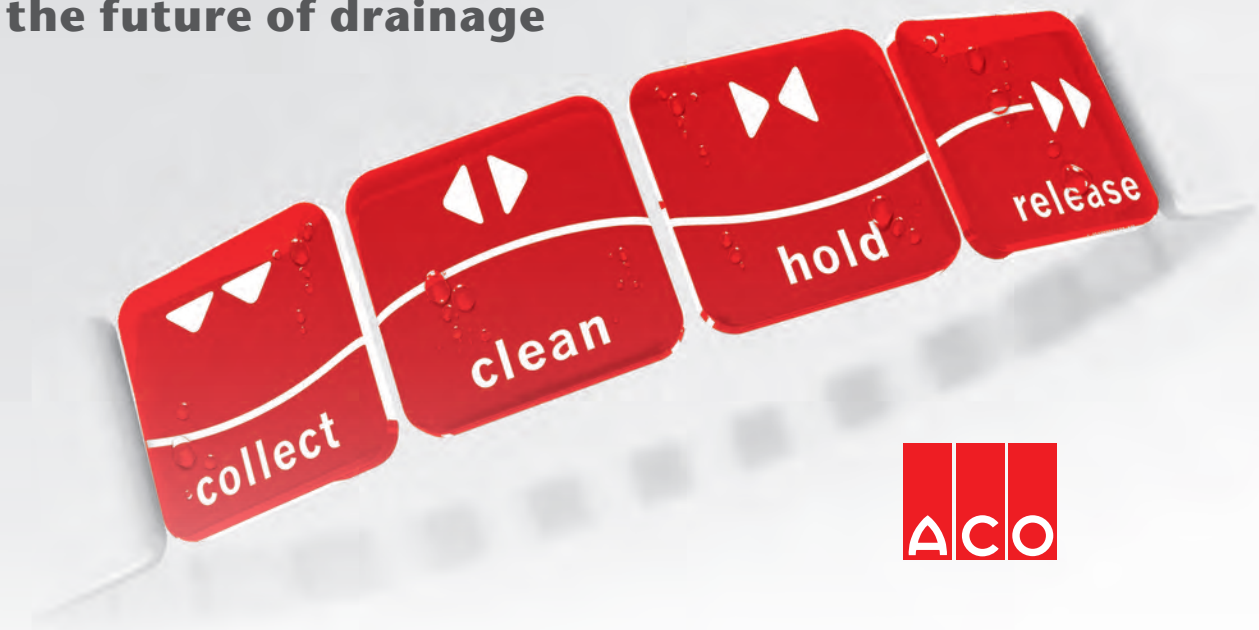


Protects the cellar from rising ground water and backwater

ACO Therm® Light shaft



ACO. creating
the future of drainage



The ACO system chain creates the drainage solutions for the environmental conditions of tomorrow

Increasingly extreme weather events require ever more complex drainage concepts. To this end, ACO creates clever system solutions, which function in both directions: they protect people from water – and vice versa. Each ACO product within the ACO system chain secures the direction of the water with the objective of being able to recover it in a way that makes ecological and economic sense. Within the ACO Group, ACO Building Material supports the global system chain with protective construction elements and drainage systems for modern and sustainable architecture in the private and commercial building construction sector.

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ACO Therm® Light shaft



Each ACO Building Material product supports the ACO system chain



collect:

Collect and carry

- Drainage channels and yard gullies
- Facade drainage channels
- Bath drainage
- Floor gullies
- Shaft covers



clean:

Pre-treat and treat

- Doormats



hold:

Hold and retain

- Cellar window
- Water pressure-tight Light shafts
- Backflow systems
- Surface water harvesting



release:

Pump, discharge and reuse

- Linear infiltration
- Honeycomb panels and gravel stabilisation
- Lifting Plant



ACO system chain in action

Also better – ACO Therm® cellar light shafts

ACO Therm® Cellar light shafts have always been convincing, not only for the greatest possible light incidence in cellars. This is because they are made of glass fibre reinforced polypropylene (PP-GF) or glass fibre reinforced plastic (GRP), are dimensionally stable and guarantee a long service life. Furthermore, they can be walked on, driven on, assembled directly on the cellar wall, on perimeter insulation or assembled so that they are watertight under pressure. Assembly on ACO Therm® Block now even makes it possible to assemble light shafts without thermal bridges. The cellar light shaft of the 600 series now presents itself with new functional and economic features, commencing from optimised component geometry up to height adjustability.

Robust in use, flexible in design - the ACO Therm® Light shaft

The ACO Therm® Light shaft is available in various designs and always provides sufficient light in the cellar. It can be assembled as water pressure-tight - on the ACO Therm® Block and also without thermal bridges and without having to drill any holes in the cellar wall.

The ACO Therm® Light shaft is available in depths of 400 and 600 mm and can be extended in height with extension elements. Different cover versions also provide sufficient protection against accumulating dirt and rainwater.



High flexibility provides you with every design freedom

Almost all ACO Therm® Light shafts can be walked on, driven on, assembled directly on the cellar wall, on perimeter insulation or assembled so as to be water pressure-tight.

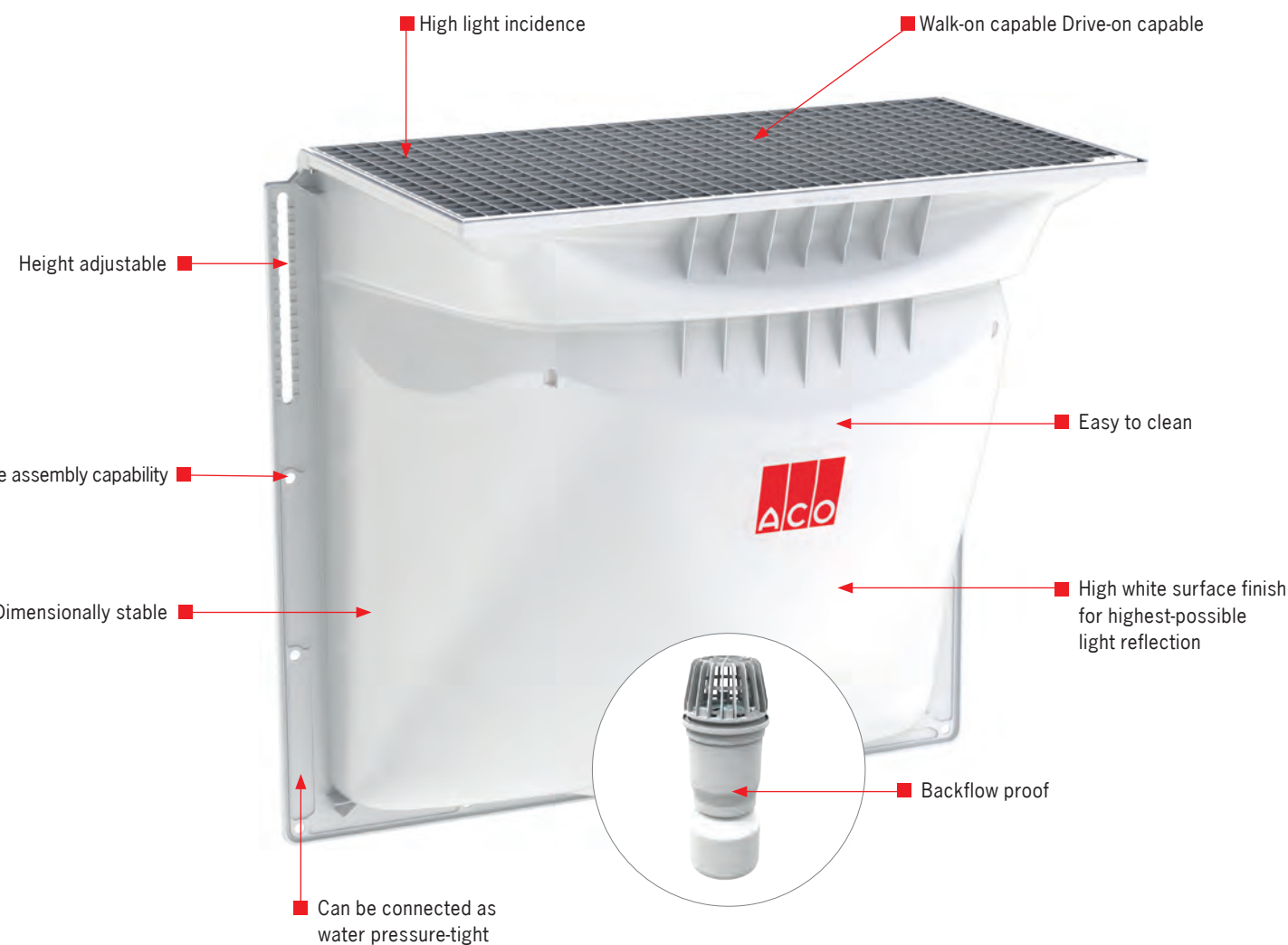
By assembling on ACO Therm® Block, we also make it possible to assemble the Light shaft without thermal bridges.

With reference to the new energy saving regulation (EnEV 2014), this type of Assembly is becoming increasingly important. According to the EnEV, thermal bridges should be prevented whenever possible.

The drainage opening in the Light shaft body can be closed with a sealing plate to make it water pressure-tight. We can provide backflow-proof drainage connections for connection to the sewage system.

6 grating variants and various extension elements for height compensation can be additionally provided for an individual design.

We provide even more light in the cellar with our ACO Therm® Large light shaft, 700 mm deep.



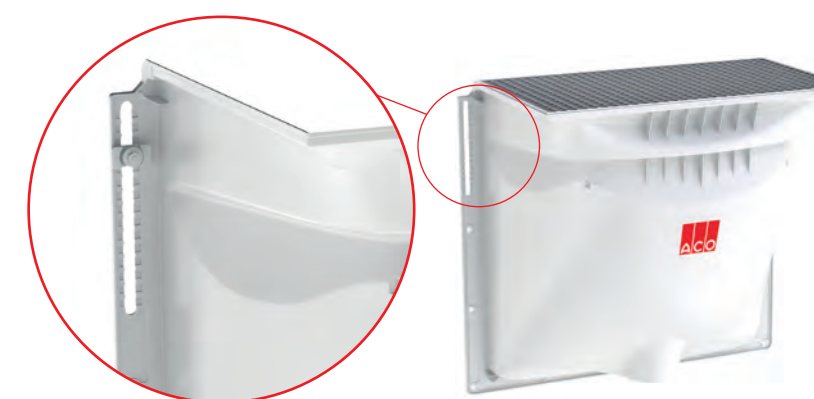
Great stability provides security for you

ACO Therm® Light shafts made of glass fibre reinforced polypropylene (PP-GF) or glass fibre reinforced plastic (GRP) are dimensionally stable and have a long service life.

Already provided with 4 fastenings, the light shaft achieves a high stability and can be driven over with the appropriate assembling kit and grating.

For light shaft assembly on perimeter insulation (from 80 mm), we always specify extremely stable heavy-duty anchors, which ensure the necessary load transfer even when in an unfilled condition.

The 1000 x 1000 x 600, 1000 x 1300 x 600 and 1250 x 1300 x 600 versions are equipped with a new type of height adjustment, which enables fine height adjustment of up to 280 mm.



The new 600 ACO Therm® Light shaft is equipped with a variety of optimisations for increasing comfort

Optimised component geometry

The strengthening rib, which is circumferential in the side area, as well as the so-called drainage chimney ensure additional stability in the light shaft body

Advantages:

- Additional stability against earth pressure and water pressure



Height adjustment

The light shaft flange has been equipped with a locking area and sliding area. A so-called detent block engages in the upper locking area to provide the necessary load transfer. 90 degree rotation conveys the detent block into the sliding position so that the complete light shaft can be slid either up and down via the 28 cm longitudinal hole. The lower sliding area with the engaging guide block ensures lateral stability and in turn enables fine height adjustment without having to loosen the fastening screws.



Advantages:

- Fine height adjustment in 2 cm increments
- Height adjustment is exclusively executed via the two upper fixing points
- Sliding area of 28 cm
- For assembly on perimeter insulation, only the two upper fixing aids need to be fixed in the cellar wall. The two lower guide blocks are fixed directly in the perimeter insulation with spiral dowels
- Adaptation to the light shaft body onto the finished floor construction on the ground floor.



Light shaft base

The base of the Light shaft has a three-sided gradient towards the drainage opening

Advantages:

- Keeping the water away from the cellar wall
- No damp plaster or render
- Preventing moisture damage
- Improved self-cleaning

Drainage opening

The drainage opening is located as 152 mm away from the wall.

Advantages:

- Drainage connection is not positioned in the insulation up to an insulation thickness of 140 mm
- On-site recess of the insulation for the drainage connection is not necessary for insulation up to 140 mm, therefore:
- No thermal bridging
- Time saving of approx. 15 minutes
- Backflow unit in the drainage connection accessible for maintenance and servicing work



Incorporation of perimeter

insulation

The side walls and the light shaft base are provided with a relatively straight, continuous surface on the wall side.

Advantages:

- Perimeter insulation does not have to be adapted so extensively to the contour of the light shaft when assembling the DWD on the cellar wall, this therefore results in time savings

Insert-capable rear wall

The light shaft body is equipped with a groove on the wall side to accommodate mounting a rear wall.

Advantages:

- When assembled directly on the cellar wall and on perimeter insulation, there is no need for expensive plastering or rendering work inside the light shaft
- Time saving due to elimination of plastering and rendering work
- Compatible with ACO insulation connection profile

Stable design freedom due to the ACO extension elements

All ACO extension elements in the height-adjustable and fixed versions are equipped with a stable hollow chamber profile and a grey, stable grating edge to

guarantee the robustness of the light shaft system. A combination of fixed and variable extension elements is also possible at any time in the future.



Variable, height-adjustable extension element



Fixed extension element directly on light shaft



Combination of fixed and variable extension element



Fixed and variable extension elements can be shortened and/or notched according to requirements

Adaptation to individual needs

Depending on the circumstances involved in the project, you can select between a fixed and a variable extension element. The height-adjustable version provides a profile height of 340 mm and an offset range of 30 - 300 mm. This design can be additionally aligned with the existing surface gradient or fall and subsequently adapted to the existing floor level. Up to 3 fixed extension elements can be stacked on each other depending on the necessity. Extended extension elements round off the product range and, above all, enable an optimum transition from perimeter insulation to clinker facade or bridging of gaps in the facade.

Stability despite individuality

The stable hollow-chamber profile and the stable grating edge provide the light shaft grating with a secure support and contribute to the walk-on capability and/or drive-on capability of the system. An additional advantage of the robust material is that an additional stiffening frame is not required. Fixed extension elements from a nominal width of 1250 mm are already equipped with integrated steel stiffening for additional stability. In order to increase stability, the extension element is also screwed together with the light shaft.



Assembly of two fixed extension elements



Application example: Fixed extension element with extended cheeks

Possible height adjustments with the extension elements

Extension element (ASE)	1 fixes ASE	2 fixe ASE	3 fixe AS E	1 variables ASE	1 fixes and 1 variables ASE	2 fixe and 1 variables ASE
400 depth: heights (mm)	275	525	775	30 – 300	305 – 580	555 – 825
600 depth: heights (mm)	275	525	775	30 – 300	305 – 580	555 – 825
700 depth. Heights (mm)	270	520	Not possible	30 – 300*	Not possible	

*Only possible for the 1500 x 1000 x 700 and 1500 x 1500 x 700 light shafts

Individual design and effective protection with ACO Light shaft gratings

All ACO light shafts can be optionally equipped with walk-on capable or drive-on capable cover gratings. Any loads which occur can be safely transferred into the building structure via the grating.



Expanded metal grating, galvanised steel, load-bearing up to 1.5 kN



Mesh grating, mesh size 30 x 30 mm, Walk-on-capable up to 1.5 kN



Mesh grating, mesh size 30 x 10 mm, load-bearing up to 1.5 kN, drive-on capable, wheel load up to 9 kN

Many variants for your needs

The ACO Light shaft gratings made of galvanised steel, and recently also of stainless steel, cover a wide range of applications. For patios, terraces and paths, for example, the mesh grating is recommended as MW 30/10 or the design gratings, while for carports, the drive-on capable mesh grating is the right choice. For special applications, shortened or extended gratings always provide a secure light shaft cover. The range of gratings is supplemented by a high-quality clip-on liner made of stainless steel to cover up the white edge of the light shaft.



Designer grating as longitudinal profile, stainless steel or galvanised steel, load-bearing up to 1.5 kN



Designer grating as V-profile, stainless steel, load-bearing up to 1.5 kN



product winner



Effective protection for you and your light shaft

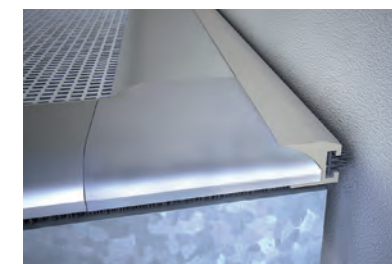
ACO Light shaft covers protect your light shaft from leaves, rain and small animals. The diagonally assembled glass cover, made of single-pane safety glass, protects the light shaft against rainwater and facade water. Additional protection against fine dirt and small animals is also provided by the leaf protection grating and insect protection grating. For light shafts which are located near accessible surfaces, we can also provide a load-bearing cover with a scratch-resistant plastic pane.



Leaf and insect protection gratings



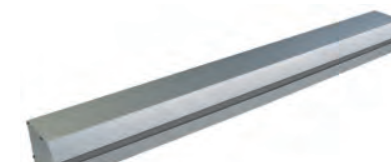
Brush seal facing downwards for a clean seal to the light shaft and rattle-free access



The brush seal creates a clean connection to the wall



Walk-on-capable light shaft covers



Light shaft cover with clip-on box



The ACO Light shaft cover made of single-pane safety glass (ESG) including fixing accessories and sealing tape

Quickly assembled and simply adapted - the ACO ventilation shaft

The ACO ventilation shaft is utilised for air circulation in heating rooms and drying rooms and is available with or without a base.

The basic body without base can be utilised as an attachment or extension element, height compensation is possible by extending it. (remove lower fastening if necessary!).



Ventilation shaft without base including expanded metal grating



Ventilation shaft without base (can also be utilised as extension element)



Expanded metal grating



Mesh grating, mesh size 30 x 30 mm

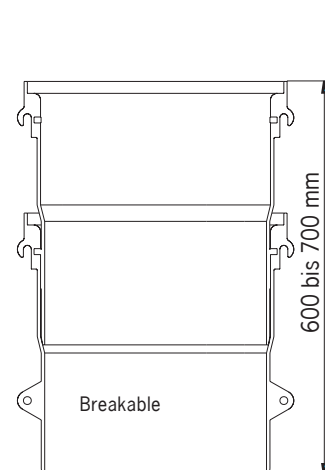


Mesh grating, mesh size 30 x 10 mm

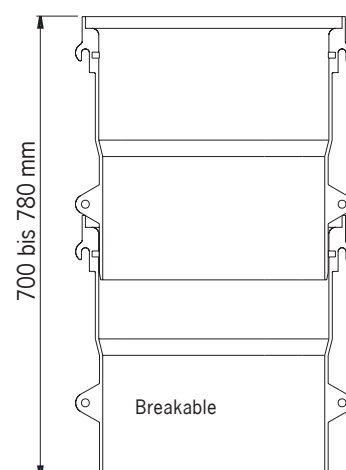
Save time through easy handling - also water pressure-tight

The ACO ventilation shaft is quick and simple to assemble. Height adjustments are no problem, as it can be stacked on each other to any height and is infinitely height-adjustable. If necessary, the lower fixing can be easily removed.

Ventilation shafts with a base can also be assembled on the cellar wall so that they are water pressure-tight. Refer to Page 25 for assembly material.



Adjustment range: 600-700 mm after removing the lower fixing



Adjustment range: 700-780 mm without removing the lower fixing



Continuously height-adjustable

Suitable accessories

The accessories listed here are suitable as standard for all light shaft dimensions and are suitable for both standard and water pressure-tight assembling.

- Odour trap, dirt bucket and backflow stop valve in the drainage connection
- Easy to clean

- For standard and water pressure-tight assembling
- Suitable for all ACO Light shafts
- Complete removal of the backflow unit possible
- Retrofittable
- Backflow unit and all seals freely accessible

The function of the backflow stop valve is brilliant and simple at the same time: There is a plastic ball located in the ball cage in the outlet. In the open condition, the ball lies at the bottom of the ball cage and clears the way for draining off water. In case of backflow water – e.g. when the capacity of the sewer system is exceeded – the ball floats up and is pressed against the sealing seat. The backflow of wastewater from the sewer into the light shaft and thereby into the cellar is stopped. Water cannot get into your cellar rooms!



Art.-No. 310060



Art.-No. 310079



Art.-No. 310068

The backflow stop valve (left) and the drainage connection (middle) contain a leaf trap and are already equipped with an integrated odour trap

The backflow unit for the drainage connection (right) can be retrofitted and can only be used in combination with a odour trap



Art.-No. 35583

This closure is suitable for the water pressure-tight sealing of the light shaft drainage opening prior to light shaft assembly

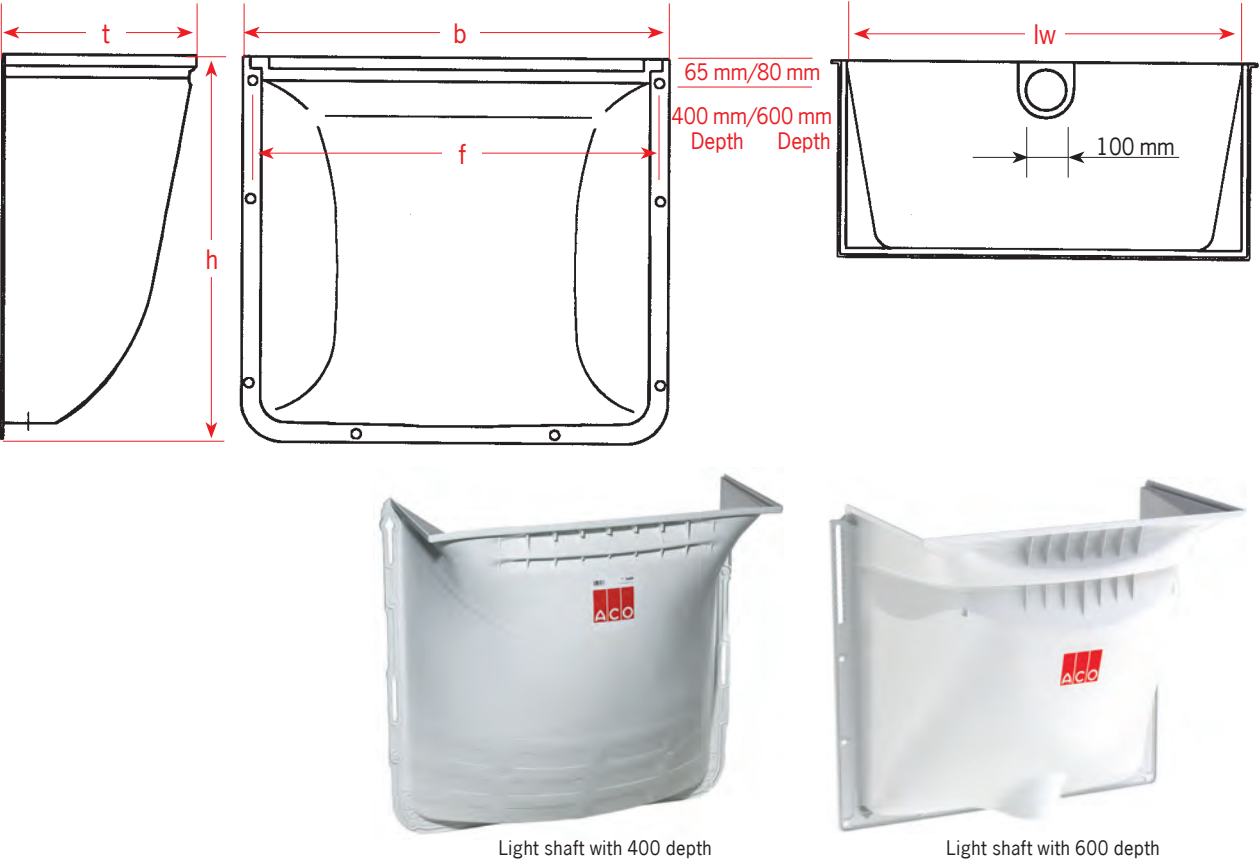
Art.-Nr. 375088

Drilling template for ACO Light shafts





Light shaft variants and grating sizes at a glance



Light shafts with 400 depth

Light shaft width W x H x D [mm]	Window width [mm]	Grating size [mm]	w [mm]	h [mm]	t [mm]	lw [mm]	f [mm]	Water pressure-tight Assembly capable	Height adjustable	Article No.
800 x 600 x 400	800	840 x 400	920	666	429	809	880	Yes	No	35566
1000 x 600 x 400	1000	1040 x 400	1120	666	429	1008	1080	Yes	No	35667
1000 x 1000 x 400	1000	1040 x 400	1120	1073	429	1008	1080	Yes	Yes	35568
1000 x 1300 x 400	1000	1040 x 400	1120	1373	429	1008	1080	Yes	Yes	35569
1250 x 1000 x 400	1250	1340 x 400	1430	1074	429	1310	1380	Yes	No	35894

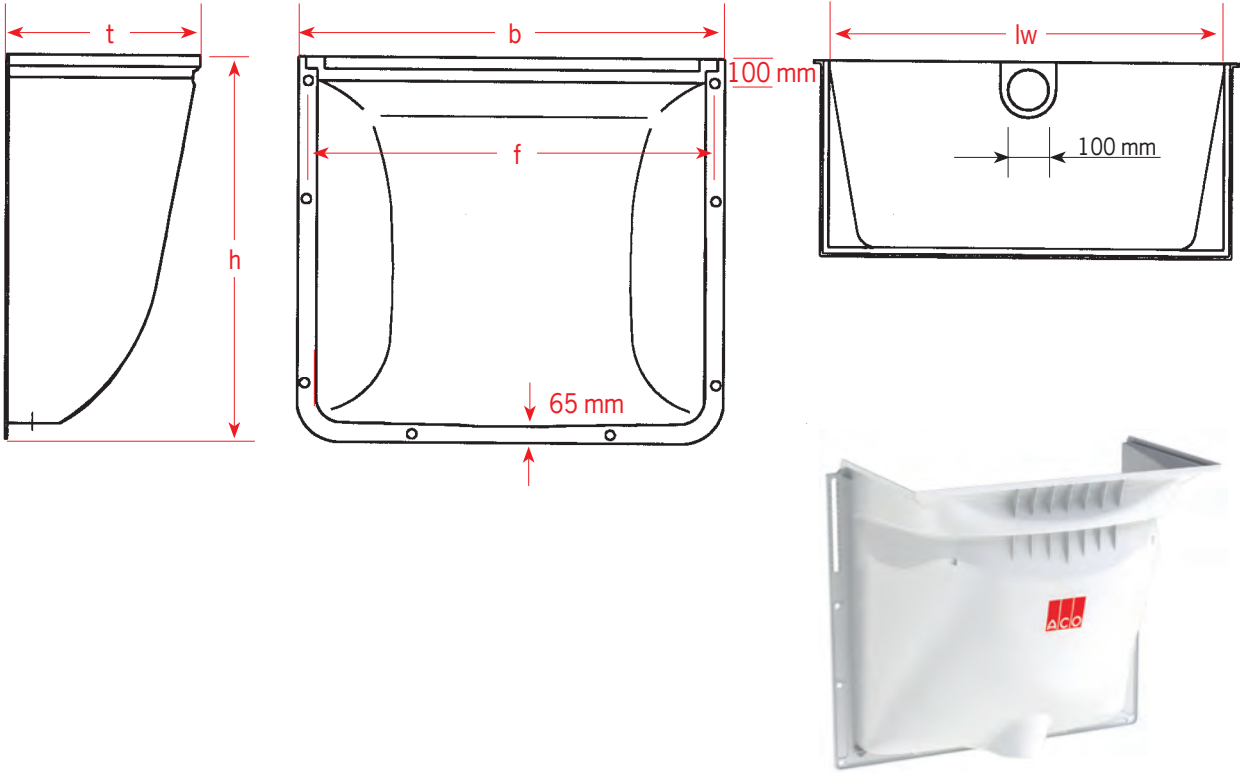
Light shafts with 600 depth

Light shaft width W x H x D [mm]	Window width [mm]	Grating size [mm]	b [mm]	h [mm]	t [mm]	lw [mm]	f [mm]	Water pressure-tight Assembly capable	Height adjustable	Article No.
1000 x 1000 x 600	1000	1040 x 600	1164	1063	630	1009	1110	Yes	Yes	375000
1000 x 1300 x 600	1000	1040 x 600	1164	1363	630	1009	1110	Yes	Yes	375001
1250 x 1300 x 600	1250	1340 x 600	1464	1363	630	1314	1410	Yes	Yes	375002

Rear wall for 600 Light shaft

Light shaft size		Article No.
Width [mm]	Height [mm]	
1000	1000	375059
	1300	375060
1250	1300	375061

Adhesive sealant for rear wall



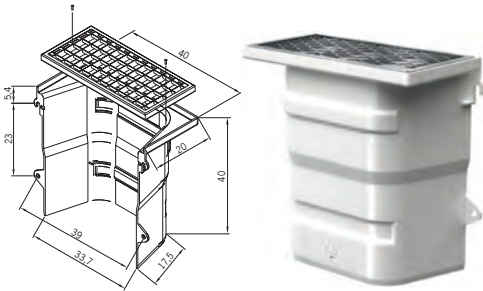
Large Light shafts with 700 depth

Light shaft width W x H x D [mm]	Window width [mm]	Grating size [mm]	b [mm]	h [mm]	t [mm]	lw [mm]	f [mm]	Water pressure-tight	Height adjustable	Article No.
1500 x 1000 x 700	1500	1665 x 700	1754	1093	730	1595	1700	yes	yes	375155
1500 x 1500 x 700	1500	1665 x 700	1764	1591	730	1595	1706	yes	yes	375156
2000 x 1000 x 700	2000	2165 x 700	2254	1089	730	2095	2198	yes	yes	375157
2000 x 1500 x 700	2000	2165 x 700	2254	1593	730	2095	2198	yes	yes	375158

Ventilation well variants

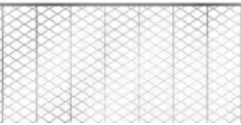
Dimension			Art.-No.	Art.-No.
Width [mm]	Height [mm]	Depth [mm]	With base	Without
400	400	200	10405*	35594
Ventilation shaft grating as expanded metal, walk-on capable			35580	
Ventilation shaft grating, mesh 30/30, walk-on capable			35581	
Ventilation shaft grating, mesh 30/10, walk-on capable			35582	

* Can be assembled as water pressure-tight



Standard grating

Expanded metal,
walk-on capable,
up to 1.5 kN
load-bearing



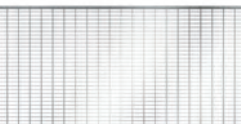
Mesh grating
30/30, walk-on
capable, up to
1.5 kN
load-bearing



Mesh grating
30/10,
walk-on-capable,
load-bearing up
to 1.5 kN



Mesh grating
30/10, walk-on
capable,
load-bearing up
to 9 kN



For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	400	840	35572
	1000	400	1040	35573
	1250	400	1340	35896
600	1000	600	1040	315870
	1250	600	1340	315874
700	1500	700	1660	38767
	2000	700	2160	38770

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	400	840	35574
	1000	400	1040	35575
	1250	400	1340	35897
600	1000	600	1040	315878
	1250	600	1340	315882
700	1500	700	1660	38768
	2000	700	2160	38771

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	400	840	35576
	1000	400	1040	35577
	1250	400	1340	35898
600	1000	600	1040	315999
	1250	600	1340	375028
700	1500	700	1660	38769
	2000	700	2160	38772

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	400	840	35578
	1000	400	1040	35579
	1250	400	1340	35899
600	1000	600	1040	375029
	1250	600	1340	375030

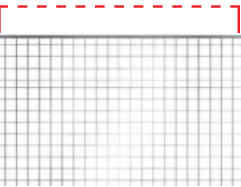
Shortened

Light shaft gratings

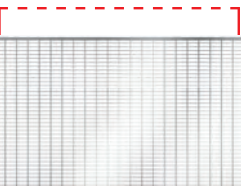
Expanded metal,
walk-on capable,
up to 1.5 kN
load-bearing



Mesh grating
30/30, walk-on
capable, up to
1.5 kN
load-bearing



Mesh grating
30/10, walk-on
capable, up to
1.5 kN
load-bearing



For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	1000	350	1040	10476
		300	1040	10477
		250	1040	10478
	1250	300	1340	10479
		250	1340	10480
600	1000	550	1040	315869
		500	1040	315868
		450	1040	315867
	1250	550	1340	315873
		500	1340	315872
		450	1340	315871
		450	1340	315871

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	1000	350	1040	10740
		300	1040	10741
		250	1040	10742
	1250	300	1340	10743
		250	1340	10744
600	1000	550	1040	315877
		500	1040	315876
		450	1040	315875
	1250	550	1340	315881
		500	1340	315880
		450	1340	315879
		450	1340	315879

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
600	1000	550	1040	315998
		500	1040	315997
		450	1040	315996
		350	1040	380566
	1250	550	1340	375031
		500	1340	375032
		450	1340	375033

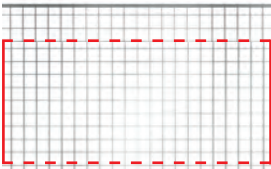
Extended

Light shaft gratings

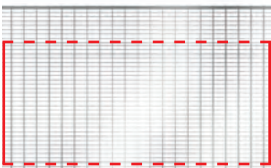
Expanded met-
al, walk-on
capable, up to
1.5 kN
load-bearing



Mesh grating
30/30, walk-
on capable,
up to 1.5 kN
load-bearing



Mesh grating
30/10,
walk-on-cap-
able, load-bear-
ing up to 1.5 kN



For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	1000	450	1040	315867
		500	1040	315868
		550	1040	315869
		600	1040	315870
	1250	450	1340	315871
		500	1340	315872
400	1000	550	1340	315873
		600	1340	315874
	1250	450	1040	315875
		500	1040	315876
	1250	550	1040	315877
		600	1040	315878
400	1000	450	1340	315879
		500	1340	315880
		550	1340	315881
		600	1340	315882
	1250	450	1340	315882
		500	1340	315882

For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	1000	450	1040	315996
		500	1040	315997
		550	1040	315998
		600	1040	315999
	1250	450	1340	375033
		500	1340	375032
400	1000	550	1340	375031
		600	1340	375031
	1250	450	1340	315999
		500	1340	315999
		550	1340	315999
		600	1340	315999

Adapter bracket for gratings



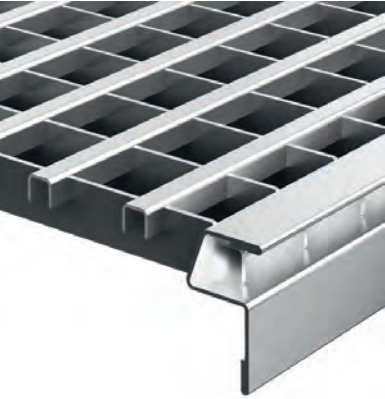
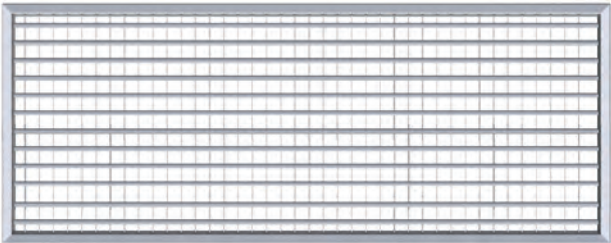
Description	Suitable for	Article No.
Adapter bracket for Light shaft 1000 x 400/600 mm ■ with fixing screws for light shaft grating	■ Gap size 10 mm	11160
	■ Gap size 20 mm	11161
	■ Gap size 30 mm	11162
	■ Gap size 40 mm	11163
Adapter bracket for Light shaft 1250 x 400/600 mm ■ with fixing screws for light shaft grating	■ Gap size 10 mm	11164
	■ Gap size 20 mm	11165
	■ Gap size 30 mm	11166
	■ Gap size 40 mm	11167

Design gratings

Design as longitudinal profile

Overview of advantages

- Made of stainless steel or galvanised steel
- With grating edge covering
- Test it: Also usability of plastic light shafts from other manufactures

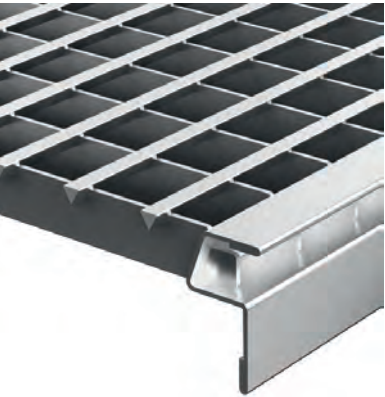
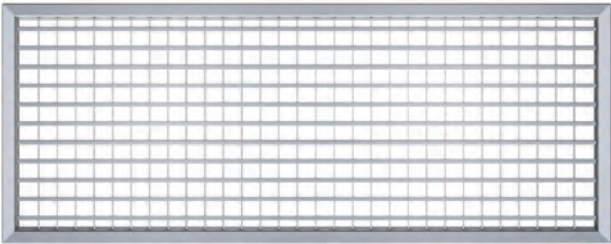


Material	For light shaft		Dimension		Article No.
	Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
Stainless steel	400	800	400	840	380468
		1000	400	1040	380402
		1250	400	1340	380403
	600	1000	600	1040	380469
		1250	600	1340	380470
Galvanised steel	400	800	400	840	380471
		1000	400	1040	380400
		1250	400	1340	380401
	600	1000	600	1040	380472
		1250	600	1340	380473

Design as V-shaped profile

Overview of advantages

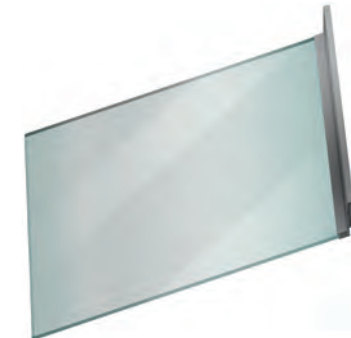
- Made of stainless steel
- With grating edge covering
- Test it: Also useability of plastic light shafts from other manufacturers



Material	For light shaft		Dimension		Article No.
	Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
Stainless steel	400	800	400	840	380474
		1000	400	1040	380406
		1250	400	1340	380407
	600	1000	600	1040	380475
		1250	600	1340	380476



Covers made of toughened glass



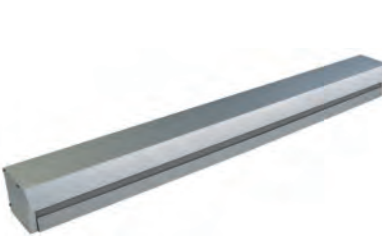
For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	480	950	35592
	1000	480	1220	35593
	1250	480	1500	35902
600	1000	680	1220	375051
	1250	680	1500	37497

Walk-on capable light shaft covers



For light shaft		Dimension		Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
400	800	430	880	375520
	1000	430	1080	375521
	1250	430	1380	375522
600	1000	630	1080	375523
	1250	630	1380	375524
700	1500	730	1710	375525
	2000	730	2210	375526

Cover box for the walk-on capable light shaft cover



For light shaft		Article No.
Depth [mm]	Width [mm]	
400/600	800	375527
	1000	375528
	1250	375529
700	1500	375530
	2000	375531

Leaf and insect protection gratings



For light shafts up to one grating size		Article No.
Depth [mm]	Width [mm]	
600	1150	10331
750	1400	10367

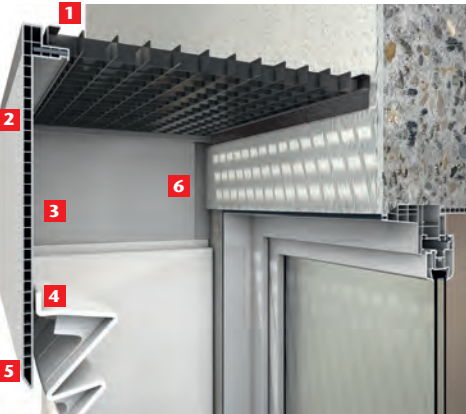
Overview of advantages

- Coated aluminium profile
- Circumferential brush profile
- Wall-side positioned brush profile
- High load-bearing plastic webbed material
- Construction kit
- Can be utilised for almost all Light shaft systems



Overview of extension elements

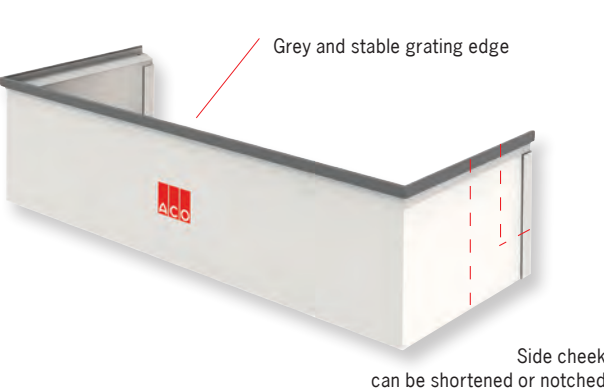
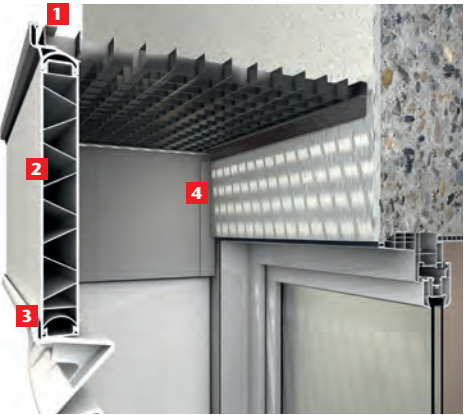
High-adjustable extension element



- Height-adjustable extension elements, 30-300 mm**
- 1 Integrated steel stiffener from a width of 1500 mm
 - 2 Stable hollow chamber profile
 - 3 Height adjustment range from 30-300 mm
 - 4 Screwed connection with light shaft
 - 5 Spigot end for subsequent ground and floor level adjustment
 - 6 Wall connection profile

Designation [mm]	Dimension		Article No.
	Width [mm]	Depth [mm]	
800 x 400	881	438	315788
1000 x 400	1081	438	315789
1250 x 400	1381	438	315790
1000 x 600	1081	642	315826
1250 x 600	1381	642	315827
1500 x 700	1708	743	315794

Fixed extension element



- Fixed extension element**
- 1 Click-capable grey grating edge
 - 2 Stable hollow chamber profile
 - 3 Screwed connection with light shaft
 - 4 Wall connection profile

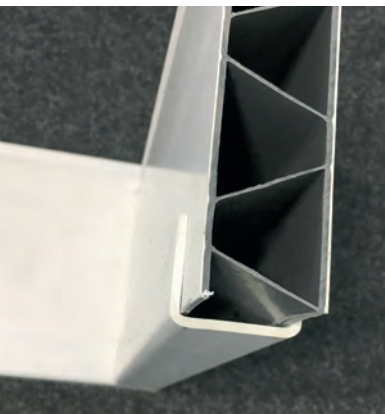
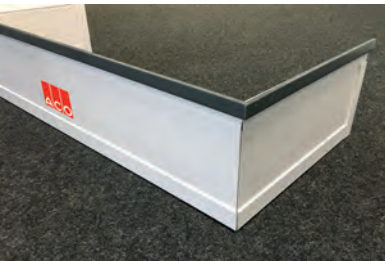
Designation [mm]	Dimension		Article No.
	Width [mm]	Depth [mm]	
800 x 400	860	428	315773
1000 x 400	1060	428	315774
1250 x 400	1360	428	315775
1000 x 600	1060	635	315830
1250 x 600	1360	635	315831
1500 x 700	1686	730	315785**
2000 x 700	2185	730	315786**

**Maximum one extension element can be used

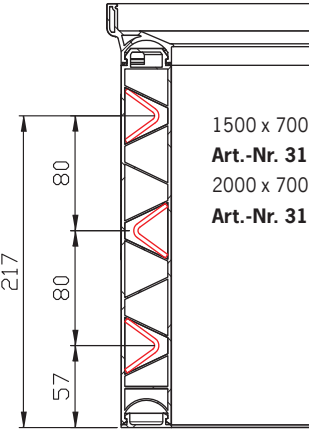
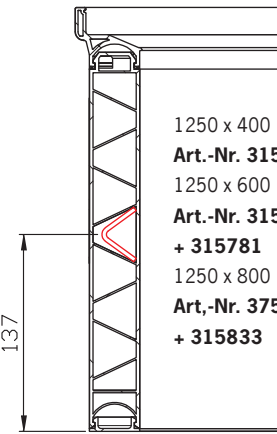
Shortening fixed extension elements

Fixed extension elements can not only be shortened or notched on the cheek side, but it is also possible to shorten the elements for the height in order to adapt the extension element to the surface level. However, it should be noted that exten-

sion elements from a design width of 1250 mm are reinforced with profile steel in the front profile chambers at the factory. Before cutting to length, open the respective profile chamber laterally and remove the profile steel.



Position of the stiffening iron



In order to give the extension element sufficient stability again in the cutting area, it is necessary to provide the cut edge with prefabricated U-profiles. Furthermore, the U-profiles will conceal the cut edges. The extension elements can then still be walked or driven on. Traffic-capable except for the sizes 1500 x 700 and 2000 x 700 mm.

U-Profile kits

Article No.	Description
375127	ACO U-Profile kit for fixed extension elements 800 x 400 mm
375128	ACO U-Profile kit for fixed extension elements 1000 x 400 mm
375129	ACO U-Profile kit for fixed extension elements 1250 x 400 mm
375130	ACO U-Profile kit for fixed extension elements 1000 x 600 mm
375131	ACO U-Profile kit for fixed extension elements 1250 x 600 mm
375132	ACO U-Profile kit for fixed extension elements 1000 x 800 mm
375133	ACO U-Profile kit for fixed extension elements 1250 x 600 mm
375134	ACO U-Profile kit for fixed extension elements 1500 x 700 mm
375135	ACO U-Profile kit for fixed extension elements 2000 x 700 mm

Assembly kit for extension elements

High-adjustable extension element
When installing height-adjustable extension elements, you can select between assembly with or without wall screws. The assembly kit with wall screwed connection is necessary when you have decided on extension elements with extended cheeks. In general, it should be noted that extension elements cannot be assembled so as to be water pressure-tight.

Assembly type	Light shaft depth	Application	Article No.
Without wall screwed connection	400/600	Walk-on capable	315787
Without wall screwed connection	700	Walk-on capable	315821
With wall screwing	400/600	Walk-on capable	315933
With wall screwing	700	Walk-on capable	315934



Fixed extension elements

Fixed extension elements can also be assembled directly on the wall or on perimeter insulation. For this purpose, we can provide you with the universal assembling kit. When installed directly on the cellar wall, fixed extension elements can also be driven over. However, even in the case of fixed extension elements, it must be noted that it is not possible to assemble them so that they are water pressure-tight.

Assembly type	Light shaft depth	Application	Article No.
with perimeter insulation	400/600	Walk-on capable	315928
with perimeter insulation	700	Walk-on capable	315929
on cellar walls	400/600	Can be driven over	315928
on cellar walls	700	Walk-on capable	315929



The height-adjustable extension elements for the ACO Therm® Light shafts

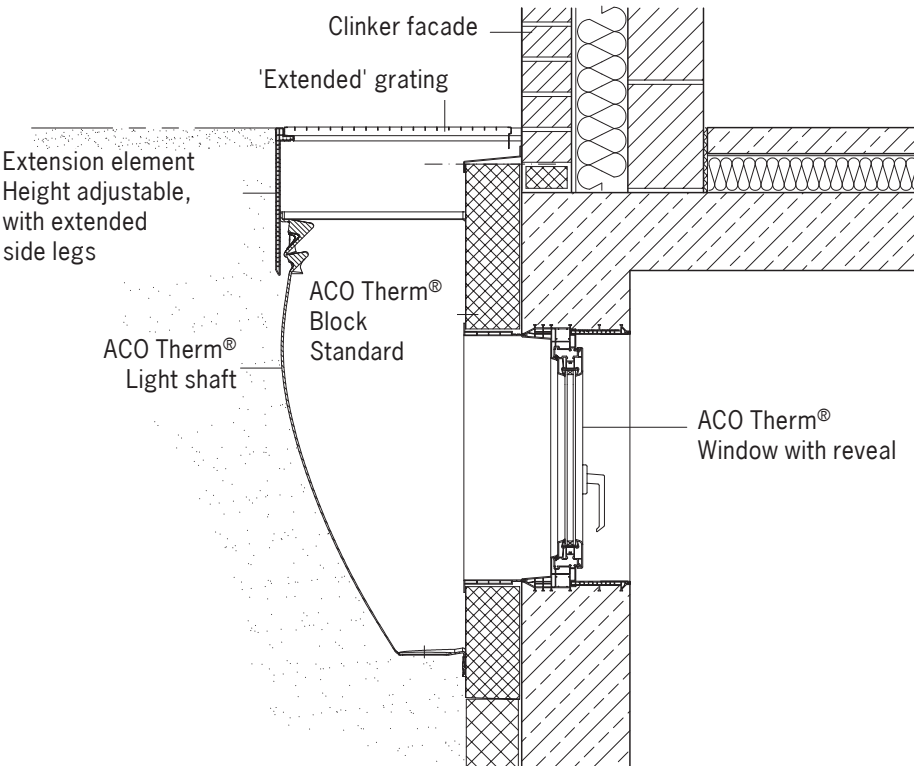
with extended side cheeks

Overview of advantages

- Bridging gaps in the facade
- Optimal for the transition from perimeter insulation to the clinker facade
- Side cheeks can be shortened or notched



Side legs can be shortened or notched



Light shaft type W x H x D [mm]	Nominal size W x H x D [mm]	Width [mm]	Height [mm]	Depth [mm]	Adjustment range [mm]	Article No.
1000 x 600 x 400	1000 x 340 x 600	1081	340	642	30/-300	315826
1000 x 1000 x 400	1000 x 340 x 600	1081	340	642	30/-300	315826
1000 x 1300 x 400	1000 x 340 x 600	1081	340	642	30/-300	315826
1250 x 1000 x 400	1250 x 340 x 600	1381	340	642	30/-300	315827
1000 x 1000 x 600	1000 x 340 x 800	1081	340	840	30/-300	375020
1000 x 1300 x 600	1000 x 340 x 800	1081	340	840	30/-300	375020
1250 x 1300 x 600	1250 x 340 x 800	1381	340	840	30/-300	375021
Assembly kit	for all depths with extended cheeks					315933

The fixed extension elements for the ACO Therm® Light shafts

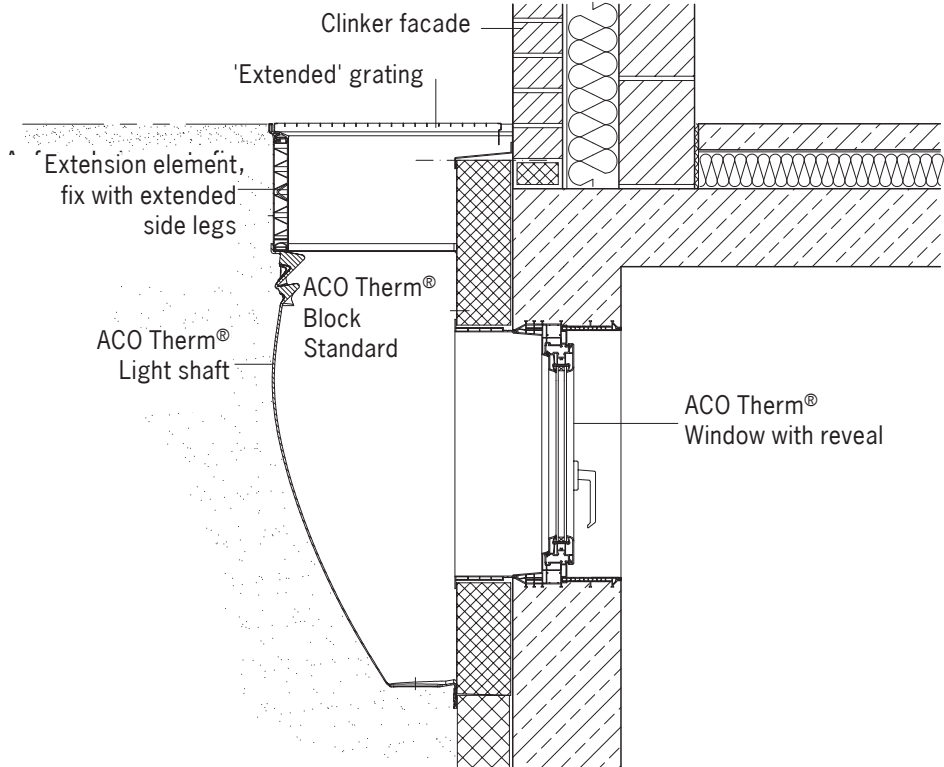
with extended side cheeks

Overview of advantages

- Bridging gaps in the facade
- Optimal for the transition from perimeter insulation to the clinker facade
- Side cheeks can be shortened or notched



Side legs can be shortened or notched



Light shaft type W x H x D [mm]	Nominal size W x H x D [mm]	Width [mm]	Profile hight [mm]	Depth [mm]	Extension height [mm]	Article No.
1000 x 600 x 400	1000 x 275 x 600	1060	295	635	275	315830
1000 x 1000 x 400	1000 x 275 x 600	1060	295	635	275	315830
1000 x 1300 x 400	1000 x 275 x 600	1060	295	635	275	315830
1250 x 1000 x 400	1250 x 275 x 600	1360	295	635	275	315831
1000 x 1000 x 600	1000 x 275 x 800	1060	295	835	275	375022
1000 x 1300 x 600	1000 x 275 x 800	1060	295	835	275	375022
1250 x 1300 x 600	1250 x 275 x 800	1360	295	835	275	375023
Assembly kit	for 400 and 600 Light shaft depth					315928
Sealing tape	for insertion into the Light shaft grating support, not DWD					315932



Extension elements, closed on 4 sides

Overview of advantages

- 4 sides closed
- Connection via tongue and groove system
- Walk-on capable

Product information

- A maximum of 3, 4-sided closed extension elements are inserted/stacked
- Extension elements closed on 4 sides can be inserted into the grating support of the fixed extension elements and screwed together with assembling kit Article No. 315787. A maximum of three extension elements can be used
- Extension height for one extension element: 275 mm
- Extension height for additional extension elements: 250 mm




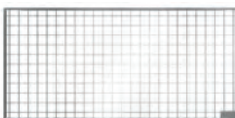

Extension elements, closed on 4 sides, fixed height, load-bearing

Order information

For light shaft		Dimensions			Article No.
Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	Height [mm]	
400	1000	400	1000	295	375090
600	1250	400	1250	295	375091
400	1000	600	1000	295	375092
600	1250	600	1250	295	375093

Gratings for extension elements closed on 4 sides

Order information

	For extension elements		Dimensions		Article No.
	Depth [mm]	Width [mm]	Depth [mm]	Width [mm]	
Expanded metal, walk-on capable, load-bearing up to 1.5 kN					
	400	1000	424	1040	375096
	400	1250	424	1340	375097
	600	1000	625	1040	375098
	600	1250	625	1340	375099
Mesh grating 30/30, walk-on-capable, load-bearing up to 1.5 kN					
	400	1000	424	1040	375102
	400	1250	424	1340	375103
	600	1000	625	1040	375104
	600	1250	625	1340	375105
Mesh grating 30/10, walk-on-capable, load-bearing up to 1.5 kN					
	400	1000	424	1040	375108
	400	1250	424	1340	375109
	600	1000	625	1040	375110
	600	1250	625	1340	375111

Safe assembly with the right assembly kit

Due to the wide selection for assembling, ACO Light shafts can be assembled directly on the cellar wall, on insulation or even as water pressure-tight. The extension elements and assembling panels can also be assembled quickly with the right assembly kits. From the following overview, you can quickly and easily determine the assembly kits which you will require.

Assembly kits for light shafts

For standard assembling, various assembling sets are available including a grating lift-off guard. A different assembly kit is required depending on whether the system is to be walk-on or drive-on, or whether it is to be assembled on cellar walls or insulation.



Assembly kit Article No. 315805

Assembly type	Insulation thickness	Assembly below ground	Application	Light shaft depth mm	requires Quantity/ Number of	Article No. Assembly kit
On cellar walls	–	Concreted cellar	Walk-on capable	400	1	35595
On cellar walls	–	Concreted cellar	Walk-on capable	600	1	375035
On cellar walls	–	Concreted cellar	Walk-on capable	700	1	38775
On cellar walls	–	Concreted cellar	Drive-on capable	400	1	35598
On cellar walls	–	Concreted cellar	Drive-on capable	600	1	375035
On insulation	From 60 mm	Concreted cellar	Walk-on capable	400	1	35834
On insulation	From 60 mm	Concreted cellar	Walk-on capable	600	1	375038
On insulation	From 60 mm	Concreted cellar	Walk-on capable	700	1	380420
On insulation	From 100 mm	Concreted cellar	Walk-on capable	400	1	35667
On insulation	From 100 mm	Concreted cellar	Walk-on capable	600	1	375038
On insulation	From 100 mm	Concreted cellar	Walk-on capable	700	1	380420
On insulation	From 140 mm	Concreted cellar	Walk-on capable	400	1	315805
On insulation	From 140 mm	Concreted cellar	Walk-on capable	600	1	375039
On insulation	From 140 mm	Concreted cellar	Walk-on capable	700	1	380421
On insulation	From 160 mm	Concreted cellar	Walk-on capable	400	1	315806
On insulation	From 160 mm	Concreted cellar	Walk-on capable	600	1	375040
On insulation	From 160 mm	Concreted cellar	Walk-on capable	700	1	380422
On insulation	From 200 mm	Concreted cellar	Walk-on capable	400	1	35666
On insulation	From 200 mm	Concreted cellar	Walk-on capable	600	1	375041
On insulation	From 200 mm	Concreted cellar	Walk-on capable	700	1	380423
On insulation	From 240 mm	Concreted cellar	Walk-on capable	400	1	380424
On insulation	From 240 mm	Concreted cellar	Walk-on capable	600	1	375042
On insulation	From 240 mm	Concreted cellar	Walk-on capable	700	1	380424
On insulation	From 300 mm	Concreted cellar	Walk-on capable	400	1	380424
On insulation	From 300 mm	Concreted cellar	Walk-on capable	600	1	375042
On insulation	From 300 mm	Concreted cellar	Walk-on capable	700	1	380425
On cellar walls	–	Masonry wall cellar ¹⁾	Walk-on capable	400	1	35595
On cellar walls	–	Masonry wall cellar ¹⁾	Walk-on capable	600*	1	35595
On cellar walls	–	Masonry wall cellar ¹⁾	Walk-on capable	700	1	38775
On insulation	From 60 mm	Masonry wall cellar ¹⁾	Walk-on capable	400	1	35834
On insulation	From 60 mm	Masonry wall cellar ¹⁾	Walk-on capable	600*	1	35834
On insulation	From 60 mm	Masonry wall cellar ¹⁾	Walk-on capable	700	2	35834
On insulation	From 100 mm	Masonry wall cellar ¹⁾	Walk-on capable	400	1	375142
On insulation	From 100 mm	Masonry wall cellar ¹⁾	Walk-on capable	600*	1	375142
On insulation	From 100 mm	Masonry wall cellar ¹⁾	Walk-on capable	700	2	375142
On insulation	From 140 mm	Masonry wall cellar ¹⁾	Walk-on capable	400	1	375143
On insulation	From 140 mm	Masonry wall cellar ¹⁾	Walk-on capable	600*	1	375143
On insulation	From 140 mm	Masonry wall cellar ¹⁾	Walk-on capable	700	2	375143
On insulation	From 180 mm	Masonry wall cellar ²⁾	Walk-on capable	400	1 1	375144 375146 ³⁾
On insulation	From 180 mm	Masonry wall cellar ²⁾	Walk-on capable	600*	1 1	375144 375146 ³⁾
On insulation	From 180 mm	Masonry wall cellar ²⁾	Walk-on capable	700	2 1	375144 375146 ³⁾
On insulation	From 240 mm	Masonry wall cellar ²⁾	Walk-on capable	400	1 1	375145 375146 ³⁾
On insulation	From 240 mm	Masonry wall cellar ²⁾	Walk-on capable	600*	1 1	375145 375146 ³⁾
On insulation	From 240 mm	Masonry wall cellar ²⁾	Walk-on capable	700	2 1	375145 375146 ³⁾

* Height adjustment not usable

¹⁾ Minimum requirements for solid masonry ≥ Mz 12, Solid brick made of lightweight concrete ≥ V4, Perforated sand-lime brick ≥ KSL 12, Aerated concrete ≥ G4 (compressive strength ≥ 4 N/mm²) Without guarantee - substrate must be inspected for sufficient strength!

solid lime sand brick ≥ KS 12, vertically perforated brick ≥ HLz 14, hollow block of lightweight concrete ≥ HBI 4,

²⁾ Minimum requirements for masonry bricks Solid brick ≥ Mz 12, Solid brick of lightweight concrete ≥ V4, Perforated sand-lime brick ≥ KSL 12, Aerated concrete ≥ G4 (compressive strength ≥ 4 N/mm²) Without guarantee - substrate must be inspected for sufficient strength!

solid lime sand brick ≥ KS 12, vertically perforated brick ≥ HLz 12, hollow block of lightweight concrete ≥ HBI 4

Water pressure-tight assembly

In the case of water pressure-tight assembly, a distinction is to be made between assembly of water impermeable walls or permeable walls. For assembly on WIP walls, the Profix systems (assembly using the assembly rail set) and the sealing fix (assembly by means of assembly screws) are available. While the stainless steel assembly rails, in combination with the sealing material on the wall (usually bitumen thick coating), can be used for assembly on permeable walls.

ACO Profix system

Profix System	Light shaft size	Article No.
Assembly rail kit Made of stainless steel	800 x 600x 400	35584
	1000 x 600 x 400	35585
	1000 x 1000 x 400	35586
	1000 x 1300 x 400	35587
	1250 x 1000 x 400	35903
	1000 x 1000 x 600	375046
	1000 x 1300 x 600	375047
	1250 x 1300 x 600	375048
ACO Profix sealant (2 cartridges per light shaft)	All sizes	37109



ACO Profix (swellable sealing compound)



ACO assembly rail kit V2A



Dichtfix System

Shaft version	Required assembly material	Article No.
Light shafts with 400 and 600 mm depth	Assembly kit made of stainless steel	35633
	Dichtfix tape 4 m	35632
Large light shaft with 700 mm depth	Assembly kit made of stainless steel	380563
	Dichtfix tape 5.5 m	380564
Ventilation well with base	Assembly kit made of stainless steel	380567
	Assembly rail kit made of GRP	380565
	Dichtfix tape 4 m (sufficient for 3 ventilation wells)	35632



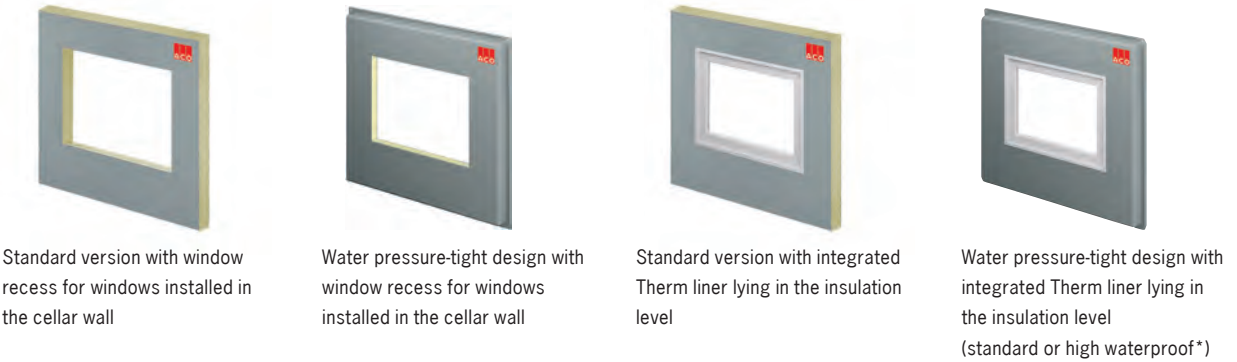
ACO Dichtfix (rubber band)



ACO Dichtfix and ACO Profix were tested by MFP Leipzig GmbH

Light shaft assembly on insulation made easy - with ACO Therm® Block

ACO Therm® Block is available for standard assembly and for water pressure-tight light shaft assembly. The ACO Therm® Light shaft can be simply and safely secured on the assembly panel directly. Thermal-bridging free and no drilling required. The significantly simplified workmanship of the perimeter insulation and the fact that no plastering or painting is necessary additionally saves both costs and time.



Fast assembly

ACO Therm® Block is adhered as thermal bridging free with thermal insulation panel adhesive on the cellar wall. If required, the version for water pressure-tight assembly can be securely fixed with two screws during the curing stage of the thermal insulation panel adhesive.

ACO Therm® Block assembly panel

Highly insulating PUR foam enables a simple, thermal-bridging free and water pressure-tight light shaft assembly on thermal insulation. Also available for standard assembly.

Circumferential sealing flange

The flange serves as the watertight connection on the cellar wall.

Simpler workmanship

The straight edges of the ACO Therm® Blocks simplify the previously time-consuming workmanship and processing of the perimeter insulation significantly.

Finished surface area

Working steps such as plastering, rendering and painting are omitted.

Optimal isothermal curve

The core-insulated window frame not only has a positive effect on the U-value of the window, but also significantly reduces the risk of condensation water and mould formation.

Assembly core

The foamed-in assembling core enables simple and time-saving light shaft assembly with Spax screws.

With window frame or Window cut-out

ACO Therm® Block is equipped with an integrated and air-tight foam-filled window frame which can be assembled in the ACO Therm® window units. The assembly panel is available with a window cut-out as an alternative.

*24 h test as per ift Guidelines FE-07/01, test report 14-002562-PR01 available for viewing under: www.aco-hochbau.de/service/zertifikate

ACO. creating
the future of drainage



Every ACO building construction product supports the ACO system chain

System solutions for the cellar

- Cellar window
- Assembly panels for Light shafts
- Pressure water proof Light shafts
- Backflow systems

Infrastructure for house and garden

- Bath drainage
- Shaft covers
- Facade drainage channels
- Linear drainage
- Point drainage
- Doormats
- Honeycomb panels and gravel stabilisation
- Linear infiltration

Barn windows and escape doors