



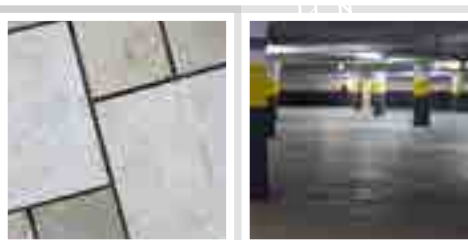
SIPHONS ABLÄUFE

Ø 315

260 x 260

55-130

260



HL Major drains

15. Terraces, patios,
car parks a.s.o.

15



PERFECT SERIES

DN110

HL Major drains PERFECT SERIES

Basic information about design and installation

When designing big open spaces, car parkings or roof terraces, the drainage of rain water becomes more and more important due to the increasing rainfall. For this reason we would like to bring closer to you the different combination possibilities of our drain series „Perfect“.

▲ Calculation of the quantity of drains:

For the calculation of the quantity of the fitting drains we recommend to use as a basis the standard rain yield factor of 400 l / (s x ha), according EN12056. Please find examples in chapter „Flat roof drains“.

▲ Adjustment of the grate level to the level of the pavement:

When connecting the drain to the sewage pipe, one has often the problem, that the final height level is not yet fixed or known. That means, that in advance it is nearly impossible to reach the right final level of the pavement.

Therefore we recommend the usage of two-part drains: First you connect the drain body to the sewage pipe; in this phase the drain body works as a temporary drainage. When the further pavement (asphalt, concrete, cobblestone..) is known, the extension is set on the drain body and may be adjusted in height simply by cutting. That eases the creation of the slope to the drain.

▲ Load classifications

When selecting the drain please take care to use the right load classification according EN1253. With our „Perfect“-series you may reach load classifications A015, B125, H1,5, K3, L15 and M125, depending on the material of the grate or the frame. At the installation you have to care for a stable relining of the frame to reach a smooth force distribution to the subsoil.

▲ May plastic drains be used also for mastic asphalt?

The advantages of plastic drains, namely low weight and therefore easy handling, are wellknown. By using combinations of plastic drain bodies and massive cast iron frames and grates the direct setting into mastic asphalt with high temperatures is possible.

▲ Stench trap

In principle rainwater should be connected to a special rainwater duct or should be drained away (acc. DIN1986-100). Should this not be possible, one should avoid the rise of stench from the sewage system to the drain by using traps. For inside HL provides normal water traps, for outside we recommend the usage of frost-proof flaps.

Relevant standards/directives

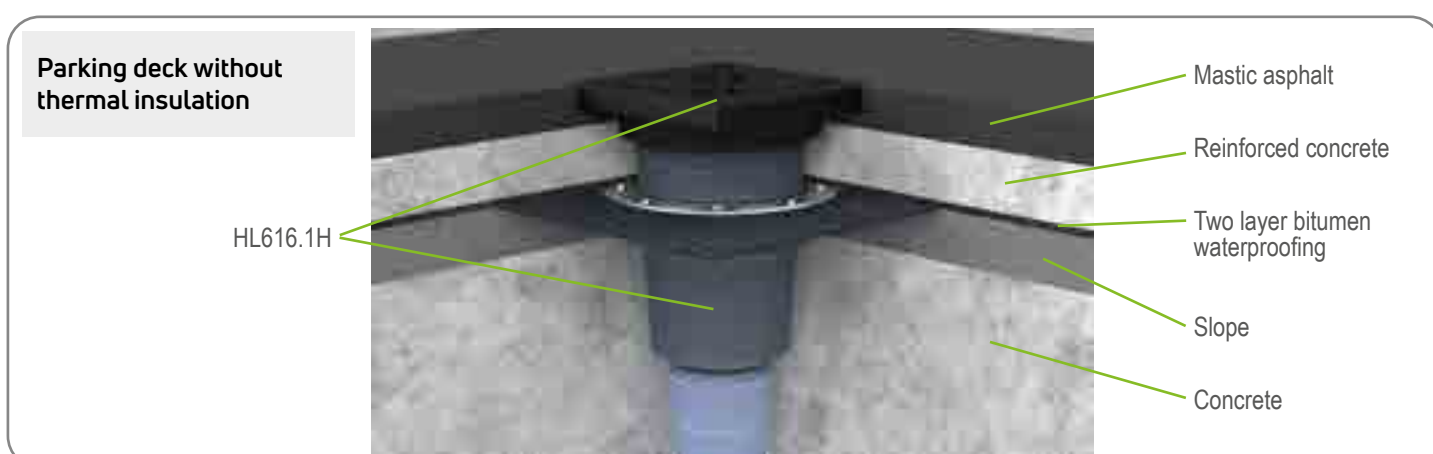
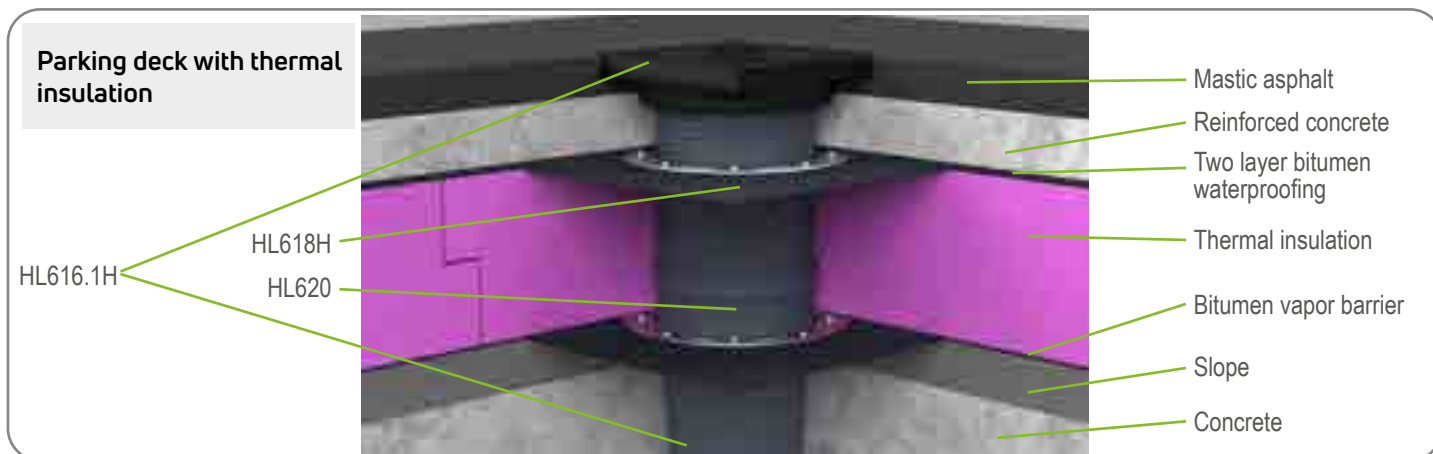
ÖNORM B 2501 Drainage of buildings
 DIN 1986-100 Drainage systems for buildings and estates
 EN 1253..... Drains for buildings

ÖNORM B2209 Waterproofing works
 ÖNORM B2220 Roof waterproofings with bitumen and plastic sheetings
 ÖNORM B7209 Waterproofings for buildings
 ÖNORM B7220 Roofs with waterproofings

Selection of the convenient drain

Selective criteria	Requirements	Product
Drainage surface	<p>When you calculate the quantity of occurring rain water acc. ÖNORM B2501 and DIN 1986-100, you have to use at least the standard rain yield factor of 300 l/ (s x ha).</p> <p>Quantity of rain water = 0,03 l/s x Drainage surface (m²)</p> <p>Quantity of drains = $\frac{\text{Absolute quantity of rain water}}{\text{Capacity of the gully}}$</p>	<p>For calculating the right drain and the requested quantity of drains please note the capacity of the particular product.</p>
Floor construction	<p>To find out, what is the best composition of the drain, like extension (with or without flange), gravel guard or heating, a detailed plan of the different layers is necessary.</p>	<p>Extension (with or without flange) Sealing kit Gravel guard Eventually heating</p>
Waterproofing	<p>Please prefer drains with prefabricated bitumen flanges, when the floor is sheeted with bitumen. For all other waterproofing materials you can use the sealing set, which fits to the used waterproofing material.</p> <p>Bitumen waterproofings, liquid bitumen sheetings or compounds</p> <p>Polymer sheetings like PVC</p> <p>Liquid compounds</p>	<p>Drain vertical HL616(.1)H Drain horizontal HL615(.1)H Drain vertical HL616(.1) + Sealing kit HL86.0 Drain horizontal HL615(.1) + Sealing kit HL86.0 Drain vertical HL616(.1) + Sealing kit HL86.M Drain horizontal HL615(.1) + Sealing kit HL86.M</p>
Load classifications	<p>The load classifications of the different drains are depending on the material of the frame or the grate. Load classifications according EN 1253:</p> <p>Classification A up to max. 1,5 t for cast iron, plastic(L) and stainless steel(S) frame</p> <p>Classification B up to max. 12,5 t for cast iron frame and grate</p>	<p>Drain horizontal: HL605(L)(S), HL615(L)(S) Drain vertical: HL606(L)(S),HL616(L)(S) Drain horizontal: HL605.1, HL615.1 Drain vertical: HL606.1, HL616.1</p>

HL Major drains PERFECT SERIES – Sectional drawings



HL Major drains PERFECT SERIES – Installation

Installation example HL616H



1. Create taphole with Ø 300 mm, apply prime coat, apply first bitumen layer



2. Insert major drain HL616H



3. Weld on the bitumen flange on the first bitumen layer



4. Connect second bitumen layer with the bitumen flange



5. Ready connection of the drain to the two-layer waterproofing



6. Remove lid cover, adjust the extension in height by cutting



7. Cover the extension with the fleece, lay on the construction steel



8. Pour out with concrete



9. Remove the grate and insert the gravel catcher



10. Ready

HL Major drains PERFECT SERIES – Products – Overview

Drains



Product	HL605(L)(S)	HL605.1	HL615(L)(S)	HL615.1	HL615H(L)(S)	HL615.1H
Description	Major drain horizontal with plastic frame, one-piece	Major drain horizontal with cast iron frame, one-piece	Major drain horizontal with flange and plastic frame, two-piece	Major drain horizontal with flange and cast iron frame and grate, two-piece	Major drain horizontal with bitumen flange and plastic frame, two-piece	Major drain horizontal with bitumen flange and cast iron frame and grate, two-piece
Function	HL605 with cast iron grate, HL605L with plastic grate, HL605S with stainless steel grate	Load classification B – max. 12,5 t	HL615 with cast iron grate, HL615L with plastic grate, HL615S with stainless steel grate	Load classification B – max. 12,5 t	HL615H with cast iron grate, HL615HL with plastic grate, HL615HS with stainless steel grate	Load classification B – max. 12,5 t

Extensions

Product data see chapter „Sealing kits / Extensions“



Product	HL620	HL618	HL618H
Description	Standard extension	Extension with flange	Extension with bitumen flange
Function	Elongation of the extension	Adjustment of the drain in height to the sealing level	Adjustment of the drain in height to the bitumen waterproofing level

Extensions



Product	HL621	HL622	HL622/S	HL623	HL624 / HL624V
Description	Extension with plastic frame and cast iron grate	Extension with plastic frame and screwable stainless steel grate	Extension with plastic frame and screwable V4A stainless steel grate	Extension with plastic frame and screwable plastic grate	Extension with cast iron frame and cast iron grate, HL624V: screwable
Function	fits to all major drains	fits to all major drains	fits to all major drains	fits to all major drains	fits to all major drains

HL Major drains PERFECT SERIES – Products – Overview

Drains



HL606(L)(S)

Major drain vertical with plastic frame, one-piece

HL606 with cast iron grate,
HL606L with plastic grate,
HL606S with stainless steel grate

HL606.1

Major drain vertical with cast iron frame and cast iron grate, one-piece

Load classification B – max. 12,5 t

HL616(L)(S)

Major drain vertical with flange and plastic frame, two-piece

HL616 with cast iron grate,
HL616L with plastic grate,
HL616S with stainless steel grate

HL616.1

Major drain vertical with flange, cast iron frame and cast iron grate, two-piece

Load classification B – max. 12,5 t

HL616H(L)(S)

Major drain vertical with bitumen flange and plastic frame, two-piece

HL616H with cast iron grate,
HL616HL with plastic grate,
HL616HS with stainless steel grate

HL616.1H

Major drain with bitumen flange, cast iron frame and cast iron grate, two-piece

Load classification B – max. 12,5 t

Accessories



Product

HL190

HL195

HL191

HL609

HL619

Description

Gravel guard

Leaf catcher

Gravel trap

Heating kit

Fixing lugs

Function

Drainage of rainwater on the sealing level, e.g. with inverted constructions

For non-walkable surfaces like gravel, grass

For flaged floors, set into gravel embankment, below the slab

For the heating of the drain, to avoid ice

For fixing the drain and the extension

Sealing kits



Product data see chapter „Sealing kits / Extensions“

Product

HL86.0

HL86

HL86.M

HL86.H

Description

Sealing kit without foil

Sealing kit with EPDM-foil

Sealing kit with textile coated membrane

Sealing kit with bitumen membrane

Function

For clamping of local waterproofings

For bitumen coatings and EPDM-foils

For liquid sealing compounds

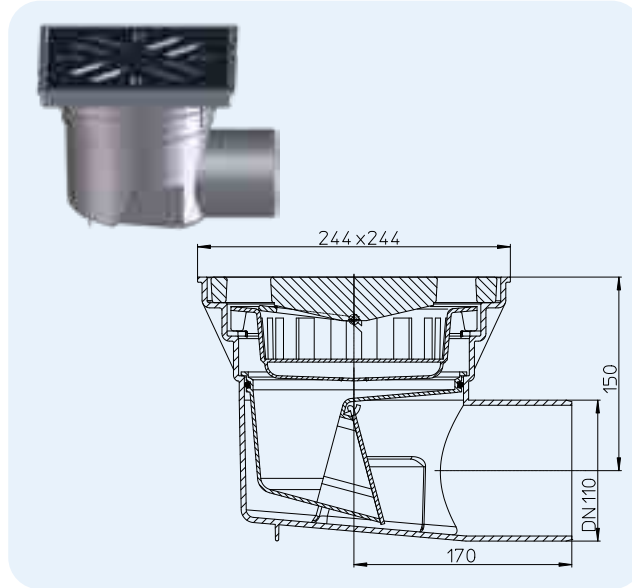
For bitumen waterproofings and liquid bitumen compounds

HL Major drains PERFECT SERIES – Products – Data

HL605 Major drain PERFECT with plastic frame

Data

Material	PP
Grate	226 x 226 mm HL605, HL605W: Cast iron HL605L, HL605LW: Plastic HL605S, HL605SW: Stainless steel
Stench trap	HL605, HL605L, HL605S: Frost-proof flap HL605W, HL605LW, HL605SW: Water trap
Standard	EN 1253
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Recess dimension min. 300 x 360 mm Heating set HL609 for heating of the drain body available

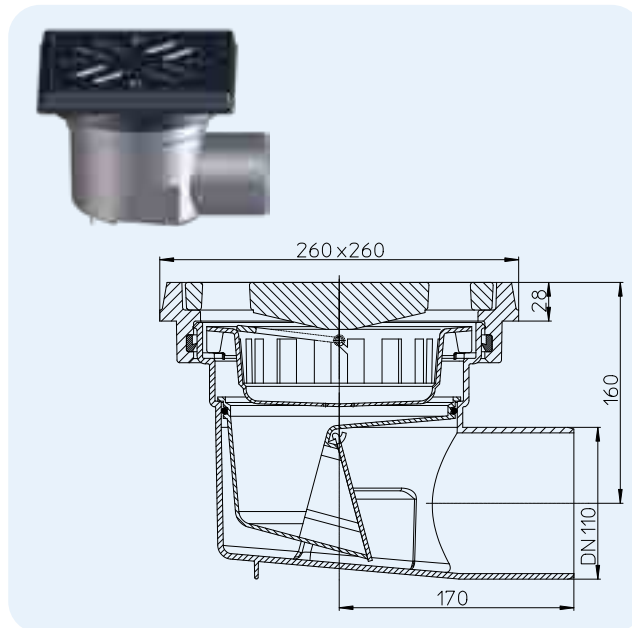


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
605	DN110	7025 g	Frost-proof flap	Cast iron	+006687	1
605L	DN110	1495 g	Frost-proof flap	Plastic	+009336	1
605S	DN110	2790 g	Frost-proof flap	Stainless steel	+010882	1
605W	DN110	6980 g	Water trap	Cast iron	+011070	1
605LW	DN110	1495 g	Water trap	Plastic	+009350	1
605SW	DN110	2790 g	Water trap	Stainless steel	+011117	1

HL605.1 Major drain PERFECT with cast iron frame and cast iron grate

Data

Material	PP
Grate	Cast iron 226 x 226 mm, Cast iron frame 260 x 260 mm
Stench trap	HL605.1: Frost-proof flap HL605.1W: Water trap
Standard	EN 1253
Load classification	B – max. 12,5 t
Additional information	Recess dimension min. 300 x 360 mm Heating set HL609 for heating of the drain body available



Capacity table HL605, HL605.1

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10a) + 10b) and pt. 5.5.1.2 Fig. 9

Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 4,5 (35 mm)	0,80	2,15	4,30	6,10	6,20	6,30	6,65	6,70

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

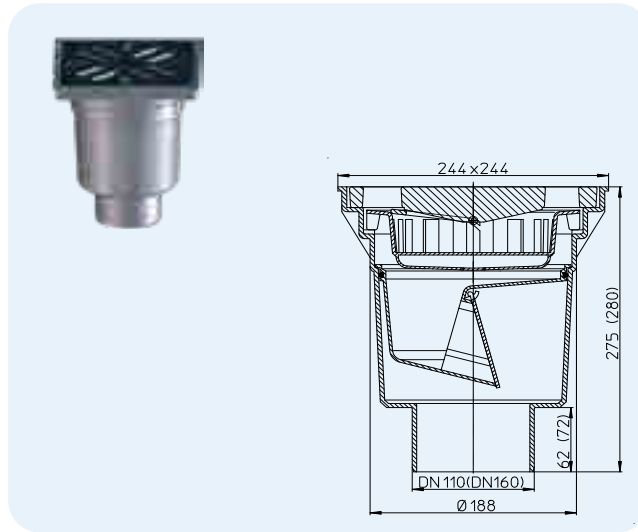
Nominal width	EN 1253	5 mm	15 mm	20 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 1,4 (20 mm)	1,05	3,20	3,90	4,65	4,80	4,90	5,05	5,20

HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
605.1	DN110	11815 g	Frost-proof flap	Cast iron	+006700	1
605.1W	DN110	11810 g	Water trap	Cast iron	+011094	1

HL606 Major drain PERFECT with plastic frame

Data

Material	PP
Grate	226 x 226 mm HL606/1, HL606/5, HL606W/1, HL606W/5: Cast iron HL606L/1, HL606L/5, HL606LW/1, HL606LW/5: Plastic HL606S/1, HL606S/5, HL606SW/1, HL606SW/5: Stainless steel
Stench trap	HL606/1, HL606L/1, HL606S/1, HL606/5, HL606L/5, HL606S/5: Frost-proof flap HL606W/1, HL606LW/1, HL606SW/1, HL606W/5, HL606LW/5, HL606SW/5: Water trap
Standard	EN 1253
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Heating set HL609 for heating of the drain body available

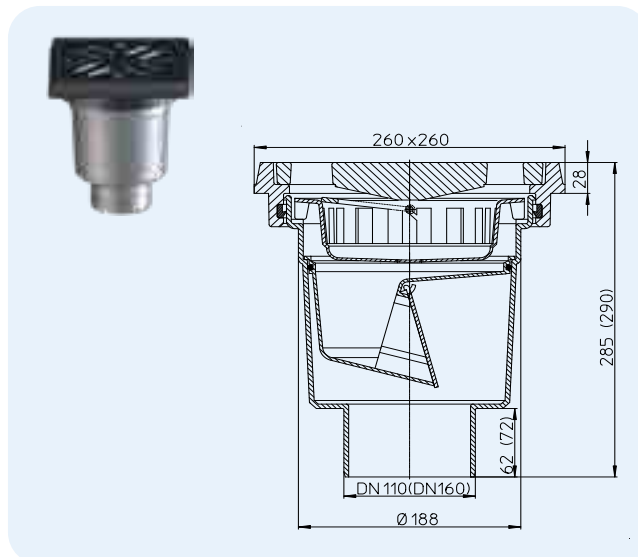


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/ package
606/1	DN110	7280 g	Frost-proof flap	Cast iron	+906062	1
606/5	DN160	7375 g	Frost-proof flap	Cast iron	+976065	1
606L/1	DN110	1460 g	Frost-proof flap	Plastic	+009374	1
606L/5	DN160	1465 g	Frost-proof flap	Plastic	+009398	1
606S/1	DN110	2755 g	Frost-proof flap	Stainless steel	+010905	1
606S/5	DN160	2760 g	Frost-proof flap	Stainless steel	+010929	1
606W/1	DN110	6980 g	Water trap	Cast iron	+011131	1
606W/5	DN160	6990 g	Water trap	Cast iron	+011155	1
606LW/1	DN110	1460 g	Water trap	Plastic	+009411	1
606LW/5	DN160	1465 g	Water trap	Plastic	+009435	1
606SW/1	DN110	2755 g	Water trap	Stainless steel	+011216	1
606SW/5	DN160	2760 g	Water trap	Stainless steel	+011230	1

HL606.1 Major drain PERFECT with cast iron frame and cast iron grate

Data

Material	PP
Grate	Cast iron 226 x 226 mm, Cast iron frame 260 x 260 mm
Stench trap	HL606.1/1, HL606.1/5: Frost-proof flap HL606.1W/1, HL606.1W/5: Water trap
Standard	EN 1253
Load classification	B – max. 12,5 t
Additional information	Heating set HL609 for heating of the drain body available



Capacity table HL606, HL606.1

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10(a) + 10(b) and pt. 5.5.1.2 Fig. 9
Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 vertical	min. 4,5 (35 mm)	0,90	2,50	5,80	6,20	6,25	6,30	6,35	6,50
DN 160 vertical	min. 8,1 (35 mm)	1,15	3,00	5,20	5,40	5,60	5,65	5,80	6,00

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

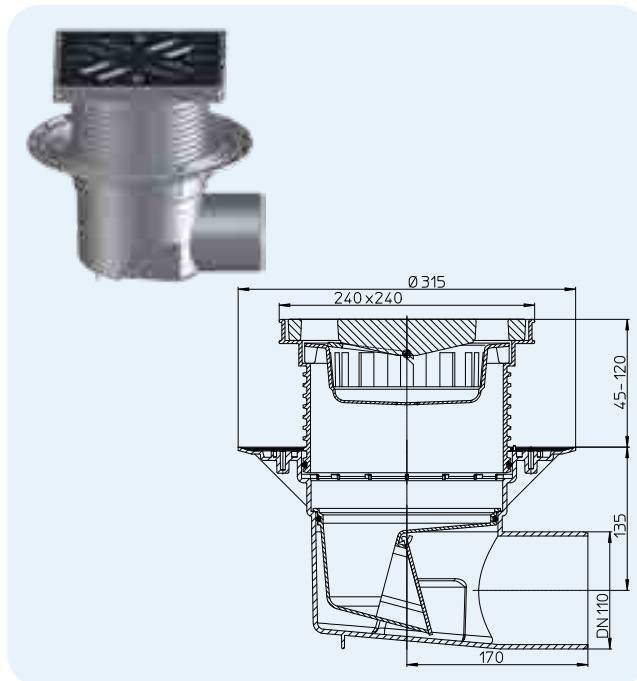
Nominal width	EN 1253	5 mm	15 mm	20 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 vertical	min. 1,4 (20 mm)	0,75	2,50	3,45	5,70	5,90	5,95	6,00	6,15
DN 160 vertical	min. 4 (20 mm)	0,75	2,95	3,55	4,85	5,00	5,15	5,20	5,35

HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/ package
606.1/1	DN110	12400 g	Frost-proof flap	Cast iron	+960613	1
606.1/5	DN160	12775 g	Frost-proof flap	Cast iron	+970612	1
606.1W/1	DN110	11860 g	Water trap	Cast iron	+011193	1
606.1W/5	DN160	11870 g	Water trap	Cast iron	+011179	1

HL615 Major drain PERFECT with flange and plastic frame, two piece

Data

Material	PP
Grate	226 x 226 mm HL615, HL615W: Cast iron HL615L, HL615LW: Plastic HL615S, HL615SW: Stainless steel
Stench trap	HL615, HL615L, HL615S: Frost-proof flap HL615W, HL615LW, HL615SW: Water trap
Standard	EN 1253
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Recess dimension min. 290 x 380 mm Heating set HL609 for heating of the drain body available
Including	Lid cover

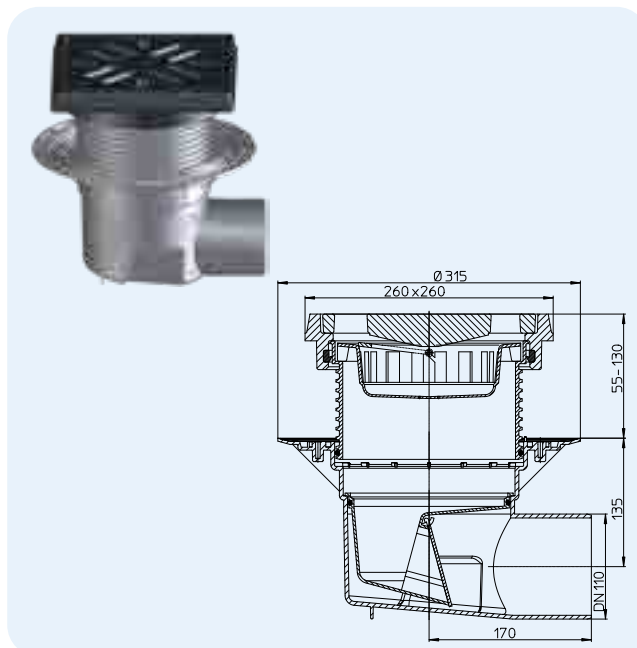


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
615	DN110	7440 g	Frost-proof flap	Cast iron	+006748	1
615L	DN110	1920 g	Frost-proof flap	Plastic	+009459	1
615S	DN110	3215 g	Frost-proof flap	Stainless steel	+010943	1
615W	DN110	7440 g	Water trap	Cast iron	+011254	1
615LW	DN110	1920 g	Water trap	Plastic	+009473	1
615SW	DN110	3215 g	Water trap	Stainless steel	+011292	1

HL615.1 Major drain PERFECT with flange, cast iron frame and cast iron grate, two-piece

Data

Material	PP
Grate	Cast iron 226 x 226 mm Cast iron frame 260 x 260 mm
Stench trap	HL615.1: Frost-proof flap HL615.1W: Water trap
Standard	EN 1253
Load classification	B – max. 12,5 t
Additional information	Recess dimension min. 290 x 380 mm Heating set HL609 for heating of the drain body available
Including	Lid cover



Capacity table HL615, HL615.1, HL615H, HL615.1H

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10a) + 10b) and pt. 5.5.1.2 Fig. 9

Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 4,5 (35 mm)	0,80	2,35	4,40	6,70	6,90	6,95	7,10	7,20

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

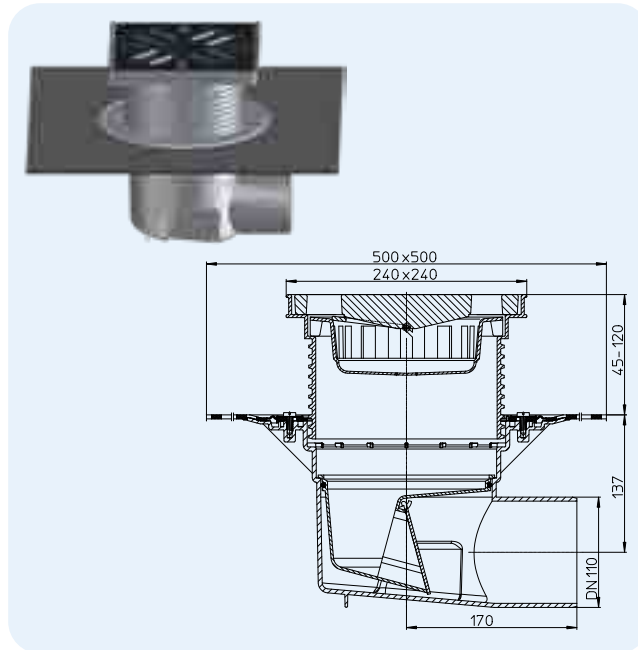
Nominal width	EN 1253	5 mm	15 mm	20 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 1,4 (20 mm)	0,85	2,70	3,45	5,35	5,55	5,65	5,80	5,90

HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
615.1	DN110	12400 g	Frost-proof flap	Cast iron	+006762	1
615.1W	DN110	12330 g	Water trap	Cast iron	+011278	1

HL615H Major drain PERFECT with bitumen flange and plastic frame, two-piece

Data

Material	PP
Grate	226 x 226 mm HL615H, HL615HW: Cast iron HL615HL, HL615HLW: Plastic HL615HS, HL615HSW: Stainless steel
Stench trap	HL615H, HL615HL, HL615HS: Frost-proof flap HL615HW, HL615HLW, HL615HSW: Water trap
Standard	EN 1253
Recommended for	Bitumen waterproofings
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Recess dimension min. 290 x 380 mm Heating set HL609 for heating of the drain body available
Including	Lid cover

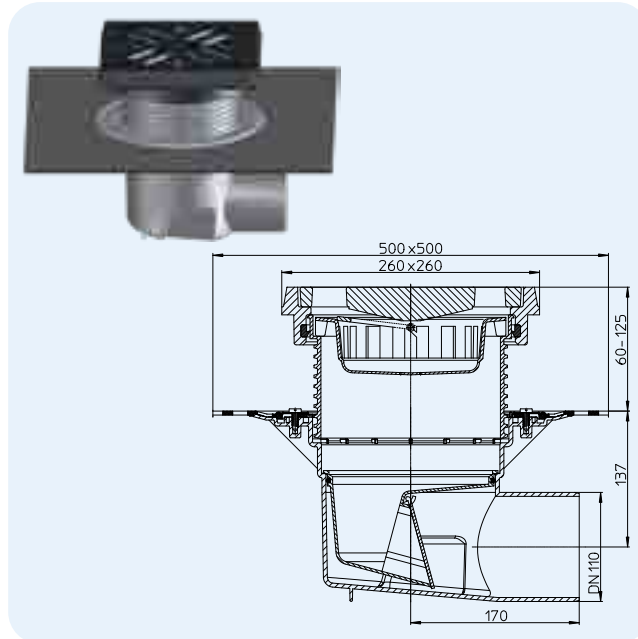


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
615H	DN110	8345 g	Frost-proof flap	Cast iron	+006786	1
615HL	DN110	3175 g	Frost-proof flap	Plastic	+009497	1
615HS	DN110	4470 g	Frost-proof flap	Stainless steel	+011018	1
615HW	DN110	8700 g	Water trap	Cast iron	+011445	1
615HLW	DN110	3175 g	Water trap	Plastic	+009510	1
615HSW	DN110	4470 g	Water trap	Stainless steel	+011490	1

HL615.1H Major drain PERFECT with bitumen flange, cast iron frame and cast iron grate, two-piece

Data

Material	PP
Grate	Cast ironrost 226 x 226 mm Cast iron frame 260 x 260 mm
Stench trap	HL615.1H: Frost-proof flap HL615.1HW: Water trap
Standard	EN 1253
Recommended for	Bitumen waterproofings
Load classification	B – max. 12,5 t
Additional information	Recess dimension min. 290 x 380 mm Heating set HL609 for heating of the drain body available
Including	Lid cover



Capacity table HL615, HL615.1, HL615H, HL615.1H

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10a) + 10b) and pt. 5.5.1.2 Fig. 9

Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 4,5 (35 mm)	0,80	2,35	4,40	6,70	6,90	6,95	7,10	7,20

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

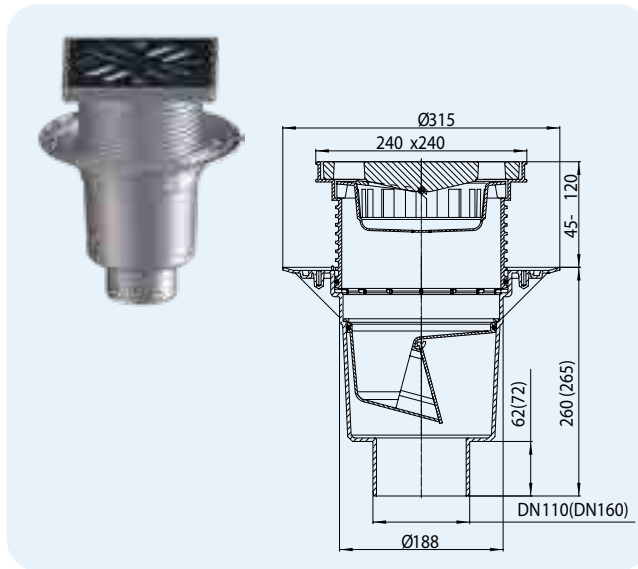
Nominal width	EN 1253	5 mm	15 mm	20 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 horizontal	min. 1,4 (20 mm)	0,85	2,70	3,45	5,35	5,55	5,65	5,80	5,90

HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
615.1H	DN110	13600 g	Frost-proof flap	Cast iron	+006809	1
615.1HW	DN110	13575 g	Water trap	Cast iron	+011476	1

HL616 Major drain PERFECT with flange and plastic frame, two piece

Data

Material	PP
Grate	226 x 226 mm HL616/1, HL616/5, HL616W/1, HL616W/5: Cast iron HL616L/1, HL616L/5, HL616LW/1, HL616LW/5: Plastic HL616S/1, HL616S/5, HL616SW/1, HL616SW/5: Stainless steel
Stench trap	HL616/1, HL616L/1, HL616S/1, HL616/5, HL616L/5, HL616S/5: Frost-proof flap HL616W/1, HL606LW/1, HL616SW/1, HL616W/5, HL616LW/5, HL616SW/5: Water trap
Standard	EN 1253
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Recess dimension min. 290 x 290 mm. Tap hole diameter: 250 mm. Heating set HL609 for heating of the drain body available
Including	Lid cover

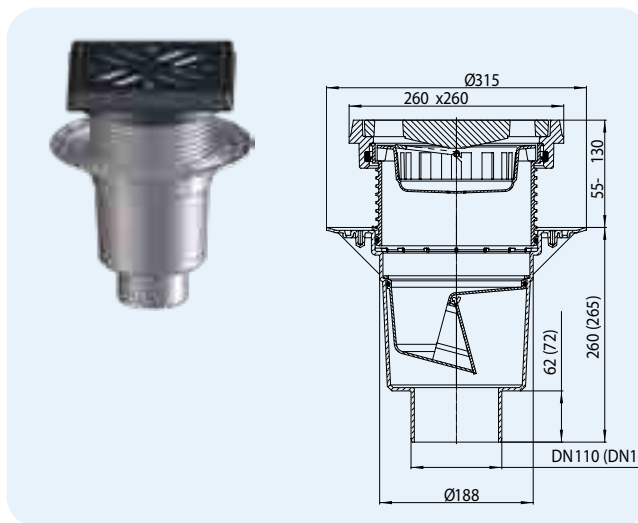


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
616/1	DN110	8345 g	Frost-proof flap	Cast iron	+906161	1
616/5	DN160	8400 g	Frost-proof flap	Cast iron	+976164	1
616L/1	DN110	1860 g	Frost-proof flap	Plastic	+009534	1
616L/5	DN160	1865 g	Frost-proof flap	Plastic	+009558	1
616S/1	DN110	3155 g	Frost-proof flap	Stainless steel	+010967	1
616S/5	DN160	3160 g	Frost-proof flap	Stainless steel	+010981	1
616W/1	DN110	7380 g	Water trap	Cast iron	+011315	1
616W/5	DN160	7390 g	Water trap	Cast iron	+011339	1
616LW/1	DN110	1860 g	Water trap	Plastic	+009596	1
616LW/5	DN160	1870 g	Water trap	Plastic	+009572	1
616SW/1	DN110	3155 g	Water trap	Stainless steel	+011407	1
616SW/5	DN160	3165 g	Water trap	Stainless steel	+011421	1

HL616.1 Major drain PERFECT with flange, cast iron frame and cast iron grate, two-piece

Data

Material	PP
Grate	Cast iron 226 x 226 mm Cast iron frame 260 x 260 mm
Stench trap	HL616.1/1, HL616.1/5: Frost-proof flap HL616.1W/1, HL616.1W/5: Water trap
Standard	EN 1253
Load classification	B – max. 12,5 t
Additional information	Recess dimension min. 290 x 290 mm. Tap hole diameter: 250 mm. Heating set HL609 for heating of the drain body available
Including	Lid cover



Capacity table HL616, HL616.1, HL 616H, HL616.1H

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10(a) + 10(b) and pt. 5.5.1.2 Fig. 9
Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5 mm	15 mm	25 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 vertical	min. 4,5 (35 mm)	0,70	2,15	4,55	5,90	6,05	6,15	6,20	6,25
DN 160 vertical	min. 8,1 (35 mm)	0,95	2,65	5,30	7,65	7,75	8,00	8,10	-

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

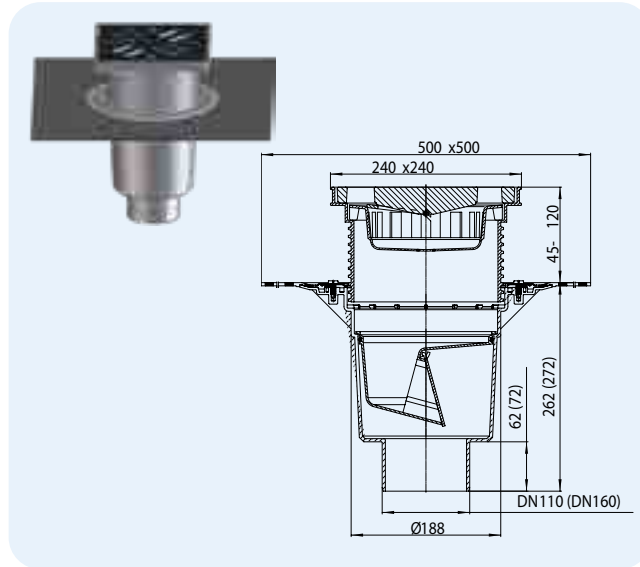
Nominal width	EN 1253	5 mm	15 mm	20 mm	35 mm	45 mm	55 mm	65 mm	75 mm
DN 110 vertical	min. 1,4 (20 mm)	0,45	2,40	3,40	6,10	6,20	6,30	6,35	6,40
DN 160 vertical	min. 4 (20 mm)	0,45	2,05	3,10	5,35	5,55	5,70	5,80	5,90

HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
616.1/1	DN110	12910 g	Frost-proof flap	Cast iron	+961610	1
616.1/5	DN160	13190 g	Frost-proof flap	Cast iron	+971619	1
616.1W/1	DN110	13430 g	Water trap	Cast iron	+011360	1
616.1W/5	DN160	13440 g	Water trap	Cast iron	+011384	1

HL616H Major drain PERFECT with bitumen flange and plastic frame, two-piece

Data

Material	PP
Grate	226 x 226 mm HL616H/1, HL616H/5, HL616HW/1, HL616HW/5: Cast iron HL616HL/1, HL616HL/5, HL616HLW/1, HL616HLW/5: Plastic HL616HS/1, HL616HS/5, HL616HSW/1, HL616HSW/5: Stainless steel
Stench trap	HL616H/1, HL616HL/1, HL616HS/1, HL616H/5, HL616HL/5, HL616HS/5: Frost-proof flap HL616HW/1, HL606HLW/1, HL616HSW/1, HL616HW/5, HL616HLW/5, HL616HSW/5: Water trap
Standard	EN 1253
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	Recommended for Bitumen waterproofings; Recess dimension min. 290 x 290 mm. Tap hole diameter: 250 mm. Heating set HL609 for heating of the drain body available
Including	Lid cover

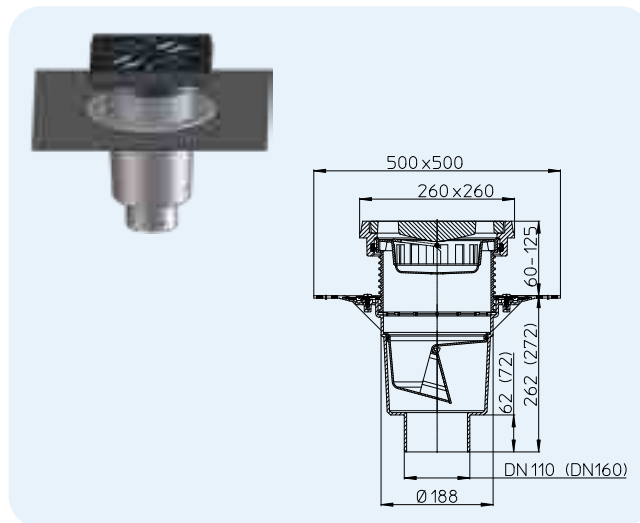


HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
616H/1	DN110	8900 g	Frost-proof flap	Cast iron	+916160	1
616H/5	DN160	9635 g	Frost-proof flap	Cast iron	+917167	1
616HL/1	DN110	3115 g	Frost-proof flap	Plastic	+009619	1
616HL/5	DN160	3120 g	Frost-proof flap	Plastic	+009633	1
616HS/1	DN110	4410 g	Frost-proof flap	Stainless steel	+011032	1
616HS/5	DN160	4415 g	Frost-proof flap	Stainless steel	+011056	1
616HW/1	DN110	8635 g	Water trap	Cast iron	+011513	1
616HW/5	DN160	8645 g	Water trap	Cast iron	+011537	1
616HLW/1	DN110	3115 g	Water trap	Plastic	+009671	1
616HLW/5	DN160	3125 g	Water trap	Plastic	+009657	1
616HSW/1	DN110	4410 g	Water trap	Stainless steel	+011599	1
616HSW/5	DN160	4420 g	Water trap	Stainless steel	+011629	1

HL616.1H Major drain PERFECT with bitumen flange and cast iron frame and grate

Data

Material	PP
Grate	Cast iron 226 x 226 mm Cast iron frame 260 x 260 mm
Stench trap	HL616.1H/1, HL616.1H/5: Frost-proof flap HL616.1HW/1, HL616.1HW/5: Water trap
Standard	EN 1253
Load classification	B – max. 12,5 t
Additional information	Recommended for Bitumen waterproofings Recess dimension min. 290 x 290 mm. Tap hole diameter: 250 mm. Heating set HL609 for heating of the drain body available
Including	Lid cover



Capacity table HL616, HL616.1, HL 616H, HL616.1H

Tested acc. to EN 1253-2:2015 acc. to pt. 5.5.2.1 Fig. 10a) + 10b) and pt. 5.5.1.2 Fig. 9
Drainage capacity measured according to EN 1253-2:2015 according to pt. 5.5.2.1 on downpipe 3 m

Nominal width	EN 1253	5mm	15mm	25mm	35mm	45mm	55mm	65mm	75mm
DN 110 vertical	min. 4,5 (35 mm)	0,70	2,15	4,55	5,90	6,05	6,15	6,20	6,25
DN 160 vertical	min. 8,1 (35 mm)	0,95	2,65	5,30	7,65	7,75	8,00	8,10	-

Drainage capacity measured according to EN 1253-2:2015 according to clause 5.5.1.2 free draining

Nominal width	EN 1253	5mm	15mm	20mm	35mm	45mm	55mm	65mm	75mm
DN 110 vertical	min. 1,4 (20 mm)	0,45	2,40	3,40	6,10	6,20	6,30	6,35	6,40
DN 160 vertical	min. 4 (20 mm)	0,45	2,05	3,10	5,35	5,55	5,70	5,80	5,90

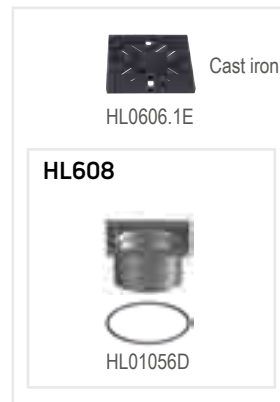
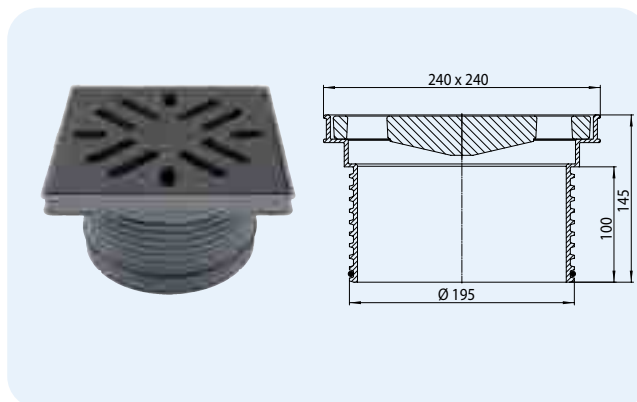
HL-No.	Dimension	Weight	Stench trap	Grate	EAN	Piece/package
616.1H/1	DN110	14240 g	Frost-proof flap	Cast iron	+962617	1
616.1H/5	DN160	14630 g	Frost-proof flap	Cast iron	+951611	1
616.1HW/1	DN110	13520 g	Water trap	Cast iron	+011551	1
616.1HW/5	DN160	13530 g	Water trap	Cast iron	+011575	1

HL Major drains – Accessories – Data

HL621 Extension with plastic frame and cast iron grate

Data

Material	PP
Frame	Plastic 240 x 240 mm
Grate	Cast iron 226 x 226 mm
Load classification	A – max. 1,5 t L – max. 1,5 t
Additional information	fits to all major drains

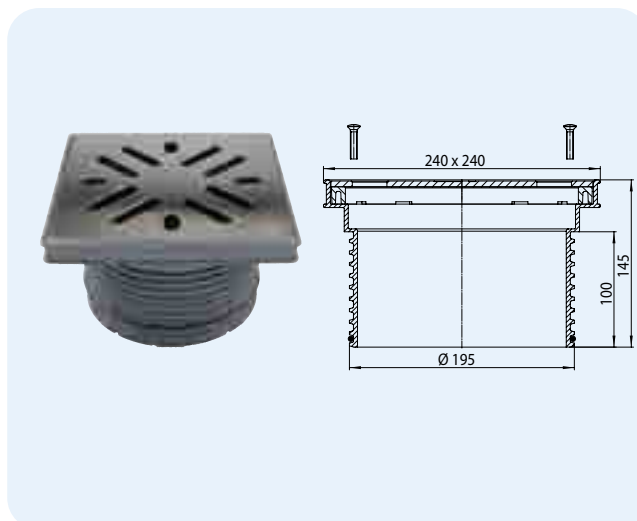


HL-No.	Weight	EAN	Piece/package
621	6510 g	+014644	1

HL622, (HL622/S) Extension with plastic frame and screwable stainless steel grate (V4A)

Data

Material	PP, Stainless steel
Frame	Plastic 240 x 240 mm
Grate	HL622: Stainless steel 226 x 226 mm HL622/S: Stainless steel 226 x 226 mm V4A
Load classification	A – max. 1,5 t
Additional information	fits to all major drains

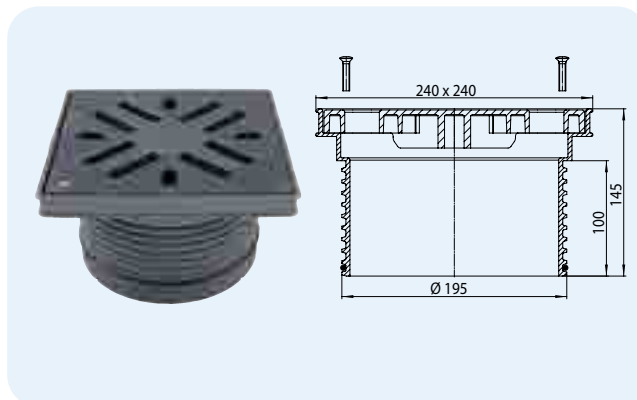


HL-No.	Weight	EAN	Piece/package
622	2220 g	+014705	1
622/S	2220 g	+014729	1

HL623 Extension with plastic frame and screwable plastic grate

Data

Material	PP, Plastic
Frame	Plastic 240 x 240 mm
Grate	Plastic 226 x 226 mm
Load classification	A – max. 1,5 t
Additional information	fits to all major drains

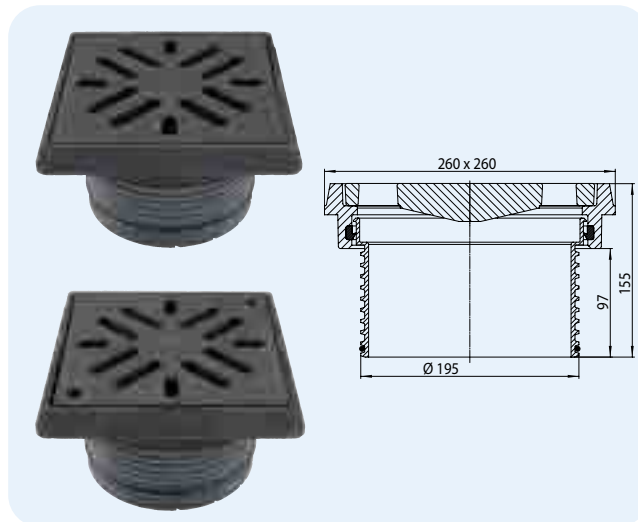


HL-No.	Weight	EAN	Piece/package
623	954 g	+014743	1

HL624, (HL624V) Extension with cast iron frame and cast iron grate (screwable)

Data

Material	PP, Cast iron
Frame	Cast iron 260 x 260 mm
Grate	HL624: Cast iron 226 x 226 mm HL624V: Cast iron 226 x 226 mm screwable
Load classification	B – max. 12,5 t
Additional information	fits to all major drains

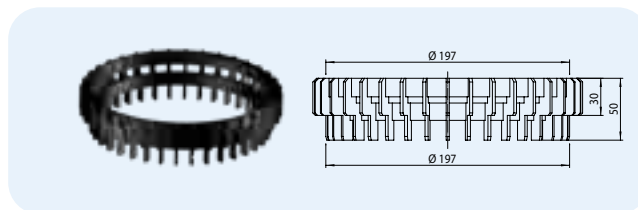


HL-No.	Weight	EAN	Piece/package
624	11370 g	+014767	1
624/V	11370 g	+028597	1

HL190 Gravel guard

Data

Material	PP
Additional information	for the installation between flange of the body and extension, to guarantee enough drainage on the sealing level, e.g. with inverted constructions, fits to all major drains

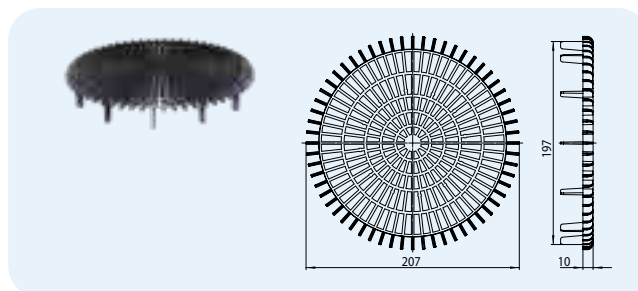


HL-No.	Dimension	Weight	EAN	Piece/package
190	Ø 197 mm	95 g	+011858	1

HL191 Gravel trap

Data

Material	PP
Additional information	flat gravel trap for usage below flaged floors or duckboards

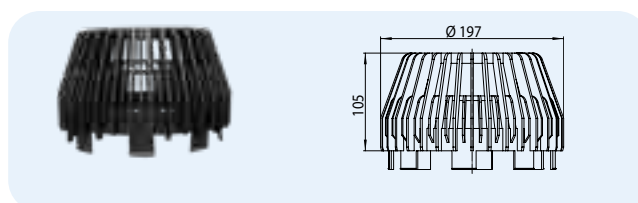


HL-No.	Dimension	Weight	EAN	Piece/package
191	Ø 197 mm	120 g	+029006	1

HL195 Leaf catcher

Data

Material	PP
Additional information	for non-walkable surfaces, fits to all major drains

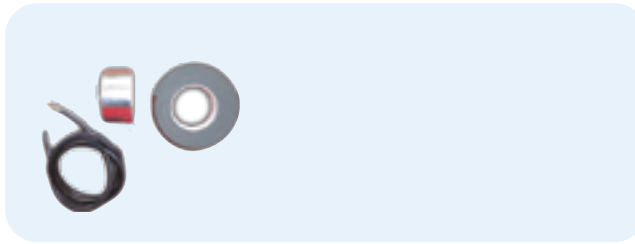


HL-No.	Dimension	Weight	EAN	Piece/package
195	Ø 197 mm	250 g	+018093	1

HL609 Heating Set

Data

Additional information self-regulating heating tape (2m length) with 18W/m, equal to 36W/230V. Including a 3-pole kable (length 1 m), self-adhesive thermal conducting tape and insulation tape. Overheating is, due to the self-regulating construction, impossible. Fits to all major drains.

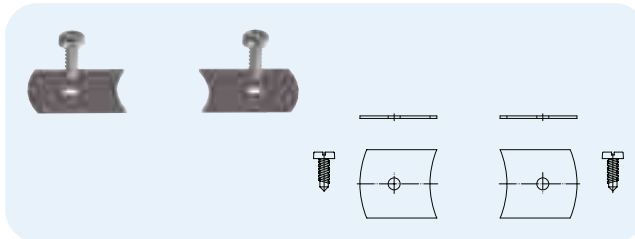


HL-No.	Weight	EAN	Piece/package
609	704 g	+006090	1

HL619 Fixing brackets „FixIt“

Data

Material Stainless steel
 Additional information For a tensile-safe connection between drain body and extension



HL-No.	Weight	EAN	Piece/package
619	54 g	+013197	1