STAGING THE FIRE
WITHOUT WASTING ENERGY

photo by Jean-Luc Laloux – Réfectoire du Maigre (18th century) at the Abbaye d'Aulne in Thuin, Belgium

Thermal comfort

> operates either as an open fire or as a glass-door stove
> cheats in 2 different ways: direct radiation and natural convection
> the partial opening of the glass door enables open-fire operation without any risk of draughtback, even if the atmospheric conditions are unfavourable or if the draught of the chimney is insufficient when fully opened
> outside air inlet directly beneath the stove

Performances, respect for the environment

> excellent efficiency supported by EN standard (75% on average with glass door closed)
> tax benefits (according to country and/or area)

Aspect

> wide view of the fire
> sober lines will suit any interior style
> various models: narrow, wide, extra-wide, square, high...
> double-face models
> many possibilities of integration: architectural, in low volumes, in old fireplaces
> the mechanism and the runners are never visible even with the glass door open.
> no bottom runner on lower edge of glass door
> hearth opening can be placed level with floor
> many optional claddings (see chapter "claddings & front panels")
> a decorative frame to mask hearth angles is available (3 sides)

Ergonomics, maintenance

> stain-reducing system for glass door
> glass door tilts forwards for easy cleaning

Installation & maintenance

> easy to install and to position
> all mechanical components remain easily accessible very quickly even when stove has been walled-in
> heat can be routed to an adjacent room – if necessary – with an auxiliary ventilation unit
> optional very silent auxiliary ventilation unit
> partial raising of glass door can compensate for insufficient draught
> 5-year guarantee

Optional barbecue

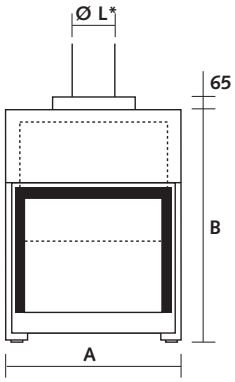
> healthier cooking
> faster: no need to wait for glowing embers
> fits in a couple of seconds even on a burning fire
> dripping pan to collect grease

Decorative claddings

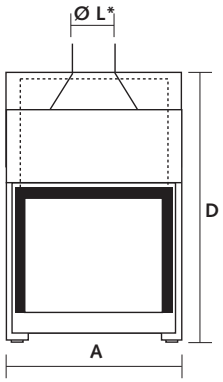
> avoid recess work
> avoid decoration work
> shorten installation time
> integrate log storage
> can be taken away when moving house
> unique shape
> available pre-painted (to be painted in the colour of your choice), in rust colour, anthracite grey and white

The stûv 21 is protected by many patents.

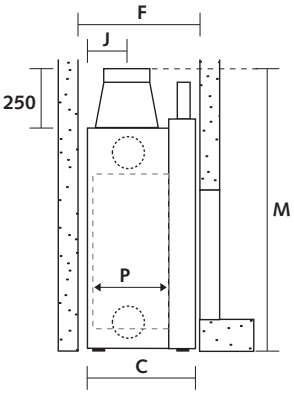
Dimensions

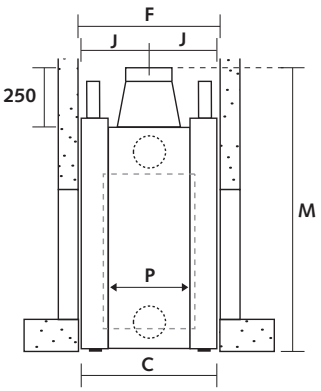


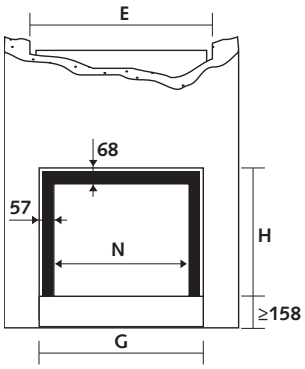
partially raised
low configuration

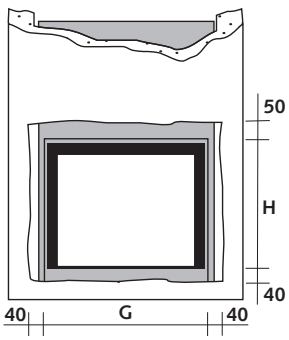


fully raised
high configuration

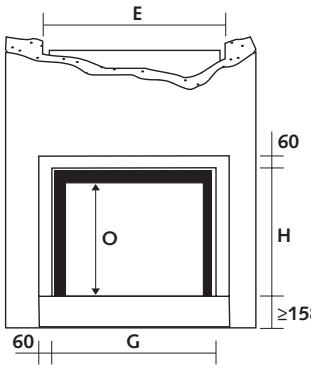








Gap for frame and counter-frame fitting (framing work without decorative frame stûv)



Gap for frame and counter-frame stûv fitting (framing work with decorative frame stûv)

		A	B	C	D	E	F	G	H	J	L*	M	N	O	P
single face	stûv 21/45**	450	1490	484	-	460	505	384	819	196	200	1695	270	750	275
	stûv 21/65C square	650	1010	440	1165	660	460	584	539	171	180	1215	470	470	231
	stûv 21/65H high	650	1225	490	1455	660	510	584	683	196	200	1430	470	615	281
	stûv 21/75	750	1005	490	1137	760	510	684	524	186	180	1211	570	456	281
	stûv 21/85	850	1115	540	1295	860	560	784	603	201	200	1320	670	535	331
	stûv 21/95	950	1225	590	1455	960	610	884	683	221	250	1430	770	615	381
	stûv 21/105**	1050	1040	496	-	1060	515	984	469	201	200	1245	870	400	288
	stûv 21/125	1250	1115	563	1295	1260	585	1184	603	221	300	1320	1070	535	354
	stûv 21/135**	1350	1040	500	-	1360	515	1282	469	203	250	1245	1170	400	291
double face	stûv 21/75 DF	750	1005	670	1136	760	685	684	524	336	250	1211	570	456	430
	stûv 21/85 DF	850	1115	670	1295	860	685	784	603	336	250	1320	670	535	430
	stûv 21/95 DF	950	1225	670	1455	960	685	884	683	336	250	1430	770	615	430
	stûv 21/125 DF	1250	1115	670	1295	1260	685	1184	603	336	300	1320	1070	535	430

* *Standard smoke exit diameter; other cross-sections are available. Please consult stûv.*

** *The stûv 21/45 is only available with a part-raising door. The stûv 21/105 & 21/135 are only available with full-raise of glass door.*

Please note: the dimensions shown do not take into account the space required for insulation for when the stove is fitted in a combustible material.

Technical data

		A	B	C	D	E	F	G	H	I	J	K	L(a)	L(b)	L(c)	L(d)	M	N
single face	stûv 21/45	160	6 – 11	10	83	<0.30	n.c.	1.6 - 3.0	50	25	12.3	10.3	152°	10	7	2	7	100
	stûv 21/65C square	155	5 – 8	7	78	<0.30	71	1.4 - 2.3	33	33	11.2	8.0	226°	14	12	2	17	100
	stûv 21/65H high	197	8 – 13	13	73	<0.12	13	2.4 - 4.0	50	33	12.4	12.3	323°	12	12	0	8	100
	stûv 21/75	182	8 – 11	10	73	<0.30	26	2.5 - 3.4	50	50	12.4	11.8	270°	13	13	0	9	100
	stûv 21/85	234	8 – 14	14	76	<0.30	22	2.4 - 4.1	50	60	12.5	12.5	273°	13	13	0	11	100
	stûv 21/95	292	10 – 18	18	79	<0.30	18	2.9 - 5.1	50	70	12.6	13.2	275°	9	13	0	11	200
	stûv 21/105	224	7 – 14	14	77	<0.30	15	2.0 - 4.1	33	80	12.2	11.3	279°	14	15	1	18	100
	stûv 21/125	305	11 – 23	23	78	<0.30	-	3.2 - 6.6	50	100	12.5	15.2	312°	11	15	0	10	200
	stûv 21/135	286	11 – 21	20	72	<0.12	-	3.4 - 6.5	33	100	12.0	n.c.	302°	17	15	0	20	200
double face	stûv 21/75 DF	187	9 – 15	15	71	<0.30	-	2.8 - 4.7	-	50	12.4	14.2	333°	-	14	0	13	200
	stûv 21/85 DF	236	1 – 21	20	72	<0.12	15	3.4 - 6.5	-	60	12.4	18.5	349°	-	15	0	11	200
	stûv 21/95 DF	297	12 – 22	22	72	<0.12	-	3.7 - 6.8	-	70	12.1	21.2	331°	-	15	1	13	200
	stûv 21/125 DF	310	14 – 27	27	72	<0.30	31	4.3 - 8.3	-	100	10.9	33.2	251°	-	13	1	13	200

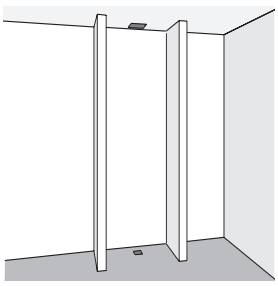
conforms to the standard EN 13229 CE

patent nr 1445541

A unit mass (kg)
B optimal range of use (kW)
C rated-power efficiency (kW)
D efficiency measured at rated power (%)
E CO emissions (%)
F fine particle emissions (mg/Nm³)
G range of wood consumption / hour at 12% humidity (as an indication) (kg/h)
H length of the wood logs in cm (horizontally)
I length of the wood logs in cm (vertically)
J minimum draught needed to reach calorific rated power (Pa)
K weight-flow ratio of smokes (g/s)
L mean smoke temperature at rated power (°C)
M minimum insulation thickness (in cm) between potentially combustible materials and
a the back part of the stove
b the sides of the stove
c the top part of the stove
d the bottom part of the stove
N minimum section of combustion air feed from an outer opening (cm²)

Installation

The stûv 21 has been designed to insert into the masonry. We recommend to interrupt the chimney duct at ceiling level, and connect the stove with a prime-quality stainless steel flue, rigid if possible. Then warm air blowing ducts are installed and the chimney mantel is built around the fireplace. Two walls can be built on either side of the fireplace, so that only the front part needs to be closed.

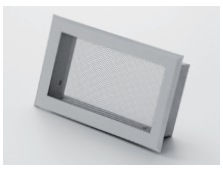


Fresh air intake

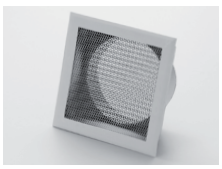
Minimum 100 to 200 cm² (see table above) at the base of the stove. A register will shut off air supply when the stove is not in use.

Warm air

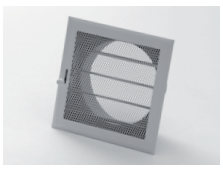
Depending on the model, up to eight duct openings, 145 mm in diameter, distribute hot air. At least two should be connected. They can be used to supply neighbouring roo the heat ducts are long, it is a good idea to boost the effects of natural convection using a fan system. You can chose the position of the warm air outlet ducts: on top, at the back, or at the side.



Single position inlet or outlet mesh



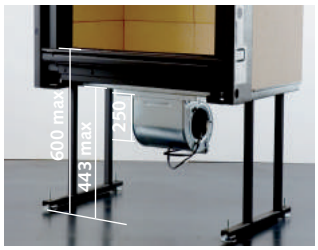
200 x 200 mm inlet or outlet mesh for Ø 150 mm



Dual position inlet or outlet mesh

stûv 21/85 with total raising of glass door (standard configuration) : full raising puts the door completely out of sight. The deflector is shaped to improve draught.

stûv 21/85 with partial raising of glass door when installation height is limited.



A support, available as an option, makes it easy to fix the height of the fireplace.

4-Sided frame and counter-frame lacquered in anthracite grey to mask masonry angles around the hearth and give it some fullness. Available as a 3-sided frame for stoves flush-fitted to the floor.

Auxiliary ventilation unit

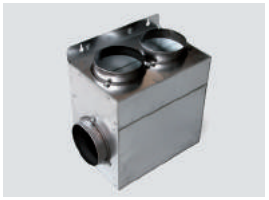
A high-capacity mechanical ventilation unit supplements natural ventilation for a significantly improved stove performance. It pulsates the required quantity of air with slow-spinning and thus quiet fans.

Three possibilities :

- a 600 m³/h ventilator fitted under the hearth and accessible from inside the hearth (except for the model 21/65C).
- two side ventilators (2 x 200 m³/h)
- one independent 600 m³/h ventilator to be installed in an adjacent room.

ventilator (600 m³/h)

side ventilators (2 x 200 m³/h)



independent ventilator (600 m³/h)

Other available accessories...

insulating kit Promafour® 400

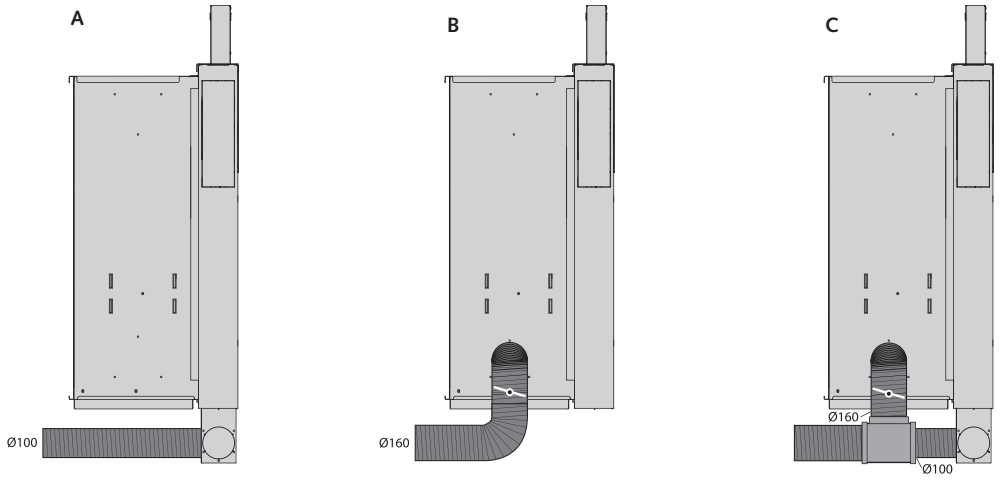
straight and deflected ducts, accessories for connecting to the stove and floor

barbecue grill

Control of the air inlet

The air control of your stûv 21 varies depending on installation. The compensation air inlet (Ø 160 mm) and the combustion air inlet (Ø 100 mm) will ideally be fitted with a valve enabling adjustment of their opening.

Three configurations



	combustion air	compensation air	combustion air + compensation air
recommended in	well insulated houses, fitted with mechanically controlled ventilation	traditional houses	low energy houses and more
benefits	option of use with a fan, easy to use	use without fan	option of use with a fan, control of compensation air
		in accordance with certain regulations (France, Italy, …)	in accordance with certain regulations (France, Italy, …)
restrictions	ensure the control of compensation air in open fire mode with room air	ensure the control of combustion air and compensation air with the valve	control of the valve only in open fire mode

Measuring the size of the chimney flue

The stûv 21 will operate adequately if the **T** value defining the draught value of the chimney flue reads between **T maxi** and **T mini**.
When the fireplace has been installed so as to operate only with the glass door partially open, this value must read between **T maxi** and **T2 mini**.

Measuring the draught: $T = \frac{S \times \sqrt{H}}{G}$

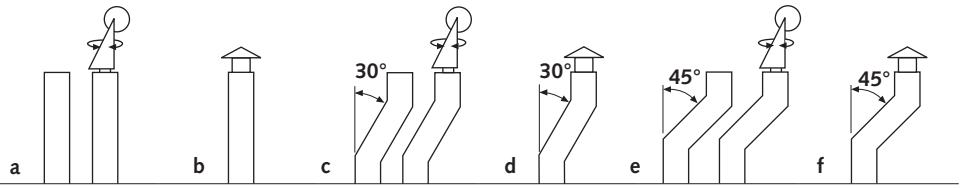
T is the chimney draught
S is the flue cross-section (in cm²)
H is the height of chimney (in m), measured from the base of the flames
G characterises the geometry of the chimney; it is given in the table below.

This figures have been calculated for masonry conducts. For a pre-built steel conduct, you can increase the **T** figure with 20%.

stûv coefficients (T)

Model	T mini	T2 mini	T maxi
21/45	-	1500	2700
21/65C square	1800	1450	3240
21/65H high	2000	1600	3600
21/75	2600	2080	4680
21/85	3600	2880	6480
21/95	4600	3680	8220
21/105	2880	-	5580
21/125	6800	5500	12000
21/135	4600	-	8000
21/75 DF	3380	2700	6084
21/85 DF	4680	3450	8425
21/95 DF	7880	6872	12645
21/125 DF	7900	6600	13100

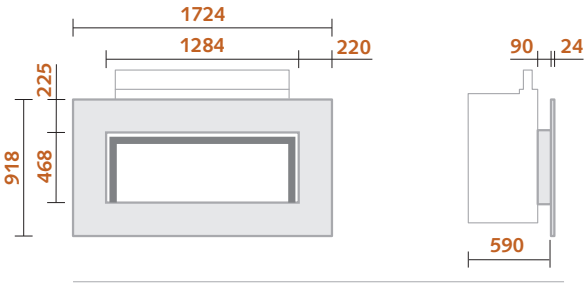
Table of G coefficients

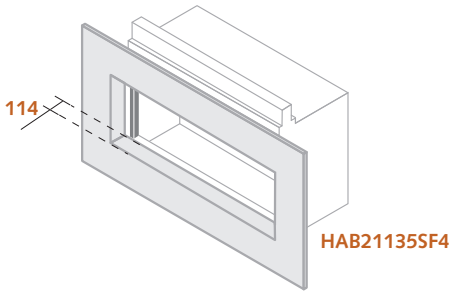


	a *straight flue with or without rotating cap*	b *straight flue with fixed cap*	c *30° offset with or without rotating cap*	d *30° offset with fixed cap*	e *45° offset with or without rotating cap*	f *45° offset with fixed cap*
insulated interior flue	0.19	0.29	0.31	0.41	0.37	0.47
insulated exterior flue	0.25	0.35	0.37	0.47	0.43	0.53
non-insulated interior flue	0.30	0.40	0.42	0.52	0.48	0.58

Stûv reserve the right to alter stûv stoves without prior notice. Information on **www.stuv.com** is regularly updated.

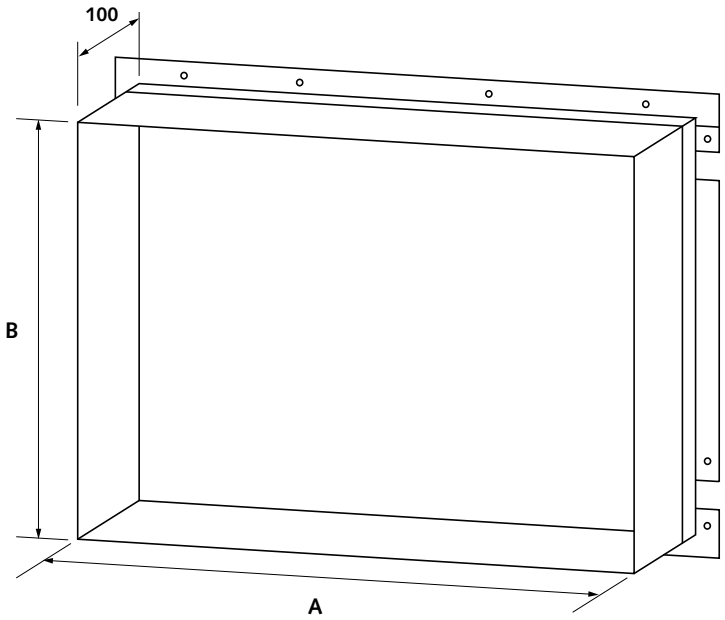
SF 4





21 - frame | thin frame

DIMENSIONS OF THE THIN FRAME



DIMENSIONS	21/65C	21/65H	21/75	21/85	21/95	21/105	21/125	21/135
THICKNESS	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm	4 mm
DEPTH	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm
A	584 mm	584 mm	684 mm	784 mm	884 mm	984 mm	1184 mm	1284 mm
B	538 mm	683 mm	524 mm	603 mm	683 mm	468 mm	603 mm	468 mm

Colour chart

TECHNICAL SPECIFICATIONS

MATERIAL	steel
THICKNESS	2 mm
NUMBER OF COLOURS	19 + rust
TYPE OF PAINT	Electrostatic powder

RAL 9010
ref 11----02

Rust. This reference is not a colour but a fixed state of the material (oxidised steel).
ref 11----01

RAL 1020
ref 11----04

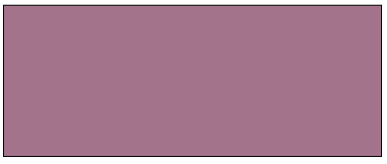
RAL 6022
ref 11----08

RAL 7034
ref 11----12

RAL 3013
ref 11----06

RAL 9007
ref 11----20

RAL 4007
ref 11----05



RAL 4009
ref 11----09

RAL 6019
ref 11----13

RAL 5024
ref 11----17

STUVGREY
ref 11----03

RAL 6013
ref 11----16

RAL 5010
ref 11----10

RAL 3011
réf 11----14

RAL 6003
réf 11----18

RAL 6034
réf 11----07

RAL 7009
ref 11----11

RAL 7023
ref 11----15

RAL 3005
ref 11----19

Colour design by Bernard Gilbert - This colour chart is provided for information purposes only and does not form part of a contract.