Jøtul C 24

Jøtul C 24
EN 16510
Manual Version P00

JØTUL

Monterings- og bruksanvisningen må oppbevares under hele produktets levetid. These instructions must be kept for future references. Wir empfehlen Ihnen, die Montage- und Bedienungsanleitung für spätere Zwecke sorgfältig aufzubewahren. Ce document doit être conservé pendant toute la vie de l'appareil.

EU no. 215/1186 - 24/04/2015

Datasheet / Fiche Technique / Ficha técnica / Scheda dati / Datasheet / Datenblatt / Dane techniczne

Requirements / Exigences / Requisitos / Requisiti / Vereisten / Forderungen / Wymagania	
Supplier / Fabricante / Fornitore / Vereisten / Lieferant / Producent:	Jøtul AS
Product models / Produits concernés / Modelos / Modelli / Product modellen / Varianten der Feuerstelle / Modele produktu	JØTUL C 24
Energy efficiency class / Classe énergétique / Clase de eficiencia energética / Classe energetica / Energie efficiëncy klasse / Energieeffizienz-Klasse / Klasa efektywności energetycznej	A
Direct heat output / Puissance réelle de sortie / Potencia calorifica emitida / Emissione di calore diretta / Directe warmte afgifte / Nennwärmeleistung / Bezpośrednia moc grzewcza	7,0 kW
Energy efficiency index / Index de rendement énérgétique/ Índice de eficiencia energetica / Indice di efficienza energetica / Energie efficiëncy index / Energieeffizienz-Index / Indeks efektywności energetycznej	103,1
Efficiency at nominal heat output / Rendement à puissance nominale / Eficiencia al rendimiento nominal / Efficienza alla potenza nominale / Efficiency bij nominale warmte afgifte / Wirkungsgrad bei Nennheizleistung / Sprawność dla mocy znamionowej	78 %
• Any specific precautions that shall be taken when the local space heater is assembled installed or maintained. • Toutes les précautions spécifiques doivent être prises lors de l'assemblage, l'installation ou l'entretien de l'appareil. • Cualquier precaución específica que deba tenerse en cuenta durante el montaje, instalación o mantenimiento del equipo de calefacción • Precauzioni specifiche da prendere quando il riscaldatore viene assemblato, installato o mantenuto in uno spazio. • Eventuele specifieke voorzorgsmaatregelen die worden genomen wanneer de plaatselijke ruimteverwarming wordt gemonteerd, geïnstalleerd of onderhouden. • Besondere Maßnahmen bei Montierung, Installation und Wartung. • Wszelkie szczególne środki ostrożności, które należy podjąć, gdy lokalny ogrzewacz pomieszczeń jest zamontowany lub konserwo	• Fire safety precautions such as safety distances when installing, national standards, local codes and regulations. See the Instructions manual. • Les précautions d'incendie telles que les distances de sécurité lors de l'installation, le suivi des normes, les codes locaux et les règlementations nationales. Veuillez lire le manuel d'installation. • Precauciones frente a incendios como distancia de seguridad en la instalación, estándares nacionales, códigos locales y reglamentos. Lea el manual de instalación. • Precauzioni per la sicurezza antincendio come le distanze di sicurezza durante l'installazione, le normative nazionali e locali. Leggere il manual. • Brandveiligheidsmaatregelen, zoals veiligheids-afstanden bij installatie, nationale normen, lokale codes en voorschriften. Lees de installatiehandleiding. • Für brenntechnische Verhältnisse, wie z.B. Aufstellbedingungen und nationale Forderungen. Siehe die Montage- und Bedienungsanleitung. • Środki bezpieczeństwa przeciwpożarowego, takie jak odległości od materiałów palnych jakie należy zachować podczas instalacji, normy krajowe, lokalne przepisy i regulacje. Patrz instrukcja obsługi.

UK - Installation and operating instructions

Table of contents

2.0 Technical Data

Installation

- All local regulations, including those referring to national and European Standards as well as the information provided in this assembly and instruction manual need to be complied with when installing the appliance.
- When you install any kind of fireplace or stove, you must inform the local building and housing authorities. In addition you are obliged to have the installation inspected and approved by a local chimney sweep prior to the commissioning
- To ensure best possible functionality and safety for your installation, we advise you to call a professional fitter. Your Jøtul Dealer will be able to recommend a qualified fitter in your area. For information on Jøtul Dealers, please go to www.jotul.com

Safety

Any changed made to the product by the dealer, fitter or user could result in the product and safety functions not functioning as intended. The same applies to the fitting of accessories or extra equipment not supplied by Jøtul AS. This could also be the case if parts that are neccessary for the operation and safety of the stove are dismantled or removed.

This stove is produced in accordance with type approval for the product, which also covers the product's Assembly and Instruction Manual. Read and follow the user operating instructions carefully.

The Declaration of Performance (DoP) is available on www.jotul.com

Technical data

Test in compliance with EN 16510			
	Classification of appliance	Type BF	
P_{nom}	Nominal heat output	7,0	kW
η_{nom}	Energy efficiency at nominal heat output	78	%
η_s	Seasonal space heating energy efficiency at nominal heat output	68	%
EEI	Energy efficiency index	103	
	Energy efficiency class	A1	
	Fuel	Wood logs *	
	Fuel length, maximum	500	mm
	Fuel consumption	2,49	kg/h
	Amount of fuel	1,8	kg
	Amount of fuel, maximum	2	kg
CO_{nom}	CO emission at 13% O_2 at nominal heat output	0,07	%
		851	mg/Nm^3
NO_{xnom}	NO_x emission at 13% O_2 at nominal heat output	117	mg/Nm^3
OGC_{nom}	OGC emission at 13% O_2 at nominal heat output	40	mg/Nm^3
PM_{nom}	Dust emission at 13% O_2 at nominal heat output	11	mg/Nm^3
p_{nom}	Flue draught at nominal heat output	12	Pa
	Recommended sub-pressure in the connecting piece	18-20	Pa
	Required combustion air supply	18,1	m^3/h
T_{snom}	Flue gas outlet temperature at nominal heat output	359	°C
T class	Chimney designation	T400 G	
$Ø_{f.g\ nom}$	Flue gas mass flow at nominal heat output	6,3	g/sec
V_h	Standing air loss	NPD	m^3/h
	Leakage before testing at gauge pressure of 5 Pa (1013 mbar, 27 °C)	3,7	Nm^3/h
	Leakage before testing at gauge pressure of 10 Pa (1013 mbar, 27 °C)	5,8	Nm^3/h
	Leakage before testing at gauge pressure of 15 Pa (1013 mbar, 27 °C)	7,7	Nm^3/h
CON/INT	Continuous operation (CON)/Intermittend operation (INT)	INT**	
	Reaction to fire classification	A1	
E, f	Power supply voltage, frequency	-	V

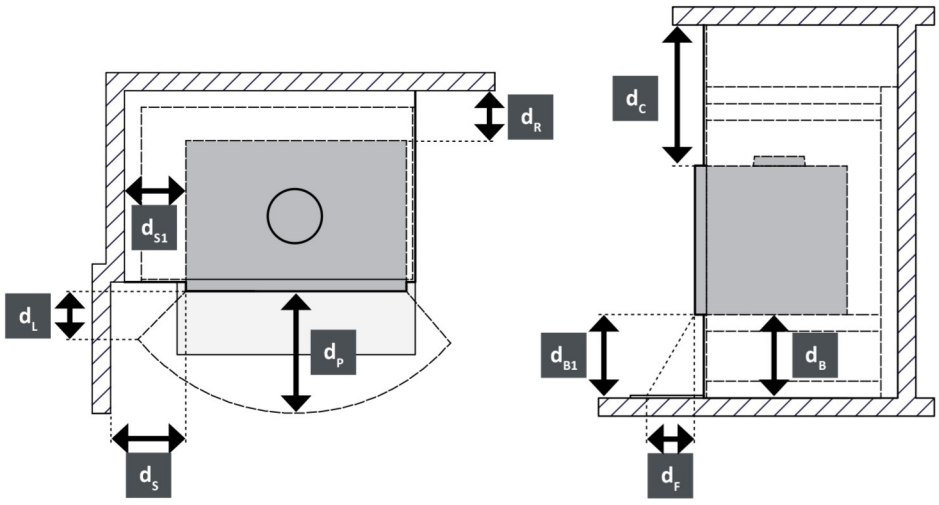
* Use only recommended fuels - designation I.

** Intermittent operation in this context means normal use of a wood-burning stove. In other words, you should let the fire die down until only the embers are left before refueling.

Technical Data

Basic technical data			
	Materials	Stainless steel Cast iron Ceramic stone/vermiculite Glass	
	Surface treatment	Senotherm	
	Smoke outlet	Top/Back	
d_{out}	Diameter of the flue gas outlet	150	mm
	Fresh air connection piece external diameter	80/100	mm
L	Overall dimensions (length)	441	mm
H	Overall dimensions (height)	500	mm
W	Overall dimensions (width)	694	mm
m	Mass (weight)	136	kg
m_{chim}	Maximum load of a chimney the stove may carry	120	kg

Minimum distances to combustible materials			
d_R	Rear	for installation – see manual/installation drawings	mm
d_S	Sides	for installation – see manual/installation drawings	mm
d_C	Ceiling	for installation – see manual/installation drawings	mm
d_P	Front	1050	mm
d_F	Front to the bottom front radiation area	for installation – see manual/installation drawings	mm
d_L	Front to the side front radiation area	for installation – see manual/installation drawings	mm
$d_{B'}$	Distance from the loading door to the floor	for installation – see manual/installation drawings	mm
d_{non}	Minimum distances to non-combustible walls.	-	mm
	Corner	for installation – see manual/installation drawings	mm
	The code for insulated flue pipe	T400-N1-D-Vm-L50050-G100	
	Convection air inlet	min 500	cm²
	Convection air outlet	min 750	cm²
	Protective insulation material	Calcium silicat plate (lamda 0,06 W/mK or better)	
	Thickness of protective insulation material	for installation – see manual/installation drawings	

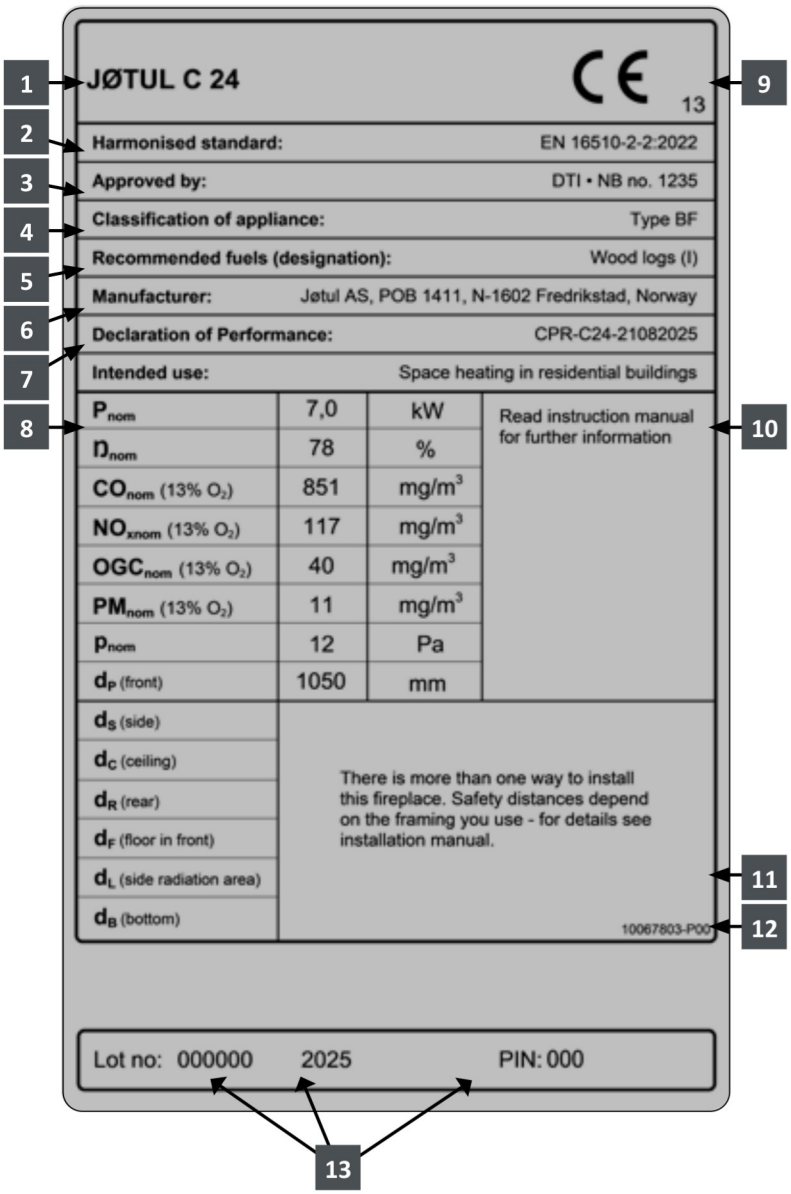


Approval Label

All Jøtul wood-burning stoves are fitted with an approval label that specifies the approval standards and the distance to combustible materials.

The approval label is located at the rear of the stove.
The approval label provides a pin and lot number. These numbers should be quoted when contacting your dealer or Jøtul AS and is required in the event of a complaint.

Approval Label



TYPE PLATE EXPLANATION

1. Type and/or the model number or designation to enable the appliance to be identified
2. Applicable standards
3. Name of test centre/certification number
4. Classification of appliance
5. Recommended fuels
6. Manufacturer's name and address
7. DOP document number
8. Table of values:

   P_{nom} - nominal heat output

   η_{nom} - energy efficiency at nominal heat output

   CO_{nom} - CO emission at 13% O_2 at nominal heat output

   NO_{xnom} - NO_x emission at 13 % O_2 at nominal heat output

   OGC_{nom} - OGC emission at 13 % O_2 at nominal heat output

   PM_{nom} - dust emission at 13 % O_2 at nominal heat output

   p_{nom} - flue draught at nominal heat output

   Minimum distances to combustible materials:

   d_R - back

   d_S - sides

   d_C - ceiling

   d_P - front

   d_F - front to the bottom front radiation area

   d_L - front to the side front radiation area

   d_B - below the bottom (not regarding feet)

9. CE mark of conformity- The digits indicate the year of issue of the certificate
10. Product specifications and instructions
11. Waste electrical and electronic equipment
12. Type plate number
13. Product registration number

Fig. 1A

Jøtul C 24 inclusive optional wide frame

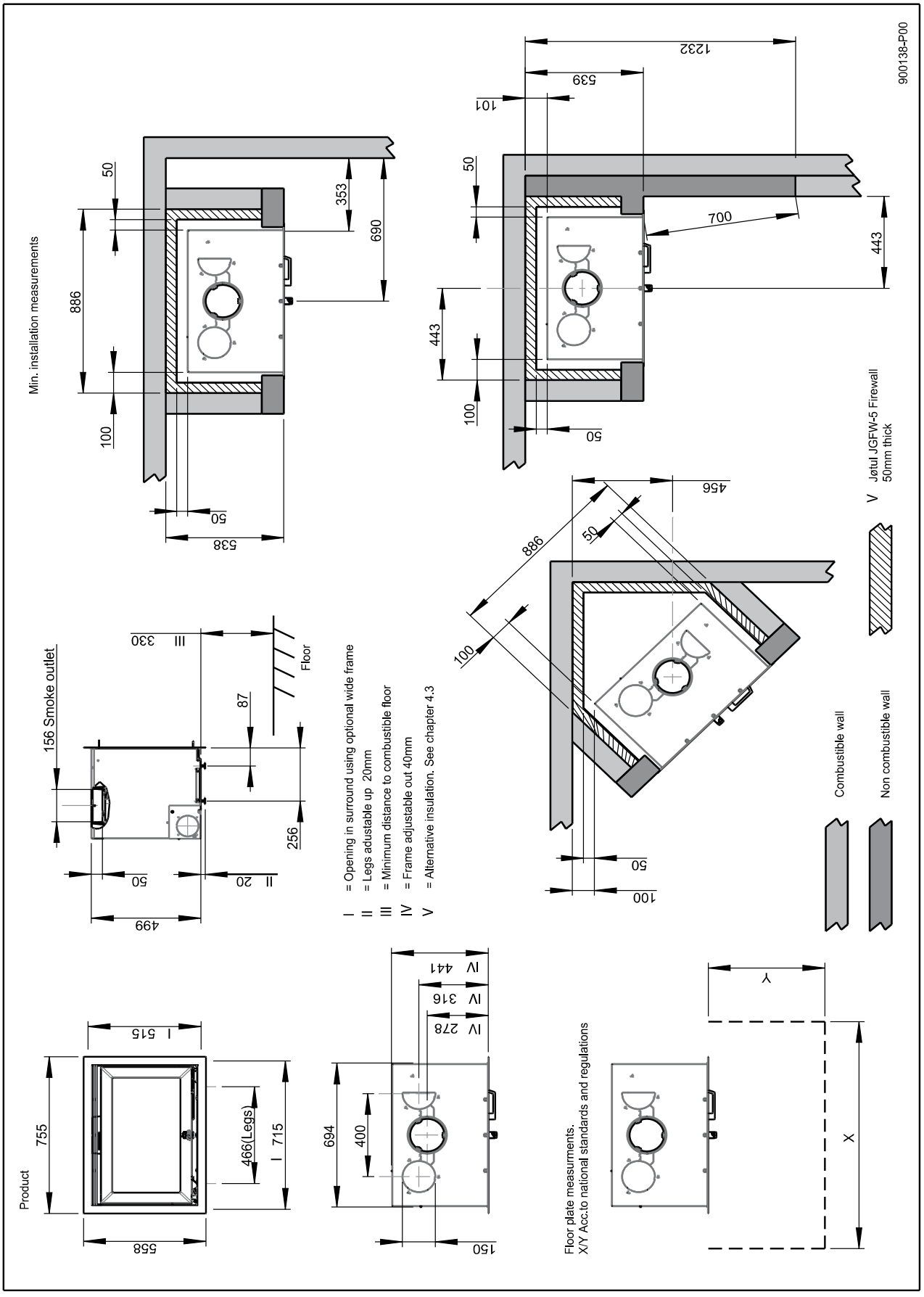
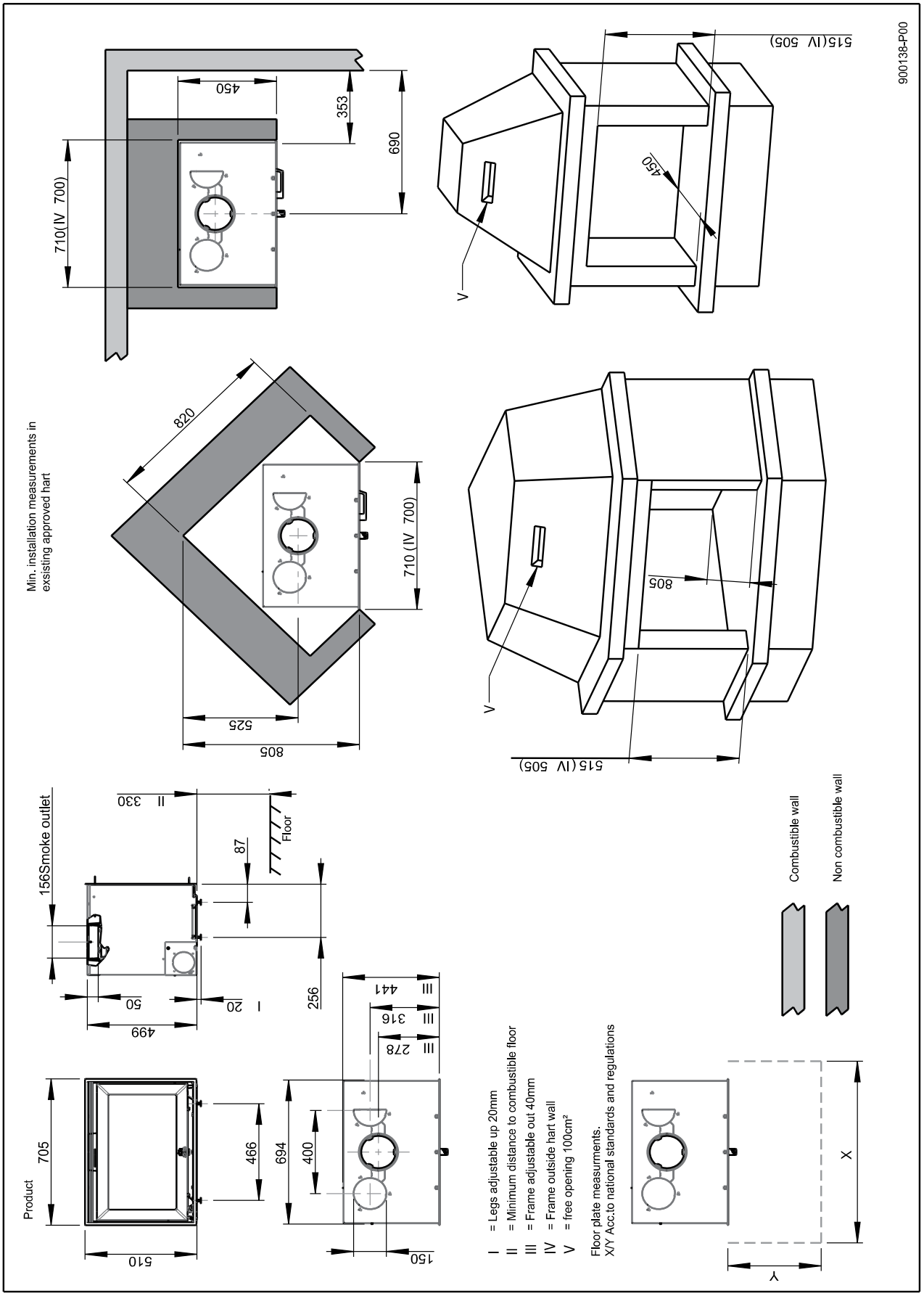


Fig. 1B

Jøtul C 24 inclusive optional narrow frame



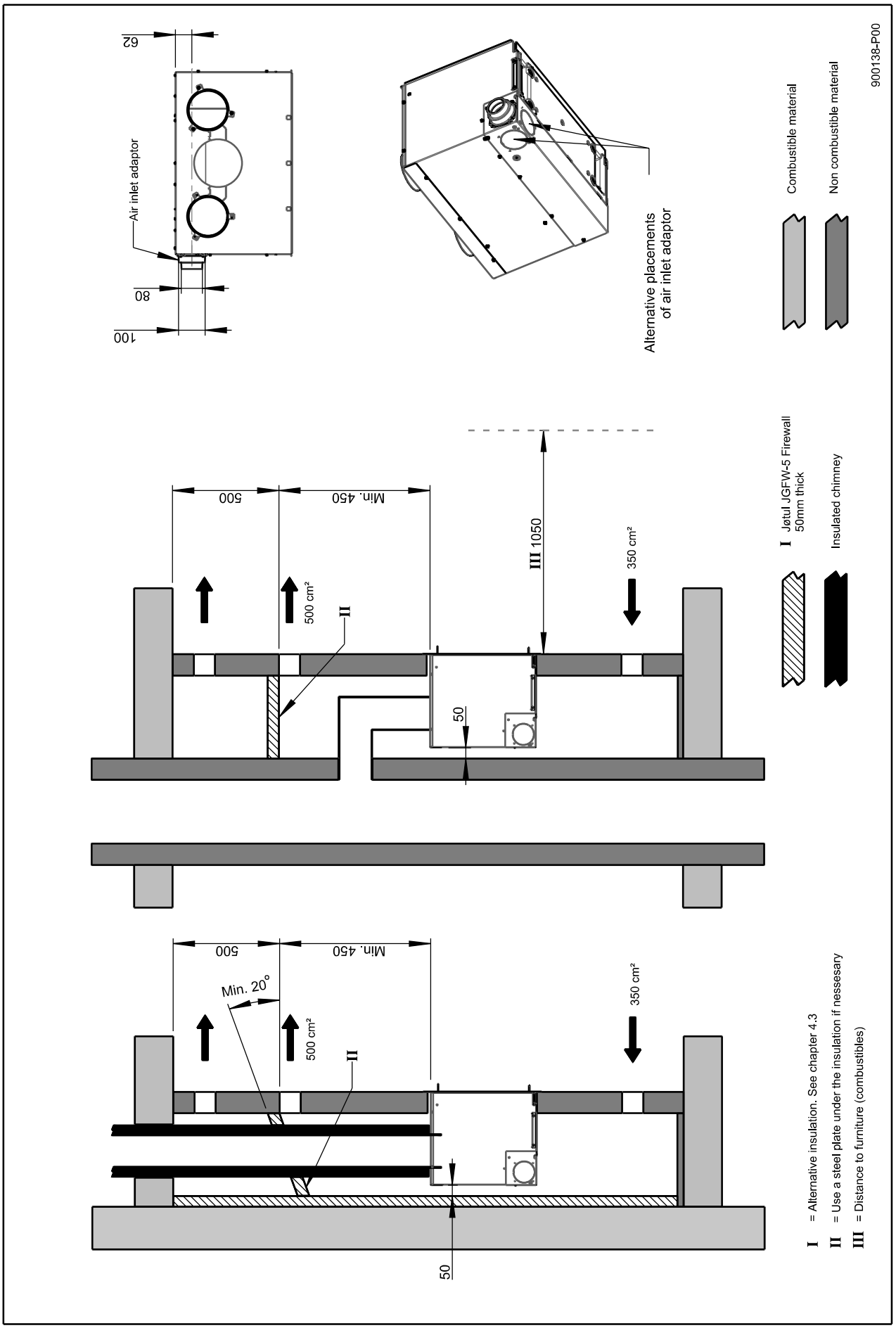

62
Air inlet adaptor
80
100
Alternative placements
of air inlet adaptor
Combustible material
Non combustible material
900138-P00
I Jøtul JGFW-5 Firewall
50mm thick
Insulated chimney
Min. 450
500
500 cm²
II
III 1050
350 cm²
50
Min. 20°
I = Alternative insulation. See chapter 4.3
II = Use a steel plate under the insulation if nessesary
III = Distance to furniture (combustibles)

Fig. 2

3.0 Safety

NB! To guarantee optimal performance and safety, Jøtul stoves must be fitted by a qualified installer.

Any modifications to the product by the distributor, installer or consumer may result in the product and safety features not functioning as intended. The same applies to the installation of accessories or optional extras not supplied by Jøtul. This may also be the case if parts that are essential to the functioning and safety of the fireplace have been disassembled or removed.

In all these cases, the manufacturer is not responsible or liable for the product and the right to make a complaint becomes null and void.

Keep the door closed during use (the product is not approved for use with open door

3.1 Fire Prevention Measures

There is a certain element of danger every time you use your fireplace. The following instructions must therefore be followed:

- The minimum safety distances when installing and using the fireplace are given in **fig. 1A** and **fig. 1B**.
- Ensure that furniture and other flammable materials are not too close to the fireplace. Flammable materials should not be placed within 1,05 metre of the fireplace.
- Allow the fire to burn out. Never extinguish the flames with water.
- The fireplace becomes hot when lit and may cause burns if touched.
- Only remove ash when the fireplace is cold. Ash can contain hot embers and should therefore be placed in a non-flammable container.
- Ash should be placed outdoors or be emptied in a place where it will not present a potential fire hazard.

In case of chimney fire:

- Close all hatches and vents.
- Keep the firebox door closed.
- Check the loft and cellar for smoke.
- Call the fire service.

Before use after a fire an expert must check the fireplace and the chimney in order to ensure that it is fully functional.

3.2 Glove

Use the protective glove when handling the product when it is hot.

4.0 Installation

The Jøtul C 24 is a cassette stove that is designed to fit inside an existing fireplace hearth (Fig. 1 B). This requires a minimum hearth opening of HxWxD = 515x710x450 mm. If the frame is placed on the outside of the hearth walls, the opening may be reduced to HxWxD = 505x700x450 mm. NB! You must allow space between the cassette and the masonry for thermal expansion of the cassette stove.

The product also fits inside a new fireplace surround (Fig. 1 A). The fireplace surround must have a minimum opening of HxWxD = 515x715x490 mm. It is also important to allow space for insulation around the surround. If using a wide frame (optional extra), it will overlap openings to HxW = 558x755 mm.
A narrow frame is included with the product. It is possible to move this frame and a wide frame (optional extra) up to 40 mm to make it easier to adapt the product for different flue pipe positions.

- The stove must be installed in rooms with a good ventilation. A good ventilation is vital for the efficient operation of your stove.
- The appliance shall not be installed with ventilating systems which have pressure below -15 Pa.
- Extractor fans, when operating in the same room or space as the appliance, could cause problems.
- We recommend installing smoke detectors in the home.
- The distances specified in the manual only apply if you comply with the maximum amount of firewood. They only guarantee fire safety.
- There is no guarantee that the present building materials can withstand the temperature in relation to visual changes.
- Check that Building Regulations and any local by laws are followed during installation.

4.1 Floor

Foundation

You need to make sure the foundation is suitable for a fireplace. See **“2.0 Technical Data”** for specified weight.

Requirements for protection of wooden flooring beneath the fireplace

The Jøtul C24 has a heat shield underneath to protect the floor from radiated heat. The product can therefore be positioned directly on a wooden floor that is covered by a sheet of metal or other non-inflammable material. The recommended minimum thickness is **0.9 mm**. The plate must cover the entire floor surface within the surround.

We recommend the removal of any flooring that is not attached to the foundation (“floating floors”) beneath the installation.
Any floor covering of inflammable material, such as linoleum, carpets, etc. must be removed from under the floor plate.

Requirements for protection of inflammable floors in front of the fireplace

The floor in front of the fireplace must be protected by a sheet of metal or other non-inflammable material. The recommended minimum thickness is 0.9 mm. The floor plate must comply with national laws and regulations.
Contact your local building authorities regarding restrictions and installation requirements.

4.2 Ceiling

Distance from hot air vents in the top **(Fig. 1B-**V or 500 mm.

4.3 Insulation requirements

When the cassette is fitted into a surround with combustible walls protected by insulating material, the following types and thicknesses can be used:

50 mm Jøtul JGFW-5 fireproof board (specific thermal conductivity = λ value = 0.06 W/mK)

50 mm (min. 38 mm) Rockwool (λ value = 0.046 W/mK)

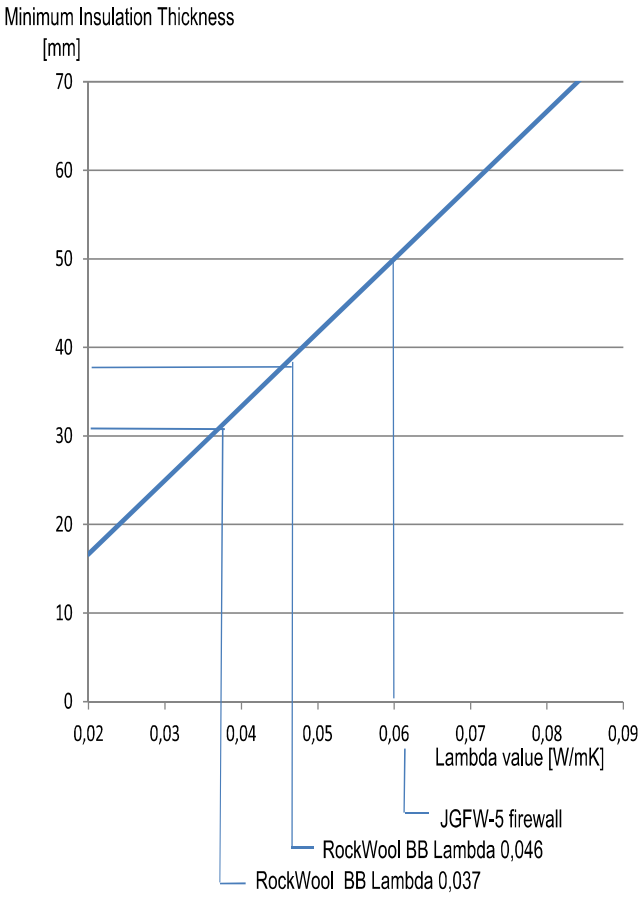
50 mm (min. 31mm) Rockwool (λ value = 0.037 W/mK)

Other materials may be used. See Fig. 33 for minimum insulation thicknesses for known Lambda (λ) values.

Note: The insulation must be mounted in a way that doesn`t allow heat to be conducted through the securing materials to the combustible walls.

Fig 33

Minimum insulation thickness



4.4 Outside air connection

Warning! You need to ensure an adequate supply of outdoor air to the room in which the product is being installed. An inadequate supply of air may cause smoke to be emitted into the room. This is highly dangerous! Symptoms of this may be the smell of smoke, feeling of tiredness, nausea and sickness.

If the house is tightly sealed and insulated and/or has a mechanical air extraction system, the room should be fitted with vents or a separate duct to provide an additional supply of outside air. Ducts in the room where the stove is installed must be made of a non-combustible material such as a flexible aluminium pipe with an internal diameter of 80 or 100 mm. A fresh air duct connector is included with the product. The connector can be attached in three different places (**Fig. 2**) depending on how the duct is entering the surround or heart. A kit for outside air connection with air duct, wall grille and insulation is an optional extra. If outside air does not pass through a separate duct, the lever (**Fig. 27A**) must be in the open position. If the air to the product passes through an outside air duct, the lever must be in the closed position. See Chapter 4.11 for installation of outside air connection.

4.5 Air circulation

If installing in a new fireplace surround (**Fig. 2**), air must be able to circulate between the cassette and the masonry.

Min. circulation air:
Base: 350 cm2 free opening.
Top: 500 cm2 free opening.

This is a safety measure to ensure that the build-up of heat inside the fireplace surround does not become too great and that the output of heat to the room is adequate. If the product is installed in an approved hearth, the opening in the base can be omitted and the opening in the top can be 100 cm2. See Chapter 4.6.

4.6 Hot air distribution / fan

One or two ducts with an internal diameter of 150 mm can be connected to distribute the heated air from the cassette. Hot air ducts must be made of a heat-resistant, non-combustible material, for example, flexible aluminium ducts. These can become very hot and it is important that they do not come into contact with any combustible material. Two connectors for the ducts are included with the product (ducts are not included).
The problem of paint changing colour just above the cassette is reduced by the use of hot air ducts. A fan (optional extra) can be fitted inside the product to increase hot air distribution. This can be fitted regardless of whether ducts for hot air distribution have been installed or not. The fan should be fitted before the product is installed. See the instruction manual for fan installation (included with the fan).

4.7 Chimney and flue pipe

- The fireplace can be connected to chimneys and flue pipes approved for solid fuel fireplaces with flue gas temperatures as specified in «2.0 Technical Data».
- The cross-section of the chimney must be at least that of the flue pipe. Use «2.0 Technical Data» to calculate the correct chimney cross-section. NB! The minimum recommended chimney length is 3.5 m.
- For recommended chimney draught, see «2.0 Technical Data». If the draught is too strong, action must be taken, e.g. install and operate a flue pipe damper in order to reduce the draught.
- The chimney and sweeping hatch must be inspected to ensure they are tightly sealed to prevent leakage. If there is a leak, less air will be pulled through the stove. Your local fire safety office can carry out an inspection of the chimney.
- The chimney must be connected in accordance with the installation instructions of the chimney supplier.
- Before a hole is made in the chimney, the fireplace should be test-mounted in order to correctly mark the position of the fireplace and the hole in the chimney. See Fig. 1 for minimum dimensions.
- It is extremely important for connections to have a degree of flexibility. This is to prevent any movement in the installation leading to the formation of cracks.
- It is important for the joints/flue pipes to be sealed completely. Air leakage may cause malfunction.
- An adapter that makes it easier to install the flue pipe is available as an optional extra. See Chapter 4.11.
- A flue gas bend that alters the direction of the flue gas by more than 45° must be fitted with a sweeping hatch. Note that it is possible to sweep from the inside of the burn chamber. See Chapter 7.2.
- NB: A correct and airtight connection is extremely important for the function of the product.
- Weight must not be transferred from the fireplace structure to the chimney. The fireplace structure must not hinder the chimney's ability to move, and must not be anchored to the chimney.
- When using a semi-insulated flue pipe (starter section), the part must at a minimum comply with class T 400-N1-D-Vm-L50050-G100. For installation requirements, see drawing.
- The function of the chimney and the flue pipe in terms of safety distances must be met. The chimney shall be proven according to EN 13384-2:2015+A1:2019 depending on the individual situation on site.

4.8 Before installation

Make sure that the Jøtul C 24 fits inside the hearth or surround, Fig. 1 shows the minimum dimensions. You must allow space between the cassette and the masonry for thermal expansion of the cassette stove. The hearth must be cleaned thoroughly before installation. It is important to remove old soot and tar that has collected in the hearth to prevent an unpleasant smell in the room. Use a suitable detergent.

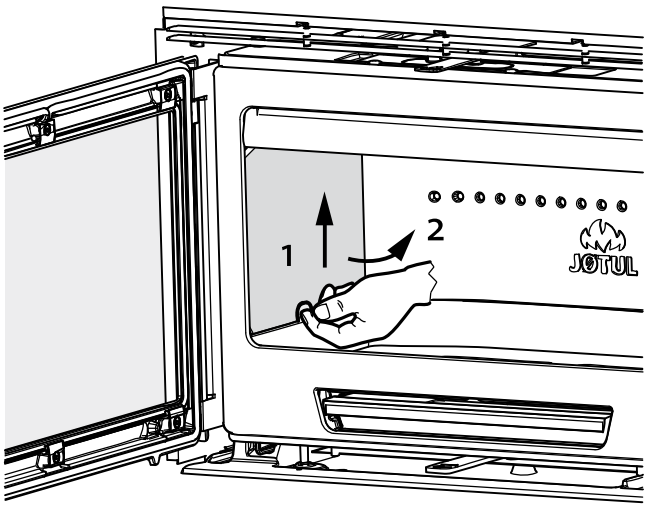
The standard product comes in a two packages.

- When the product is unpacked, remove the bag of screws and the box with the outside air connector, 2 hot air outlet connectors and the oven glove from the burn chamber.
- Also remove the ash pan, fire grate and a wooden block (used for transportation) just below the product's smoke outlet.
- Check the product for signs of damage and make sure that the control handles work.

4.9 Door hinge reversal

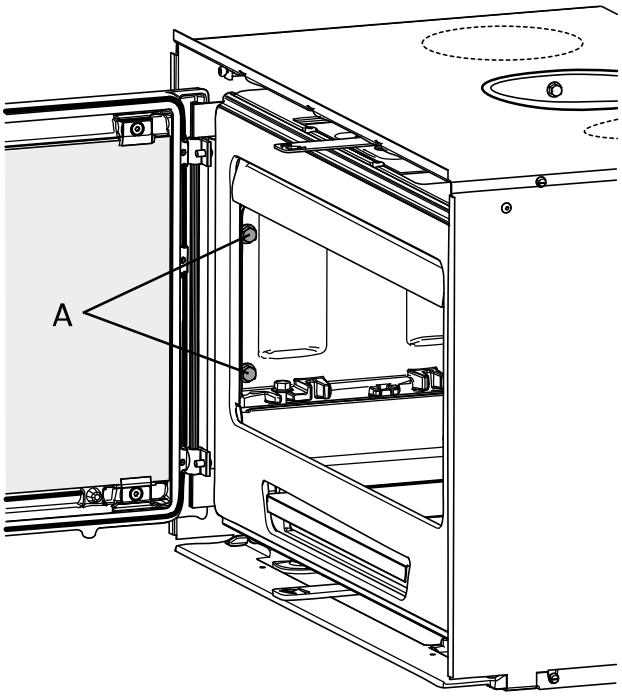
It is possible to change the door of the Jøtul C 24 from left-hinged to right. If you wish to change the hinges, this should be done before installation. If you do not wish to change the hinges, proceed to Chapter 4.10.

Fig. 3



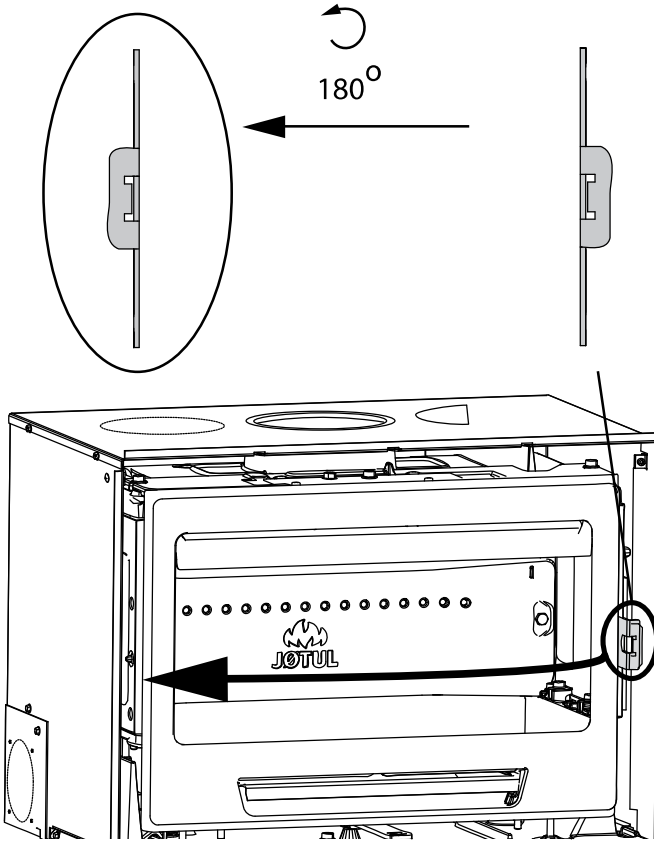
1. Remove the side burn plates by lifting them slightly and pulling out at the bottom.

Fig. 4



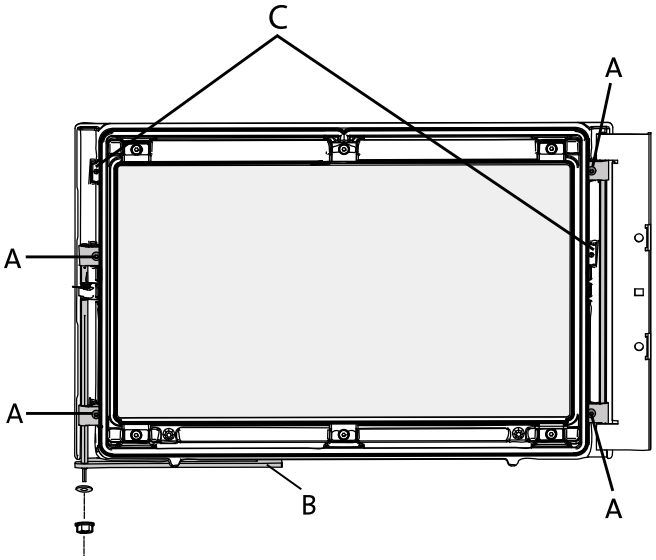
2. Loosen the 2 screws (Fig. 4A) holding the hinges in place. Hold the door so that it does not fall down when loosening the last screw.
3. Place the door face down on a flat surface.

Fig. 5



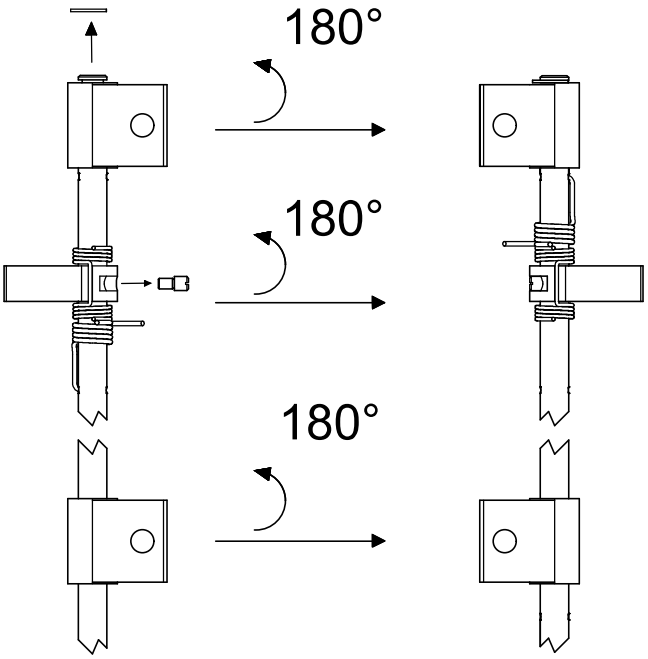
4. Remove the lock catch on the right-hand side of the product and attach it to where the door hinges were on the left-hand side.

Fig. 6



5. Remove the handle (**Fig. 6B**) from the door lock. Loosen the 4 screws (**Fig. 6A**) holding the door lock and hinges in place. Scrape any traces of glue off the surfaces (**Fig. 6C**).

Fig. 7



6. Rotate the parts of the door lock axis by 180°.

Fig. 8