

# POROTHERM Slabs

Pink lines = simple joists  
Blue lines = double joists



## Resistance of the slab for joists in spacing 625 mm and C20/25 concrete

Joist length [mm]	Clear span [mm]	Reinforcement diameter	MIAKO 15/62,5 PTH				MIAKO 19/62,5 PTH				MIAKO 23/62,5 PTH			
			h = 190		h = 210		h = 230		h = 250		h = 270		h = 290	
			q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>
1 750	1 500	2ø8	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00
2 000	1 750	2ø8	18,23	14,94	20,00	16,93	20,00	19,57	20,00	20,00	20,00	20,00	20,00	20,00
2 250	2 000	2ø8	13,53	11,02	15,28	12,48	17,79	14,57	19,52	16,01	20,00	17,95	20,00	19,43
2 500	2 250	2ø8	10,24	8,28	11,54	9,36	13,59	11,07	14,87	12,14	16,73	13,69	18,06	14,80
2 750	2 500	2ø8	7,80	6,25	8,77	7,05	10,48	8,48	11,43	9,27	12,95	10,54	13,94	11,36
3 000	2 750	2ø10	10,88	8,81	12,29	9,99	14,40	11,75	15,82	12,93	17,79	14,57	19,23	15,77
3 250	3 000	2ø10	8,76	7,05	9,87	7,97	11,69	9,49	12,81	10,42	14,49	11,82	15,63	12,77
3 500	3 250	2ø10	7,09	5,65	7,97	6,39	9,56	7,71	10,45	8,45	11,89	9,65	12,79	10,40
3 750	3 500	2ø10	11,69	9,49	13,36	10,88	15,61	12,75	17,33	14,19	19,44	15,95	20,00	17,36
4 000	3 750	2ø10	5,75	4,54	6,45	5,12	7,86	6,30	8,56	6,88	9,82	7,93	10,50	8,52
4 250	4 000	2ø12	9,61	7,75	11,00	8,91	12,95	10,54	14,37	11,72	16,19	13,24	17,60	14,41
4 500	4 250	2ø12	7,84	6,02	8,85	7,12	10,57	8,55	11,58	9,40	13,18	10,73	13,35	10,87
4 750	4 500	2ø12	12,78	9,27	14,67	11,97	17,12	14,01	19,04	15,61	20,00	17,60	20,00	17,50
5 000	4 750	2ø12 + ø6	6,57	4,70	7,40	5,91	8,94	7,20	9,78	7,90	11,19	9,07	12,04	9,78
5 250	5 000	2ø12 + ø8	10,81	7,32	12,43	9,82	14,60	11,91	16,23	13,27	18,53	15,19	19,41	15,92
5 500	5 250	2ø12 + ø10	6,66	4,12	7,50	5,46	9,09	7,32	9,94	8,03	11,35	9,20	11,99	9,74
5 750	5 500	2ø12 + ø12	10,95	6,42	12,57	8,69	14,76	11,81	16,41	13,42	18,46	15,13	20,00	16,55
6 000	6 000	2ø12 + ø14	6,25	3,50	7,14	4,67	8,78	6,70	9,64	7,78	10,85	8,79	11,22	9,10
6 250	6 250	2ø12 + ø16	10,56	5,47	12,15	7,49	14,29	10,32	15,90	13,00	17,92	14,68	19,52	16,01
6 500	6 500	2ø12 + ø18	5,67	3,01	6,45	4,06	8,00	5,95	8,88	7,15	10,15	8,20	10,46	8,46
6 750	6 750	2ø12 + ø20	10,47	4,73	12,04	6,55	14,20	9,17	15,80	11,60	17,81	14,59	19,44	15,95
7 000	7 000	2ø12 + ø22	5,14	2,63	5,84	3,58	7,30	5,37	8,08	6,48	9,43	7,60	9,69	7,82
7 250	7 250	2ø12 + ø24	9,59	4,14	13,30	5,81	13,34	8,25	15,06	10,50	17,23	13,34	18,68	15,31
7 500	7 500	2ø12 + ø26	4,72	2,00	5,35	2,78	6,73	4,37	7,44	5,46	8,72	7,01	8,96	7,21
7 750	7 750	2ø12 + ø28	8,89	3,23	12,35	4,64	12,39	6,79	13,97	8,70	15,94	11,19	17,41	13,62
8 000	8 000	2ø12 + ø30			4,91	2,11	6,22	3,54	6,86	4,45	8,07	5,99	8,31	6,67
8 250	8 250	2ø12 + ø32	8,09	2,46	11,12	3,65	11,16	5,56	12,47	7,19	14,13	9,38	15,42	11,47
8 500	8 500	2ø12 + ø34			4,45	1,86	5,70	3,24	6,27	4,08	7,41	5,56	7,72	6,18
8 750	8 750	2ø12 + ø36	7,54	2,13	8,77	3,25	10,61	5,06	11,94	6,61	13,74	8,68	15,18	10,67
9 000	9 000	2ø12 + ø38					5,29	2,59	5,80	3,29	6,88	4,61	7,18	5,56
9 250	9 250	2ø12 + ø40	7,03	1,54	8,18	2,49	9,93	4,11	11,16	5,45	12,86	7,28	14,18	9,00
9 500	9 500	2ø12 + ø42							6,02	2,61	7,05	3,79	7,56	4,59
9 750	9 750	2ø12 + ø44							10,21	4,44	11,68	6,08	12,74	7,57
10 000	10 000	2ø12 + ø46							6,39	2,41	7,24	3,56	7,34	4,34
10 250	10 250	2ø12 + ø48							10,76	4,10	12,32	5,67	13,46	7,12
10 500	10 500	2ø12 + ø50							5,89	2,24	6,79	3,36	6,87	4,10
10 750	10 750	2ø12 + ø52							11,36	3,80	12,20	5,33	12,73	6,74
11 000	11 000	2ø12 + ø54									6,39	2,75	6,45	3,38
11 250	11 250	2ø12 + ø56							10,24	3,05	11,54	4,43	12,03	5,66
11 500	11 500	2ø12 + ø58									6,03	2,21	6,06	2,74
11 750	11 750	2ø12 + ø60							9,24	2,40	10,65	3,64	11,39	4,72
12 000	12 000	2ø12 + ø62									5,67	2,09	5,68	2,61
12 250	12 250	2ø12 + ø64							9,52	2,21	10,36	3,41	10,77	4,48
12 500	12 500	2ø12 + ø66											5,34	2,08
12 750	12 750	2ø12 + ø68									9,84	2,75	10,21	3,70
13 000	13 000	2ø12 + ø70											5,03	1,60
13 250	13 250	2ø12 + ø72									9,35	2,17	9,69	3,00



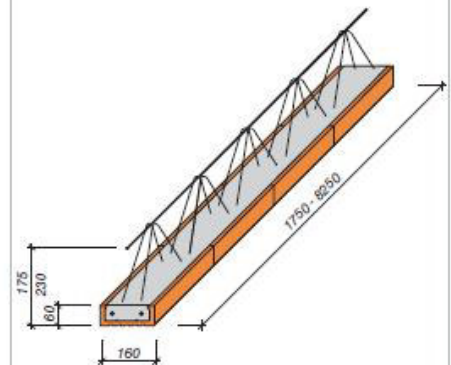
Simple joist

□ marking in tables



Double joist

□ marking in tables



$q_n$  – Characteristic value of maximum loading (without self-weight)  
Should be denoted as  $q_k$  according to Eurocode

$q_d$  – Design value of maximum loading (without self-weight)

$$\text{Bedding length} = \frac{\text{Joist length} - \text{clear span}}{2}$$



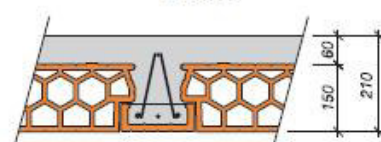
# Resistance of the slab for joists in spacing 500 mm and C20/25 concrete

Joist length	Clear span	Reinforcement	MIAKO 15/62,5 PTH				MIAKO 19/62,5 PTH				MIAKO 23/62,5 PTH			
			h = 190		h = 210		h = 230		h = 250		h = 270		h = 290	
[mm]	[mm]	diameter	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>	q <sub>d</sub>	q <sub>n</sub>
1 750	1 500	2ø8	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00
2 000	1 750	2ø8	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00
2 250	2 000	2ø8	17,28	15,30	19,61	17,40	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00
2 500	2 250	2ø8	13,21	11,50	14,97	13,20	17,41	15,40	19,15	16,90	20,00	19,00	20,00	20,00
2 750	2 500	2ø8	10,20	8,86	11,54	10,07	13,56	11,90	14,88	13,10	16,74	14,80	18,09	16,00
3 000	2 750	2ø10	13,88	12,20	15,77	13,90	17,54	15,50	18,94	16,80	18,86	16,60	19,98	17,70
3 250	3 000	2ø10	11,27	9,83	12,80	11,22	14,97	13,20	16,52	14,60	16,66	14,70	17,59	15,50
3 500	3 250	2ø10	9,22	7,97	10,46	9,10	12,35	10,81	13,60	11,90	14,85	13,00	15,62	13,70
3 750	3 500	2ø10	13,88	11,00	15,94	11,53	18,53	15,19	20,64	16,95	23,20	17,58	25,23	20,77
3 750	3 500	2ø10	7,58	6,47	8,58	7,39	10,24	8,90	11,26	9,82	12,77	11,20	13,79	12,10
3 750	3 500	2ø10	11,47	7,81	13,20	10,74	15,44	12,62	17,20	14,08	19,40	15,92	21,09	17,32
4 000	3 750	2ø12	9,99	7,51	11,43	9,75	11,70	10,22	12,42	10,88	12,26	10,73	12,81	11,23
4 000	3 750	2ø12	14,92	10,35	17,23	12,29	19,34	15,87	20,77	17,06	21,63	17,77	22,97	18,89
4 250	4 000	2ø12	8,43	5,96	9,66	7,77	10,67	9,29	11,29	9,85	11,13	9,70	11,59	10,12
4 250	4 000	2ø12	12,67	8,20	14,65	11,02	17,15	14,04	18,95	15,57	19,75	16,21	20,93	17,19
4 500	4 250	2ø12 + ø6	8,54	5,26	9,77	6,90	10,42	9,06	10,96	9,55	10,74	9,35	11,12	9,69
4 500	4 250	2ø12 + ø6	12,64	7,18	14,74	9,74	17,08	13,11	18,23	14,94	18,88	15,48	19,92	16,35
4 750	4 500	2ø12 + ø8	7,75	4,52	8,92	5,97	9,85	8,27	10,32	8,97	10,08	8,75	10,40	9,04
4 750	4 500	2ø12 + ø8	11,45	6,11	13,44	8,39	16,02	11,44	17,14	14,03	17,72	14,52	18,64	15,28
5 000	4 750	2ø12 + ø10	7,03	3,94	8,09	5,24	9,27	7,39	9,67	8,38	9,43	8,16	9,68	8,39
5 000	4 750	2ø12 + ø10	10,37	5,28	12,17	7,34	14,56	10,14	16,08	12,89	16,59	13,57	17,43	14,27
5 250	5 000	2ø12 + ø12	6,36	3,48	7,32	4,68	8,64	6,68	8,98	7,75	8,74	7,53	8,95	7,72
5 250	5 000	2ø12 + ø12	9,32	4,60	10,99	6,49	13,22	9,08	15,00	11,64	15,47	12,64	16,22	13,27
5 500	5 250	2ø12 + ø12	5,87	2,75	6,74	3,74	8,03	5,52	8,32	6,88	8,09	6,94	8,26	7,09
5 500	5 250	2ø12 + ø12	8,62	3,60	10,17	5,20	12,26	7,47	13,93	9,65	14,40	11,75	15,07	12,31
5 750	5 500	2ø12 + ø12	5,43	2,14	6,22	2,96	7,48	4,55	7,73	5,69	7,50	6,40	7,63	6,52
5 750	5 500	2ø12 + ø12	8,00	2,76	9,43	4,12	11,41	6,12	12,95	7,99	13,43	10,31	14,04	11,44
6 000	5 750	2ø12 + ø14			5,64	2,70	7,01	4,18	7,22	5,25	7,00	5,95	7,10	6,04
6 000	5 750	2ø12 + ø14	7,18	2,38	8,51	3,51	10,39	5,54	11,80	7,32	12,57	9,51	13,13	10,69
6 250	6 000	2ø12 + ø14			5,22	2,09	6,56	3,42	6,73	4,33	6,56	5,51	6,58	5,57
6 250	6 000	2ø12 + ø14	6,67	1,73	7,91	2,82	9,70	4,50	11,01	6,04	11,77	7,98	12,27	9,96
6 500	6 250	2ø12 + ø14							7,88	3,52	7,19	4,85	7,29	5,88
6 500	6 250	2ø12 + ø14							11,86	4,93	11,83	6,65	12,34	8,38
6 750	6 500	2ø12 + ø16							8,02	3,28	6,77	4,56	6,85	5,56
6 750	6 500	2ø12 + ø16							12,37	4,54	11,11	6,17	11,58	7,87
7 000	6 750	2ø12 + ø18							7,83	3,07	6,39	4,30	6,44	5,29
7 000	6 750	2ø12 + ø18							11,31	4,20	10,45	5,75	10,88	7,42
7 250	7 000	2ø12 + ø18							6,93	2,47	6,00	3,59	6,03	4,44
7 250	7 000	2ø12 + ø18							10,66	3,38	9,85	4,77	10,24	6,24
7 500	7 250	2ø12 + ø18									5,64	2,97	5,65	3,96
7 500	7 250	2ø12 + ø18							10,07	2,66	9,30	3,91	9,65	5,20
7 750	7 500	2ø12 + ø20									5,29	2,81	5,28	3,53
7 750	7 500	2ø12 + ø20							9,17	2,43	8,77	3,64	9,09	4,92
8 000	7 750	2ø12 + ø20									4,98	2,29	4,95	2,91
8 000	7 750	2ø12 + ø20							8,67	1,84	8,29	2,93	8,58	4,06
8 250	8 000	2ø12 + ø20											4,64	2,36
8 250	8 000	2ø12 + ø20									7,84	2,30	8,10	3,30

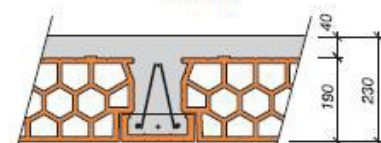
## Slab depth 190 mm



## 210 mm



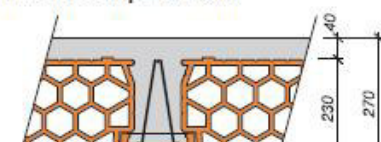
## 230 mm



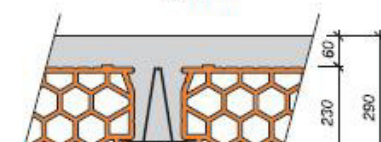
## 250 mm



## Tloušťka stropu 270 mm



## 290 mm

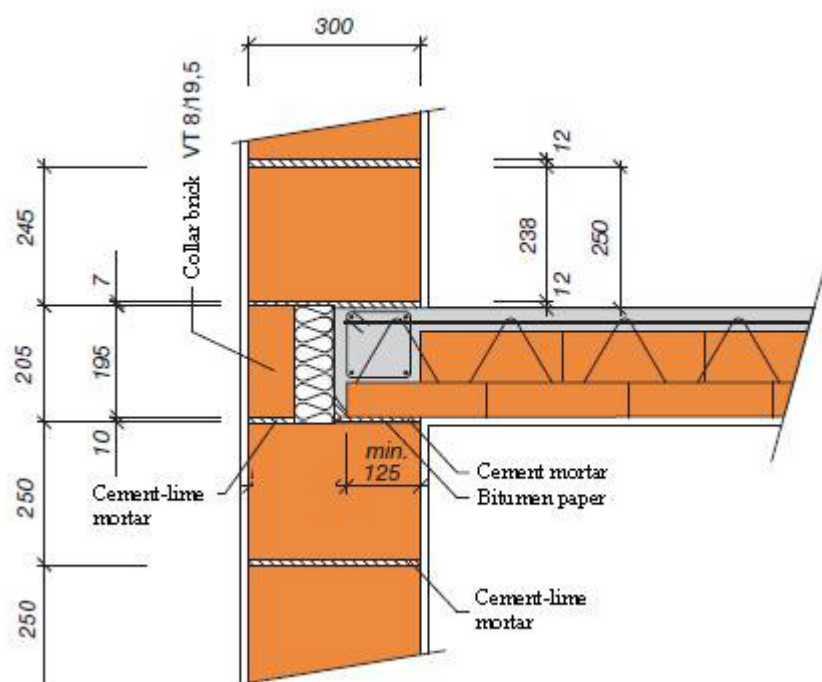


## Self-weight of the slab and concrete consumption

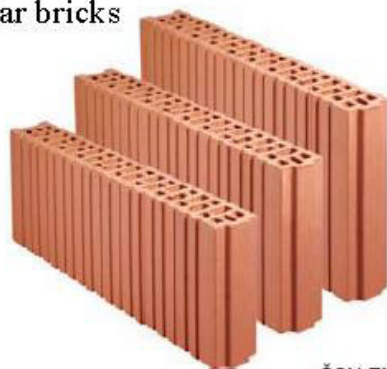
Slab depth [mm]	Spacing of joists					
	625 mm			500 mm		
	$g_n$ [kN/m <sup>2</sup> ]	$g_d$ [kN/m <sup>2</sup> ]	*	$g_n$ [kN/m <sup>2</sup> ]	$g_d$ [kN/m <sup>2</sup> ]	*
190	2,68	2,95	0,058	2,82	3,10	0,062
210	3,14	3,45	0,078	3,28	3,61	0,082
230	2,95	3,25	0,066	3,13	3,44	0,071
250	3,42	3,76	0,086	3,60	3,96	0,091
270	3,38	3,72	0,074	3,60	3,96	0,080
290	3,84	4,22	0,094	4,06	4,47	0,100

\* Concrete consumption [m<sup>3</sup>/m<sup>2</sup>]

## Detail of slab-wall joint

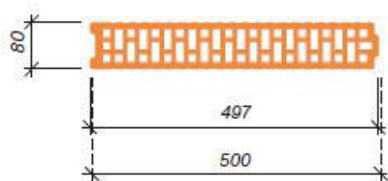


## Collar bricks

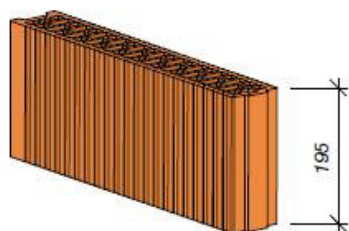


ČSN EN 771-1

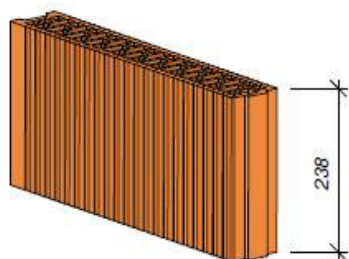
### Collar brick VT 8



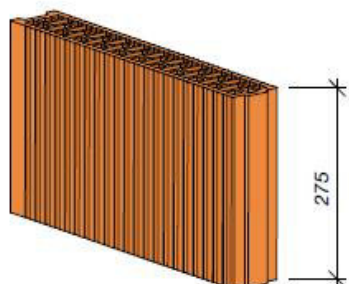
### Collar brick VT 8/19,5



### Collar brick 8/23,8

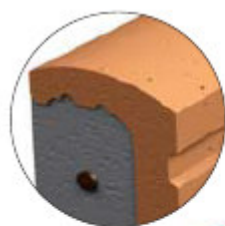


### Collar brick VT 8/27,5





# Porotherm 7 Lintel



ČSN EN 845-2

Height: 238 mm

Width: 70 mm

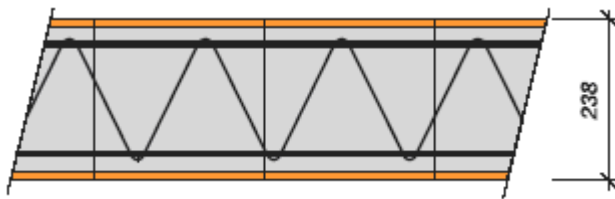
Length: 1000 – 3250 mm

Weight: 35 kg/m

## Load-bearing capacity of lintels in kN/m

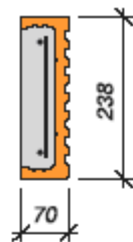
Length mm	Bedding mm	Clear span mm	1 lintel $q_d$ (1)	2 lintels $q_d$ (2)	3 lintels $q_d$ (3)	4 lintels $q_d$ (4)
1000	125	750	16,7	33,5	50,3	67,0
1250		1000	19,2	38,4	57,6	76,8
1500		1250	12,7	25,4	38,1	50,8
1750		1500	14,4	28,8	43,2	57,6
2000	200	1600	12,7	25,5	38,2	50,9
2250		1850	11,6	23,2	34,9	46,5
2500	250	2000	10,0	20,0	30,0	40,0
2750		2250	10,1	20,3	30,4	40,6
3000		2500	7,6	15,2	22,9	30,5
3250		2750	5,7	11,4	17,1	22,8
3500		3000	4,3	8,7	13,0	17,3

## Vertical lengthwise profile

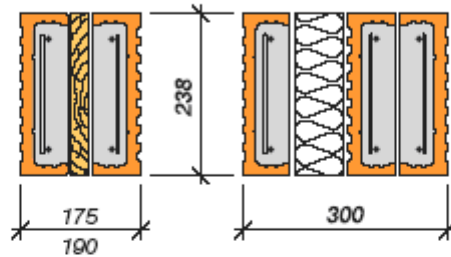


## Examples of use

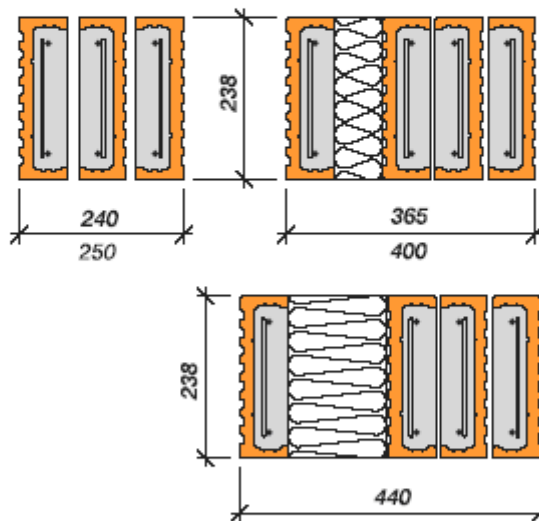
①



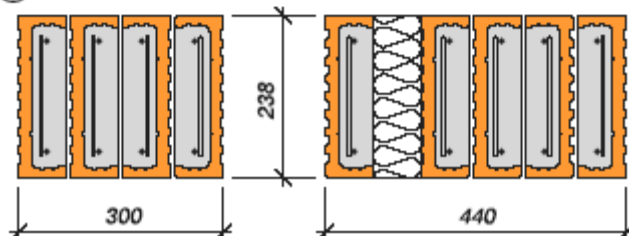
②



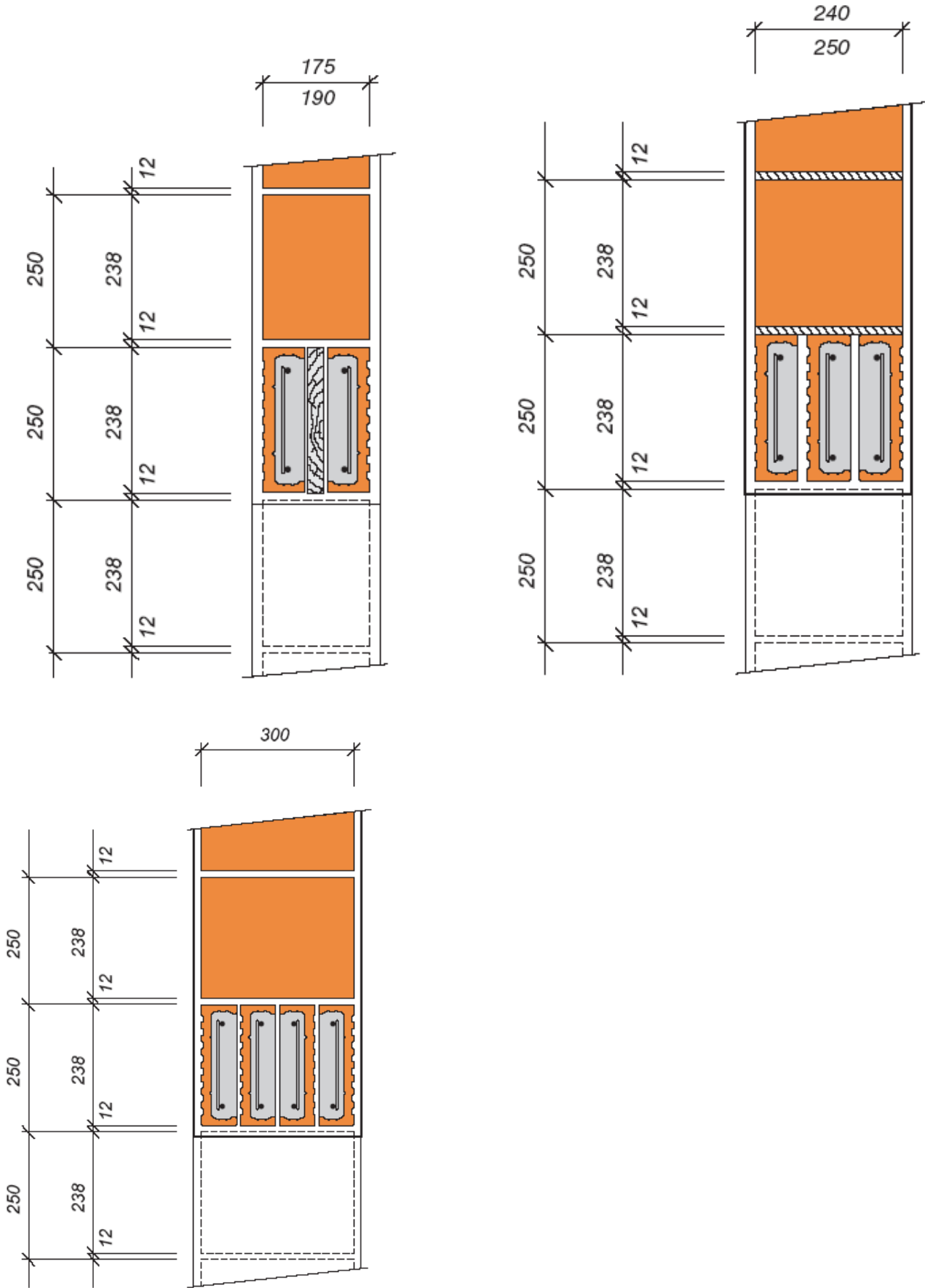
③

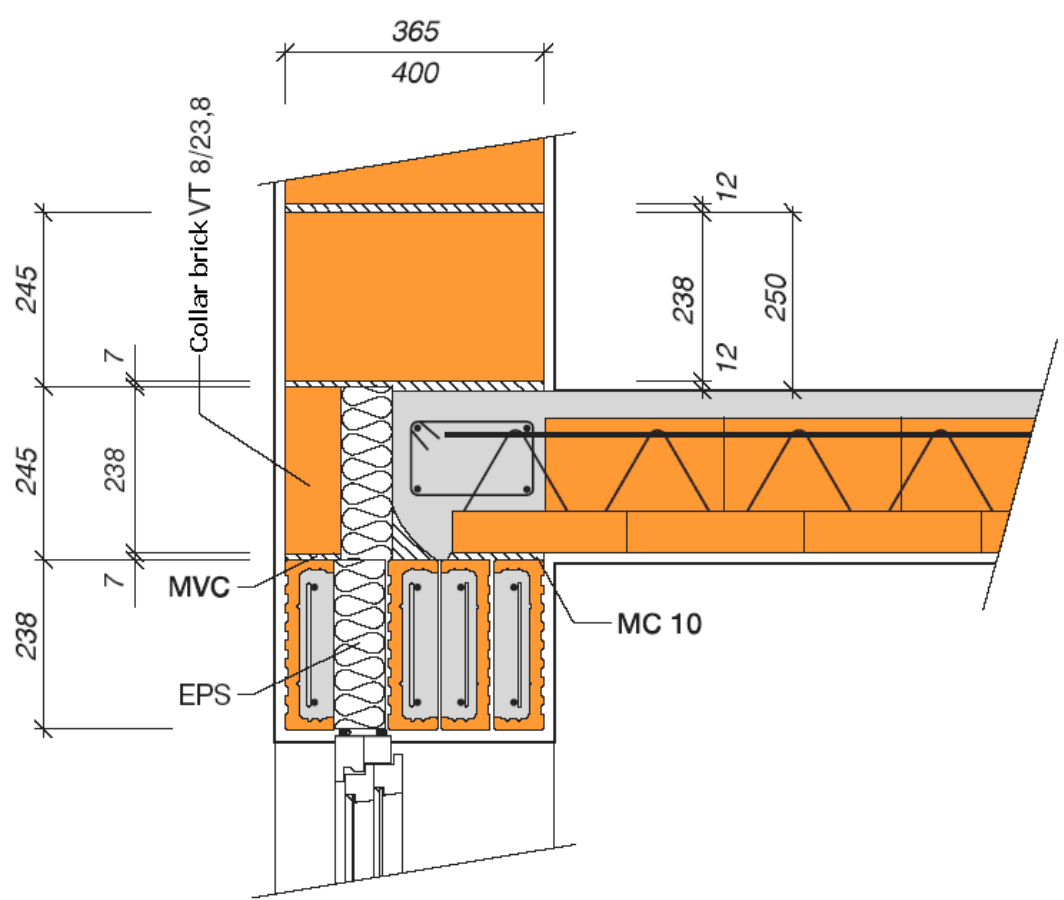
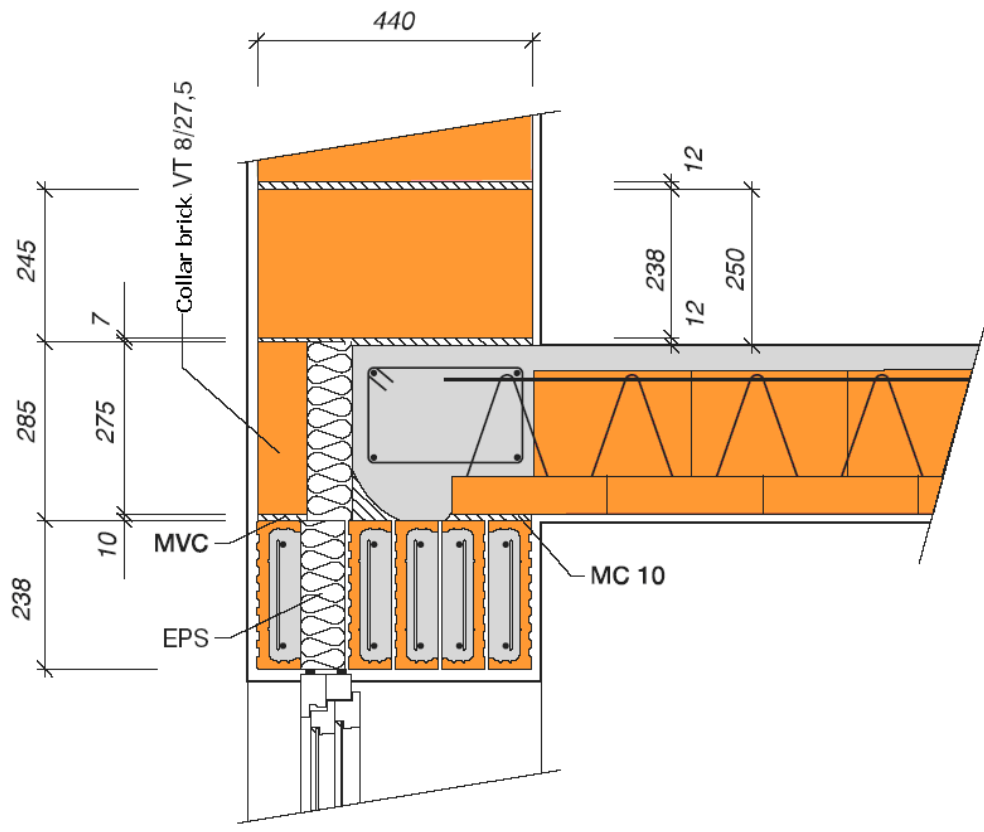


④



Examples of detailing

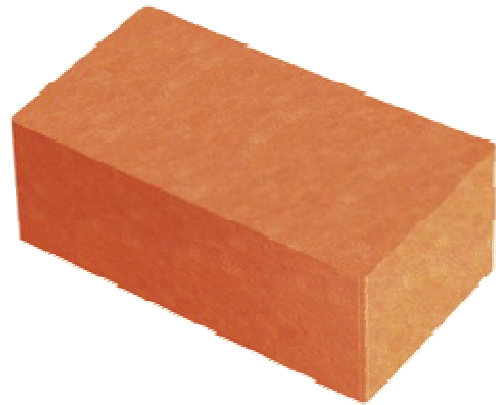






# FULL BRICK

Solid bricks – big size. These bricks are designed for finishing both outer and inner masonry, pillar and gatepost walling etc. Connected by general purpose mortar.



## TECHNICAL DATA

Dimensions (L x W x H):	290x140x65 mm
Average weight inf.:	5 kg
Pressure strength class:	20 MPa

## OTHER TECHNICAL DATA

Brickwork thickness:	140 mm
Brick consumption:	88.8 pcs/m <sup>2</sup>
	306.5 pcs/m <sup>3</sup>

# POROTHERM 30 Profi Dryfix

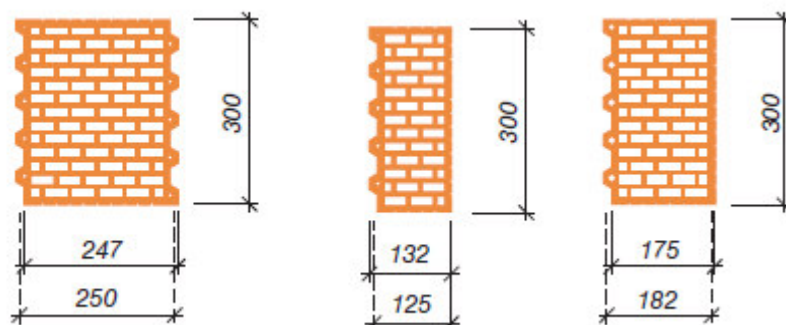
Hollow masonry units for exterior and interior load-bearing walls. Connected by polyurethane foam.

Characteristic	Value
Dimensions length/width/height [mm]	247/300/249
Density [kg/m <sup>3</sup> ]	800 – 850
Weight [kg/pc]	Max. 15,7
Compressive strength	P10/P15
Masonry thickness [mm]	300
Consumption [pcs/m <sup>2</sup> ]	16
Weight of masonry including plaster [kg/m <sup>2</sup> ]	280
Fire resistance	REI 180 DP1
R <sub>w</sub> [dB]	46
R <sub>u</sub> [m <sup>2</sup> K/W]	1,73
λ <sub>u</sub> [W/mK]	0,19
U <sub>ext</sub> [W/m <sup>2</sup> K]	0,50

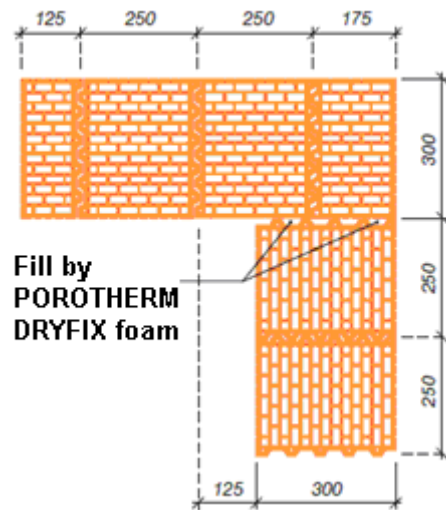
## Porotherm 30 Profi Dryfix



## Dimensions: Full brick, half-brick, corner brick



## Bond of the walls at the corner

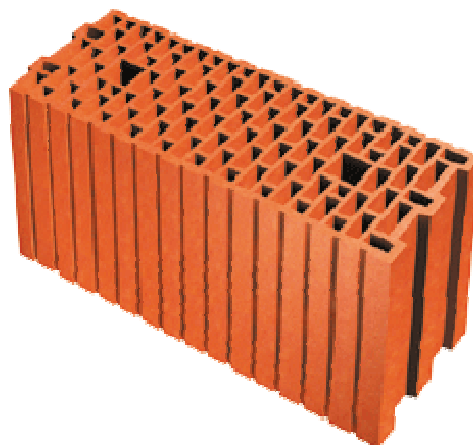


# SUPERTHERM 17,5/49,7 P+D

Hollow masonry units for exterior and interior non-bearing walls (partitions). Connected by general purpose mortar.

## TECHNICAL DATA

Dimensions (L x W x H):	497x175x238 mm	
Class of volume weight inf.:	700-1100	kg/m <sup>3</sup>
Average weight inf.:	15	kg
Pressure strength class:	10	MPa
Absorbing power inf.:	16-23	%
Podíl děrování inf.:	51-55	%



## OTHER TECHNICAL DATA

Brickwork thickness:	175	mm
Brick consumption:	8	ks/m <sup>2</sup>
	45.7	ks/m <sup>3</sup>
Mortar consumption:	17	l/m <sup>2</sup>

