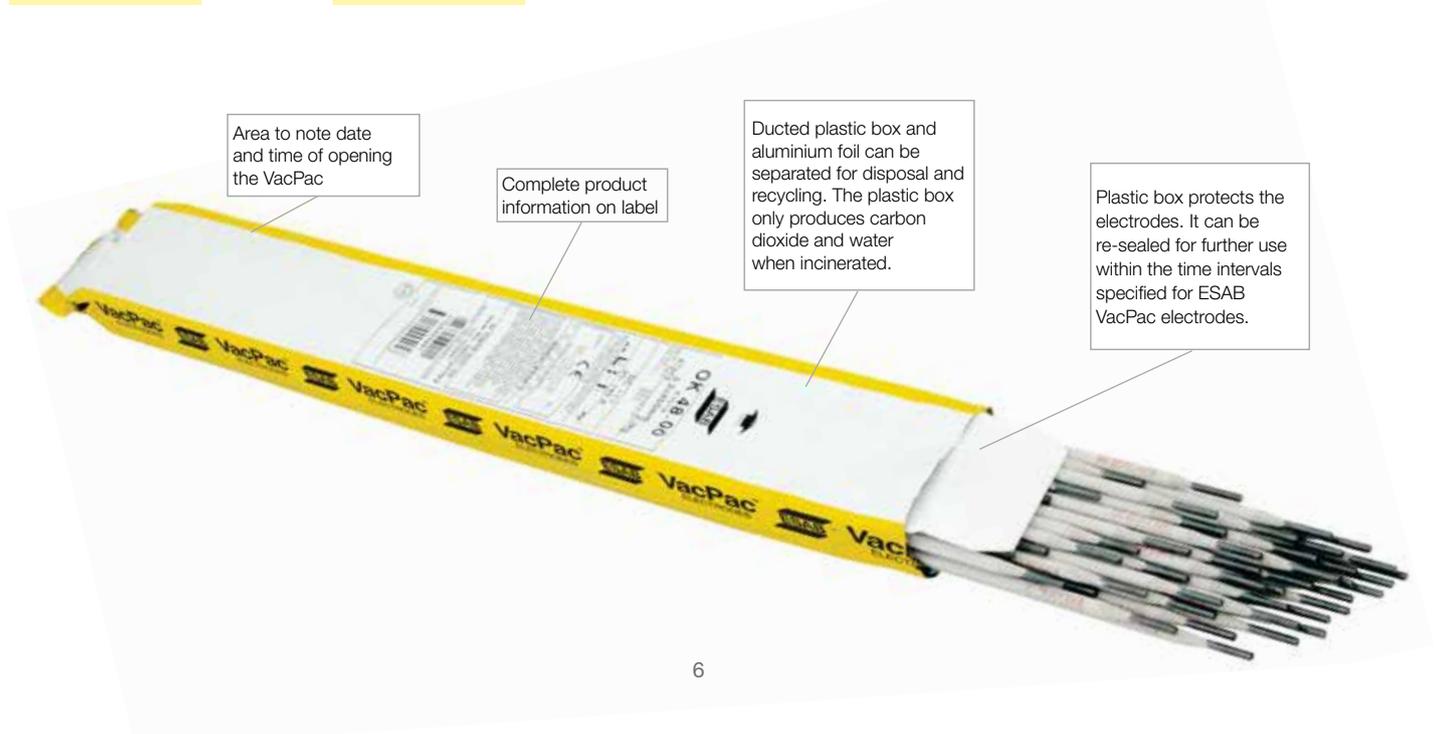
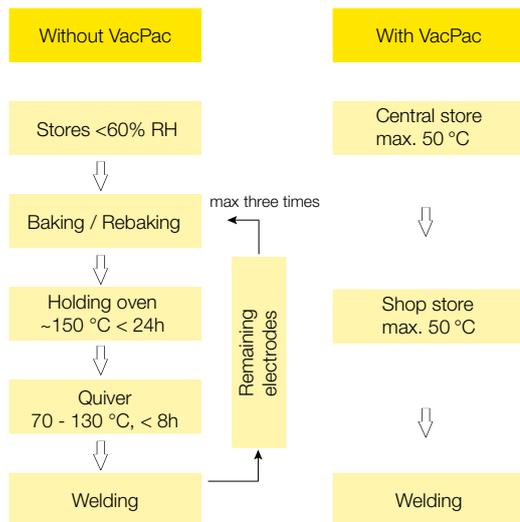
A low hydrogen class value is beneficial because it reduces the risk of hydrogen cracking and permits lower preheating and interpass temperatures to be applied during welding. This leads to decreased energy consumption and thereby lower costs for a work site.

Some products have the letter "R" in the AWS classification. These products have a higher resistance against moisture re-absorption than electrodes without the "R" in the the AWS classification (maximum 0.4wt% after 9hrs exposure in a standard atmosphere of 26.7°C and 80%RH).

Electrodes in opened VacPac in an atmosphere exceeding 60%RH and 22°C should be re-dried after 8hrs for "R" classified electrodes, and after 4hrs for all other un-alloyed and low alloyed electrodes. For very critical applications and severe environments, a safe practice is to use heating quivers in order to prevent moisture pick up at the welding site. Depending on welding environment, the type of coating and hygroscopic properties, the application and welding positions, a re-drying operation may be required at a higher frequency to ensure that all requirements are met.

For austenitic stainless steel and nickel base electrodes, the main danger is too damp electrodes causing start porosity. If the safe exposure times are followed this issue can be prevented. The ferritic and ferritic martensitic grades can suffer from hydrogen cracking if too damp electrodes are used.

Simplified storage and handling for major savings



MIG/MAG WIRES, TIG RODS, SAW WIRES, ALUMINIUM WIRES, ESW/SAW STRIPS



MIG/MAG Wires, TIG Rods, SAW Wires and ESW/SAW Strips

Solid MIG/MAG wires, TIG rods and SAW wires should be stored in dry conditions in original sealed undamaged packaging as supplied. Contact with water or moisture should be avoided. This could take the form of rain or the condensation of moisture on a cold wire. To avoid condensation, keep the wire in the original packaging and, if necessary, leave the wire to warm up to at least the ambient temperature before opening the package.

Other hydrogen-containing substances, like oil, grease and corrosion or substances that could absorb moisture must also be avoided on the surface of the wires. Spooled wire is supplied packed in plastic bags and partly used spools should be replaced into a plastic bag for storage to prevent surface contamination. Wire should be stored at ambient conditions of temperature and humidity, and dusty areas should be avoided when wire is not enclosed in some type of dust-protecting packaging or equipment.

TIG rods should be protected from dust and airborne contamination after removal from the packaging. The package for TIG rods consists of a rigid fibre tube with a plastic lid that can be closed again after breaking the sealing. The tube is PE coated and provides very good moisture protection. The package is also very stable and user friendly.

Marathon Pac™ bulk drum for MIG/MAG welding is designed for fast, efficient handling and ease of eventual recycling. VCI paper inside every drum and protective foil around each pallet protects the wire against moisture during transport and storage. Once empty, simply remove the lifting straps from the octagonal drum and fold it completely flat for easy, space saving storage until collection. Also note that Marathon Pac protects your welding wire from contamination.

Recommended conditions of storage for all solid wires, in their original packaging, are minimum temperature of 15-36 °C and humidity of < 60% RH. Do not expose welding wires in storage to direct sunlight. Avoid direct contact with welding wire with bare or dirty hands.

Welding operators must keep strips as clean and protected as possible. This includes the careful and proper storage and handling of all stock to prevent dust and organic compounds including body oils from contaminating the strip surface.

Aluminium Wires

Atmospheric conditions affect weld quality. Moisture (H₂O) is a prime source of hydrogen. At arc temperatures, water breaks down releasing hydrogen atoms that cause porosity in weldments. Aluminium, which is allowed to repeatedly come into contact with water, will eventually form a hydrated oxide (AlOH) coating.

Moisture from condensation present on either the electrode or the base metal can cause two problems during welding:

- Porosity caused by hydrogen generated from the breakdown of water or from the breakdown of hydrated oxide (AlOH) present on the metal surfaces
- Entrapment of the actual oxide (AlOH) present on the metal surfaces, in the weldment

In an aluminium welding shop, the uniformity of air and metal temperatures is important, especially when the relative humidity is high. Electrode and base metal should be allowed to stabilise to the weld area temperature. The electrode should not be opened in the weld area for 24 hours after entry from a cooler storage area. The base metal should be cleaned and brushed with a clean stainless steel brush prior to welding. ESAB recommends mild alkaline solutions and commercial degreasers that do not evolve into toxic fumes during welding. All surfaces must be thoroughly dried after cleaning.



CORED WIRES



Cored wires should be stored in their unopened and undamaged original packaging. Failure to do this may seriously reduce the durability of the cored wire.

Storage times should be kept to a minimum and stock rotation should be used.

Non and low alloyed cored wires are not susceptible to rapid moisture absorption since the core ingredients are protected from the atmosphere by the sheath. Strict QA procedures ensure all of ESAB's cored wires contain low levels of moisture in the as-manufactured condition.

To maintain low moisture levels, cored wires should be stored under correct conditions. 15-36 °C and humidity of <60% RH. Poor storage conditions can be detrimental to their performance and durability. Inadequate storage conditions can lead to surface rusting or contamination of the wire to the extent that feedability and diffusible hydrogen levels are adversely affected.

Stainless steel cored wires are more sensitive to moisture pick up. Therefore the spools are vacuum packed in metalised film pouches. The storage recommendations are the same as for un-alloyed and low-alloyed cored wires.

For stainless steel cored wires, extra attention is required in order to ensure that they are returned to the correct storage conditions at the end of the working period.

Wires should not be left on welding machines or out of storage for prolonged periods, especially overnight, since condensation from moisture in the air may lead to rapid surface deterioration. Always replace wires in their original packaging and return them to controlled storage areas.

If a wire has been left on the equipment for a long period of time, it is good practice to run off at least one layer of wire to remove the worst of any surface oxidation or contamination that may have occurred.

All cored wires should avoid direct contact with water or moisture. This could take the form of rain or the condensation of moisture on a cold wire. To avoid condensation, the relative humidity and temperature must be monitored and the temperature should not fall below the dew point (listed in table on page 3).

Other hydrogen-containing substances like oil, grease and corrosion or substances that could absorb moisture must also be avoided on the wire surface.

Deteriorated Product

Cored wires that are rusty, have suffered from serious water and moisture contamination, or have been exposed to the atmosphere over long periods of time cannot be restored in their original condition and should be discarded.

ESAB ceramic weld metal supports and backing have no adverse influence on weld metal composition and mechanical properties. They are dry and insensitive to moisture absorption, leaving the cored wire's low-hydrogen performance unaffected.



SAW & STRIP CLADDING FLUXES



ESAB agglomerated fluxes have a guaranteed as-manufactured moisture content from production. This moisture content is controlled by internal ESAB specifications. Before transport, each pallet is shrink-wrapped or wrapped in plastic foil. This precautionary action is done in order to maintain the as-manufactured moisture content for as long as possible. Flux should never be exposed to wet conditions, such as rain or snow.

Storage

- Unopened standard flux bags (made of PE or paper with PE inlay) must be stored in maintained storage conditions as follows:
 - Temperature: 20 +/- 10 °C (68 +/- 18 °F). Relative humidity: As low as possible - not exceeding 60%
- Fluxes delivered in BlockPac™, aluminium lined 25 kg bags, or BigBag, as well as in 25 kg steel buckets can be stored under severe climatic conditions because the packaging protects the flux from moisture pick-up, as long as it is unopened and undamaged
- Fluxes in BlockPac have unlimited durability as long as the foil is not damaged (label information might be outdated due to possible classification amendments or filler material standard updates)
- The content of unprotected flux hoppers must, after an 8 hour shift, be placed in a drying cabinet or heated flux hopper at a temperature of 150 +/- 25 °C
- Remaining flux from opened bags must be placed at a temperature of 150 +/- 25 °C

Flux Usage

- When handled and stored as recommended, ESAB fluxes can normally be used straight away
- In severe applications, stipulated by the applicable material specification or if the flux has somehow picked up moisture, re-drying of the flux is recommended
- Re-drying shall be performed as follows: 300 +/- 25 °C for about 2-4 hours

- Re-drying must be done either in equipment that turns the flux so that the moisture can evaporate easily or in an oven on shallow plates with a flux height not exceeding 5 cm
- It is recommended to empty the flux feeding system on the C&B when welding activities will be stopped for more than 8 hours
- Re-dried flux, not immediately used, must be kept at 150 +/- 25 °C before use

Recycling

- Moisture and oil must be removed from the compressed air used in the recycling system
- Addition of new flux must be done with the proportion of at least one part new flux to three parts recycled flux
- Foreign material, such as millscale and slag, must be removed by a suitable system, such as sieving

Disposal

- Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations
- Please address your local disposal company for prescribed disposal
- Information on product and residues are given in the Safety Data Sheets available at www.esab.com



For customers to be able to use fluxes without prior re-drying, ESAB's BigBag is equipped with an aluminium liner, reliably protecting the flux from moisture, even in tough climates such as near the equator.

The complete BigBag, including the aluminium liner, is fully recyclable (EN 13431).

BigBag packaging has a well defined discharge spout which can be closed during the flux flow to only dispense the desired amount.

PSE-5

Portable Electrode Dry-storage Container with Manual Thermostat



The PSE are light and handy dry-storage containers for electrodes. It is easy to carry and has a manual thermostat with a high range in storage temperature. The heating element runs from the top to the bottom and the top is fully insulated.

- 5 kg (11 lbs) storage capacity
- 130 °C (260 °F) pre-set temperature

Visit esab.com for more information.

Specifications

Input Voltage	220 - 240 V
Output Power	200 W
Output Current	1 A
Dimensions Height	500 mm (19.7 in.)
Dimensions Diameter (Outer)	140 mm (5.5 in.)
Weight	5 kg (11 lbs)

Ordering Information

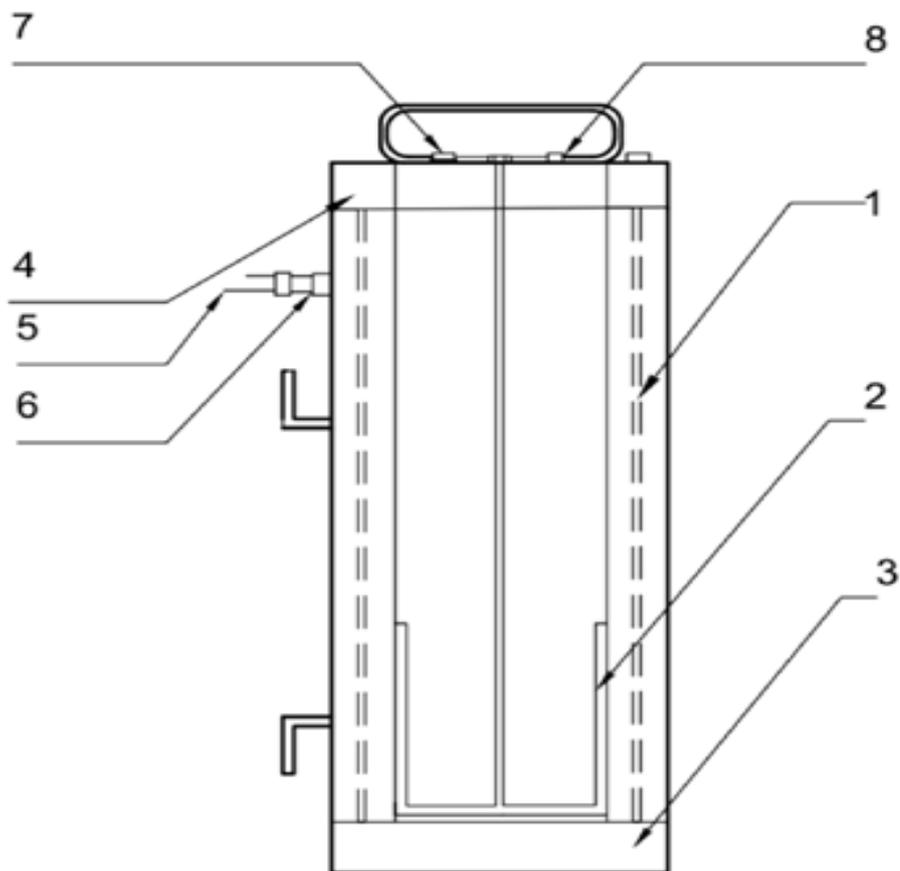
PSE-5 Electrode Dry-storage Container, 1 ph 230 V AC 50/60 Hz	0700100145
PSE-5 Electrode Dry-storage Container, 1 ph 110 V AC 50/60 Hz	0700100146
PSE-5 Electrode Dry-storage Container, 1 ph 24 V AC 50/60 Hz	0700100147

PSE-5

Portable Electrode Dry-storage Container with Manual Thermostat

Wear & Spare Parts

1	Heating Element 230 V - PSE	0700100112
1	Heating Element 110 V - PSE	0700100113
1	Heating Element 24 V	0700100114
2	Puller Tray 5 kg	0700100151
3	Bottom Cover PSE-5	0700100152
4	Top Cover PSE-5	0700100153
5	Power Cord 230 V with plug	0700100118
5	Power Cord 110 V with plug - PSE	0700100119
5	Power Cord 24 V with plug	0700100120
6	Cable Gland - PSE	0700100121
7	Fuse Holder	0700100122
7	Fuse (glass) 5 A	0700100141
8	Pilot Lamp 230 V	0700100124
8	Pilot Lamp 110 V	0700100125
8	Pilot Lamp 24 V	0700100126



PSE-10 & PSE-24

Portable Electrode Dry-storage Containers with Manual Thermostat



The PSE are light and handy dry-storage containers for electrodes. It is easy to carry and has a manual thermostat with a high range in storage temperature. The heating element runs from the top to the bottom and the top is fully insulated.

- 10/24 kg (22/53 lbs) storage capacity
- 60 - 200 °C (140-392 °F) storage temperature

Visit esab.com for more information.

Specifications	PSE-10	PSE-24
Input Voltage	220 - 240 V	220 - 240 V
Output Power	400 W	600 W
Output Current	2 A	2 A
Dimensions Height	600 mm (23.6 in.)	600 mm (23.6 in.)
Dimensions Diameter (Outer)	220 mm (8.66 in.)	250 mm (9.8 in.)
Weight	8 kg (17 lbs)	13 kg (28 lbs)

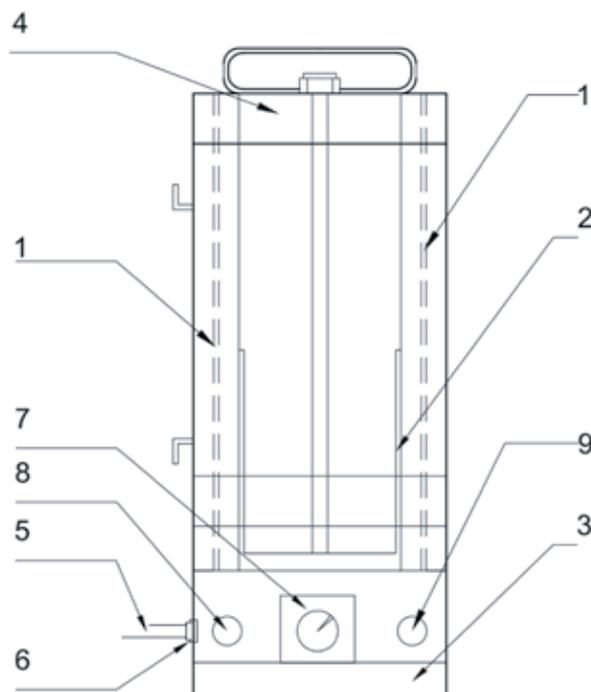
Ordering Information	
PSE-10 Electrode Dry-storage Container, 1 ph 230 V AC 50/60 Hz	0700100127
PSE-10 Electrode Dry-storage Container, 1 ph 110 V AC 50/60 Hz	0700100128
PSE-10 Electrode Dry-storage Container, 1 ph 24 V AC 50/60 Hz	0700100129
PSE-24 Electrode Dry-storage Container, 1 ph 230 V AC 50/60 Hz	0700100109
PSE-24 Electrode Dry-storage Container, 1 ph 110 V AC 50/60 Hz	0700100110
PSE-24 Electrode Dry-storage Container, 1 ph 24 V AC 50/60 Hz	0700100111



PSE-10 & PSE-24

Portable Electrode Dry-storage Containers with Manual Thermostat

Wear & Spare Parts		PSE-10	PSE-24
1	Heating Element 230 V - PSE	0700100112	0700100112
1	Heating Element 110 V - PSE	0700100113	0700100113
1	Heating Element 24 V	0700100114	0700100114
2	Puller Tray 24 kg	-	0700100115
2	Puller Tray 10 kg	0700100133	-
3	Bottom Cover PSE-24	-	0700100116
3	Bottom Cover PSE-10	0700100134	-
4	Top Cover PSE-24	-	0700100117
4	Top Cover PSE-10	0700100135	-
5	Power Cord 230 V with plug	0700100118	0700100118
5	Power Cord 110 V with plug - PSE	0700100119	0700100119
5	Power Cord 24 V with plug	0700100120	0700100120
6	Cable Gland - PSE	0700100121	0700100121
7	Thermostat	0700100032	0700100032
8	Fuse Holder	0700100122	0700100122
8	Fuse (glass) 10 A	-	0700100123
8	Fuse (glass) 5 A	0700100141	-
9	Pilot Lamp 230 V	0700100124	0700100124
9	Pilot Lamp 110 V	0700100125	0700100125
9	Pilot Lamp 24 V	0700100126	0700100126



SDE-50

Electrode Drying Oven with Digital Thermostat



The SDE are large containers for drying and storing electrodes. It is easy to move and has a digital thermostat with a high range in storage temperature. After drying, the temperature falls automatically to the recommended pre-set dry-storage temperature of 130 °C (260 °F).

- 50 kg (110 lbs) storage capacity
- From ambient to 400 °C (752 °F) storage temperature

Visit esab.com for more information.

Specifications

Input Voltage	3 ph 380 - 415 V (1 ph 110 - 230 V)
Output Power	3000 W
Output Current	14 A
Dimensions LxWxH	700 x 530 x 1070 mm (27.6 x 21 x 42 in.)
Weight	75 kg (165 lbs)

Ordering Information

SDE-50 Electrode Drying Oven, 3 ph 400 V AC 50/60 Hz	0700100092
SDE-50 Electrode Drying Oven, 1 ph 110 V AC 50/60 Hz	0700100093

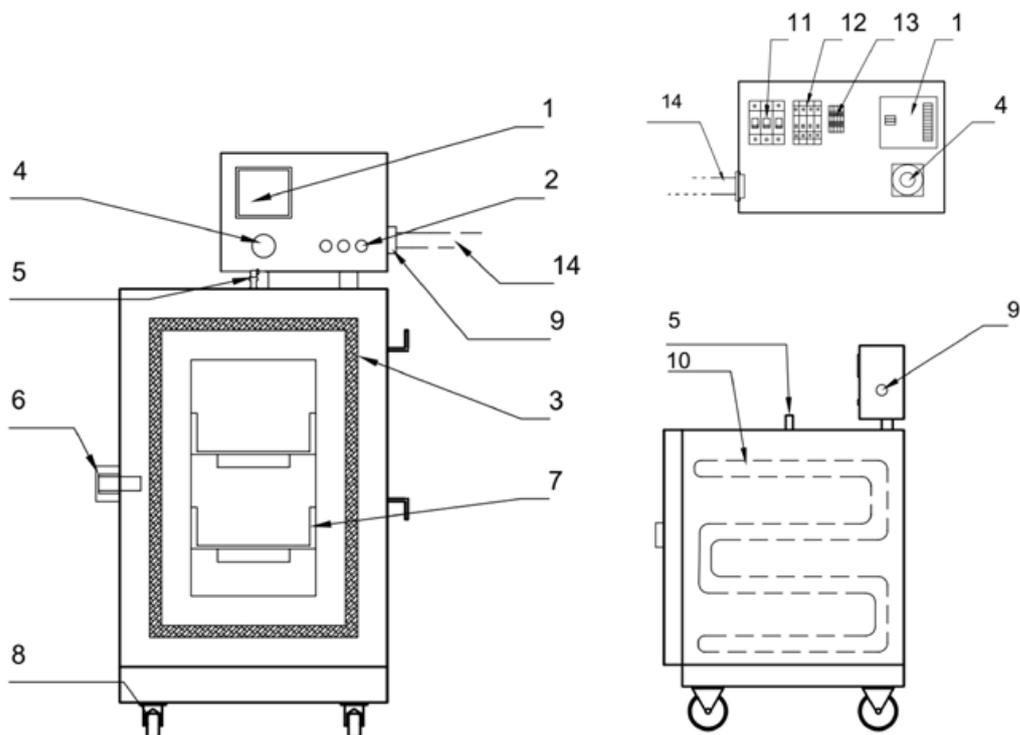


SDE-50

Electrode Drying Oven with Digital Thermostat

Wear & Spare Parts

1	Digital Thermostat DT-109 A	0700100002
2	Signal Lamp 230 V	0700100003
2	Signal Lamp 110 V	0700100004
3	Fiberglass Wick SDE-50	0700100098
4	Power Switch	0700100018
5	Air Valve	0700100020
6	Door Handle	0700100006
7	Tray	0700100054
8	Castors without Brake Back	0700100008
8	Castors with Brake Front	0700100009
9	Cable Gland - SDE/SDF	0700100031
10	Heating Element 230 V - SDE/SDF	0700100011
10	Heating Element 110 V - SDE/SDF	0700100012
11	Contactor 230 V	0700100017
11	Contactor 110 V	0700100023
12	Fuse (automatic) 10 A	0700100015
12	Fuse (automatic) 2 A	0700100016
13	Terminal	0700100019
14	Power Cord 400 V with plug CEE 5x32 A	0700100013
14	Power Cord 110 V with plug - SDE/SDF	0700100014



SDE-100

Electrode Drying Oven with Digital Thermostat



The SDE are large containers for drying and storing electrodes. It is easy to move and has a digital thermostat with a high range in storage temperature. After drying, the temperature falls automatically to the recommended pre-set dry-storage temperature of 130 °C (260 °F).

- 100 kg (220 lbs) storage capacity
- From ambient to 400 °C (752 °F) storage temperature

Visit esab.com for more information.

Specifications

Input Voltage	3 ph 380 - 415 V (1 ph 110 - 230 V)
Output Power	3000 W (1500 W)
Output Current	14 A
Dimensions LxWxH	530 x 720 x 1380 mm (21 x 28 x 54 in.)
Weight	90 kg (198 lbs)

Ordering Information

SDE-100 Electrode Drying Oven, 3 ph 400 V AC 50/60 Hz	0700100068
SDE-100 Electrode Drying Oven, 1 ph 110 V AC 50/60 Hz	0700100069
SDE-100 Electrode Drying Oven, 1 ph 230 V AC 50/60 Hz	0700100060

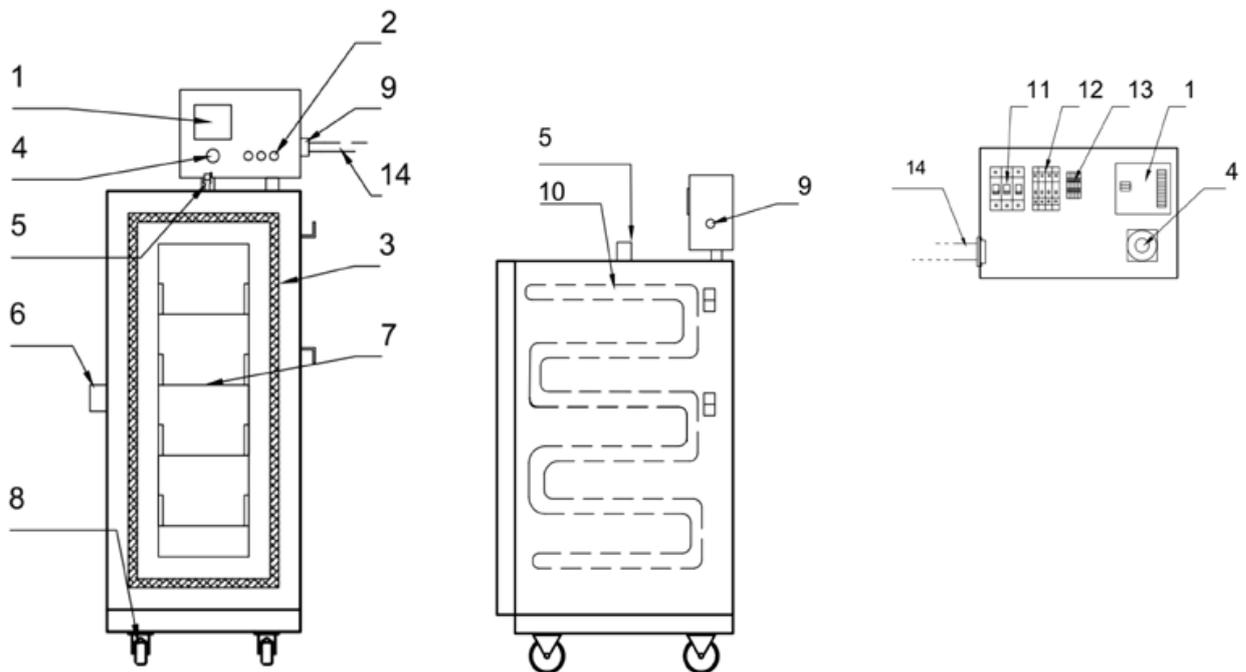


SDE-100

Electrode Drying Oven with Digital Thermostat

Wear & Spare Parts

1	Digital Thermostat DT-109 A	0700100002
2	Signal Lamp 230 V	0700100003
2	Signal Lamp 110 V	0700100004
3	Fiberglass Wick SDE-100	0700100074
4	Power Switch	0700100018
5	Air Valve	0700100020
6	Door Handle	0700100006
7	Tray	0700100054
8	Castors without Brake Back	0700100008
8	Castors with Brake Front	0700100009
9	Cable Gland - SDE/SDF	0700100031
10	Heating Element 230 V - SDE/SDF	0700100011
10	Heating Element 110 V - SDE/SDF	0700100012
11	Contactor 230 V	0700100017
11	Contactor 110 V	0700100023
12	Fuse (automatic) 10 A	0700100015
12	Fuse (automatic) 2 A	0700100016
13	Terminal	0700100019
14	Power Cord 400 V with plug CEE 5x32 A	0700100013
14	Power Cord 110 V with plug - SDE/SDF	0700100014



SDE-250

Electrode Drying Oven with Digital Thermostat



The SDE are large containers for drying and storing electrodes. It is easy to move and has a digital thermostat with a high range in storage temperature. After drying, the temperature falls automatically to the recommended pre-set dry-storage temperature of 130 °C (260 °F).

- 250 kg (550 lbs) storage capacity
- From ambient to 400 °C (752 °F) storage temperature

Visit esab.com for more information.

Specifications

Input Voltage	3 ph 380 - 415 V (1 ph 110 - 230 V)
Output Power	4500 W (1500 - 2250 W)
Output Current	21 A (14 A)
Dimensions LxWxH	830 x 720 x 1530 mm (28 x 21 x 60 in.)
Weight	225 kg (496 lbs)

Ordering Information

SDE-250 Electrode Drying Oven, 3 ph 400V AC 50/60 Hz	0700100044
SDE-250 Electrode Drying Oven, 1 ph 110V AC 50/60 Hz	0700100045
SDE-250 Electrode Drying Oven, 1 ph 230V AC 50/60 Hz	0700100061

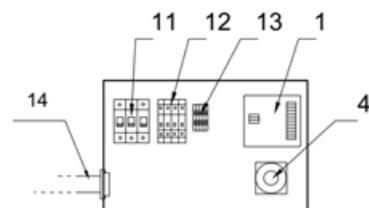
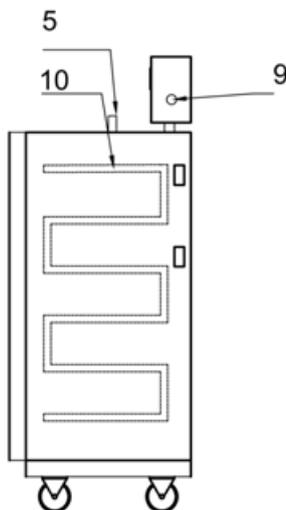
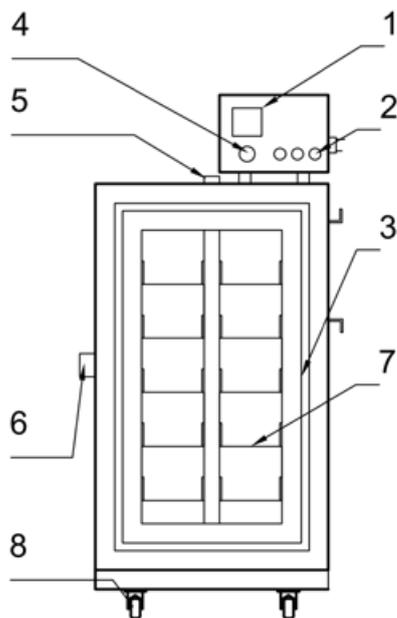


SDE-250

Electrode Drying Oven with Digital Thermostat

Wear & Spare Parts

1	Digital Thermostat DT-109 A	0700100002
2	Signal Lamp 230 V	0700100003
2	Signal Lamp 110 V	0700100004
3	Fiberglass Wick SDE-250	0700100050
4	Power Switch	0700100018
5	Air Valve	0700100020
6	Door Handle	0700100006
7	Tray	0700100054
8	Castors without Brake Back	0700100008
8	Castors with Brake Front	0700100009
9	Cable Gland - SDE/SDF	0700100031
10	Heating Element 230 V - SDE/SDF	0700100011
10	Heating Element 110 V - SDE/SDF	0700100012
11	Contactors 230 V	0700100017
11	Contactors 110 V	0700100023
12	Fuse (automatic) 10 A	0700100015
12	Fuse (automatic) 2 A	0700100016
13	Terminal	0700100019
14	Power Cord 400 V with plug CEE 5x32 A	0700100013
14	Power Cord 110 V with plug - SDE/SDF	0700100014



SDF-50

Flux Drying Oven with Digital Thermostat



The SDF are large containers for drying and storing welding powder (flux). It is easy to move and has a digital thermostat with a high range in storage temperature. After drying, the temperature falls automatically to the recommended pre-set dry storage.

- 50 kg (110 lbs) storage capacity
- Temperature of 130 °C (260 °F)
- From ambient to 400 °C (752 °F) storage temperature

Visit esab.com for more information.

Specifications

Input Voltage	3 ph 380 - 415 V (1 ph 110 - 230 V)
Output Power	3000 W (1 500 W)
Output Current	14 A
Dimensions LxWxH	1070 x 670 x 1130 mm (42 x 26 x 44 in.)
Weight	110 kg (242 lbs)

Ordering Information

SDF-50 Flux Drying Oven, 3 ph 400 V AC 50/60 Hz	0700100021
SDF-50 Flux Drying Oven, 1 ph 110 V AC 50/60 Hz	0700100022
SDF-50 Flux Drying Oven, 1 ph 230 V AC 50/60 Hz	0700100059

Wear & Spare Parts

1	Digital Thermostat DT-109A	0700100002
2	Signal Lamp 230 V	0700100003
2	Signal Lamp 110 V	0700100004
3	Door Handle	0700100006
4	Puller Arm SDF-50	0700100028
5	Castors without Brake Back	0700100008
5	Castors with Brake Front	0700100009
6	Cable Gland - SDE/SDF	0700100031
7	Heating Element 230 V - SDE/SDF	0700100011
7	Heating Element 110 V - SDE/SDF	0700100012
8	Air Valve	0700100020
9	Power Switch	0700100018
10	Fuse (automatic) 10 A	0700100015
10	Fuse (automatic) 2 A	0700100016
11	Contactor 230 V	0700100017
11	Contactor 110 V	0700100023
12	Terminal	0700100019
13	Power Cord 400 V with plug CEE 5x32A	0700100013
13	Power Cord 110 V with plug - SDE/SDF	0700100014
14	Fiberglass Wick SDF-50	0700100163

SDF-250

Flux Drying Oven with Digital Thermostat



The SDF are large containers for drying and storing welding powder (flux). It is easy to move and has a digital thermostat with a high range in storage temperature. After drying, the temperature falls automatically to the recommended pre-set drystorage temperature of 130 °C (260 °F).

- 250 kg (551 lbs) storage capacity
- From ambient to 400 °C (752 °F) storage temperature

Visit esab.com for more information.

Specifications

Input Voltage	3 ph 380 - 415 V (1ph 110 - 230 V)
Output Power	3000 W (1 500 W)
Output Current	14 A
Dimensions LxWxH	1070 x 670 x 1130 mm (42 x 26 x 44 in.)
Weight	110 kg (242 lbs)

Ordering Information

SDF-250 Flux Drying Oven, 3 ph 400 V AC 50/60 Hz	0700100000
SDF-250 Flux Drying Oven, 1 ph 110 V AC 50/60 Hz	0700100001

Wear & Spare Parts

1	Digital Thermostat DT-109 A	0700100002
2	Signal Lamp 230 V	0700100003
2	Signal Lamp 110 V	0700100004
3	Door Handle	0700100006
4	Puller Arm SDF-50	0700100007
5	Castors without Brake Back	0700100008
5	Castors with Brake Front	0700100009
6	Cable Gland - SDE/SDF	0700100031
7	Heating Element 230 V - SDE/SDF	0700100011
7	Heating Element 110 V - SDE/SDF	0700100012
8	Power Cord 400V with plug CEE 5x32 A	0700100013
8	Power Cord 110V with plug - SDE/SDF	0700100014
9	Fuse (automatic) 10 A	0700100015
9	Fuse (automatic) 2 A	0700100016
10	Contactactor 230 V	0700100017
10	Contactactor 110 V	0700100023
11	Power Switch	0700100018
12	Terminal	0700100019
13	Air Valve	0700100020
14	Fiberglass Wick SDF-250	0700100164

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