průmyslová keramika

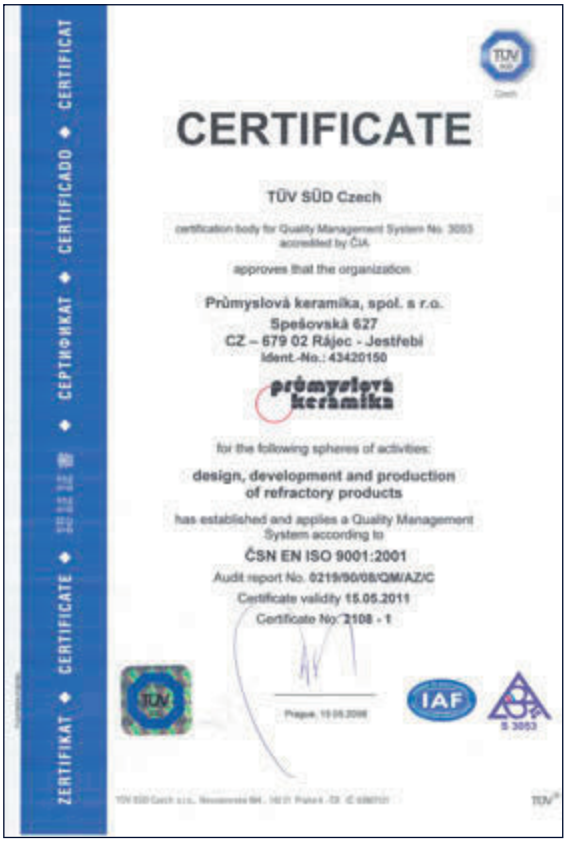
PRODUCTS FOR STOVE FITTERS

COMPANY PROFILE

Průmyslová keramika, spol. s r.o. was established in 1991 to develop and produce refractory materials. Our wide range of products are all based on our own proprietary materials that reflect specific client needs and include components for blast furnaces, cement plants, energy production, chemical plants, metallurgy, glassworks and of course, stove fitters.

Heating with renewable fuels, wood and other biomass has become more important. At the same time improving the efficiency and reduction of emissions of home heating systems that burn renewables has also become more important. To meet these needs have focussed our efforts on improving the material qualities, durability and design features of our related products.

In order to supply the growing demand for biomass home heating systems, together with leading manufacturers of fireplaces and stove inserts Průmyslová keramika is continuously developing materials which maximize heating efficiency and reduce emissions. This is an increasingly significant segment of our business.



Průmyslová keramika, spol. s r.o.
Člen Cechu kamnářů
České republiky

STOVE-FITTING MORTARS

These are refractory mortars with hydraulic bond and a differently set pot life. They are used for walling, jointing and plastering of refractory materials with a temperature resistance of 1100 °C and feature excellent adhesion to absorbing as well as low-absorbing surfaces. Their high strength is achieved in a short time, without need of heat treatment. Joints can have a thickness of 6–30 mm.

KAMMAL 10

Quick-setting mortar with a pot life of approx. 10 min. Quick setting is ideal for joining stove tiles right at the stove work site by bonding tiles to tiles, where only a small quantity of mortar is prepared.

KAMMAL 30

Quick-setting multi-purpose mortar with a pot life of approx. 30 min. The mortar is suitable for joining pre-manufactured blocks from tiles, joining of dense pre-formed shapes and fireclay bricks, where a shorter time between building steps is required.

KAMMAL 60

Multi-purpose stove-fitting mortar with a pot life of approx. 60 min. Longer pot life of the mortar is ideal for the creation of smaller pre-manufactured parts made from tiles. The mortar is also suitable for joining dense pre-formed shapes and fireclay bricks, where a longer time between individual building steps is more advantageous, e.g. in the case of larger structures.

KAMMAL 90

Multi-purpose stove-fitting mortar, suitable for the creation of bigger or complex-shaped pre-manufactured blocks made from tiles and as a bearing layer for a strengthening mesh before the final treatment using KAMMAL stove-fitting plasters, with a pot life of approx. 90 min.

KAMMAL 90-W

Multi-purpose white stove-fitting mortar, ideal as a bearing layer for a strengthening mesh before the final treatment using KAMMAL stove-fitting plasters, with a pot life of approx. 90 min.

KAMMAL 600

Quick-setting mortar with a pot life of approx. 30 min., intended for less thermally stressed parts of stoves. The strength and reliability of the bond is limited by a temperature of 600 °C. It is suitable especially for repairs of larger uneven areas and application of plasters with a higher thickness.

it can also be used for outdoor fireplaces
they can be in direct contact with fire

STOVE-FITTING PLASTERS

KAMMAL MOD

A fine modelling plaster based on gypsum, with a grain size of up to 0.5 mm. It is primarily used as a protecting drawn plaster especially in stove fittings, for the creation of various decorative surfaces (smooth, stucco) and for mantelpiece moulding. It can be applied in thick layers with a thickness of up to 50 cm. The pot life of the modelling plaster is approx. 30 minutes.

KAMMAL SH

A fine stove-fitting refined silicate plaster with a grain size of up to 1.5 mm. The plaster is suitable for the creation of thin plaster layers, especially for larger areas. It is ideal for plastering heat storages and insulation structures and also very well suited for outdoor structures (garden fireplaces, smoke houses, baking ovens, etc.).

KAMMAL SJ

A very fine plaster, with a grain size of up to 0.5 mm, refined white silicate plaster intended for the creation of smooth or variously structured thin plaster layers. We recommend using KAMMAL 90-W white stove-fitting mortar as the base layer.

KAMMAL SD

A stove-fitting plaster with a grain size of up to 3 mm, for the creation of structured grooved plaster surfaces as the last layer of plastered stoves. The recommended base layer is KAMMAL MOD or KAMMAL SH mortar.

JOINTING GROUTS

SPARAL

A single-component powder grout based on a hydraulic binder and synthetic resins for grouting tile stoves. Its colour can be arbitrarily changed by adding appropriate inorganic pigments.

The basic jointing grout is pure white, labelled SPARAL 100.
For selected tile colours we deliver already pigmented jointing grouts labelled with the glaze number of the tile manufacturer.

+ can be ordered in a wide variety of colours

REFRACTORY MASTICS

From a wide range of over 30 different types of refractory mastics, we offer paste-like mastics for stove fitting (except for ŽÁROTMEL STANDARD), ready for application. The mastic requires only brief stirring before use, even after prolonged storage. If needed, we also produce mastics resistant to higher temperatures.

ŽÁROTMEL ALU-125

Single-component mastic based on water glass intended for joining dense refractory building materials with a temperature resistance of up to 1250 °C. It is particularly suitable for walling made of fireclay and refractory castable elements, walling of fire pits, etc.

ŽÁROTMEL UNI-126

Multi-purpose stove-fitting mastic, particularly intended for gluing of insulation calcium-silicate and vermiculite boards with a temperature resistance of up to 1260 °C. It is ideal for gluing dense refractory pre-formed shapes requiring high joint strength, e.g. in accumulation flue gas system (system CTS).

ŽÁROTMEL BASAL

Single-component stove-fitting mastic, intended for gluing non-structural insulation materials, e.g. PERIL, PERCEM, etc.

ŽÁROTMEL STANDARD

Refractory self-hardening mastic supplied in a dry state, prepared with water. It is used for joining ceramic as well as metal materials, creating thin protective coats and sealing of joints up to several centimetres thick.

\+ high penetration ability, even in very low-absorbent materials

\- can only be used indoors

REFRACTORY STOVE-FITTING CASTABLES

As a manufacturer of a wide range of refractory castables, we have adopted specific requirements of stove fitting by developing special castables, not only for industrial pre-manufacturing, but also for processing directly at the stove work site. Stove-fitting castables complement our range of shaped products by allowing the preparation of atypical shapes with the same or similar technical parameters.

KAMBET 1000

Refractory castable are intended for casting lintels exposed to high temperatures. Thanks to the rapid increase of strength it significantly shortens the curing time compared to the other materials.
Another substantial advantage is a wide range of moisture content, which allows mixing of suitable consistency for work without significant loss of strength.

MEBET 1350-DC

Refractory castable, intended for casting individual elements exposed to high temperatures and flame. It can be used in a direct contact with food, e.g. for baking ovens, grills, etc.

+ can come in contact with open flame
they can be processed without the use of special equipment, usually required for refractory castables

- in the case of larger volumes of cast parts they may require slower drying before the first operation
we recommend consulting with our experts

PRE-FORMED SHAPES FOR FIREPLACES AND STOVES

PKT

Because they multiply their radiative and retentive properties by storing a part of thermal energy that is usually used only for hot-air (convection) heating pre-formed shapes are used for the heat storage coverings of hot-air fireplaces. This creates a very pleasant, radiant form of heating.

Pre-formed shapes have no health averse properties are fibre-free and do not release any dust or chemicals.

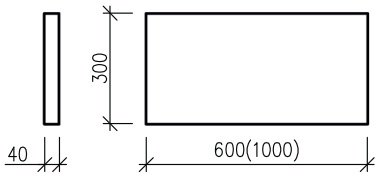
Basic technical parameters:

bulk density	cold crushing strength (110 °C)	max. service temperature	specific heat capacity	thermal conductivity (200 °C)
1000 kg.m^{-3}	3.5 MPa	1150 °C	886 J.kg^{-1}.K^{-1}	0.29 W.m^{-1}.K^{-1}

covering outer surface temperature	covering inner surface temperature	hot-air chamber inner temperature	thermal power	stored heat
40 °C	66 °C	80 °C	190 W/m^2	1180 kJ/m^2
60 °C	119 °C	150 °C	427 W/ m^2	2480 kJ/ m^2

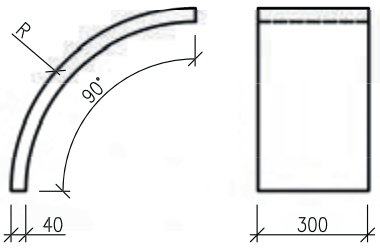
SLABS

designation	dimensions [mm]	weight [kg]
PKT 60	600 x 300 x 40	7.2
PKT 100	1000 x 300 x 40	12.0



ARCHES

designation	dimensions [mm]	weight [kg]
PKT R300	R300 x 300 x 40	5.3
PKT R400	R400 x 300 x 40	7.2
PKT R450	R450 x 300 x 40	8.1
PKT R500	R500 x 300 x 40	9.0
PKT R550	R550 x 300 x 40	10.0
PKT R770	R770 x 300 x 40	14.2
PKT R880	R880 x 300 x 40	16.2

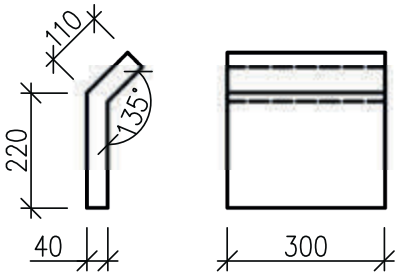


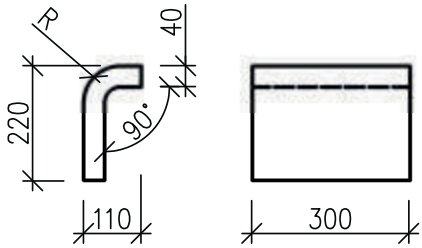
CORNERS

designation	dimensions [mm]	weight [kg]
PKT V135	135° x 300 x 40	3.8

designation	dimensions [mm]	weight [kg]
PKT V90	90° x 300 x 40	3.5

designation	dimensions [mm]	weight [kg]
PKT R70	R70 x 300 x 40	3.2
PKT R100	R100 x 300 x 40	3.1





Processing: splitting by a stove-fitting splitter
cutting by a diamond wheel

Bonding: KAMMAL stove-fitting mortars
ŽÁROTMEL UNI-126

Surface finish: see page 17

1 – vent grill
2 – chimney
3 – hot-air chamber covering
4 – hot-air chamber
5 – flue pipe
6 – insulation with an air gap
7 – surface finish
8 – fireplace insert
9 – central air inlet
10 – non-flammable plate

PRE-FORMED SHAPES FOR FIREPLACES AND STOVES

AKT

Pre-formed shapes are mainly used as covering of storage fireplaces. They excellently accumulate thermal energy and gradually release it into the room. They are an ideal source of radiant heat, even long after the fire goes out.

Pre-formed shapes have no health averse properties are fibre-free and do not release any dust or chemicals.

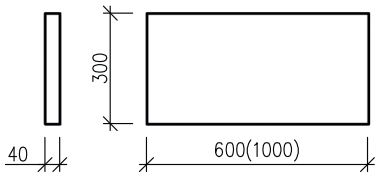
Basic technical parameters:

bulk density	cold crushing strength (110 °C)	max. service temperature	specific heat capacity	thermal conductivity (200 °C)
2200 kg.m^{-3}	40 MPa	1250 °C	885 J.kg^{-1}.K^{-1}	1.06 W.m^{-1}.K^{-1}

covering outer surface temperature	covering inner surface temperature	chamber inner temperature	thermal power	stored heat
40 °C	48 °C	67 °C	191 W/m^2	1860 kJ/m^2
60 °C	75 °C	112 °C	417 W/ m^2	3700 kJ/ m^2

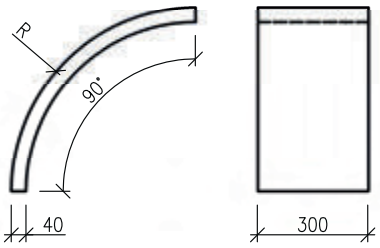
SLABS

designation	dimensions [mm]	weight [kg]
AKT 60	600 x 300 x 40	15.8
AKT 100	1000 x 300 x 40	26.4



ARCHES

designation	dimensions [mm]	weight [kg]
AKT R300	R300 x 300 x 40	11.6
AKT R400	R400 x 300 x 40	15.8
AKT R450	R450 x 300 x 40	17.8
AKT R500	R500 x 300 x 40	19.8
AKT R550	R550 x 300 x 40	22.2
AKT R770	R770 x 300 x 40	31.2
AKT R880	R880 x 300 x 40	35.6

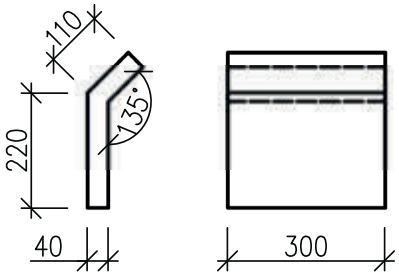


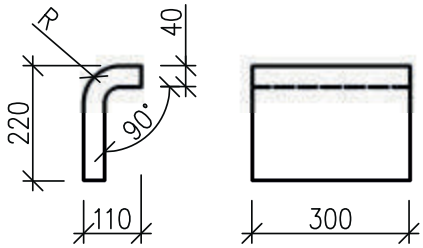
CORNERS

designation	dimensions [mm]	weight [kg]
AKT V135	135° x 300 x 40	8.3

designation	dimensions [mm]	weight [kg]
AKT V90	90° x 300 x 40	7.7

designation	dimensions [mm]	weight [kg]
AKT R70	R70 x 300 x 40	7.0
AKT R100	R100 x 300 x 40	6.8





Processing: cutting by a diamond wheel

Bonding: KAMMAL stove-fitting mortars
ŽÁROTMEL ALU-125, UNI-126

Surface finish: see page 17

1 – vent grill
2 – chimney
3 – hot-air chamber storage covering
4 – hot-air chamber
5 – flue pipe
6 – insulation with an air gap
7 – surface finish
8 – fireplace insert
9 – central air inlet
10 – non-flammable plate

AKT 3

Great storage properties of the material in conjunction with high weight of the pre-formed shapes provide maximum utilization of thermal energy, which they store and thus complement and enhance the use properties of AKT and PKT pre-formed shapes. They can be used for covering and, more importantly, to form storage cores around fireplace inserts.

Pre-formed shapes have no health averse properties are fibre-free and do not release any dust or chemicals.

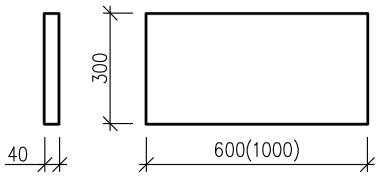
Basic technical parameters:

bulk density	cold crushing strength (110 °C)	max. service temperature	specific heat capacity	thermal conductivity (200 °C)
2700 kg.m^{-3}	95 MPa	1250 °C	900 J.kg^{-1}.K^{-1}	1.5 W.m^{-1}.K^{-1}

covering outer surface temperature	covering inner surface temperature	chamber inner temperature	thermal power	stored heat
40 °C	45 °C	65 °C	190 W/m^2	2220 kJ/m^2
60 °C	72 °C	110 °C	427 W/ m^2	4490 kJ/ m^2

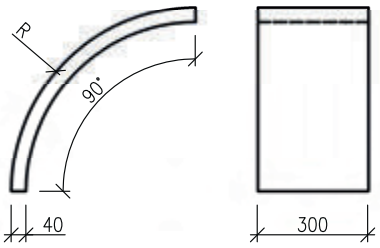
SLABS

designation	dimensions [mm]	weight [kg]
AKT3 60	600 x 300 x 40	19.4
AKT3 100	1000 x 300 x 40	32.4



ARCHES

designation	dimensions [mm]	weight [kg]
AKT3 R300	R300 x 300 x 40	14.3
AKT3 R400	R400 x 300 x 40	19.5
AKT3 R450	R450 x 300 x 40	21.9
AKT3 R500	R500 x 300 x 40	24.4
AKT3 R550	R550 x 300 x 40	27.1
AKT3 R770	R770 x 300 x 40	38.3
AKT3 R880	R880 x 300 x 40	43.7

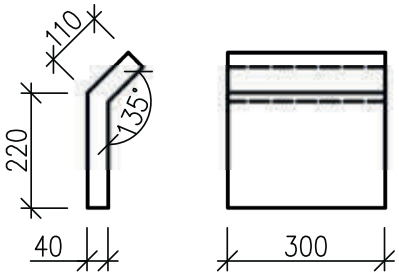


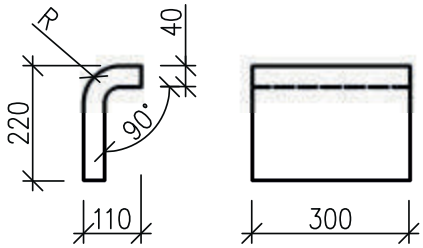
CORNERS

designation	dimensions [mm]	weight [kg]
AKT3 V135	135° x 300 x 40	10.4

designation	dimensions [mm]	weight [kg]
AKT3 V90	90° x 300 x 40	9.5

designation	dimensions [mm]	weight [kg]
AKT3 R70	R70 x 300 x 40	8.4
AKT3 R100	R100 x 300 x 40	8.6





Processing: cutting by a diamond wheel

Bonding: KAMMAL stove-fitting mortars
ŽÁROTMEL ALU-125, UNI-126

Surface finish: see page 17

1 – chimney
2 – hot-air chamber covering
3 – hot-air chamber
4 – flue pipe
5 – storage core
6 – surface finish
7 – fireplace insert
8 – central air inlet
9 – non-flammable plate

VKT

Large pre-formed shapes with a thickness of 25 mm are ideal for the outer housing of fireplaces and stoves, especially for hypocaust systems. They quickly transfer heat into the room and complement the primary storage system of the stove with them accumulate capabilities.

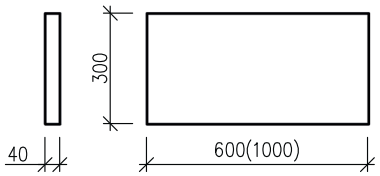
Basic technical parameters:

bulk density	cold crushing strength (110 °C)	max. service temperature	specific heat capacity	thermal conductivity (200 °C)
2000 kg.m^{-3}	25 MPa	1200 °C	850 J.kg^{-1}.K^{-1}	1.0 W.m^{-1}.K^{-1}

covering outer surface temperature	covering inner surface temperature	chamber inner temperature	thermal power	stored heat
40 °C	44 °C	64 °C	188 W/m^2	950 kJ/m^2
60 °C	70 °C	108 °C	421 W/ m^2	1910 kJ/ m^2

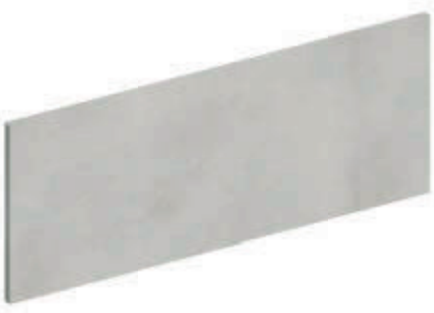
SLABS

designation	dimensions [mm]	weight [kg]
VKT 120/50	1200 x 500 x 25	31.5
VKT 120/25	1200 x 250 x 25	16.0
VKT 60/50	600 x 500 x 25	16.0



Processing: cutting by a diamond wheel

Bonding: KAMMAL stove-fitting mortars
ŽÁROTMEL ALU-125, UNI-126



SURFACE FINISHES

1 – pre-formed shape (PKT, AKT, AKT3, VKT)

2 – base plaster, bearing layer for a strengthening mesh. In the case thin plaster KAMMAL SJ as the finish layer is required we recommend using KAMMAL 90-W white mortar. In the case KAMMAL MOD modelling plaster or KAMMAL SH thin plaster is used, we recommend KAMMAL 60 mortar for smaller areas and KAMMAL 90 or KAMMAL 90-W for larger areas.

3 – top plaster for surface unification, e.g. modelling plaster KAMMAL MOD or thin plaster KAMMAL SH and SJ

4 – if necessary, unifying fine thin plaster KAMMAL SJ or paint

HEAT ACCUMULATION SYSTEM CTS

Heat accumulators made of cordierite-based cast ceramics allow maximum use of heat transfer from the firebox into the chimney. A correctly dimensioned stove can prevent unnecessary heat loss while maintaining the required flue draft for the chimney system.

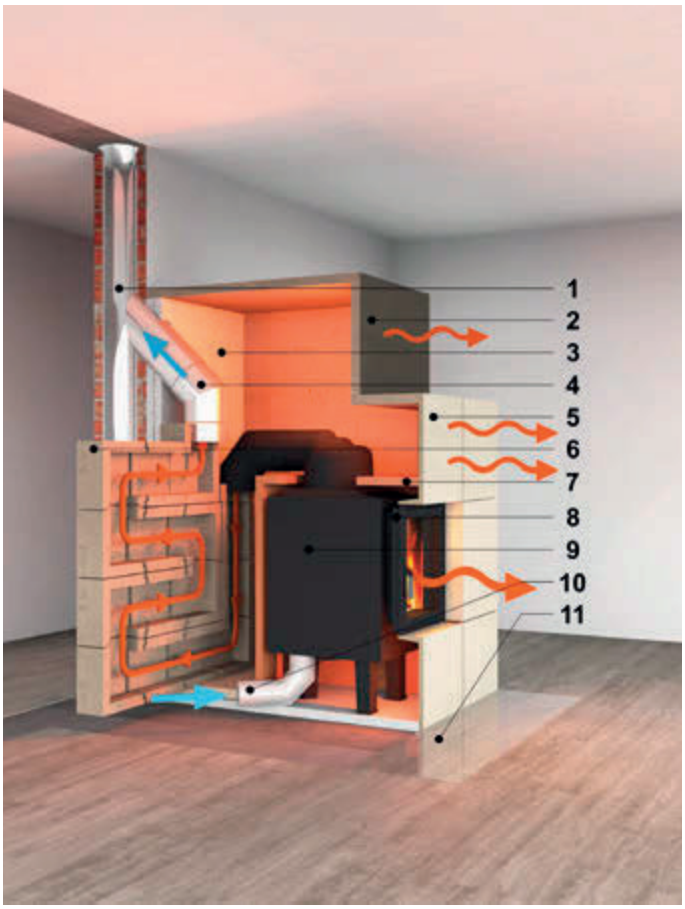
Basic technical parameters:

bulk density	cold crushing strength (110 °C)	max. service temperature	specific heat capacity	thermal-shock resistance
2300 $kg.m^{-3}$	95 MPa	1200 °C	890 $J.kg^{-1}.K^{-1}$	min. 50 cycles

Name	**dimensions [mm]**	**weight [kg]**	
CTS TRANSITION PIECE A	280x280x80	9.9 kg	
CTS TRANSITION PIECE B	280x280x80	8.6 kg	
CTS HALF PIECE	280x280x140	14.7 kg	
CTS BASE PIECE	280x280x280	29.5 kg	
CTS BASE PIECE WITH CLEANING HOLE	280x280x280	28.4 kg	
CTS CORNER	280x280x280	30.6 kg	
CTS CORNER WITH CLEANING HOLE R	280x280x280	29.5 kg	

CTS CORNER WITH CLEANING HOLE L	280x280x280	29.5 kg	
CTS CORNER WITH CLEANING HOLE P	280x280x280	29.5 kg	
CTS CORNER WITH CLEANING HOLE Z	280x280x280	29.5 kg	
CLEANING HOLE PLUG	inner Ø 104	1.1 kg	

1 – chimney
2 – hot-air chamber covering
3 – rear insulation with an air gap
4 – flue pipe
5 – heat transfer surface (VKT, AKT, ceramics)
6 – flue gas system CTS
7 – storage core
8 – double glazed door
9 – stove insert
10 – central air inlet
11 – non-flammable plate



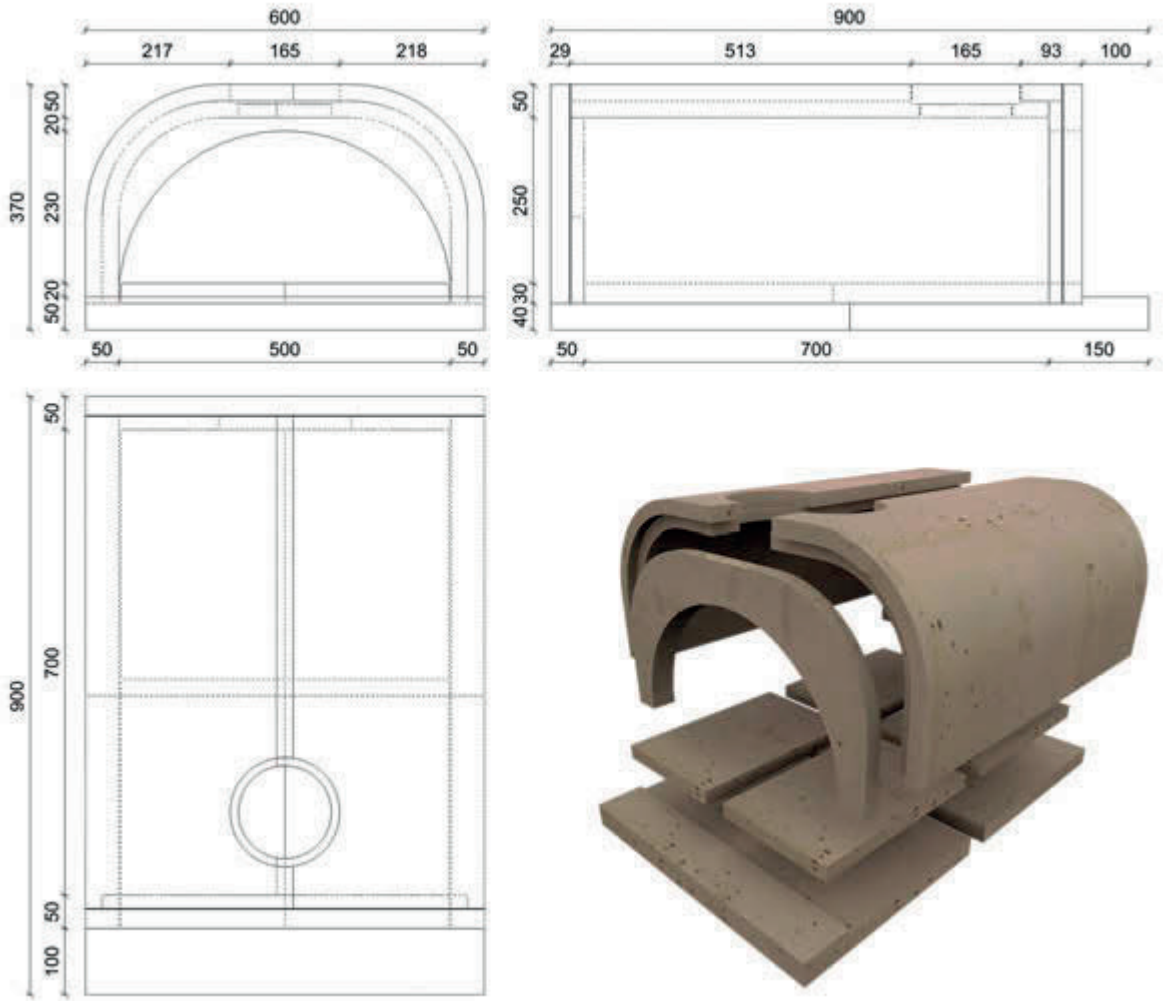
Oven FAMILY PIZZA

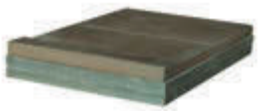
The optimal shape of the FAMILY PIZZA oven and the highest quality materials ensure the ideal ratio of oven heating, heat radiation and heat storage. The advantages include a short heat-up time and long thermal inertia. Its dimensions make it ideal for private use among family and friends makes it the best choice from other different designs. The oven is suitable for baking various kinds of food. Due to the non-toxicity of the used material*. Baked goods can be baked directly on the bottom of the oven. Roasting meat and grilling should be done on a grate or tray.

* The non-toxicity of the material and its suitability for use in contact with food is confirmed by a certificate issued by the Regional Office of Public Health Care.

PARAMETRY TECHNICZNE

Outer dimensions:	900x600x370 mm
Inner dimensions:	700x500x250 mm
Weight:	170 kg
Max. service temperature:	1350 °C
Flue outlet diameter:	150 mm

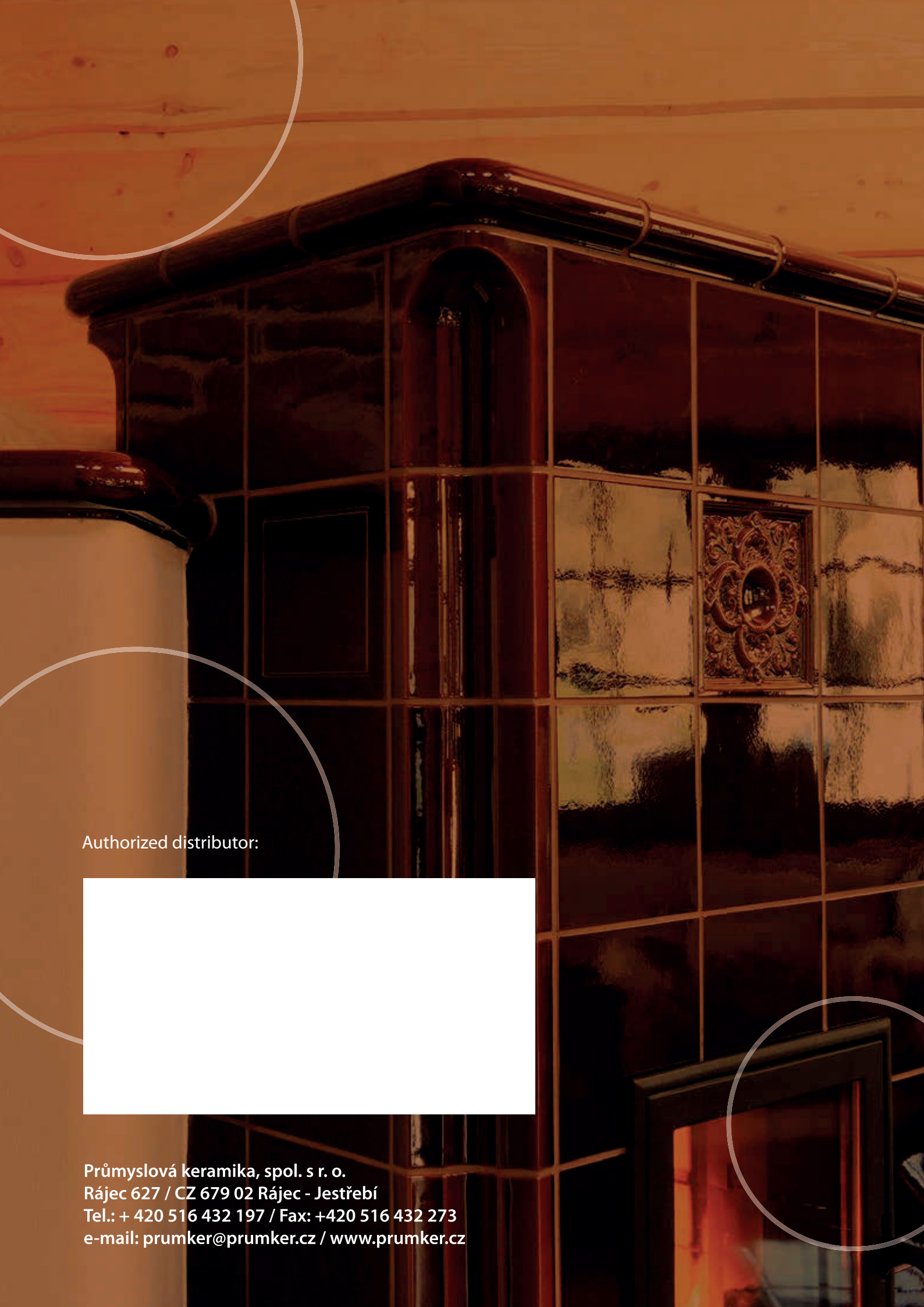




FAMILY/PIZZA

pizza/maso/chléb

NOTES



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