

**BOSCH  
BETON®**

# AGRICULTURAL

Silage clamp | Biogas | Manure storage | Storage AGRA



**BUILDING A  
SOLID FUTURE**





# CORPORATE STORY

Bosch Beton is an ambitious family firm that produces concrete retaining walls from its state-of-the-art factory in Barneveld and sells them to the civil engineering and agricultural industries. We do this in the Netherlands and in our neighbouring countries. Whatever the situation requires, we have a customised retaining wall solution. We deliver a high-quality and sustainable product for now and for the next generations. Sustainability and innovation have high priority so that we can minimise our own footprint and that of our customers. We are working towards 100% circular production of our retaining walls in the future. 'Building a solid future' is our promise to our customers. Supporting customers, personal contact, full service, fast delivery and quality make Bosch Beton a solid partner. Sustainability, a pioneering approach, decisiveness, sincerity and loyalty are our core values.

## RETAINING WALL SOLUTIONS

Our retaining walls can be used for so many different applications in the agricultural sector; as silage clamp for grass or maize, as concrete manure storage, as silo for storing raw materials for biogas or retaining walls for a dairy farmer's barn. Whatever the issue and however complex we work with you to find the best customised solution for your situation.

### Sustainability

Our products offer customers the most sustainable solution for all their requirements.

### A pioneering approach

We aim for innovation and work continuously on product development.

### Decisiveness

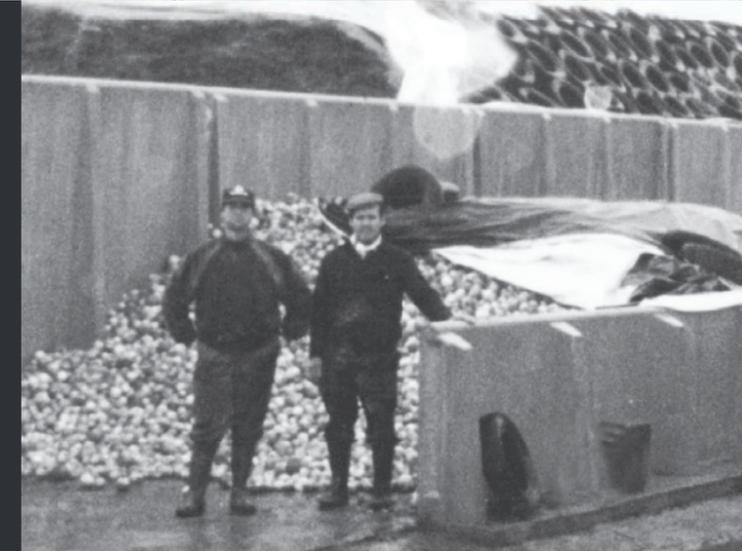
We don't only think about innovation, improvement, connection and sustainability; we achieve these too.

### Sincerity

We always give honest and expert advice with the right price/quality ratio.

### Loyalty

We are committed to our customers and always honour our agreements and obligations.





We processed 20,000 tonnes of rubble from our former factory into granulate for use as raw material for new retaining walls.

## SUSTAINABLE PRODUCTION



Sustainable raw materials



100% recyclable



Long service life



Solar power



Guarantee



Rainwater



## BUILDING A SOLID FUTURE

'Building a solid future' is our promise to our customers and we aim to realise this in the broadest sense. What we build today must contribute to tomorrow's world. If customers choose Bosch Beton retaining walls, they must have assurance that they're making a sustainable choice. That's why we keep on innovating, developing and improving our sustainability to continue to make and deliver a high-quality and sustainable product. Our prefab retaining walls are certified in line with the strictest requirements, including KIWA/ KOMO and Güteschutz. Bosch Beton is one of the first retaining wall producers worldwide to obtain a CSC Gold certificate (Concrete Sustainability Council), which means that we produce sustainable and responsible concrete products. Our state-of-the-art factory exudes sustainability throughout. We use sustainable materials, installations and recycled products for our production, reuse rainwater in the production process and have over 18,000 solar panels to generate our energy.



# FORAGE PRESERVATION

Get the most from your silage clamp



## 3 big profits from a high-quality silage clamp

1. Immediately reduces your forage losses and save 5-10% on high feed costs per average dairy farm
2. Better feed preservation through optimal compaction right up to the edge
3. Good forage ensures a higher and better milk production.



### 10, 15 or 20 ton axle load

Axle load and wheel pressure are decisive for good compaction and forage preservation.



### Silage angle maximum 28 degrees

Ensures good compaction of your forage and the safety of people and machine.



### Prevent heating

Maximum preservation and good feed-out rate. Average temperature in a silage clamp is 4 degrees lower than in an unwallied clamp.



### Location of the silage clamp

For the preservation and proper storage of stored feed, the best location of your silage clamp is with the opening to the north or northeast.



### Dry matter content

Important for preservation and nutritional value.

**Maize: minimum of 33% - maximum of 37% DM**  
**Grass: minimum of 35% - maximum of 45% DM**



### High-strength concrete C60/75

Structural retaining walls produced with high-strength concrete C60/75 for better acid resistance and extra long life.

Storage press juices



### Up to 20 year warranty in accordance with agricultural certification

Agricultural building and structures (BS 5502-22) and agricultural concrete products (BRL 2812).



### Work in a clean silage clamp

Prevent mold, bacteria and pests.

Aqua



# SILAGE CLAMP

Good roughage is the basis for everything and means improved milk production from your cow. A good silage clamp will reduce both losses and the need to purchase additional roughage. Circular thinking and a good silage clamp offer financial gains. The walls are structurally capable of withstanding up to a 20 tonne axle load. Using a 100% acid-resistant bitumen sealant ensures that moisture and air can't enter the silage. Complete your silo with accessories including a dual gutter, stairway or acid-resistant clinker brick floor. A Bosch Beton silage clamp will last for generations and also complies with the latest regulations and quality requirements.



*“Good roughage and health is the basis for everything.”*

**Remco de Vos, Mts De Vos**





# BIOGAS

Biogas is a sustainable energy source that offers opportunities to reduce carbon emissions. One option for producing biogas is the fermentation of maize. In order to be able to use maize in the biogas digester, minimum stocks of 18 months are required. A farmer begins stockpiling maize well before starting up a biogas digester. Clean, orderly and cost-effective raw material storage is very important for a biogas plant. We help our customers in devising the right silo solution. With Bosch Beton walls, you are assured of maximum yield on your raw materials.



*“You need to make sure that tidy silage clamps there’s less wastage or no wastage at all.”*

**Richard Bower, Staffordshire**





# MANURE STORAGE

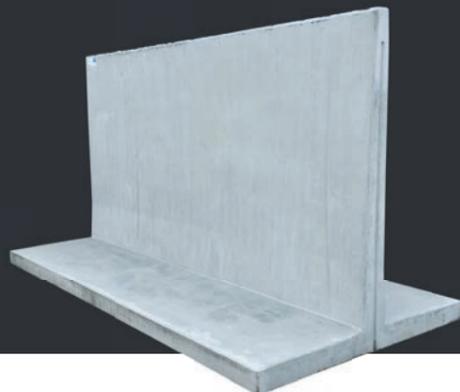
Silage clamps are also extremely suitable for manure storage. Concrete manure storage is the most sustainable solution for both silos for storage or a horse paddock. Whether you need a small or large storage space, with our retaining walls you can decide on the storage capacity yourself. With various accessories and options you can ensure that, for instance, effluent and acids do not come into contact with the soil or surface water. Your manure storage can be made to measure within a short time.





# STORAGE AGRA

As well as grass or maize storage, silage clamps are also well suited to indoor storage, including grain, sugar beet, flower bulb waste, residual products such as pressed pulp or the storage and transfer of wet by-products. We have developed retaining walls for storage specifically for agricultural applications, such as indoor storage systems. The walls are unique as they can absorb the heavy pressure and impact forces caused by shovels and tractors. For small or large storage areas, you determine the storage capacity yourself. Storage from retaining walls can be constructed quickly.



*“We chose one manure storage and storage for bulb waste. The Bosch Beton dual gutters prevent us being faced with too much effluent.”*

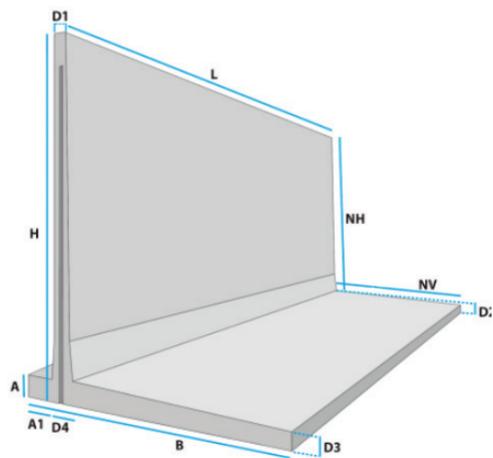
**Nick van der Wereld,  
Worldflower**



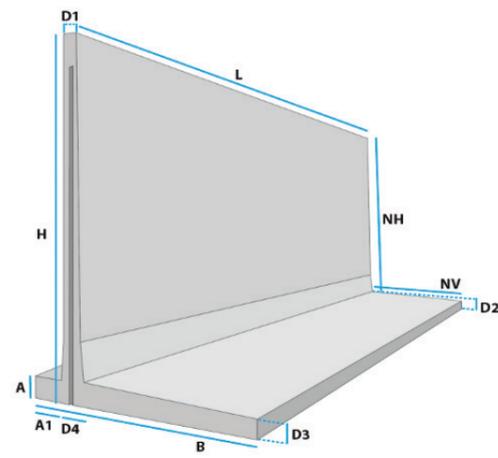
# EXTERNAL WALLS

Bosch Beton retaining walls are available in various types, sizes, colours and structures and have a long service life. Our extensive product range means expansion or adaptation is always possible with our retaining walls. And as our walls also meet the strictest quality and certification requirements, you are assured of a sustainable product.

## EXTERNAL WALL SELF-SUPPORTING WALL

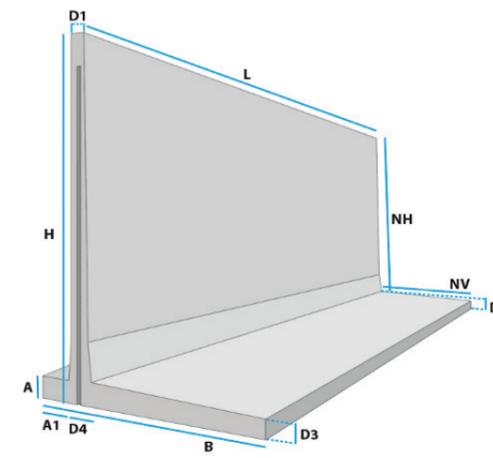


## EXTERNAL WALL SELF-SUPPORTING WALL



View our products

## EXTERNAL WALL SELF-SUPPORTING WALL



## AXLE LOAD & SAFETY DISTANCE

The minimum axle pressure for good compaction of roughage in a silage clamp is 7.5 tonnes per axle. The vehicle weight is, therefore, at least 15 tonnes. A safety distance is prohibited for retaining walls with an agricultural application. Good manoeuvring and compaction is important, especially in the corners of the silage clamp, which is why retaining walls must be designed structurally for this.

**Please note:** on purchase you have a 'structural' concrete product, so it's important that you are absolutely certain that the product is safe and suitable for the right application.

Bosch Beton has worked to prohibit safety distances in silage clamps so that people and machines can drive roughage into the silage clamp safely. That's why we offer up to a 20-year breakage warranty.

**20 tonne** axle load

- ✓ Suitable for heavy axle loads
- ✓ No soil embankment needed due to the extra long foot
- ✓ Particularly suitable for higher silage clamps

**15 tonne** axle load

- ✓ Suitable for heavy axle loads
- ✓ Ideal in combination with a 20 tonne axle load soil embankment
- ✓ Particularly suitable for higher silage clamps

**10 tonne** axle load

- ✓ Suitable for heavy axle loads
- ✓ Ideal in combination with a 15 tonne axle load soil embankment
- ✓ Particularly suitable for higher silage clamps

Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
LA100V	1150	3995	1430	1050	1000	125	150	140	180	148	200	3275
LA125V	1400	3995	1580	1200	1250	125	150	140	180	148	200	3810
LA150V	1650	3995	1680	1300	1500	125	150	140	180	148	200	4280
LA175V	1910	3995	1950	1550	1750	125	160	140	200	157	200	5270
LA200V	2160	3995	2070	1650	2000	125	160	140	220	157	200	6010
LA250V	2710	3995	2310	1850	2500	125	210	170	260	206	200	8460
LA300V	3245	2495	2700	2100	3000	125	245	180	300	236	300	7020
LA400V	4350	2495	3300	2600	4000	125	350	190	360	330	340	11220

Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
LA150G	1650	3995	1180	800	1500	125	150	144	180	148	200	3595
LA175G	1910	3995	1400	1000	1750	125	160	147	200	157	200	4505
LA200G	2160	3995	1470	1050	2000	125	160	147	220	157	200	5200
LA250G	2710	3995	1710	1250	2500	125	210	183	260	206	200	7465
LA300G	3245	2495	2100	1500	3000	125	245	199	300	236	300	6330
LA400G	4350	2495	2800	2100	4000	125	350	222	360	330	340	10595

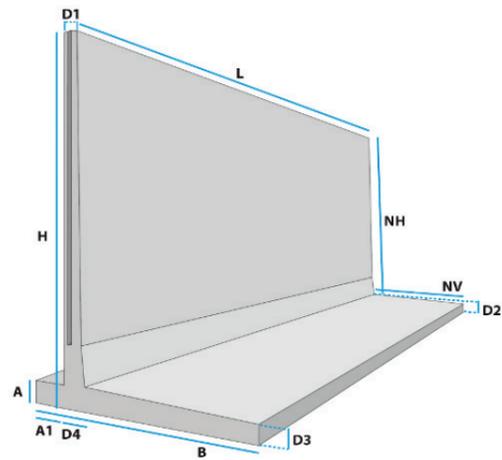
Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
LA200S	2160	3995	1320	1050	2000	125	160	149	220	157	200	4975
LA250S	2710	3995	1560	1250	2500	125	210	186	260	206	200	7145
LA300S	3245	2495	1950	1500	3000	125	245	203	300	236	300	6085

Other sizes available on request.

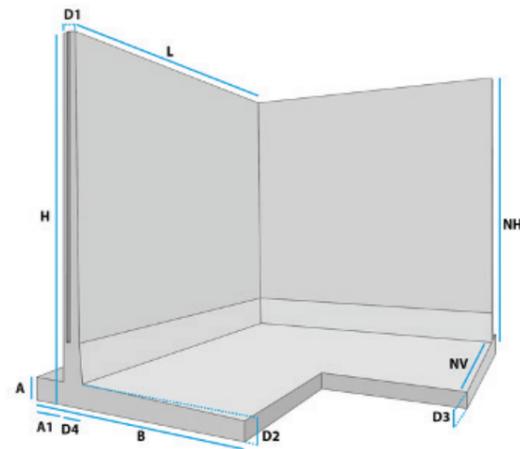


# EXTERNAL WALLS

## EXTERNAL WALL SELF-SUPPORTING WALL



## EXTERNAL WALL CORNER SELF-SUPPORTING WALL



- ✓ Suitable for smaller and lower silage clamps
- ✓ In combination with a 15 tonne axle load soil embankment
- ✓ Also ideal for manure storage and bulk storage



- ✓ Suitable for smaller and lower silage clamps
- ✓ In combination with a 15 tonne axle load soil embankment
- ✓ Also ideal for manure storage and bulk storage

Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
L050hak	500	3995	600	285	410	85	90	83	115	90	200	890
L075hak	750	3995	800	488	659	85	91	83	112	90	200	1220
L100hak	1000	3995	800	489	909	85	91	83	111	90	200	1425
L125hak	1250	3995	900	577	1148	85	102	92	123	100	200	1860
L150hak	1500	3995	1050	716	1387	85	113	94	134	110	200	2395
L175hak	1750	3995	1200	850	1620	90	130	98	150	125	200	3060
L200hak	2000	3995	1350	985	1855	100	146	101	165	140	200	3835
L225hak	2250	3995	1500	1113	2085	100	165	120	187	165	200	4820
L250hak	2500	3995	1600	1200	2322	100	178	136	200	170	200	5655
L300hak	3000	3995	1900	1467	2775	100	225	144	233	200	200	7850
L350hak	3500	2495	2050	1590	3245	100	255	149	260	220	200	5930
L400hak	4000	2495	2450	1810	3731	100	269	150	290	229	350	7375

Type (Corner)	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
L050100hak	500	995	600	285	410	85	90	83	115	90	200	400
L050hak	500	1995	600	285	410	85	90	83	115	90	200	840
L075100hak	750	995	800	488	659	85	91	83	112	90	200	540
L075hak	750	1995	800	488	659	85	91	83	112	90	200	1140
L100100hak	1000	995	800	489	909	85	91	83	111	90	200	640
L100hak	1000	1995	800	489	909	85	91	83	111	90	200	1350
L125100hak	1250	995	900	577	1148	85	102	92	123	100	200	810
L125hak	1250	1995	900	577	1148	85	102	92	123	100	200	1725
L150100hak	1500	995	1050	716	1387	85	113	94	134	110	200	990
L150hak	1500	1995	1050	716	1387	85	113	94	134	110	200	2180
L175hak	1750	1995	1200	850	1620	90	130	98	150	125	200	2765
L200hak	2000	1995	1350	985	1855	100	146	101	165	140	200	3435
L250hak	2500	1995	1600	1200	2322	100	178	136	200	170	200	4795

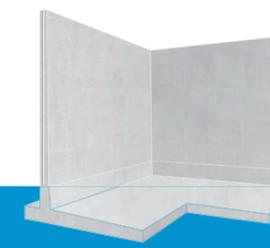
\*Walls up to 300 cm are also available without heel  
\*Walls up to 300 cm are also available in lengths of 1990 mm

\*All external wall corners are also available without heel.

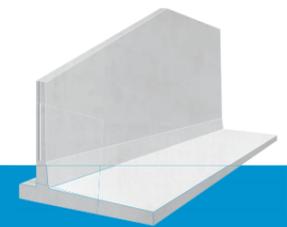
## OPTIONS



The stairs in the U retaining wall enable you to walk easily at height through your silage clamp. The stairs are available separately.



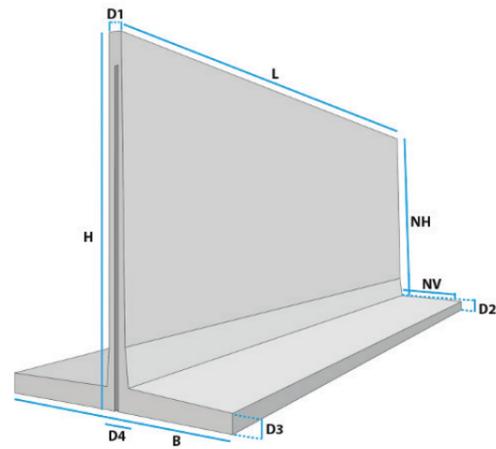
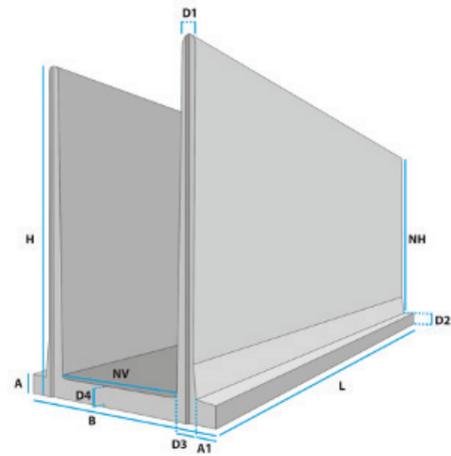
We can provide almost any type of corner. We mitre the walls or use fixed corner elements.



We can chamfer silage clamp walls on request. The cutting line runs from half the height to half the length as standard. We can also customise this for you!

# PARTITIONING WALLS

The U and T retaining walls also serve as partitioning wall to create multiple silage or storage chambers. These walls are unique as both sides can absorb the heavy pressure and impact forces of ensiling and removing silage using heavy shovels and tractors.

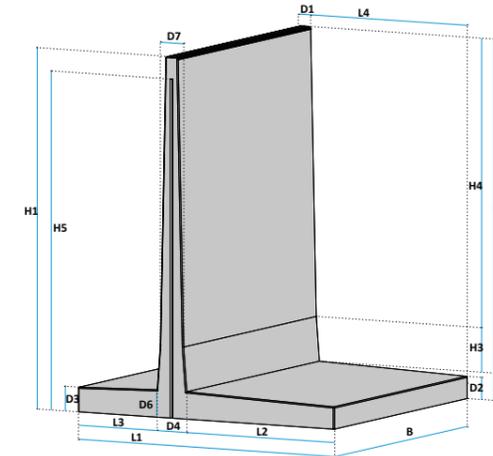


## PARTITIONING WALL U WALL

## PARTITIONING WALL T WALL

# NEW INNOVATION

We are increasingly seeing a combination of silage clamp walls with automatic cover systems. Demand for retaining walls with heel is also increasing. When covering and when removing silage, the cover system moves across the stable heel along the silage clamp walls. The cover system ensures better feed preservation and retention.



## EXTERNAL WALL SELF-SUPPORTING WALL



**15 tonne** axle load

- Independent wall with load bearing on both sides
- The space in the U wall also serves as a walkway
- The space in the U wall also drains rainwater

Also available for 10 tonne axle load

**20 tonne** axle load

- Independent wall with load bearing on both sides
- Space saving
- Can also be used as an external wall

Also available for 15 tonne axle load

**15 tonne** axle load

- Suitable for heavy axle loads
- Particularly suitable for higher silage clamps
- With extra long heel for the cover system

Type 15T	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
U100	1165	3995	1250	1006	1165	100	-	122	140	-	-	3780
U125	1415	3995	1250	994	1415	100	-	128	140	-	-	4360
U150hak	1680	3995	1450	982	1532	100	140	154	140	140	80	5435
U175hak	1930	3995	1450	972	1782	100	140	159	140	140	80	6085
U200hak	2190	3995	1550	970	2050	100	140	160	140	140	130	6795
U250hak	2690	3995	1900	1188	2540	100	150	176	150	150	180	8890
U300hak	3190	3995	2150	1418	3020	100	170	186	170	160	180	11420

Type 20T	H	L	B	NV	NH	D1	D2	D3	D4	kg
TWA100	1150	3995	1280	550	1000	125	150	145	180	3100
TWA125	1400	3995	1480	650	1250	125	150	145	180	3685
TWA150	1650	3995	1680	750	1500	125	150	144	180	4325
TWA175	1910	3995	1900	850	1750	125	160	149	200	5260
TWA200	2160	3995	2020	900	2000	125	160	140	220	5920
TWA250	2710	3995	2260	1000	2500	125	210	188	260	8410
TWA300	3245	2495	2600	1150	3000	125	245	180	300	6850
TWA400	4350	2495	3100	1370	4000	125	350	190	360	10775

Type 10T	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
U300hak	3190	3995	2150	1418	3020	100	170	186	170	160	180	11420

Type 15T	H	L	B	NV	NH	D1	D2	D3	D4	kg
TWA200	2160	3995	1820	900	2000	125	160	150	220	5700
TWA250	2710	3995	2160	1000	2500	125	210	190	260	8245
TWA300	3245	2495	2500	1150	3000	125	245	183	300	6645

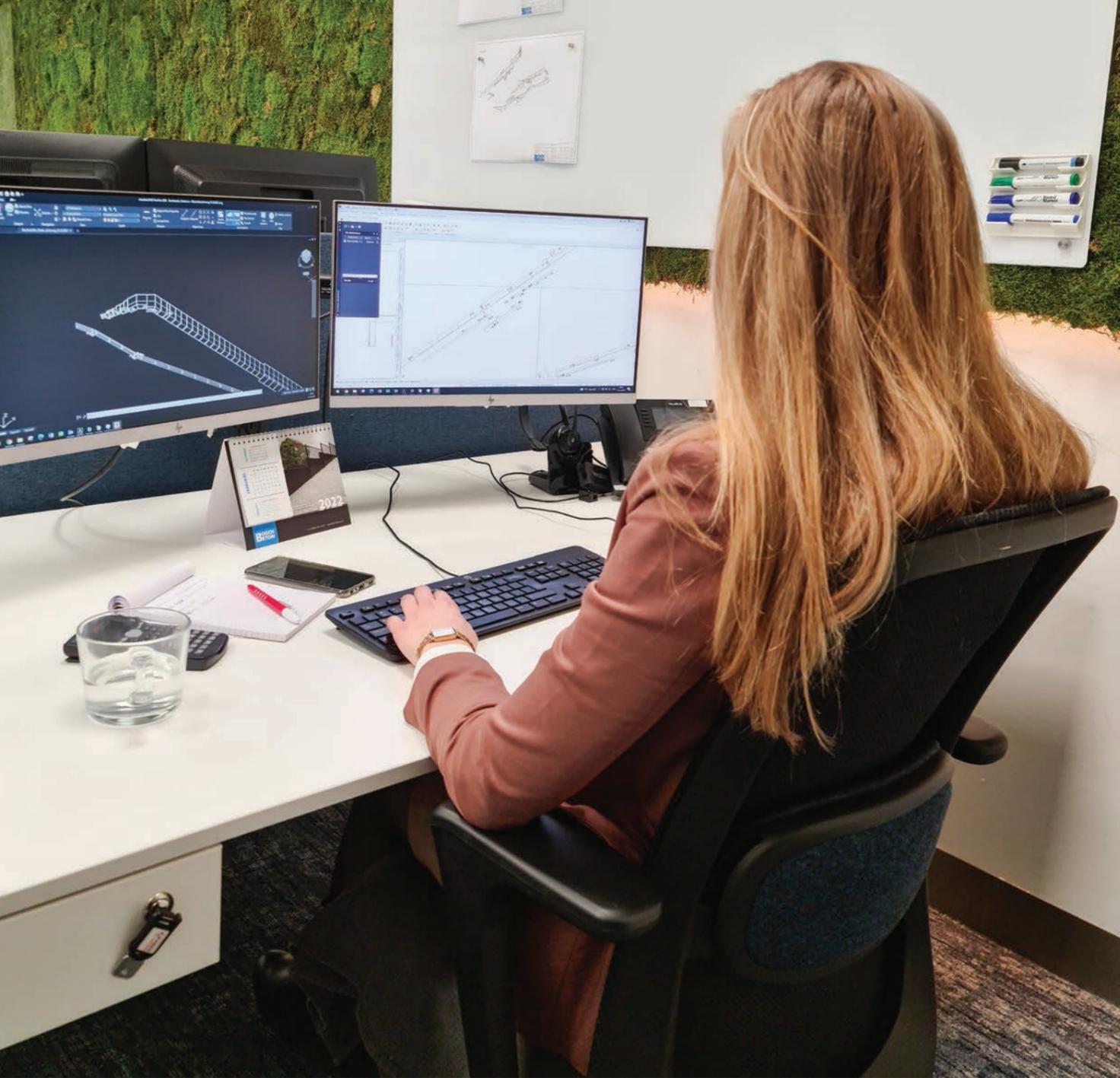
Type 15T	H1	H2	H3	H4	H5	B	L1	L2	L3	L4
LA300H	3245	3000	400	2600	3045	2495	2600	1500	800	1587,5
	D1	D2	D3	D4	D5	D6	D7			
	125	199	230	300	245	245	238			



*"We decided to place a cover system on the new silage clamps. We wanted a lasagne pit and that's easy to cover with a cover system."*

**Klaske Faassen, Noordzigt dairy farm, Sint Jacobiparochie**





## ENGINEERING

Our in-house Engineering team calculates and checks that the retaining wall solution we offer meets our customers' structural requirements. They detail large requests into clear quotations, make structural calculations and working drawings and devise solutions to ensure that projects are feasible in practice. The team uses advanced design and software programs including Scia, Allplan and Tekla. Handling materials in a smart way so we can develop alternative solutions, ensures that we make an important contribution to structurally-improved products with a longer service life and a lower carbon footprint.



## PRODUCTION

Bosch Beton stands for quality and we invest in that. We use high-quality moulds so we can guarantee dimensions. Handling materials in a smart way so we can develop alternative solutions ensures that we make an important contribution to structurally-improved products with a longer service life and a lower carbon footprint. We conduct daily tests and measurements on concrete quality in our own laboratory, including extensive retaining wall strength tests in our own pressure chamber. The test simulates the lateral and downward pressure in practice, so we can examine the wall's behaviour and see where potential cracks can occur.



# PROJECT PREPARATION & PLACEMENT

We discuss the preparation with our customer to ensure smooth and satisfactory wall placement on site. For example, the unloading point must be accessible and easy for transport to drive on. Sound preparation of the substrate is also important for correct wall placement and it's vital that a qualified employee is present. The walls can be placed in different ways. We usually place the walls ourselves

from the truck. Other options are placement using a clamp or that the customer does this themselves.



View the placement of a silage clamp



## SERVICE TEAM

Quality and service come first for us. We think it's important that our customers are satisfied and stay that way. From quotation request to delivery. And we stay in touch with our customers after that too. The team also takes care of the correct silage clamp finishing, such as making it impermeable to liquids and oxygen or applying a coating. If necessary, our service team can be accessible outside standard working hours. Our employees are knowledgeable. Feel free to contact us with questions about the strength of the walls, structures, services or other questions.

Customers give Bosch Beton an average 8.8



Would you like to give us a rating?





# SILAGE CLAMP GENERATOR

Use our online 3D generator to build your own silage clamp in three steps. Decide what you are going to use the silo for, select a silage clamp wall type, and enter the dimensions of your silage clamp along with the axle load. Make a selection for the flooring of the farmyard, and any accessories and services required. You will receive a customised recommendation free of obligation within three working days of receipt of your application. If you would rather have immediate advice, please feel free to contact our team.



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