

Brochure

Profiles

Aboveground cover type „LIGHT“

Aboveground cover type „COMPACT“

Underground cover type „IBS“

Underground cover type „USA“

Accessories

Price lists

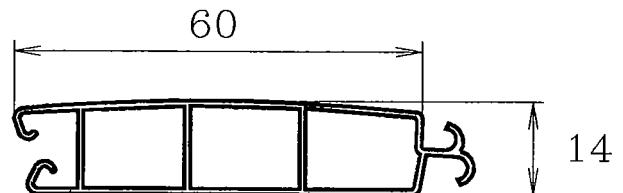
- Instructions for use
- Solar instructions
- Mounting instructions

Other informations



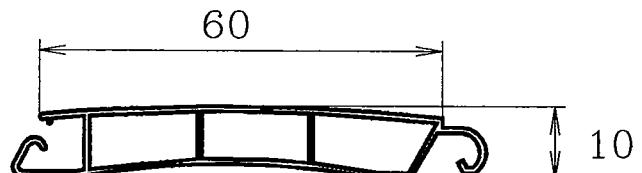
TYPES OF SLATS

STANDARD-PROFILE
for COMPACT, IBS,
and USA pool covers



- Reversible slat profile (calcium deposits)
- Smooth top surface with curvature (good water shedding properties)
- Very flexible (double hook system)
- High tensile strength
- Excellent buoyancy (3 internal hollow sections)

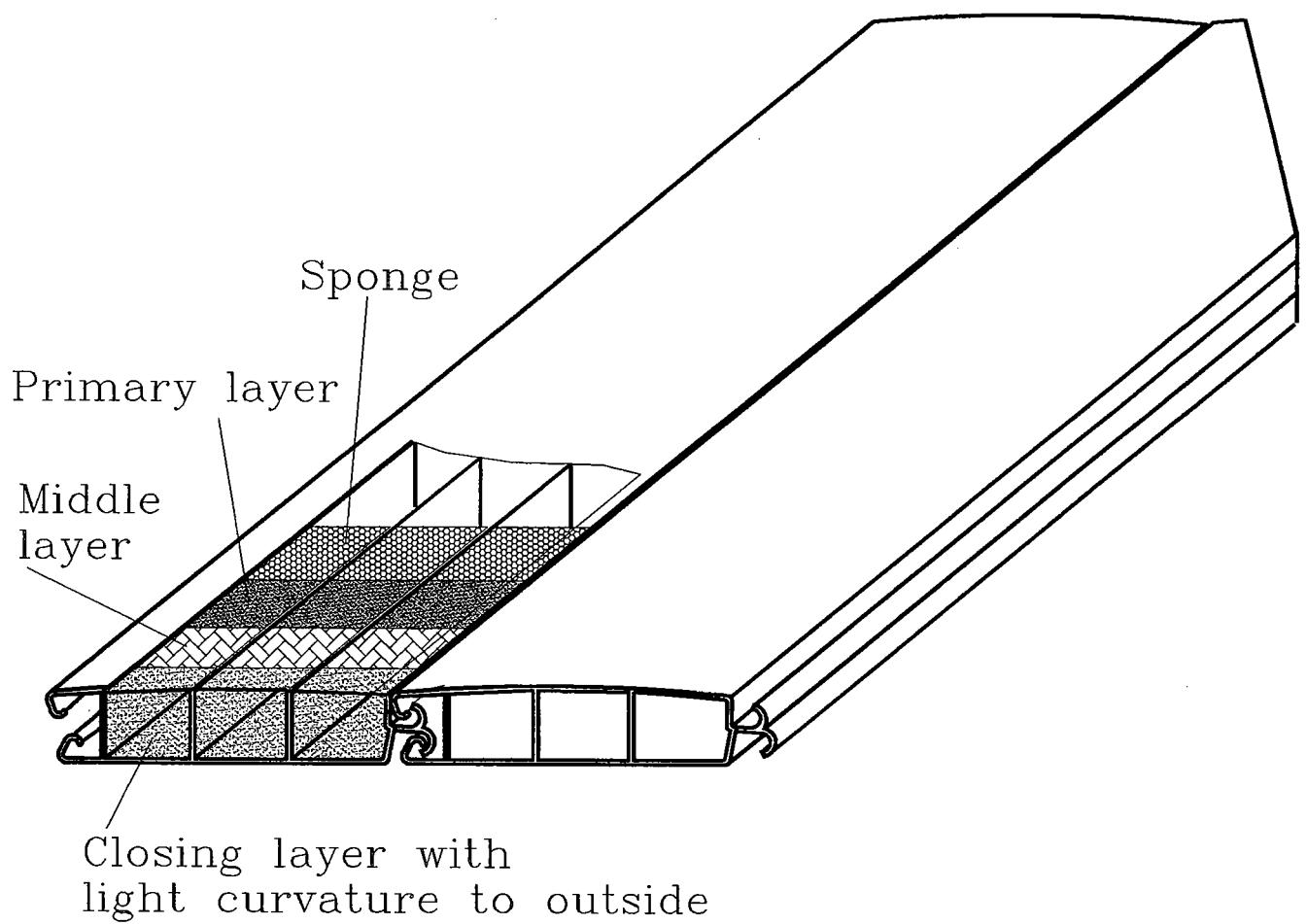
LIGHT-PROFILE
only for LIGHT
pool covers



- Smooth curved surface
- Smaller rolled up diameter of the cover when opened
- High placed joint-hook
- Rapid drying time for cover due to curved surfaces
- Reduced lime deposits

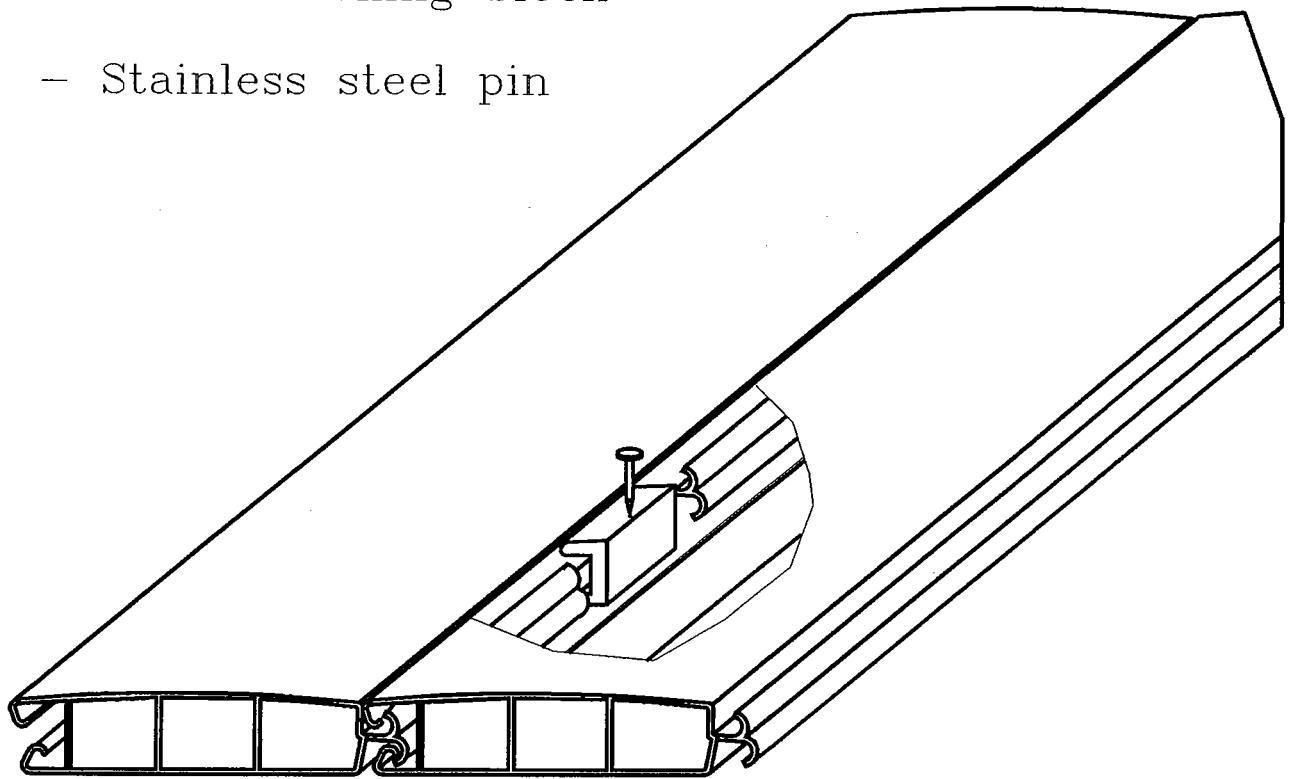
THE SEALING SYSTEM

- Multilayered process
- Three seals per internal section per side
- The sealing materials bond to the PVC slat which eliminates differential expansion of the materials.



THE LOCK SYSTEM

- Plastic locking block
- Stainless steel pin



Advantages of the sealing and lock systems

- The slats can be cut to suit almost any pool shape using radius corners and diagonal cuts without stepping the slats
- No end stopper to seal the slats, which can break off
- The sealing material bond to the PVC slat and expand and contract at the same rate
- Individual slats can be easily replaced, even after many years without damaging the double hook system



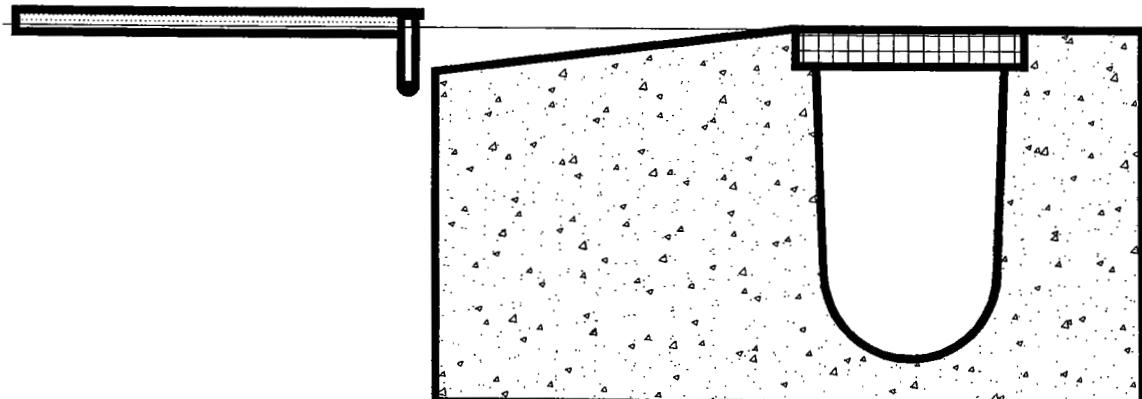
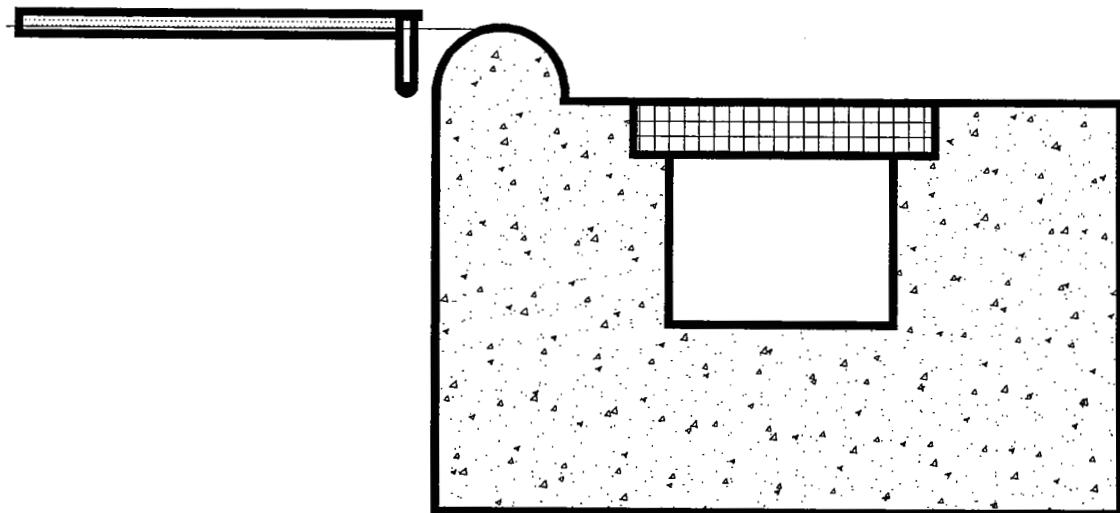
PENDULUM GUIDES FOR LEVEL DECK POOLS

Installation :

- Stainless steel pendulum guides can be used on either indoor or outdoor pools
- Guides are imperative for covers to level deck pools

Attention !

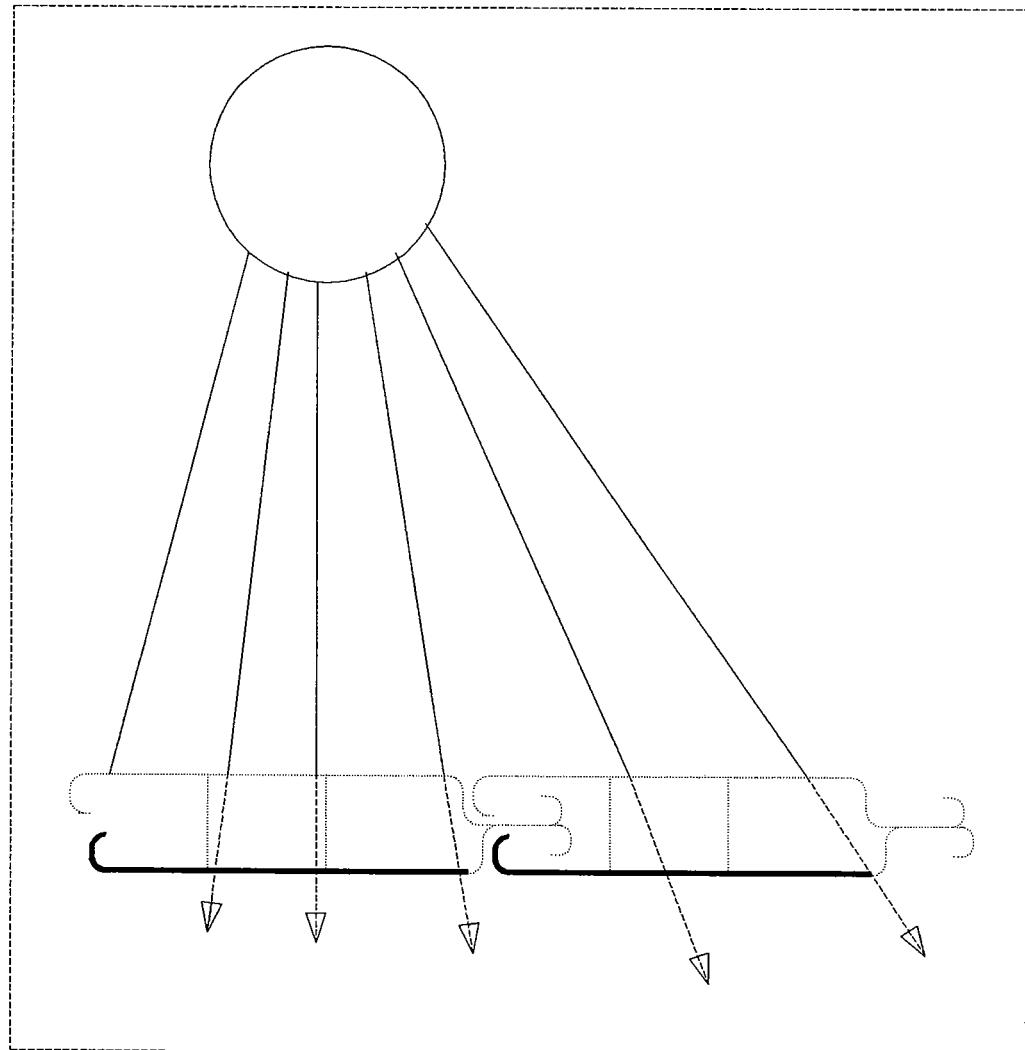
- The guides cannot prevent accident prevention on level deck pools





THE SOLAR SLATS

- Translucent upperside
- Black underside
- No sunlight can penetrate the black underside and enter the pool
- Take notice of the solar instructions





Schwimmbad-Abdeckungen seit 1963
pool covers • couvertures de piscines

Technical description grando LIGHT

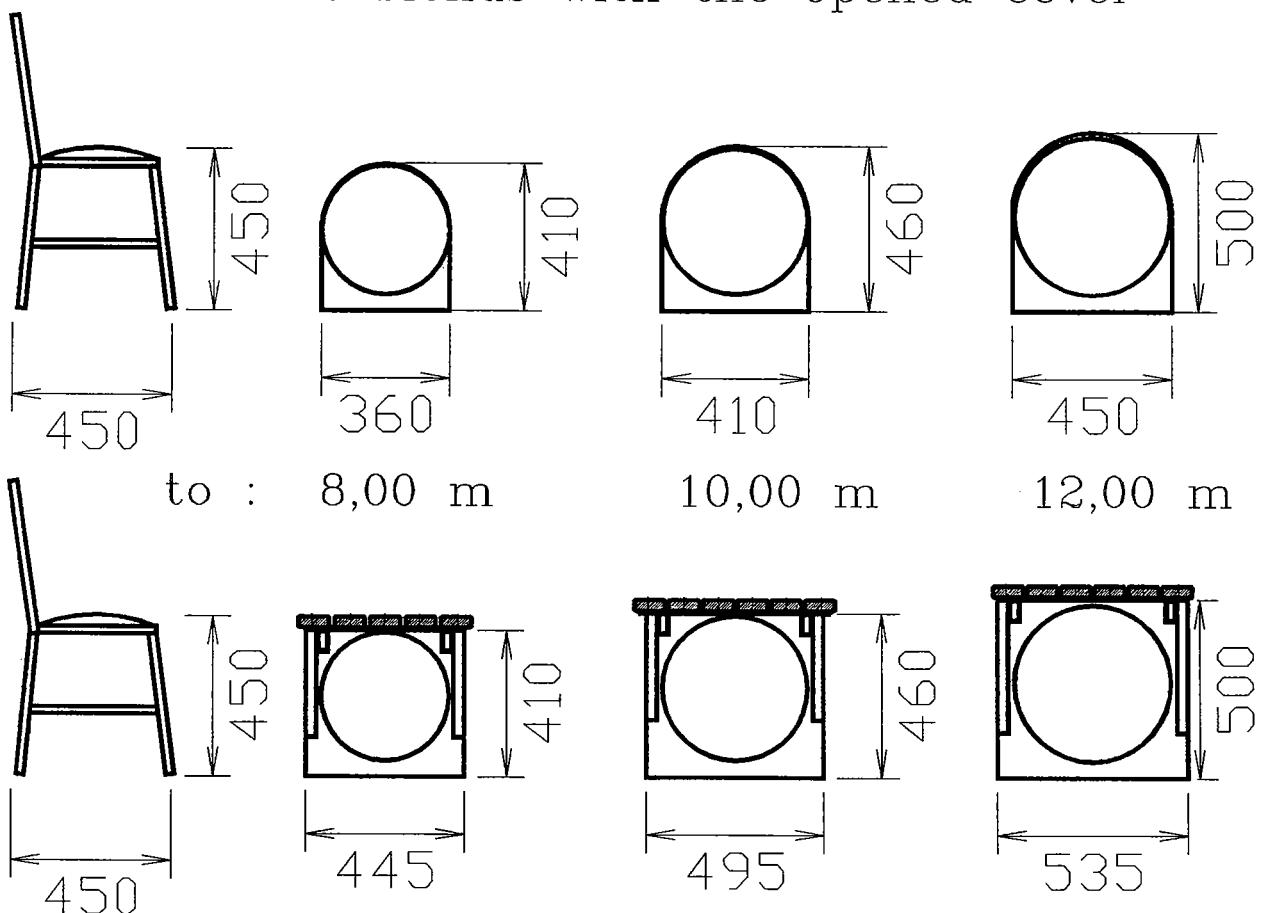
- Pool cover** A special smooth curved PVC profile creates a slatted pool cover with excellent water shedding properties. Available in white, and blue as standard colours. Each slat has three internal hollow sections. Each section has a waterproof multilayered seal that forms a molecular bond with the PVC slat, this eliminates any differential expansion of the materials used and ensures a watertight seal. The system for joining the slats, utilising stainless steel pins and plastic locking blocks, eliminates any lateral displacement of the slats and facilitates the removal and replacement of individual slats. The combination of the slat joining and end sealing systems means that radius corners, roman ends, cut outs and slanting cuts can be accurately reproduced. The slats are joined by a double hook system which provide a high tensile, very flexible joint between the slats. The PVC slats are resistant to ultra violet light, non biodegradable, non corrosive and completely hygienic.
- Drive and non drive end supports** Both the drive and non drive end supports are conservated from heavy duty, non biodegradable, solid PVC. The non drive support plate has a ball bearing and an outer seal to prevent water ingress and the smooth rotation of the shaft. The drive motor is protected with a heavy duty PVC housing.
- Drive unit** Direct current motor 24 V DC. Automatic impeding gear motor, travel limitor (limit switch and Additional safety limit switch).
- Carrier shaft** Eloxadized aluminium with stainless steel journal, ball beared and sealed with oil seals.
- Power supply** 230 V/24 V DC transformer, with rectifier, protected primary and secondary.
- Key switch** Lockable, with a removable key for the open/stop/close operations. The key switch is located within the driving unit (available for remote location).

ACCESSORIES

- Upper paneling** Alternative 1 : in white PVC plate. Installed on a self supporting steel frame work, sandblasted, hot dip galvanised and PVC lacquered, For pools over 5 m wide, a centre support is necessary.
- Top bench** Alternative 2 : the top bench is panelled with, either white PVC or treated meranti hardwood slats. The panelling is fixed onto the sandblasted, hot dip galvanised and PVC lacquered steel framework. For pools over 5 m wide a centre support is necessary.
- Front/Rear Panels** The front and rear panels are available with either PVC or meranti hardwood slats to match the top bench.(for alternatives 1 + 2) For pools over 5 m wide the panelling will require a centre support.
- Framework** For pools over 5 m wide the top bench and front and rear panel framework can be supplied to accept panelling by the customer. It is possible to retrospectively fit original grando PVC and timber finishes to the top bench front and rear panels

THE LIGHT COVER

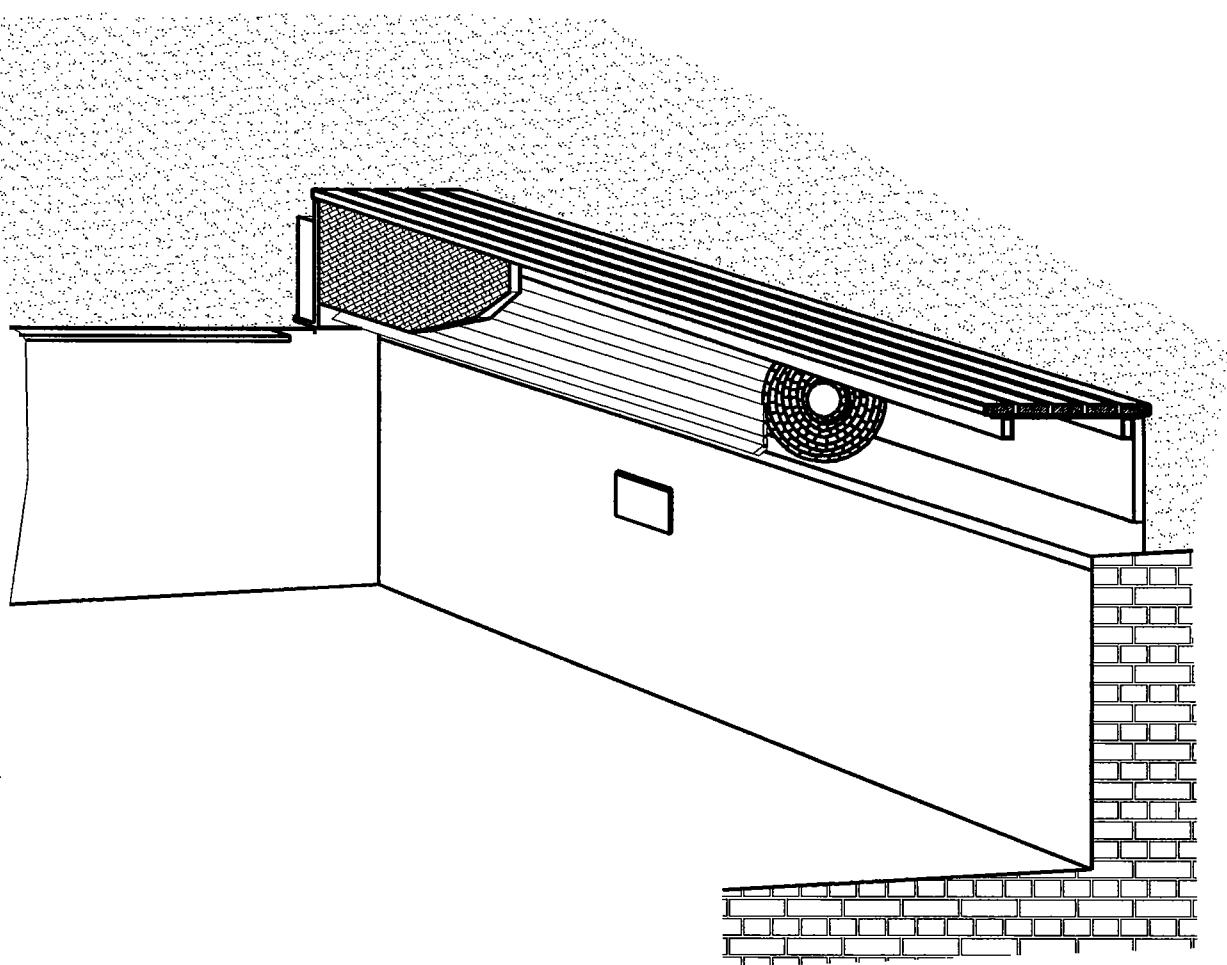
- The 10 mm thick LIGHT slats have a smaller roll up diameter and therefore the overall height of both the drive and non drive units is reduced compared to the COMPACT model
- Unless otherwise stated the drive and non drive end supports have a semicircular top section that blends with the opened cover

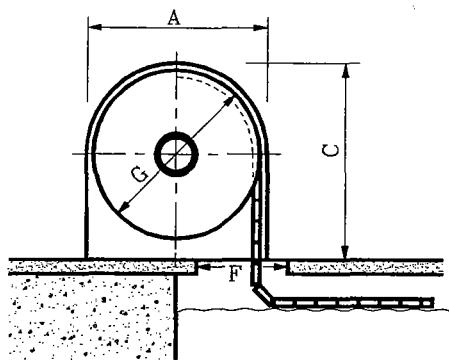
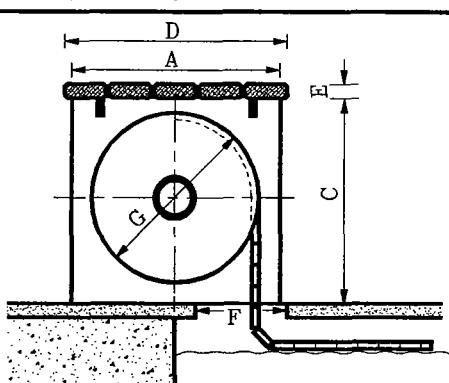
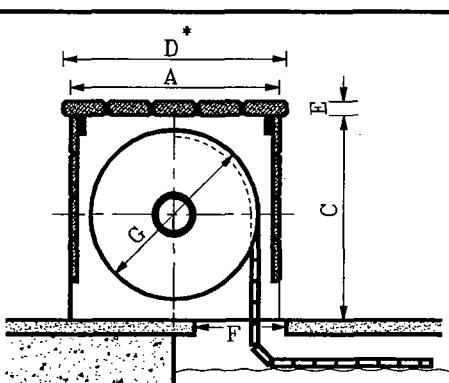
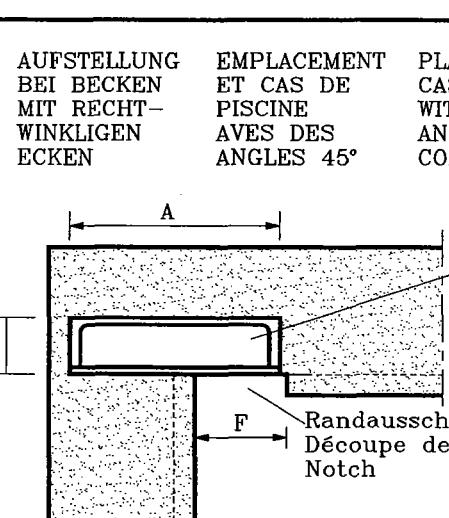
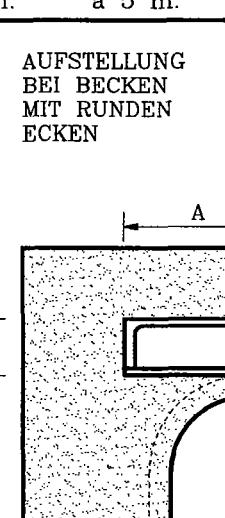


- Compact driving unit constructed in moulded and welded PVC
- 24 V DC motor
- Reduction-gear
- The limit switches incorporate a safety limit
- The carrier shaft is constructed in lightweight anodised aluminium

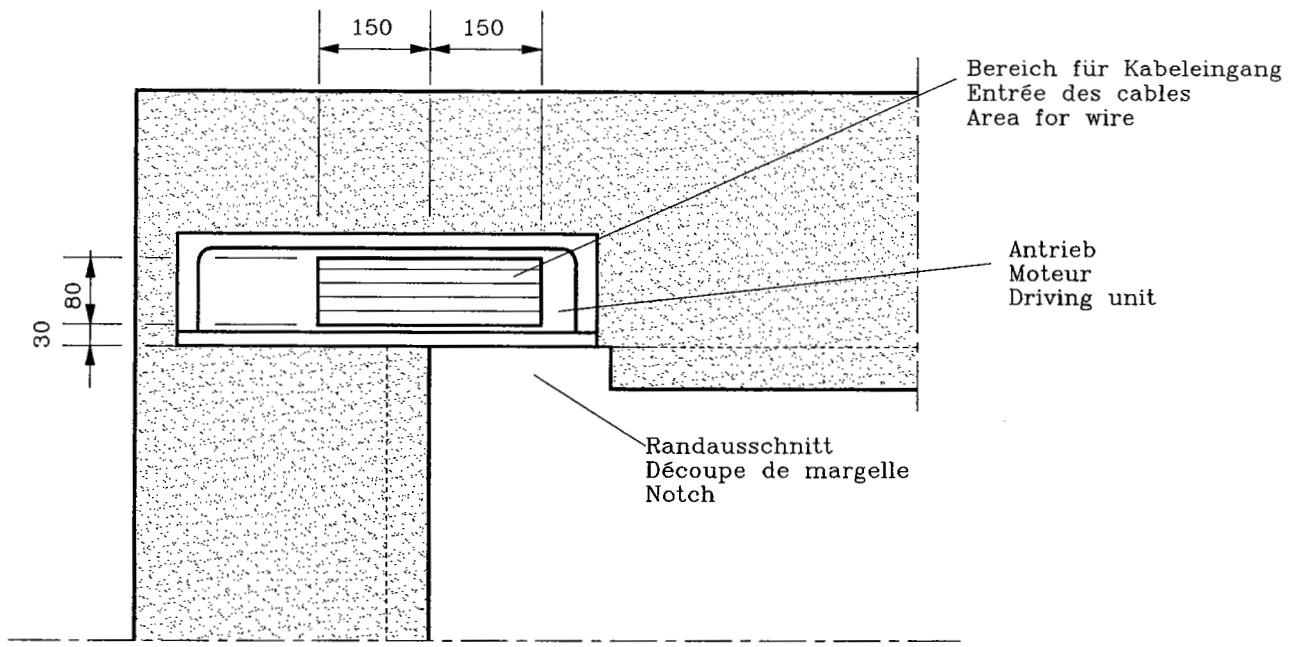
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LIGHT with paneling – normal position

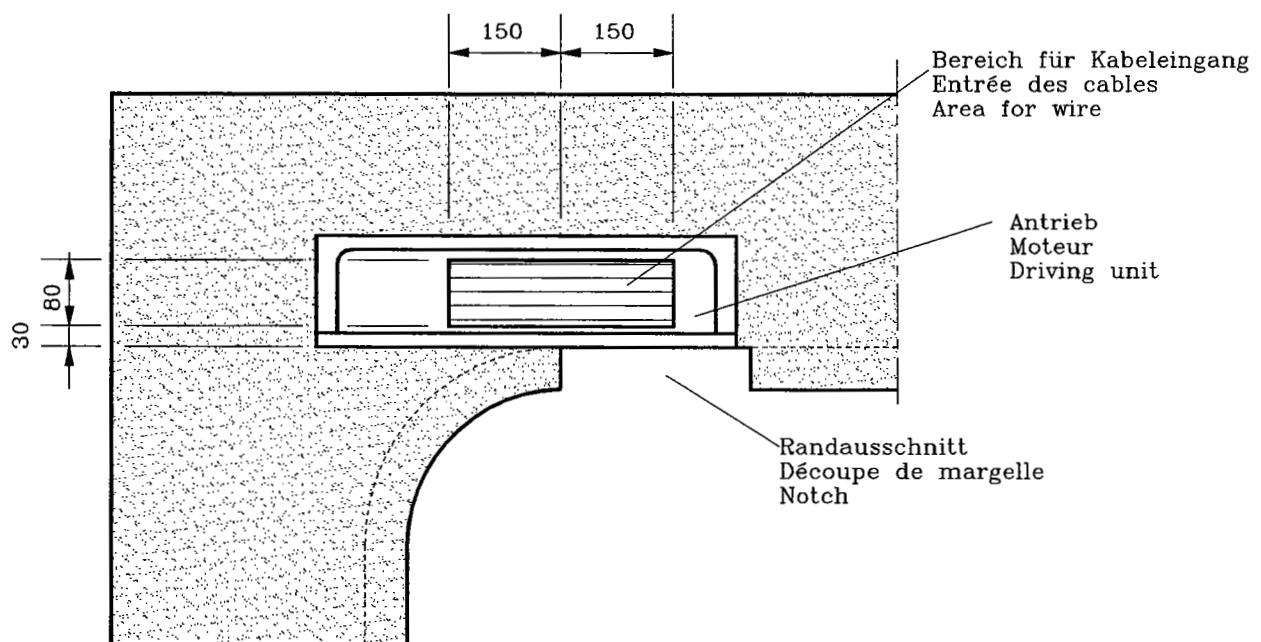


	<p>LIGHT MIT HALBRUNDEN SEITENTEILEN OHNE VERKLEIDUNG</p> <p>Bis max. 6 m Beckenbreite</p>	<p>LIGHT AVEC PARTIES LATÉRALES ARRONDIES SANS HABILLAGE</p> <p>Largeur piscine jusqu'à 6 m max.</p>	<p>LIGHT WITH SIDE PLATES HAVE A ROUND BUT WITHOUT PANELING</p> <p>Pool width up to 6 m max.</p>																																				
	<table border="1"> <thead> <tr> <th>Breite Largeur Width</th><th>Länge Longueur Length</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr> </thead> <tbody> <tr> <td>-4m</td><td>- 8m</td><td>360</td><td>145</td><td>410</td><td>-</td><td>-</td><td>210</td><td>345</td></tr> <tr> <td>4-5m</td><td>8-10m</td><td>410</td><td>145</td><td>460</td><td>-</td><td>-</td><td>230</td><td>395</td></tr> <tr> <td>5-6m</td><td>10-12m</td><td>460</td><td>165</td><td>500</td><td>-</td><td>-</td><td>250</td><td>435</td></tr> </tbody> </table>	Breite Largeur Width	Länge Longueur Length	A	B	C	D	E	F	G	-4m	- 8m	360	145	410	-	-	210	345	4-5m	8-10m	410	145	460	-	-	230	395	5-6m	10-12m	460	165	500	-	-	250	435		
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<p>AUFPSTELLUNG BEI BECKEN MIT RECHT-WINKLIGEN ECKEN</p> <p>EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES 45°</p>	<p>PLACEMENT IN CASE OF POOL WITH RIGHT-ANGLED CORNERS</p>	<p>AUFPSTELLUNG BEI BECKEN MIT RUNDEN ECKEN</p>	<p>EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES ARRONDIS</p>																																				
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<p>Alle Maße sind Fertigmäße in mm. Toutes les mesures sont des mesures finales en mm. All dimensions are finished dimensions in mm. Änderungen vorbehalten. Sous réserve de modifications. Subject to change.</p>	<p>grando grando GmbH SCHWIMMBAD-ABDECKUNGEN De-Gasperi-Straße 6 D-51469 Bergisch Gladbach Telefon: 02202/1049-0 Telefax: 02202/104910</p>	<p>01.07.91</p>	<p>bg</p>	<p>1/anl/101-001</p>																																			
		<p>SCHWIMMBAD-ABDECKUNG TYP: LIGHT</p>																																					
		<p>VOLET COVERTURE TYPE: LIGHT</p>																																					
		<p>POOL COVER TYPE: LIGHT</p>		<p>L I G H T</p>																																			

AUFPSTELLUNG BEI BECKEN MIT RECHTWINKLIGEN ECKEN
 EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES 45°
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AUFPSTELLUNG BEI BECKEN MIT RUNDEN ECKEN
 EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES ARRONDIS
 PLACEMENT IN CASE OF POOL WITH ROUND CORNERS



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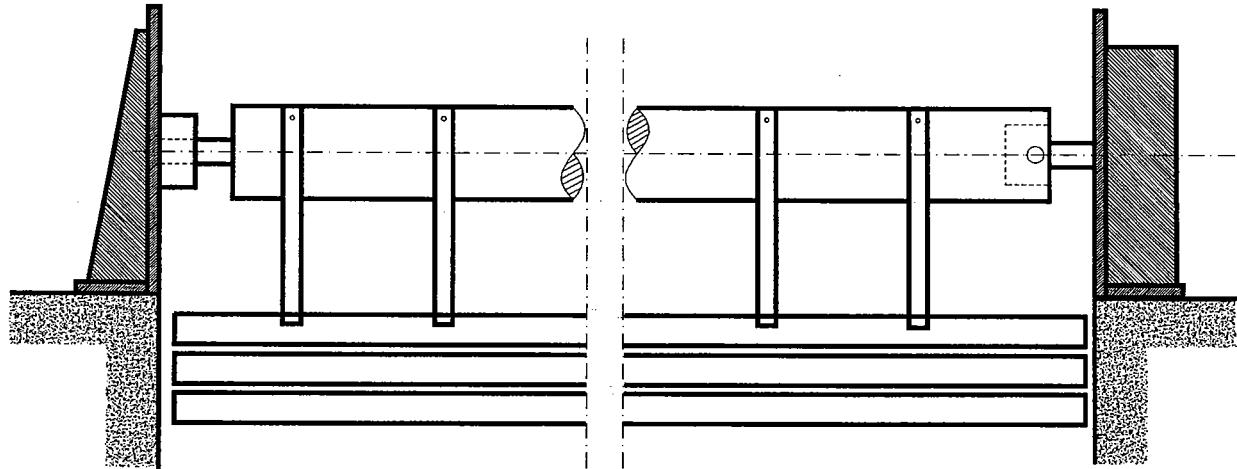
KABELEINGANG FÜR ABDECKUNG LIGHT
ENTREE DES CABLES VOLET LIGHT
WIRE AREA FOR COVER LIGHT

L I G H T

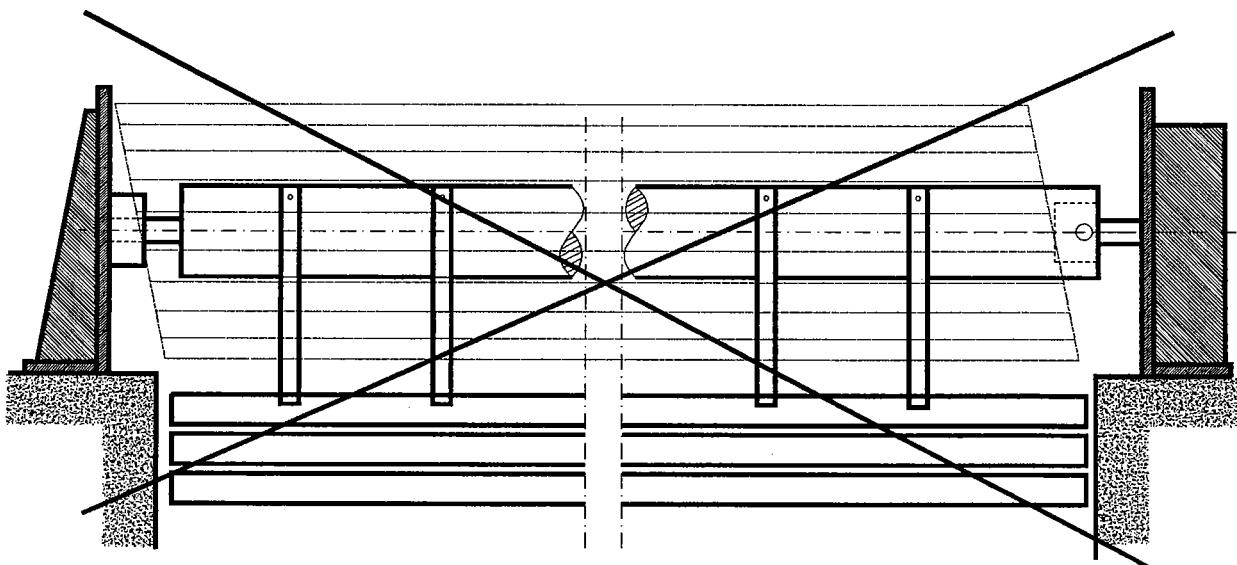


Normal position

Flush with the pool wall and respective edge tile



Position beyond the pool wall



Dangers :

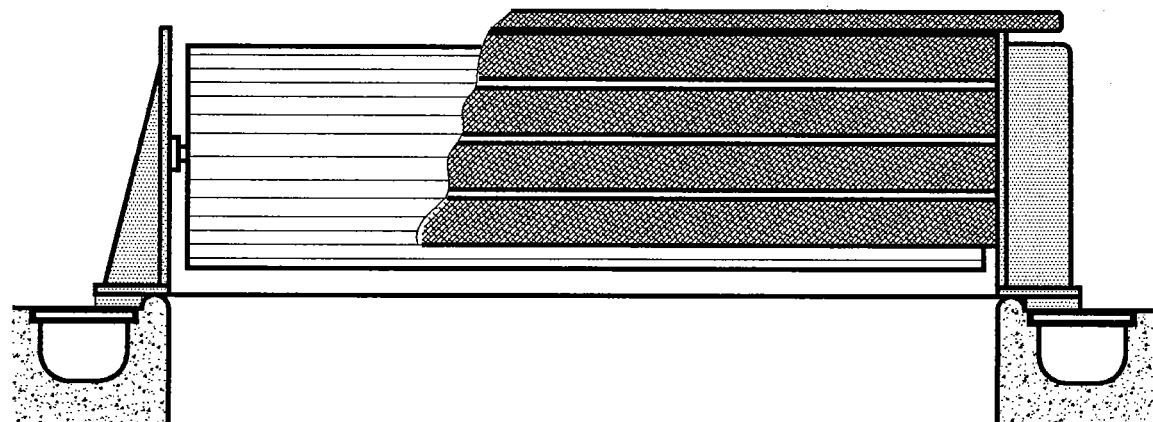
- The cover can travel either left or right on the carrier shaft
- When opening or closing the cover can rest or rub on the pool edge



Installation with a leveldeck-pool

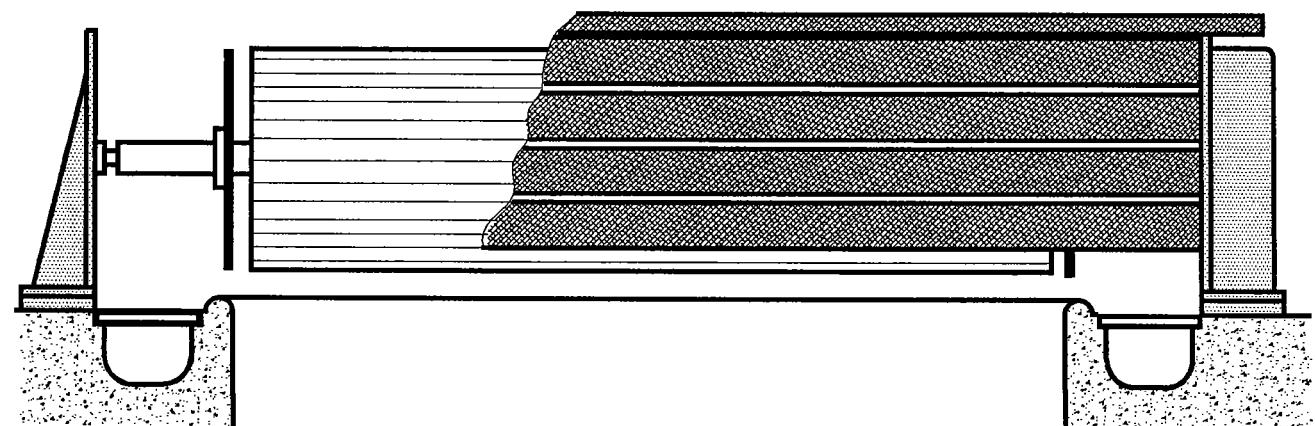
Mounting over level deck channels :

- Special plates can be provided upon receipt of accurate templates to enable the drive and non drive units to be firmly secured

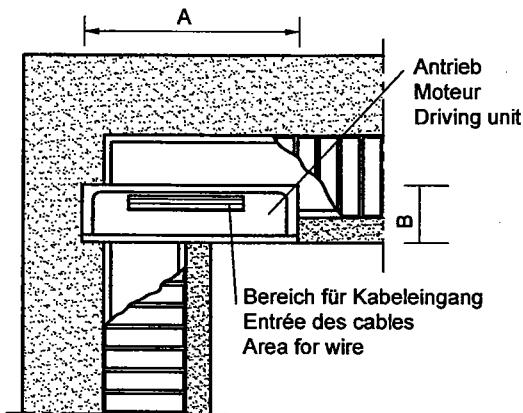
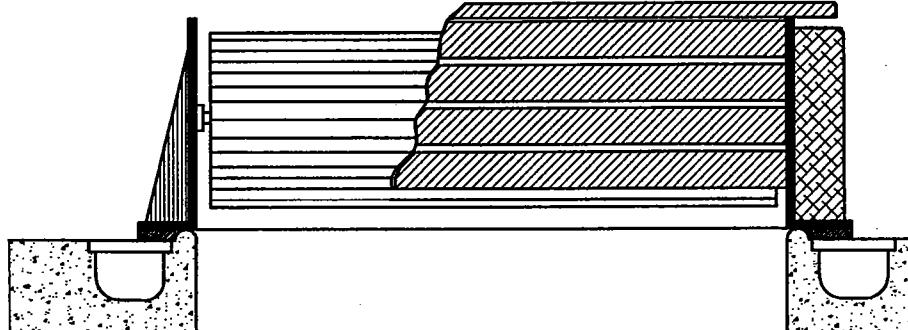
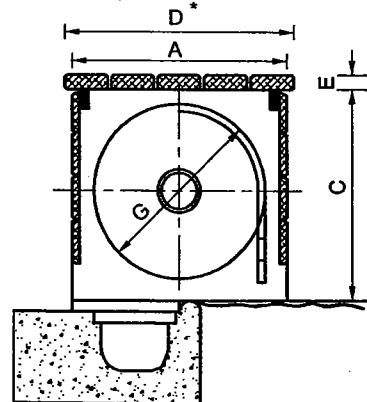


Mounting behind the level deck channels :

- To prevent misalignment when opening and closing the cover guide discs are provided



ALTERNATIVE I



Bis max. 6 m
Beckenbreite und
max. 12 m Becken-
länge

Largeur piscine
jusqu'à 6 m max.
et longueur piscine
jusqu'à 12 m max.

Pool width up to
6 m max. and
pool length up
to 12 m max.

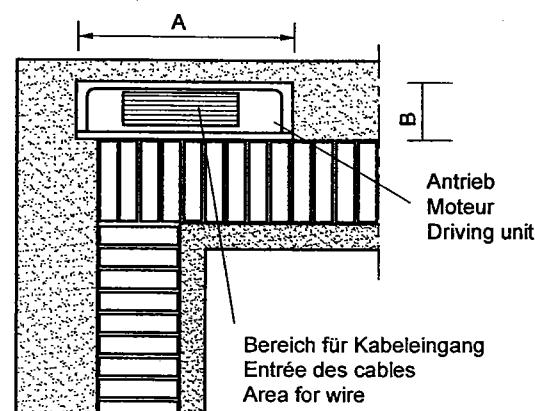
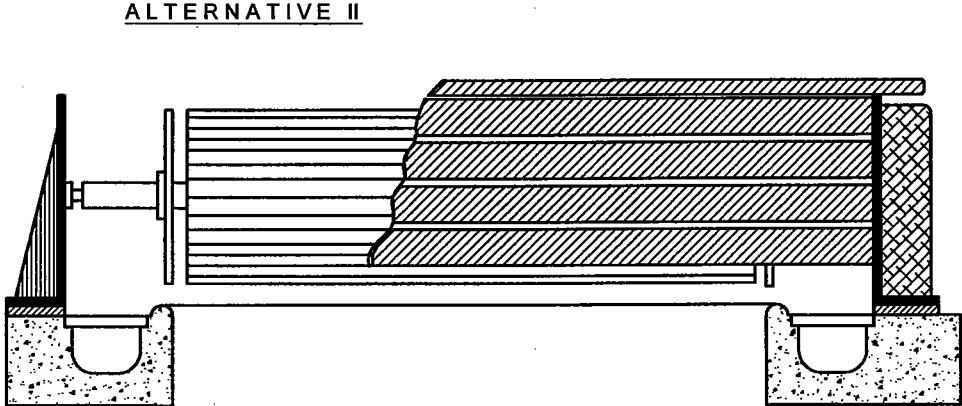
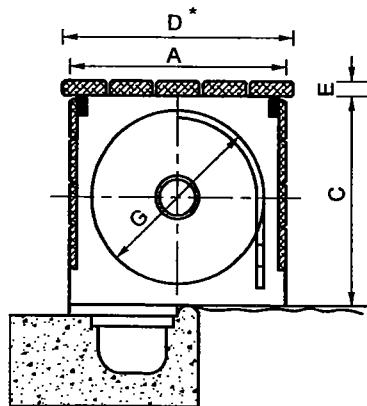
Breite Largeur Width	Länge Longueur Length	A	B	C	D*	E	F	G
-4m	- 8m	445	145	410	485	30		345
4-5m	8-10m	495	145	460	560	30		395
5-6m	10-12m	535	165	500	560	30		435

* über 5 m
Beckenbreite in
stabiler Rahmen-
konstruktion

* Avec ossature
renforcée pour
piscine d'une largeur
supérieure à 5 m

* Extra strong
frame for pools
above 5 m width

ALTERNATIVE II



Bis max. 6 m
Beckenbreite und
max. 12 m Becken-
länge

Largeur piscine
jusqu'à 6 m max.
et longueur piscine
jusqu'à 12 m max.

Pool width up to
6 m max. and
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* über 5 m
Beckenbreite in
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* Avec ossature
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Alle Maße sind
Mindestmaße in mm
Toutes les Mesures
sont des mesures
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All dimensions are
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Anderungen
vorbehalten.
Subject to change

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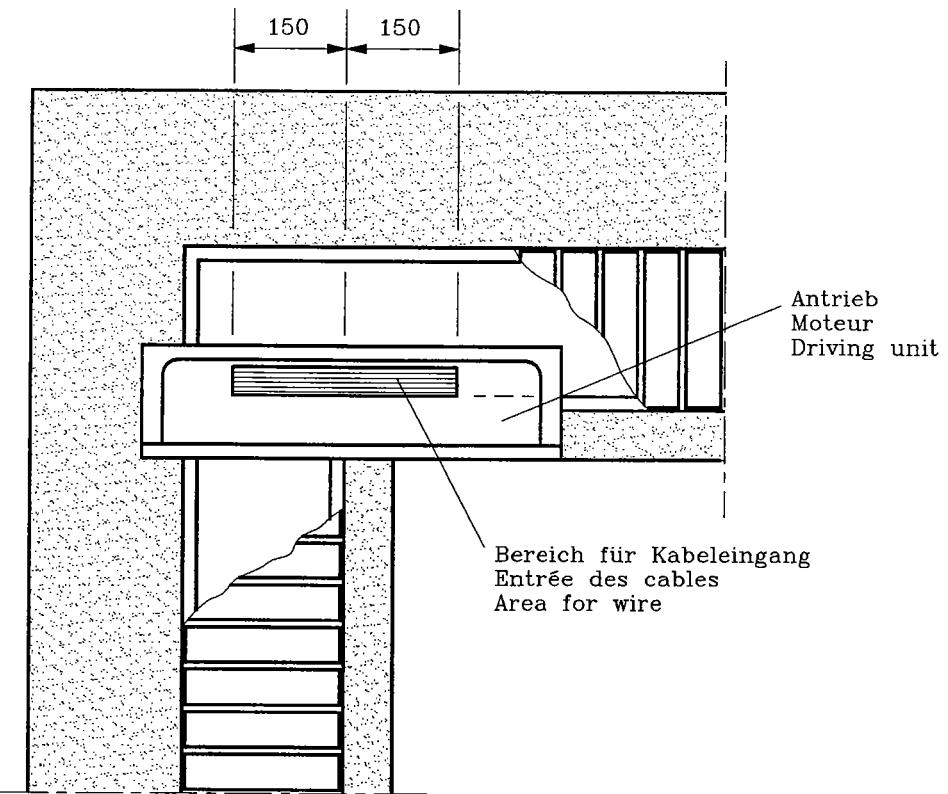
SCHWIMMBAD-ABDECKUNG LIGHT
BEI ÜBERFLUTUNGSRINNE

VOLET COUVERTURE LIGHT
AVEC DEBORDEMENT

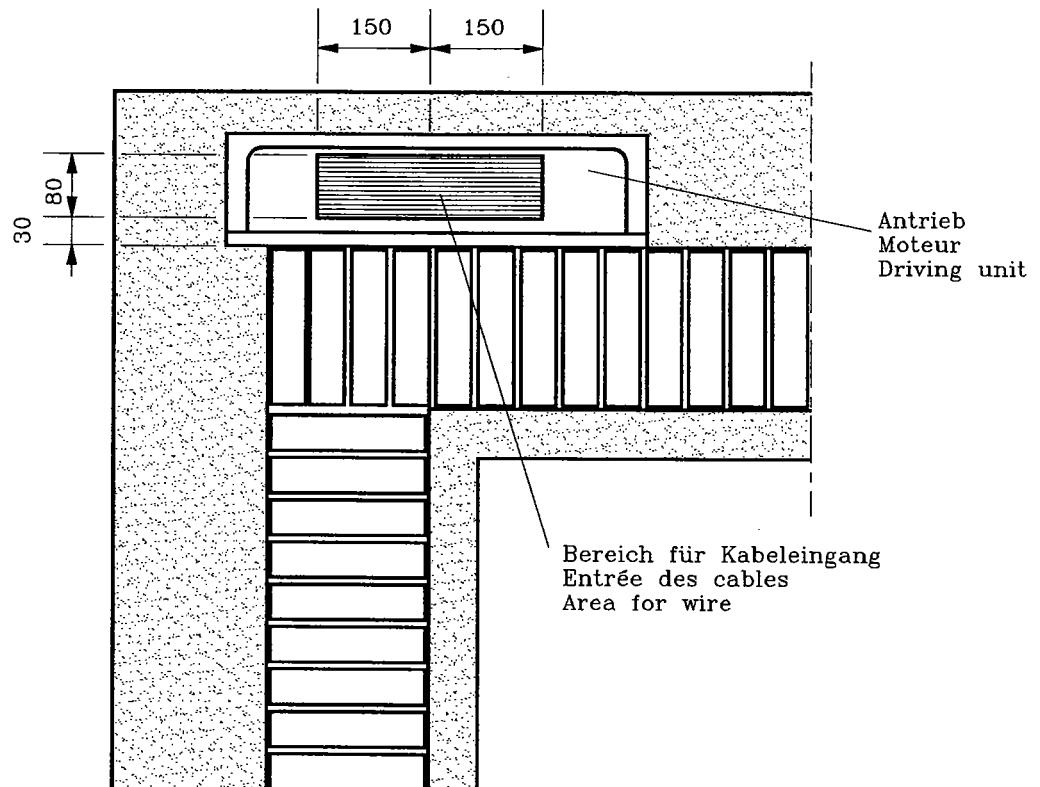
POOL COVER LIGHT FOR OVERFLOW SYSTEM

LIGHT

ALTERNATIVE I



ALTERNATIVE II



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Fertigmaße in mm.
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Aenderungen
vorbehalten.
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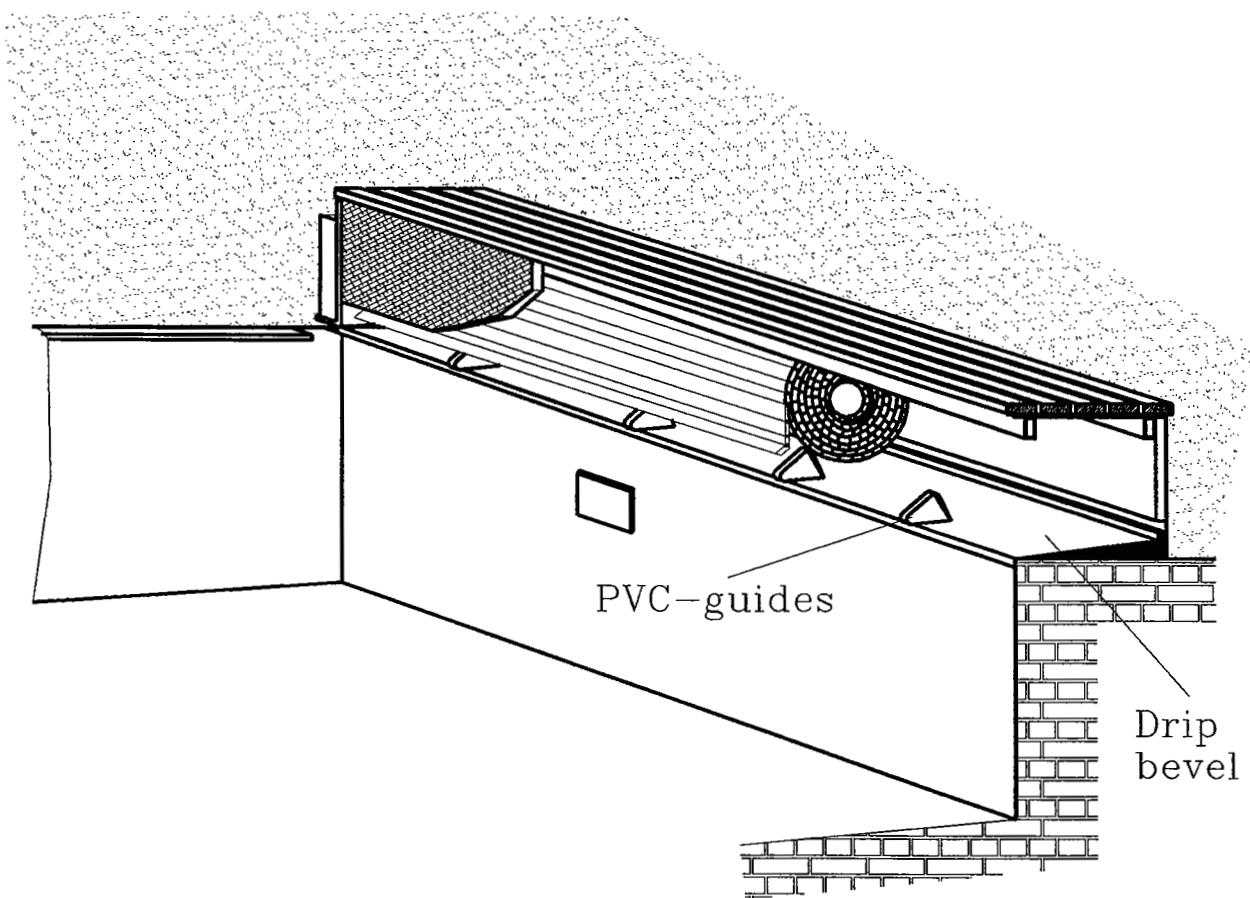
KABELEINGANG ABDECKUNG LIGHT
BEI UBERFLUTUNGSRINNE

ENTREE DES CABLES POUR VOLET
LIGHT AVEC DEBORDEMENT

WIRE AREA LIGHT WITH OVERFLOW SYSTEM

L I G H T

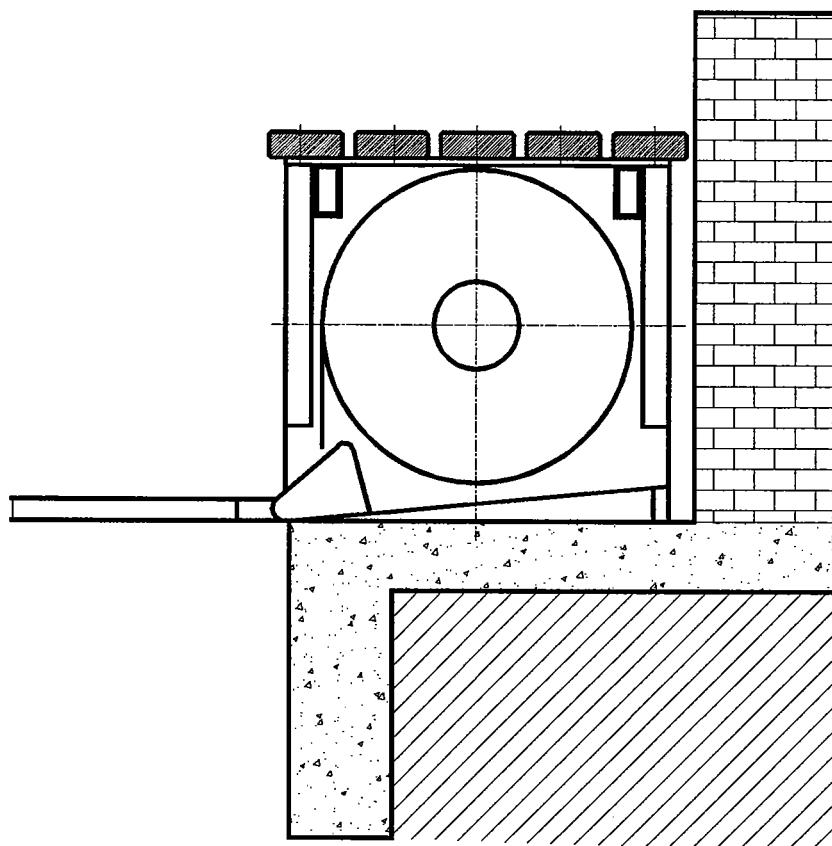
LIGHT cover with paneling flush with the pool edge



- The PVC-guides are individual manufactured according to the measure of the pool edge and installed each 700–800 mm

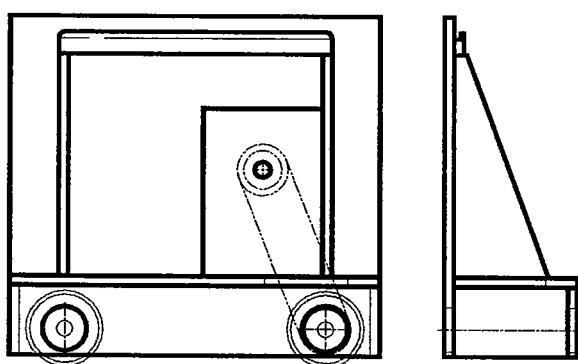
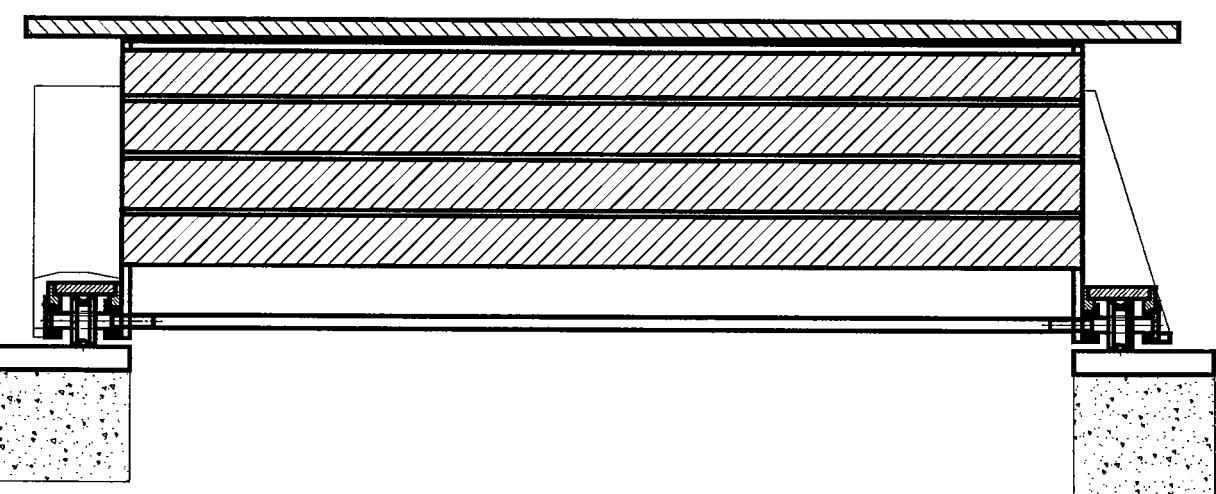
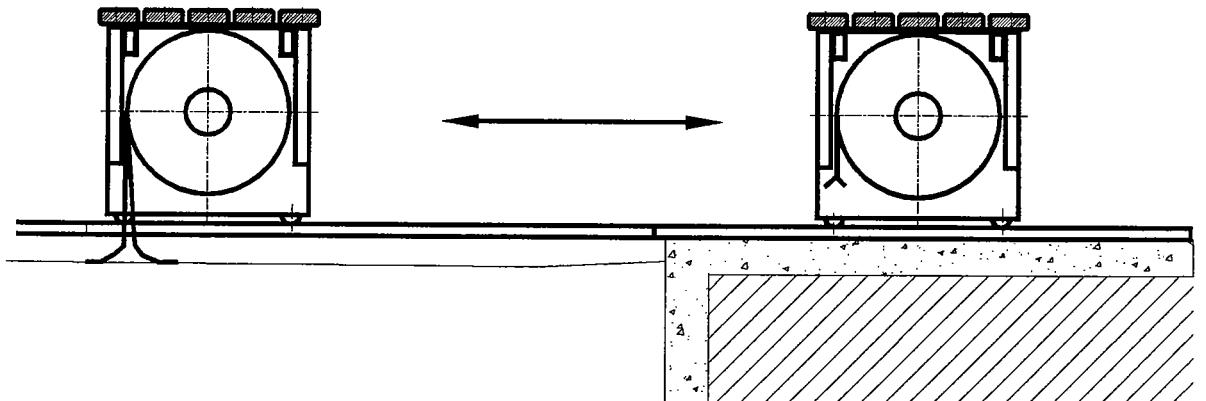


Flush with the pool edge

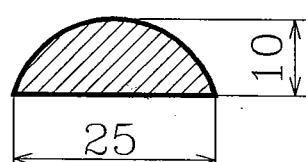


- Installation of PVC-guides
- For indoor-swimming pools, a drip bevel can be installed to allow the water from the opened cover to drain back into the pool

MOBILE

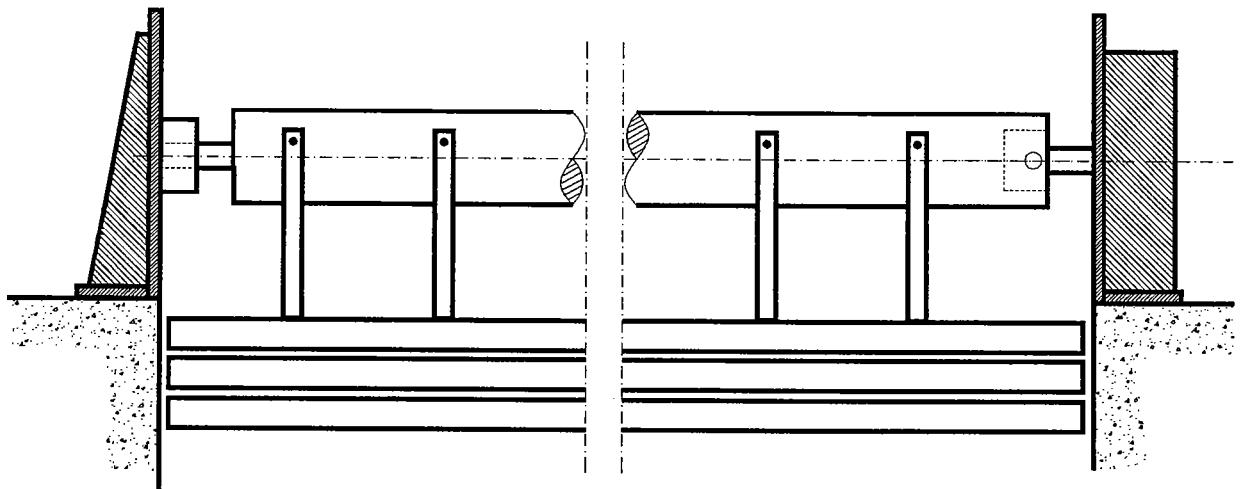


- Cover assembly can be either manually or electrically operated
- Cove assembly runs on brass tracks
- This cover is only available with panelling to all 3 sides

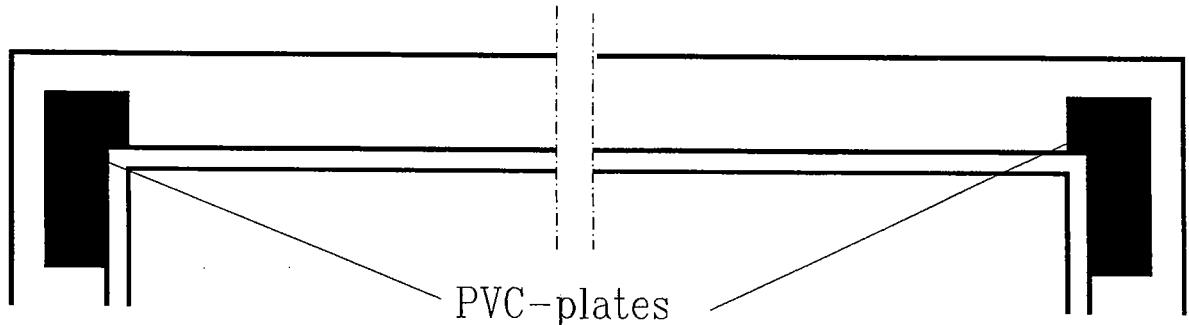
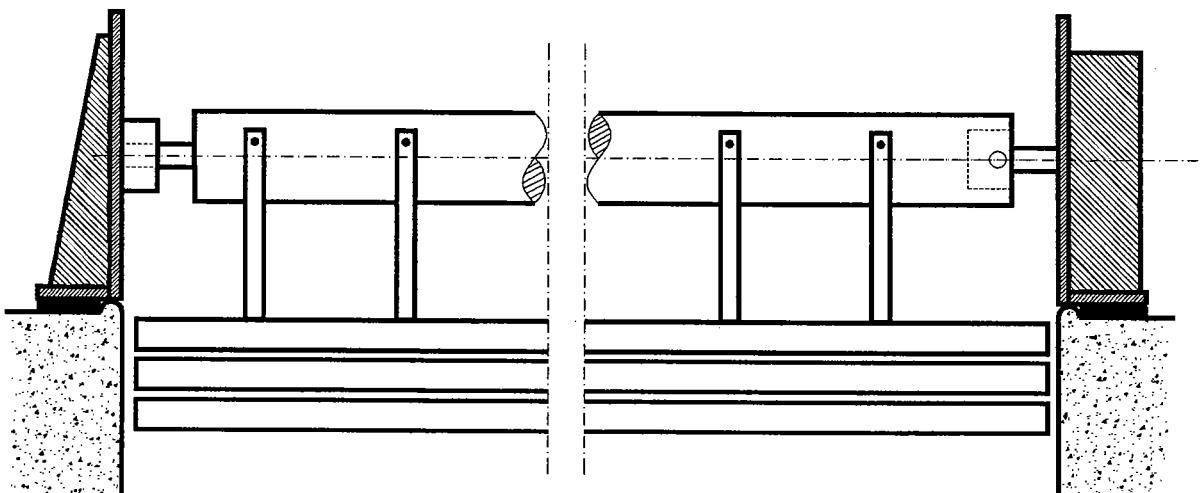




For pool with no top edge overhang

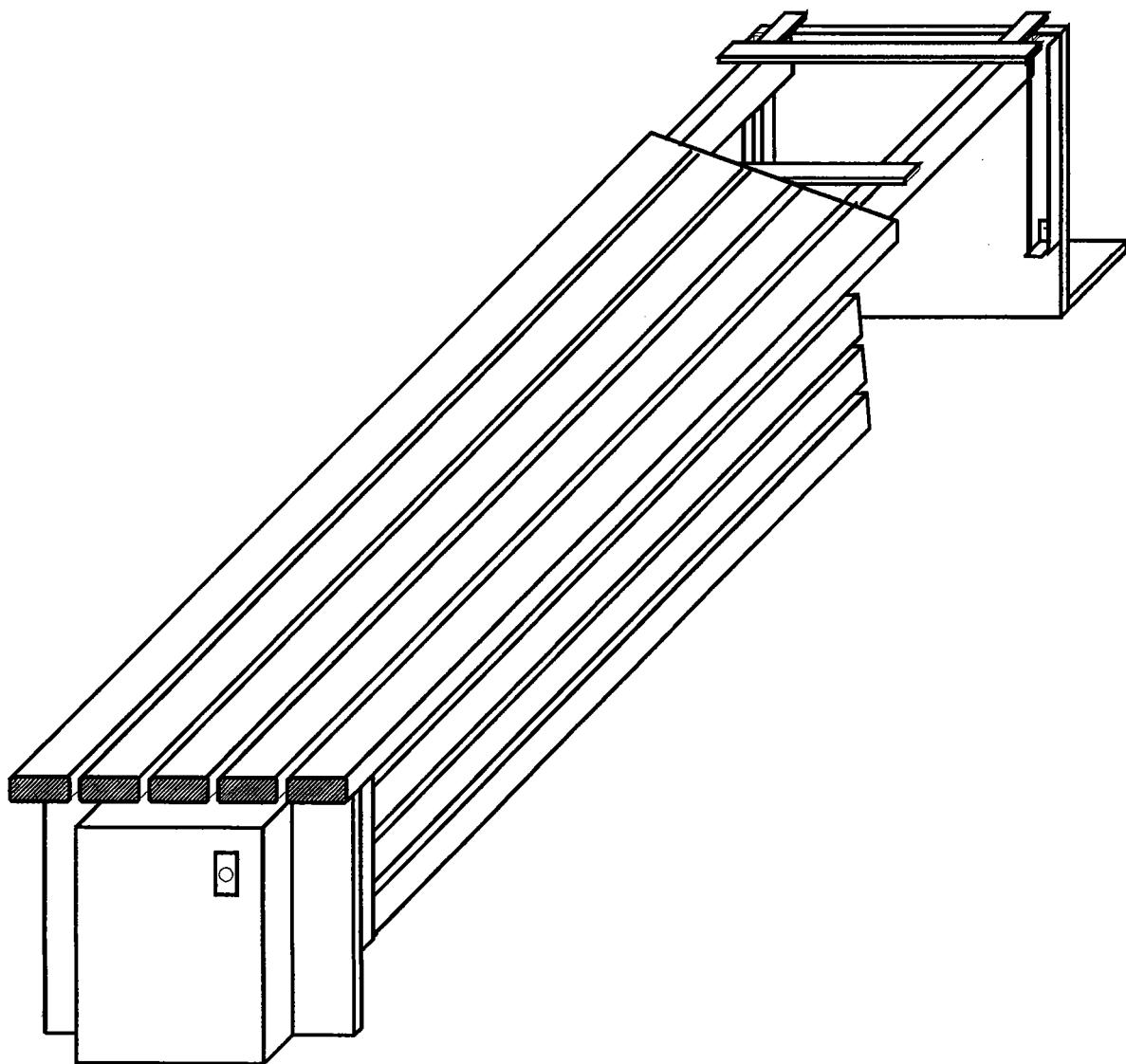


Depending on the edge tile detail the drive and non drive units must be at the same height.
If necessary PVC-plates can be produced to provide the necessary clearance



BENCH AND PANELING

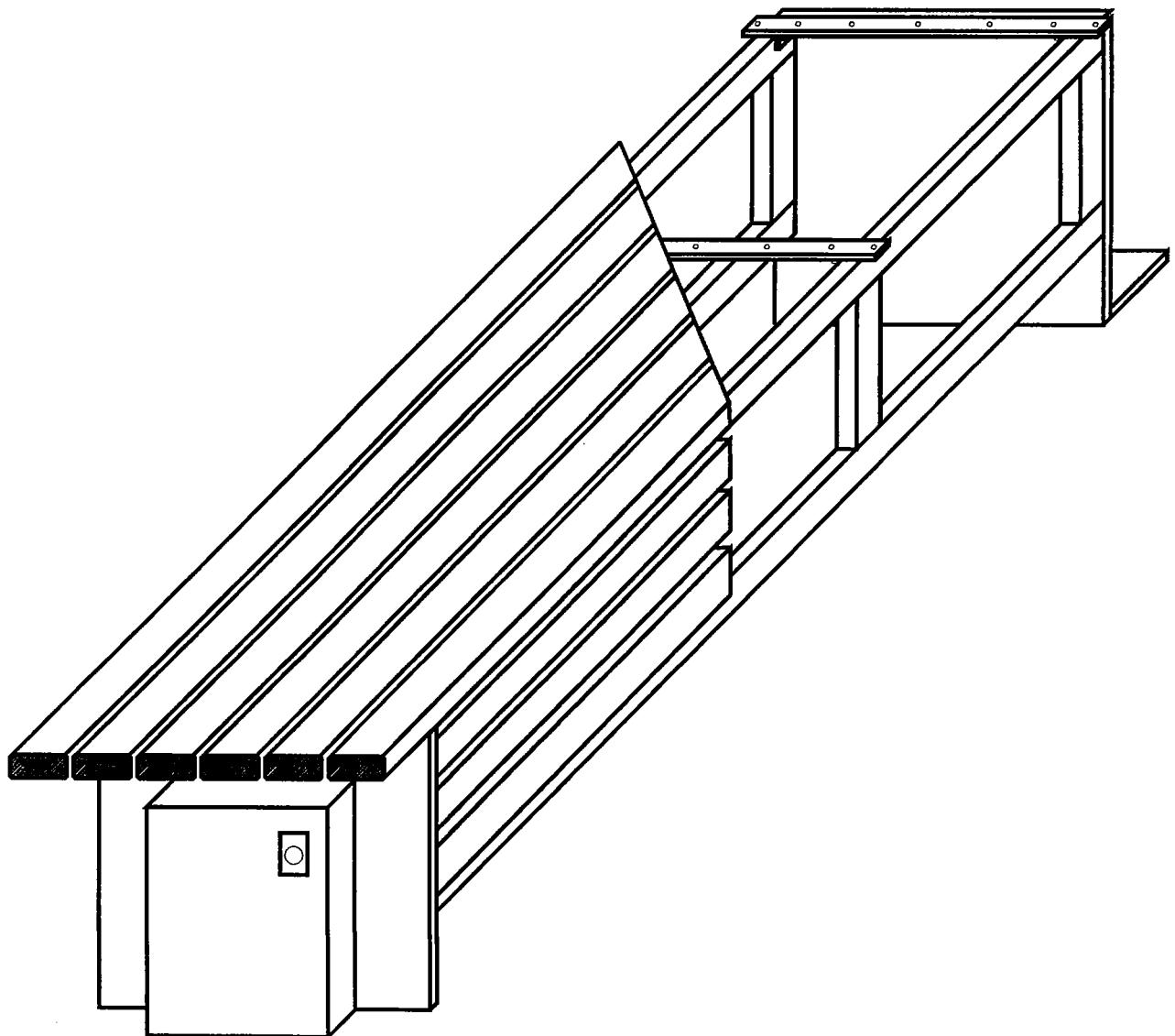
- Bench in wood or PVC with frame construction
- Frame can be constructed to accept paneling by the customer
- Paneling in wood or PVC





FRAME CONSTRUCTION'S PANELING

- In wood or PVC
- To accept panelling by the customer





Schwimmbad-Abdeckungen seit 1963
pool covers • couvertures de piscines

Technical description grando COMPACT

- Pool cover** A special smooth curved PVC profile creates a slatted pool cover with excellent water shedding properties. Available in white, blue and grey as standard colours. A solar version is available at an extra cost. The standard slats are reversible and can be turned over periodically to combat the build up of calcium deposits. Each slat has three internal hollow sections. Each section has a waterproof multilayered seal that forms a molecular bond with the PVC slat, this eliminates any differential expansion of the materials used and ensures a watertight seal. The system for joining the slats, utilising stainless steel pins and plastic locking blocks, eliminates any lateral displacement of the slats and facilitates the removal and replacement of individual slats. The combination of the slat joining and end sealing systems means that radius corners, roman ends, cut outs and slanting cuts can be accurately reproduced. The slats are joined by a double hook system which provide a high tensile, very flexible joint between the slats. The PVC slats are resistant to ultra violet light, non biodegradable, non corrosive and completely hygienic. COMPACT covers are suitable for any pool up to 25 m x 10 m. With solar slats the heat-energy from the sun is transferred into the pool water via the transparent upper side and block underside of the slats therefore creating a saving on heating bills.
- Drive and non drive end supports** Both the drive and non drive end supports are constructed from heavy duty, non biodegradable, solid PVC. The non drive support plate has a ball bearing and an outer seal to prevent water ingress and the smooth rotation of the shaft. The drive motor is protected with a heavy duty PVC housing.
- Drive unit** The drive unit consists of a 24 V DC motor with integral PC board, limit and safety limit switches and thermal trip protection, all housed in an aluminium casing.
- Carrier shaft** The carrier shaft and end journals are constructed from high grade stainless steel.
- Power supply** The 240 V/24 V DC transformer, with protected primary and secondary windings, is supplied within an IP 55 rated casing.
- Key switch** The key switch is located within the driving unit and consists of an anodised face plate with a removable key for the open/close operation and an emergency stop switch. Auxiliary key switches are available for remote location.

ACCESSORIES

- Top bench** The top bench is panelled with, either white PVC or treated meranti hardwood slats. The panelling is fixed onto the sandblasted, hot dip galvanised and PVC lacquered steel framework. For pools over 5 m wide a centre support is necessary.
- Front/Rear Panels** The front and rear panels are available with either PVC or meranti hardwood slats to match the top bench. For pools over 5 m wide the panelling will require a centre support.
- Framework** For pools over 5 m wide the top bench and front and rear panel framework can be supplied to accept panelling by the customer. It is possible to retrospectively fit original grando PVC and timber finishes to the top bench a front and rear panels
- Drip bevel** For indoor pools, a drip bevel can be installed to allow the water from the opened cover to drain back into the pool.
- Handrail** Polished stainless steel handrail and brackets are essential for the prevention of accidents on standard pools. Accident prevention cannot be guaranteed with level deck pools.



THE COMPACT COVER

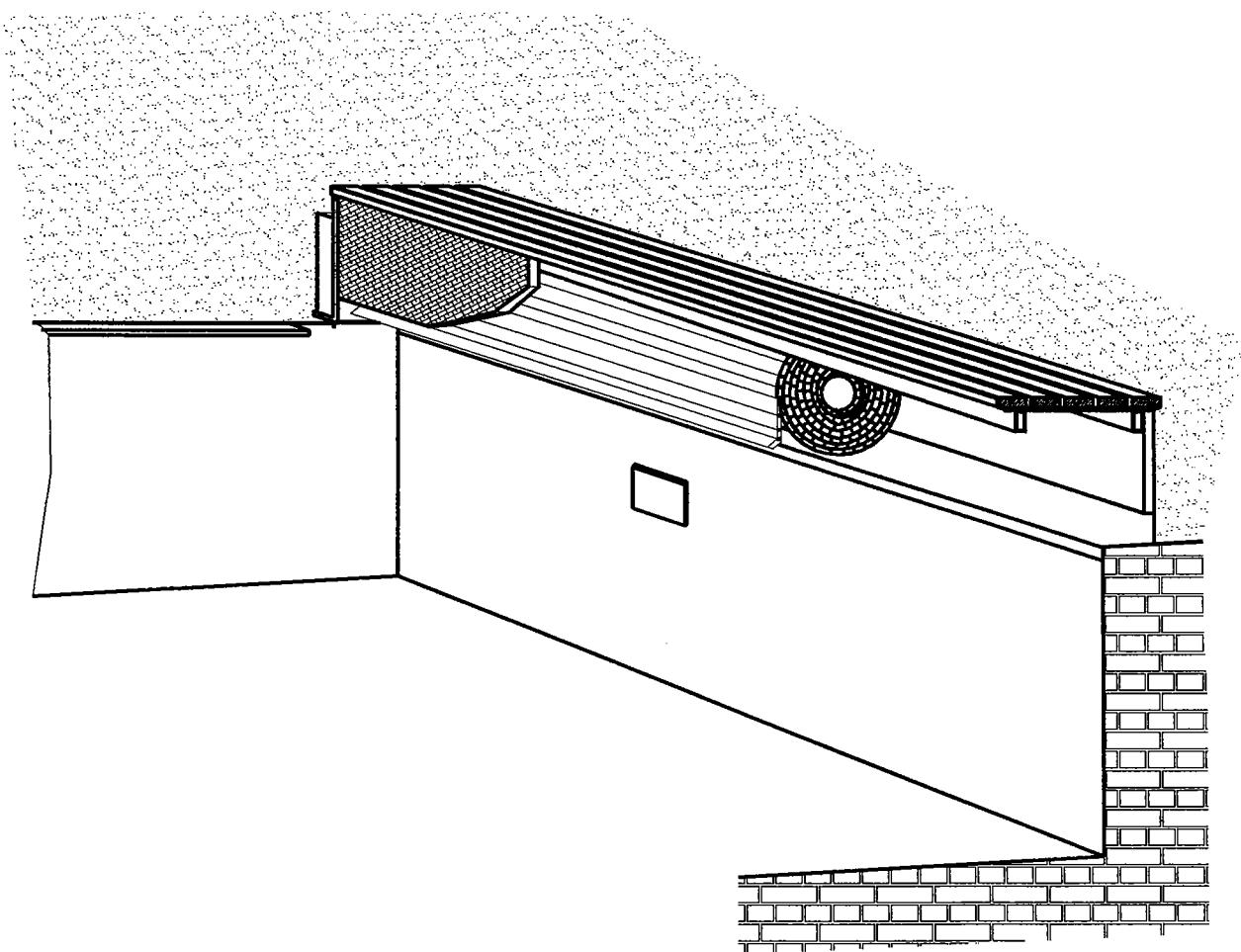
- 14 mm thick standard-profile
- Stainless steel shaft
- Compact drive motor and limits are housed in an aluminium casing

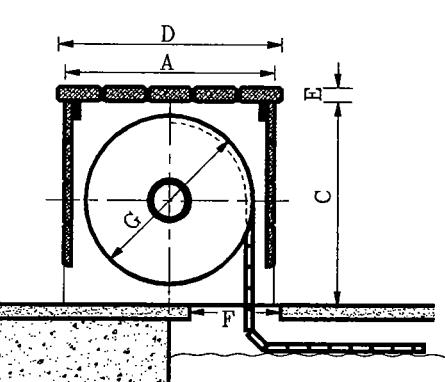
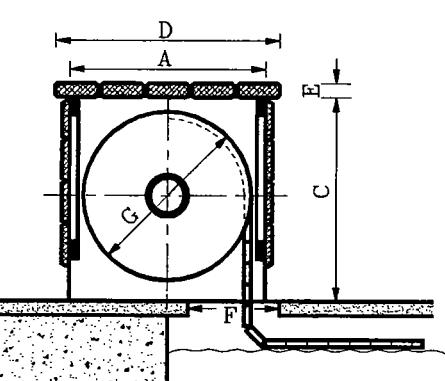
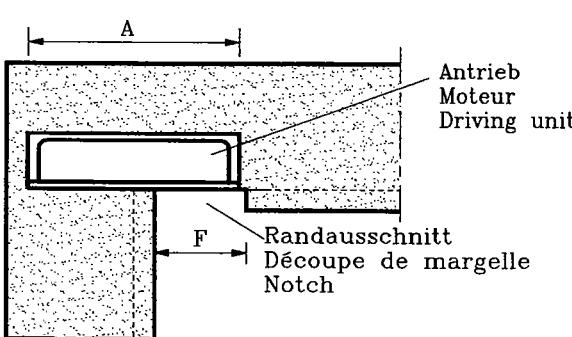
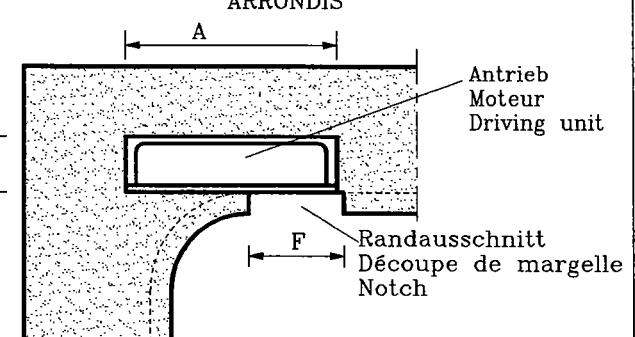
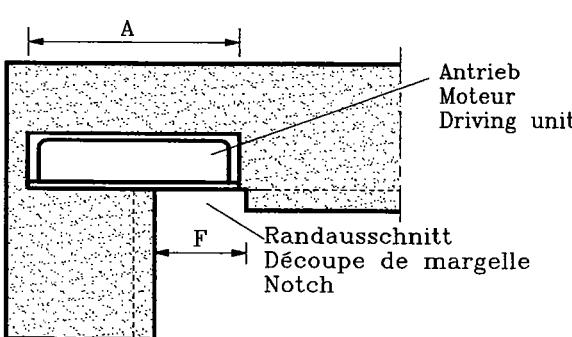
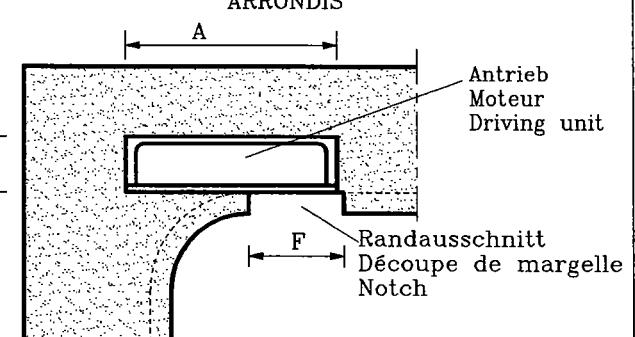
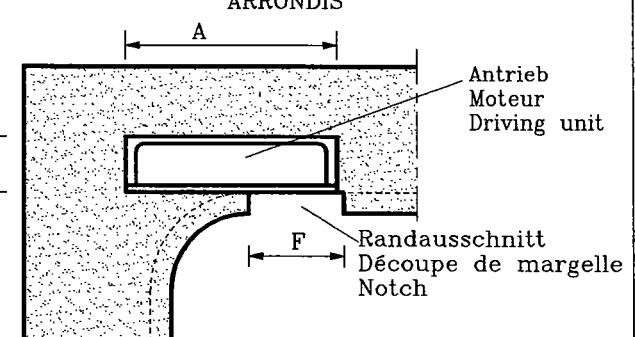
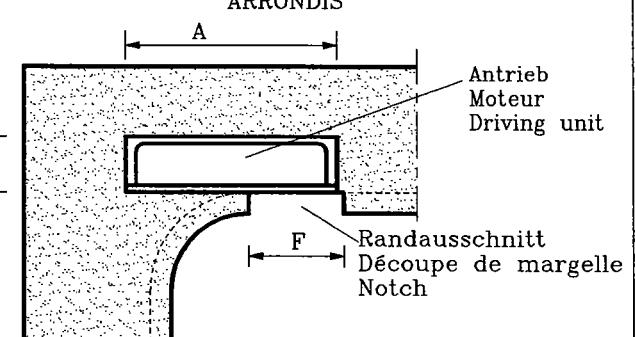
For the LIGHT and COMPACT covers, the end support plates are constructed in heavy duty PVC. This means :

- Simple modification of the bearing plates
- No rust spots
- No lacquered finish necessary and no staining

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COMPACT with panelling normal position

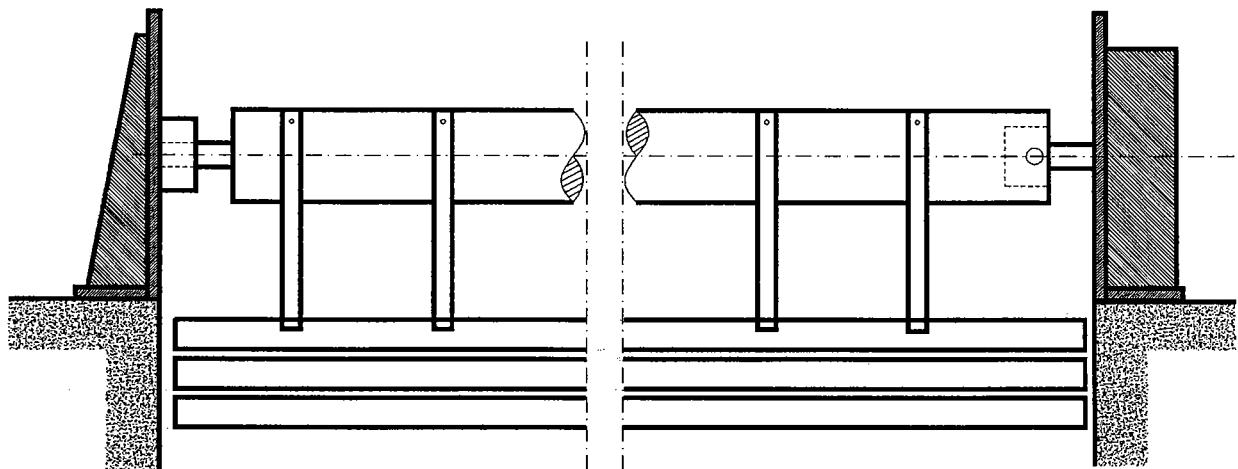


	COMPACT MIT SITZBANK UND BLENDEN Bis 5 m Beckenbreite <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Länge Longueur Length</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>- - 5 m</td> <td>480</td> <td>165</td> <td>480</td> <td>572</td> <td>30</td> <td>230</td> <td>405</td> </tr> <tr> <td>5 - 7 m</td> <td>530</td> <td>165</td> <td>530</td> <td>585</td> <td>30</td> <td>250</td> <td>435</td> </tr> <tr> <td>7 - 9 m</td> <td>580</td> <td>165</td> <td>530</td> <td>655</td> <td>30</td> <td>270</td> <td>475</td> </tr> <tr> <td>9 - 11m</td> <td>630</td> <td>165</td> <td>580</td> <td>685</td> <td>30</td> <td>290</td> <td>520</td> </tr> <tr> <td>11 - 12m</td> <td>680</td> <td>165</td> <td>630</td> <td>736</td> <td>30</td> <td>300</td> <td>540</td> </tr> <tr> <td>12 - 14m</td> <td>680</td> <td>165</td> <td>630</td> <td>736</td> <td>30</td> <td>320</td> <td>580</td> </tr> <tr> <td>14 - 16m</td> <td>730</td> <td>200</td> <td>680</td> <td>829</td> <td>30</td> <td>340</td> <td>615</td> </tr> </tbody> </table>	Länge Longueur Length	A	B	C	D	E	F	G	- - 5 m	480	165	480	572	30	230	405	5 - 7 m	530	165	530	585	30	250	435	7 - 9 m	580	165	530	655	30	270	475	9 - 11m	630	165	580	685	30	290	520	11 - 12m	680	165	630	736	30	300	540	12 - 14m	680	165	630	736	30	320	580	14 - 16m	730	200	680	829	30	340	615	COMPACT AVEC BANC ET 2 PANNEAUX Largeur piscine jusqu'à 5 m <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Länge Longueur Length</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>- - 5 m</td> <td>480</td> <td>165</td> <td>480</td> <td>572</td> <td>30</td> <td>230</td> <td>405</td> </tr> <tr> <td>5 - 7 m</td> <td>530</td> <td>165</td> <td>530</td> <td>585</td> <td>30</td> <td>250</td> <td>435</td> </tr> <tr> <td>7 - 9 m</td> <td>580</td> <td>165</td> <td>530</td> <td>655</td> <td>30</td> <td>270</td> <td>475</td> </tr> <tr> <td>9 - 11m</td> <td>630</td> <td>165</td> <td>580</td> <td>685</td> <td>30</td> <td>290</td> <td>520</td> </tr> <tr> <td>11 - 12m</td> <td>680</td> <td>165</td> <td>630</td> <td>736</td> <td>30</td> <td>300</td> <td>540</td> </tr> <tr> <td>12 - 14m</td> <td>680</td> <td>165</td> <td>630</td> <td>736</td> <td>30</td> <td>320</td> <td>580</td> </tr> <tr> <td>14 - 16m</td> <td>730</td> <td>200</td> <td>680</td> <td>829</td> <td>30</td> <td>340</td> <td>615</td> </tr> </tbody> </table>	Länge Longueur Length	A	B	C	D	E	F	G	- - 5 m	480	165	480	572	30	230	405	5 - 7 m	530	165	530	585	30	250	435	7 - 9 m	580	165	530	655	30	270	475	9 - 11m	630	165	580	685	30	290	520	11 - 12m	680	165	630	736	30	300	540	12 - 14m	680	165	630	736	30	320	580	14 - 16m	730	200	680	829	30	340	615	COMPACT WITH BENCH AND 2 BLINDS Pool width up to 5 m
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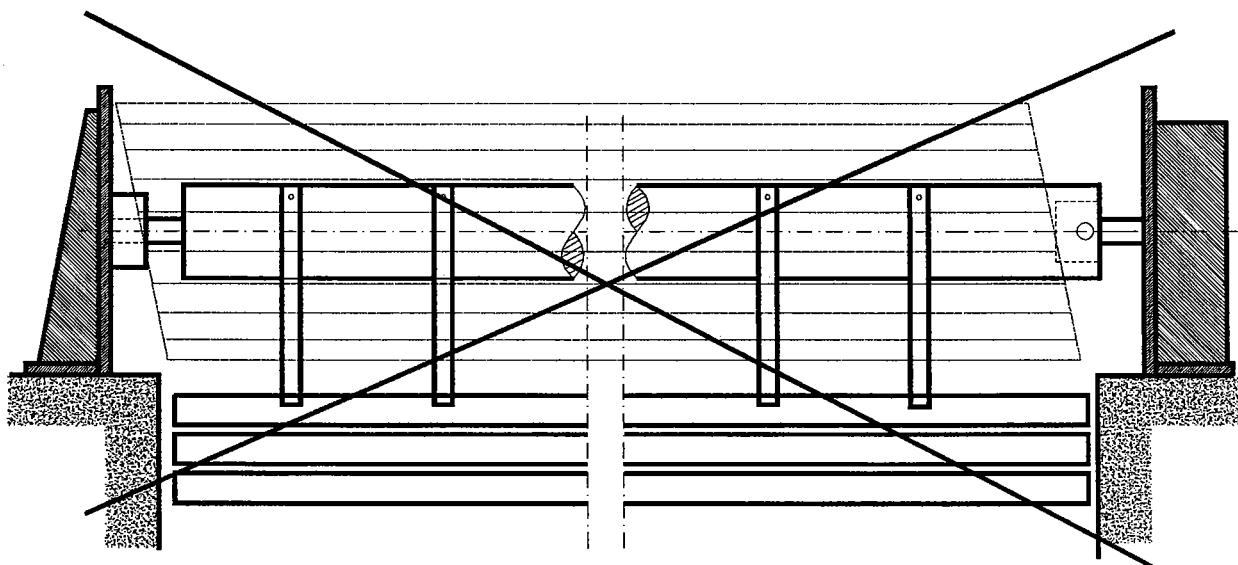


Normal position

Flusch with the pool wall and respective edge tile



Position beyond the pool walls



Dangers :

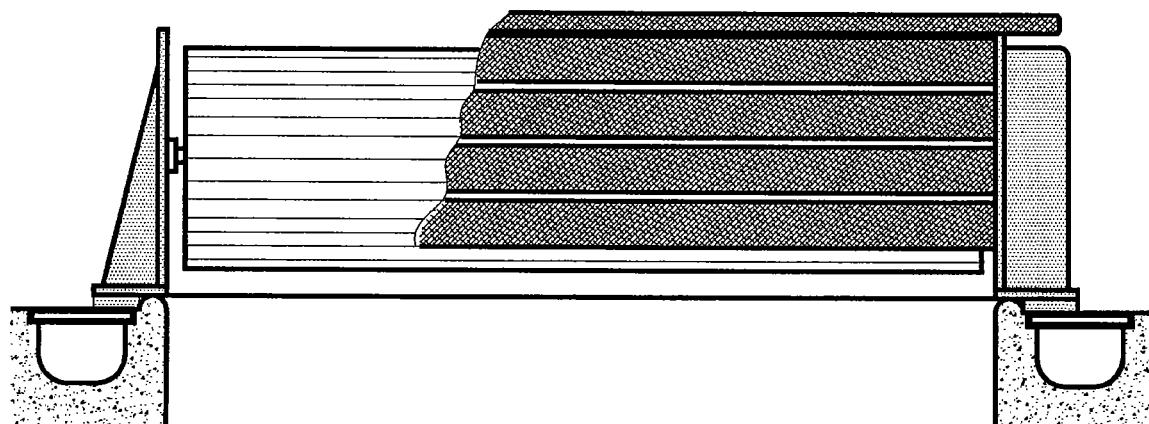
- The cover can travel either left or right on the carrier shaft
- When opening or closing the cover can rest or rub on the pool edge



Installation with a leveldeck-pool

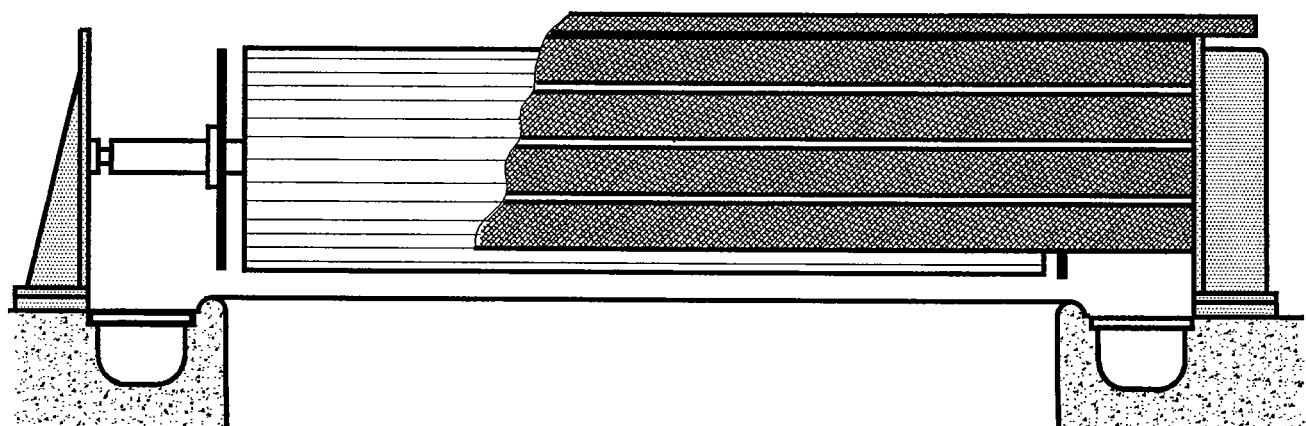
Mounting over level deck channels :

- Special plates can be provided upon receipt of accurate templates to enable the drive and non drive units to be firmly secured

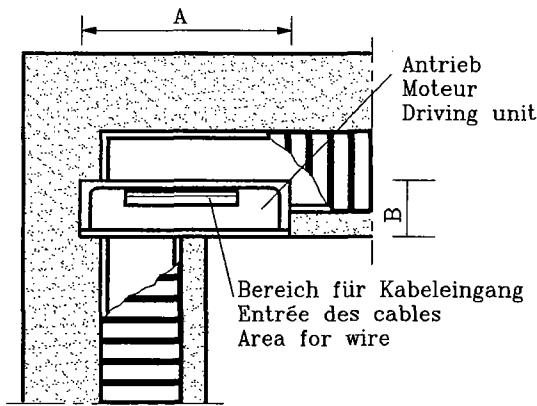
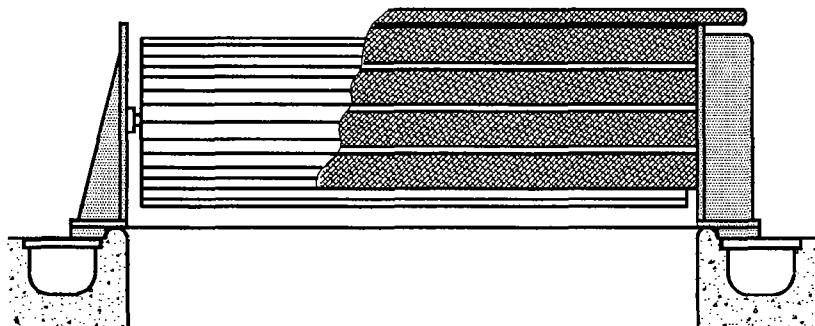
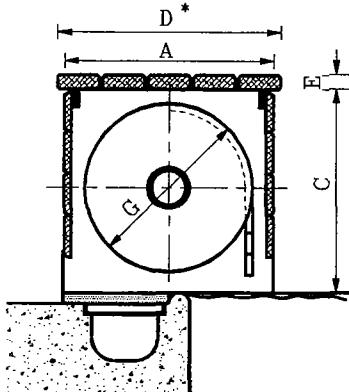


Mounting behind the level deck channels :

- To prevent misalignment when opening and closing the cover guide discs are provided



A L T E R N A T I V E I



Bis max. 7 m
Beckenbreite

Largeur piscine
jusqu'à 7 m max.

Pool width up
to 7 m max.

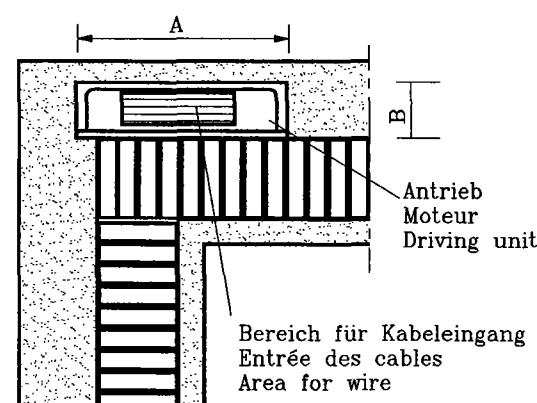
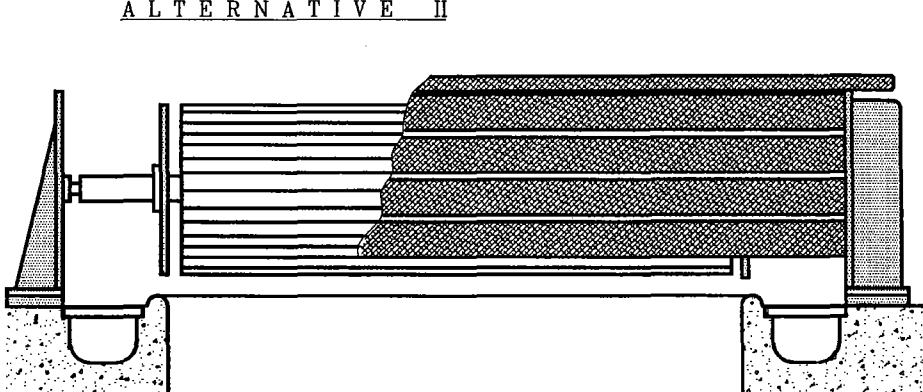
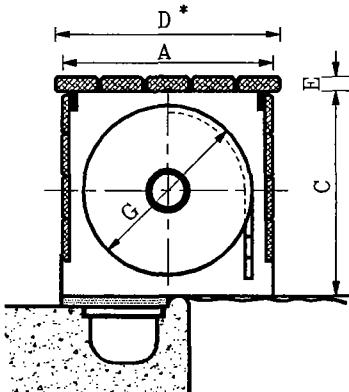
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* Über 5 m
Beckenbreite in
stabiler Rahmen-
konstruktion

* Avec ossature
renforcée pour
piscine d'une largeur
supérieure à 5 m

* Extra strong
frame for pools
above 5 m width

A L T E R N A T I V E II



Bis max. 7 m
Beckenbreite

Largeur piscine
jusqu'à 7 m

Pool width up
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Anderungen
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Sous réserve de
modifications.
Subject to change

grando

grando GmbH
SCHWIMMBAD-ABDECKUNGEN
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D-51469 Bergisch Gladbach
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Telefax: 02202/104910

01.07.91

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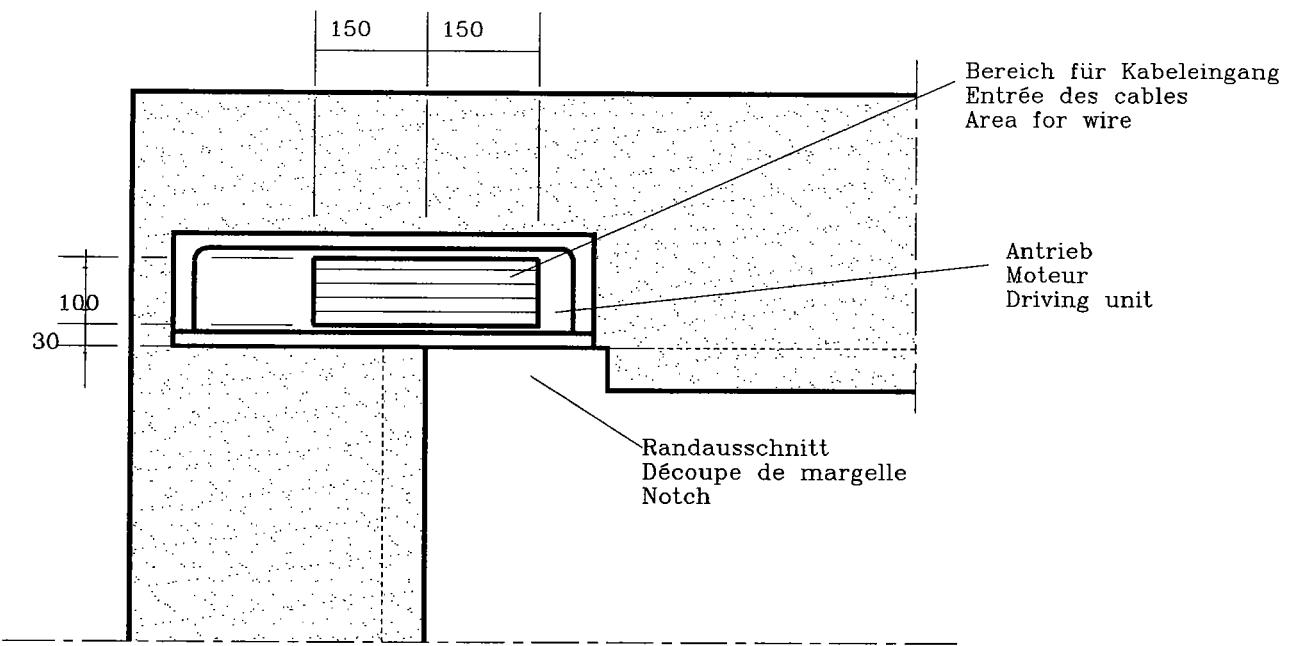
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SCHWIMMBAD-ABDECKUNG COMPACT
BEI ÜBERFLUTUNGSRINNE
VOLET COUVERTURE COMPACT
AVEC DEBORDEMENT

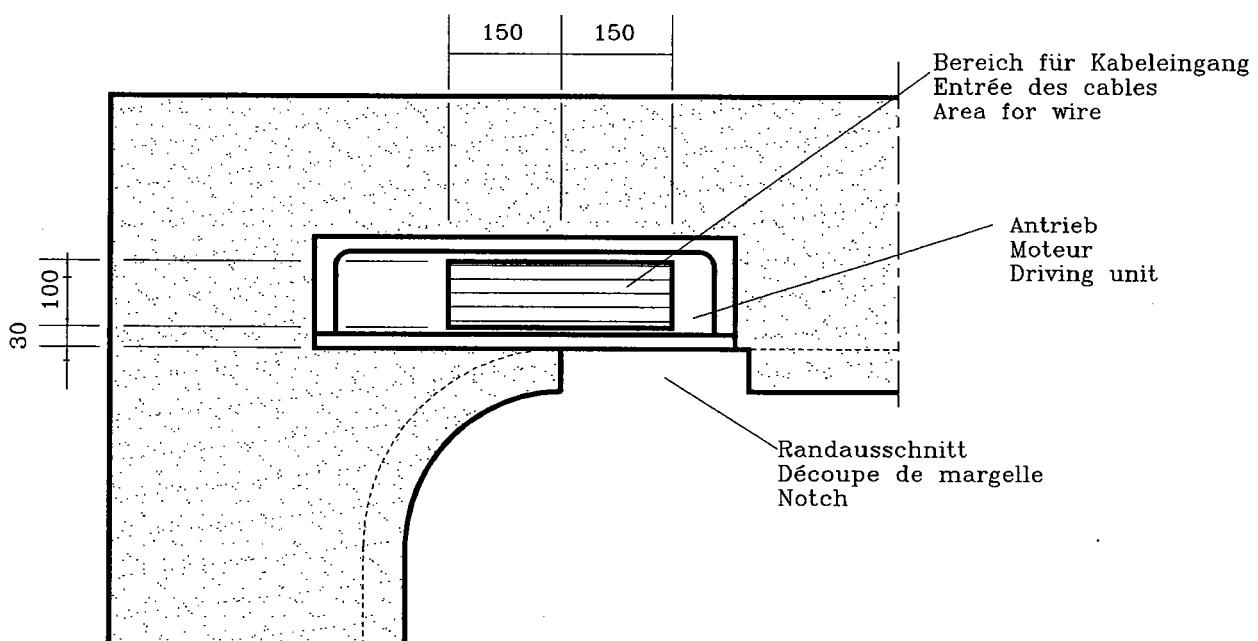
POOL COVER COMPACT FOR OVERFLOW SYSTEM

COMPACT

AUFSTELLUNG BEI BECKEN MIT RECHTWINKLIGEN ECKEN
 EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES 45°
 PLACEMENT IN CASE OF POOL WITH RIGHTANGLED CORNERS



AUFSTELLUNG BEI BECKEN MIT RUNDEN ECKEN
 EMPLACEMENT ET CAS DE PISCINE AVES DES ANGLES ARRONDIS
 PLACEMENT IN CASE OF POOL WITH ROUND CORNERS



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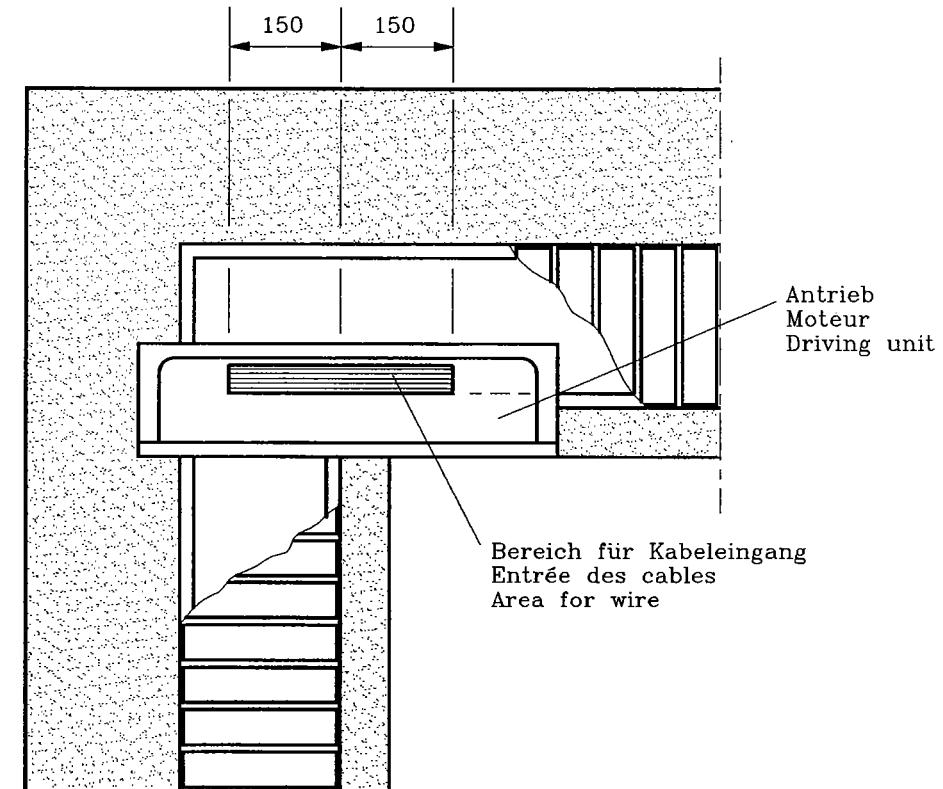
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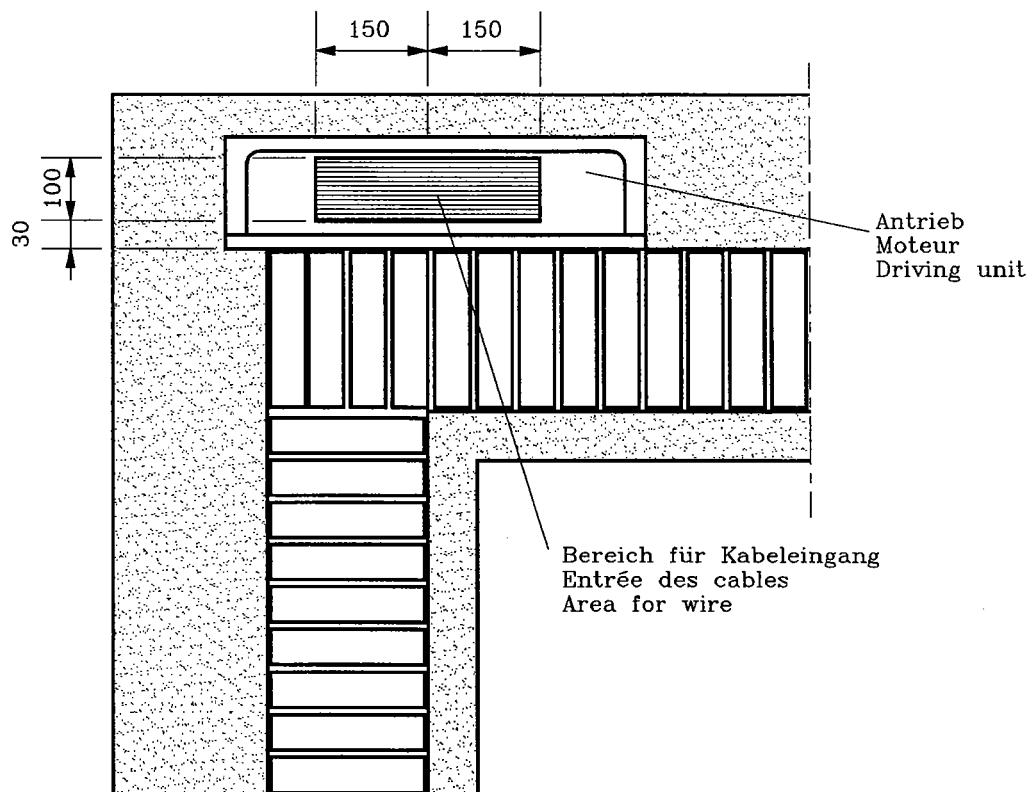
KABELEINGANG FÜR ABDECKUNG COMPACT
 ENTREE DES CABLES VOLET COMPACT
 WIRE AREA FOR COMPACT COVER

COMPACT

ALTERNATIVE I



ALTERNATIVE II



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finished dimensions
in mm.

Anderungen
vorbehalten.
Sous réserve de
modifications.
Subject to change

grando

grando GmbH

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01.07.91

bg

c/anl/201-004

201-004

KABELEINGANG ABDECKUNG COMPACT
BEI ÜBERFLUTUNGSRINNE

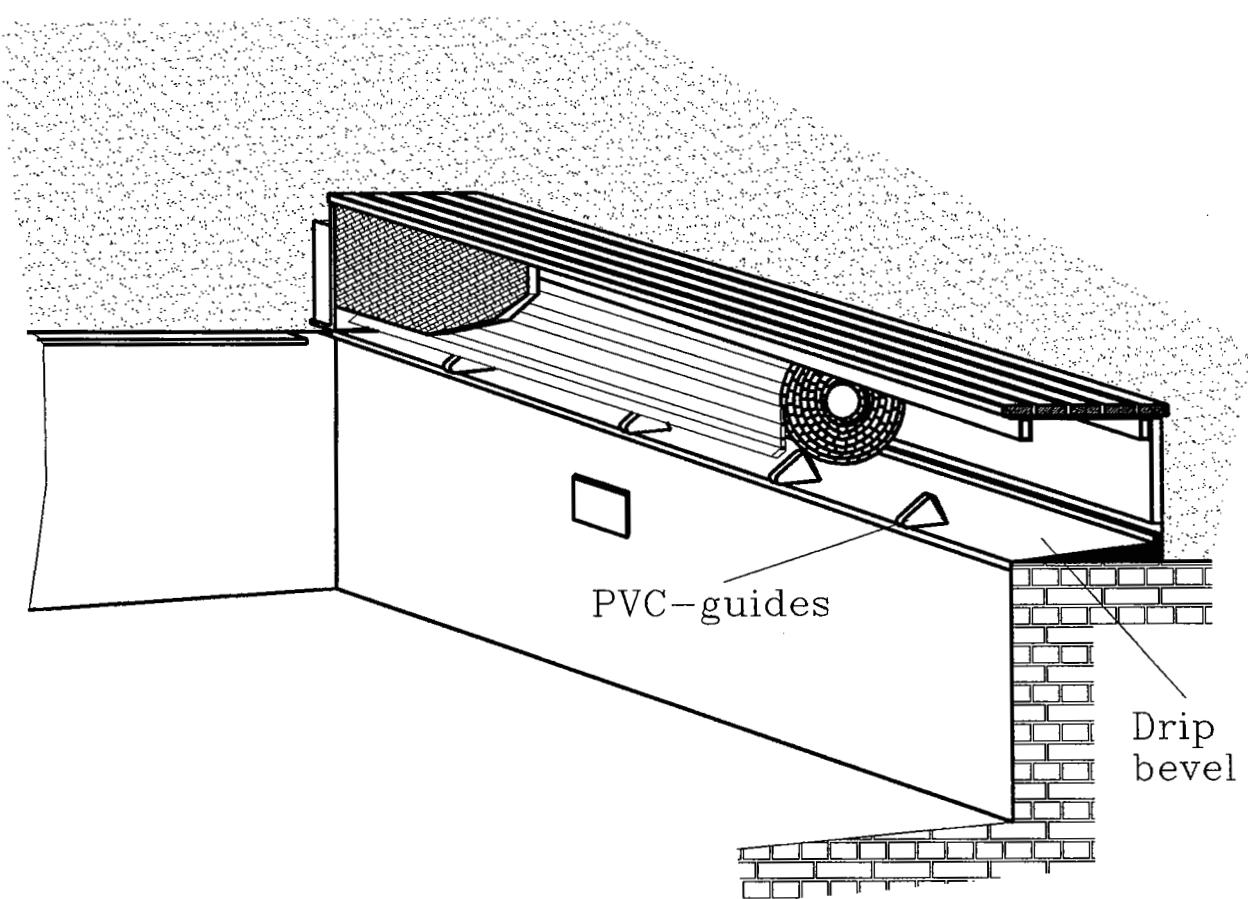
ENTREE DES CABLES POUR VOLET
COMPACT AVEC DEBORDEMENT

WIRE AREA COMPACT WITH OVERFOLW SYSTEM

COMPACT

grando®

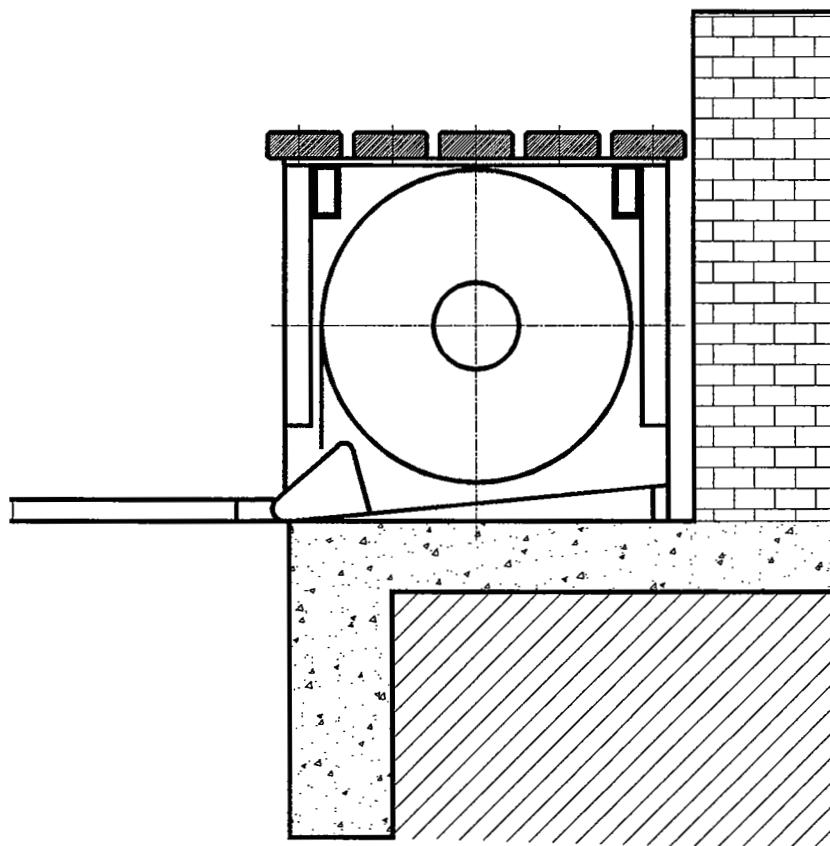
COMPACT cover with paneling flush with the pool edge



- The PVC-guides are individual manufactured according to the measure of the pool edge and installed each 700–800 mm

grando®

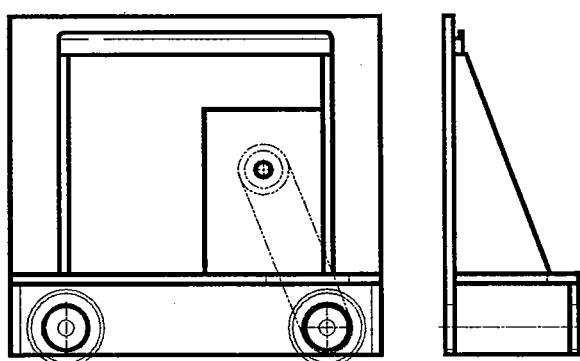
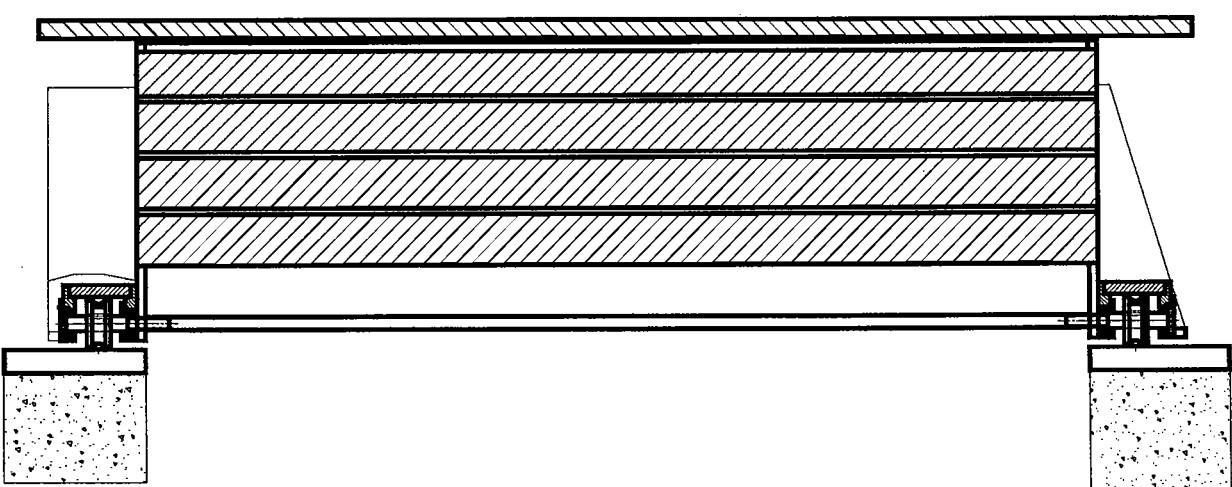
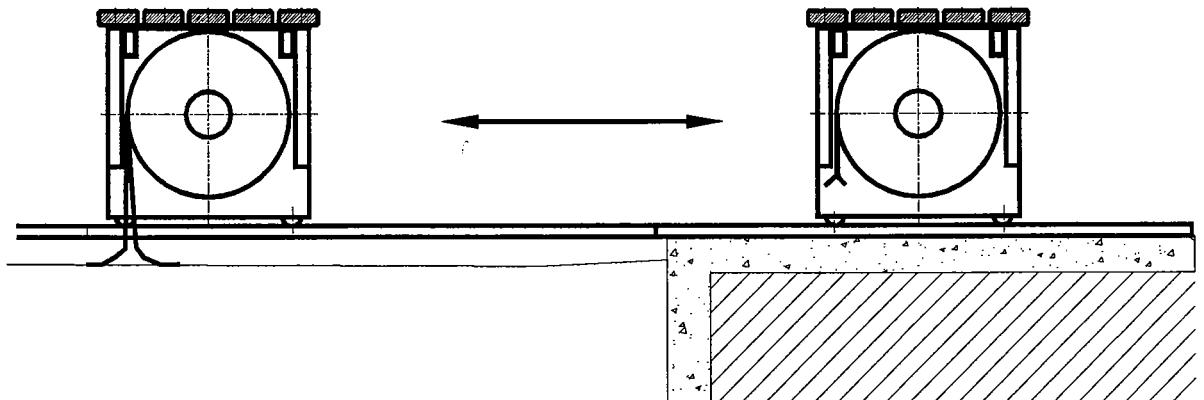
Flush with the pool edge



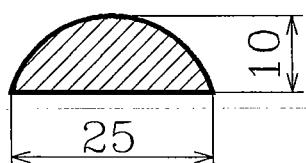
- Installation of PVC-guides
- For indoor-swimming pools, a drip bevel can be installed to allow the water from the opened cover to drain back into the pool



MOBILE

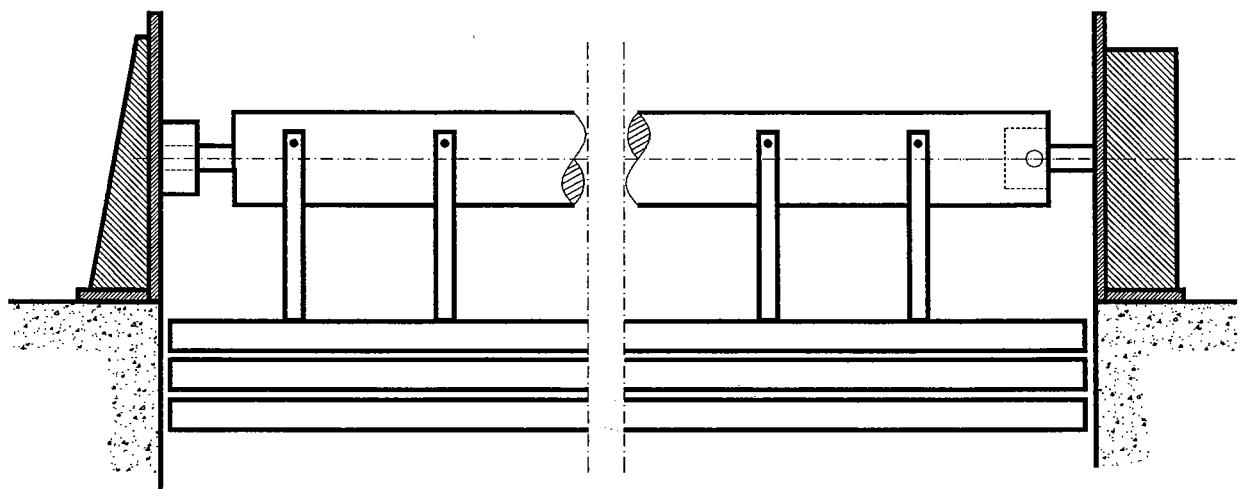


- Cover assembly can be either manually or electrically operated
- Cove assembly runs on brass tracks
- This cover is only available with panelling to all 3 sides

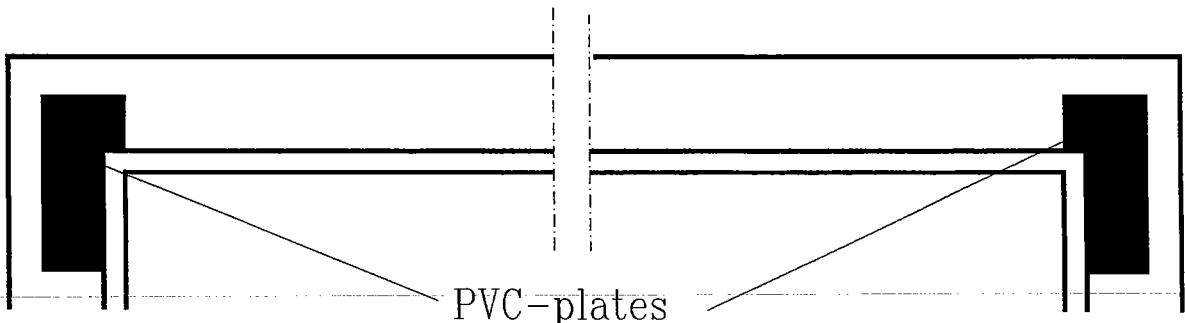
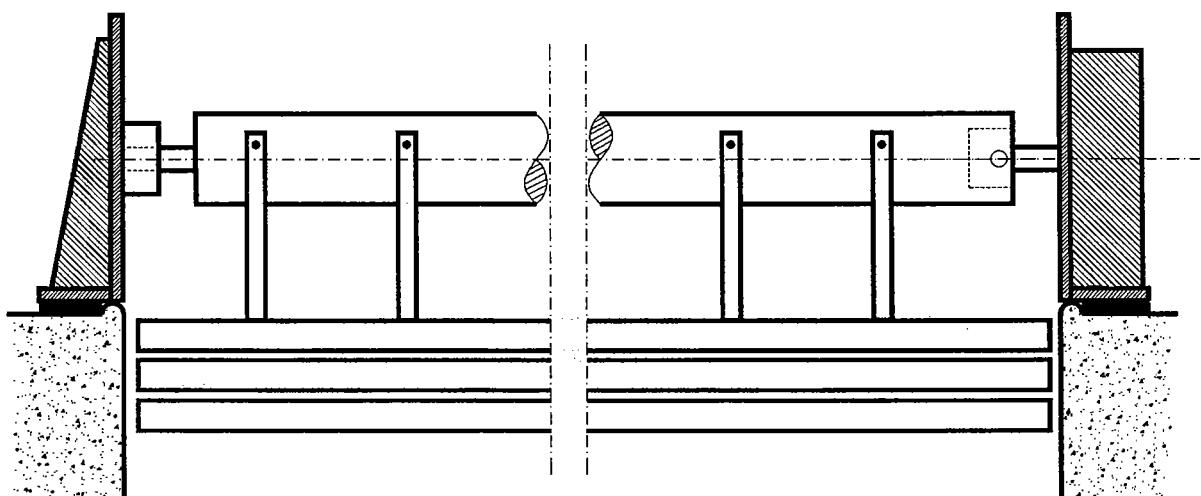




For pool with no top edge overhang



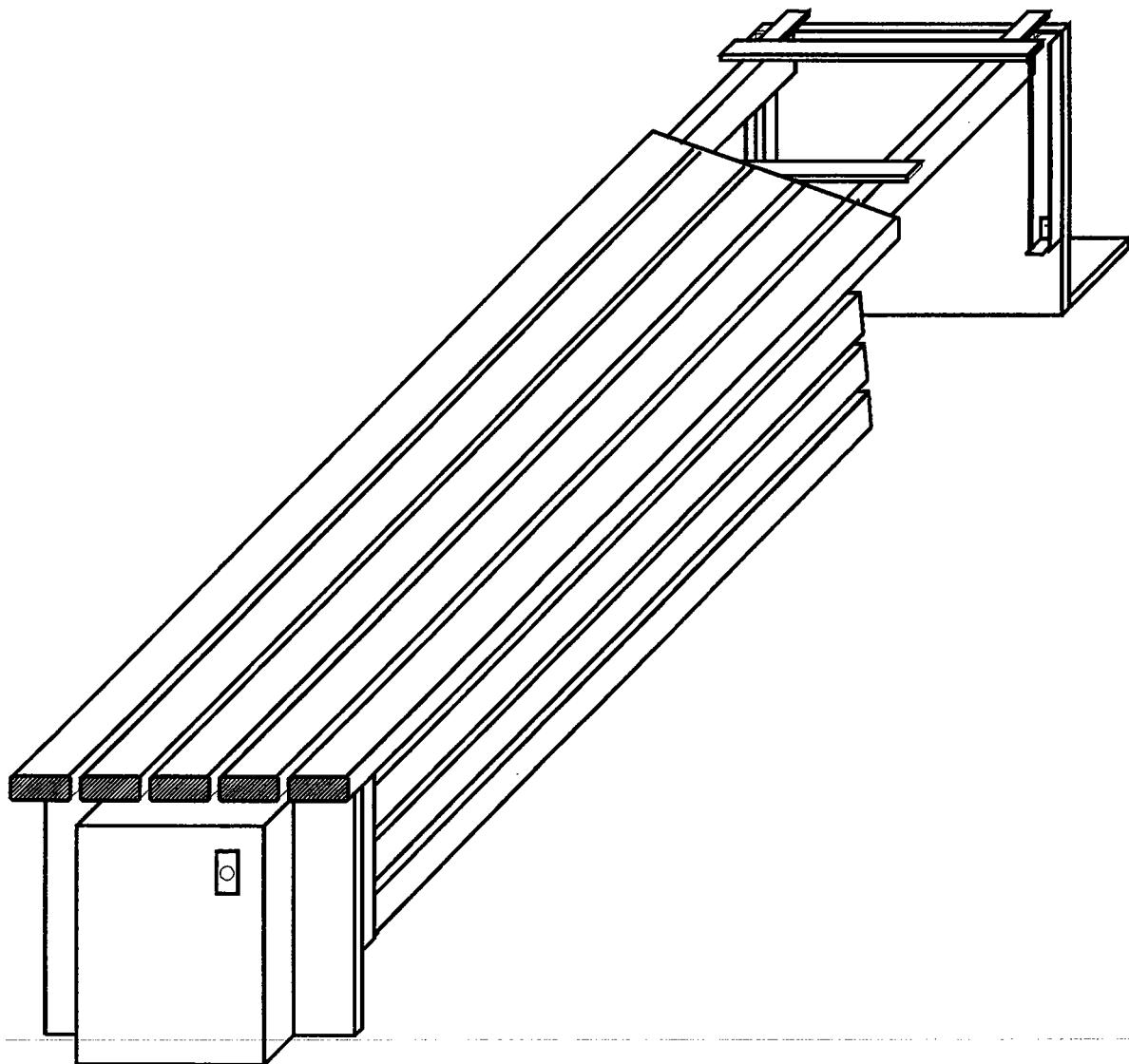
Depending on the edge tile detail the drive and non drive units must be at the same height.
If necessary PVC-plates can be produced to provide the necessary clearance





BENCH AND PANELING

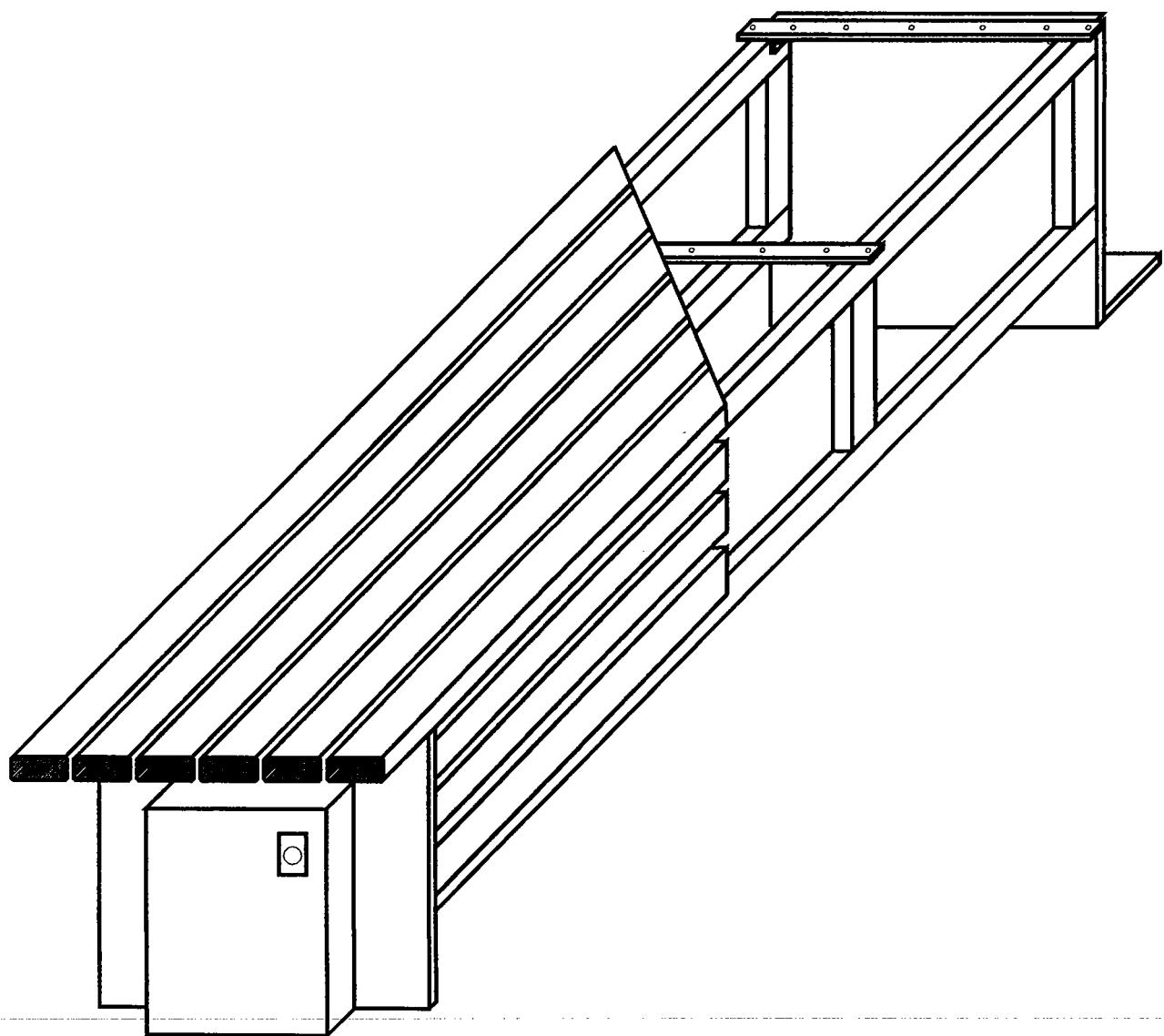
- Bench in wood or PVC with frame construction
- Frame can be constructed to accept paneling by the customer
- Paneling in wood or PVC





FRAME CONSTRUCTION'S PANELING

- In wood or PVC
- To accept panelling by the customer





Schwimmbad-Abdeckungen seit 1963
pool covers • couvertures de piscines

Technical description grando IBS

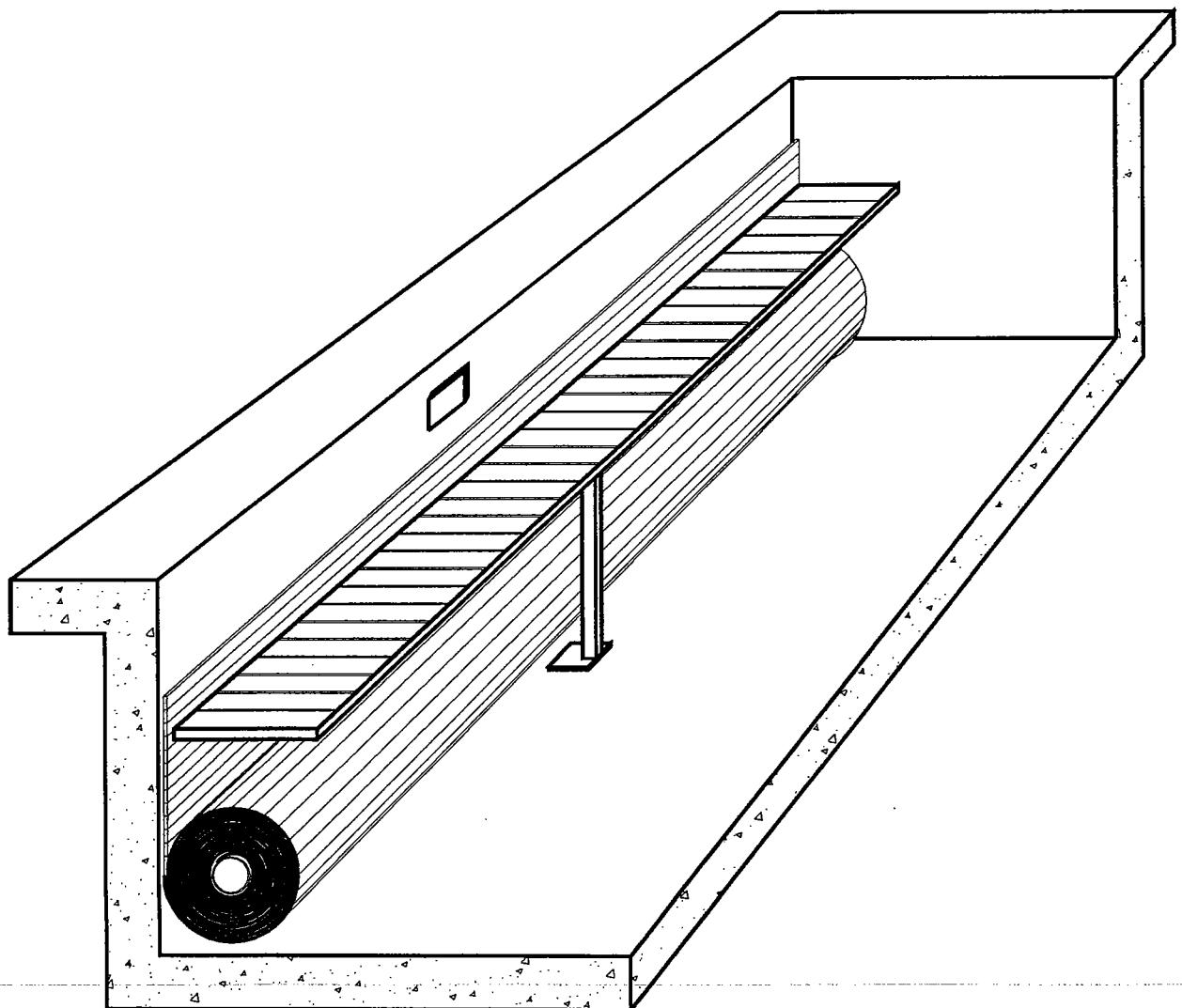
- Pool cover** A special smooth curved PVC profile creates a slatted pool cover with excellent water shedding properties. Available in white, blue and grey as standard colours. A solar version is available at an extra cost. The standard slats are reversible and can be turned over periodically to combat the build up of calcium deposits. Each slat has three internal hollow sections. Each section has a waterproof multilayered seal that forms a molecular bond with the PVC slat, this eliminates any differential expansion of the materials used and ensures a watertight seal. The system for joining the slats utilising stainless steel pins and plastic locking blocks, eliminates any lateral displacement of the slats and facilitates the removal and replacement of individual slats. The combination of the slat joining and end sealing systems means that radius corners, roman ends, cut outs and slanting cuts can be accurately reproduced. The slats are joined by a double hook system which provide a high tensile, very flexible joint between the slats. The PVC slats are resistant to ultra violet light, non biodegradable, non corrosive and completely hygienic. COMPACT covers are suitable for any pool up to 25 m x 10 m. With solar slats the heat energy from the sun is transferred into the pool water via the transparent upper side and black underside of the slats, therefore creating a saving on heating bills.
- Design** The non drive bearing and wall sleeve are formed from solid PVC.
- Drive unit** The drive unit is either 400 V/24 V DC or 230 V/24 V DC motor with integral PVC board, reduction gears, limit and safety limit switches and thermal trip protection mounted in an aluminium casing. The drive casing is covered with a PVC casing once installed.
- Carrier shaft** The carrier shaft and end journals are conservated from high grade stainless steel. The carrier shaft is driven by the motor through a sealed wall sleeve. The wall sleeve contains a bearing and water seals to prevent water ingress. The bearing is packed with special grease.
- Power supply** The transformer is either 400 V/24 V or 240/24 V with thermal protection. The transformer is supplied within an IP 55 rated casing.
- Key switch** The key switch is remotely located and consists of an anodised face plate with a removable key for the open/close operation and an emergency stop switch. The key switch is designed to be installed in the wall.

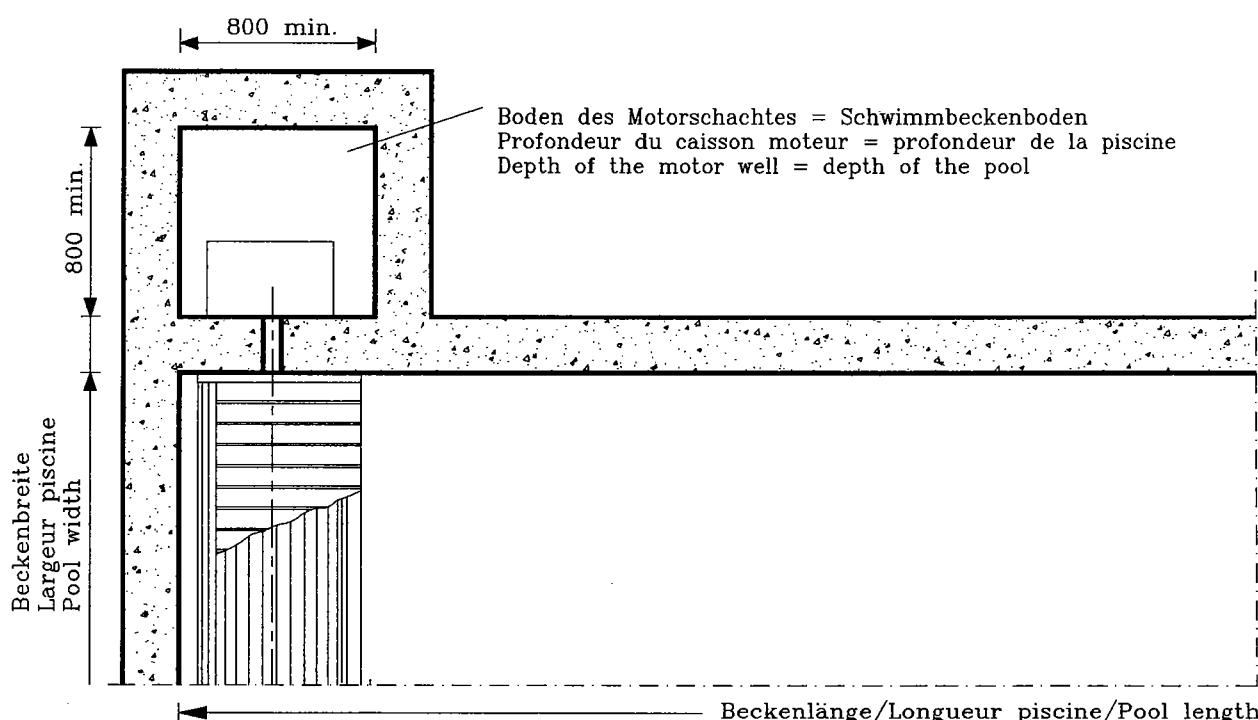
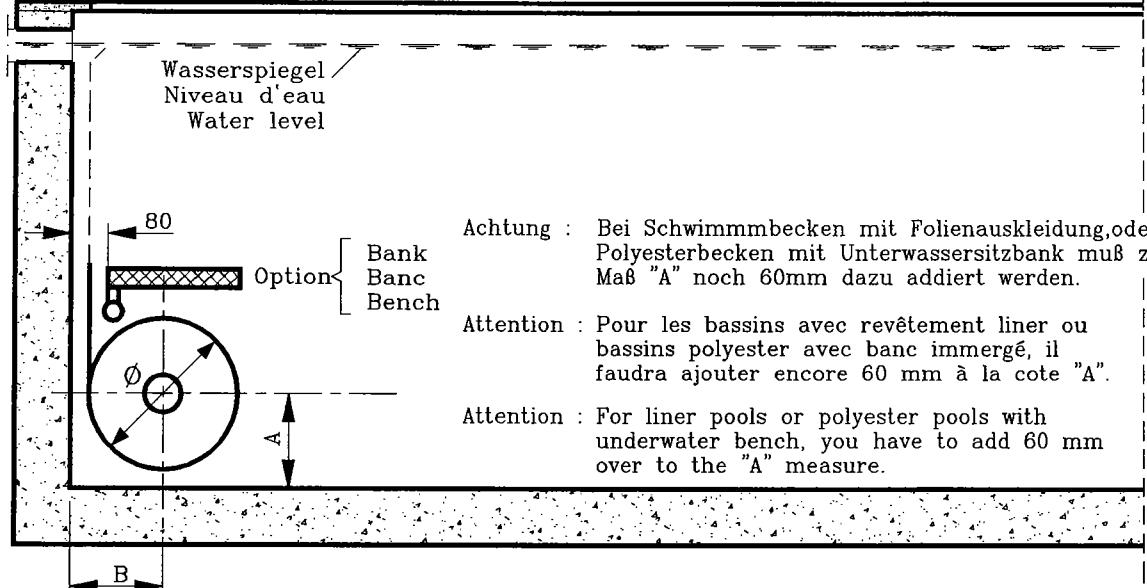
ACCESSORIES

- Underwater bench** An underwater bench is available for the IBS-1 type cover. The rectangular hollow section high grade stainless steel frame has white PVC slatted inserts. For pools over 3.5 m wide a centre support is necessary.
- Underwater-pit cover** An underwater cover assembly is available for the IBS-2 type cover. The high grade stainless steel angle section framework has either white PVC slatted inserts or PVC inserts to accept tiles to match the floor tiling. The PVC inserts to accept tiles are available at an extra cost. Guide rollers are fitted to the rear of framework to protect the cover slats and connecting straps.
- Handrail** Special polished stainless steel handrail and brackets are essential for the prevention of accidents on standard pools. Accident prevention cannot be guaranteed with level deck pools.

IBS-1

- Possible to retrofit to existing pools (specially for indoor pools)
- Underwater bench stainless steel frame with guide rollers and removable PVC panels
- Underwater front pannel available
- Let enough place for the ground-vacuum cleaner





Beckenlänge Longueur pis. Pool length	Ballen \emptyset mm \emptyset volet \emptyset cover	A mm	B mm
6 m	415	260	240
7 m	445	275	255
8 m	460	280	260
9 m	490	295	275
10 m	505	305	285
11 m	530	315	295
12 m	545	320	305
13 m	565	335	315
14 m	605	355	335
15 m	625	360	345
16 m	640	370	350
17 m	650	375	355

Maßangaben nur für Schwimmbecken ohne Schrägen und Rundungen sowie einer max. Beckenbreite von 7,00 m.

Cotes valables uniquement pr bassin sans découpes arrondies ou en biais, ainsi que pr largeur max. de 7,00 m.

Dimensions are only for pools without slant and round lines as well as a max. pool width up to 7,00 m.

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06.05.92
14.09.98

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301-002

ABDECKUNG AM BECKENBODEN

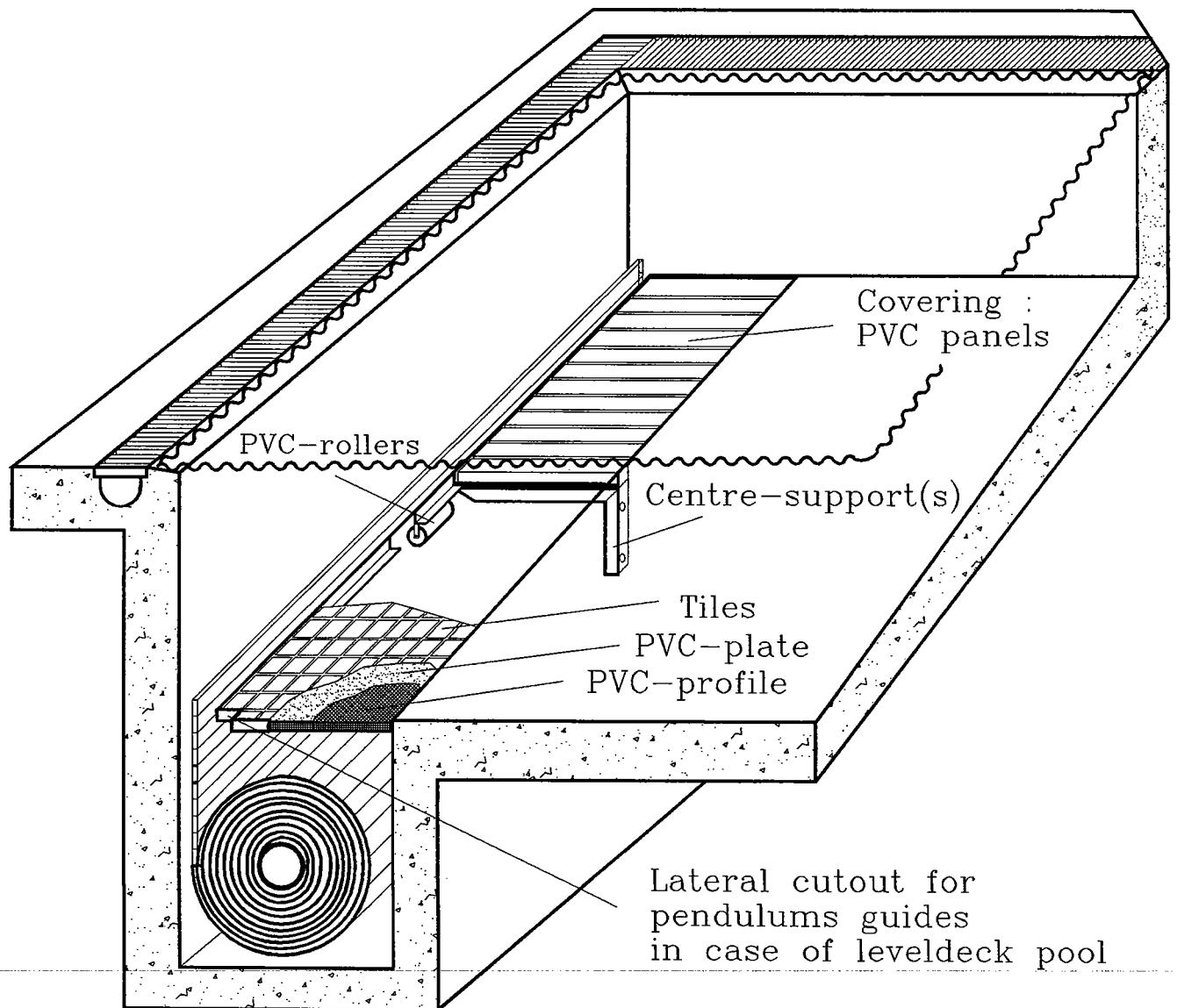
VOLET AU FOND DE LA PISCINE

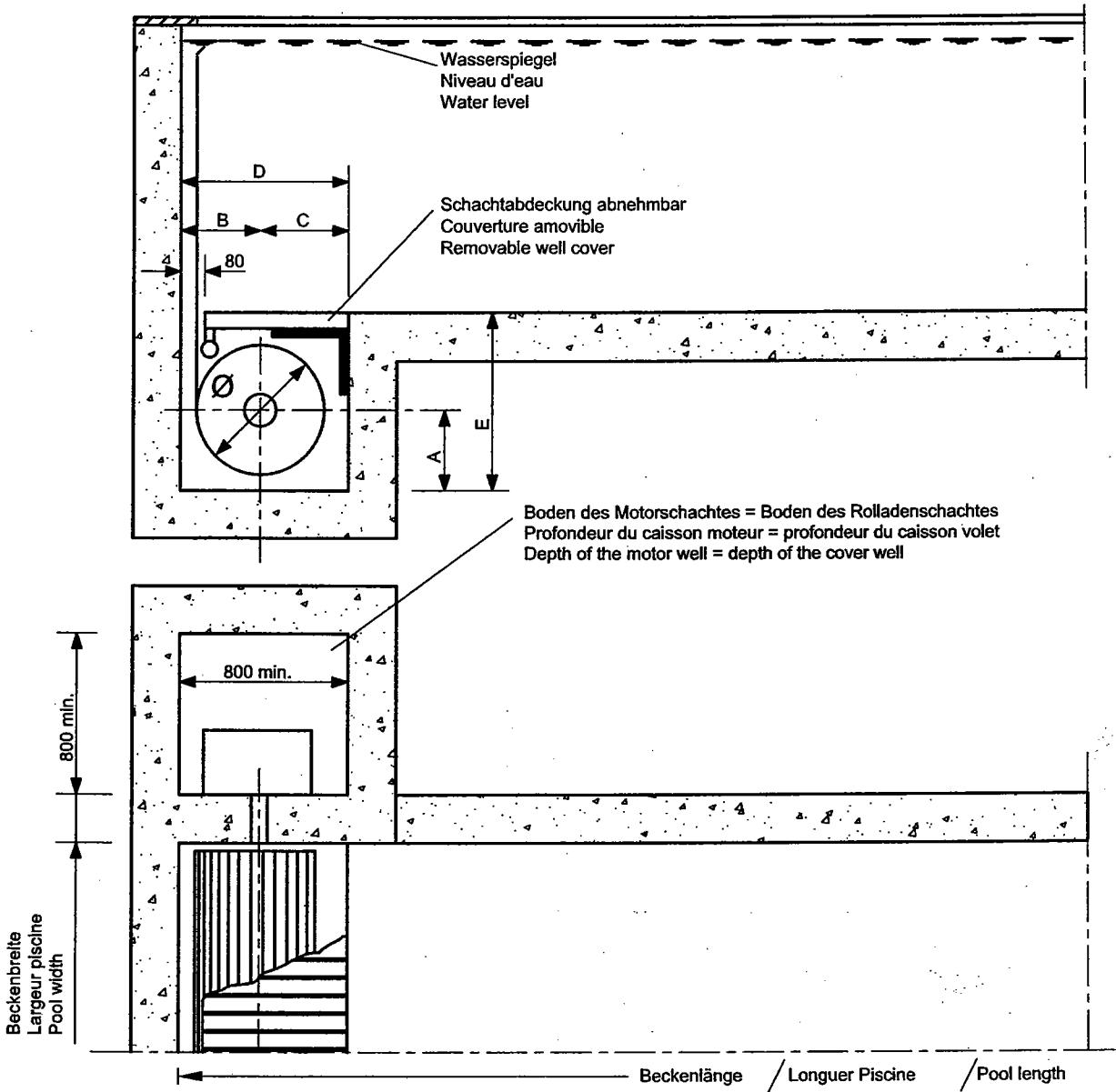
COVER AT THE BOTTOM OF THE POOL

I B S - 1

IBS-2

- A return inlet and a floor sump should be installed in the cover pit
- Underwater pit cover with stainless steel frame and guide rolls and removable PVC panels
- Underwater pit cover available with PVC panels to accept tiles to match pool floor tiling





Beckenlänge Longueur pisc. Pool length	Ø Ballen Ø volet Ø cover	A	B	C	D	E
< 6 m	415	260	240	285	525	615
< 7 m	445	275	255	300	555	645
< 8 m	460	280	260	310	570	660
< 9 m	490	295	275	325	600	690
< 10 m	505	305	285	330	615	705
< 11 m	530	315	295	345	640	730
< 12 m	545	320	305	355	660	745
< 13 m	565	335	315	365	680	765
< 14 m	605	355	335	385	720	805
< 15 m	625	360	345	395	740	825
< 16 m	640	370	350	400	750	840
< 17 m	650	375	355	405	760	850
< 18 m	670	385	365	415	780	870
< 19 m	675	385	370	420	790	875

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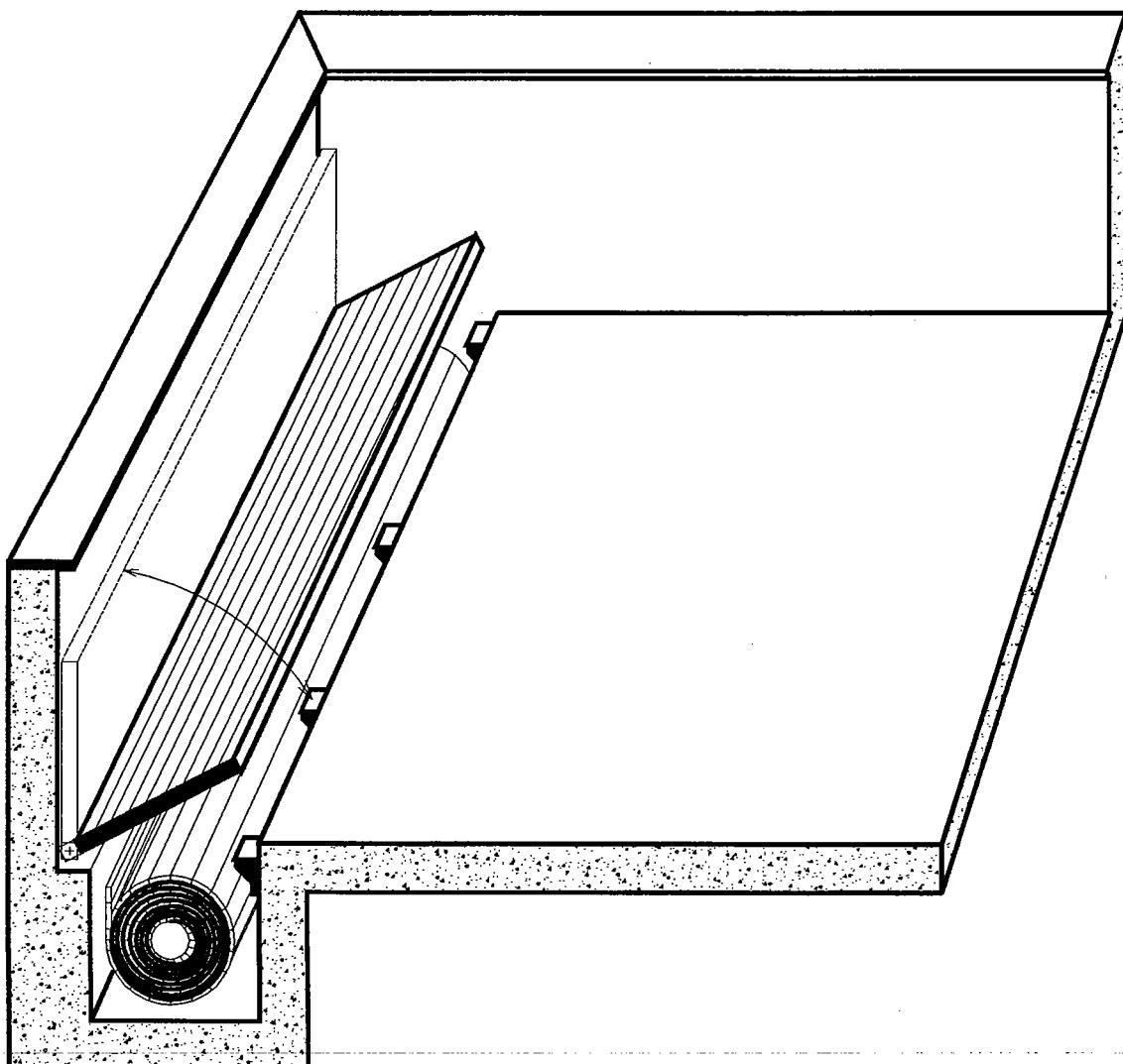
ABDECKUNG UNTER BECKENBODEN
VOLET AU-DESSOUS DE FOND DE LA PISCINE
COVER BELOW THE BOTTOM OF THE POOL

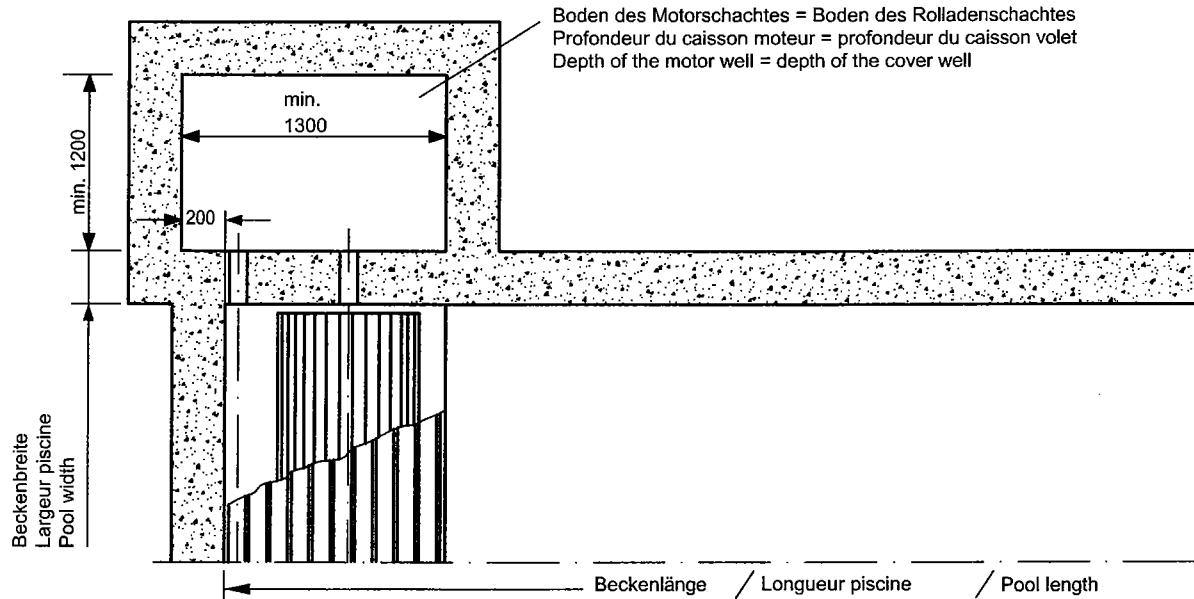
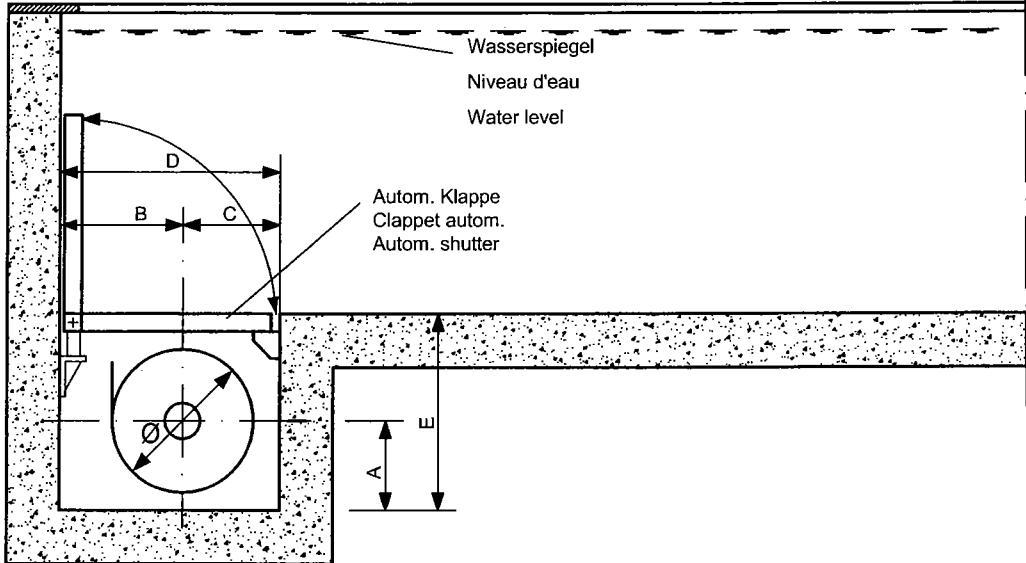
I B S - 2



IBS-3

- Mostly for public pools, because no slope over 8 mm
- Automatic shutter with PVC profiles
- Grando limit-switch system (precise adjustment)
- Interlocked electrics system ensure the timed operation of shutter and slats





Beckenlänge Longueur pisc. Pool length	Ø Ballen Ø volet Ø cover	A	B	C	D	E
< 6 m	415	260	410	260	670	765
< 7 m	445	275	425	275	700	795
< 8 m	460	280	430	280	710	810
< 9 m	490	295	445	295	740	840
< 10 m	505	305	455	305	760	855
< 11 m	530	315	465	315	780	880
< 12 m	545	320	475	325	800	895
< 13 m	565	335	485	335	820	915
< 14 m	605	355	505	355	860	955
< 15 m	625	360	515	365	880	975
< 16 m	640	370	520	370	890	990
< 17 m	650	375	525	375	900	1000
< 19 m	675	390	540	390	930	1025

Maßangaben nur für Schwimmbecken ohne Schrägen und Rundungen sowie einer max. Beckenbreite von 7,00 m.
Cotes valables uniquement pour bassin sans découpes arrondies ou en biais, ainsi que pr largeur max. de 7,00 m.
Dimensions are only for pools without slant and round lines as well as a max. pool width up to 7,00 m.

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02.07.91
25.10.2006

bg
Stefan Richartz

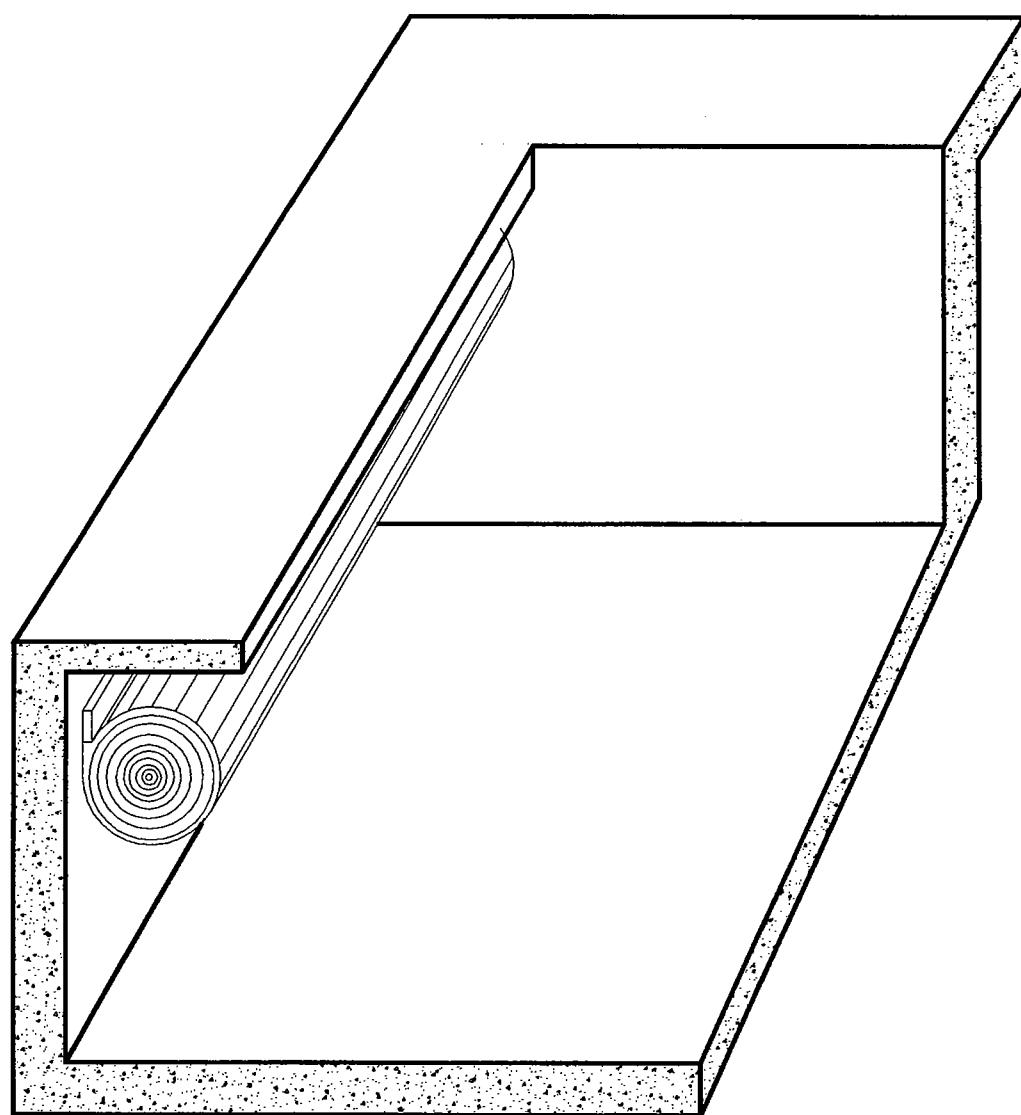
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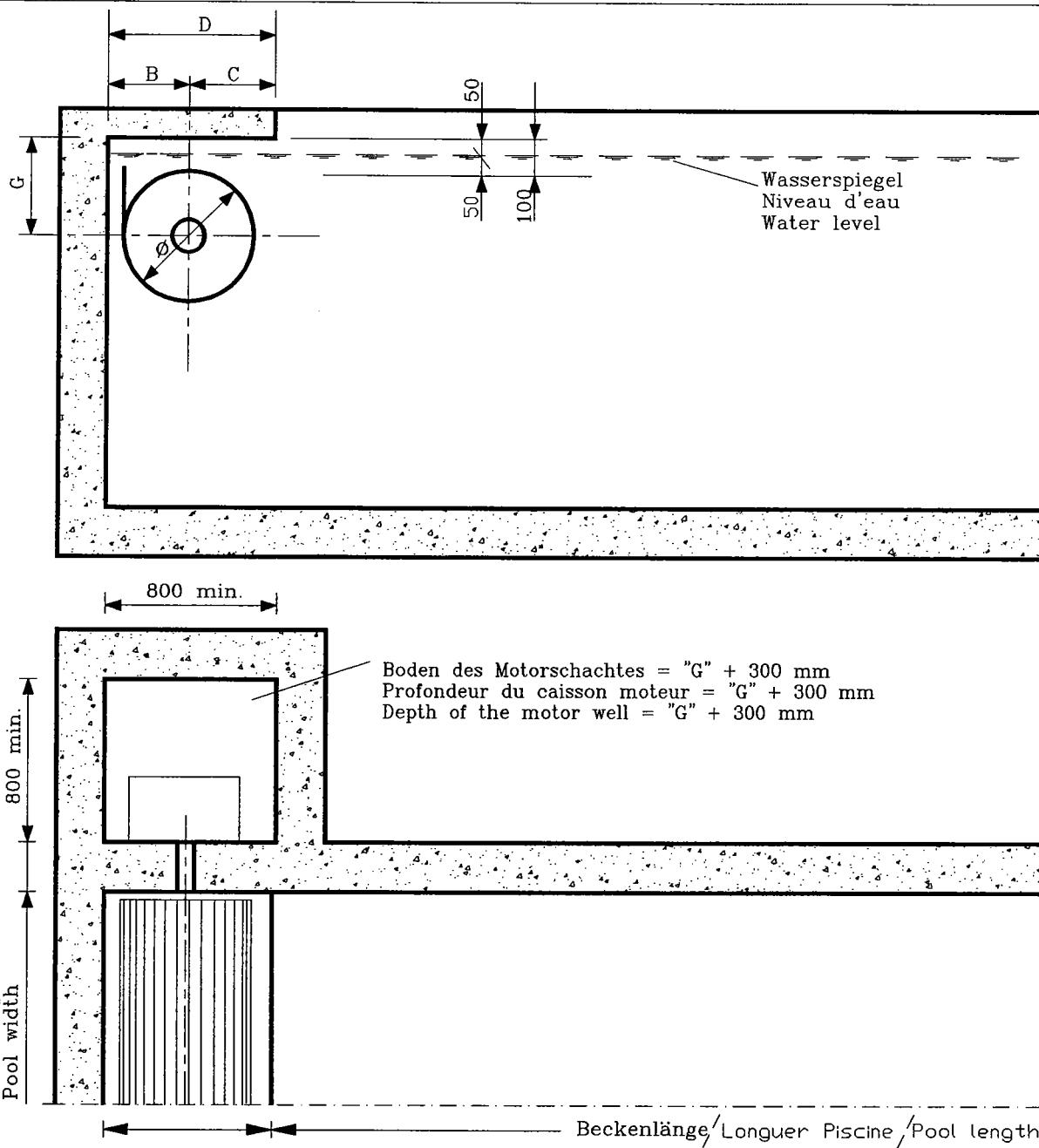
ABDECKUNG IN SCHACHT UNTER BECKENBODEN
MIT AUTOM. SCHACHTKLAPPE
VOLET AU-DESSOUS DU FOND DE LA PISCINE
AVEC CLAPPET AUTOMATIQUE
COVER BELOW THE BOTTOM OF THE POOL WITH
AUTOMATIC SCHATTER

IBS - 3

grando®

IBS-4





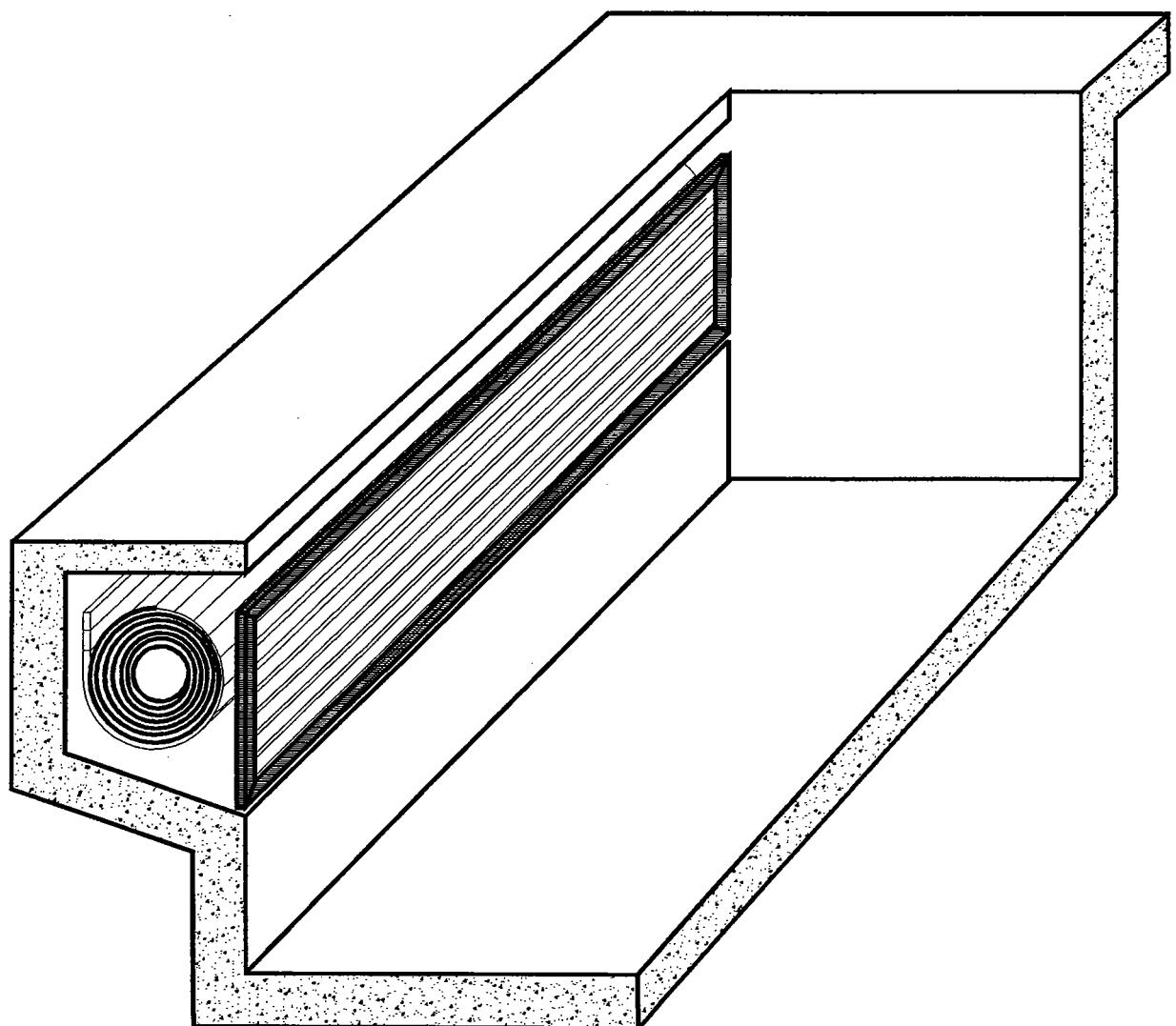
Beckenlänge Longueur pis. Pool length	Ballen ø mm ø volet ø cover	A	B	C	D	E	G
6 m	415		260	360	620		360
7 m	445		275	375	650		375
8 m	460		280	380	660		380
9 m	490		295	395	690		395
10 m	505		305	405	710		405
11 m	530		315	415	730		415
12 m	545		325	425	750		425
13 m	565		330	435	765		435
14 m	605		355	455	810		445
15 m	625		360	465	825		465
16 m	640		370	470	840		470
17 m	650		375	475	850		475

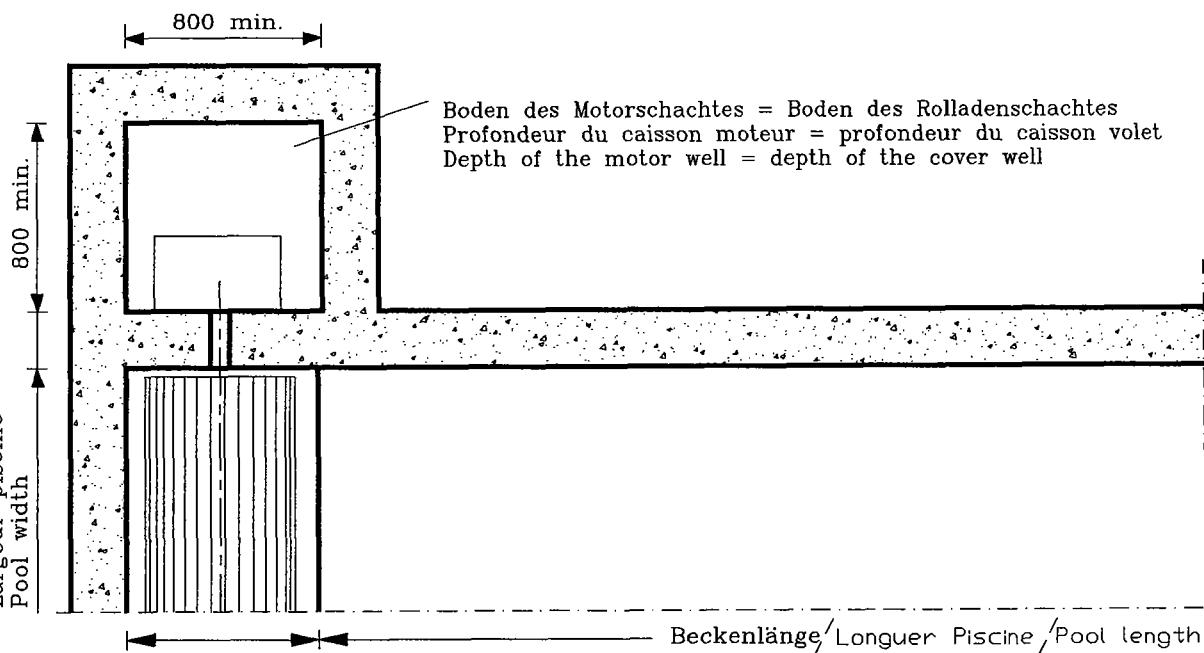
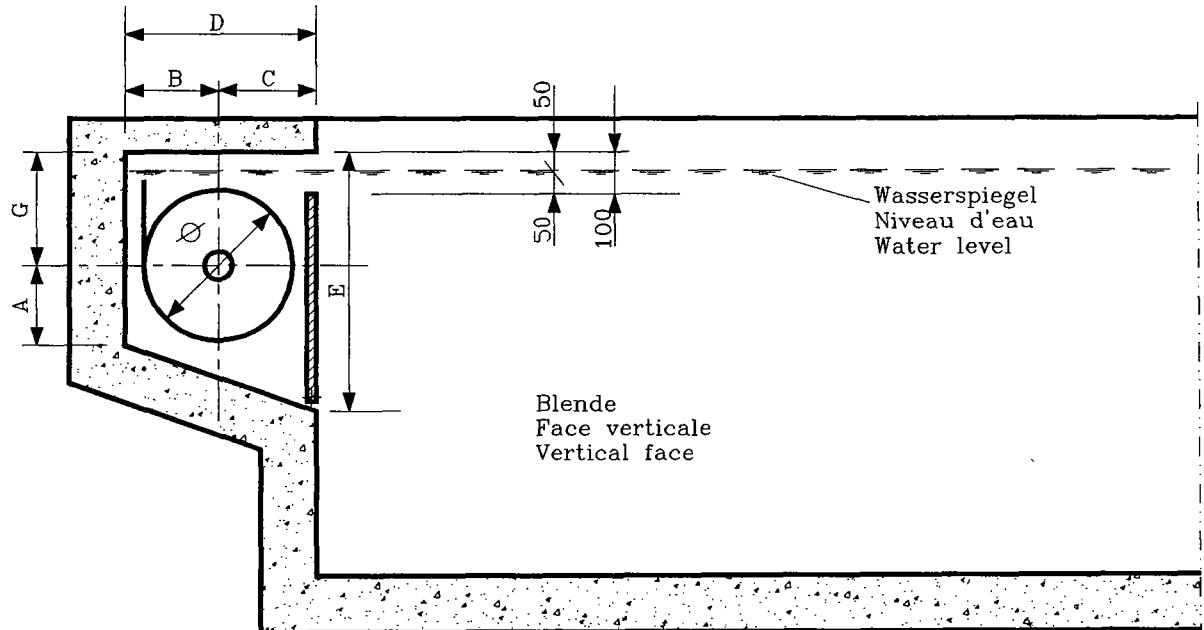
Maßangaben nur für Schwimmbecken ohne Schrägen und Rundungen sowie einer max. Beckenbreite von 7,00 m.
Cotes valables uniquement pr bassin sans découpes arrondies ou en biais, ainsi que pr largeur max. de 7,00 m.
Dimensions are only for pools without slant and round lines as well as a max. pool width up to 7,00 m.

All Maße sind Fertigmaße in mm. Toutes les mesures sont des mesures finales en mm. All dimensions are finished dimensions in mm.	grando grando GmbH SCHWIMMBAD-ABDECKUNGEN De-Gasperi-Straße 6 D-51469 Bergisch Gladbach Telefon: 02202/1049-0 Telefax: 02202/104910	01.07.91	bg	i/anl/304-001	304-001
Änderungen vorbehalten. Sous réserve de modifications. Subject to change.	ABDECKUNG DIREKT UNTER DEM WASSERSPIEGEL VOLET JUSTE EN DESSOUS DU NIVEAU D'EAU COVER DIRECTLY BELOW THE WATER LEVEL			I B S - 4	

IBS-5

- Front panelling
- Stainless steel frame with PVC-slats
- Depending on the dimensions of the front panel it may be necessary to install in sections





Boden des Motorschachtes = Boden des Rolladenschachtes
 Profondeur du caisson moteur = profondeur du caisson volet
 Depth of the motor well = depth of the cover well

Beckenlänge Longueur pisc. Pool length	Ballen ømm Ø volet Ø cover	A	B	C	D	E	G
6 m	415	260	260	360	620	715	360
7 m	445	275	275	375	650	745	375
8 m	460	280	280	380	660	760	380
9 m	490	295	295	395	690	790	395
10 m	505	305	305	405	710	805	405
11 m	530	315	315	415	730	830	415
12 m	545	325	325	425	750	845	425
13 m	565	335	335	435	770	865	435
14 m	605	355	355	455	810	905	445
15 m	625	360	360	465	830	925	465
16 m	640	370	370	470	840	940	470
17 m	650	375	375	475	850	950	475

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grando GmbH

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Telefax: 02202/104910

01.07.91

bg

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ABDECKUNG IN GESCHLOSSENER NICHE

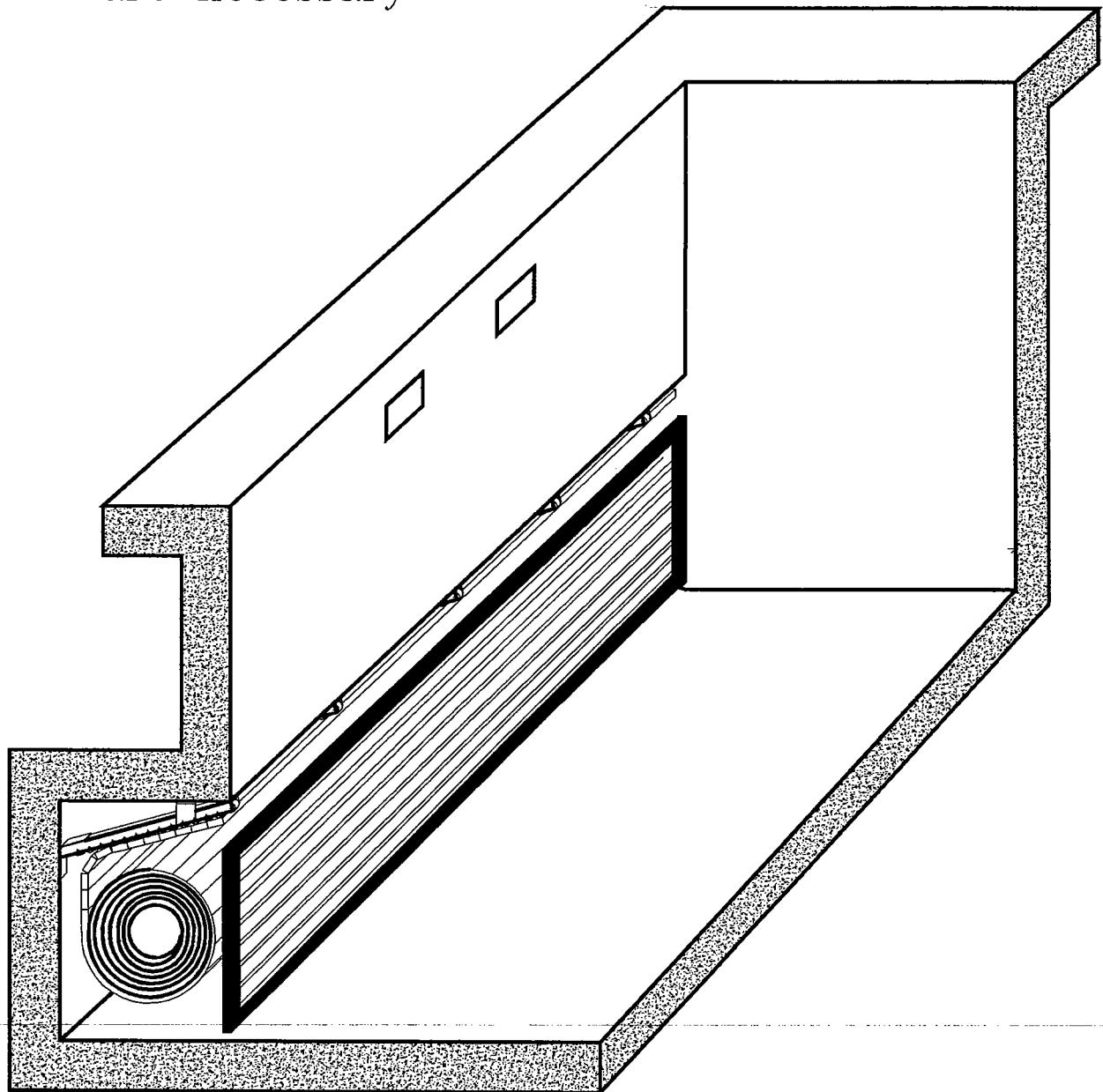
VOLET DANS UNE NICHE FERMEE

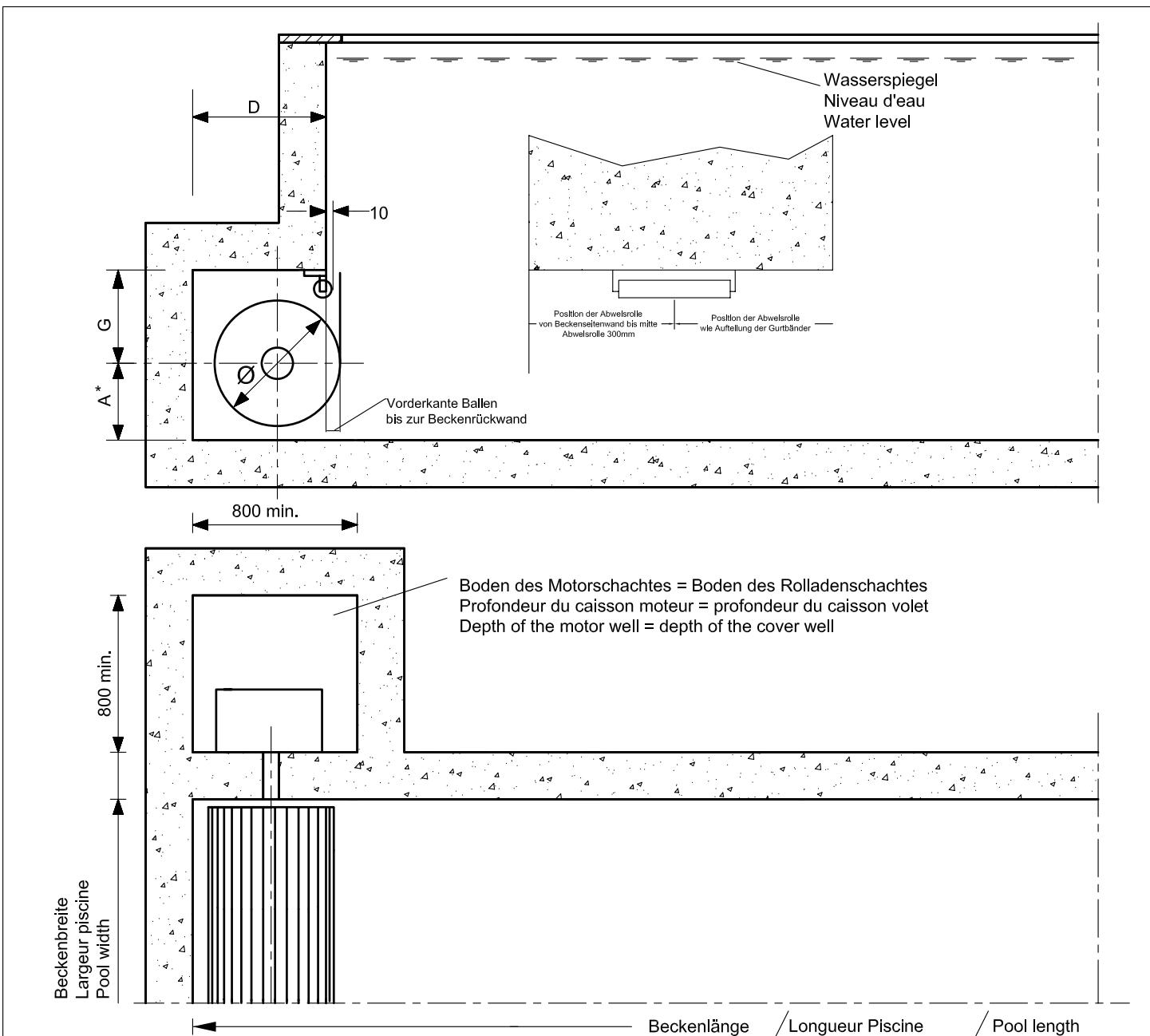
COVER IN CLOSED RECESS

I B S - 5

IBS-6

- PVC guide rollers are necessary
- The opening and closing of the cover is a gentle movement
- It is possible to stop the cover at any point during the opening and closing procedure
- For the underwater panelling, the roll guides are necessary



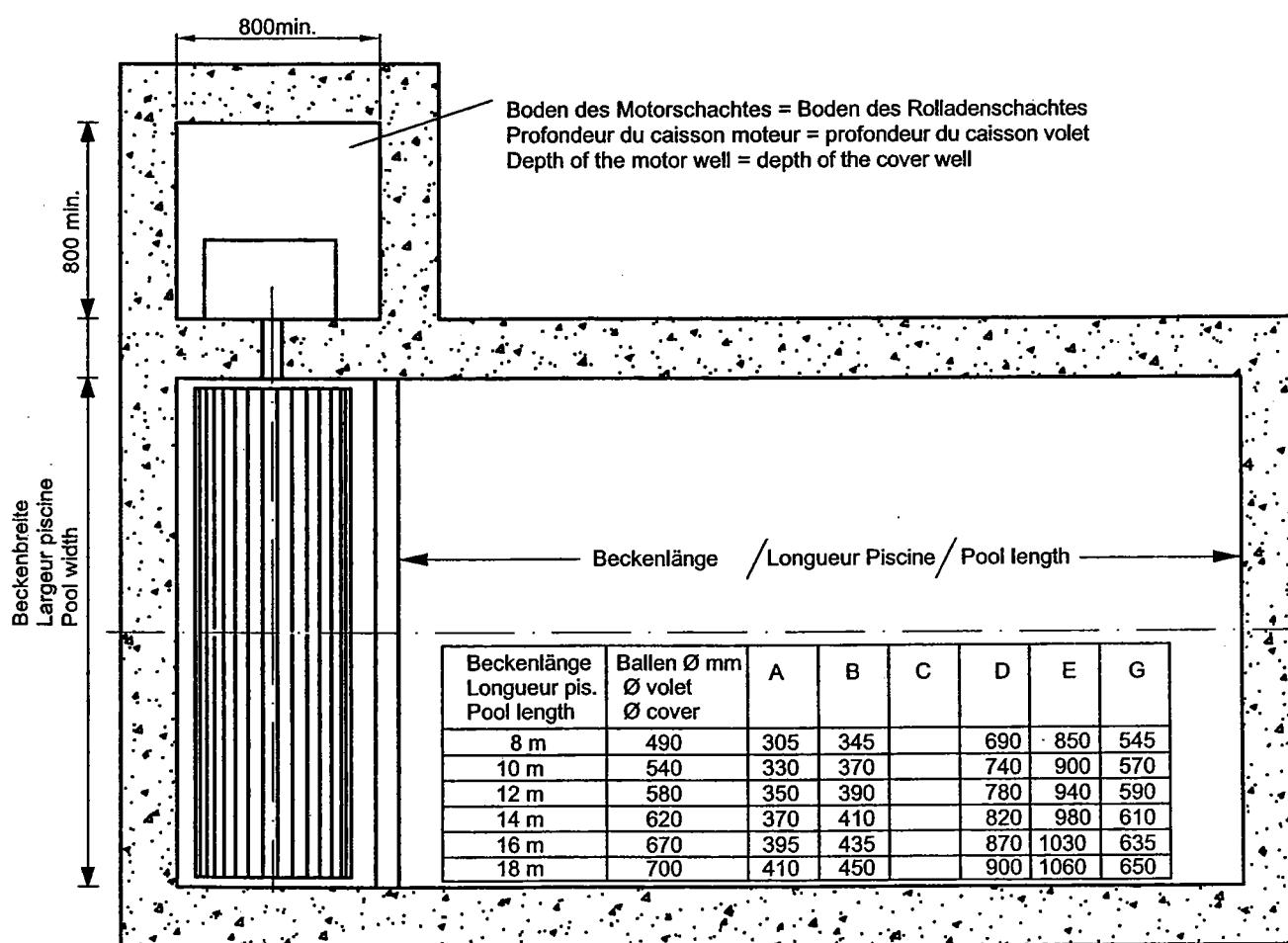
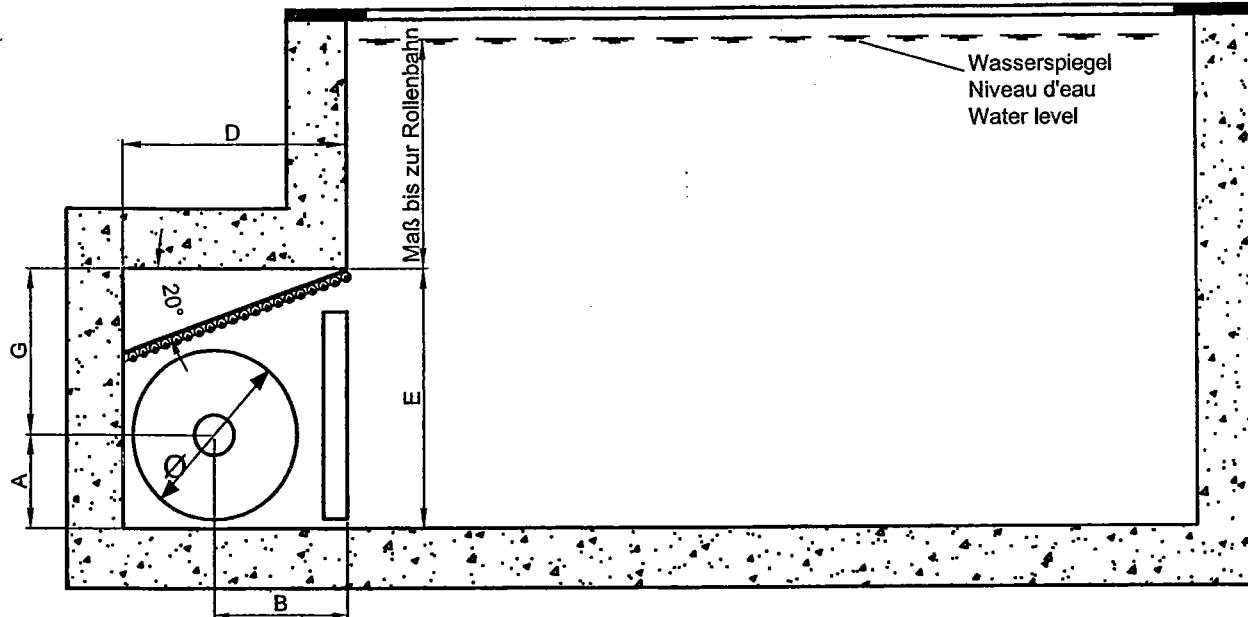


- * Bei Einsatz von autom. Bodenstaubsauger Maß "A" + 300 mm.
En cas d'un aspirateur de fond = cote "A" + 300 mm
In case of an automatic pool vacuum cleaner = measure "A" + 300 mm

Beckenlänge Longueur piscine Pool length	Ballen Ø mm Ø volet Ø cover	A*	B	C	D	E	G
6 m	415	260			465		270
7 m	445	275			495		285
8 m	460	280			510		295
9 m	490	295			540		305
10 m	510	305			560		315
11 m	535	315			585		325
12 m	545	320			595		330
13 m	585	335			635		345
14 m	605	355			655		365
15 m	630	360			680		370
16 m	640	370			690		380
17 m	655	375			695		385

Maßangaben nur für Schwimmbecken ohne Schrägen und Rundungen sowie einer max. Beckenbreite von 7,00 m.
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Dimensions are only for pools without slant and round lines as well as a max. pool width up to 7,00 m.

Alle Maße sind Mindestmaße in mm Toutes les Mesures sont des mesures minimales en mm All dimensions are finished dimensions In mm Änderungen vorbehalten. Sous réserve de modification Subject to change	 grando gmbh SCHWIMMBAD-ABDECKUNGEN De-Gasperi-Straße 6 D-51469 Bergisch Gladbach Telefon: 02202/1049-0 Telefax: 02202/1049-10	23.10.96	ag	i/anl/306-002	306-002	
		ABDECKUNG AUF BECKENBODENNIVEAU IN DIE BECKENWAND EINGELASSEN		IBS - 6		
		VOLET DANS LE MUR DE LA PISCINE CETTE FOIS CI AU NIVEAU DU SOL				
		COVER RECESSED INTO THE POOL WALL AT FLOOR LEVEL				



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grando
 grando GmbH
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04.11.2002

Richartz

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ABDECKUNG AUF BECKENBODENNIVEAU IN DIE
BECKENWAND EINGELASSEN

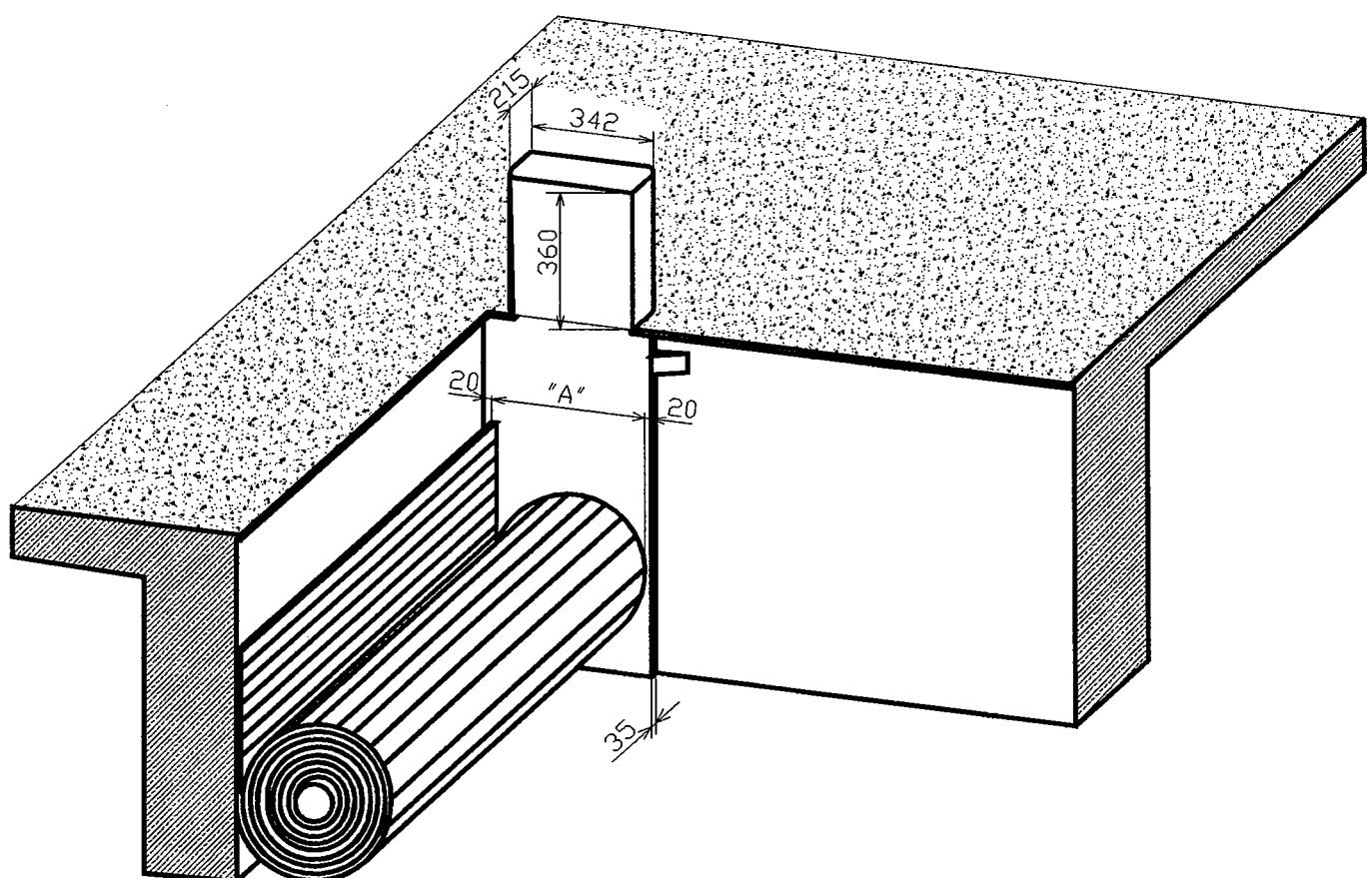
VOLET DANS LE MUR DE LA PISCINE
CETTE FOIS CI AU NIVEAU DU SOL

COVER RECESSED INTO THE POOL WALL
AT FLOOR LEVEL

IBS - 6

IBS-7

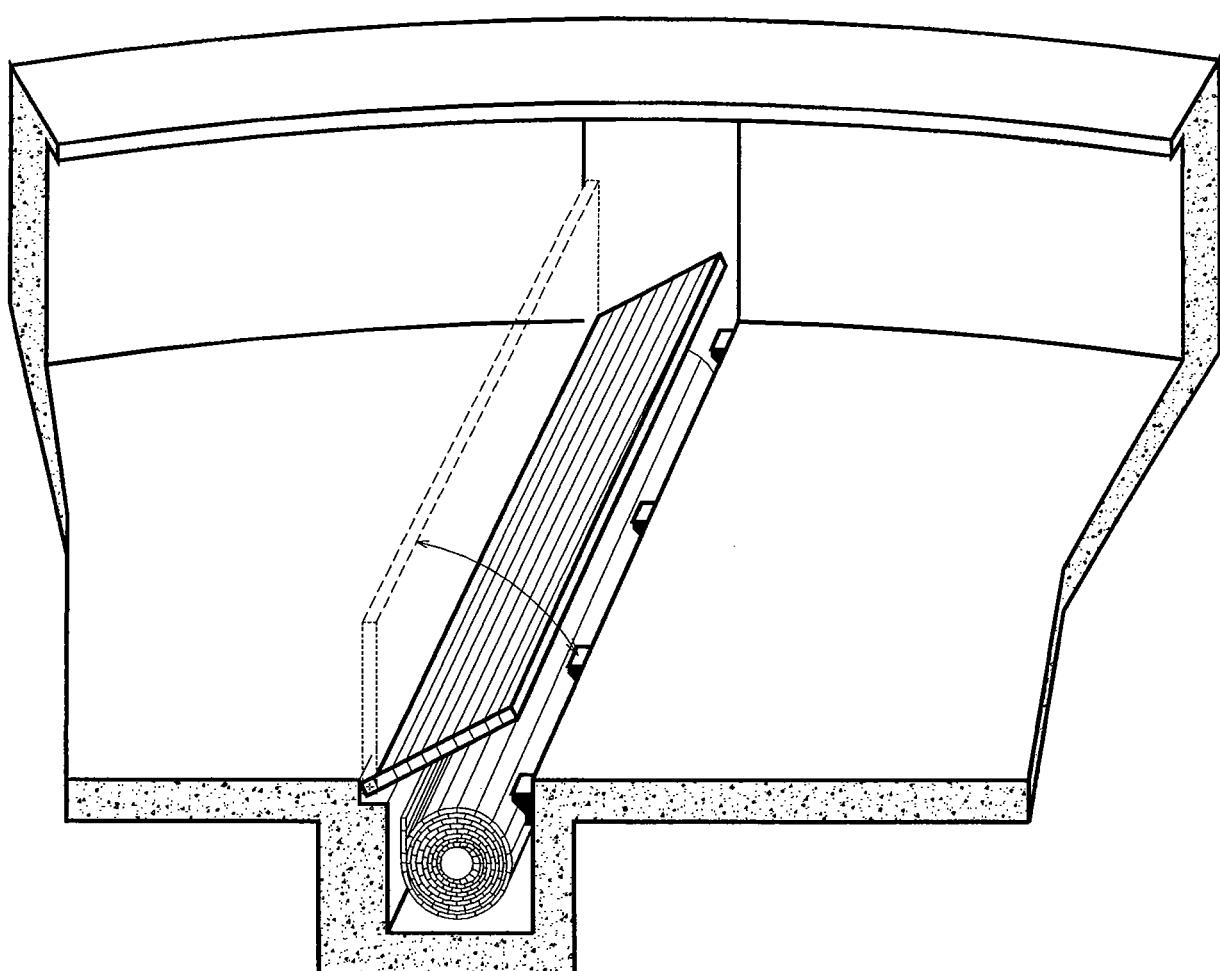
- Allows on underwater IBS cover to be installed without a wall sleeve
- Driving-unit in a PVC box installed on the pool-edge
- Connexion between the motor and the shaft via stainless steel chain covered with a PVC panel
- The PVC plate is 35 mm from the pool wall to allow for movement in the chain



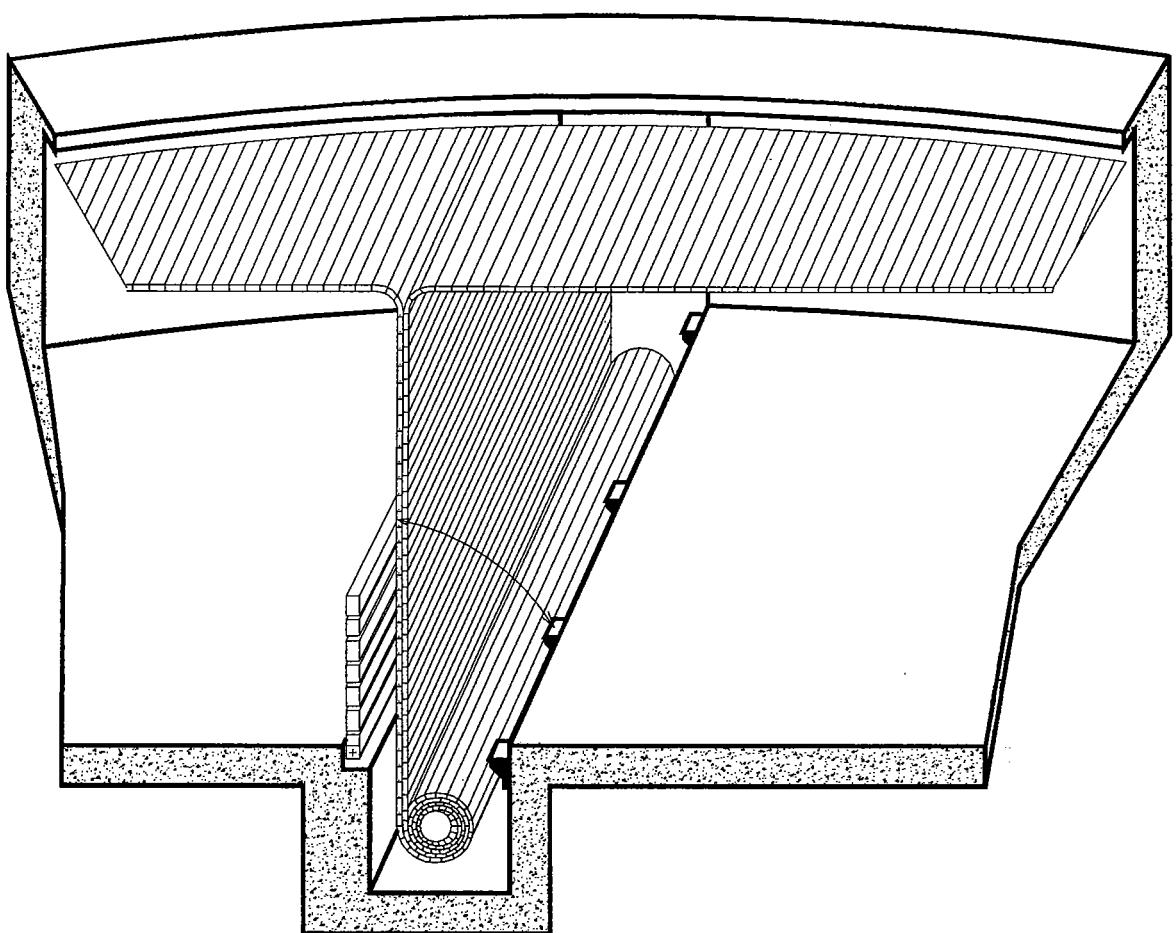


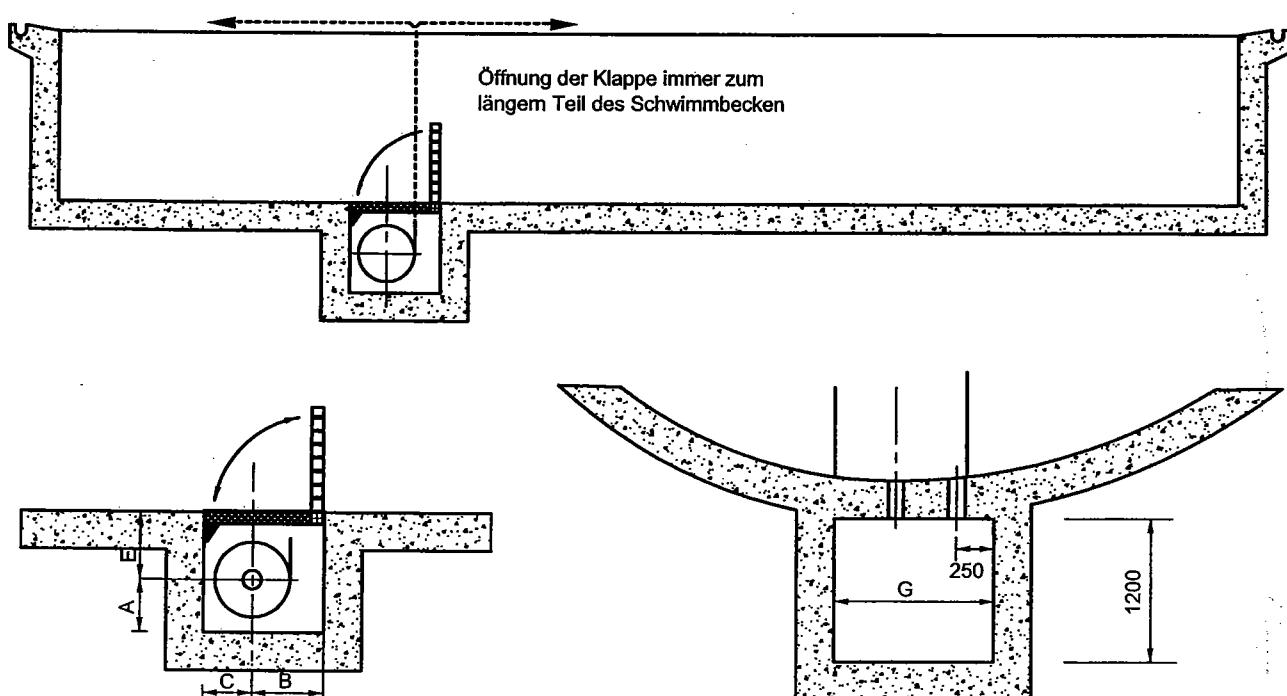
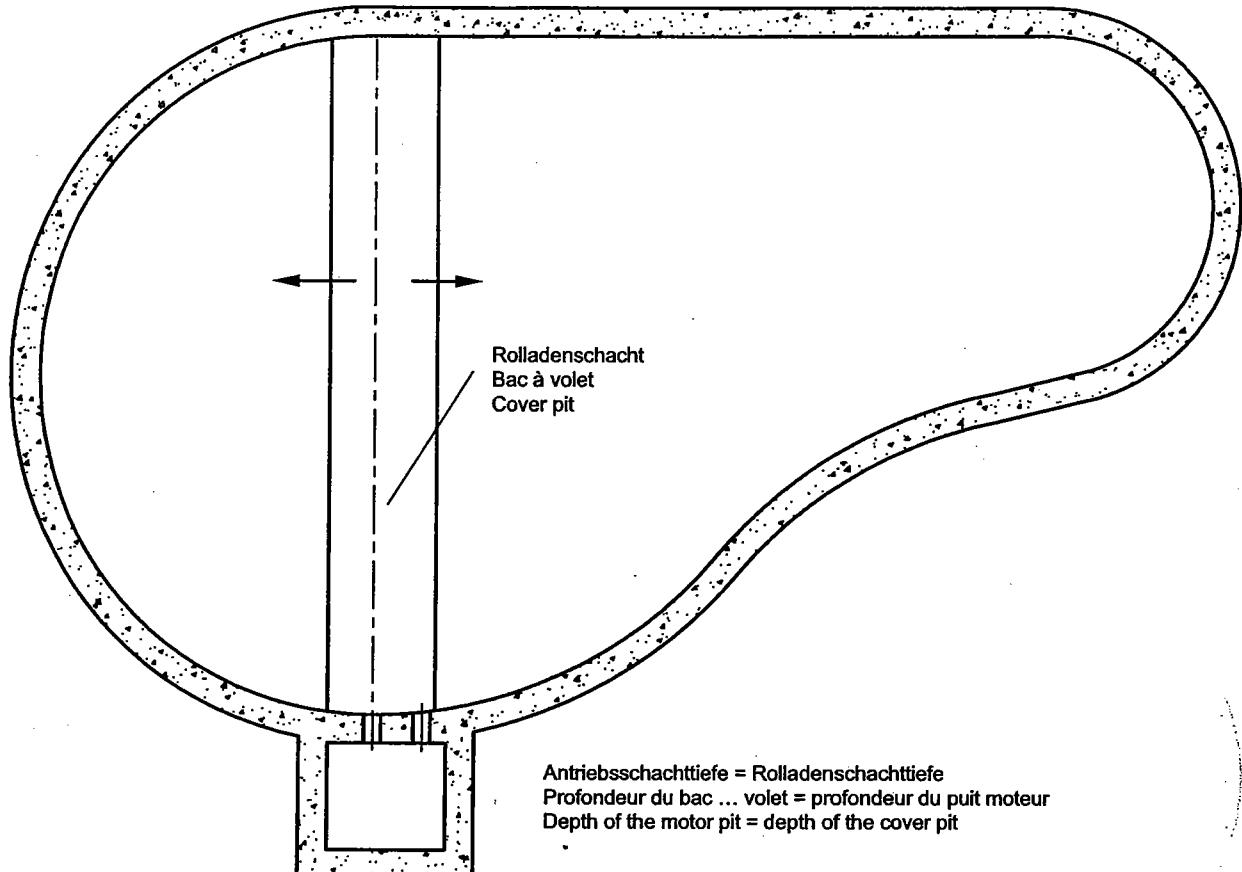
IBS-8

- Designed to cover free pool forms
- Only one shaft for 2 covers, consequently a smaller pit
- Protected by patent



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Die Maße A - G können erst nach Vorlage der genauen Beckenform- und Maße mitgeteilt werden.
 Indication de toutes mesures après réception de la forme et des dimensions.
 All dimensions from A - G will be given after the poolshape and size has been received.

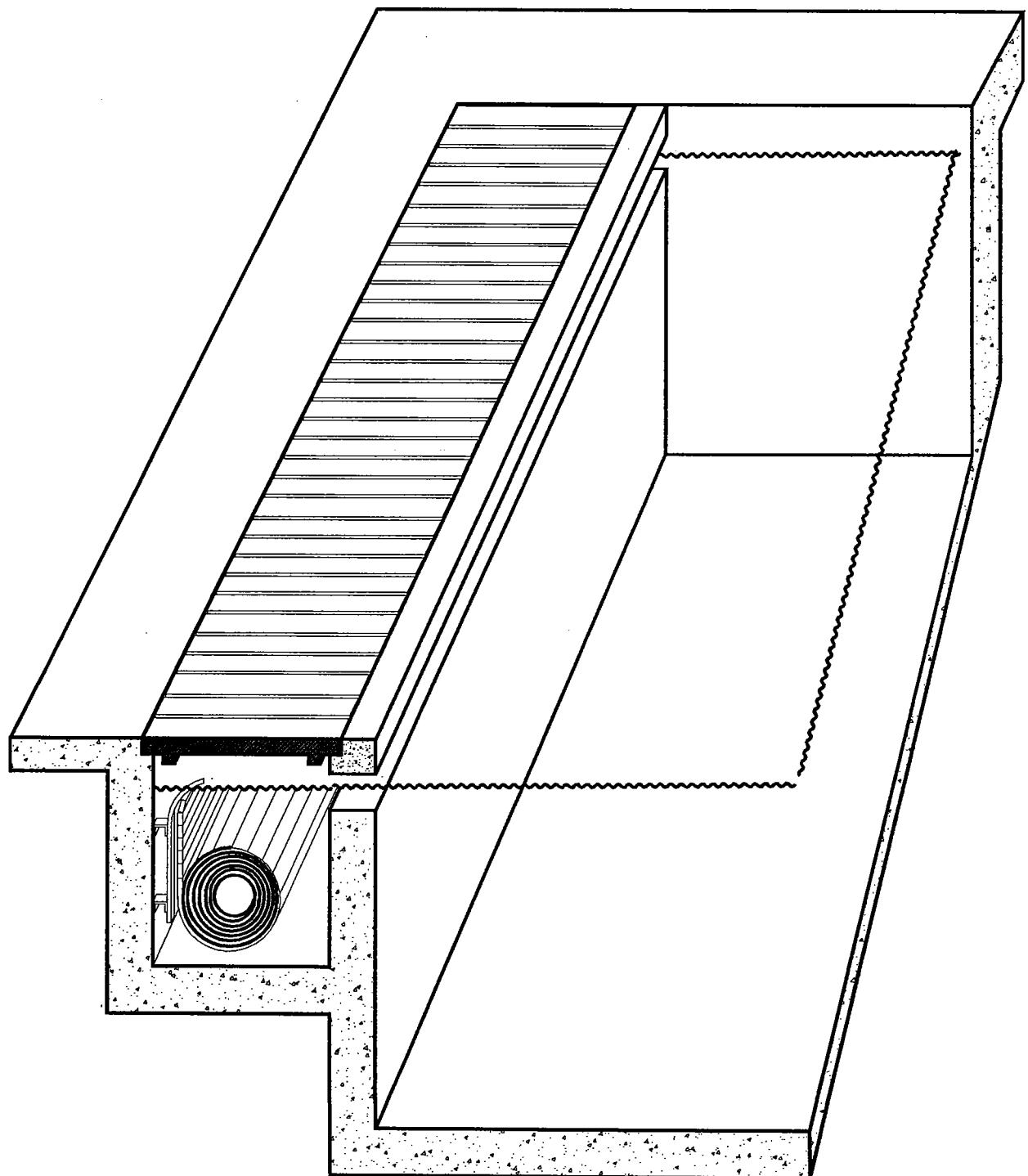
Alle Maße sind
 Mindestmaße in mm
 Toutes les Mesures
 sont des dimensions
 minimal en mm
 All dimensions are
 finished Dimensions
 in mm

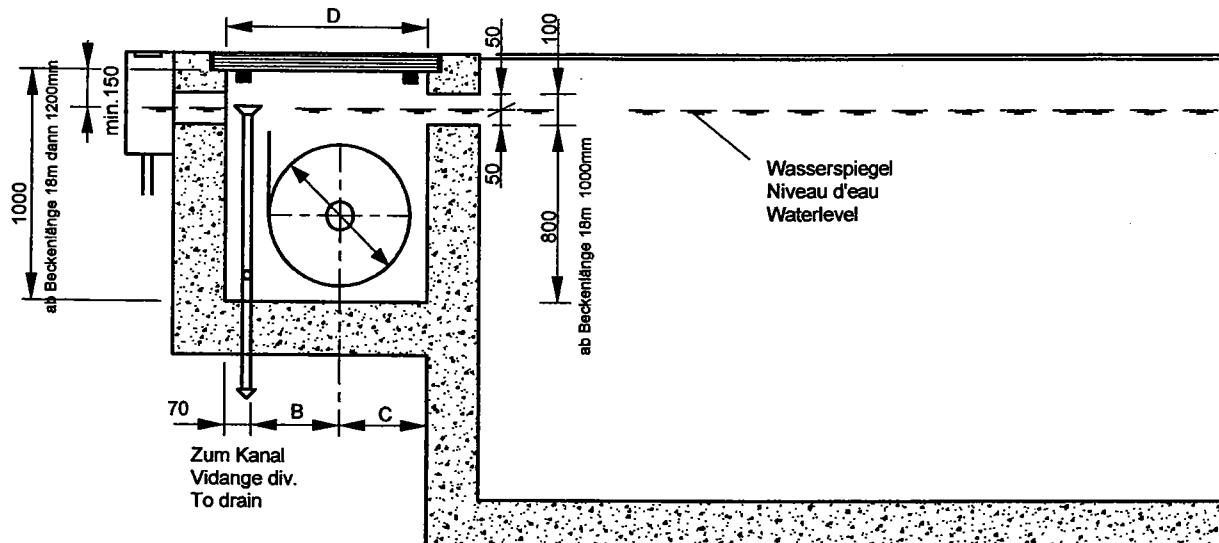
Änderungen
 vorbehalten.
 Sous réserve de
 modifications
 Subject to change

grando grando GmbH SCHWIMMBAD-ABDECKUNGEN De-Gasperi-Straße 6 D-51469 Bergisch Gladbach Telefon: 02202/1049-0 Telefax: 02202/1049-10	02.07.91	bg	i/anl/308-001	308-001
	ABDECKUNG FÜR FREIE BECKENFORMEN VOLET POUR PISCINE DE FORME LIBRE COVER FOR FREE SHAPE POOL		IBS - 8	

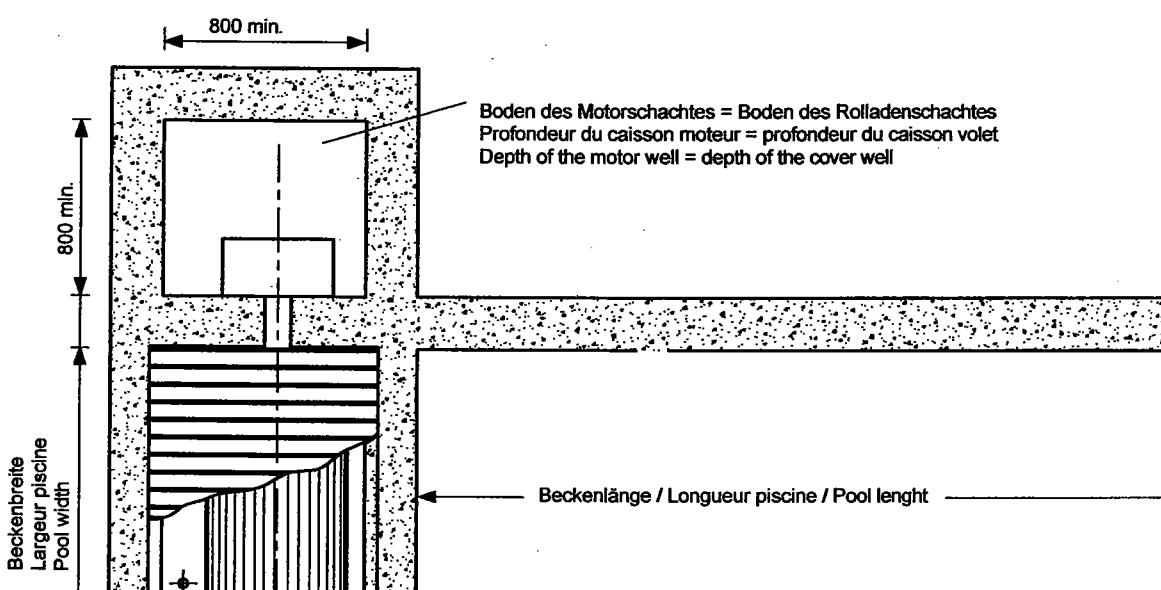
grando®

IBS-9





Wasserspiegel
Niveau d'eau
Waterlevel



Boden des Motorschachtes = Boden des Rolladenschachtes
Profondeur du caisson moteur = profondeur du caisson volet
Depth of the motor well = depth of the cover well

Beckenlänge Longeur piscine Pool length	Ballen Ø mm Ø volet Ø cover	A mm	B mm	C mm	D mm
6 m	415		295	235	530
7 m	445		310	250	560
8 m	460		315	255	570
9 m	490		330	270	600
10 m	505		340	280	620
11 m	530		350	290	640
12 m	545		360	300	660
13 m	565		370	310	680
14 m	590		380	320	700
15 m	625		400	340	740
16 m	640		410	345	750
17 m	650		420	350	770
18 m	670		420	365	785
20 m	700		435	380	815
22 m	730		450	395	845
24 m	760		465	410	875
26 m	800		485	430	915

Maßangaben nur für Schwimmbecken ohne
Schrägen und Rundungen sowie einer max.
Beckenbreite von 7,00 m.

Cotes valables uniquement pr bassin sans
découpes arrondies ou en biais, ainsi que pr
largeur max. de 7,00 m.

Dimensions are only for pools without slant
and round lines as well as a max. pool
width up to 7,00 m.

Alle Maße sind
Mindestmaße in mm
Toutes les Mesures
sont des mesures
minimales en mm
All dimensions are
finished dimensions
in mm

Anderungen
vorbehalten.
Sous réserve de
modification
Subject to change

grando®

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SCHWIMMBAD-ABDECKUNGEN
De-Gasperi-Straße 6
D-51469 Bergisch Gladbach
Telefon: 02202/1049-0
Telefax: 02202/1049-10

06.05.92

bg

309-002

ABDECKUNG HINTER DEM SCHWIMMBECKEN IN SEPARATEM

SCHACHT INSTALLIERT (TIEFLIEGENDER WASSERSPIEGEL)

VOLET DANS UN CAISSON DERRIERE LA PISCINE

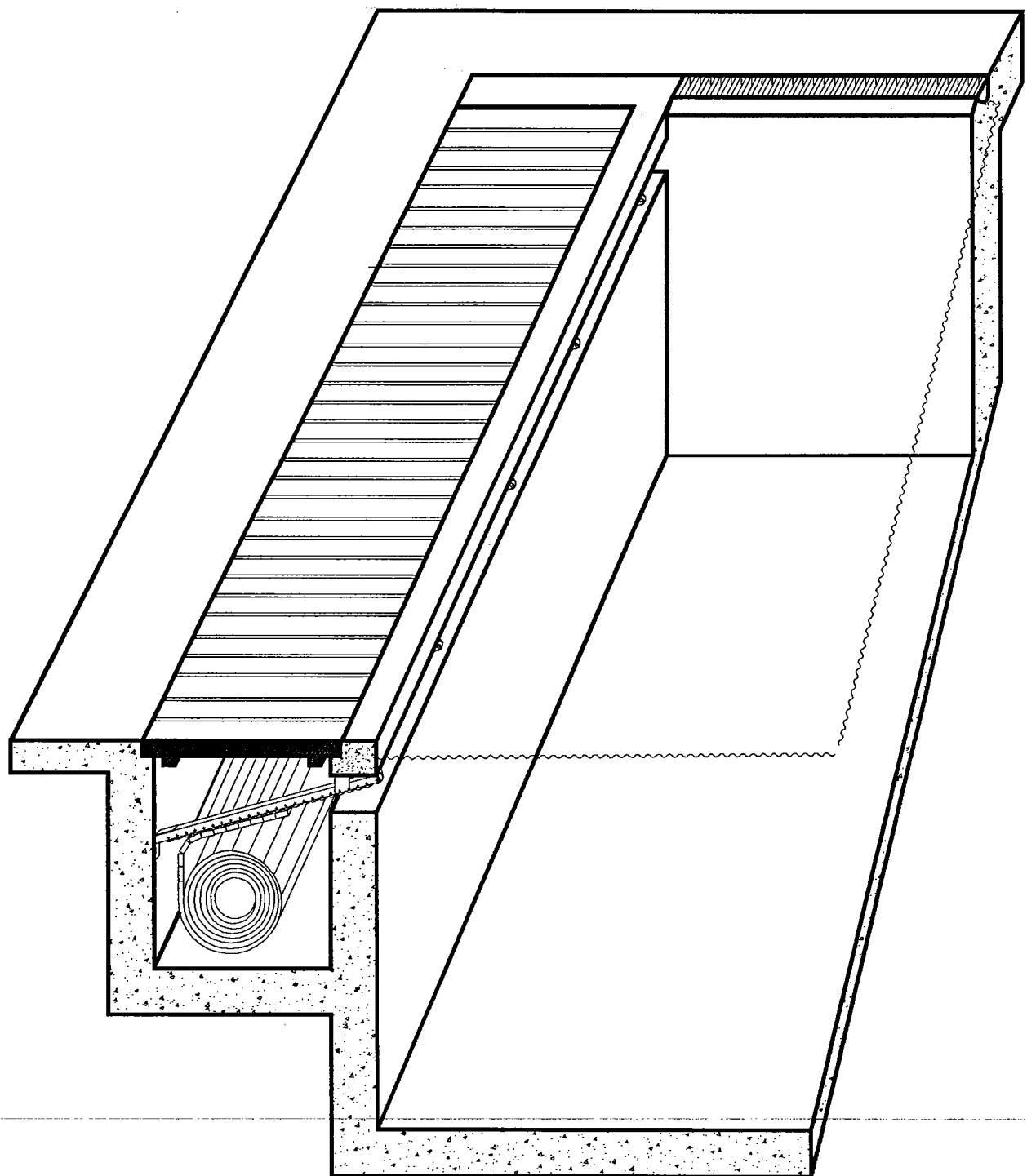
COVER IN A WELL BEHIND THE POOL

I B S - 9



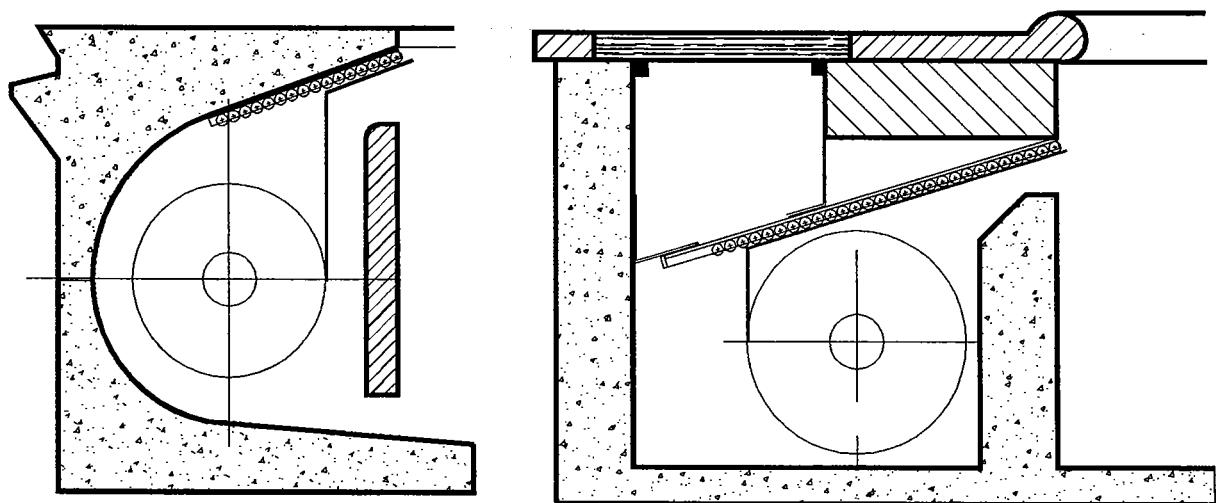
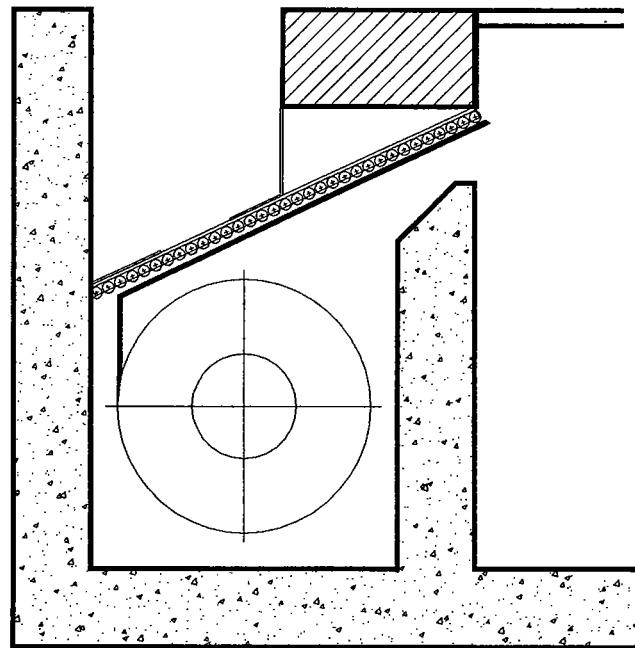
MOUNTING POSSIBILITIES WITH GUIDE ROLLS

- Water level above the cover pit support beam
- Cover travel very smooth



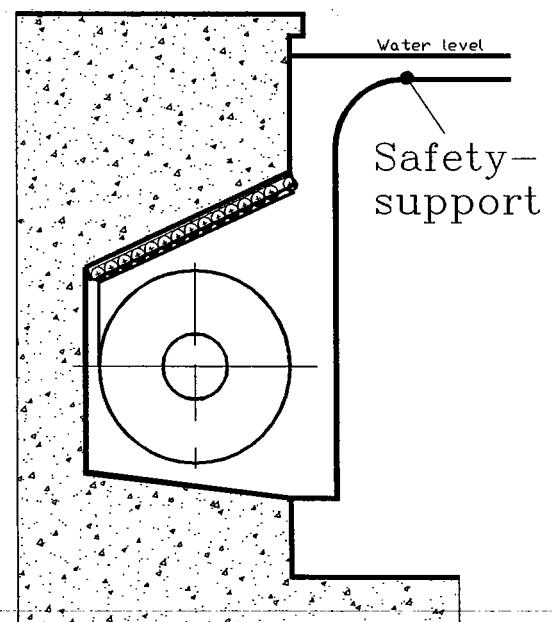
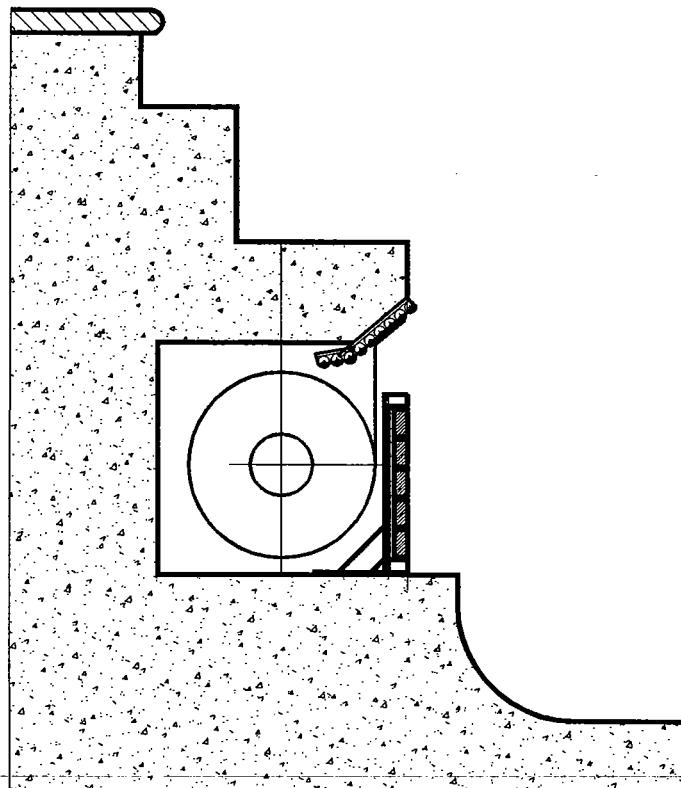
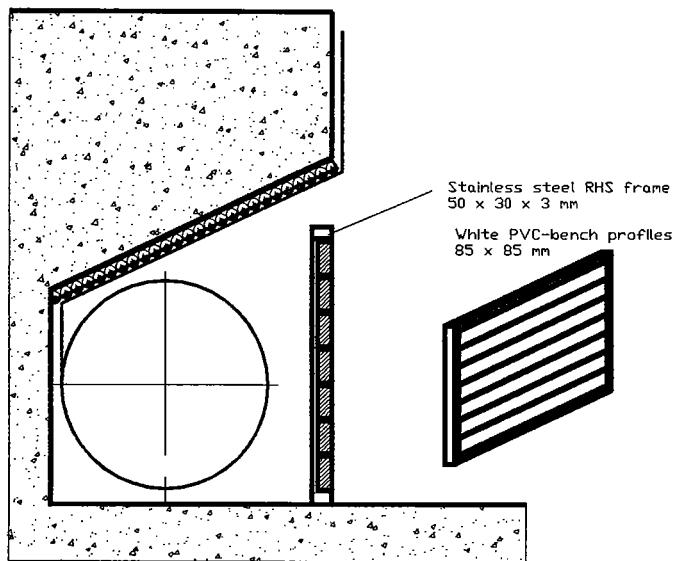


ALTERNATIVE INSTALLATION OPTIONS USING GUIDE ROLLS





ALTERNATIVE INSTALLATION OPTIONS USING GUIDE ROLLERS



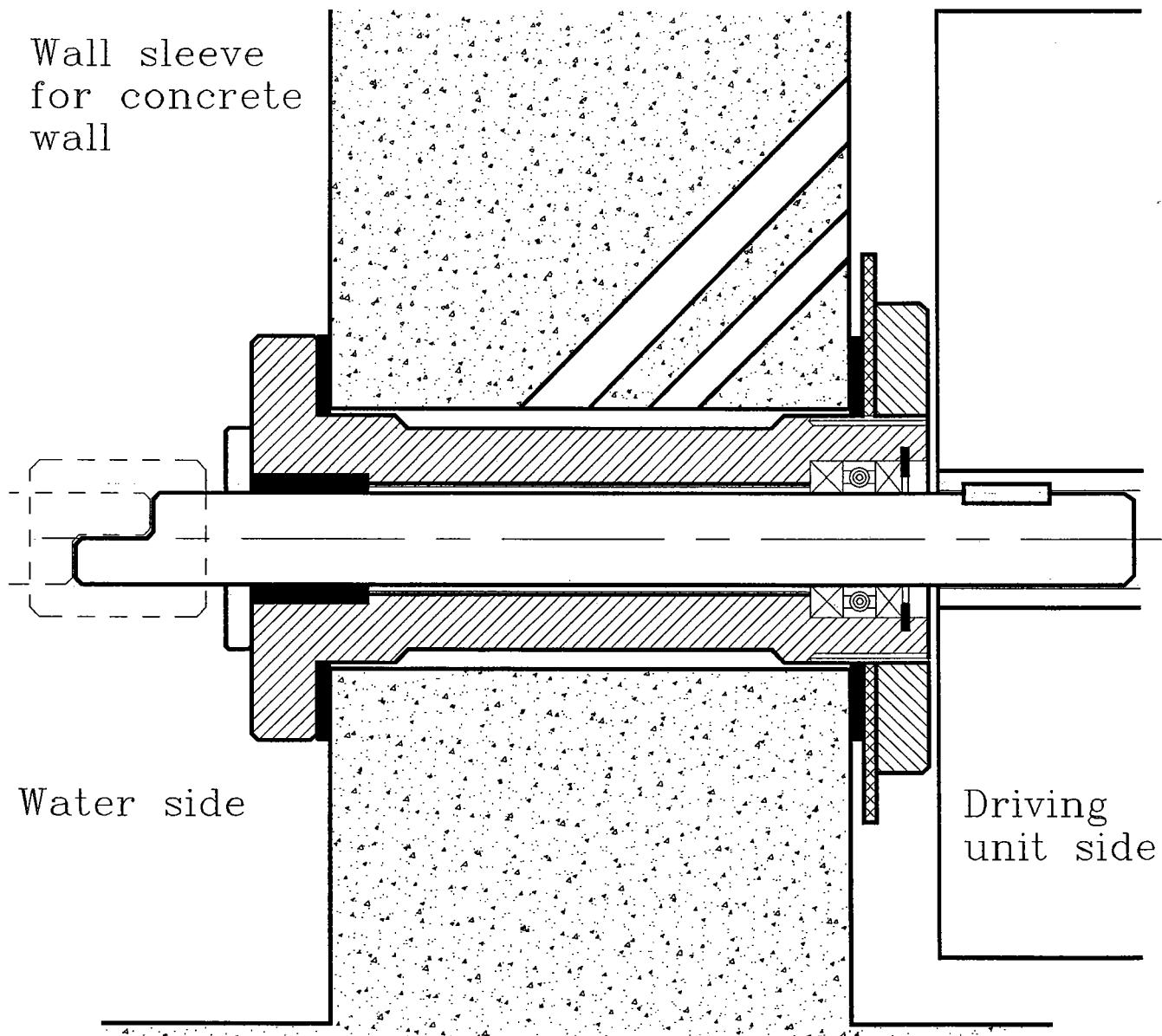
WALL SLEEVE

The wall sleeve consists of a robust PVC outer through which runs the stainless steel drive shaft

The stainless steel drive shaft has several seals along its length

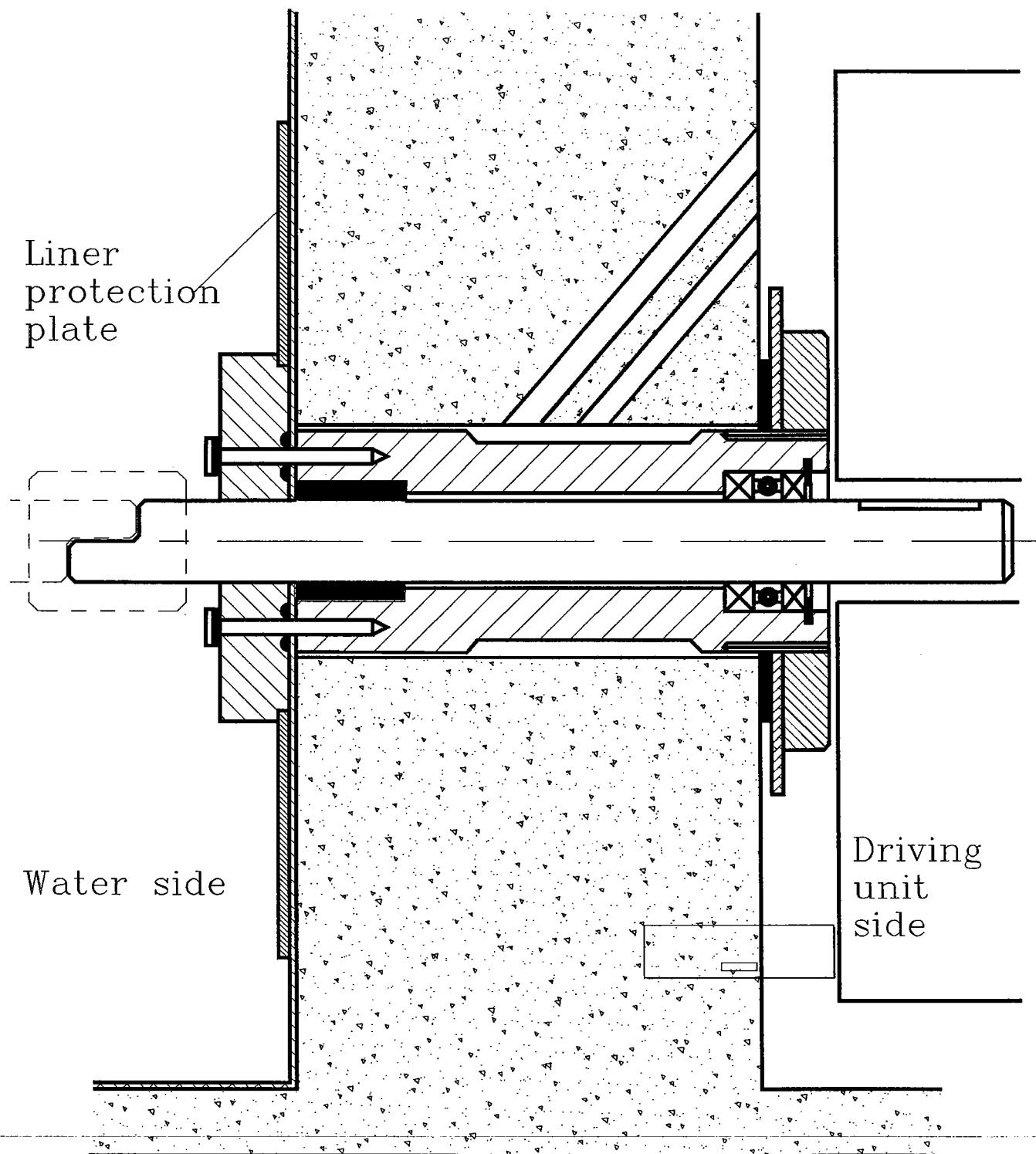
- Oil seals in front and behind the bearing
- 1,5 bar grease pressure

Wall sleeve
for concrete
wall



grando®

WALL SLEEVE FOR LINER POOL





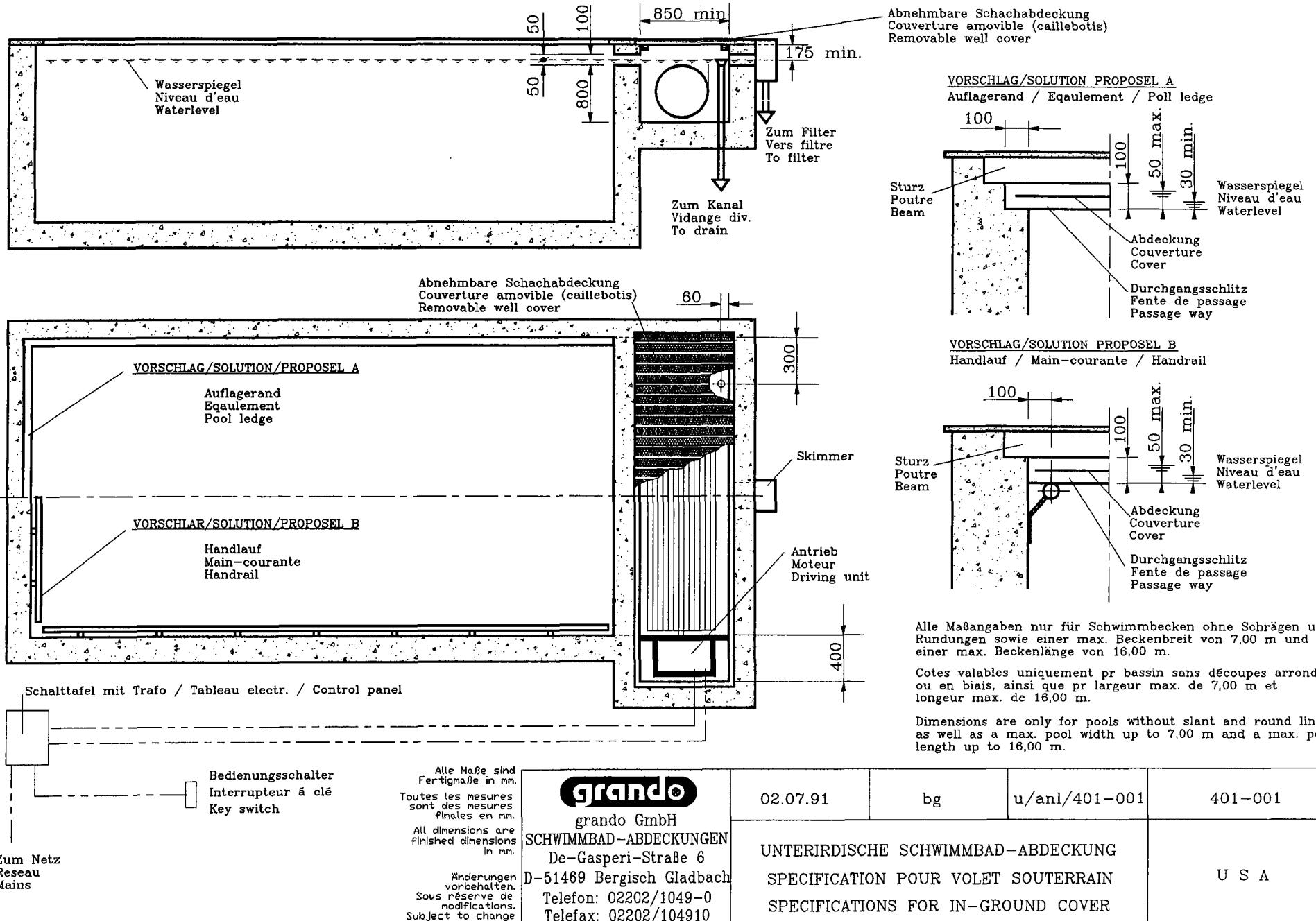
Schwimmbad-Abdeckungen seit 1963
pool covers • couvertures de piscines

Technical description grando USA

Pool cover	A special smooth curved PVC profile creates a slatted pool cover with excellent water shedding properties. Available in white, blue and grey as standard colours. A solar version is available at an extra cost. The standard slats are reversible and can be turned over periodically to combat the build up of calcium deposits. Each slat has three internal hollow sections. Each section has a waterproof multilayered seal that forms a molecular bond with the PVC slat, this eliminates any differential expansion of the materials used and ensures a watertight seal. The system for joining the slats utilising stainless steel pins and plastic locking blocks, eliminates any lateral displacement of the slats and facilitates the removal and replacement of individual slats. The combination of the slat joining and end sealing systems means that radius corners, roman ends, cut outs and slanting cuts can be accurately reproduced. The slats are joined by a double hook system which provide a high tensile, very flexible joint between the slats. The PVC slats are resistant to ultra violet light, non bio-degradable, non corrosive and completely hygienic. COMPACT covers are suitable for any pool up to 25 m x 10 m. With solar slats the heat energy from the sun is transferred into the pool water via the transparent upper side and black underside of the slats, therefore creating a saving on heating bills.
Design	The USA drive unit is constructed from solid PVC. The drive unit is fixed in a recess in the cover chamber and is immersed in water. The top of the drive unit is above water level. The top of the drive unit has a PVC lid to provide protection against splashing. The PVC drive unit contains a sealed drive bearing, motor unit and chain drive mechanism.
Drive unit	The drive unit is either a 400 V/24 V DC or 240 V/24 V DC motor with integral PVC board, reduction gears limit and safety switches and thermal protection mounted in an aluminium casing within the immersed PVC outer casing.
Carrier shaft	The carrier shaft and end journals are constructed from high grade stainless steel. The carrier shaft is driven by the motor, via a chain drive, through a special bearing which passes through the immersed PVC casing.
Power supply	The transformer is either 400 V/24 V or 240/24 V with thermal protection. The transformer is supplied within an IP 55 rated casing.
Key switch	The key switch is remotely located and consists of an anodised face plate with a removable key for the open/close operation and an emergency stop switch. The key switch is designed to be installed in the wall.

ACCESSORIES

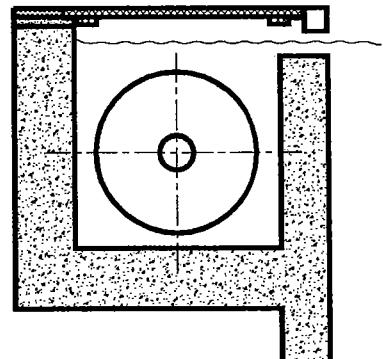
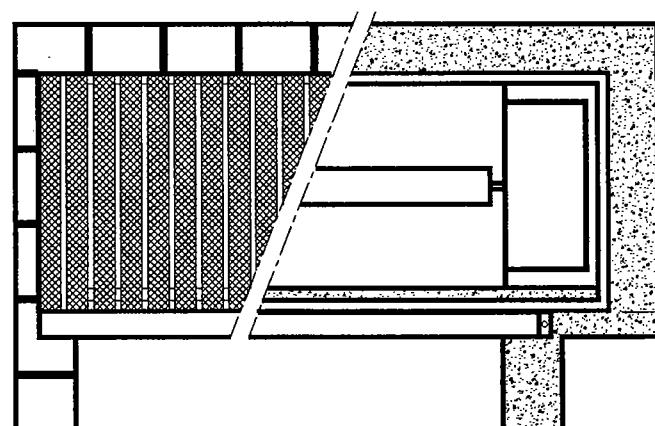
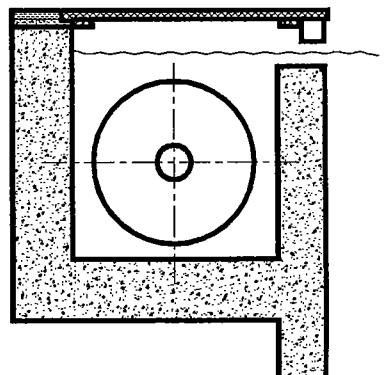
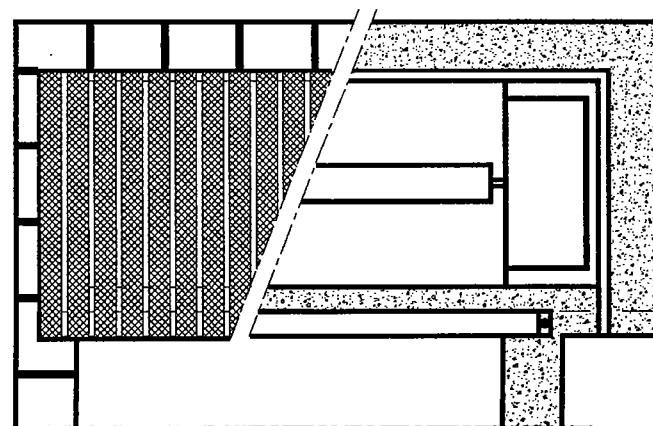
Pit cover	A pit cover assembly is available for the USA/IBS-9 type covers. The cover is formed from a high grade stainless steel frame with either a PVC slatted finish or a tilded meranti hardwood finish.
Frame for cover pit	As above but without PVC or wood finish.
Support beam	A support beam is available to span the pool, above water level, to create an opening through which the cover slats can pass. The beam can either be galvanised and pointed steel or stainless steel. The support beam is available for pools up to a maximum width of 7 m.
Magnetic safety switch	The installation of the optional magnetic and tool switch is highly recommended. The switch will not allow the operation of the cover if the pool water level is either too high or too low.
Handrail	Special polished stainless steel handrail and brackets are essential for the prevention of accidents on standard pools. Accident prevention cannot be guaranteed with level deck pools.

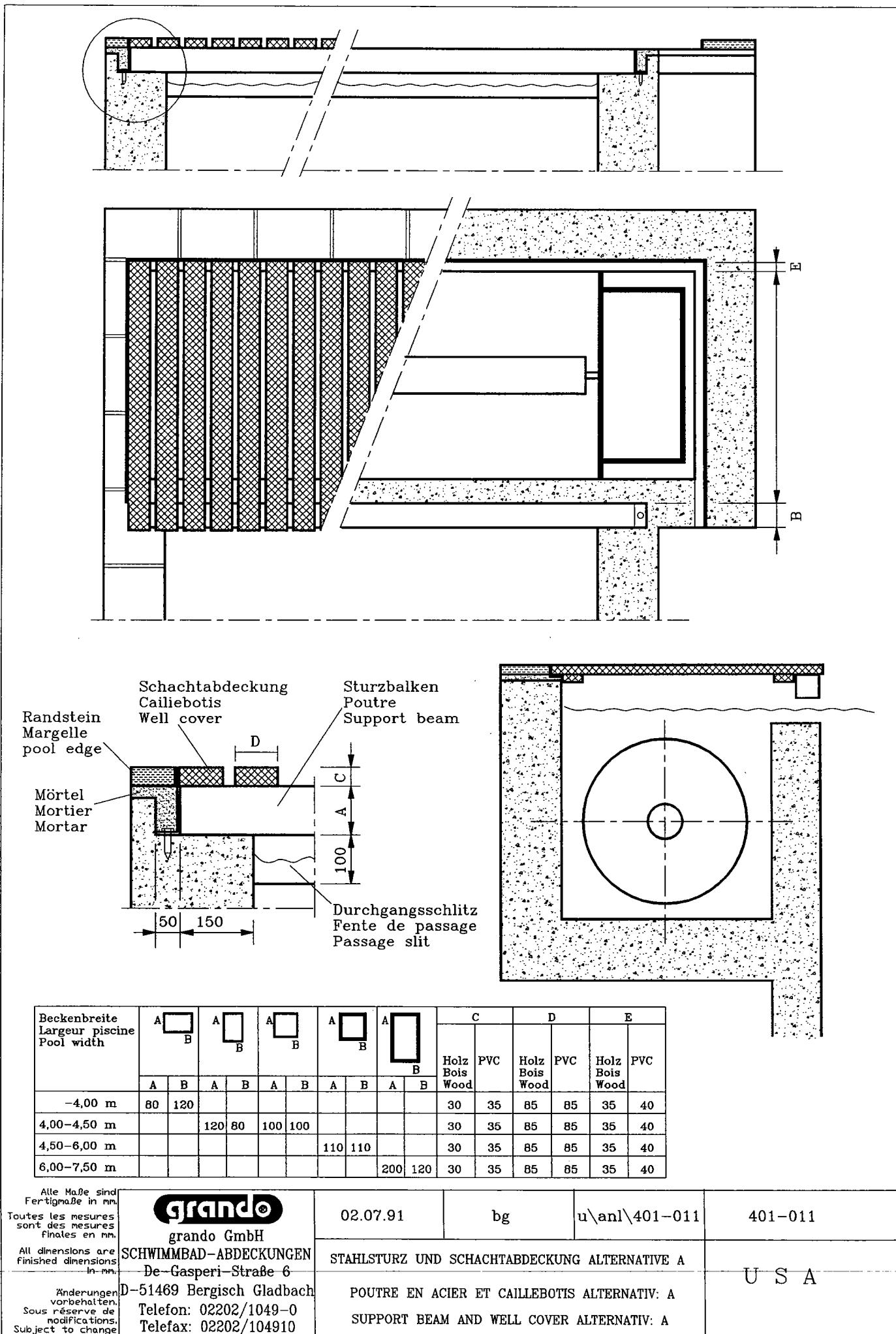


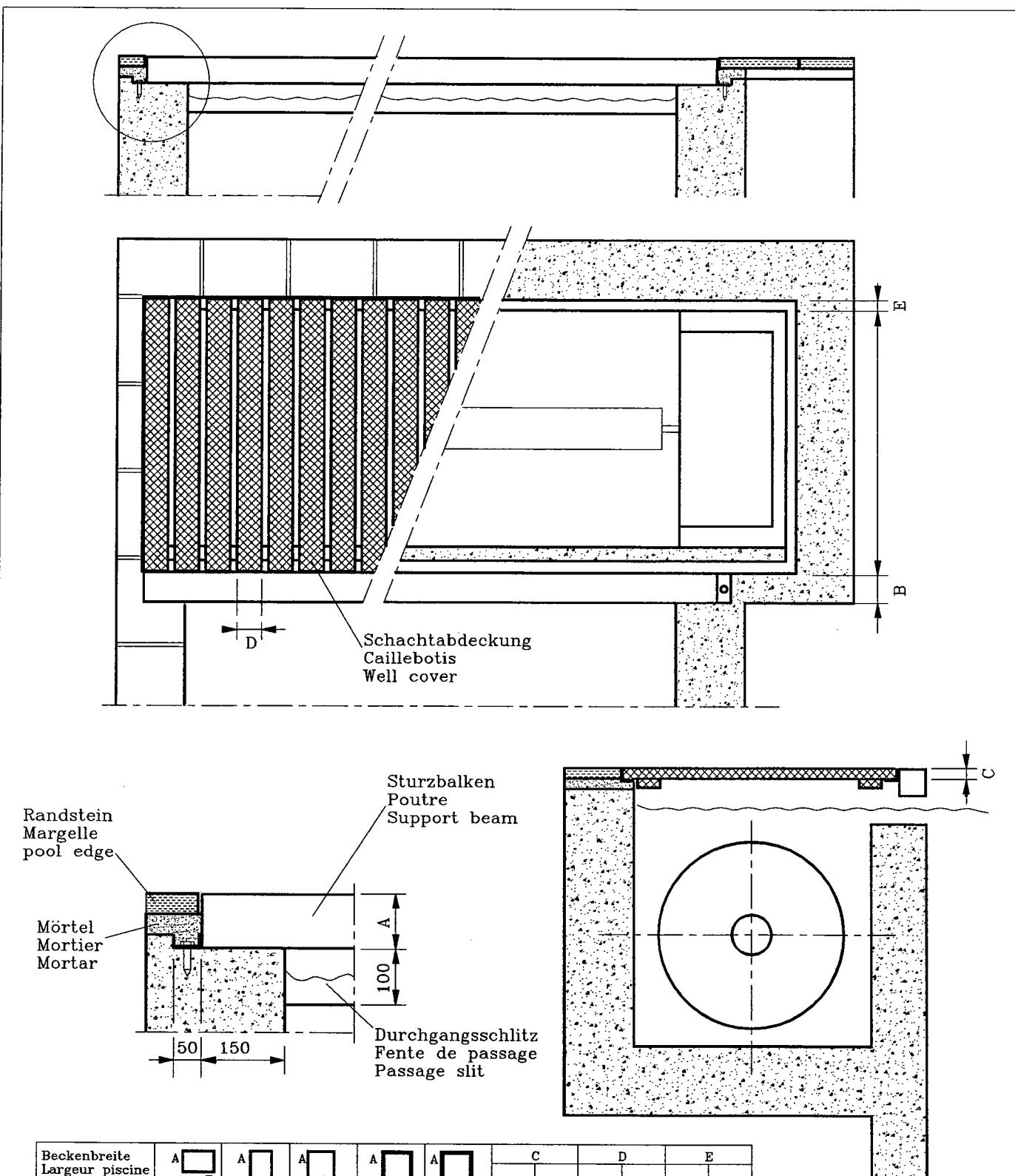


THE PIT COVER FOR USA AND IBS-9 COVERS

- The pit cover is constructed either in meranti hardwood or PVC with stainless steel frame







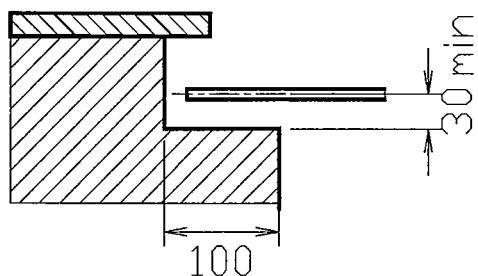
Beckenbreite Largeur piscine Pool width	A		B		A		B		A		B		A		B		C		D		E	
	A		B		A		B		A		B		A		B		Holz Bois Wood	PVC	Holz Bois Wood	PVC	Holz Bois Wood	PVC
-4,00 m	80	120															30	35	85	85	35	40
4,00-4,50 m			120	80	100	100											30	35	85	85	35	40
4,50-6,00 m							110	110									30	35	85	85	35	40
6,00-7,50 m									200	120	30	35	85	85	85	35	35	40				

All dimensions are finished dimensions in mm. Alle Maße sind Fertigmäße in mm. Toutes les mesures sont des mesures finales en mm.	grando grando GmbH SCHWIMMBAD-ABDECKUNGEN De-Gasperi-Straße 6 D-51469 Bergisch Gladbach Telefon: 02202/1049-0 Telefax: 02202/104910	02.07.91	bg	u\anl\401-012	401-012	
		STAHLSTURZ UND SCHACHTABDECKUNG ALTERNATIVE: B			U S A	
		POUTRE EN ACIER ET CAILLEBOTIS ALTERNATIVE: B				
		SUPPORT BEAM AND WELL COVER ALTERNATIVE: B				

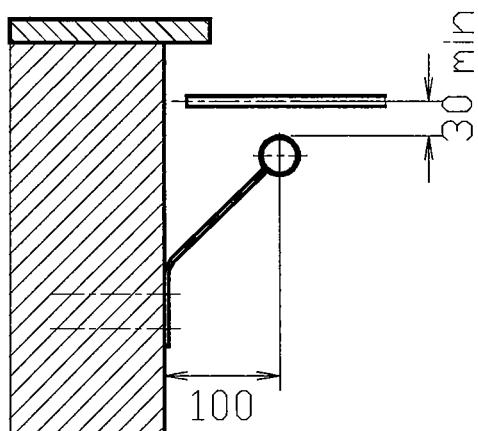


ACCIDENT PREVENTION

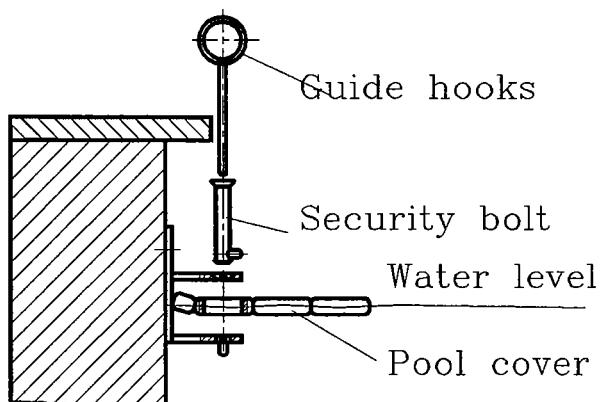
Safety support
provided by
pool edge

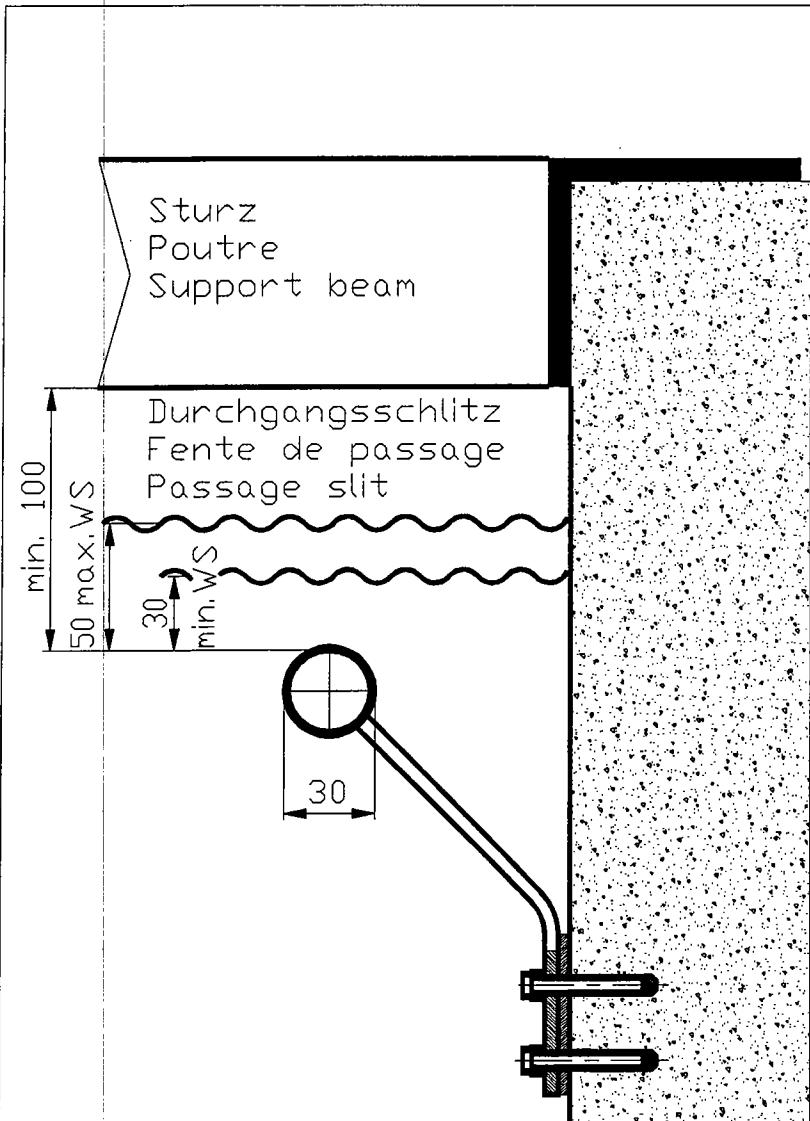


Safety support
provided by
handrail



Manual
locking bolt



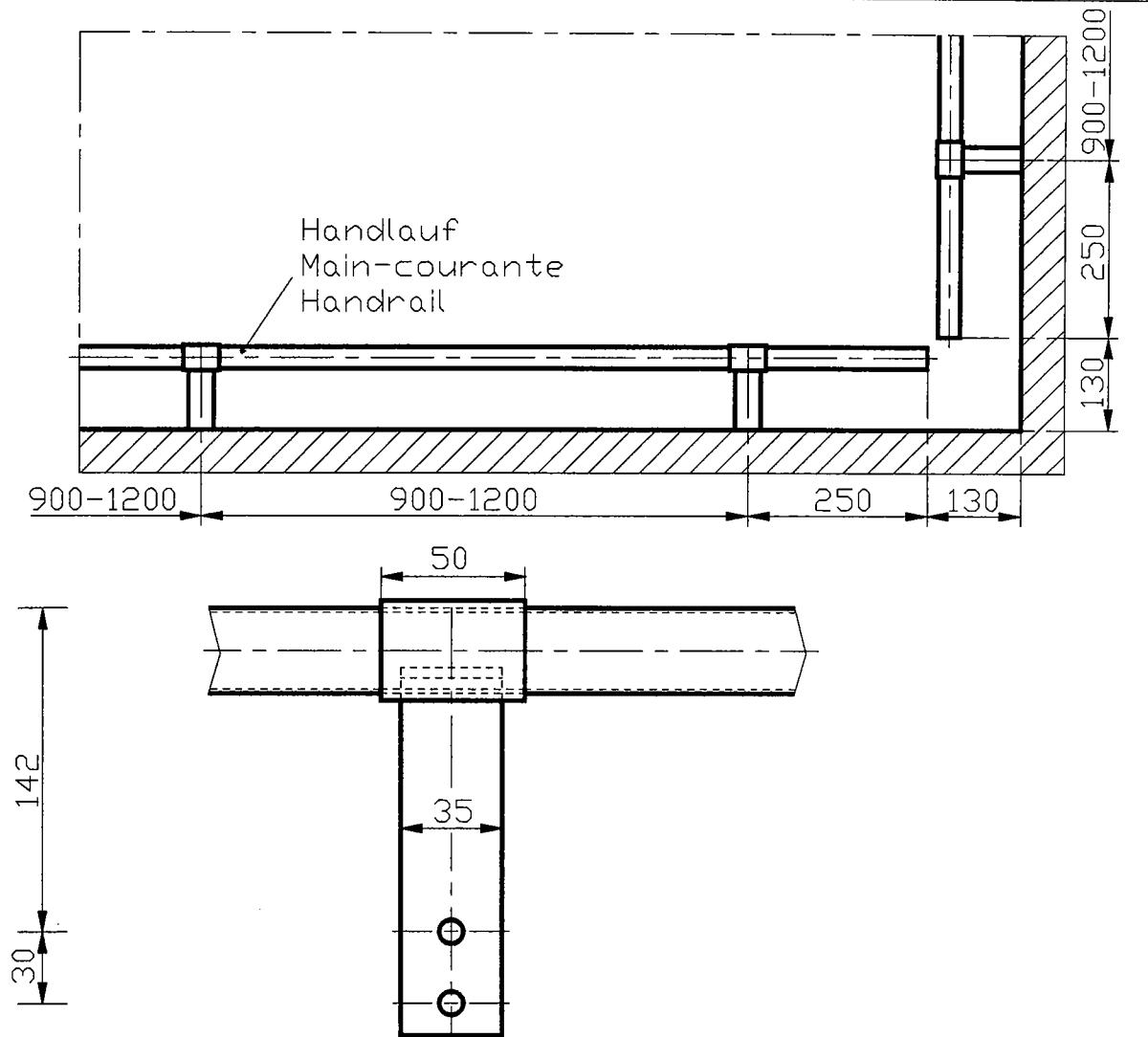


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finished dimensions
in mm.

Aenderungen
vorbehalten.
Sous réserve de
modifications.
Subject to change



	Datum	Name	USER	17B\HDL
Gez.	01.12.98	Zahr	Maßstab	-----
Gepr.			Typ.	Handlauf
Bez.	EDEELSTAHL-HANDLAUF FÜR SICHERHEITSUNTERSTÜTZUNG MAIN-COURANTE DE SECURITE EN INOX HANRAIL IN STAINLESS STEEL FOR SAFETY FEATURE			