



## RETAINING WALLS FOR THE INFRASTRUCTURE MARKET

Coping with height differences, terracing, driveways, enclosures, infrastructure works, parking lots, etc.



Completely smooth formwork with a top thickness of 10 cm and tongue-groove connection.







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# CBS BETON: THE REFERENCE FOR CONCRETE SYSTEMS

## Spotlight on retaining walls

If you take a good look, you'll be amazed at how many applications suit our concrete elements. Together with our customers, we are completing wonderful projects in Belgium, France, the Netherlands, Luxembourg and Germany, ranging from public procurement projects to installations for industry, agriculture, landscaping, biogas, etc., all of which must meet precise quality requirements.

It is becoming increasingly apparent how **quick and easy** the use of precast concrete is: placement goes smoothly, with preparation time at a minimum. And once the elements are in place, there's no further maintenance required. Our aim is to achieve a **fair price-quality ratio** for a product that is **functional** and as **aesthetic** as it can be.

## Engineers and constructors

For those who have a less mundane application or want a little extra, CBS Concrete thinks along with you: gabions, stadium terraces, an amphitheatre, printed walls (e.g. wood and stone), etc. Tell us what you're looking for. Our engineers, draughtsmen and production managers will work with you. Together with our enthusiastic sales team, they provide a top service with just that little bit more: customer-orientated thinking with attention to your budget and schedule.

## Quality – Certificates – Service

Since our founding in the late 1990s, production in Wielsbeke has evolved enormously, in both quality and organisation.

We constantly work to meet the demands of the marketplace in terms of **quality** – we have our own lab where samples are taken from production every day. We also have the necessary **certificates**. And we have the enthusiasm required to continue to earn them.

**Service** An important word of great importance to us at CBS Concrete Even if things go differently than expected, we make every effort to bring your project to a successful conclusion.

We want to continue to grow and evolve, but that can only be done together with you. Tell us what you want to create and we'll cast your ideas into a concrete form.

And last but not least ... CBS Beton also offers a **comprehensive logistics service**, from loading your truck to organising deliveries to the job site, with or without positioning from the truck. You ask, we produce and deliver.

# Our core values



We have a constant stock and an extensive range.



We have a very short production time and can switch quickly for fitting work



Continuous product improvements thanks to our own engineering and quality divisions.



**CBS LOGISTICS:**  
loading your truck, organising deliveries to the job site, with or without placement from the truck.



We have the right skills in house to handle your specific request.



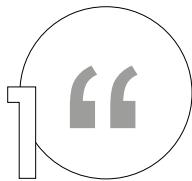
High degree of finish of our concrete elements.  
Always a shot in the arm.



After reviewing your request, we'll send you a quote within the shortest possible time.



We work to find a solution when you ask for customisation.



# Standardisation, design, production & quality control

## DID YOU KNOW ...

CBS Beton was the first manufacturer to obtain a BENOR certificate for retaining walls. This certificate confirms that our retaining walls comply with Belgian and European standards. CBS Concrete is the only manufacturer with an in-house design and engineering office. This allows us to work out an appropriate proposal to avoid surprises during execution of your project.

Retaining walls from CBS Beton are manufactured in accordance with **European concrete standard NBN EN 206** and **Belgian national supplement NBN B 15-001**, as well as the **European standard for prefabricated concrete retaining walls, NBN EN 15258**. CBS Beton also holds CE certificate EN 15258 for prefabricated retaining wall elements.

**Our retaining walls are designed in accordance with the applicable standards.**

- NBN EN 1990: Eurocode 0 - Basis for structural design
- NBN EN 1991: Eurocode 1 - Loads on structures [+ national annexes]
- NBN EN 1992: Eurocode 2 - Design and calculation of concrete structures
- NBN EN 1997: Eurocode 7 - Geotechnical design



## Design principles

- Concrete strength class: high-strength concrete C60/75
- Environmental classes (NBN EN 206):

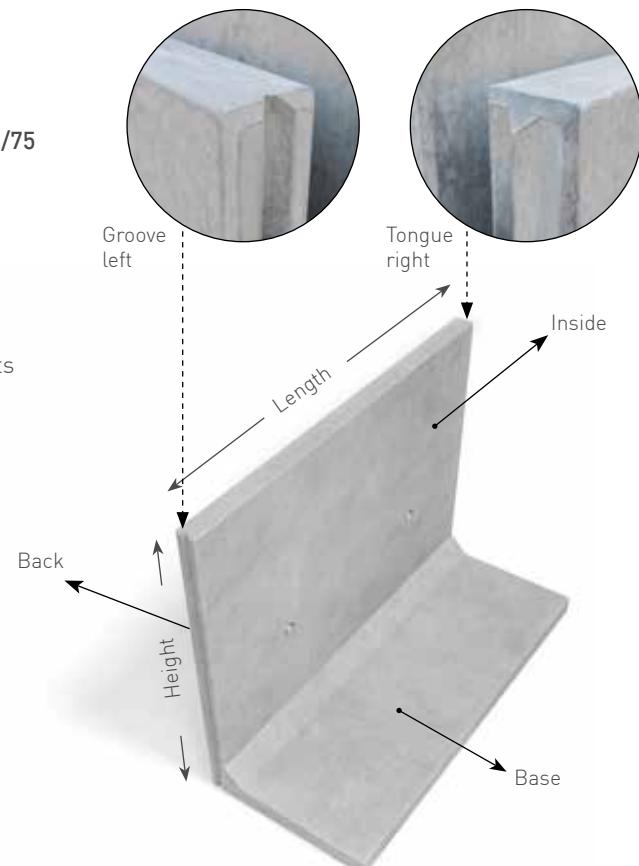
- XC4: alternating wet and dry
- XD3: alternating wet and dry, in contact with chlorides (de-icing salts)
- XF4: high water saturation with de-icing salts
- Others on request

- Environmental classes (NBN B 15-001):

- EE4: frost and de-icing salts
- Others on request

- The following properties are taken into account with respect to the backfill material:

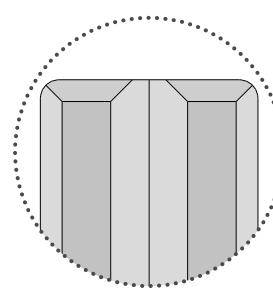
- Internal friction angle:  $\kappa = 32.5^\circ$
- Weight by volume:  $k = 18 \text{ kN/m}^3$



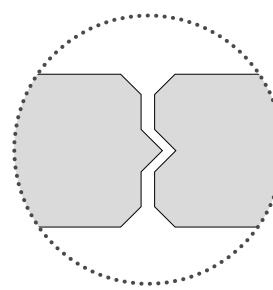


2 “

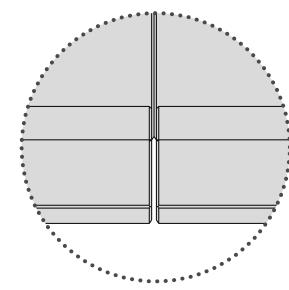
## Execution of the walls



**Rounded bevels**  
along the top of the  
retaining wall.

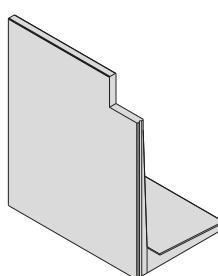


**Tongue and groove  
connection.**

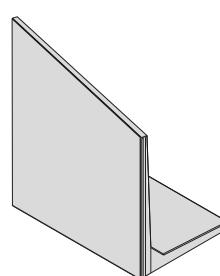


Under the base, there is a  
**sand gap** to make it easier  
to locate the walls so that  
the top sides fit nicely.

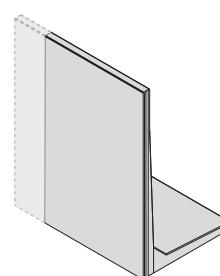
Special executions possible.



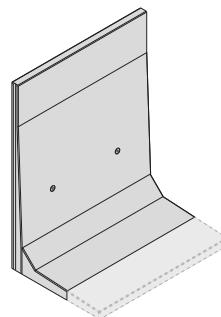
Recess



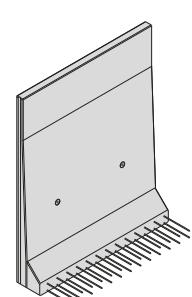
Bevel



Length adjustment



Base shortened

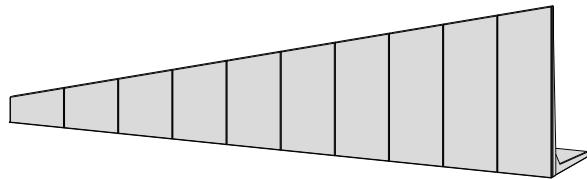
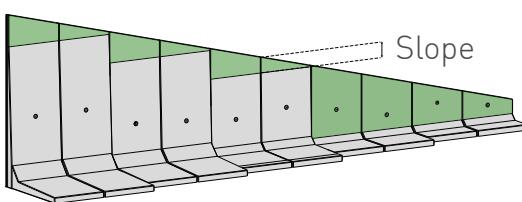


Base with excellent  
reinforcement

3

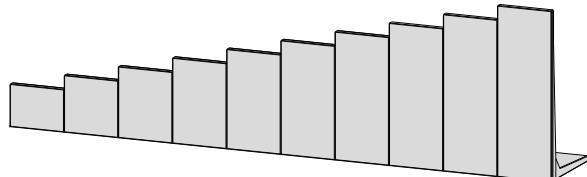
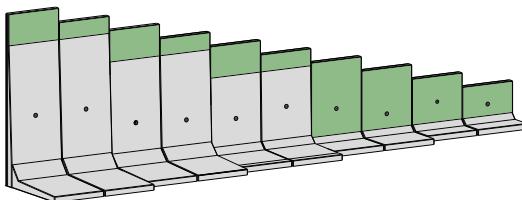
## Unique to our walls

The upper part of the wall forms one line when retaining walls of different heights are installed. This way, the different walls do not stand out and you get a nice aesthetic appearance. **The green part indicates the level to which the 10 cm thickness is maintained** according to the length of each wall.

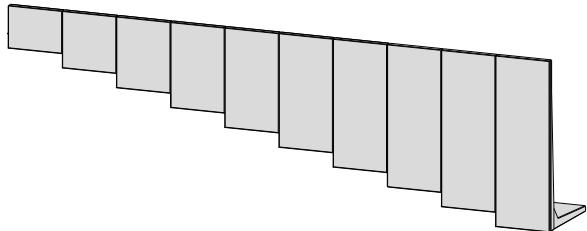
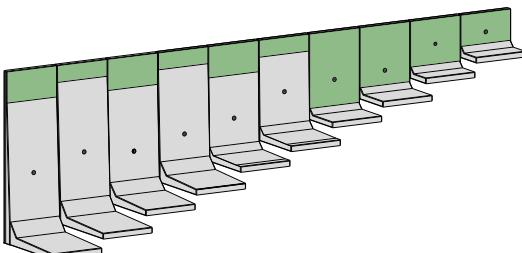


Elements of varying height on a continuous foundation and with sloping top edges.

Slope up to 50 cm over 1 metre

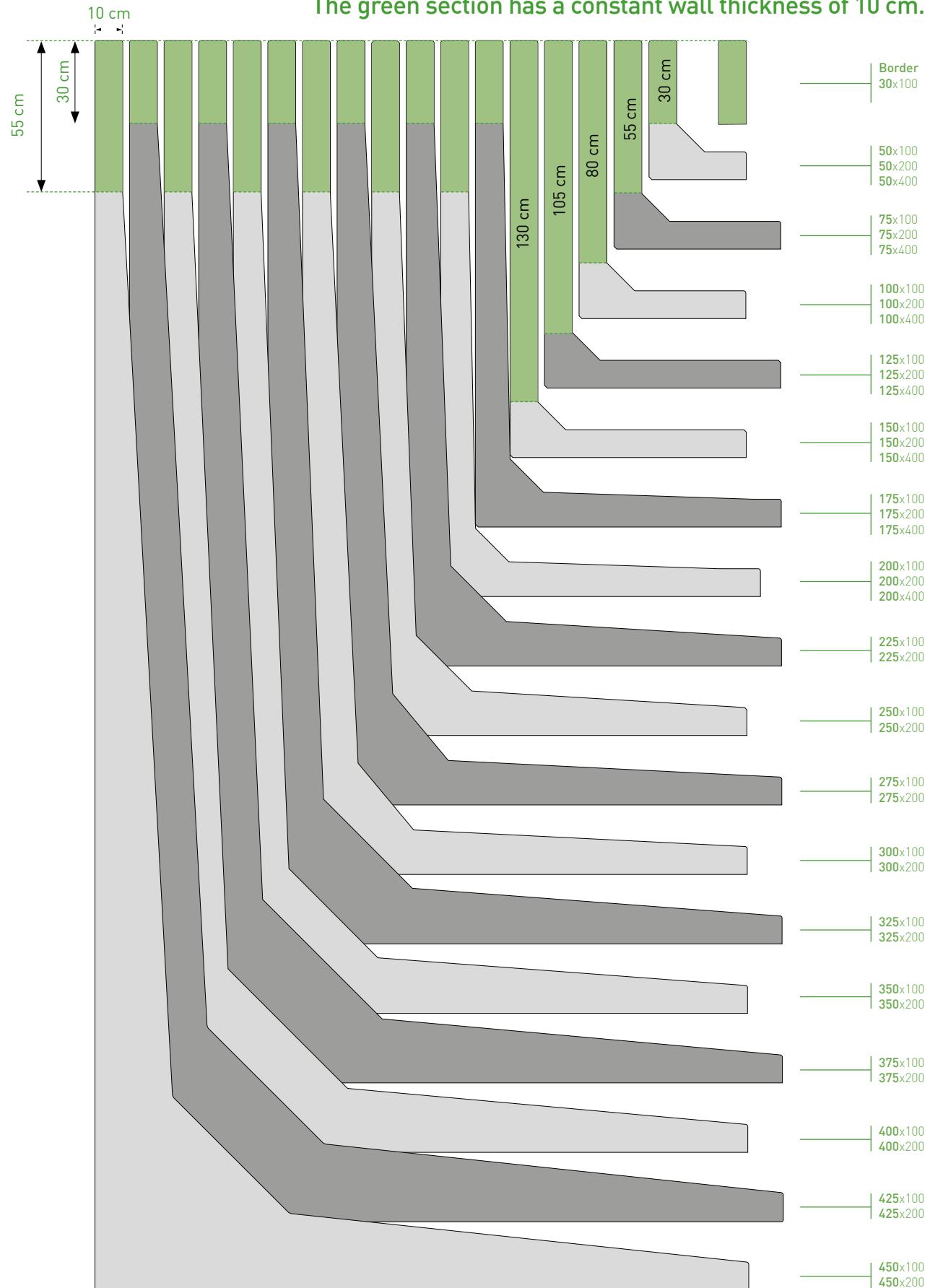


Elements of different heights on a continuous foundation



Elements of varying height on a stepped foundation

The green section has a constant wall thickness of 10 cm.



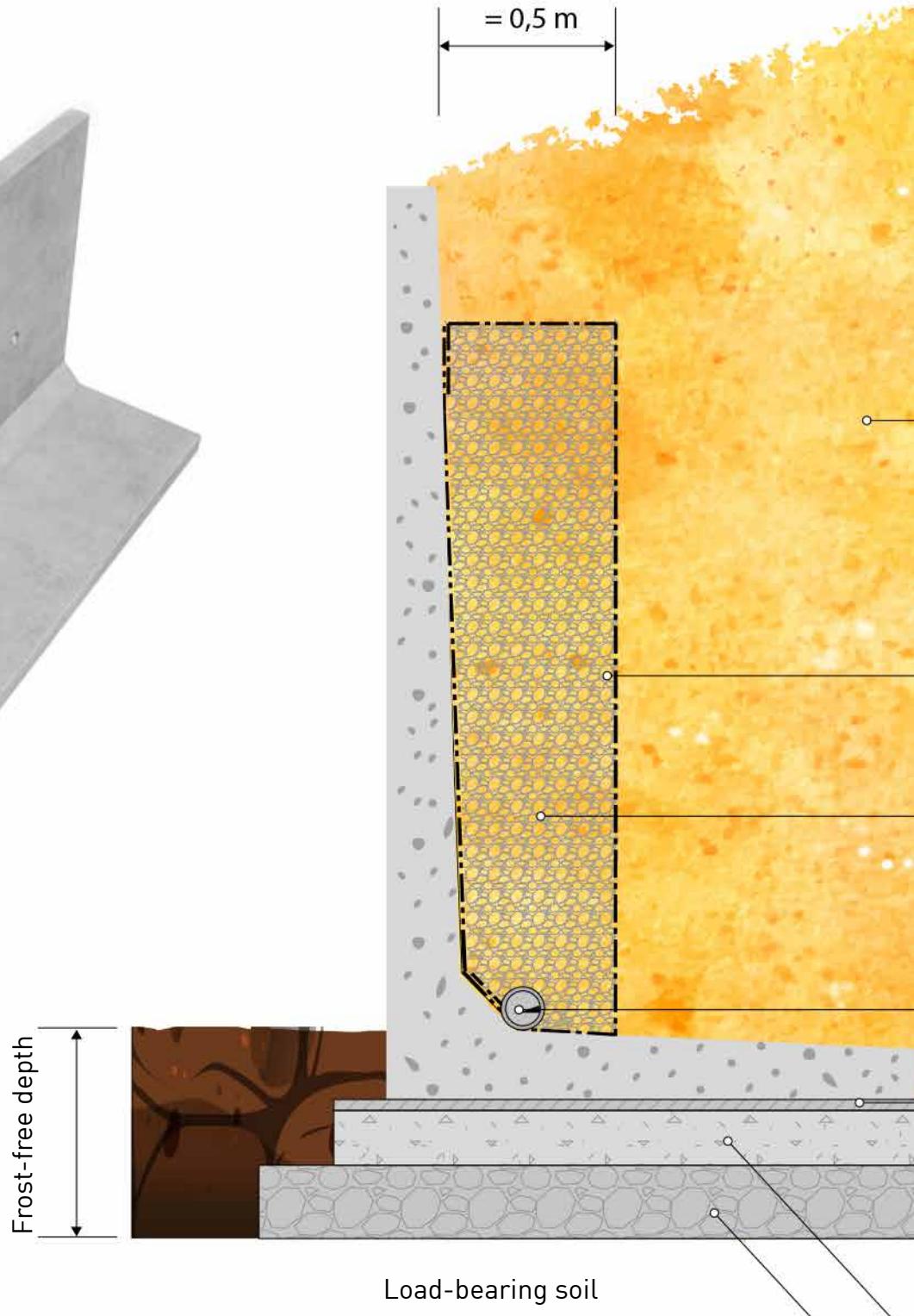
The following retaining walls  
are available on request from  
4.50 m high.

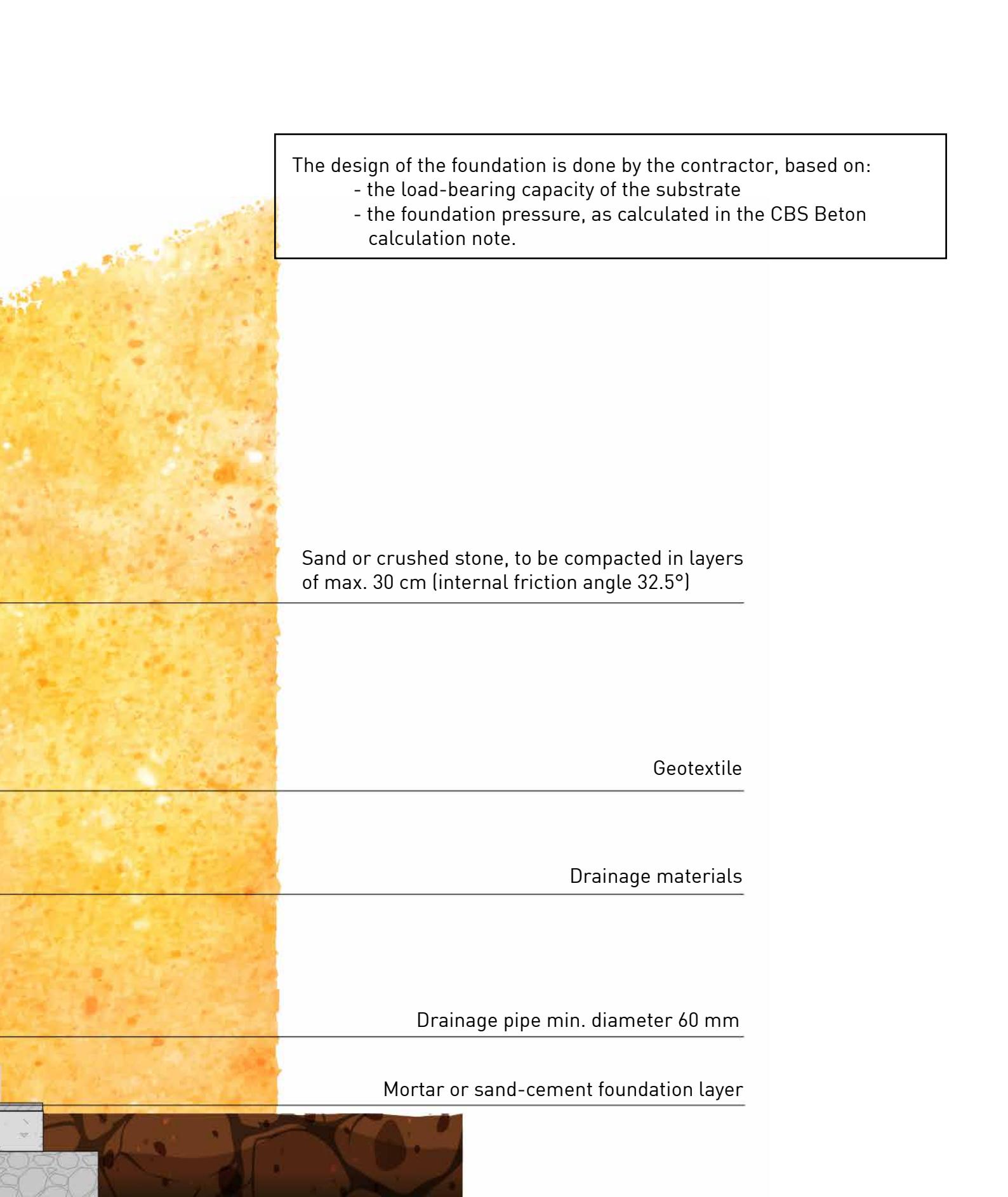
475x100	500x100	525x100	550x100	575x100	600x100	625x100	650x100	675x100	700x100
475x200	500x200	525x200	550x200	575x200	600x200	625x200	650x200	675x200	

4

## Placement

The retaining walls must be backfilled with a non-cohesive material, e.g. sand, gravel or crushed stone, **compacted in layers of 30 cm**. The compaction equipment must remain at a distance of at least **1/3 of the wall height or 50 cm from the retaining wall.**





The design of the foundation is done by the contractor, based on:

- the load-bearing capacity of the substrate
- the foundation pressure, as calculated in the CBS Beton calculation note.

Sand or crushed stone, to be compacted in layers of max. 30 cm (internal friction angle 32.5°)

Geotextile

Drainage materials

Drainage pipe min. diameter 60 mm

Mortar or sand-cement foundation layer

Foundation: sand cement (150 kg cement per m<sup>3</sup>) or lean concrete (C12/15)

Sub-foundation: crushed stone (0/40)

# Types of loads

## 3 WALL FORMULAS AND THEIR USE

We can offer you 3 formulas in the range of fully smooth-formed retaining walls, each with its specific characteristics:

- 1)CLF10GS-GAMMA for standard overload
- 2)DLF10GS-GAMMA for heavy overload
- 3)ELF-GAMMA for heavy overload and special conditions

R = rear reinforcement  
Z = with heel

### Formula 1

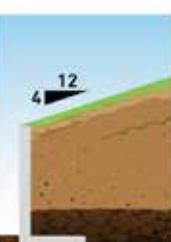
#### CLF10GS

Standard walls

**CLF10GS:**  
**STANDARD OVERLOAD**



CLF10GS  
uniform distributed overload  
10 kN/m<sup>2</sup>  
light traffic max. 3.5 tons



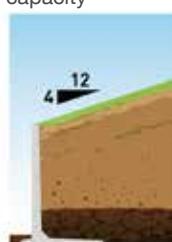
CLF10GS  
slope 12:4

**CLF10GSZ:**  
**STANDARD OVERLOAD**

Use with lower bearing capacity

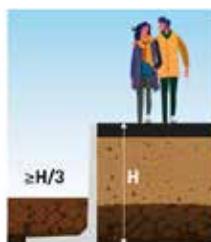


CLF10GSZ  
uniform distributed overload  
10 kN/m<sup>2</sup>  
light traffic max. 3.5 tons



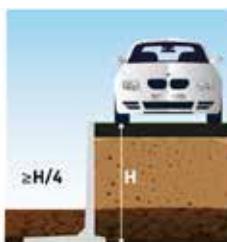
CLF10GSZ  
slope 12:4

**CLF10GSR:**  
**REVERSE PLACEMENT**



CLF10GSR  
uniform distributed overload  
5 kN/m<sup>2</sup> no traffic,  
just pedestrians/cyclists

**CLF10GSRZ:**  
**REVERSE PLACEMENT**



CLF10GSRZ  
uniform distributed overload  
10 kN/m<sup>2</sup>  
light traffic max. 3.5 tons

## Formula 2

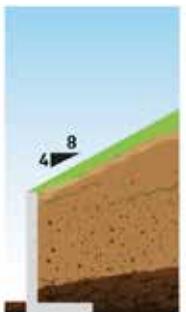
### DLF10GS

Walls for heavy overload

#### DLF10GS: HEAVY OVERLOAD



DLF10GS  
uniform distributed  
overload 25 kN/m<sup>2</sup>



DLF10GS  
slope 8:4



DLF10GS  
uniformly distributed  
overload 40 kN/m<sup>2</sup> at edge  
distance 1 m equivalent to  
load mode LM1 according  
to NBN EN 1991-2

#### DLF10GSZ: HEAVY OVERLOAD

Use with lower bearing capacity substrate



DLF10GSZ  
uniform distributed  
overload 25 kN/m<sup>2</sup>



DLF10GSZ  
slope 8:4



DLF10GSZ  
uniformly distributed  
overload 40 kN/m<sup>2</sup> at edge  
distance 1 m equivalent to  
load mode LM1 according  
to NBN EN 1991-2

#### DLF10GSRZ: REVERSE PLACEMENT

REVERSE PLACEMENT



DLF10GSRZ  
uniform distributed  
overload 25 kN/m<sup>2</sup>

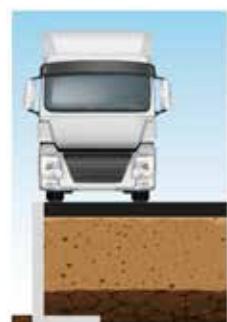
## Formula 3

### ELF15GS / ELF20GS / ELF25GS / ELF30GS

Specific conditions

#### ELF15GS / ELF20GS / ELF25GS / ELF30GS HEAVY OVERLOAD

Specific conditions



ELF RANGE  
heavy traffic according  
to NBN EN 1991-2 edge  
distance 0 m



SELF RANGE  
heavy traffic according to  
NBN EN 1991-2



ELF RANGE  
heavy traffic according to NBN EN  
1991-2



# L-walls CLF10GS range

Formula 1

## CLF10GS Standard retaining wall

<b>Top thickness</b>	<b>Always 10 cm</b>
<b>Standard lengths</b>	<b>1 m - 2 m - 4 m</b>
<b>Connection</b>	<b>Tongue and groove</b>
<b>Top finish</b>	<b>Rounded bevels</b>
<b>Finish</b>	<b>Smooth</b>
<b>Special features</b>	<b>Sand gap</b>
<b>Concrete quality</b>	<b>C 60/75</b>



# CLF10GS

## STANDARD L-WALLS

Standard load base side



	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE	
LENGTH 1 M	CLF10GS50x100	50	100	35	10	195	1 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS75x100	75	100	60	10	310	1 x 2,5 T	tongue and groove	C60/75	5
	CLF10GS100x100	100	100	60	10	370	1 x 2,5 T	tongue and groove	C60/75	5
	CLF10GS125x100	125	100	85	10	495	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS150x100	150	100	85	10	555	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS175x100	175	100	115	10	770	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS200x100	200	100	115	10	830	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS225x100	225	100	135	10	1150	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS250x100	250	100	135	10	1210	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS275x100	275	100	160	10	1520	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS300x100	300	100	160	10	1580	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS325x100	325	100	185	10	1965	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS350x100	350	100	185	10	2025	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS375x100	375	100	210	10	2590	2 x 5 T	tongue and groove	C60/75	0
LENGTH 2 M	CLF10GS400x100	400	100	210	10	2650	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS425x100	425	100	235	10	3290	2 x 10 T	tongue and groove	C60/75	0
	CLF10GS450x100	450	100	235	10	3355	2 x 10 T	tongue and groove	C60/75	0
	CLF10GS50x200	50	200	35	10	385	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS75x200	75	200	60	10	625	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS100x200	100	200	60	10	745	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS125x200	125	200	85	10	995	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS150x200	150	200	85	10	1115	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GS175x200	175	200	115	10	1545	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS200x200	200	200	115	10	1665	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS225x200	225	200	135	10	2300	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS250x200	250	200	135	10	2425	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS275x200	275	200	160	10	3050	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS300x200	300	200	160	10	3175	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS325x200	325	200	185	10	3940	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS350x200	350	200	185	10	4060	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS375x200	375	200	210	10	5190	2 x 5 T	tongue and groove	C60/75	0
LENGTH 4 M	CLF10GS400x200	400	200	210	10	5310	2 x 5 T	tongue and groove	C60/75	0
	CLF10GS425x200	425	200	235	10	6605	2 x 10 T	tongue and groove	C60/75	0
	CLF10GS450x200	450	200	235	10	6725	2 x 10 T	tongue and groove	C60/75	0
	CLF10GS50x400	50	400	35	10	770	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS75x400	75	400	60	10	1250	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS100x400	100	400	60	10	1490	2 x 2,5 T	tongue and groove	C60/75	4
	CLF10GS125x400	125	400	85	10	1990	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS150x400	150	400	85	10	2235	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS175x400	175	400	115	10	3090	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GS200x400	200	400	115	10	3330	2 x 2,5 T	tongue and groove	C60/75	0



Constant wall thickness of 10 cm  
Wall thickness of 10 cm at top

# CLF10GSR

## L-WALLS FOR REVERSE PLACEMENT

With these walls, the rear side is under load.  
The base must be back-filled to 1/3 of its height.



	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE	
LENGTH 1 M	CLF10GSR125x100	125	100	85	10	500	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR150x100	150	100	85	10	565	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR175x100	175	100	115	10	780	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR200x100	200	100	115	10	840	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR225x100	225	100	135	10	1160	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR250x100	250	100	135	10	1225	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR275x100	275	100	160	10	1540	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR300x100	300	100	160	10	1600	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR325x100	325	100	185	10	1990	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR350x100	350	100	185	10	2050	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR375x100	375	100	210	10	2620	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR400x100	400	100	210	10	2680	2 x 5 T	tongue and groove	C60/75	0
LENGTH 2 M	CLF10GSR425x100	425	100	235	10	3335	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSR450x100	450	100	235	10	3395	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSR125x200	125	200	85	10	1005	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR150x200	150	200	85	10	1130	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSR175x200	175	200	115	10	1560	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR200x200	200	200	115	10	1685	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR225x200	225	200	135	10	2330	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR250x200	250	200	135	10	2455	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSR275x200	275	200	160	10	3090	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR300x200	300	200	160	10	3210	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR325x200	325	200	185	10	3990	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR350x200	350	200	185	10	4110	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR375x200	375	200	210	10	5255	2 x 5 T	tongue and groove	C60/75	0
4 M	CLF10GSR400x200	400	200	210	10	5375	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSR425x200	425	200	235	10	6685	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSR450x200	450	200	235	10	6810	2 x 10 T	tongue and groove	C60/75	0



Constant wall thickness of 10 cm



Wall thickness of 10 cm at top

H 50 -75 -100: CLF10GS IS SUFFICIENT FOR REVERSE PLACEMENT.

**CLF10GSZ:**  
STANDARD OVERLOAD  
Use with lower bearing capacity

## CLF10GSZ

### L-WALLS FOR STANDARD USE, WITH HEEL

A heel is used when the bearing capacity of the substrate is lower.



CLF10GSZ  
uniform distributed overload  
10 kN/m<sup>2</sup>  
light traffic max. 3.5 tons



CLF10GSZ  
slope 12:4

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE	
LENGTH 1 M	CLF10GSZ175x100	175	100	145	10	850	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSZ200x100	200	100	145	10	910	1 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSZ225x100	225	100	165	10	1240	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ250x100	250	100	165	10	1305	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ275x100	275	100	200	10	1650	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ300x100	300	100	200	10	1710	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ325x100	325	100	225	10	2110	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ350x100	350	100	225	10	2170	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ375x100	375	100	250	10	2750	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ400x100	400	100	250	10	2810	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ425x100	425	100	285	10	3525	2 x 10 T	tongue and groove	C60/75	0
LENGTH 2 M	CLF10GSZ175x200	175	200	145	10	1705	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ200x200	200	200	145	10	1830	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ225x200	225	200	165	10	2490	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ250x200	250	200	165	10	2615	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSZ275x200	275	200	200	10	3305	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ300x200	300	200	200	10	3425	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ325x200	325	200	225	10	4230	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ350x200	350	200	225	10	4355	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ375x200	375	200	250	10	5510	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ400x200	400	200	250	10	5630	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSZ425x200	425	200	285	10	7065	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSZ450x200	450	200	285	10	7185	2 x 10 T	tongue and groove	C60/75	0



Wall thickness of 10 cm at top

## CLF10GSRZ

### L-WALLS FOR REVERSE PLACEMENT, WITH HEEL

With these walls, the rear side is under load. The base must be back-filled to 1/4 of the height of the retaining wall.



	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE	
LENGTH 1 M	CLF10GSRZ175x100	175	100	145	10	860	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSRZ200x100	200	100	145	10	925	2 x 2,5 T	tongue and groove	C60/75	3
	CLF10GSRZ225x100	225	100	165	10	1260	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ250x100	250	100	165	10	1320	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ275x100	275	100	200	10	1670	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ300x100	300	100	200	10	1730	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ325x100	325	100	225	10	2135	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ350x100	350	100	225	10	2195	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ375x100	375	100	250	10	2780	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ400x100	400	100	250	10	2845	2 x 5 T	tongue and groove	C60/75	0
LENGTH 2 M	CLF10GSRZ425x100	425	100	285	10	3565	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSRZ450x100	450	100	285	10	3630	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSRZ175x200	175	200	145	10	1725	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ200x200	200	200	145	10	1850	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ225x200	225	200	165	10	2520	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ250x200	250	200	165	10	2645	2 x 2,5 T	tongue and groove	C60/75	0
	CLF10GSRZ275x200	275	200	200	10	3345	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ300x200	300	200	200	10	3465	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ325x200	325	200	225	10	4285	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ350x200	350	200	225	10	4405	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ375x200	375	200	250	10	5580	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ400x200	400	200	250	10	5700	2 x 5 T	tongue and groove	C60/75	0
	CLF10GSRZ425x200	425	200	285	10	7150	2 x 10 T	tongue and groove	C60/75	0
	CLF10GSRZ450x200	450	200	285	10	7275	2 x 10 T	tongue and groove	C60/75	0

Wall thickness of 10 cm at top





# L-walls DLF10GS range

THESE ARE L-WALLS FOR HEAVIER LOADS.

Formula 2

## DLF10GS for heavier loads

<b>Top thickness</b>	<b>Always 10 cm</b>
<b>Standard lengths</b>	<b>1 m - 2 m - 4 m</b>
<b>Connection</b>	<b>Tongue and groove</b>
<b>Top finish</b>	<b>Rounded bevels</b>
<b>Finish</b>	<b>Smooth</b>
<b>Special features</b>	<b>Sand gap</b>
<b>Concrete quality</b>	<b>C 60/75</b>



**DLF10GS:**  
HEAVY OVERLOAD



## DLF10GS

### L-WALLS FOR HEAVIER LOADS

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE
LENGTH 1 M	<b>DLF10GS175x100</b>	175	100	115	10	780	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS200x100</b>	200	100	115	10	840	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS225x100</b>	225	100	135	10	1160	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS250x100</b>	250	100	135	10	1225	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS275x100</b>	275	100	160	10	1540	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS300x100</b>	300	100	160	10	1600	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS325x100</b>	325	100	185	10	1990	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS350x100</b>	350	100	185	10	2050	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS375x100</b>	375	100	210	10	2620	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS400x100</b>	400	100	210	10	2680	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS425x100</b>	425	100	235	10	3335	2 x 10 T	tongue and groove	C60/75
	<b>DLF10GS450x100</b>	450	100	235	10	3395	2 x 10 T	tongue and groove	C60/75
LENGTH 2M	<b>DLF10GS175x200</b>	175	200	115	10	1560	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS200x200</b>	200	200	115	10	1685	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS225x200</b>	225	200	135	10	2330	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS250x200</b>	250	200	135	10	2455	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GS275x200</b>	275	200	160	10	3090	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS300x200</b>	300	200	160	10	3210	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS325x200</b>	325	200	185	10	3990	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS350x200</b>	350	200	185	10	4110	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS375x200</b>	375	200	210	10	5255	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS400x200</b>	400	200	210	10	5375	2 x 5 T	tongue and groove	C60/75
	<b>DLF10GS425x200</b>	425	200	235	10	6685	2 x 10 T	tongue and groove	C60/75
	<b>DLF10GS450x200</b>	450	200	235	10	6810	2 x 10 T	tongue and groove	C60/75
4 M	<b>DLF10GSE175x400</b>	175	400	115	10	3125	2 x 2,5 T	tongue and groove	C60/75
	<b>DLF10GSE200x400</b>	200	400	115	10	3375	2 x 2,5 T	tongue and groove	C60/75

Wall thickness of 10 cm at top

**DLF10GSZ:**  
**HEAVY OVERLOAD**  
Use with lower bearing capacity substrate



## DLF10GSZ

### WALLS FOR HEAVY OVERLOAD, WITH HEEL

This type of wall is used when the bearing capacity of the substrate is lower.

DLF10GSZ  
uniform distributed  
overload 25 kN/m<sup>2</sup>

DLF10GSZ  
slope 8:4

DLF10GSZ  
uniformly distributed  
overload 40 kN/m<sup>2</sup> at edge  
distance 1 m equivalent to  
load mode LM1 according  
to NBN EN 1991-2

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY
LENGTH 1 M	DLF10GSZ175x100	175	100	145	10	860	1 x 2,5 T	tongue and groove
	DLF10GSZ200x100	200	100	145	10	925	1 x 2,5 T	tongue and groove
	DLF10GSZ225x100	225	100	165	10	1260	2 x 2,5 T	tongue and groove
	DLF10GSZ250x100	250	100	165	10	1320	2 x 2,5 T	tongue and groove
	DLF10GSZ275x100	275	100	165	10	1670	2 x 5 T	tongue and groove
	DLF10GSZ300x100	300	100	200	10	1730	2 x 5 T	tongue and groove
	DLF10GSZ325x100	325	100	225	10	2135	2 x 5 T	tongue and groove
	DLF10GSZ350x100	350	100	225	10	2195	2 x 5 T	tongue and groove
	DLF10GSZ375x100	375	100	250	10	2780	2 x 5 T	tongue and groove
	DLF10GSZ400x100	400	100	250	10	2845	2 x 5 T	tongue and groove
	DLF10GSZ425x100	425	100	285	10	3565	2 x 10 T	tongue and groove
	DLF10GSZ450x100	450	100	285	10	3630	2 x 10 T	tongue and groove
LENGTH 2 M	DLF10GSZ175x200	175	200	145	10	1725	2 x 2,5 T	tongue and groove
	DLF10GSZ200x200	200	200	145	10	1850	2 x 2,5 T	tongue and groove
	DLF10GSZ225x200	225	200	165	10	2520	2 x 2,5 T	tongue and groove
	DLF10GSZ250x200	250	200	165	10	2645	2 x 2,5 T	tongue and groove
	DLF10GSZ275x200	275	200	165	10	3345	2 x 5 T	tongue and groove
	DLF10GSZ300x200	300	200	200	10	3465	2 x 5 T	tongue and groove
	DLF10GSZ325x200	325	200	225	10	4285	2 x 5 T	tongue and groove
	DLF10GSZ350x200	350	200	225	10	4405	2 x 5 T	tongue and groove
	DLF10GSZ375x200	375	200	250	10	5580	2 x 5 T	tongue and groove
	DLF10GSZ400x200	400	200	250	10	5700	2 x 5 T	tongue and groove
	DLF10GSZ425x200	425	200	285	10	7150	2 x 10 T	tongue and groove
	DLF10GSZ450x200	450	200	285	10	7275	2 x 10 T	tongue and groove

Wall thickness of 10 cm at top



## DLF10GSRZ

WITH THESE WALLS, THE REAR SIDE IS UNDER LOAD.

The base must be back-filled to 1/3 of its height.



DLF10GSRZ  
uniform distributed  
overload 25 kN/m<sup>2</sup>

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY
LENGTH 1 M	DLF10GSRZ175x100	175	100	145	10	870	2 x 2,5 T	tongue and groove
	DLF10GSRZ200x100	200	100	145	10	930	2 x 2,5 T	tongue and groove
	DLF10GSRZ225x100	225	100	165	10	1270	2 x 2,5 T	tongue and groove
	DLF10GSRZ250x100	250	100	165	10	1330	2 x 2,5 T	tongue and groove
	DLF10GSRZ275x100	275	100	200	10	1680	2 x 5 T	tongue and groove
	DLF10GSRZ300x100	300	100	200	10	1745	2 x 5 T	tongue and groove
	DLF10GSRZ325x100	325	100	225	10	2155	2 x 5 T	tongue and groove
	DLF10GRZ350x100	350	100	225	10	2215	2 x 5 T	tongue and groove
	DLF10GSRZ375x100	375	100	250	10	2805	2 x 5 T	tongue and groove
	DLF10GSRZ400x100	400	100	250	10	2865	2 x 5 T	tongue and groove
	DLF10GSRZ425x100	425	100	285	10	3595	2 x 10 T	tongue and groove
	DLF10GSRZ450x100	450	100	285	10	3655	2 x 10 T	tongue and groove
LENGTH 2 M	DLF10GSRZ175x200	175	200	145	10	1740	2 x 2,5 T	tongue and groove
	DLF10GSRZ200x200	200	200	145	10	1865	2 x 2,5 T	tongue and groove
	DLF10GSRZ225x200	225	200	165	10	2540	3 x 2,5 T	tongue and groove
	DLF10GSRZ250x200	250	200	165	10	2665	3 x 2,5 T	tongue and groove
	DLF10GSRZ275x200	275	200	200	10	3370	2 x 5 T	tongue and groove
	DLF10GSRZ300x200	300	200	200	10	3495	2 x 5 T	tongue and groove
	DLF10GSRZ325x200	325	200	225	10	4320	2 x 5 T	tongue and groove
	DLF10GRZ350x200	350	200	225	10	4445	2 x 5 T	tongue and groove
	DLF10GSRZ375x200	375	200	250	10	5625	2 x 5 T	tongue and groove
	DLF10GSRZ400x200	400	200	250	10	5750	2 x 5 T	tongue and groove
	DLF10GSRZ425x200	425	200	285	10	7210	2 x 10 T	tongue and groove
	DLF10GSRZ450x200	450	200	285	10	7335	2 x 10 T	tongue and groove



Wall thickness of 10 cm at top



8 “

## L-walls ELF range

These are retaining walls for demanding loads and are only supplied on request and in consultation with our engineering department.

Formula 3

### ELF15GS / ELF20GS/ ELF25GS /ELF30GS

<b>Top thickness</b>	<b>15 cm, 20 cm, 25 cm, 30 cm</b>
<b>Lengths</b>	<b>Up to 12 m</b>
<b>Heights</b>	<b>Up to 3 m</b>
<b>Connection</b>	<b>Flat</b>
<b>Top finish</b>	<b>Rounded bevels</b>
<b>Finish</b>	<b>Smooth</b>
<b>Special features</b>	<b>Sand gap</b>
<b>Concrete quality</b>	<b>C 60/75</b>



## ELF15GS / ELF20GS / ELF25GS / ELF30GS

### HEAVY OVERLOAD

Specific conditions



**ELF RANGE**  
heavy traffic according to  
NBN EN 1991-2 edge distance  
ce 0 m



**SELF RANGE**  
heavy traffic according to  
NBN EN 1991-2



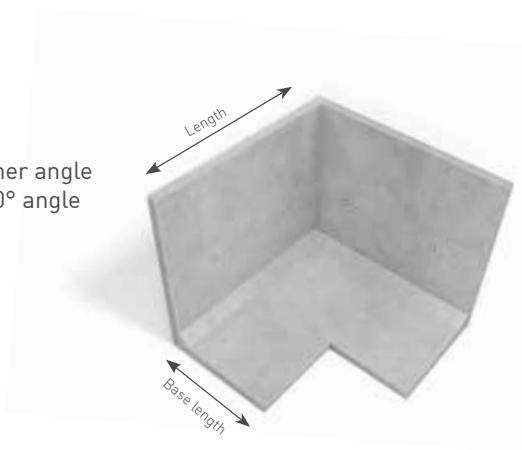
**ELF RANGE**  
heavy traffic according to NBN EN  
1991-2





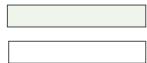
## Corner elements

Up to and including a height of 3 m, it is possible to create an inner angle of 90° consisting of 1 piece. Above a height of 3.25 m, a 2-part 90° angle (2 x 45°) is used.



### CLF10GSVH: FIXED 90° ANGLE

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE
<b>CLF10GSVH</b>									
<b>CLF10GSVH50x100</b>	50	2 x 100	35	10,00	350	2 x 2,5 T	tongue and groove	C60/75	1
<b>CLF10GSVH50x200</b>	50	2 x 200	35	10,00	735	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH75x100</b>	75	2 x 100	60	10,00	530	2 x 2,5 T	tongue and groove	C60/75	1
<b>CLF10GSVH75x200</b>	75	2 x 200	60	10,00	1160	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH100x100</b>	100	2 x 100	60	10,00	645	2 x 2,5 T	tongue and groove	C60/75	1
<b>CLF10GSVH100x200</b>	100	2 x 200	60	10,00	1395	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH125x100</b>	125	2 x 100	85	10,00	790	3 x 2,5 T	tongue and groove	C60/75	1
<b>CLF10GSVH125x200</b>	125	2 x 200	85	10,00	1790	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH150x100</b>	150	2 x 100	85	10,00	905	3 x 2,5 T	tongue and groove	C60/75	1
<b>CLF10GSVH150x200</b>	150	2 x 200	85	10,00	2025	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH175x125</b>	175	2 x 125	115	10,00	1545	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH175x200</b>	175	2 x 200	115	10,00	2710	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH200x125</b>	200	2 x 125	115	10,00	1690	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH200x200</b>	200	2 x 200	115	10,00	2945	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH225x200</b>	225	2 x 200	135	10,00	3965	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH250x200</b>	250	2 x 200	135	10,00	4200	4 x 2,5 T	tongue and groove	C60/75	0
<b>CLF10GSVH275x200</b>	275	2 x 200	160	10,00	5190	4 x 5 T*	tongue and groove	C60/75	0
<b>CLF10GSVH300x200</b>	300	2 x 200	160	10,00	5430	4 x 5 T*	tongue and groove	C60/75	0



Constant wall thickness of 10 cm



Wall thickness of 10 cm at top

\* An additional lifting hook of type **HBS MRd24** is required for unloading and positioning the **CLF10GSVH 275** and **CLF10GS VH 300**.

#### FITTING POSSIBLE FIXED ANGLE UP TO 3 M HEIGHT

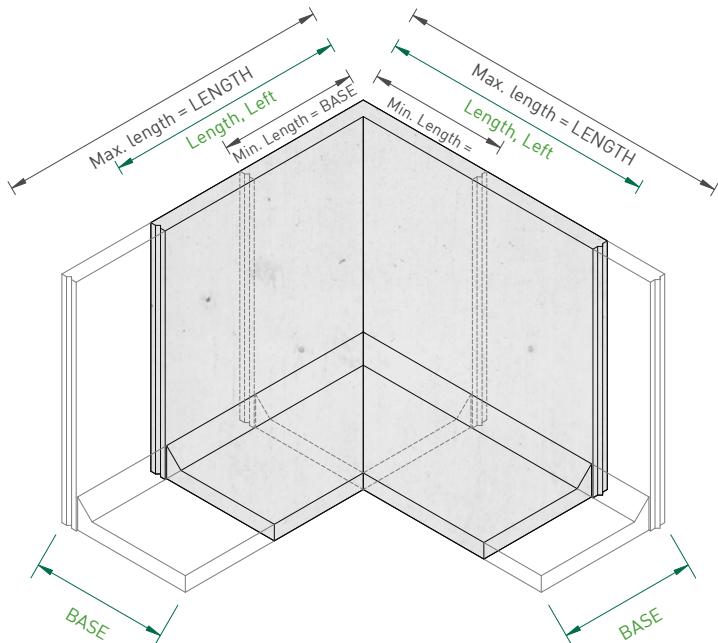
Length shortened

#### CAUTION!

The legs of an angle can be shortened on the left and/or right, but they cannot be shorter than the foot length.

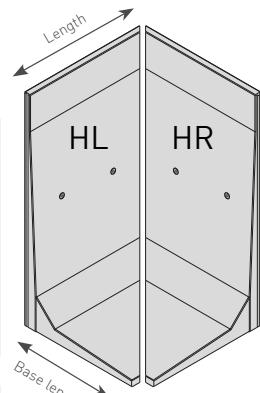
#### Some examples:

- CLF10GSVH250x200 has legs with a minimum length of 135 cm, as the base is 135 cm long.
- CLF10GSVH50x200 has legs with a minimum length of 35 cm, as the base is 35 cm long.



## CLF10GSHL/HR: TWO-PART 90° ANGLE (2 X 45°)

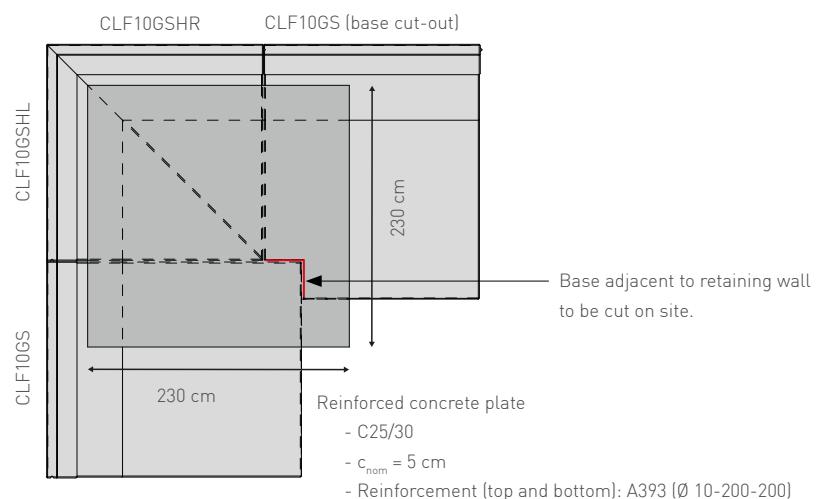
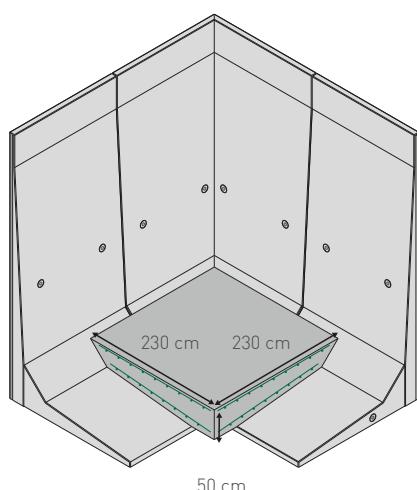
	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG	
CLF10GSHL	CLF10GSHL325x200	325	200	185	2 x 5 T	3245
	CLF10GSHL350x200	350	200	185	2 x 5 T	3360
	CLF10GSHL375x200	375	200	200	2 x 5 T	4160
	CLF10GSHL400x200	400	200	200	2 x 5 T	4280
	CLF10GSHL425x200	425	200	200	2 x 10 T	5155
	CLF10GSHL450x200	450	200	200	2 x 10 T	5275

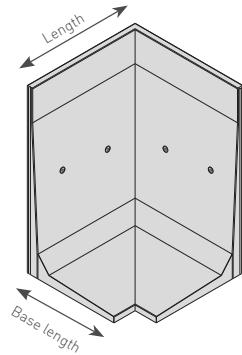


CLF10GSHL & CLF10GSHR

	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG	
CLF10GSHR	CLF10GSHR 325x200	325	200	185	2 x 5 T	3245
	CLF10GSHR 350x200	350	200	185	2 x 5 T	3360
	CLF10GSHR 375x200	375	200	200	2 x 5 T	4160
	CLF10GSHR 400x200	400	200	200	2 x 5 T	4280
	CLF10GSHR 425x200	425	200	200	2 x 10 T	5155
	CLF10GSHR 450x200	450	200	200	2 x 10 T	5275

From a height of 3.25 m, the stability of your retaining wall is ensured by installing a concrete-filled layer.





## CLF10GSRVH: FIXED 90° ANGLE FOR REVERSE PLACEMENT

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE
CLF10GSRVH	CLF10GSRVH125x100	125	2 x 100	85	10,00	800	4 x 2,5 T	tongue and groove	C60/75 1
	CLF10GSRVH125x200	125	2 x 200	85	10,00	1810	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH150x100	150	2 x 100	85	10,00	920	4 x 2,5 T	tongue and groove	C60/75 1
	CLF10GSRVH150x200	150	2 x 200	85	10,00	2050	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH175x125	175	2 x 125	115	10,00	1560	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH175x200	175	2 x 200	115	10,00	2745	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH200x125	200	2 x 125	115	10,00	1710	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH200x200	200	2 x 200	115	10,00	2985	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH225x200	225	2 x 200	135	10,00	4015	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH250x200	250	2 x 200	135	10,00	4255	4 x 2,5 T	tongue and groove	C60/75 0
	CLF10GSRVH275x200	275	2 x 200	160	10,00	5255	4 x 5 T*	tongue and groove	C60/75 0
	CLF10GSRVH300x200	300	2 x 200	160	10,00	5495	4 x 5 T *	tongue and groove	C60/75 0



Constant wall thickness of 10 cm

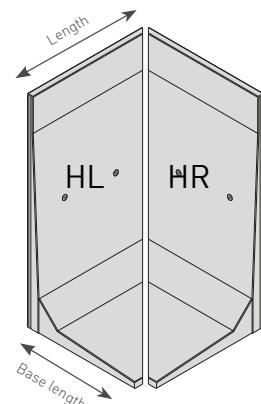


Wall thickness of 10 cm at top

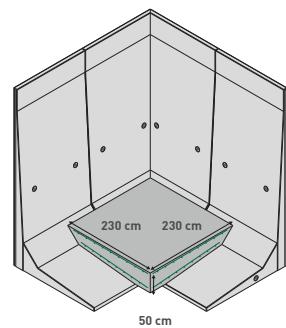
\* An additional lifting hook of type **HBS MRd24** is required for unloading and positioning the **CLF10GSVH 275** and **CLF10GSVH 300**.

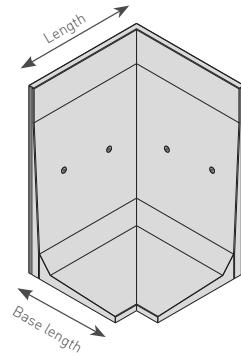
## CLF10GSRHL/HR: TWO-PART 90° ANGLE (2 X 45°) FOR REVERSE PLACEMENT

	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG
CLF10GSRHL	CLF10GSRHL325x200	325	200	185	2 x 5 T 3285
	CLF10GSRHL350x200	350	200	185	2 x 5 T 3405
	CLF10GSRHL375x200	375	200	200	2 x 5 T 4215
	CLF10GSRHL400x200	400	200	200	2 x 5 T 4335
	CLF10GSRHL425x200	425	200	200	2 x 10 T 5220
	CLF10GSRHL450x200	450	200	200	2 x 10 T 5340



	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG
CLF10GSRHR	CLF10GSRHR 325x200	325	200	185	2 x 5 T 3285
	CLF10GSRHR 350x200	350	200	185	2 x 5 T 3405
	CLF10GSRHR 375x200	375	200	200	2 x 5 T 4215
	CLF10GSRHR 400x200	400	200	200	2 x 5 T 4335
	CLF10GSRHR 425x200	425	200	200	2 x 10 T 5220
	CLF10GSRHR 450x200	450	200	200	2 x 10 T 5340





## DLF10GSVH: FIXED 90° ANGLE SINGLE TURN FOR HEAVIER LOADS

	HEIGHT CM	LENGTH CM	BASE CM	TOP THICKNESS CM	WEIGHT KG	KKA	CONNECTION	CONCRETE QUALITY	MAX. NUMBER OF PIECES PER PALETTE	
DLF10GSVH	DLF10GSVH175x125	175	2 x 125	115	10,00	1560	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH175x200	175	2 x 200	115	10,00	2745	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH200x125	200	2 x 125	115	10,00	1710	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH200x200	200	2 x 200	115	10,00	2985	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH225x200	225	2 x 200	135	10,00	4015	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH250x200	250	2 x 200	135	10,00	4255	4 x 2,5 T	tand-groef	C60/75	0
	DLF10GSVH275x200	275	2 x 200	160	10,00	5255	4 x 5 T*	tand-groef	C60/75	0
	DLF10GSVH300x200	300	2 x 200	160	10,00	5495	4 x 5 T*	tand-groef	C60/75	0

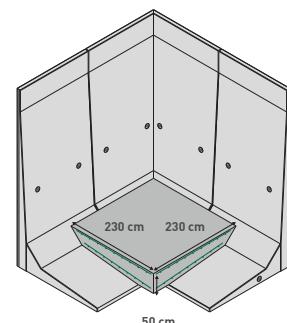
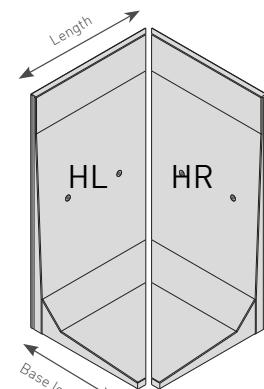
Wall thickness of 10 cm at top

\* An additional lifting hook of type HBS MRd24 is required for unloading and positioning the CLF10GSVH 275 and CLF10GSVH 300.

## DLF10GSHL/HR: TWO-PART 90° ANGLE (2 X 45°)

	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG	
DLF10GSHL	DLF10GSHL325x200	325	200	185	2 x 5 T	3285
	DLF10GSHL350x200	350	200	185	2 x 5 T	3405
	DLF10GSHL375x200	375	200	200	2 x 5 T	4215
	DLF10GSHL400x200	400	200	200	2 x 5 T	4335
	DLF10GSHL425x200	425	200	200	2 x 10 T	5220
	DLF10GSHL450x200	450	200	200	2 x 10 T	5340

	HEIGHT CM	LENGTH CM	BASE CM	KKA	WEIGHT KG	
DLF10GSHR	DLF10GSHR 325x200	325	200	185	2 x 5 T	3285
	DLF10GSHR 350x200	350	200	185	2 x 5 T	3405
	DLF10GSHR 375x200	375	200	200	2 x 5 T	4215
	DLF10GSHR 400x200	400	200	200	2 x 5 T	4335
	DLF10GSHR 425x200	425	200	200	2 x 10 T	5220
	DLF10GSHR 450x200	450	200	200	2 x 10 T	5340



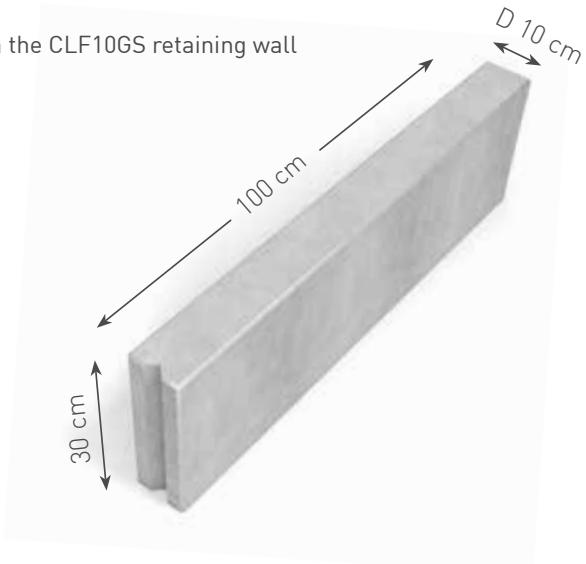
10“

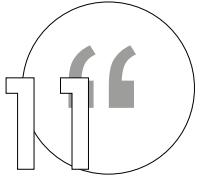
## BORDER STONES

All sides smooth, perfect for combining with the CLF10GS retaining wall range. Only available in lengths of 1 m.

**CLF10GB 30 X 100 CM**

WEIGHT: 73KG



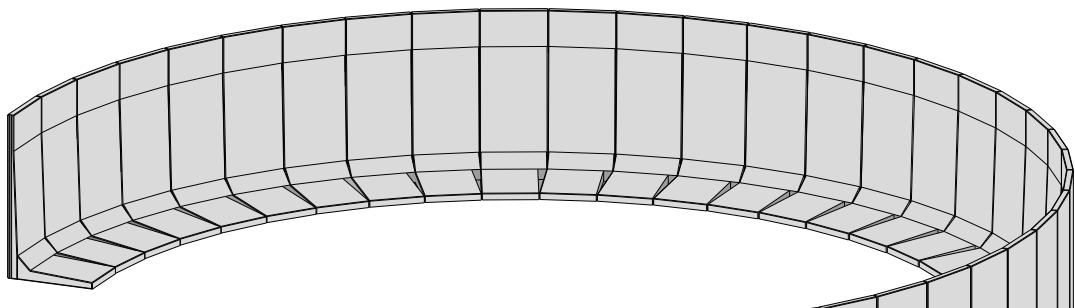


# Convex and concave arcs

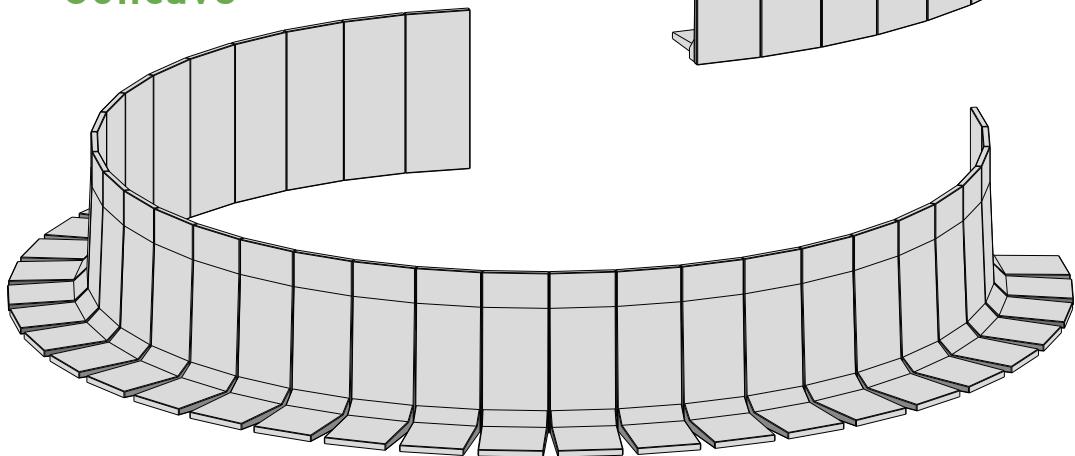
Placing retaining walls in an arc adds dynamism to a design. Radius retaining walls are always custom made and on request. There are 2 types of arcs: **convex and concave**. CBS Beton advises and assists the contractor, depending on the requirements and wishes of the client for new constructions or extensions.

## Convex

LOADABLE FROM RADIUS [R]			
TYPE	CONCAVE - R(MIN) STANDARD	CONVEX - R(MIN) STANDARD	CONVEX - R(MIN) CUSTOM
CLF10GS50x100	6,8 m	12,7 m	6,8 m
CLF10GS75x100	6,8 m	25,2 m	6,8 m
CLF10GS100x100	6,8 m	25,2 m	6,8 m
CLF10GS125x100	6,8 m	37,7 m	6,8 m
CLF10GS150x100	6,8 m	37,7 m	6,8 m
CLF10GS175x100	6,8 m	51,4 m	8,9 m
CLF10GS200x100	6,8 m	51,4 m	8,9 m
CLF10GS225x100	6,8 m	59,7 m	11,9 m
CLF10GS250x100	6,8 m	59,7 m	11,9 m
CLF10GS275x100	6,8 m	70,3 m	15,2 m
CLF10GS300x100	6,8 m	70,3 m	15,2 m
CLF10GS325x100	6,8 m	82,8 m	15,2 m
CLF10GS350x100	6,8 m	82,8 m	15,2 m
CLF10GS375x100	6,8 m	93,8 m	20,6 m
CLF10GS400x100	6,8 m	93,8 m	20,6 m
CLF10GS425x100	6,8 m	103,8 m	22 m
CLF10GS450x100	6,8 m	103,8 m	22 m



## Concave

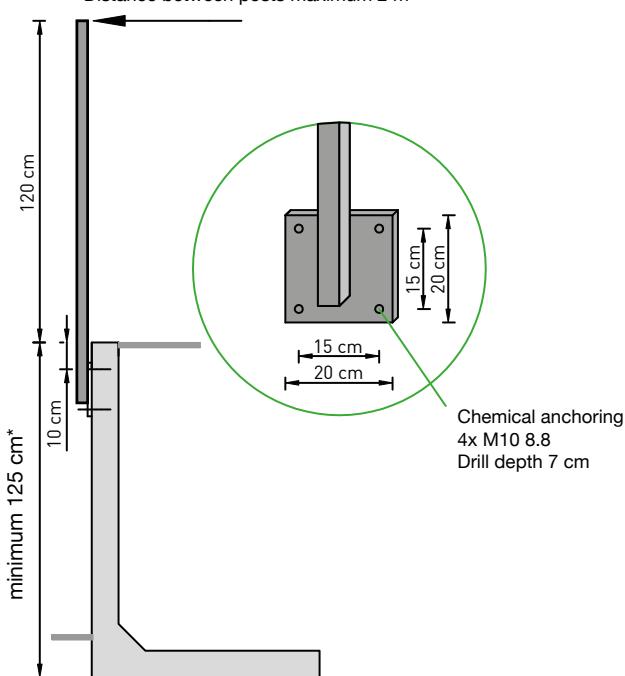


12"

# Parapet fastening

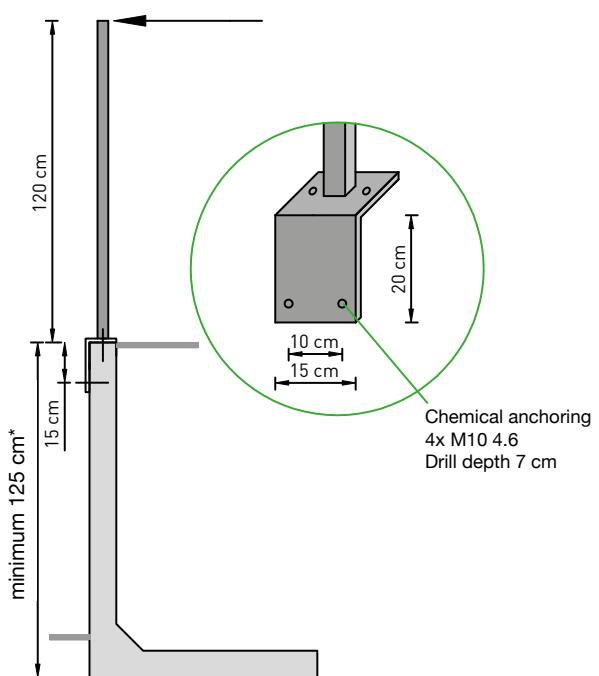
From a wall height of 125 cm\*, a parapet can be attached to the walls.

$H = 1.0 \text{ kN/m}$  (public area)  
Distance between posts maximum 2 m



\* for reverse use: min. 175 mm

$H = 1.0 \text{ kN/m}$  (public area) - Post separation maximum 1 m  
 $H = 0.5 \text{ kN/m}$  (private land) - Post separation maximum 2 m



13“

## Loading and packing

The following elements are delivered on euro pallets to facilitate loading and unloading.

CLF10GS	H	L	KG/ST	AANTAL STUKS / PALET	TOTAAL GEWICHT
<b>CLF10GS50x100</b>	50	100	195	4	780 kg
<b>CLF10GS75x100</b>	75	100	310	5	1550 kg
<b>CLF10GS100x100</b>	100	100	370	5	1850 kg
<b>CLF10GS125x100</b>	125	100	495	3	1485 kg
<b>CLF10GS150x100</b>	150	100	555	3	1665 kg
<b>CLF10GS175x100</b>	175	100	770	3	2310 kg
<b>CLF10GS200x100</b>	200	100	830	3	2490 kg
<b>CLF10GS50x200</b>	50	200	385	4	1540 kg
<b>CLF10GS75x200</b>	75	200	625	4	2500 kg
<b>CLF10GS100x200</b>	100	200	745	4	2980 kg
<b>CLF10GS125x200</b>	125	200	995	3	2985 kg
<b>CLF10GS150x200</b>	150	200	1115	3	3345 kg
<b>CLF10GS50x400</b>	50	400	770	4	3080 kg
<b>CLF10GS75x400</b>	75	400	1250	4	5000 kg
<b>CLF10GS100x400</b>	100	400	1490	4	5960 kg
<b>CLF10GSVH50x100x100</b>	50	100	350	1	350 kg
<b>CLF10GSVH75x100x100</b>	75	100	530	1	530 kg
<b>CLF10GSVH100x100x100</b>	100	100	645	1	645 kg
<b>CLF10GSVH125x100x100</b>	125	100	790	1	790 kg
<b>CLF10GSVH150x100x100</b>	150	100	905	1	905 kg

### Euro pallets are invoiced!

As much as possible, full palettes are loaded and filled according to the desired quantity.



Elements from a height of **275 cm** are **loaded horizontally**.

14“

## Lifting hooks

Lifting hooks of type **KKA 2.5 T - 5 T - 10** are required to move the walls. An additional lifting hook of type **HBS MRd24** is required for unloading and positioning the **CLF10GSVH 275** and **CLF10GSVH 300**.



KKA 10 T - KKA 5 T - KKA 2,5 T



HBS MRd24

15“

# Projects







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We would like to point out that the information and notes in this technical catalogue do not constitute a complete and conclusive description. Rather, they are intended to supplement the generally recognised rules of building technology that the expert user must observe, and to explain the installation and use of our products. Further, we would like to point out that our products should only be used and installed by competent persons and that special attention should be paid to the proper handling and storage of our goods. We are always happy to assist you with the necessary advice and tips.

