

metos

MULTIZONE INDUCTION RANGE

METOS ARDOX IE

Installation and Operation Manual

Original instructions





CAUTION: Read the instructions before using the machine.

**Manufacturer:
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1. General

Carefully read the instructions in this manual as they contain important information regarding proper, efficient and safe installation, use and maintenance of the appliance.

Keep this manual in a safe place for eventual use by other operators of the appliance.

The installation of this appliance must be carried out in accordance with the manufacturer's instructions and following local regulations. The connection of the appliance to the electric and water supply must be carried out by qualified persons only.

Persons using this appliance should be specifically trained in its operation.

Switch off the appliance in case of failure or malfunction. The periodical function checks requested in the manual must be carried out according to the instructions. Have the appliance serviced by a technically qualified person authorized by the manufacturer and using original spare parts.

Not complying with the above may put the safety of the appliance in danger.

The manufacturer does not take responsibility for any damages in case the operation instructions and warnings contained in this manual are neglected.

1.1. Symbols used in the manual



This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.



This symbol informs about the right way to perform in order to prevent bad results, appliance damage or hazardous situations.



This symbol informs about recommendations and hints that help to get the best performance out of the appliance.

1.2. Symbols used on the appliance



This symbol on a part informs about electrical terminals behind the part. The removal of the part must be carried out by qualified persons only.

1.3. Checking the relationship of the appliance and the manual

The rating plate of the appliance indicates the serial number of the appliance. If the manuals are missing, it is possible to order new ones from the manufacturer or the local representative. When ordering new manuals it is essential to quote the serial number shown on the rating plate.

2. Safety

2.1. Safe use of the appliance



Because the range is a heated appliance that has hot surfaces during normal use, the following warnings and instructions must be followed in order to avoid burns:

- The cooking zones are warmed up from the heat been transferred from cookware.
- For safe handling of cookware on the cooking top, always use heat protective gloves.
- To avoid overheating of cookware by means of evaporating of its content, do not leave cookware without supervision.
- Turn the control knob down to "0" position if cookware is taken away from cooking zone for a while.
- Switch off cooking zone after use. Do not rely on the pot detection mode.
- Do not place aluminium foil and plastic vessels on the hot hob surface.
- Metallic objects such as kitchen utensils, cutlery etc. shall not be placed on hob surface within induction heating zones since they could get hot.
- Take care when operating induction heating source, as rings, watches and similar objects worn by user could get hot when in close proximity to the hob surface.
- Users with heart pacemakers should consult their doctor whether they are safe near induction range or not.
- The inlet air must always pass through a fat filter to generator. It is essential that outlet air is always able to leave cooking equipment
- Do not cover generator vents because this may cause a fire hazard.
- The air taken in for cooling must not contain grease and have a temperature not exceeding 40°C.

2.2. Safety instructions in case of malfunction



Do not damage cooking surface. When a crack in the cooking surface becomes visible, the appliance must be immediately disconnected from the mains voltage

2.3. Disposal of the appliance

Once the unit has reached the end of its useful life, it must be disposed of in compliance with local rules and regulations. The best way of dealing with or recycling any substances which potentially have an adverse impact on the environment is to dispose of them through a proper problem waste company.



The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of life. This applies to your device but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste.

3. Functional description

3.1. General

The Ardox IE range is an appliance used for heating cooking utensils by induction.



Multizone induction means, that you can put many pots to one cooking area.

3.2. Application of the appliance

The appliance is intended for preparing various kinds of foodstuffs using cookware. The range can be used for cooking, keeping warm, flambéing, roasting etc. of food.

3.2.1. Prohibited use



Use of appliance for any other purposes than stated above is prohibited.

3.3. Operating principle and construction

Ceramic hob surface of Ardox IE consists four or induction heating zones. Cooking zones are marked on glass ceramic surface by a square shape.



Cookware placed on ceramic hob surface within induction heating zones are heated up by means of electromagnetic field generated by an induction coil. Electromagnetic field influences only the bottom of cookware. Energy transfer stops immediately if cookware is taken away from hob surface and starts again when cookware has returned back to hob surface.

3.3.1. Operating switches and indicator lights



Each cooking zone is operated by means of stepless power regulator.

Above each power regulator there is a green LED indicator. Steady light of indicator means that power regulator is on and power is transferred to corresponding heating zone.

To generate power for induction cooking zone, put first cookware within cooking zone and turn corresponding regulator from "0" position to any position between "1" and "12".

The maximum power is when the regulator is in "12" position and the minimum power when the regulator is in "1" position

4. Operation instructions

4.1. Before using the appliance

4.1.1. Selecting cookware

Cookware made from stainless steel with compound multi layer base. The magnetic induction base functions as a part of the hob's magnetic field. Enamelled steel, cast iron and enamelled cast iron cookware is also suitable for induction hobs.

As a rule, all the cookware suitable for induction hobs can be recognized by the mark "induction" on the base of cookware. If there is no mark on a base, it is recommended to use a permanent magnet. The magnet must stick to the bottom of cookware.

The cooking zone with pots diameter of over 120mm will be activated, but will not give the maximum power. Maximum power will be reached with pot diameter 200mm

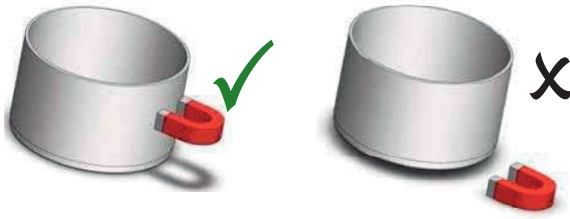
Cookware made of copper, aluminium, ceramic and glass is not suitable for use on ceramic hobs with induction heating.

Cookware made of stainless steel with base which does not attract a permanent magnet is not suitable for use on ceramic hobs with induction heating.

To get the best benefit from the range as well as from the cookware observe the following:

- Always lift pans, do not drag.
- Use good quality flat-based cookware
- Wait for pans to cool before put it in cold water
- Always ensure cookware has clean, dry base before use
- Ensure cookware handles are positioned safely and away from heat sources
- Always use lids except when frying
- Ensure cookware matches the size of cooking zone where possible
- Remember good quality cookware retain heat well, so generally, only low or medium heat is necessary

4.1.2. Pot type and Condition guide



Note

Note: A suitable pan is made of ferrous material. This being magnetic, it will react to the induction field. Ensure pots are magnetic induction approved.

If pan base is damaged or warped, ie concave or convex, discontinue use or replace as this could seriously affect performance, refer to diagrams below.



Pan base is FLAT and ideal for cooking.
Note: Pans should be kept clean and free from damage. Dirty, damaged pans effect efficiency.



Pan base is bowed out and is NOT FLAT. Unit efficiency will be dramatically reduced during cooking. It may not even be detected.
Note: This is also liable to happen if pans are damaged, e.g. large dents.



Pot base is bowed inward and is NOT FLAT; The unit efficiency will be dramatically reduced during cooking. It may not even be detected.
Note: This is also liable to happen if pans are damaged, e.g. large dents.



Excessive food spillage stuck to pan base will impinge balance of pan. One side of utensil will be further away from induction field than another. This may reduce efficiency and will cook one side of pan faster. Keep pans clean to ensure efficient cooking.



The three instances marked with **X** will cause the generator to overheat and cut out. If this occurs, turn off power. The generator will self-reset when temperature goes down.

4.2. Operation procedures

4.2.1. Using the range



Ardox IE range with ceramic hobs heats up very fast, so no preheating is necessary.



Different pots and pans can be placed on the same cooking area. Pots can be contact sideways.

4.2.2. Cooking hints

1. Before use, ensure hob surface is clean, dry and free of grease. Remove any burnt on food debris.
2. Familiarise yourself with cooking area and control settings.
3. Each cooking zone has a power capacity of 2x3,5kW.
4. Each zone is governed by individual energy regulator.
5. Control setting is from 1 to 12. (1 - lowest setting, 12 - highest).
6. Boiling, steaming, poaching, stewing, pot roasting, deep and shallow frying can be achieved on the hob.
7. Ferritic cooking vessels must be used.
8. To boil liquid, follow this procedure:
 - Fill and position pan centrally within cooking zone.
 - Turn appropriate switch dial to 12.
 - When boiling occurs, reduce setting and continue to cook by simmering.
9. The lower setting is dependent on amount and density of liquid and also starch content.
10. Skill is required to control simmering and the ability to select a corresponding temperature setting will improve with practice.
11. Any spillage should be cleaned from hob surface as soon as practically possible.
12. Setting for roasting is from 6 to 8. Higher power may cause burning of the food



Failure to clean filter regularly may cause problems that will not be covered by warranty. The air intake filter **MUST ALWAYS** be in place during operation.



Wipe glass-ceramic hob clean using a damp cloth and warm, soapy water. For heavy stains, use a scraper while cooking zone is still warm.
Wipe down with a damp cloth when zone is cool.

4.3. After use

4.3.1. Cleaning



Always disconnect the appliance from the mains before any cleaning.

Use of water hose or pressure cleaning jet is strictly forbidden.

Before cleaning the range, please remember that it remains hot for a long time after use

Ceran-glass Hob

Clean glass with hot soapy water and a soft cloth.



Do NOT use metal scrapers.

The cleaning of ceramic hob surface is identical to cleaning of other similar surfaces like glass. Do not use corrosive or abrasive agents such as grill-and oven-sprays, stain- and rust removers, scouring powder and rough sponges. Cleaning is much easier if possible spill-overs are removed immediately with damp cloth.

Sugar and mixes containing much sugar must be removed immediately, because later removing is labourious and may leave permanent marks.

Burned spillovers are easy to remove with a scraper especially intended for cleaning ceramic hob surfaces.

If plastic or aluminium foils melt on the ceramic hob surface, they can be also removed with a scraper. For cleaning always prefer chemical cleaning methods rather than mechanical rubbing. Use a slightly alkaline detergent (pH 8-10) diluted in water according to instructions when cleaning the surfaces of the range.

The grease filter protecting air intake in the bottom of the unit must be cleaned regularly. A clogged grease filter can cause overheating, power reduction or even malfunction.

Stainless Steel Surfaces

These surfaces should be cleaned with hot water and detergent then dried and polished with a soft cloth.



Cleaning agents containing bleach, abrasives or caustic chemicals will damage or stain the stainless steel surfaces and must not be used.

Badly stained, removable parts should be soaked in hot water with an approved detergent.

If parts are not able to be removed, the application of warm water with approved detergent using nylon or scotch cleaning pads will provide good results.

5. Installation

5.1. General

The installation of the appliance must be carried out in accordance with the manufacturer's instructions and in compliance with local rules and regulations. These instructions must be used together with the installation drawing.



This appliance may be connected to the mains electricity by qualified persons only

5.2. Ambient conditions

This appliance is intended to be used in the following ambient conditions: Max.ambient temperature:

Storage -20 C to + 70 C

Function 0 C to+ 40 C

Relative humidity: 10% to 90% non - condensing

5.3. Storage, transporting and unpacking the range

It is recommended to keep appliance in its own package before the actual installation begins. It protects the appliance from outer damages. If it is necessary to unpack appliance, possible lifting must be done from the bottom frame using suitable spacers of wood.

In order to avoid damages it is not allowed to use ceramic hob surface as a workbench during installation.

5.4. Positioning the range

5.4.1. Positioning the Ardox S range and the Tabletop range

This appliance is equipped with its own internal cooling system. Air inlet is located on the bottom of stainless steel enclosure (see installation drawing).

Air outlet openings are on the left, rear and right side of enclosure. Temperature of intake air should be below 40°C.

This appliance can not be placed direct near ovens or other heating appliances where ambient temperature may reach over 40°C.

An optimum air intake must not be reduced by the installation. Pay attention that air ventilation is available, see installation drawing min 50 mm from the wall. The grease filter must always be in place when the range is used.

When the range is in the right place, it must be levelled in horizontal position by turning adjustable legs. After that, the rear legs must be fixed to the floor by means of flanges and anchor bolts (see installation drawing).

5.5. Electrical connections



Check and ensure that supply voltage is the same as the voltage given on the rating plate of the appliance. The electrical connections must satisfy local house installation regulations. The valid national and local regulations of the electricity-supply inspection must be observed.

To make eventual future service easier and increase safety, a mains switch must be installed near the appliance. This switch must disconnect the appliance completely from an electrical supply network. The feed-through for the supply cable is located at the bottom of the range in the right back corner. To connect the supply cable to the terminal, do the following:

- Open ceramic hob and fix it by the fixing rod. The fixing rod is on the left side inside the enclosure
- Connect supply cable to the terminal. The terminal is on the right side inside the enclosure
- To assemble appliance, carry out operations described above in opposite order

Before close the ceramic hob, check that no wires inside the range get jammed.

5.6. Test-run



Please read the user manual before testing the appliance. After connecting the supply cable, check the function of the range.



Use cookware suitable for induction cooking. Diameter of the bottom of cookware should be at least 120 mm.

- Put some water inside cookware and place the latter in the centre of selected cooking zone
- Turn corresponding knob from "0" position to any position between "1" and "12." Green indicator LED above the knob will be active and water will be heated
- Take cookware away from cooking zone, indicator light will be flashing
- Place cookware back on the heating area, indicator light will be active again and heating process will be continued
- Adjust to maximum power.
- After a few minutes the fan must switch on.
- Turn the knob to "0" position. Heating will be stopped and indicator light will be off

6. Troubleshooting

If the appliance fails to work, check to ensure that:

- it has been used according to the instructions
- all removable parts are in place
- the main switch (usually on the wall or in the immediate vicinity of the appliance) is in position ON
- the circuit breakers (fuses) have not blown on the fuse board. Ask a qualified person to check the circuit breakers

Fault	Cause	Corrective action
Insufficient heating of cooking zone	Unsuitable pan material	Use suitable pan material.
Continuous heating of the cooking zone at maximum power	Knob switch faulty	Check / replace knob switch
Empty cooking zone starts operating	Pan detection faulty	Replace generator/ call service
Small metal objects are heated	Pan detection faulty	Replace generator/ call service
No heating of cooking zone	Pan bottom dia. less than 12 cm	Use suitable pan material
	Generator defected	Replace generator/ call service
No reaction of the appliance	Mains fuse / main supply interrupted	Check mains connection
Fuses blow when switching on	Short circuit at the generator	Replace generator / call service

The analogue control faults can be detected according to the duration and frequency of the green light blinking. The green lamp lights one time long and then short regular flashes. The number of these short flashes is the error number, this pattern is constantly repeated

Error Code	Name	Cause	Corrective action
E1<->01	Hardware over current	Unsuitable pan material	Use suitable pan material
		Wrong or defective coil	Check the coil / Call Service
E1<->02	No inductor current	Inductor connection failure	Call Service Engineer.
E1<->03	IGBT temperature too high	Air routes blocked. Fan clogged, temperature sensor of IGBT defective	Clear air routes. Clean fan, check fan rotation
E1<->04	Cooking zone temperature too high or too low	Pan empty	Remove pan, check pan base. Switch off, allow zone to cool and try again.
		Temperature sensor faulty	The sensor must be replaced
		Power board faulty	Replace the generator
E1<->05	Control unit failure	Control unit defective or wiring defective	Check or replace operating unit, check wiring harness to unit
		Digital control has faulty ID	Switch the generator off, adjust the DIP switches correctly
		Control unit faulty	Replace the control unit
E1<->06	Internal temperature too high	Air routes blocked	Clear air routes
		Fan clogged, temperature sensor defect, close exterior heat sources	Clean fan
E1<->07	Coil temperature	Coil temperature too high	Remove pan, switch off and wait a couple of minutes until cooking field has cooled down
		Temperature sensor faulty	The sensor must be replaced
E1<->08	Mains phase failure	Breakdown of mains phase or mains quality insufficient	Check mains supply
E1<->10	Communication error	Failure in LIN or CAN-Bus No connection between keyboard and generator	Disconnect from mains and check connection
1 E1<->11	Initialisation error	Needless control unit connected	Connect control unit to the correct control plug
		Digital control has faulty ID	Switch generator off, adjust the control
		Failure while initialising of the hardware	Just wait, the device will be reset approx. every 30 sec
E1<->13	Mains connection error	Mains voltage too high or too low	Check mains connection
E1<->14	Mains adaptor error	Mains voltage is too high or too low	Check mains connection
E1<->15	Empty pan protection	Mains error	Switch off the main fuse, wait a few seconds and switch on
		Empty pan	Remove pan, switch off and wait for a couple of minutes until the cooking field cooled down
		Defective temperature sensor coil	The sensor must be replaced

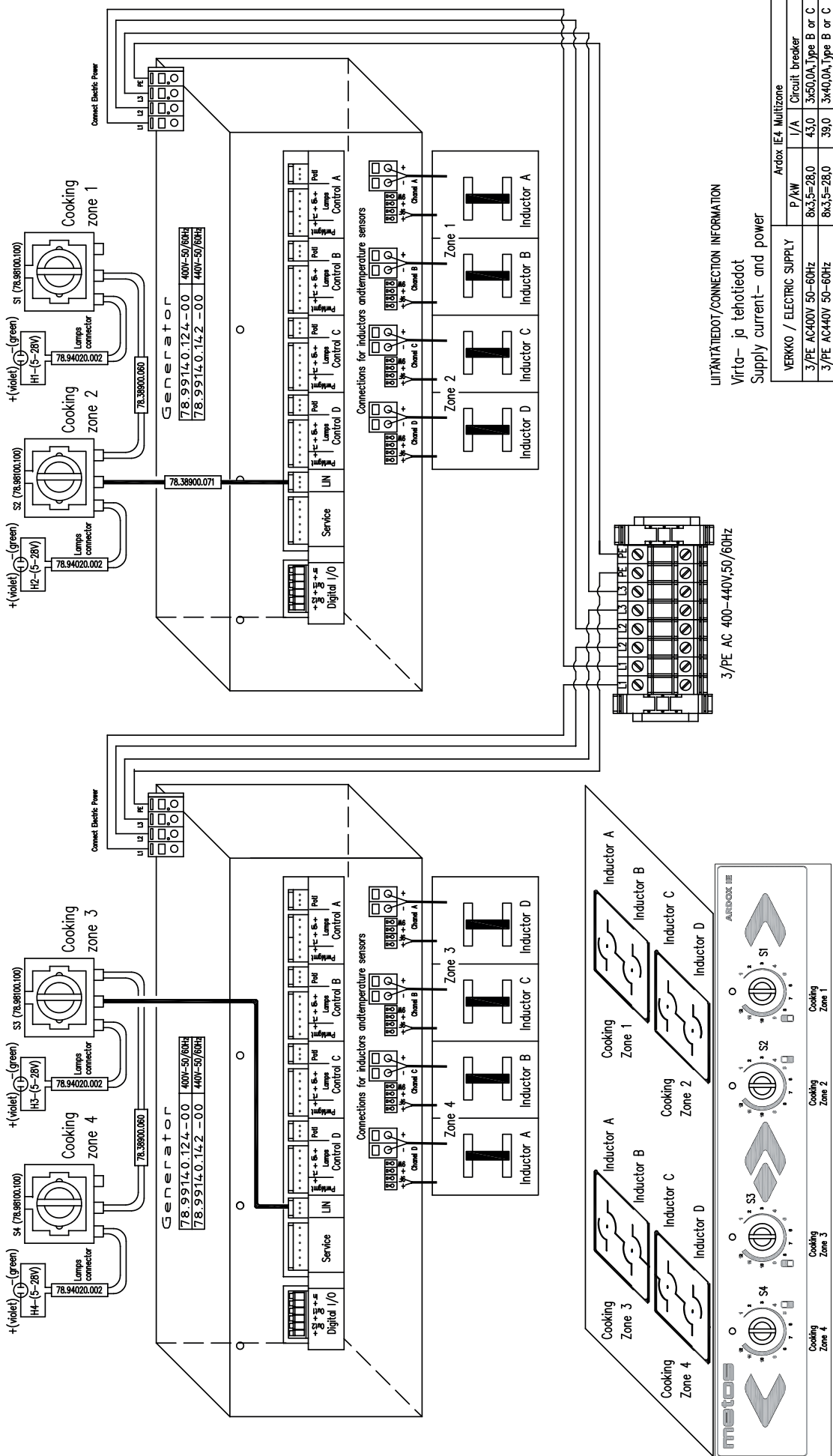
7. Technical specifications

- **Technical specifications**
- **Main and control circuit diagram T05370B3**
- **Installation drawing T05369A3**
- **Installation drawing T05476A3**

Item	Model	Specification
Outer dimensions WxDxH	Ardox IE	800x800x900 mm
Cooking zones	Ardox IE	8x3,5kW; 4x270x270 mm
Power regulation	Ardox IE	Stepless energy regulator, indicator lamp for each zone
Material	Ardox IE	Ceramic cooking hob. All other surfaces of stainless steel
Weight with package	Ardox IE	Approx. 95 kg
Weight without package	Ardox IE	Approx. 60 kg
Package dimensions WxDxH	Ardox IE	860x920x1050 mm
Electrical connection	Ardox IE	See installation drawings
Operating conditions	Ardox IE	> +5°C...40°C, Max.relative humidity of air > 30%...90%
Outer dimensions WxDxH	Ardox IEM	1020x960x990mm
Cooking zones	Ardox IEM	8x3,5Kw; 4x270x270 mm
Power regulation	Ardox IEM	Stepless energy regulator, indicator lamp for each zone
Material	Ardox IEM	Ceramic cooking hob. All other surfaces of stainless steel
Weight with package	Ardox IEM	Approx. 105 kg
Weight without package	Ardox IEM	Approx. 70 kg
Package dimensions WxDxH	Ardox IEM	1100x1100x1160mm
Electrical connection	Ardox IEM	See installation drawings
Operating conditions	Ardox IEM	> +5°C...40°C, Max.relative humidity of air > 30%...90%

IE=ARDOX IE

IEM=ARDOX IEM(M marine)



LIITÄNTÄTIEDOT/CONNECTION INFORMATION
 Virta- ja tehotiedot
 Supply current- and power

VERKKO / ELECTRIC SUPPLY		Ardox IE4 Multizone	
3/PE AC400V 50-60Hz	8x3,5=28,0	P/kW	I/A
3/PE AC440V 50-60Hz	8x3,5=28,0	43,0	3x650,0A, Type B or C
	8x3,5=28,0	39,0	3x40,0A, Type B or C

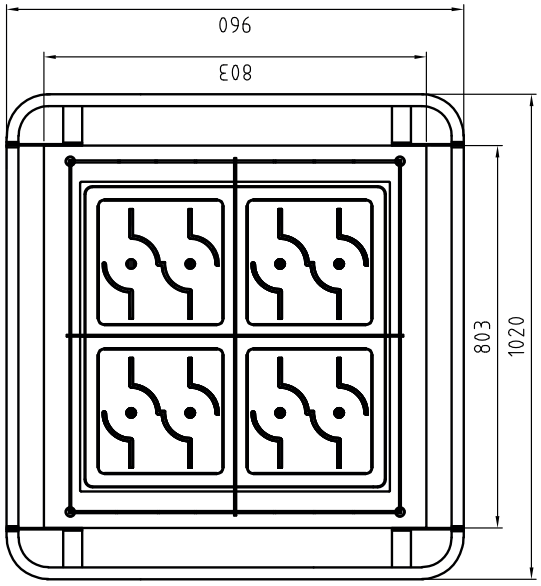
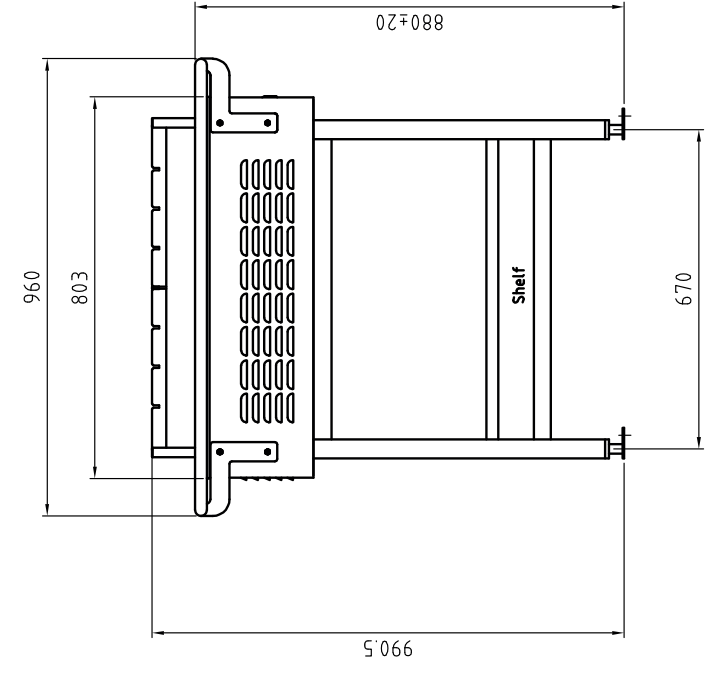
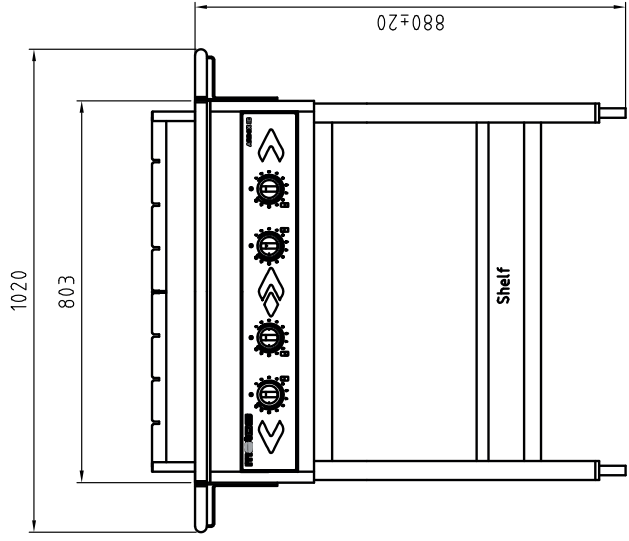
Pää- ja ohjauvirtapiiriin kytkentäkaavio
 Main- and control circuit diagram
 3/PE AC 400-440V, 50-60Hz

Ardox IE4 Multizone

Tehk. DESING	23.01.2020/A.0
Tehk. CHD	
Hyv. APPR	

METOS

Typ. no	Ardox IE4 Multizone
PROJAK	I/A
Sheet	Circuit breaker
Rev	1/1
File no	T05370B3
DWG. no	T05370B3
REV	A



ELECTRICAL SUPPLY	Ardox IE 4
	P/kW I/A
3/PE/AC4,0V 50Hz/60Hz	8x3,5kW=28 3x40A, Type B or C

1. CONNECTION POINT FOR EXTERNAL CABLE FROM MAINS.
 2. THE BACK FEET SHOULD BE FIXED, Marine all feet
- THE REQUIREMENTS GIVEN IN INSTALLATION INSTRUCTIONS MUST ALSO BE FOLLOWED.

metos

Pind	MASTAAP	1:10	POSTISOON	-	KOGUS	-
Kuupäev Nimi	Range ARDOX IE4 8x3,5kW Multizone Marine					
Joon. Koifr. Stand.	T054,76A3					
Joonise nr.	3757575					
Kuup. Nimi	Leht					
Muutused	-					
Olek	Ik					
File: Drawing2	6					

Päiväys / Datum / Date

06.08.2019

Valmistajan nimi / Tillverkarens namn / Manufacturer's name

METOS AS

Osoite / Adress / Adress

Saha tee 18
74201 Loo, Harjumaa
ESTONIA

vakuutamme yksinomaan omalla vastuullamme, että seuraava tuote:
försäkrar helt på eget ansvar att följande produkt:
declare under our sole responsibility that the product:

Nimi, tyyppi tai malli / Namn, typ eller modell / Name, type or model

Liesi / Spis / Range ARDOX -sarja / serien / series
Mallit / Modeller / Models :3757413
IE4 multizone

johon tämä vakuutus liittyy, on (mikäli asiankuuluvaa) seuraavan standardin (seuraavien standardien) tai muun normatiivisen asiakirjan (muiden normatiivisten asiakirjojen) vaatimusten mukainen
till vilken denna försäkran hör, uppfyller (vid behov) kraven i följande standard (standarder) eller annat (andra) normativa dokument
to which this declaration relates is in conformity with (if necessary) the following standard(s) or other normative document(s)

Tunnus, vuosiluku tai julkaisupäivä / Beteckning, årtal eller publiceringsdatum / Designation or number, year or date of issue

MD 2006/42/EC, LVD 2006/95/EC, EMC 2004/108/EC, RoHS 2002/95/EC, WEEE2002/96/EC,
1935/2004/EC

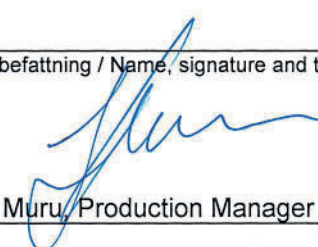
ja noudattaa (mikäli asiankuuluvaa) seuraavan direktiivin (seuraavien direktiivien) määräyksiä
och följer (vid krav) följande direktivs bestämmelser
and in conformity with (if necessary) orders of following directive(s)

EN ISO 12100-1, EN ISO 12100-2
EN 60204-1, EN 60335-1, EN 60335-2-39

Vakuutuksen antopaikka ja päivä / Utfärdad på ort och datum / Place and date of issue

Loo 06.08.2019

Valtuutetun henkilön nimi, nimikirjoitus ja asema / Bemyndigad persons namn, namnteckning och befattning / Name, signature and title of authorized person


Andres Kirstein, Managing Director
Jaan Muru, Production Manager

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This form is based on standard SFS-EN 45014 (2nd edition, 1993).

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