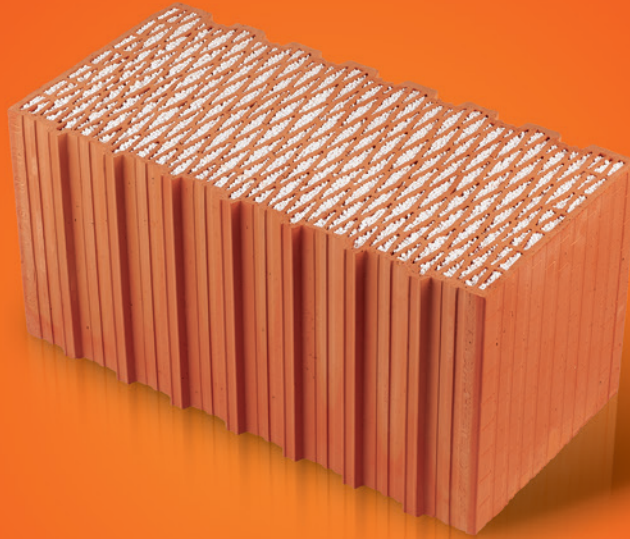


# PRODUCT CATALOGUE



a complete clay block system for rough construction  
from 1 August 2019



## WHY opt for single-leaf masonry WITHOUT INSULATION?

We recommend a single-leaf house structure made with Family 2in1 and Family clay blocks, which are suitable for buildings with zero energy, passive, low energy, and energy-saving standards.

By reducing the number of technological steps, **the building construction is significantly accelerated and the risk of structural defects is reduced.**

The unique properties of the clay blocks **ensure a long lifetime of the masonry and a pleasant indoor climate of the room** as the masonry helps to control moisture.

Single-leaf masonry has high **thermal resistance, stability, fire resistance**, and it enables the easy solution of construction details.

A lightweight or heat-insulating plaster protecting an masonry is used as the external wall finish. Thanks to its properties it ensures an aesthetic value of the final façade layer.

**BUILD WITH SINGLE  
LEAF CLAY BLOCKS  
BUILD SMART**

# WE WILL PROCESS a price quotation of material requirement for YOUR BUILDING CONSTRUCTION individually according to the project documentation.

**3 STEPS ONLY** are sufficient to obtain **A FREE PRICE QUOTATION**

**step 1** Contact information

**step 2** Material choice

**step 3** Project documentation

**for more information see** [www.heluz.com](http://www.heluz.com) **A free calculation of the material requirements**

The quoted prices apply to deliveries of complete pallets or whole packages and are valid until a new price list is issued.

For current information, visit [www.heluz.com](http://www.heluz.com).

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# HELUZ, A CZECH FAMILY COMPANY



MANUFACTURING PLANT HEVLÍN



MANUFACTURING PLANT LIBOCHOVICE



MANUFACTURING PLANT BUKOVSKO

We are not any common company, we are much more, we are family. We are engaged in the production of clay blocks and clay blocks since 1876. In that year, Jan Řehoř built the first furnace in Dolní Bukovsko and fired first clay blocks from the excavated clay. This was the beginning of a long story that we can be proud of when looking back.

Thanks to our products, thousands of people could build their new homes that have been used by the following generations thanks to their durability and pleasant environment. Carefully processed clay blocks and clay blocks are so resistant that despite their age of many dozens of years they can still be used for reconstruction of rural farmsteads up to the present time.

The family tradition was interrupted by the coming of communists that nationalised the brickworks in 1950. However, more than forty years later, the descendants of the founders acquired the brickworks back and consigned their management to their son-in-law Vladimír Heluz. In the period after the Velvet Revolution the company experienced rapid development and new plants in Hevlín and Libochovice were added up.

The leadership among the supranational companies needs more than just only the purchase of cutting-edge equipment and the extension of production. It is necessary to form an excellent team loving its work. Simply a family.

# FAMILY 2in1

U up to 0,11 W/m<sup>2</sup>K

## CLAY BLOCKS WITHOUT COMPROMISES

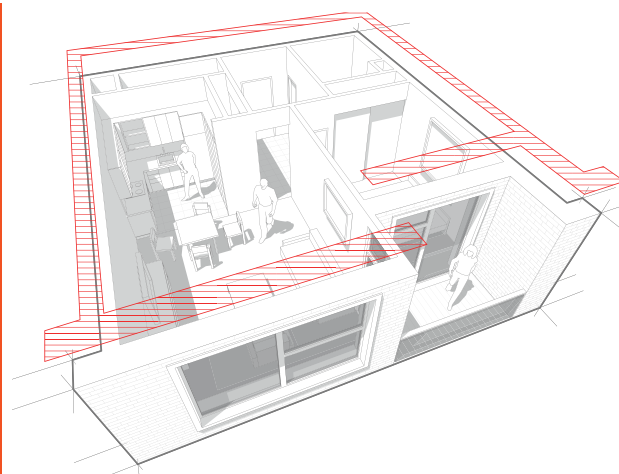


**A CONSTRUCTION** titled: An individual house Loděnice u Berouna • Project architect: Ing. Arch. Michal Prášil  
Construction company: Progress project s.r.o. (Prostějov)



Grinded clay blocks **FAMILY 2in1** have the best thermal insulation properties on the Czech market in comparison with other materials for single-leaf masonry. **Filling the clay block cavities with polystyrene has increased their thermal insulation properties by 40% while maintaining their water vapour permeability.** The FAMILY 2in1 clay blocks with a width of 440 mm and 500 mm meet the required standard values for passive houses without additional insulation. Supplementary clay blocks are used for easy solution of construction details (corners, jambs).

- + the best thermal insulation properties on the market, heat transfer coefficient U up to 0.11 W/m<sup>2</sup>K
- + for single-leaf external walls of zero-energy, passive, low-energy and energy-efficient buildings
- + it can replace up to 36 cm of thermal insulation
- + integrated insulation protected by ceramic
- + a comprehensive system solution for the building envelope in a single-leaf (monolithic) structure
- + a solid, safe structure
- + natural water vapour permeation - the wall breathes

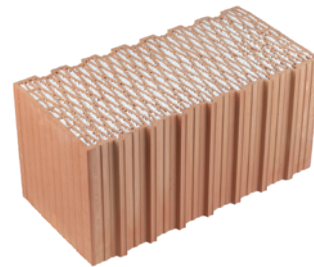




## Basic clay blocks

HELUZ FAMILY	dimensions L/W/H			compression strength	heat transfer coefficient U	clay block consumption		consumption	
	mm					pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	foam
50 grinded 2in1	247	500	249	8	0.11	16	32	7.6	5.0
44 grinded 2in1	247	440	249	10	0.13	16	36.4	6.7	5.0
38 grinded 2in1	247	380	249	10	0.15	16	42.1	5.8	5.0
30 grinded 2in1	247	300	249	10	0.23	16	53.3	4.6	5.0
25 grinded 2in1	247	250	249	10	0.26	16	64	3.8	5.0

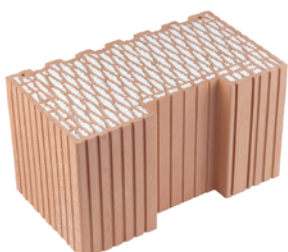
Family 2in1



## Supplementary clay blocks

HELUZ FAMILY	dimensions L/W/H			compression strength
				MPa
50-K grinded 2in1	247	500	249	10
50-K-1/2 grinded 2in1	125	500	249	10
50-N grinded 2in1	247	500	166	8
44-K grinded 2in1	247	440	249	10
44-K-1/2 grinded 2in1	125	440	249	10
44-R grinded 2in1	187	440	249	10
44-N grinded 2in1	247	440	166	10
38-K grinded 2in1	247	380	249	10
38-K-1/2 grinded 2in1	125	380	249	10
38-N grinded 2in1	247	380	166	10
30-1/2 grinded 2in1	125	300	249	10
30-R grinded 2in1	182	300	249	10

K Edge clay block



K-1/2 Edge half clay block



R Corner



N Low



# FAMILY

U up to 0,14 W/m<sup>2</sup>K

## A CLAY BLOCK WITH ALL THE TRIMMINGS



A CONSTRUCTION titled: An individual house HELUZ

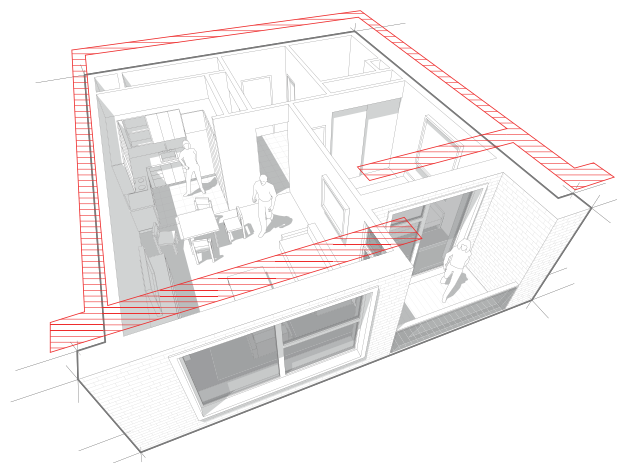


**FAMILY** grinded clay blocks have **the best thermal insulation properties** on the Czech market in comparison with other materials for single-leaf walls **without filled cavities**.

FAMILY clay blocks feature one of the most sophisticated clay block geometries, which minimizes heat transfer while maintaining high strength.

Supplementary clay blocks are used for easy solution of construction details (corners, jambs).

- + heat transfer coefficient U up to 0.14 W/m<sup>2</sup>K
- + for single-leaf external walls of passive, low-energy and energy-efficient buildings
- + a cost-optimal alternative, i.e. investment in the masonry in proportion to its return is the highest one
- + comfortable room micro-climate
- + a comprehensive system solution for the building envelope in a single-leaf (monolithic) structure
- + solid, safe structure
- + natural water vapour permeation - the wall breathes



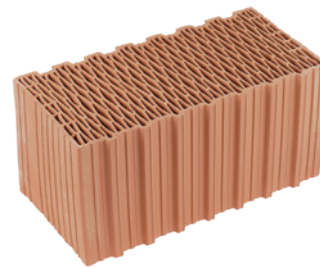




## Basic clay blocks

HELUZ FAMILY	dimensions L/W/H			compression strength	heat transfer coefficient U	clay block consumption		consumption		
	mm					pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	mortar SB	foam
	mm	mm	mm					l/m <sup>2</sup>	l/m <sup>2</sup>	m <sup>2</sup> /canister
50 grinded	247	500	249	8	0.14	16	32	7.6	5.0	5.0
44 grinded	247	440	249	10	0.17	16	36.4	6.7	4.4	5.0
38 grinded	247	380	249	10	0.20	16	42.1	5.3	4.8	5.0
30 grinded	247	300	249	10	0.25	16	53.3	4.6	3.0	5.0
25 grinded	247	250	249	10	0.31	16	64	3.8	2.5	5.0

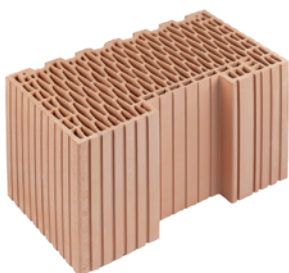
Family



## Supplementary clay blocks

HELUZ FAMILY	dimensions L/W/H			compression strength
	mm	mm	mm	MPa
50-K grinded	247	500	249	10
50-K-1/2 grinded	125	500	249	10
50-N grinded	247	500	166	10
44-K grinded	247	440	249	10
44-K-1/2 grinded	125	440	249	10
44-R grinded	187	440	249	10
44-N grinded	247	440	166	10
38-K grinded	247	380	249	10
38-K-1/2 grinded	125	380	249	10
38-N grinded	247	380	166	10
30-1/2 grinded	125	300	249	10
30-R grinded	182	300	249	10

K Edge clay block



K-1/2 Edge half clay block



R Corner



N Low



# PLUS

U up to 0,20 W/m<sup>2</sup>K

**A QUALITY  
AT A FAVOURABLE  
PRICE**



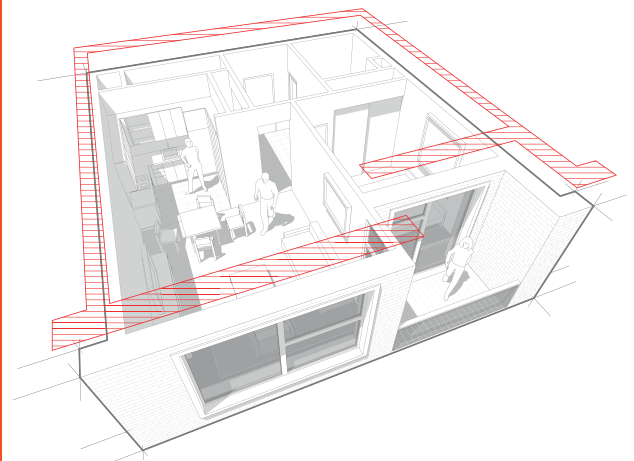
**A CONSTRUCTION** titled: **An individual house HELUZ**



**PLUS** clay blocks meet the required standard values for **thermal insulation properties and are ideal for their competitive price and high load-bearing capacity.**

PLUS clay blocks are distinguished by their good strength and low thermal conductivity. **An additional insulation is not necessary for PLUS clay blocks with a width of 44 and more.** Supplementary clay blocks are used for easy solution of construction details (corners, jambs)

- + the first generation of thermal insulation clay blocks since 1995
- + heat transfer coefficient U up to 0.20 W/m<sup>2</sup>K
- + for single-leaf external walls of energy-efficient buildings and masonry with ETICS (External Thermal Insulation Composite System)
- + increased the strength of masonry
- + favourable price, solid, safe structure
- + natural water vapour permeation - the wall breathes





## Basic clay blocks

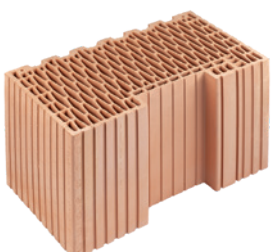
HELUZ PLUS	dimensions L/W/H			compression strength	heat transfer coefficient U	clay block consumption		consumption			
	mm					pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	mortar SB	foam	ma-sonry mortar
								l/m <sup>2</sup>	l/m <sup>2</sup>	m <sup>2</sup> /canister	l/m <sup>2</sup>
44 grinded	247	440	249	10	0.20	16	36.4	6.7	4.4	5.0	-
44	247	440	238	10	0.21	16	36.4	-			42.0
38 grinded	247	380	249	10	0.23	16	42.1	5.8	3.8	5.0	-
38	247	380	238	10	0.24	16	42.1	-			36.0



## Supplementary clay blocks

HELUZ PLUS	dimensions L/W/H			compression strength
	mm			MPa
44-K grinded	247	440	249	10
44-K-1/2 grinded	125	440	249	10
44-N grinded	247	440	166	10
44-R grinded	182	440	249	10
44-K	247	440	238	10
44-K-1/2	125	440	238	10
44-R	247	440	238	10

**K** Edge clay block



**K-1/2** Edge half clay block



**R** Corner



**N** Low



# UNI



- + optimal shape guarantees even greater strength of clay blocks and walls
- + favourable price and reduced labour intensity
- + suitable arrangement of internal partitions for cutting of clay blocks



**For outer walls with additional insulation, apartment construction, linings, and internal load bearing walls.**

HELUZ UNI	dimensions L/W/H			compression strength	heat transfer coefficient U	clay block consumption		consumption					
	mm					MPa	W/m <sup>2</sup> K	pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	mortar SB	foam	ma-sonry mortar
										l/m <sup>2</sup>	l/m <sup>2</sup>	m <sup>2</sup> /canister	l/m <sup>2</sup>
<b>30 grinded</b>	247	300	249	12.5	0.48	16	53.3	4.6	3.0	5.0	-		
<b>30</b>	247	300	238	12.5	0.56	16	53.3	-			28.0		
<b>25 grinded</b>	375	250	249	12.5	0.65	10.7	42.8	3.8	2.5	5.0	-		
<b>25</b>	375	250	238	12.5	0.74	10.7	42.8	-			24.0		

UNI clay blocks are among the ideal products in their category; **Favourable weight, great strength, good sound insulation, high fire resistance.**

# P15



- + high strength, load bearing capacity, and fire resistance
- + for load-bearing outer and inner walls of multi-storey buildings
- + enhanced acoustic properties



**For structures with higher demands on the load bearing capacity, and sound insulation.**

HELUZ P15	dimensions L/W/H			compression strength	heat transfer coefficient U	clay block consumption		consumption					
	mm					MPa	W/m <sup>2</sup> K	pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	mortar SB	foam	ma-sonry mortar
										l/m <sup>2</sup>	l/m <sup>2</sup>	m <sup>2</sup> /canister	l/m <sup>2</sup>
<b>30 grinded</b>	247	300	249	15	0.47	16	40	4.6	3.0	5.0	-		
<b>30</b>	247	300	238	15	0.55	16	40	-			28.0		
<b>25 grinded</b>	375	250	249	15	0.80	16	42.1	3.8	2.5	5.0	-		
<b>25</b>	375	250	238	15	0.86	16	42.1	-			24.0		
<b>COMPLEMENTARY CLAY BLOCKS</b>													
<b>30/25-N grinded</b>	250	300	166	15		-		-					

P15 clay blocks are distinguished by their robust shape and are a popular assortment **for the construction of multi-storey residential buildings.**

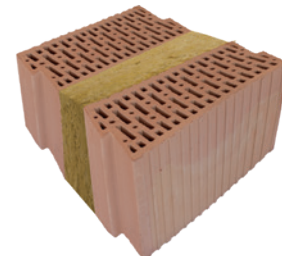
# AKU GRINDED



AKU clay block  
for concrete infill



AKU Z



AKU Z system with  
an insulating material

- + for enhanced acoustic parameters of buildings
- + high levels of air-borne sound insulation
- + improves the acoustic comfort of living
- + a high wall strength
- + easy building with use of Polyurethane PU foam
- + speed of construction

**For structures with higher demands on sound insulation.**

HELUZ AKU	dimensions L/W/H			compression strength	Airborne sound insulation $R_w$	clay block consumption		consumption			
	mm					MPa	dB	pc/m <sup>2</sup>	pc/m <sup>3</sup>	SB C mortar	SB mortar
				l/m <sup>2</sup>						l/m <sup>2</sup>	
25 grinded clay block for concrete infill	497	250	249	8	57	8	32	3,8	2.5	-	155
Z 17.5 grinded	375	175	249	20	51	10.7	61	2,7	1.8	5.0	-
2xAKU Z 17.5 grinded	375	175	249	20	73 <sup>1)</sup>	10.7	61	5,4	3.6	10.0	-

<sup>1)</sup>  $R_w$  - insulant - 40 mm of mineral wool

**AKU grinded clay blocks** are used **to separate individual apartments in apartment buildings, accommodation facilities, engine rooms and in family houses, e.g. for the separation of bedrooms from noisy areas.**



AKU with a mortar pocket



AKU



AKU 11.5

- + for enhanced acoustic parameters of buildings
- + high levels of air-borne sound insulation
- + improves the acoustic comfort of living
- + a high wall strength

**For structures with higher demands on sound insulation.**

HELUZ AKU	dimensions L/W/H			compression strength	Airborne sound insulation $R_w$	clay block consumption		consumption			
	mm					MPa	dB	pc/m <sup>2</sup>	pc/m <sup>3</sup>	masonry mortar	mortar pocket
										l/m <sup>2</sup>	
36.5 MK	247	365	238	20/15	58	16	43.8	26.0	13.0		
30/33.3 MK	333	300	238	20/15	58	12	40	22.0	18.0		
30/33.3	333	300	238	20/15	56	12	40	22.0	-		
25 MK	375	250	238	20/15	56	10.7	42.7	18.0	16.0		
25	375	250	238	20/15	55	10.7	42.7	18.0	-		
20	375	200	238	20	53	10.7	53.3	14.0	-		
11.5	375	115	238	15	47	10.7	92.8	9.0	-		
2x20	497	200	238	10	62 <sup>1)</sup>	8	40	28.0	-		

<sup>1)</sup>  $R_w$  - insulant - 100 mm of mineral wool

**AKU clay blocks** are used **to separate individual apartments in apartment buildings, accommodation facilities, engine rooms and in family houses, e.g. for separation of bedrooms from noisy rooms.**

# INNER WALLS AND PARTITIONS



8



11.5



14



20

- + the widest assortment of partitions and internal walls on the market
- + simple and very fast brickwork
- + low mortar consumption
- + suitable ceramic substrate for under plaster
- + good sound insulation

Clay blocks from a thickness of 175 mm for internal load-bearing walls, and clay blocks with thickness of 80, 115 and 140 mm for non-bearing walls, pits, and retention walls.

HELUZ	dimensions L/W/H			compression strength	Airborne sound insulation $R_w$	clay block consumption		consumption					
	mm					MPa	dB	pc/m <sup>2</sup>	pc/m <sup>3</sup>	mortar SB C	mortar SB	foam	mortar masonry
										l/m <sup>2</sup>	l/m <sup>2</sup>	m <sup>2</sup> /canister	l/m <sup>2</sup>
20 grinded	497	200	249	10	47	8	40	3.0	2.0	5.0	-		
20	497	200	238	10	49	8	40	-			19.0		
14 grinded	497	140	249	10	41	8	57.1	-	1.4	10.0	-		
14	497	140	238	10	43	8	57.1	-			13.0		
11.5 grinded	497	115	249	10	45	8	69.6	-	1.2	10.0	-		
11.5	497	115	238	10	46	8	69.6	-			11.0		
8 grinded	375	80	249	12.5	35	10.7	133.3	-	0.8	10.0	-		
8	375	80	238	12.5	36	10.7	133.3	-			8.0		

The grinded version of clay blocks for masonry on a thin joint **significantly increase the speed of brickwork, reduces the consumption of mortar and wall humidity and saves both your time and money.**

# OTHER BRICK PRODUCTS



## SMALL-FORMAT CLAY BLOCKS HELUZ

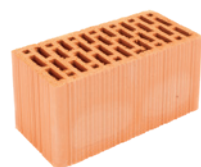
**Vertically perforated CDm clay blocks** are intended for wall thickness of 115 and 240 mm and CV14 for wall thickness of 290 and 140 mm.

**Frost resistant small-format clay blocks** can be used for facework and facing masonry and internal bearing and non-bearing walls and pillars and CV 14 can be also used for load-bearing columns.

- + they complement the clay block system for a small-format dimension
- + frost resistant
- + suitable for facework and facing masonry, pillars and columns



CDm



CV 14

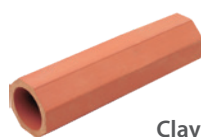
HELUZ	dimensions L/W/H			compression strength	frost resistant	clay block consumption		consumption
	mm					MPa	cycles	pc/m <sup>2</sup>
								l/m <sup>2</sup>
CDm (2DF)	240	115	113	20	F2	32.0	278.3	23
CV 14	290	140	140	20	F2	22.2	158.7	19

## SPECIAL SHAPED PIECES HELUZ

**Specially shaped pieces HELUZ** are used in new buildings and in reconstruction of houses, in gardens and in the construction of agricultural and industrial plants, etc.

**Clay wine rack** are suitable for dividing interiors, as shelf walls and as wine racks for storing bottles in wine cellars. **Clay drainage** are used for draining foundations, roads, and fields. They can also be used as decorative elements in ornamental fences and walls.

- + complementary assortment of the comprehensive HELUZ system
- + special products for other uses



Clay drainage



Clay wine rack

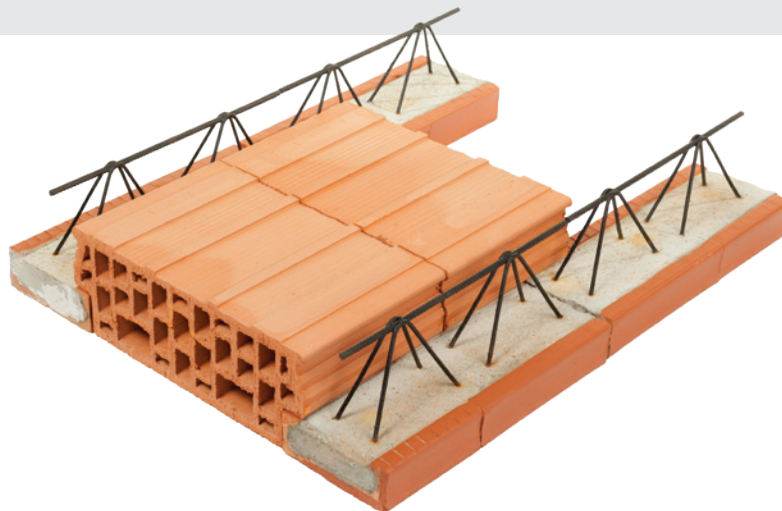
product name	dimensions L/W/H			frost resistant	consumption	
	mm				cycles	pc/m <sup>2</sup>
Brick pipe 10	250	100	100	15	-	4
Wine keeper brick 1 l	250	160	330	-	23.5	-





**A CONSTRUCTION** titled: **TERRACED** houses in Michalovice near Mladá Boleslav  
Project architect: Ing. Jan Gregora and Ing. Jana Gregorová  
Construction company: Pepí Leas

# HELUZ MIAKO BEAM AND CLAY BLOCK FLOOR SYSTEM



- + system solution
- + maximum flexibility
- + affordability
- + manual assembly option
- + traditional and popular ceiling installation technology
- + ceramic soffit = a suitable substrate for plaster
- + for a healthy indoor micro-climate
- + the most widely used clay floor system

**HELUZ MIAKO beam and clay block floor system** is composed of clay floor blocks and ceramic-concrete beams reinforced with a welded lattice girder. The straight ceramic brick floor is a good substrate for plastering. Thanks to its excellent accumulation and ability to absorb and release moisture, the floor creates a healthy micro-climate in rooms, which is why ceramic ceilings guarantee healthy and sanitary housing. Also in terms of fire resistance, heat insulation and acoustic parameters, these beam and clay block floor systems are suitable structural elements for residential and civic buildings. HELUZ MIAKO beam and clay block floor systems are highly variable and can also cover rooms with a diameter up to 8 m.

## REINFORCED CONCRETE BEAMS

product name	dimensions L/W/H		
	mm		
Reinforced concrete beams	1500-6250	160	175
	6500-8250	160	230

Informative weight of 1 meter long concrete beam is 22-25 kg.

## USE

Semi-mounted MIAKO beam and clay block floor systems are part of a comprehensive system for structural work. They are most commonly used in residential and civic buildings, but they may be used in industrial and agricultural buildings as well. These ceilings are very flexible and can be used in rugged and irregular floor plans of rooms with diameters up to 8 meters. After adding reinforcement, they can also be used as continuous beams or for brackets of balconies and stair landings, for example. However, they are not appropriate for buildings that are dynamically loaded.

Clay floor block



Reinforced concrete beam



## CLAY FLOOR BLOCKS

product name	dimensions L/W/H			clay block consumption pc/m <sup>2</sup>	airborne sound insulation 1) R <sub>w</sub> (dB)	impact sound insulation 1) L <sub>nw</sub> (dB)	fire resistance 2)
	mm						
23/50	250	400	230	8	60	49	REI 180 DP1
19/50	250	400	190	8	59	50	
15/50	250	400	150	8	58	51	
8/50	250	390	80	8	-		
23/62.5	250	525	230	6.4	60	49	
19/62.5	250	525	190	6.4	59	50	
15/62.5	250	525	150	6.4	58	51	
8/62.5	250	515	80	6.4	-		

<sup>1)</sup> with deduction of the floor effect; see more in the HELUZ Technical Manual. <sup>2)</sup> it applies to the entire floor, including plaster

## BOND BEAM CLAY BLOCKS

product name	dimensions L/W/H			clay block consumption piece/m
	mm			
8/15	333	80	150	2.7
8/19 grinded	375	80	189	2.7
8/21 grinded	375	80	209	2.7
8/23 grinded	375	80	229	2.7
8/25 grinded	375	80	249	2.7
8/27 grinded	375	80	269	2.7
8/29 grinded	375	80	289	2.7
8/23 2in1 grinded	375	80	229	2.7
8/25 2in1 grinded	375	80	249	2.7
U-17,5	240	175	238	4
U-24	240	240	238	4
U-30	240	300	238	4
U-36,5	240	365	238	4

If you are looking for a highly variable floor structure that does not require a technically demanding assembly, **and that maintains a healthy indoor microclimate and at the same time is affordable**, then have a look at **HELUZ MIAKO** beam and clay block floor systems.

Bond clay block



Bond beam block 2in1



U bond beam clay block



# HELUZ LINTELS



We offer quality ceramic lintels above door and window openings in the inner and outer walls.

Among our assortment, there are load-bearing sunblind lintels HELUZ, load-bearing lintels HELUZ 23.8 and flat ceramic lintels HELUZ.

The lintel fronts have a brick finish and form a suitable substrate for plaster.

Lintels HELUZ are the easiest way to span an opening in a wall. They have been an integral part of our comprehensive system for over 20 years. They combine the load-bearing capacity and the ceramic surface that is necessary for high-quality and durable plasters.

Don't make any compromises, use the right element in clay block walls!

## LOAD-BEARING SUNBLIND LINTELS

**Sunblind construction lintels** are used as lintels above window openings in outer walls. **These are load-bearing lintels. They already have integrated thermal insulation inside of them and create a box for placing shading systems (outdoor shutters or blinds).** These lintels are designed for covering building openings from a width of 600 mm (with ETICS - External Thermal Insulation Composite System), the min. window width must be larger) to a maximum clear opening of 3.850 mm. The height of the window opening for the installation of exterior shutters or blinds is minimum 600 mm and maximum 3.000 mm for blinds.

Lintels of more than 2.5 m in length must be combined with other static measures to increase the load capacity.

- + important element for passive and low-energy houses
- + system solution
- + possibility of mounting blinds and shutters
- + possibility of retrofitting shading elements
- + a suitable substrate for under plaster



### LOAD-BEARING LINTELS

dimensions L/W/H		
mm		
1 250-4 250	365-500	238

Informative weight - 115,0 kg/rm



**A CONSTRUCTION** titled: **TERRACED houses in Michalovice near Mladá Boleslav**

**Project architect:** Ing. Jan Gregora and Ing. Jana Gregorová • **Construction company:** Progress project s.r.o. (Prostějov)

# LOAD-BEARING LINTELS HELUZ 23.8

Load-bearing lintels HELUZ are used as lintels **above window and door openings of inner and outer walls**. These lintels can be combined with thermal insulation to achieve better thermal insulation properties.



## LOAD-BEARING LINTELS

dimensions L/W/H		
mm		
1000-3500	70	238

Informative weight - 35.0 kg/rm

- + the lintel is fully structurally load-bearing - after placement into cement mortar
- + these lintels are combined with thermal insulation in the external masonry - elimination of thermal bridges
- + easy handling also enables manual installation and saves time and money
- + the visible sides of the lintel have a brick surface - a suitable substrate for plastering
- + the shape of the ceramic lintel fittings allows you to check the right fit of the lintel, even in the completed structural work
- + simple design in the comprehensive HELUZ system in the 250 mm module

# FLAT CERAMIC LINTELS HELUZ

Flat ceramic lintels HELUZ are used **for header joists in non-load-bearing walls**, where they form so-called composite lintels together with the backing clay blocks. Composite lintels consist of two parts - the actual prefabricated ceramic-concrete lintel and the so-called pressure zone built on the structure above the lintel.



## FLAT LINTELS

dimensions L/W/H		
mm		
1000-3000	115	71
1000-3000	145	71
1000-1500	175	71

Informative weight of W. 115mm - 14.5 kg/rm

Informative weight of W. 145mm - 17.5 kg/rm

Informative weight of W. 175mm - 20.0 kg/rm

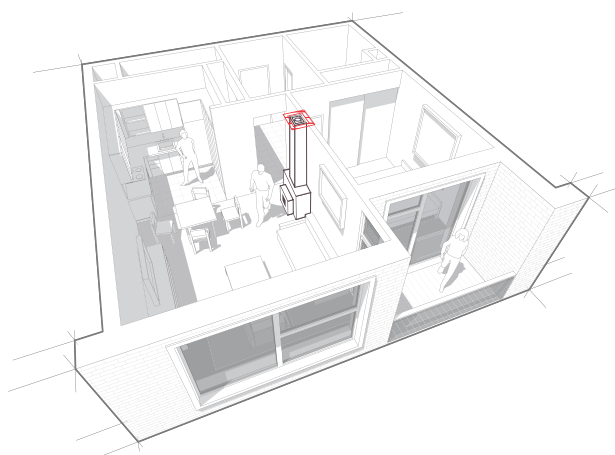
- + low steel consumption and thus the lowest price compared to other kinds of lintels
- + extensive variability of use (a combination of widths, jagged header joists)
- + the possibility of combining the lintels with the inserted thermal insulation
- + its low weight enables the easy manual handling
- + three width variations (115, 145, 175 mm)
- + simple design in the comprehensive HELUZ system in the 250 mm module in combination with so-called low clay blocks
- + lintels suitable for partitions

# CLAY BLOCK CHIMNEY SYSTEMS HELUZ



- + suitable for all types of fuels and appliances
- + low weight of individual parts
- + quick and easy assembly as a kit
- + all chimney systems allow the suction of air to the appliance with one chimney body or a shaft (except for the KLASIK system)
- + problem-free initial inspection before putting the system into operation
- + resistant to soot burnout (except for the GAS system)
- + also suitable for wet operation (except for the system KLASIK)
- + chimneys for low-energy and passive houses
- + certified and tested systems (in several European countries) developed by our company
- + a large selection of chimney heads
- + the system can be used as installation shafts for distribution systems
- + building up to 10 m of a chimney in one day
- + high variability - it is possible to build a chimney with any number of flues and shafts

**Depending on the type of an appliance and the type of fuel used, you can select the optimum chimney system. Currently, we offer 3 types of chimney systems - IZOSTAT, KLASIK, and GAS.**



## IZOSTAT

A modern chimney system suitable for all types of fuels (solid, liquid and gaseous fuels) and designed for operation at atmospheric pressure and pressurized operation. It contains thin-walled ceramic isostatic liners, heat insulation, and grinded chimney clay blocks. It is supplied as a three-layer system (chimney clay block, insulation and isostatic liner).

The HELUZ IZOSTAT chimney system can be combined with any HELUZ system, including an empty or half-empty ventilation shaft. Its design not only allows the safe venting of flue gas into the open air but also the suction of air to the appliance with one chimney body.

## KLASIK

The system is specially designed for solid fuels (e.g. fireplaces, stoves, fireplace liners, solid fuel boilers) and operation at atmospheric pressure.

HELUZ KLASIK system - it can also be used in chimney reconstruction with the possibility of combining it with any other HELUZ chimney system, including an empty or half empty ventilation shaft. Its design allows safe venting of flue gas into the open air.

## GAS

Two-layer chimney system is applicable to appliances burning gaseous and liquid fuels working in atmospheric or pressurized operation. The system contains plastic liners. It can withstand temperatures up to 120 °C without a problem.

The HELUZ GAS system can be combined with any other HELUZ chimney system, including an empty or half empty ventilation shaft. Its design not only allows the safe venting of flue gas into the open air but also the suction of air to the appliance with one chimney body.



## TECHNOLOGY NEWS - THE VAPOUR BARRIER

The vapour barrier HELUZ prevents moisture condensation, meets the fire standard and reduces the heat loss of the roof structure. 50 mm thick foamglass sheets are adhered to the chimney body at the desired point of the passage using the assembly kit. After being adhered they form a vapour permeable, non-flammable and dimensionally stable opening of size 500 x 500 mm (alternatively 500 x 900 mm).



Chimney type	dimensions L/T/H		
	mm		
individual-flue chimney system	450	50	500
two-flue chimney system	850	50	500

# BINDERS AND OTHER MATERIALS



System binders are used to build masonry structures. Thin layer masonry mortars and a special Polyurethane PU foam for easy masonry with grinded clay blocks. Extruded polystyrene is inserted into the edge clay blocks in the lining of the building openings to break the thermal bridge. Polystyrene R or PLUS for clay block filling is used for filling of the first clay block course on the base slab to break the thermal bridge.

## + for quick and easy construction using the HELUZ construction system

HELUZ offers a comprehensive assortment of binders and brickwork materials. As a result, you don't have to look for other suppliers of these materials. If you need advice on what brickwork materials you need for the selected system, do not hesitate to contact us. We will be pleased to recommend you a suitable masonry mortar, foam, and insulation so that the construction continues quickly and flawlessly. We sell both masonry materials – mortars, masonry foam and foundation mortar and materials for improving the thermal insulation properties of masonry – extruded polystyrene and bulk expanded polystyrene.

## POLYSTYRENE

FOR THE CLAY BLOCK FILLING SYSTEM			
description	use	recommended use	coefficient of thermal conductivity $\lambda$
			W/mK
R granularity 3-6mm	crushed polystyrene used in the first clay block course	HELUZ PLUS	0.033
PLUS granularity 3mm	expanded polystyrene for the brick filling of more clay block courses	HELUZ FAMILY	0.033

FOR LINING WITH EDGE CLAY BLOCKS			
description	dimensions L/W/H	recommended use	coefficient of thermal conductivity $\lambda$
	mm		W/mK
Extruded Polystyrene XPS cut	1250/150/30	for lining	0.035
Extruded Polystyrene XPS	1250/600/30		0.035

CUT EPS 70 Z	
dimensions L/W/H mm	
used with bond beam clay blocks	
1500/210/100	
1500/230/100	
1500/250/100	
used between load-bearing lintels 23.8	
1500/240/70	
1500/240/90	
1500/240/100	
1500/240/120	
1500/240/140	
1500/240/150	

### Foundation mortar



### Thin layer SB C mortar for a thin whole-surface-covering joint



### Thin layer SB mortar for a thin joint



### Thermal insulation masonry and foundation mortar





## HELUZ MORTAR AND FOAM

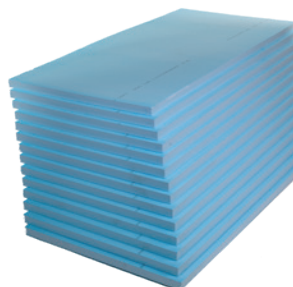
product name	use		compression strength MPa	coefficient of thermal conductivity $\lambda$ W/mK	consumption (efficiency) 1 bag/container litres m <sup>2</sup>
	standard °C	winter °C			
HELUZ SB thin layer masonry mortar	from 5	from -5 to 15	10	0.83	19.5
HELUZ SB C thin layer masonry mortar for whole-surface-covering joint	from 5	from -5 to 15	10	0.21-0.29	36.0
HELUZ foundation mortar SB Z	from 5	from -5 to 15	10	0.82-1.09	13.9
HELUZ TREND thermal insulation masonry and foundation mortar	from 5	from -5 to 15	> 8	0.15-0.20	40.0
Masonry mortar M5	from 5	from -5 to 15	5	max. 1.42	23.0
HELUZ TYTAN PUR foam (thin-filmed adhesive)	from -10 to 30	-	-	0.036	5,0 (masonry W. 175-500mm) 10,0 (masonry W. 80-140mm)
HELUZ NATURE Energy clay mortar	from 5	-	1	-	13.9



Foam



Extruded Polystyrene



Polystyrene for the clay block filling



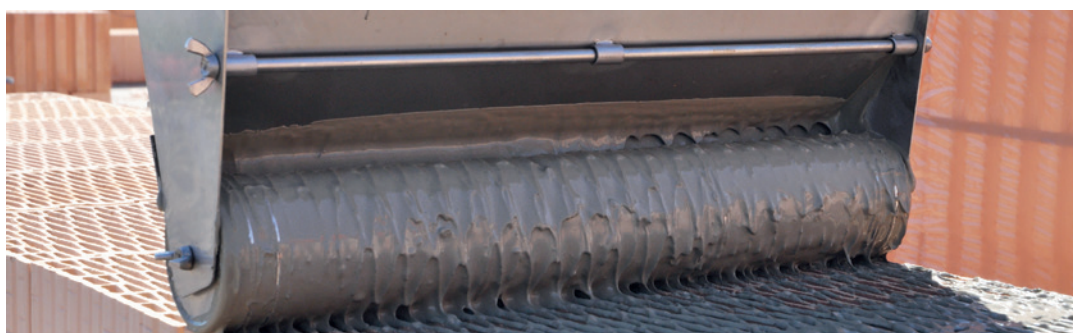
# TOOLS



Tools for the brickwork of grinded clay blocks are used for their appropriate installation into the construction. The levelling kit is used to level the mortar bed below the first clay block course of masonry. Applicator rollers are used to apply mortar for a thin joint. Saws are used for clay block cutting.

## TOOLS FOR THE BRICKWORK OF GRINDED CLAY BLOCKS

product name	use
The levelling kit	used to level the mortar bed below the first clay block course of masonry
The levelling kit LIGHT	used to level the mortar bed below the first clay block course of masonry
Applicator roller SB (50; 44; 38; 30; 25 cm)	for SB mortar for a thin joint
Applicator roller SB (17,5-25; 30-38; 24-44; 40-50 cm)	for SB mortar for a thin whole-surface-covering joint
Universal damper	for rollers for SB C mortar (any wall thickness)
Application gun for applying HELUZ foam - professional	for foam applying
Anchor from rustless steel HNK	for wall joining and anchoring



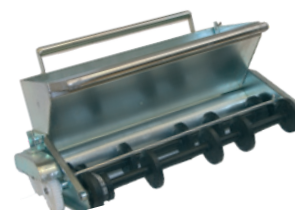
The levelling kit



Applicator roller SB



Applicator roller SB C



HELUZ offers levelling kits, clay block saws, mortar applicator rollers and many other tools and aids for brickwork. If you need advice on tools you need for the selected system, do not hesitate to contact us. We will be pleased to recommend individual brickwork aids and other equipment so that your construction goes smooth. In case you do not want to buy the brickwork tools, we will be happy to lend them to you.

## HELUZ SAWS

product name	use
A professional saw for accurate clay block cutting	with a set of saw blades
A basic set of saw blades 48 teeth	for the professional saw with blade length 425 mm
A basic set of saw blades 78 teeth with longer service life	for the professional saw with blade length 425 mm

+ for quick and easy construction using the HELUZ construction system

Universal damper



Application gun



Anchor



Professional saw

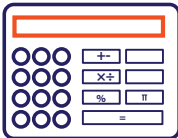


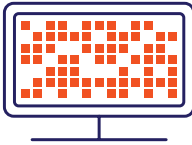




Set of blades



# SERVICES



<p><b>Calculation of material requirements</b></p> 	<p><b>Preparation of ceiling assembly plan</b></p> 
<p><b>Training on HELUZ products</b></p> 	<p><b>Calculation SW and instruments</b></p> 
<p><b>Material transport</b></p> 	<p><b>Order tracking</b></p> 

We are fully aware of what the house construction involves. That is why we offer a wide portfolio of services that make the construction as easy as possible.

# PROPERTIES OF HELUZ CLAY BLOCKS

 <p><b>Thermal insulation properties</b> The best thermal insulation properties on the market.</p>	 <p><b>Healthy clay blocks</b> Harmlessness - verified by the State Health Institute.</p>
 <p><b>Seasonal thermal energy storage</b> Warm in winter, cool in summer.</p>	 <p><b>Indoor climate</b> Pleasant indoor climate for living.</p>
 <p><b>Water vapour diffusion</b> The walls breathe. No damp, no mould.</p>	 <p><b>Environment-friendly</b> Environmental statement for all production.</p>
 <p><b>One-layer constructions</b> Low-energy and passive houses without additional insulation.</p>	 <p><b>Saving resources</b> Thanks to the long lifetime service of the buildings, the raw material resources are saved.</p>
 <p><b>Airtight building shell</b> &gt;n50 = 0,2 h-1</p>	 <p><b>Acoustics</b> Noise protection.</p>
 <p><b>Long lifetime service</b> Single-leaf clay block construction &gt;100 years Constructions with insulation &lt;25 years until a renovation</p>	 <p><b>Sound insulation of walls</b> Up to 58dB.</p>
 <p><b>Permanent value</b> The building does not lose its value. The high price of clay block buildings on the real estate market.</p>	 <p><b>Free decision making in home design</b> From simple houses to industrial buildings.</p>
 <p><b>Fast construction</b> Short construction time saves investors' money.</p>	 <p><b>Mechanical durability</b> High load capacity, strength, and durability.</p>
 <p><b>One supplier</b> Easy communication, compatibility, time saving.</p>	 <p><b>Fire resistance</b> High fire resistance of clay block houses.</p>
 <p><b>Simple system</b> From walls to a chimney. A simple system with great utility features.</p>	 <p><b>Safety</b> Robust, massive construction.</p>

# DID YOU KNOW THAT...?

- Did you know that a thorough selection of building materials is very important? You can replace windows, doors, bathrooms or floors at any time. The only thing you cannot replace is the building envelope of the house.

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- Did you know that the rough construction masonry represents only 10% of the final construction costs?

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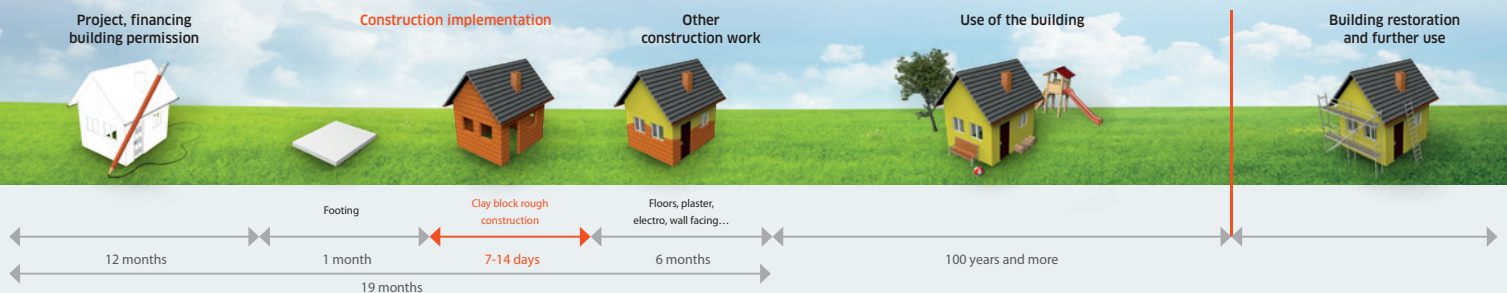
- Did you know that you could finish the rough construction within 1 - 2 weeks?

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- Did you know that HELUZ is the declaring environment-friendly production and impacts of the production on the environment? The manufacturer has the EPD (Environmental Product Declaration) certification for all production.

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## Construction speed graph



# THE CLAY BLOCK STORY



1

Open-pit excavation of the raw material. At the same time, the reclamation of the clay pits takes place so as to make the intervention in the landscape as friendly as possible.



2

Preparation and homogenization of the porous mixture using raw materials.



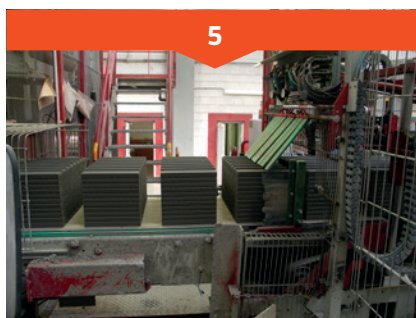
3

Storage of the porous mixture - containers for particular clay block production.



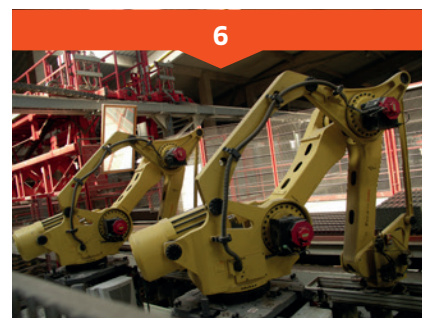
4

The mixture is pressed through a die piece to form a continuous extruded form. The production batch is marked.



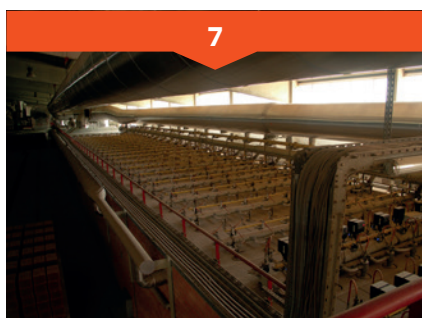
5

The continuous extruded form is cut into individual clay blocks.



6

The clay blocks are placed on kiln cars and taken to a dryer.



7

The green form of clay blocks is fired in a tunnel furnace at firing temperatures of about 900°C.



8

The fired clay blocks are then ground on the brick laying surfaces with precision to a few tenths of a millimetre. A special line is used to fill FAMILY 2in1 with an insulator.



9

Palletization, labelling, packaging in plastic wrap and storage within the plant premises. Clay blocks are ready to be taken to a construction site.



## HELUZ cihlářský průmysl, a. s.

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Subject to technical changes.