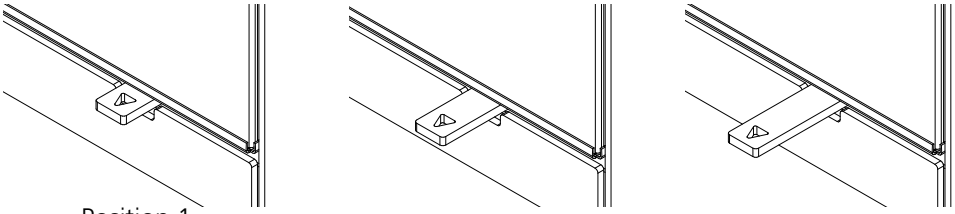
RAIS®
ART OF FIRE

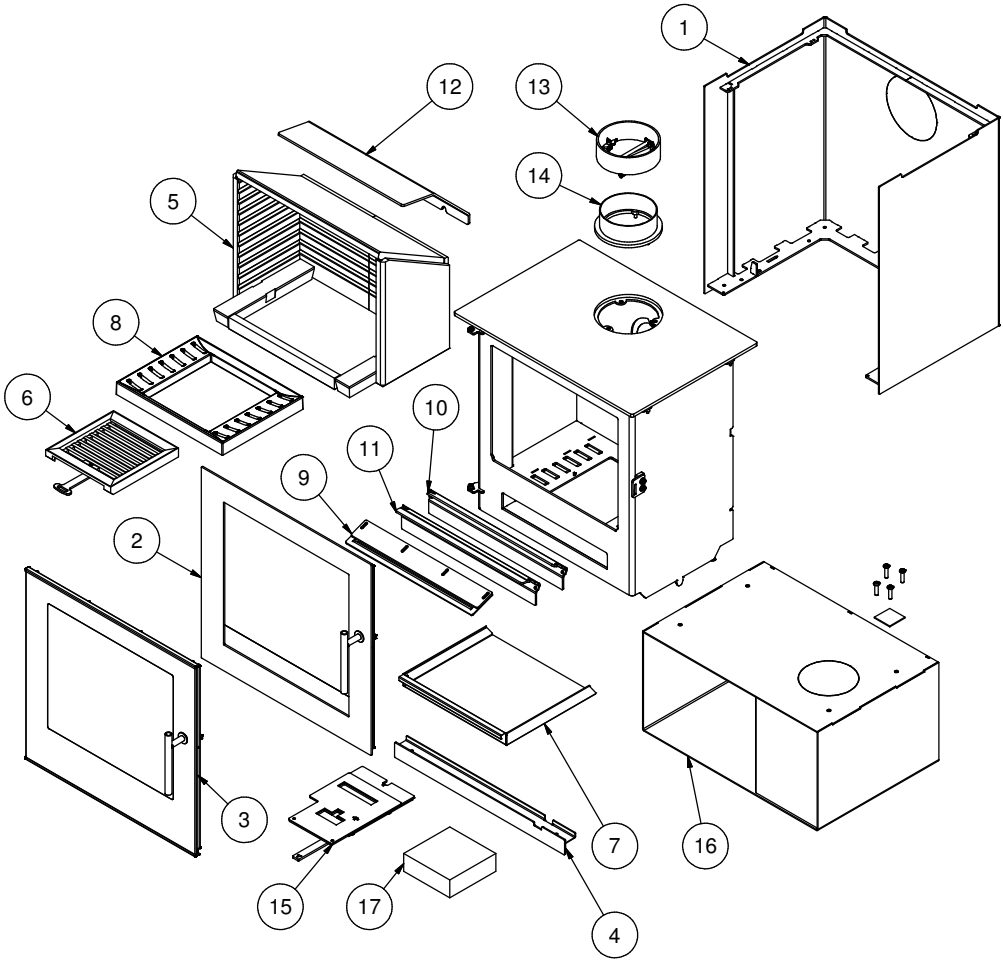
BRUGERMANUAL
USER MANUAL

RAIS Q-Tee II

Brug af brændeovn / Using the wood burning stove



Reservedelstegning / Spare parts



EC CERTIFICATE AND DECLARATION OF CONFORMITY (back of the user manual)

Mærkeplade RAIS Q-Tee II
Manufacturer's plate RAIS Q-Tee II

CE

Produced at:

RAIS A/S, Industrivej 20, 9900 Frederikshavn, Danmark

EN 13240:2001+A2:2004
EC.NO: 838

13

Raumheizer für feste Brennstoffe
Appliance fired by wood
Poële pour combustibles solides

Q-Tee II

AFSTAND TIL BRÆNDBART, BAGVÆG **ABSTAND ZU BRENNBAREN BAUTEILEN, HINTEN** **DISTANCE TO COMBUSTIBLE BACK WALL** **DIST. ENTRE COMPOSANTS COMBUSTIBLES, ARRIÈRE**	**DK:450 mm/SE BRUGERVEJLEDNING** **DE:450 mm/SIEHE BEDIENUNGSANLEITUNG** **UK:450 mm/SEE USER MANUAL** **FR:450 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR**
AFSTAND TIL BRÆNDBART, SIDEVÆG **ABSTAND ZU BRENNBAREN BAUTEILEN, SEITE** **DISTANCE TO COMBUSTIBLE SIDE WALL** **DISTANCE ENTRE COMPOSANTS COMBUSTIBLES, COTÉ**	**DK:400 mm/SE BRUGERVEJLEDNING** **DE:400 mm/SIEHE BEDIENUNGSANLEITUNG** **UK:400 mm/SEE USER MANUAL** **FR:400 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR**
AFSTAND TIL BRÆNDBART, MØBLERING **ABSTAND VORNE ZU BRENNBAREN MÖBELN** **DISTANCE TO FURNITURE AT THE FRONT** **DISTANCE ENTRE COMPOSANTS COMBUSTIBLES, DEVANT**	**DK:1200 mm/SE BRUGERVEJLEDNING** **DE:1200 mm/SIEHE BEDIENUNGSANLEITUNG** **UK:1200 mm/SEE USER MANUAL** **FR:1200 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR**
CO EMISSION **CO EMISSION IN DEN VERBRENNUNGSPRODUKTEN** **EMISSION OF CO IN COMBUSTION PRODUCTS** **EMISSION CO DANS LES PRODUITS COMBUSTIBLES**	**DK: 0,0791%** **DE: 0,0791% / 989 mg/Nm3** **UK: 0,0791%** **FR: 0,0791%**
STØV / STAUB / **DUST / POUSSIÈRES:**	**DK: 14 mg/Nm3 / DE: 14 mg/Nm3** **UK: 14 mg/Nm3 / FR: 14 mg/Nm3**
RØGGASTEMPERATUR / ABGASTEMPERATUR / **FLUE GAS TEMPERATURE / TEMPÉRATURE DES GAZ DE FUMÉE:**	**DK: 263°C / DE: 263°C** **UK: 263°C / FR: 263°C**
NOMINEL EFFEKT / HEIZLEISTUNG / **THERMAL OUTPUT / PUISSANCE CALORIFIQUE:**	**DK: 6,5 kW / DE: 6,5 kW** **UK: 6,5 kW / FR: 6,5 kW**
VIRKNINGSGRAD / ENERGIEEFFIZIENZ / **ENERGY EFFIENCY /EFFICACITÉ ÉNERGÉTIQUE:**	**DK: 81% / DE: 81%** **UK: 81% / FR: 81%**
DK: Brug kun anbefalede brændsler. Følg instrukserne i brugermanualen. Anordningen er egnet til røggassamleledning og intervalfyring.	**DK: BRÆNDE**
DE: Lesen und befolgen Sie die Bedienungsanleitung. Zeitbrandfeuerstätte. Nur empfohlene Brennstoffe einsetzen.	**DE: HOLZ**
UK: Fuel types (only recommended). Follow the installation and operating instruction manual. Intermittent operation.	**UK: WOOD**
F: Veuillez lire et observer les instructions du mode d'emploi. Foyer à durée de combustion limitée, homologué pour cheminée à connexions multiples. Utiliser seulement les combustibles recommandés.	**FR: BOIS**

Hergestellt für /Produced for:

ATTIKA FEUER AG, Brunnmatt 16, CH-6330 Cham / RAIS A/S, Industrivej 20, DK-9900 Frederikshavn

15a B-VG
VKF-NR:
XXXXX

FYR MILJØVENLIGT!

5 Miljøvenlige råd til fornuftig fyring
- sund fornuft for både miljø og pengepung.

1. Effektiv optænding. Brug tørt kvas, pindebrænde og evt. en smule avispapir. Åbn luftspjældet, så der tilføres rigeligt med luft, så gasserne fra det opvarmede træ afbrændes hurtigt.

2. Fyr kun med lidt brænde ad gangen - det giver den bedste forbrænding. Husk at der skal rigeligt luft til, hver gang der lægges nyt brænde i ovnen.

3. Når flammerne er blusset ned skal luftspjældet justeres, så lufttilførslen nedsættes.

4. Når der kun er glødende trækul tilbage, kan lufttilførslen nedsættes yderligere, så varmebehovet netop dækkes. Med en lavere lufttilførsel brænder trækullene langsommere og varmetabet gennem skorstenen reduceres.

5. Brug kun tørt træ - det vil sige træ med en fugtighed på 15 - 22 procent.

Ovnen er pakket i emballage som kan genbruges. Dette skal bortskaffes i henhold til national bestemmelse vedr. bortskaffelse af affald.

Glasset kan ikke genbruges.
Glasset skal smides væk sammen med restaffald fra keramik og porcelæn. Ildfast glas har højere smeltetemperatur, og kan derfor ikke genbruges.
Når du sørger for at ildfast glas ikke havner i returprodukterne, er det en hjælp som er et vigtigt bidrag for miljøet.

RAIS Q-Tee II

Revision : 2
Dato : 27 maj 2013

Indledning

Tillykke med Deres nye RAIS brændeovn.

En RAIS brændeovn er mere end blot en varmekilde, den er også udtryk for, at De lægger vægt på design og høj kvalitet i Deres hjem.

For at få mest mulig fornøjelse og nytte af Deres nye brændeovn er det vigtigt, at de gennemlæser manualen grundigt, inden brændeovnen stilles op og tages i brug.

Af hensyn til garantien og ved alle henvendelser angående ovnen i øvrigt er det vigtigt, at De kan oplyse ovnens produktionsnummer. Vi anbefaler derfor, at De skriver nummeret i skemaet nedenfor. Produktionsnummeret står nederst på ovnen.

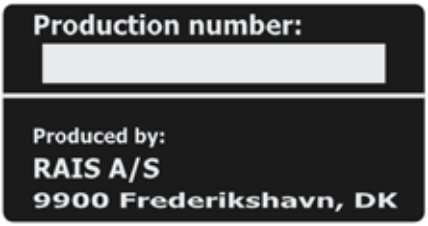
Garanti

Der ydes 5 års garanti på Deres RAIS brændeovn. Garantien omfatter dog ikke varmeisolerende materiale, glas og pakninger.
Ved enhver ændring af ovnen bortfalder garantien.

Specielt for Danmark - Nye regler for installation af brændeovne

1. januar 2008 trådte en ny bekendtgørelse for brændeovne i kraft. Hermed er der kommet nye krav til installationer af brændeovne mht. emission og dokumentation. Konsekvensen er, at fra 1. juni 2008 skal alle nyinstallerede brændeovne have en EN godkendelse samt en norsk eller tysk godkendelse.

Samtidig indføres der en prøvningsattest, der skal sikre, at kravet til emission er opfyldt. Denne attest findes bagest i denne bruger manual, og skal underskrives af skorstensfejeren efter installation. Vær opmærksom på, at attesten skal underskrives før ibrugtagning og følge ovnen i hele dens levetid.



Dato: Forhandler:

Specifikationer

	Q-Tee II
Nominel effekt (kW)	6,5
Min./Max. Effekt(kW)	3-8
Opvarmningsareal (m^2)	45-120
Ovnens bredde/dybde/højde (mm) uden stillefødder	582x410x598
Ovnens bredde/dybde/højde inkl. sokkel (mm)	582x410x883
Brændkammer bredde/dybde/højde (mm)	446x277x265
Anbefalet træmængde ved påfyldning (kg) (Fordelt på 2 stk brænde à ca. 26-33 cm)	1,8
Min. Røgtræk ved drifttemp. (Pascal)	-12
Vægt af ovn / ovnvægt med sokkel (kg)	125/147
Virkningsgrad (%)	81
CO-emission henført til 13% O_2 (%)	0,0791
Partikelemission efter NS3058/3059 (g/kg)	1,868
Støvmåling efter Din+ (mg/Nm^3)	14
Røggasmasseflow (g/s)	5,2
Røggastemperatur (°C)	263
Placering	Fritstående
Bemærkning	Leveres på en stålsokkel
Intermitterende drift	Påfyldning bør ske indenfor 3 timer

Konvektion

RAIS ovne er konvektionsovne. Dette bevirker, at ovnenes bag- og sidepaneler ikke bliver overophedede. Konvektion betyder, at der opstår luftcirkulation, således at varmen fordeles mere jævnt i hele rummet. Den kolde luft trækkes ind ved ovnens fod og op gennem konvektionskanalen, der løber langs ovnens brændkammer. Den opvarmede luft strømmer ud ved ovnens top, og sikrer derved cirkulation af varmt luft i rummet.

Skorsten

Skorstenen er drivkraften for at få brændeovnen til at fungere. Husk, at selv den bedste brændeovn ikke fungerer optimalt, hvis der ikke er det fornødne og korrekte træk i skorstenen.

Skorstenen skal være så høj, at trækforholdene er i orden -14 til -18 pascal. Hvis det anbefalede skorstenstræk ikke opnås, kan der opstå problemer med røg ud af lågen ved fyring. Skorstenens længde, regnet fra brændeovnens top, bør ikke være kortere end 3 meter og være ført mindst 80 cm over tagrygningen. Placeres skorstenen ved husets sider, bør toppen af skorstenen aldrig være lavere end tagryg eller tagets højeste punkt. Bemærk, at der ofte er nationale og lokale bestemmelser ved hus med stråtag.

Vær også opmærksom på trækforholdene ved skorsten med 2 kerner.

Ovnen egner sig til tilslutning med røggassamleledning, men vi anbefaler at indføringerne placeres således, at der bliver en frihøjdeforskel mellem dem på min. 250 mm.

Røgafgangsstudsen er 150 mm i diameter.

Hvis trækket er for stort, anbefales det at forsyne skorsten eller røgrør med et reguleringsspjæld. Hvis dette monteres skal man sikre et frit gennemstrømningsareal på minimum 20 cm² ved lukket regulerrings-spjæld. Det medfører at energien i brændslet ikke udnyttes optimalt. Hvis De er i tvivl om skorstenens tilstand bør De altid kontakte skorstensfejeren.

Husk, der skal være fri adgang til renselågen.

Installation

Ovnen kan stå frit på gulv.

Det er vigtigt at ovnen bliver korrekt installeret af hensyn til både miljø og sikkerhed.

Når brændeovnen installeres, er der nogle regler som SKAL overholdes:

Ovnen skal opsættes og installeres i henhold til alle gældende nationale og lokale regler og forordninger. Lokale myndigheder samt skorstensfejermester bør kontaktes før opstilling. RAIS anbefaler brug af kompetente installatører.

Der må ikke foretages uautoriserede ændringer af ovnen.

BEMÆRK: Inden brændeovnen må tages i brug, skal opstillingen anmeldes til den lokale skorstensfejer.

Der skal være rigelig tilførsel af frisk luft i opstillingsrummet for at sikre en god forbrænding. Bemærk, at eventuel mekanisk udsugning som f.eks. en emhætte kan formindske lufttilførslen. Eventuelle luftriste skal placeres således, at lufttilførslen ikke blokeres. Ovnen har et luftforbrug på 10-20m^3/t.

Gulvkonstruktionen skal kunne bære vægten af brændeovnen såvel som en eventuel skorsten.

Ovnen placeres på ildfast materiale (gælder for den fritstående model).

Når De vælger, hvor De vil placere Deres RAIS brændeovn, bør De tænke på varmefordelingen til de andre rum. Så får De mest mulig fornøjelse af Deres ovn. Ovnen skal placeres i sikker afstand fra brændbart materiale.

Se mærkepladen på brændeovnen.

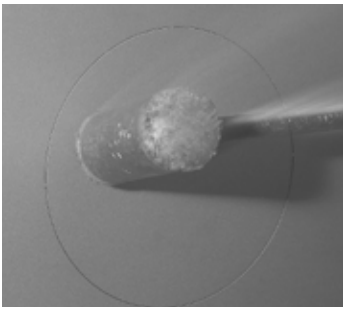
Ved modtagelse inspiceres ovnen for defekter.

NB!!

RAIS A/S anbefaler at ovnen installeres af en autoriseret/kompetent Rais forhandler eller en pejsemontør anbefalet af en autoriseret Rais forhandler.
Se www.rais.com for forhandleroversigt.

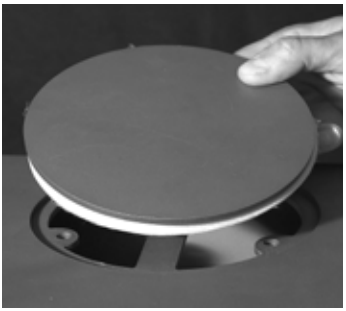
Ændring af skorstenstilslutning

Ovnen leveres klargjort til topafgang, men kan ændres til bagudgang på følgende måde:



Slå udslagsblanketten ud på omklædningen.

Blænddæksel og pakning tages af og sættes på hullet i toppen - vær opmærksom på at pakningen sidder rigtigt. Det hele skrues sammen med de 3 M6 møtrikker.



Røgafgangsstudsen - leveres af forhandleren - og holderen for øverste røgleder monteres med 3 M6x20 cylinderskruer og M6 møtrikker.

Øverste røgleder, røgvendeplade og topplade monteres i omvendt rækkefølge

Placering af Q-Tee II

Opstillingsafstande ved brændbar væg

For at få afklaret om den væg brændeovnen skal stå ved er brændbar, kan du kontakte din bygningsarkitekt eller de lokale bygningsmyndigheder.
Ovnen placeres på ikke-brændbart materiale, såsom beton, mursten el. lign.

Normal opstilling - retvinklet

	Uisoleret røgrør	Isoleret røgrør
A. Møbleringsafstand (min.)	1200 mm	1200 mm

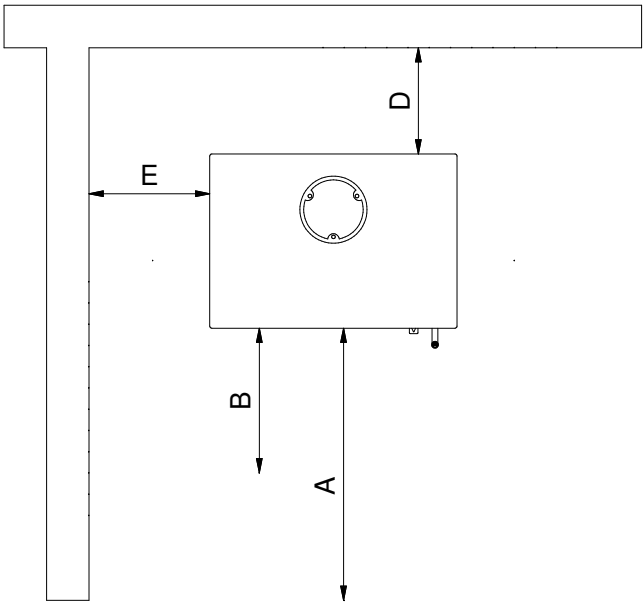
Afstand til brændbart materiale (min.)

B. foran (gulv)	600 mm	600 mm
C. til siden (gulv) - hvor målet ikke er angivet, følges de nationale og lokale bestemmelser		
D. bagud (væg)	450 mm	350 mm
E. til side til væg	400 mm	400 mm

Hvis gulvet er brændbart, skal ovnen placeres på ikke-brændbart materiale, såsom stål-plade, glasplade, klinker eller kunstskiferplade og hæves min. 250mm over gulv med f.eks. en ikke brændbar sokkel.

Afstand til brændbart materiale (min.)

B. foran (gulv)	300 mm	300 mm



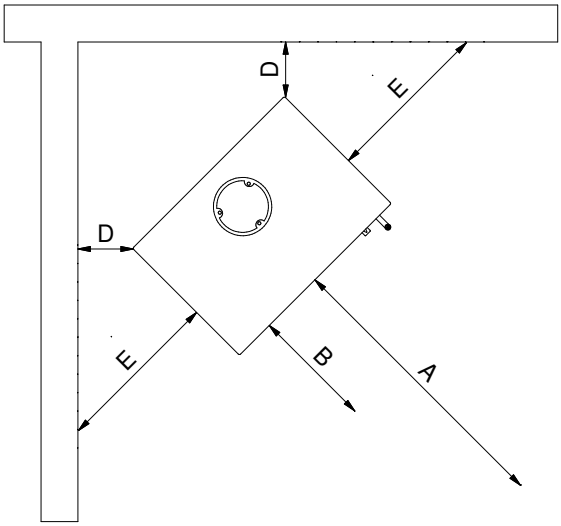
Hjørneopstilling 45°

Ovnen placeres på ikke-brændbart materiale, såsom beton, mursten el. lign.

	Uisoleret røgrør	Isoleret røgrør
A. Møbleringsafstand (min.)	1200 mm	1200 mm
Afstand til brændbart materiale (min.)		
B. foran (gulv)	600 mm	600 mm
C. til siden (gulv) - hvor målet ikke er angivet, følges de nationale og lokale bestemmelser		
D. bagud (væg)	300 mm	200 mm
E. til side til væg	400 mm	400 mm

Hvis gulvet er brændbart, skal ovnen placeres på ikke-brændbart materiale, såsom stålplade, glasplade, klinker eller kunstskiferplade og hæves min. 250mm over gulv med f.eks. en ikke brændbar sokkel.

Afstand til brændbart materiale (min.)		
B. foran (gulv)	300 mm	300 mm



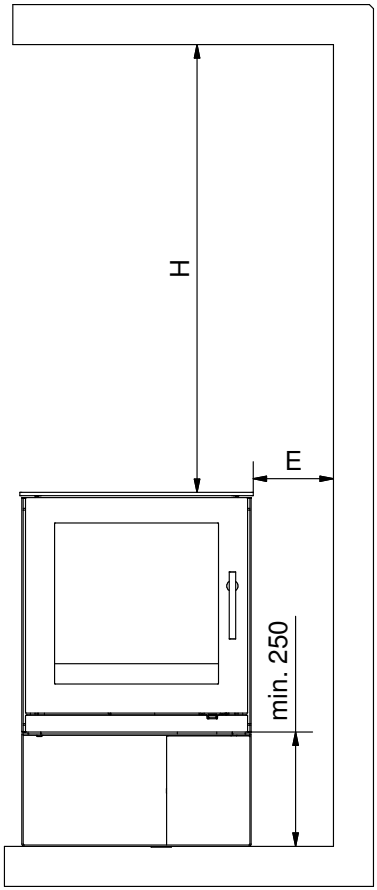
Placering af Q-Tee II over gulv

Opstillingsafstande på brændbar gulv og brændbar sidevæg

Hvis gulvet er brændbart, skal ovnen placeres på ikke-brændbart materiale, såsom stålplade, glasplade, klinker eller kunstskiferplade og hæves over gulvet med f.eks. en ikke brændbar sokkel.

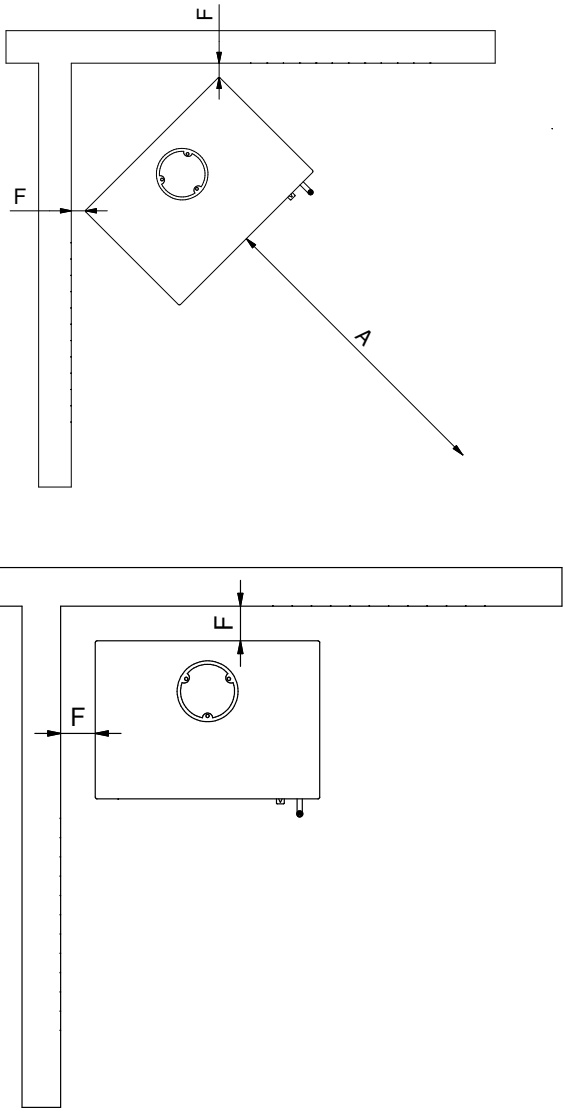
Normal opstilling - retvinklet

Afstand til brændbart materiale (min.)	Uisoleret røgrør	Isoleret røgrør
E. til side til brændbar væg	400 mm	400 mm
G. til gulv	250 mm	250 mm
H. til loft	800 mm	800 mm



Opstillingsafstande ved ikke-brændbar væg

Vi anbefaler en minimumsafstand til ikke-brændbart materiale på 50 mm (F) til rengøring. Der skal altid være mulighed for adgang til renselåge.



Med hensyn til valg af gulv og afstande til gulv henvises til oplysninger på side 9 til 11..

Brændsel

Ovnen er designet og godkendt iht. EN 13240, EN 13229 og NS 3058/3059 til forbrænding af kløvet, tørt birk. Brændet skal have et vandindhold på 15-22 % og en max. længde på brændkammerets længde minus 50-60 mm.

Det giver både løbesod, miljøgener og en dårlig brændselsøkonomi at fyre med vådt træ. Nyfældet træ indeholder ca. 60-70 % vand, og er fuldstændig uegnet at fyre med. De skal regne med, at nyfældet træ skal stå stakket til tørring i min. 1 år.
Træ med en diameter på mere end 100 mm bør kløves. Uanset størrelse bør træet altid have mindst èn overflade uden bark.

Det er ikke tilladt at afbrænde lakeret, lamineret, imprægneret træ, træ med kunststofbelægning, malet affaldstræ, spånplade, krydsfiner, husaffald, papirbriketter og stenkul, da det ved afbrænding udvikler ildelugtende røg, der kan være giftig.

Ved afbrænding af ovenstående og ved større fyringsmængder end anbefalet, belastes ovnen med en større varmemængde, hvilket medfører en højere skorstenstemperatur og en lavere virkningsgrad. Derved kan ovn og skorsten beskadiges og garantien bortfalder.

Træets brændværdi hænger meget sammen med træets fugtighed. Fugtigt træ har lav brændværdi. Jo mere vand træet indeholder - jo mere energi bruges der på at få det til at fordampe og denne energi går tabt.

BRUG KUN ANBEFALEDE BRÆNDSLER

Den efterfølgende tabel viser brændværdien i forskellige træsorter, der har været lagret i 2 år, og har en restfugtighed på 15-17 %.

Træsort	Kg tørt træ pr. m^3	I forhold til bøg/eg
Avnbøg	640	110%
Bøg og eg	580	100%
Ask	570	98%
Ahorn	540	93%
Birk	510	88%
Bjergfyr	480	83%
Gran	390	67%
Poppel	380	65%

1 kg træ giver samme varmeenergi uanset træsort. 1 kg bøg fylder blot mindre end 1 kg gran.

Tørring og lagring

Træ kræver tid til at tørre : en korrekt lufttørring varer ca. 2 år.

Her følger nogle tips:

Opbevar træet savet, kløvet og stablet på et luftigt, solrigt sted beskyttet mod regn (sydsiden af huset er særdeles velegnet).
Opbevar brændestablerne med en håndsbredde afstand, det sikrer at den gennemstrømmende luft tager fugtigheden med ud.
Undgå at dække brændestablerne med plastik, da det hindrer fugtigheden i at komme ud. Det er en god idè at tage brænde ind 2-3 dage før det skal bruges.

Regulering af forbrændingsluft

Alle RAIS ovne er forsynet med èt-grebs betjeningshåndtag til regulering af spjældet. Ovnens individuelle regulering kan ses på illustrationerne.

Primærluft er den forbrændingsluft der tilsættes den primære forbrændingszone, dvs. brændets glødelag. Denne luft, som er kold, bruges kun i optændingsfasen.

Sekundærluft er den luft, der tilsættes i gasforbrændingszonen, dvs. luft som medvirker til forbrænding af pyrolysegasserne(forvarmet luft der bruges til rudeskyld og forbrænding). Denne luft trækkes ind gennem spjældet under brændkammeret og forvarmes via sidekanalerne og sendes ud som varm skylleluft til ruden. Denne varme luft skyller ned langs ruden og holder den fri for sod.

Hullerne (tertiær luften) bagerst og øverst i brændkammeret, medvirker til at forbrænde de sidste gasrester.

Ved indstilling i intervallet mellem position 1 og 2 sikres optimal udnyttelse af energiindholdet i brændet fordi der er ilt til forbrændingen og afbrænding af pyrolysegasserne. Når flammerne er klare gule - er spjældet indstillet rigtigt. At finde den rigtige position kræver lidt fornemmelse som kommer ved brug af ovnen.

Vi fraråder at skrue helt ned for spjældet, fordi man synes det bliver for varmt. For lille lufttilførsel giver en dårlig forbrænding, som kan give høje og farlige røggasser, emissioner og en dårlig virkningsgrad. Det betyder at der komme mørk røg fra skorstenen og at træet brændværdi ikke udnyttes optimalt.

Brug af brændeovn (forrest i manualen)

Indstilling af luftspjæld - der er 3 indstillinger på spjældet.

Position 1

Luftspjældet er lukket , hvilket betyder minimal lufttilførsel.

Position 2

Træk håndtaget ud til 1. hak. Denne position giver fuld sekundærluft. Ved almindelig forbrænding indstilles håndtaget i intervallet mellem 1 og 2. Når flammerne er klare og gule, er spjældet indstillet rigtigt, dvs. der opnås langsom/optimal forbrænding.

Position 3

Træk håndtaget ud til næste hak. Luftspjældet er helt åben og giver delvis sekundærluft og fuld primærluft. Denne position bruges ikke under normal drift.

Ved optænding skal luftspjældet indstilles i position 3.

Kontrol

Hvis asken er hvid og væggene i brændkammeret er fri for sod, når ovnen har været i brug, har luftreguleringen været korrekt, og træet tilstrækkeligt tørt.

Førstegangsoptænding

En forsigtig start betaler sig. Begynd med et lille bål, så brændeovnen kan tilvænnes den høje temperatur. Dette giver den bedste start og eventuelle skader undgås.

Vær opmærksom på, at der kan fremkomme en ejendommelig, men ufarlig lugt og røgudvikling fra ovnens overflade under den første optænding. Det er fordi maling og materiale skal hærde, men lugten forsvinder hurtigt - sørg for kraftig udluftning, gerne gennemtræk.

Under denne proces skal De være påpasselig med ikke at berøre de malede flader, og det anbefales at De jævnligt åbner og lukker lågen for at forhindre lågens pakning i at klæbe fast.

Desuden kan ovnen under opvarmning og nedkøling give såkaldte "kliklyde", dette skyldes de store temperaturforskelle materialet udsættes for.

Brug aldrig nogen form for flydende brændstof til optænding eller for at holde ilden ved lige. Man risikerer en eksplosion.

Når ovnen har stået ubrugt i nogen tid, brug da samme fremgangsmåde som ved førstegangsoptænding.

Optænding og påfyldning (se billeder bagerst i manualen)

OBS: Hvis airsystem er tilsluttet, skal ventilen være åben.

"Top-Down" optænding

Start med at placere 2-3 stk træ - ca. 1-1½kg - i bunden af brændkammeret.
Ovenpå lægges ca. 1kg tørt træ, kløvet til pindebrænde, samt 2-3 sprittabletter eller lignende (1).
Luftspjældet indstilles så det er helt åbent - position 3.

Bålet tændes og lågen lukkes til (2-3). Lad den stå åben ca. 10-15mm.

OBS! Det er vigtigt at få en hurtig optænding af træet.

Når der er klare flammer - efter ca. 10-15 min - lukkes lågen helt (4).
Spjæld - se indstilling af luftspjæld.

Når de sidste flammer er slukket og der er et pænt glødelag (5), påfyldes 2-3 stk. træ.
Luk lågen til, og når ilden har godt fat lukkes lågen helt.
Spjæld - se indstilling af luftspjæld.

Efter ca. 5 min - eller til der er klare blivende gule flammer (6) - lukkes spjældet gradvist.
Den optimale position af spjældet for normal drift er position 2.

RAIS anbefaler, at man påfylder 2-3 stk. træ - ca. 1-1½kg - indenfor 3 timer (intermitterende drift).

OBS!!!

Hold ovnen under skærpet opsyn under optænding.

Under anvendelse skal lågen altid holdes lukket.

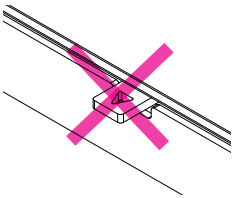
Når du fyrer bør røgen ud af skorstenen være næsten usynlig, blot ses en "flimmer" i luften.

Når du påfylder, skal døren åbnes forsigtigt for at undgå røgudslag. Fyld aldrig træ på, før der er et glødelag i ovnen.

Advarsel!!

Hvis brændet kun ulmer eller ryger, og der tilføres for lidt luft, udvikles der uforbrændte røggasser.
Røggas kan antændes og eksplodere. Det kan give skader på materiel og i værste fald personer.

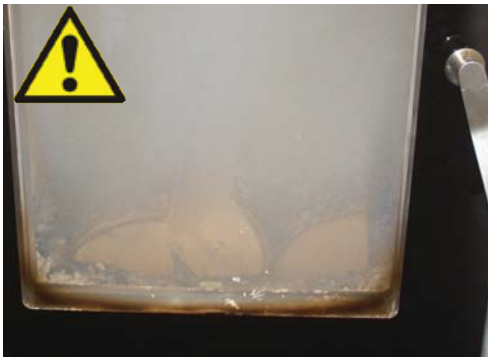
Luk aldrig helt for lufttilførslen når der tændes op i ovnen.



Hvis der kun er få gløder tilbage, skal der tændes op forfra.

Hvis man bare lægger brænde på, tændes bålet ikke, derimod udvikles der uforbrændte røggasser.

Her er der lagt træ på et for lille glødelag, og der tilføres for lidt luft - røgudvikling begynder.



Undgå meget kraftig røgudvikling - fare for røggaseksplosion.

Ved meget kraftig røgudvikling, åbn luftspjældet helt, samt eventuel låge på klem eller tænd op forfra.

Rengøring og pleje

Brændeovn og skorsten skal tilses af en skorstensfejer 1 gang om året. Ved rengøring og pleje skal ovnen være kold.

Er glasset tilsodet:
- Rens glasset jævnligt og kun når det er koldt, ellers brænder soden sig fast.
- Fugt et stykke papir eller avis, dyp det i asken og gnid på det tilsodede glas.
- Gnid efter med et stykke papir og glasset bliver rent.
- Alternativt bruges glasrens, som købes hos din RAIS forhandler.

Udvendig rengøring af malede flader (kold ovn!) foretages med en tør fnugfri klud eller en blød børste.

Rengøring af brændkammer:

Asken skrabes/skovles ud og opbevares i en ikke brændbar beholder indtil den er afkølet. Bortskaffelse af aske sker ved almindelig dagrenovation.

HUSK!! Tøm aldrig brændkammeret helt for aske - bålet brænder bedst ved et lille askelag.

Inden en ny fyringssæson skal skorsten og røggasforbindelsesstykket altid kontrolleres for blokering.
Efterse ovnen udvendigt og indvendigt for skader, specielt pakninger og de varmeisolerende plader (vermaculit).

Rensning af røgveje

Røgvejen består af en røgvenderplade (vermaculit) og en røgchikane (stål). Behandl disse forsigtigt.

Fjern røgvendepladen ved at tippe den op i den ene side og dreje den lidt på skrå.
Tag forsigtigt pladen ud.

Fjern dernæst røgchikanen ved at løfte forenden og tippe bagenden ned.
Tag forsigtigt røgchikanen ud.

Fjern snavs og støv og indsæt i omvendt rækkefølge.

Driftsforstyrrelser

Røgudslag fra låge:

Kan skyldes for lavt træk i skorstenen <12Pa
- kontroller om røgrøret eller skorstenen er stoppet
- kontroller om emhætten er tændt, i givet fald sluk emhætten og åben et vindue/dør i nærheden af ovnen i en kort periode.

Sod på glas:

Kan skyldes at brændet er for vådt.
- sørg for at ovnen varmes ordentlig op under optænding inden lågen lukkes

Kan skyldes at spjældet er reguleret for langt ned.

Ovn brænder for stærkt kan skyldes:
- utæthed ved lågepakning
- for stort skorstenstræk >22 Pa, reguleringsspjæld bør monteres.

Ovn brænder for svagt kan skyldes:
- for lidt brænde
- for lidt lufttilførsel til rumventilation
- manglende rensning af røgveje
- utæt skorsten
- utæthed mellem skorsten og røgrør

Ved vedvarende driftforstyrrelser anbefales det at kontakte din RAIS forhandler eller skorstensfejer.

ADVARSEL!!

Ved skorstensbrand:
- luk for alle lufttilførsler på brændeovnen
- tilkald brændvæsenet
- brug aldrig vand til slukning!
- efterfølgende skal De kontakte skorstensfejeren for kontrol af ovn og skorsten.

VIGTIGT!!

For at opnå en sikker forbrænding skal der være klare gule flammer eller klare gløder - træet må ikke ligge og "ulme" - luk derfor aldrig helt for lufttilførslen.

Hvis brændet kun ulmer eller ryger, og der tilføres for lidt luft, udvikles der uforbrændte røggasser.
Røggas kan antændes og eksplodere. Det kan give skader på materiel og i værste fald personer.

Luk aldrig helt for lufttilførslen når der tændes op i ovnen.

Reservedele Q-Tee II

Hvis der anvendes andre reservedele end dem som anbefalet af RAIS, bortfalder garantien.

Alle udskiftelige dele kan købes som reservedele hos din RAIS forhandler.
Se reservedelstegning for de enkelte produkter (forrest i brugermanualen).

Pos.	Antal	Varenr.	Beskrivelse
1	1	838010290	Omklædning Q-Tee II
2	1	8382090	Stållåge
3	1	8381090	Glaslåge
4	1	838052490	Afdækning Q-Tee II
5	1	8382200	Skamolsæt
6	1	8383800	Rysterist
7	1	8384001	Askeskuffe
8	1	8383810	Fast rist
9	1	838121090	Skylleluftplade
10	1	838121590	Turboplade (stållåge)
11	1	838121190	Turboplade (glaslåge)
12	1	8381301	Røgchikane
13	1	61-00	Røgafgangsstuds 6”
14	1	61-105	Røgafgangsstuds 5”
15	1	8380990	Spjæld
16	1	838040190	Sokkel komplet
17	1	8385500	Pakningssæt

TEST Reg.nr. 300

TEKNOLOGISK INSTITUT
Akkrediteret prøvningsorgan, DANAK-akkreditering nr. 300

TEKNOLOGISK INSTITUT
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Kongsvang Allé 29
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Fax +45 72 20 10 19
Info@teknologisk.dk

PRØVNINGSATTEST

Uddrag af rapport nr. 300-ELAB-1882-EN og 300-ELAB-1882-NS

Emne: Brændeovn: Rais Q-Tee II

Rekvirent: Rais A/S, Industrivej 20, 9900 Frederikshavn

Procedure:

X	Prøvning efter DS/EN13240/A2:2004
X	Prøvning efter NS3058-1, NS 3058-2 og NS3059 (partikelmåling)
X	Støvmåling efter DIN plus Zertifizierungsprogramm

PRØVNINGSRESULTATER

Prøvning ved nominel ydelse iht. EN 13240 afsnit A4.7 er foretaget med brænde, og følgende resultater blev opnået:

Nominel ydelse: 5,6 kW

CO-emission henført til 13 % O_2: 0,08 %

Virkningsgrad: 81 %

Røggastemperatur: 263°C

Sikkerhedsprøvning er foretaget iht. EN 13240 afsnit A4.9.2.2. Ved følgende afstande til brændbart materiale er temperaturen mindre end 65°C over rumtemperaturen:

Afstand til sidevæg: Se vejledningen **Afstand til bagvæg:** se vejledningen

Partikelmåling iht. NS 3058 og/eller støvmåling iht. metode DIN plus:

Partikelemission efter NS 3058: 2,06 g/kg (tørstof) middelværdi (maks. 10)

Partikelemission efter NS 3058: 2,28 g/kg (tørstof) maksimalt (maks. 20)

Støvemission efter metode DIN plus: 14 mg/Nm³ ved 13 % O_2 (maks. 75)

Bemærk venligst, at de oplyste værdier er et uddrag af prøvningsrapporten. For yderligere oplysninger henvises til prøvningsrapporten, se nummer ovenfor.
Teknologisk Institut er notificeret prøvningsorgan med ID-nr. 1235.

Århus, den 2. april 2013 Jes Sig Andersen Faglig leder	Skorstensfejerpåtegning

På baggrund af ovennævnte partikelemission attesteres det hermed, at fyringsanlægget opfylder emissionskravene i bilag 1 til Bekendtgørelse nr. 1432 af 11/12/2007 vedr. regulering af luftforurening fra brændeovne og brændekedler samt visse andre faste anlæg til energiproduktion.

Y:\Organization\C014_Vedvarende Energi og Transport\ELAB\Drift\Attester\Brovn\Alle udstedte Attester\Rais-1882-Rais Q-Tee II.doc

FIRE ENVIRONMENTALLY FRIENDLY!

5 Eco-friendly advices for sensible heating
- common sense both environmentally and economically.

1. Effective lighting. Use dry brushwood, kindling and possible a piece of news paper. Open the air damper, so plenty of air is fed to the stove and the gases from the heated wood can burn rapidly.

2. Light the fire with only little wood at a time - this gives the best combustion. Remember plenty of air for every time new wood is added.

3. When the flames are diminished, adjust the air damper so that the air supply is reduced

4. When only glowing embers remain, air flow can be reduced further, so heating demand is just covered. With a lower air supply the charcoal will burn slower and the heat loss through the chimney is reduced.

5. Use only dry wood - ie wood with a humidity of 15 to 22 percent.

The oven is wrapped in packaging that is recyclable. This must be disposed of according to national rules regarding the disposal of waste.

The glass can not be reused.
The glass should be discarded along with the residual waste from
ceramics and porcelain.
Pyrex glass has a higher melting temperature and therefore can not be reused.
If discarded you make an important positive contribution to the environment.

RAIS Q-Tee II

Revision : 2
Dato : 27th may 2013

Introduction

Thank you for purchasing a RAIS wood burning stove.

The Q-TEE II is a multi fuel stove, as it can burn wood and other smokeless fuels (coal).

A RAIS wood burning stove is more than just a heat source: it also shows that you care about design and quality in your home.

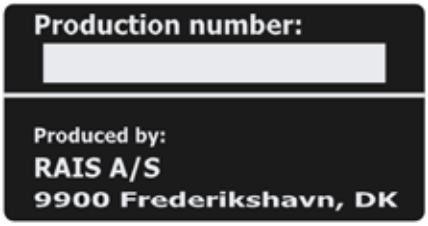
To make the most of your wood burning stove it is important that you read the manual thoroughly, before installing and using it.

In the case of warranty coverage, and for general queries regarding your wood burning stove, it is important that you know the stove's production number. We therefore recommend that you note down the number in the table below. The production number is located on the back of the stove at the bottom.

Warranty

Your RAIS wood burning stove comes with a 5 year warranty. The warranty, however, does not cover heat-insulating materials, glass and seals.

Any alterations made to the stove will void the warranty.



Date: Distributor:

Specifications

	Q-Tee II
Nominal output wood / coal(kW)	6.5 / 8
Min./Max. output wood / coal (kW)	3-8 / 4-9
Heating area (m^2)	45-135
Stove's width/depth/height (mm) without positioning feet	582x410x598
Stove's width/depth/height incl. socket(mm)	582x410x883
Combustion chamber's width/depth/height (mm)	446x277x265
Recommended amount of wood / coal when fuelling (kg). Wood: distributed on 2-3 logs of wood of approx. 25 cm	1.8 / 2
Min. uptake / Min. draught (Pascal)	-12
Weight of stove / Weight of stove w. socket (kg)	125 / 147
Efficiency wood / coal (%)	81 / 77
CO-emission at 13% O_2 wood / coal (%)	0.0791 / 0.1448
Particles acc. to NS3058/3059 (wood) (g/kg)	1.868
Dust measured acc. to Din+ (wood) (mg/Nm^3)	14
Smoke gas mass flow wood / coal (g/s)	5.2 / 3.5
Smoke gas temperature wood / coal (°C)	263 / 310
Placement	Free standing
Remarks	Can be fitted with a steel socket
Intermittent operation	Refuelling should be undertaken within 3 hours

Installation instructions

The following pages give instructions for the safe and proper installation of this heating appliance in the UK. These instructions cover the basic principles of installation, although detail may need slight modification to suit particular local site conditions. In all cases the installation must comply with current UK Building Regulations, Local Authority Byelaws and other specifications or regulations as they affect the installation of the stove. Please note that it is a legal requirement under England and Wales Building Regulations that the installation of the stove is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at www.hetas.co.uk.

It should be noted that the current Building Regulations requirements are given in Approved Document J. These requirements may also be met by adopting the relevant recommendations given in British Standards BS 8303 and BS EN 15287-1.

WARNING: Health and Safety Advice Notice
The installation of this heating appliance is governed by the Health and Safety at Work Act 1974. It is the responsibility of the installer to ensure that all requirements of this Act are met during the installation works. Attention is drawn in particular to the following:

Handling:
The appliance is a heavy item and adequate facilities must be available for loading, unloading and site handling.

Fire Cement:
Some types of fire cement are caustic and should not be allowed to come into contact with the skin. Protective gloves should be worn when handling fire cement. In case of contact with the skin wash immediately with plenty of water.

Asbestos:
This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts:
When installing or servicing this stove care should be taken to avoid the possibility of personal injury.

Important Warning –Preparatory Work and Safety Checks:

- This stove must not be installed into a chimney that serves any other heating appliance.
- It's recommendet not have an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.
- If this appliance is installed into an existing chimney, the chimney must first be swept and examined for soundness and suitability before the appliance is installed (see also section headed "Chimney").

Convection

RAIS stoves are convection stoves. This means that the stove's back and side panels are not over-heated. Convection means that there is a circulation of air, which ensures that the heat is distributed more evenly throughout the entire room. The cold air is sucked in at the base of the stove up through the convection channel, which runs along the stove's combustion chamber. The heated air pours out at the top of the stove, which ensures a circulation of warm air throughout the room.

Chimney

The chimney is the driving force which makes the stove function. In order for the stove to perform satisfactorily the chimney height must be sufficient to ensure the correct draught of 14 to 18 Pa so as to clear the products of combustion and prevent problems of smoke emanating into the room when firing.
NOTE: A chimney height of not less than 4.5 metres measured vertically from the outlet of the stove to the top of the chimney should be satisfactory. Alternatively the calculation procedure given in BS 5854:1980 may be used as the basis for deciding whether a particular chimney design will provide sufficient draught.

The outlet from the chimney should be above the roof of the building in accordance with the provisions of Building Regulations Approved Document J.

If installation is into an existing chimney then it must be sound and have no cracks or other faults which might allow fumes into the house. Older properties, especially, may have chimney faults or the cross section may be too large i.e. more than 230 mm x 230 mm. Remedial action should be taken, if required, seeking expert advice, if necessary. If it is found necessary to line the chimney then a flue liner suitable for solid fuel must be used in accordance with Building Regulations Approved Document J.

Any existing chimney must be clear of obstruction and have been swept clean immediately before installation of the stove. If the stove is fitted in place of an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

If there is no existing chimney then either a prefabricated block chimney in accordance with Building Regulations Approved Document J or a twin walled insulated stainless steel flue to BS 1856-1 can be used. These chimneys must be fitted in accordance with the manufacturer's instructions and Building Regulations.

A single wall metal fluepipe is suitable for connecting the stove to the chimney but is not suitable for using for the complete chimney. The chimney and connecting fluepipe must have a minimum diameter of 125 mm. Any bend in the chimney or connecting fluepipe should not exceed 45°. 90°bends should not be used.

Combustible material should not be located where the heat dissipating through the walls of fireplaces or flues could ignite it. Therefore when installing the stove in the presence of combustible materials due account must be taken of the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions.

If it is found that there is excessive draught in the chimney then either an adjustable flue damper or alternatively a draught stabiliser should be fitted. The adjustable flue damper should not close off the flue entirely but should in its closed position leave a minimum continuous opening free area of at least 20 % of the total cross sectional area of the flue or fluepipe.

Adequate provision e.g. easily accessible soot door or doors must be provided for sweeping the chimney and connecting fluepipe.

You should also familiarise yourself with the draught conditions for chimneys with 2 flues.

The flue outlet spigot is either 150 mm (6”) in diameter, or 129 mm (5”) in diameter.

For strong draughts, the chimney or flue should be fitted with a draught stabiliser. In which case, it is important to ensure that there is a free flow-through area of minimum 20 cm² when the regulating gate is shut. Otherwise, the fuel energy may not be used optimally. If, at any time, you are unsure about the condition of the chimney, you should contact a chimney sweep.

Remember that access to the access door should be kept clear.

Installation

The stove can be free standing on the floor or on a socket.

When installing the wood burning stove, there are some rules which MUST be followed:

The stove must be set up and installed in accordance with all current national and local rules and reulations. Local authorities and a chimney specialist should be contacted prior to set up.

It is prohibited to carry out unauthorised alterations to the stove.

There must be plenty of fresh air in the room where the stove is being installed, in order to ensure proper combustion. Note that any mechanical exhaust ventilation - e.g. an extraction hood - may reduce the air supply. Any air grates must be placed in such a manner, that the air supply is not blocked.

The floor structure must be able to carry the weight of the wood burning stove, as well as the weight of a chimney, if necessary.

The stove is placed on fireproof material.

When you choose where to set up your RAIS wood burning stove, you should consider the heat distribution to the other rooms. This will enable you to get the best use out of your stove.
The stove should be set up at a safe distance from inflammable materials.

See the manufacturer's plate on the wood burning stove.

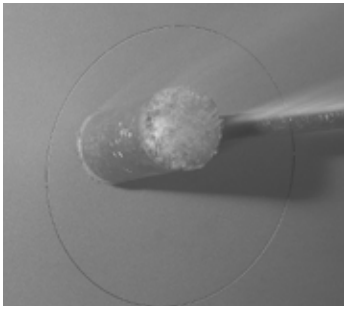
Upon receiving the stove must be inspected for defects.

NOTE!!

RAIS A/S recommends that the stove is installed by a qualified/ competent Rais dealer or a fireplace fitter recommended by an authorized RAIS dealer.
See www.rais.com for dealer list.

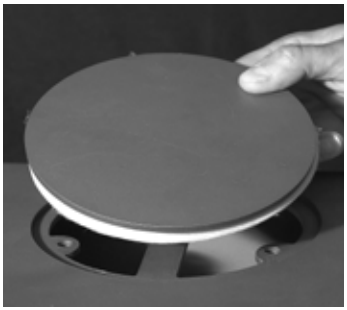
Change of chimney connection

The stove is delivered ready for top outlet, but may be changed to back outlet in the following way:

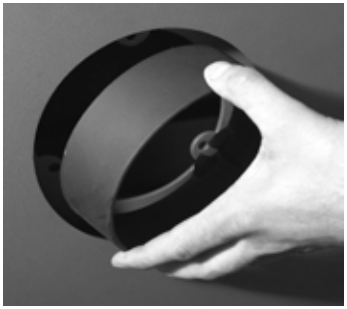


Strike out the knock out plate at the rear of stove.

Remove the blanking plate and the packing, and position them in the hovle at the top. Ensure that the packing is positioned correctly. Screw all elements together with the three M6 nuts.



Mount the flue collar (supplied by the dealer) and the clamp for the upper smoke conductor with three M6x20 cylinder screws and M6 nuts.



Mount the parts in reverse order.

Freestanding installation distance in case of combustible wall

To determine whether the wall next to where the stove is going to be installed is flammable, you should contact your building contractor or the local building authorities.

The hearth should be able to accommodate the weight of the stove. The chimney must be independently supported by wall brackets or a ceiling support plate. The weight of the stove is indicated in the brochure.

The stove should always be installed on a non-combustible hearth of a size and construction that is in accordance with the provisions of the current UK Building Regulations Approved Document J.

If the stove is to be installed on a wooden floor, it must be covered with a non-combustible material at least 12 mm thick and for free standing installations we recommend 575mm in front and 150mm to each side of the stove.

If the Q-Tee 2 is installed with the Rais log store, the distance in front of the stove must meet the UK Building Regulations of 300mm.

Recess Installation - non combustible walls

For installation within a non combustible recess (ie a typical UK chimney breast), please refer to Section J of the UK Building Regulations which advise a minimum 225 or 300mm in front of the appliance.

The clearance distances to combustible material beneath, surrounding or upon the hearth and walls adjacent to the hearth should comply with the guidance on the separation of combustible material given in UK Building Regulations Approved Document J and also in these stove instructions.

Placement of Q-Tee II

Installation distance from a combustible wall

The stove is placed on a non-combustible floor.
Using non insulated 150mm I.D. flue pipe, the minimum distance to combustible wall must be 450 mm from the flue.

Normal set-up - corner setting

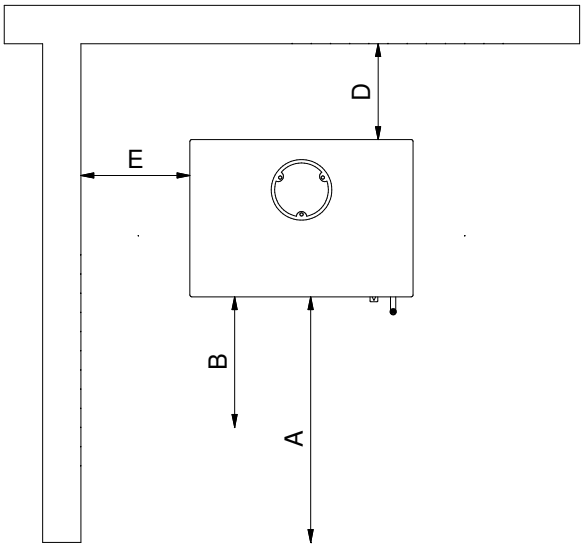
	Uninsulated flue	Insulated flue
A. Distance to furniture (min.)	1200 mm	1200 mm
Distance to flammable materials (min.)		
B. in front (floor)	575 mm	575 mm
C. to the side (floor) - if distances are not shown, national/local regulations are followed		
D. to the rear (wall)	400 mm	350 mm
E. to the side of the wall	400 mm	400 mm

Q-TEE II with 250mm Log store

If the stove is to be installed on a wooden floor, it must be covered with a non-combustible material at least 12 mm thick, in accordance with UK Building Regulations Approved Document J. If the stove is to be elevated min. 250mm for example placed on a non-combustable base.

Distance to flammable materials (min.)

B. in front (floor)	300 mm	300 mm



Corner setting 45°

The stove is placed on a non-combustible floor.

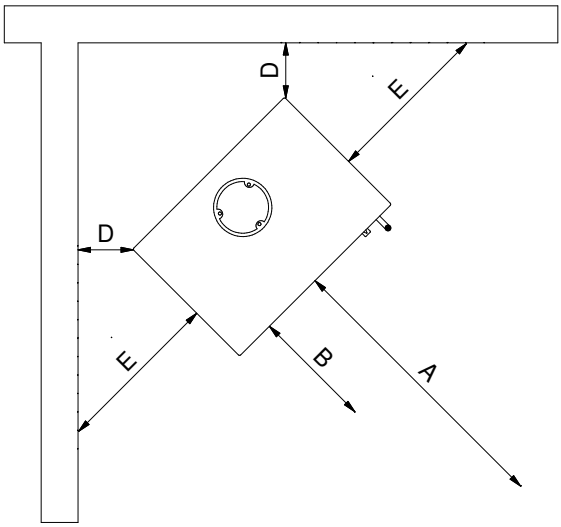
	Uninsulated flue	Insulated flue
A. Distance to furniture (min.)	1200 mm	1200 mm
Distance to flammable materials (min.)		
B. in front (floor)	575 mm	575 mm
C. to the side (floor) - if distances are not shown, national/local regulations are followed		
D. to the rear (wall)	300 mm	200 mm
E. to the side of the wall	400 mm	400 mm

Q-TEE II with 250mm Log store

If the stove is to be installed on a wooden floor, it must be covered with a non-combustible material at least 12 mm thick, in accordance with UK Building Regulations Approved Document J. If the stove is to be elevated min. 250mm for example placed on a non-combustible base.

Distance to flammable materials (min.)

B. in front (floor)	300 mm	300 mm



Placement of Q-Tee II

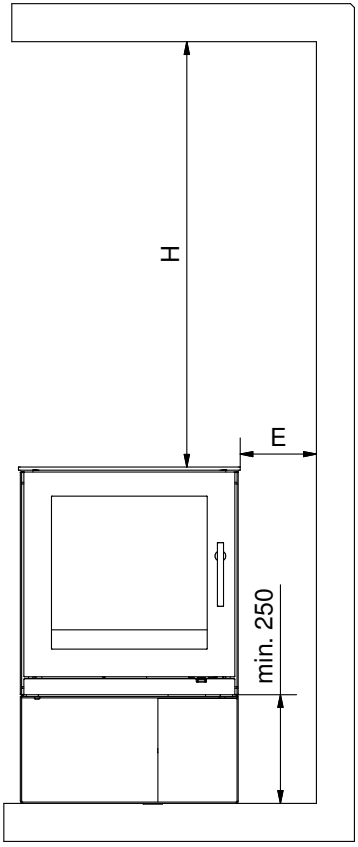
Installation distance from combustible ceiling, floor and side wall

Normal corner setting

	Uninsulated flue	Insulated flue
Distance to flammable materials (min.)		
E. to the side of the wall	400 mm	400 mm
G. to the floor	250 mm	250 mm
H. to the ceiling	800 mm	800 mm

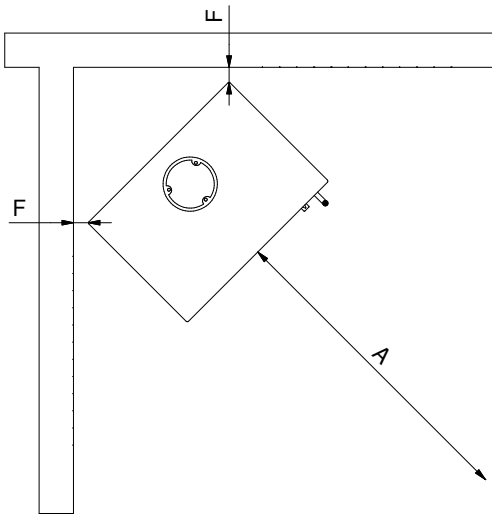
Q-TEE II with 250mm Log store

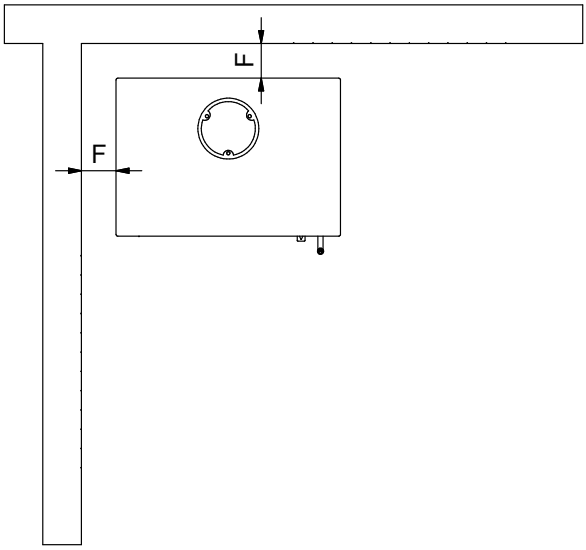
If the stove is to be installed on a wooden floor, it must be covered with a non-combustible material at least 12 mm thick, in accordance with UK Building Regulations Approved Document J. If the stove is to be elevated min. 250mm for example placed on a non-combustable base.



Installation distance from non-combustible wall

We recommend a minimum distance to non-combustible material of 50 mm (F) for cleaning considerations.
It should always be possible to access the flue access door.





For the Installer

Finally before firing the stove for the first time a check should be made to ensure that the assembly and stove installation has been satisfactory and that there are no leaks in any seals in the appliance and appliance connections to the chimney.

Ensure that the appliance and chimney flue are functioning correctly before finally handing over to the user. If necessary read the later parts of this manual for guidance on care required when first lighting.

Inform the user that the appliance has been commissioned and ready to use and give instruction on the safe operation of the stove.

These Instructions must be left with the user and the user should be instructed to keep them in a safe place.

Operating instructions

Please note that HETAS Ltd Appliance Approval only covers the use of dry seasoned wood logs on this appliance. HETAS Ltd Approval does not cover the use of other fuels either alone or mixed with the wood logs, nor does it cover instructions for the use of other fuels.

Fuel

The stove is designed and approved in accordance with EN 13240 and NS 3058 for stoking split, dried firewood. The firewood must have a water content of 15-22% and its max. length should be the length of the combustion chamber minus 50-60 mm.

Stoking with wet firewood causes both soot, environmental pollution and bad fuel economy. Freshly cut wood contains approx. 50-70% water and is thoroughly unsuitable for stoking. Count min. 1 year of storage time for newly cut wood before using.
Wood with a diameter of more than 100 mm should be split. Regardless of wood size, it should always have at least one surface area free of bark.

We do not recommend stoking with painted, laminated or impregnated wood, wood with a synthetic surface, painted refuse wood, chipboard, plywood, domestic waste, paper briquettes and pit coal, as this will produce malodorous smoke, which could be poisonous.

When firing with the above-mentioned items and amounts larger than those recommended, the stove is subjected to a larger amount of heat, which results in a higher chimney temperature and lower efficiency. This can result in the stove and chimney becoming damaged and would void the warranty.

The calorific value of the firewood is closely connected to the moisture level of the firewood. Moist firewood has a low heat value. The more water the wood contains, the more energy it takes for this water to vaporise, resulting in this energy being lost.

ONLY USE RECOMMENDED FUELS

The following table shows the calorific value of different types of wood, which have been stored for 2 years, and which have a residual moisture of 15-17%.

Wood	Kg dry wood pr. m^3	compared to beech/oak
Hornbeam	640	110%
Beech and oak	580	100%
Ash	570	98%
Maple	540	93%
Birch	510	88%
Mountain pine	480	83%
Fir	390	67%
Poplar	380	65%

1 kg of wood yields the same heat energy irrespective of wood type. 1 kg beech merely takes up less space than 1 kg of fir.

Drying and storage

Drying wood takes time: proper air drying takes approx. 2 years.

Here are some tips:

Store the wood sawn, split and stacked in an airy, sunny place, which is protected against rain (the south side of the house is particularly suitable).
Store the firewood stacks at a hand's breadth apart, as this ensures that the air flowing through takes the moisture with it. Avoid covering the firewood stacks with plastic, as this prevents the moisture from escaping. It is a good idea to bring the firewood into the house 2-3 days before you need it.

Regulating the combustion air

All RAIS stoves are equipped with a one-handed operating lever for regulating the damper. The stove-specific regulating mechanisms can be seen on the diagrams.

Primary air is the combustion air added to the primary combustion zone, i.e. the bed of glowing embers. This air, which is cold, is only used in the lighting stage.
Secondary air is the air which is added in the gas combustion zone, i.e. air which contributes to the combustion of the pyrolysis gasses (preheated air, which is used for the cleaner glass system and combustion). This air is sucked through the damper under the combustion chamber and is pre-heated through the side channels and then emitted as hot scavenging air onto the glass. The hot air rinses the glass and keeps it soot-free.

The tertiary channel, which can be seen at the top of the combustion chamber towards the back, serves to combust the final gas residues.

By setting the interval between position 1 and 2 (firewood) and between position 2 and 3 (coal), the energy content in the firewood/coal is used optimally, as there is oxygen for combustion and for the burning of the pyrolysis gasses. When the flames are a clear yellow the damper has been set correctly. Finding the correct position comes with time after you have used for stove for a while.

It is not recommended that you turn it down completely. A mistake commonly made is shutting the damper too early because it feels too hot. This results in dark smoke emanating from the chimney and in the calorific value of the firewood not being used to its fullest.
See also Warning on page 21.

Room ventilation and stoves

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

The stove requires a permanent and adequate air supply in order for it to operate safely and efficiently.
In accordance with current Building Regulations the installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion air. This air vent should not under any circumstances be shut off or sealed.

Using the wood burning stove

Adjustment of the air damper - the damper has 3 settings
(see front of manual)

Position 1

The damper is almost closed meaning that there is a minimal air intake.

Position 2

Pull the lever until first click. This position gives full secondary air.
During normal wood stoking the lever is set between position 1 and 2. When the flames are clear and yellow, the damper is set correctly, i.e. resulting in a slow / optimal burning.

Position 3

Pull the lever until next click. The air damper is completely open and gives full primary and partly secondary air.
The position is for the lighting stage of wood and is not used under normal operation of wood stoking.
The position 3 is for normal operation with coal firing.

Control

If the ash is white and the walls in the combustion chamber soot-free after the stove has been used, the air regulation was set correctly and the wood/coal was sufficiently dry.

First usage

A careful start pays off. Start with a small fire, so that the wood burning stove can get accustomed to the high temperature. This gives the best start and any damage is avoided.

Be aware that a strange but harmless odour and smoke concoction may emanate from the surface of the stove, the first time you fire up. This is because the paint and materials need to harden. The odour disappears quickly, but you should check the ventilation and draught, if possible. See also, the IMPORTANT warning notice below about persistent fumes.

During this process you must be careful not to touch the painted surfaces, and it is recommended that you regularly open and close the door to prevent the door seal from sticking.

The stove may also produce "clicking noises" during heating and cooling, caused by the large temperature differences which the material is subjected to.

Never use any type of liquid fuel for kindling or maintaining the fire. You could be at risk of explosion.

The stove gets very hot when in use always wear protective gloves when tending the stove.

If the stove has not been used for a while, follow the steps as if you were using it for the first time.

IMPORTANT - Warning Note!

Properly installed, operated and maintained this appliance will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, the following immediate actions should be taken:

(a) Open doors and windows to ventilate room.
(b) Let the fire out or eject and safely dispose of fuel from the appliance.
(c) Check for flue or chimney blockage, and clean if required.
(d) Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

IMPORTANT - Warning Note!

Do not use an aerosol spray on or near the stove when it is alight.

IMPORTANT - Safety advice!

When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002 (Replaces BS 6539).

Lighting and fuelling (see back of manual)

NOTE: If airsystem is connected, the valve must be open.

TIPS before firing up:
Open a door or window close to the wood burning. If there is a "storm" in the stove coming from the chimney, it is advisable to place a screwed-up piece of newspaper between the upper baffle plate and the chimney, set the paper on fire, and wait until you hear a "rumbling" noise in the chimney. This means that there definitely is a draught in the chimney and you avoid smoke in the room.

"Top-Down" lighting (wood)

Start by placing 2-3 pieces wood - approx. 1½-2 kilogram - in the bottom of the burning chamber.
Place approx. 1 kilogram of dry firewood, split into kindling sticks, and a couple of alcohol briquettes or similar (1). Set the air damper to fully open position - position 3.
Light the fire and close the door (2-3), leaving the door ajar approximately 10-15 mm.

NOTE: It is important to get a quick lighting of the wood.

When the flames are clear - after approx. 10-15 min - close the door completely (4).
Damper - see adjustment of air damper.

When the last flames are extinguished and there is a nice layer of embers (5), add 2-3 pieces of wood.
Close the door and once the fire has a good hold close the door completely (6).
Damper - see adjustment of air damper.

After approx. 5 min - or when the flames are clear and stable (7) - close the damper gradually.
The optimal position of the air damper for normal operation is position 2.

Lighting of coal

Start in the same way as with wood lighting (see above).

When the last flames are extinguished and there is a nice layer of embers (5), add 2-3 kgs of coal. Spread them evenly over the layer of embers.
Close the door and once the fire has a good hold close door completely.
Damper - see adjustment of air damper.
When the flames are clear and stable (6) - close the damper gradually.
The optimal position of the air damper for normal operation is position 3.

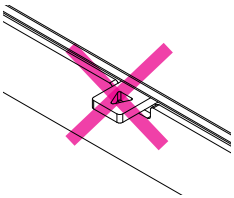
Note!!!

Keep an eye on the stove when lighting.
During operation the door should always remain shut.
When firing the smoke exiting the chimney should be bearly visible (just a flickering).
When refuelling the door is opened carefully to prevent smoke exiting the burning chamber. Never add wood/coal before there is a layer of embers.
RAIS recommend to add 2-3 kgs of wood/coal within 3 hours (intermittent operation).

Warning!!

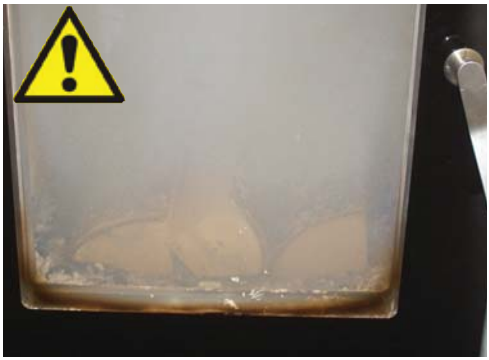
If the firewood is only burning slowly without flames or is smoking, and too little air is added, unburned exhaust gasses are developed.
Exhaust gasses can be ignited and explode, leading to damage to material and possibly personal injury.

Never close the air supply completely when lighting a fire in the stove.



If there are only a few embers remaining you must light the fire again.
If you just add firewood the fire will not be lit, but unburned exhaust gasses will develop.

Here firewood has been added to an ember layer which is too small, and the air flow is too small - smoke is developed.



Avoid heavy smoke - danger of exhaust gas explosion.

In case of very heavy smoke, open the damper and light the fire again.

Cleaning and care

Glass

Most woodstoves use a ceramic glass product which is resistant to heat but requires cleaning to keep its appearance.
Soot or opaque marks can easily cleaned if the marks are fresh, however If you leave the glass dirty for any length of time the acid from the wood can etch the surface of the glass permantley (wet unseasoned wood, soft wood such as used in the building industry, pallet wood should be avoided).
Only clean when cold.

Use only stove glass cleaners to re-move heavy tar/ soot deposits.
All other marks can normally be removed with a damp cloth, then dry with a clean cloth or newspaper, do not let the glass dry before applying a dry clean cloth.
With more stubborn marks i.e. Opaque areas / frosting, you need put a small amount of wood ash on a clean damp cloth. If the opaque mark /frosting, doesn't come out, contact your dealer for a special remover.

Paint finish

The appliance has been coated with a high temperature paint which can last for years. Do not clean with a damp cloth or any cleaning products as they can cause rust or discolouration. Only clean when cold use a brush with soft bristles or dust with a lint free cloth Only re-spray when necessary.

The wood burning stove and the chimney must be serviced by a chimney sweep twice a year. During cleaning and care, the stove must be cold.

Cleaning the combustion chamber:

Scrape/shovel the ash out and store it in a non-flammable container until it has cooled down. You can dispose of ash with your normal household waste.

REMEMBER!! Never remove all the ashes from the combustion chamber - the wood will burn at its best with a layer of ashes of approx. 20 mm.

Prolonged period of non-use:

If the stove is to be left unused for a prolonged period of time then it should be given a thorough clean to remove ash and unburned fuel residues. To enable a good flow of air through the appliance to reduce condensation and subsequent damage, leave the air controls fully open.

Prior to a new heating season, it should be checked that the chimney and smoke gas connector are not blocked.

Cleaning of flue way

The flue ways consist of a smoke converter plate (vermaculit) and a smoke chicane (steel). Handle these parts carefully.

Remove the smoke converter plate by tilting it to one side and turning it a little slantwise. Pull out the plate carefully.

Then remove the smoke chicane by lifting the front, tipping it down at the back. Carefully lift out the smoke chicane.

Remove dirt and dust, and mount the parts in reverse order.

Interruption of operation

Smoke spillage around door:

Could be due to too low draught in the chimney <12Pa
- Check whether the flue or chimney is blocked
- check whether the extraction hood is switched on; if it is, switch it off and open a window/door in the proximity of the stove for a short while.

Soot on glass:

Could be because the firewood/coal is too wet.
- make sure that the stove is heated properly when firing up, prior to closing the door

Could be because the damper regulation is too low.

A stove burning too strong could be caused by:
- leak around the door seal
- chimney draught too large >22 Pa, draught control regulator should be installed.

A stove burning too weakly could be caused by:
- too small amount firewood/coal
- too little air supply for room ventilation
- unclean smoke channels
- leaky chimney
- leakage between chimney and flue

If your stove continues to malfunction, we recommend that you contact your RAIS distributor or chimney sweep.

IMPORTANT!! To ensure safe burning there must be clear yellow flames or clear embers at all times. The firewood should not be smouldering. Therefore you should never completely cut off the air supply.

WARNING!!

In case of chimney fire:
- shut off all air supply on the wood burning stove
- contact the fire department
- never attempt to put out fire with water!
- afterwards, you should ask your chimney sweeper to check the stove and chimney

If the firewood/coal is only burning slowly without flames or is smoking, and too little air is added, unburned exhaust gasses are developed.
Exhaust gasses can be ignited and explode, leading to damage to material and possibly personal injury.

Never close the air supply completely when lighting a fire in the stove.

Spare parts Q-Tee II

If spare parts other than those recommended by RAIS are used, the warranty is voided.

All replaceable parts can be bought as spare parts from your RAIS distributor.
For reference see spare parts drawing Q-Tee II (front of the user manual).

Pos.	Antal	Varenr.	Beskrivelse
1	1	838010290	Mantle Q-Tee II
2	1	8382090	Steel door
3	1	8381090	Glass door
4	1	838052490	Cover Q-Tee II
5	1	8382200	Fire brick set
6	1	8383800	Shaking grate
7	1	8384001	Ash pan
8	1	8383810	Fixed grate
9	1	838121090	Air guiding plate
10	1	838121590	Turbo plate (steel door)
11	1	838121190	Turbo plate (glass door)
12	1	8381301	Smoke chicane
13	1	61-00	Flue collar 6”
14	1	61-105	Flue collar 6”
15	1	8380990	Air damper
16	1	838040190	Socket complete
17	1	8385500	Seal set

RAIS®
ART OF FIRE

EC CERTIFICATE AND DECLARATION OF CONFORMITY

No.: 838

The undersigned, who represents the following manufacturer

Manufacturer:	RAIS A/S
Address:	Industrivej 20, DK-9900 Frederikshavn, Denmark

hereby declares that the product

Product identification: RAIS Q-TEE II

is in conformity with the requirements according to the following EC directive(s)
(Inclusive all valid supplementary material)

Reference no.	Title
1989/106/EC	**Directive of Building regulations (89/106/EEC Construction Products – CPD)**

And that all standards and/or technical specifications mentioned on the next page have been carried out.

Last two figures, the year, where the CE-label was put on the stove: 13

PLACE: FREDERIKSHAVN, DENMARK DATE: 16-05-2013

Signature

Henrik Nørgaard, Managing Director

THE ORIGINAL

RAIS®
ART OF FIRE

EC CERTIFICATE AND DECLARATION OF CONFORMITY

No.: 838

References to standards or/and technical specifications, which have been applicable to this Declaration of Conformity, or partly:

- **Harmonized standards:**

No.	Edition	Title	Part
EN 13240 **EN 13240/A2**	**2001** **2004**	**Roomheaters fired by solid fuel** **Roomheaters fired by solid fuel (Supplementary material)**	

- **Other standards and/or technical specifications:**

No.	Edition	Title	Part

- **Other technical solutions, of which detailed information are included in the technical documentation or the technical dossier of the construction:**

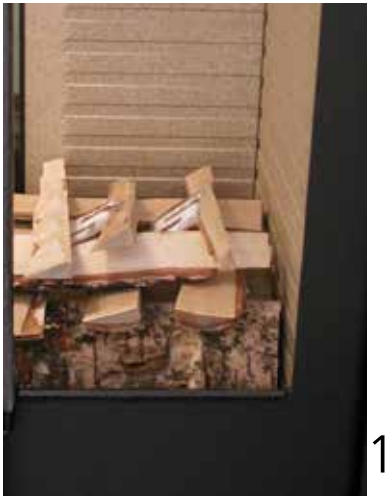
OPTION: AIR-SYSTEM

OPTION: GLASS OR STEEL DOOR

OPTION: SOCKET

Other references or other relevant information determined by the applicable EC Directive(s):

THE ORIGINAL



1

2

3

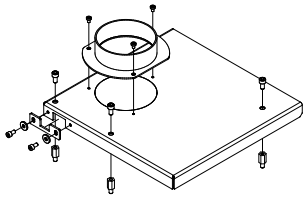
4

5

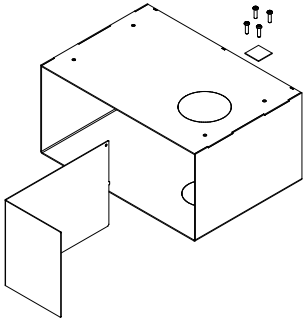
6

Q-TEE II
Tilbehør / Accessories

8381790
Air-box



838040190
Sockel
Socket



RAIS®
ART OF FIRE

Svanemærkekravene: Version 3		
Virkningsgrad :	Min.	75 %
Partikler :	Max.	4 g/kg træ
Kulilte CO :	Max.	0,136 %
OGC :	Max.	120 mg/m^3

Alle kriterierne skal være opfyldt på en gang.

Svanemerkekravene:		
Virkningsgrad :	Min.	75 %
Partikler :	Max.	4 g/kg tre
Kulilte CO :	Max.	0,136 %
OGC :	Max.	120 mg/m^3

Alle kriterine skal være oppfylt samtidig.

Kraven för att få Svanmärket:		
Verkningsgrad :	Minst	75 %
Partiklar :	Högst	4 g/kg ved
Kulilte CO :	Högst	0,136 %
OGC :	Högst	120 mg/m^3

Alla kriterierna måste uppfyllas samtidigt.

Joutsenmerkin saamisen edellytykset:		
Hyötysuhde :	Vähintään	75%
Hiukkaspäästöt :	Enintään	4 g puukiloa kohden
Häkää (CO) :	Enintään	0,136 %
OGC :	Enintään	120 mg/m^3

Kaikkien ehtojen on täytyttävä samanaikaisesti.

RAIS A/S
Industrivej 20
DK-9900 Frederikshavn
www.rais.dk