

ACO Product catalogue 2008

Access Covers – Heavy Duty



Access Covers – Outdoor Applications

System overview

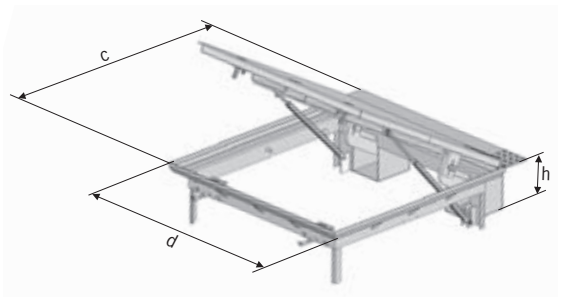
- The access covers are made out of galvanized steel or stainless steel.
- The covers are fastened to the frame with screws.
- The cover is made out of antiskid metal plate or it is prepared for different surfaces (concrete, tiles, vinyl).
- Standard construction is water tight and smell tight.



Servokat® –GD

Covers are produced from stainless steel grades 304. Covers are gasket sealed, screw fixed with hinge and gas springs. Load class B 125 and D 400 according DIN EN 124.

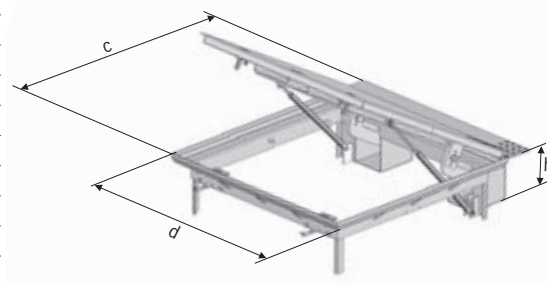
Load class	Dimensions <i>a x b</i>	<i>c x d</i>	<i>h</i> (mm)	Weight (kg)	Standard Part.-No.	Emergency exit Part.-No.
B125	600 x 600	890 x 745	280	118	59298	59301
B125	600 x 800	890 x 945	280	146	59925	60395
B125	700 x 700	990 x 845	280	140	59299	59302
B125	700 x 1400	990 x 1545	280	225	60393	60396
B125	800 x 800	1090 x 945	280	168	58451	59303
B125	800 x 1000	1090 x 1145	280	193	60394	60397
B125	1000 x 1000	1290 x 1145	340	225	58452	59304
B125	1000 x 1500	1290 x 1645	340	292	60169	58608
B125	1000 x 2000	1290 x 2145	340	388	59550	60398
B125	1200 x 1200	1490 x 1345	340	279	59300	60399
B125	1500 x 1500	1790 x 1645	340	377	59551	60400
D400	600 x 600	890 x 745	280	127	59938	60457
D400	600 x 800	890 x 945	280	158	60456	60458
D400	700 x 700	990 x 845	280	152	59870	60460
D400	700 x 1400	990 x 1545	280	246	60459	60461
D400	800 x 800	1090 x 945	280	184	58611	58713
D400	800 x 1000	1090 x 1145	280	209	58612	60462
D400	1000 x 1000	1290 x 1145	335	246	58456	59939
D400	1000 x 1500	1290 x 1645	335	328	60463	60464
D400	1000 x 2000	1290 x 2145	335	433	59155	60465
D400	1200 x 1200	1490 x 1345	335	312	59940	60466
D400	1500 x 1500	1790 x 1645	335	424	59519	59520



Servokat® –GD

Covers are produced from galvanized steel. Covers are gasket sealed, screw fixed with hinge and gas springs. Load class A15, B 125 and D 400 according DIN EN 124.

Load class	Dimensions		h (mm)	Weight (kg)	Standard Part.-No.	Emergency exit Part.-No.
	a x b	c x d				
A15	600x600	785x750	185	110	58435	59796
A15	600x800	785x950	215	134	59549	59797
A15	700x700	885x850	230	130	58436	59798
A15	700x1400	885x1550	230	124	59795	60160
A15	800x800	985x950	235	160	58437	59799
A15	800x1000	985x1150	235	184	58605	59800
A15	1000x1000	1185x1150	275	214	58438	58967
A15	1000x1500	1185x1650	255	297	59297	58901
A15	1000x2000	1185x2150	300	369	59694	59802
A15	1200x1200	1385x1350	240	270	58439	59803
A15	1500x1500	1685x1650	320	379	58770	59804
B125	600x600	890x745	280	122	58447	58606
B125	600x800	890x945	280	156	59923	60162
B125	700x700	990x845	280	146	59231	59232
B125	700x1400	990x1545	280	243	59400	60163
B125	800x800	1090x945	280	180	58448	58907
B125	800x1000	1090x1145	280	208	59570	60164
B125	1000x1000	1290x1145	340	239	58449	59924
B125	1000x1500	1185x1650	245	318	60161	60165
B125	1000x2000	1290x2145	340	411	58751	60166
B125	1200x1200	1490x1345	340	317	58450	60167
B125	1500x1500	1790x1645	340	415	685254	60168
D400	600x600	890x745	280	131	59934	60936
D400	600x800	890x945	280	164	59935	60937
D400	700x700	990x845	280	156	59936	60938
D400	700x1400	990x1545	280	253	60546	60939
D400	800x800	1090x945	280	188	58453	58904
D400	800x1000	1090x1145	280	214	59937	59554
D400	1000x1000	1290x1145	335	249	58454	58711
D400	1000x1500	1290x1645	335	331	58455	59305
D400	1000x2000	1290x2145	335	438	58905	60940
D400	1200x1200	1490x1345	335	315	59493	60941
D400	1500x1500	1790x1645	335	430	58712	60942



Servokat® -HD

HD D400 galvanized

Access cover hydraulic without isolation and without heat wire.

<i>Dimensions axb</i>	<i>Weight (kg)</i>	<i>Part.- No.</i>
700x1400	1150	60103
1000x1000	1135	59156
1000x2000	1940	60206
1200x1200	1525	60104
1500x1500	2190	60207

Access cover hydraulic with isolation and heat wire.

<i>Dimensions axb</i>	<i>Weight (kg)</i>	<i>Part.- No.</i>
700x1400	1150	60105
1000x1000	1135	59157
1000x2000	1940	60208
1200x1200	1525	60209
1500x1500	2190	60210

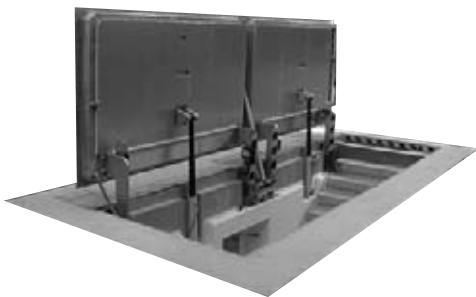
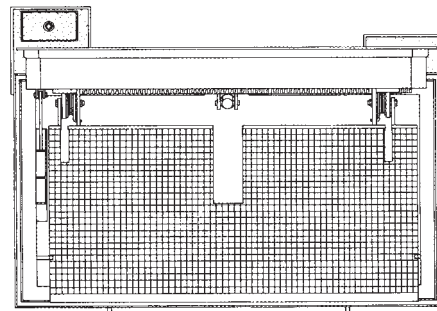
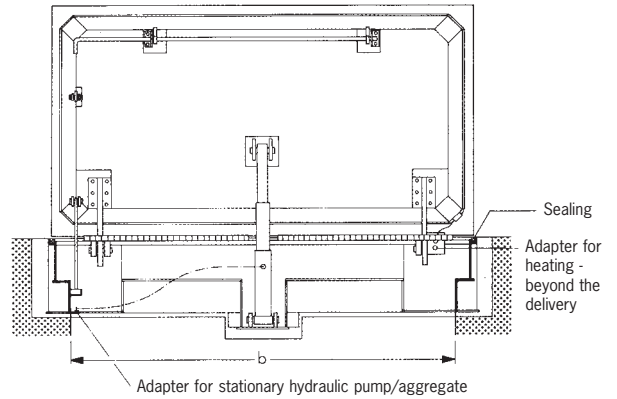
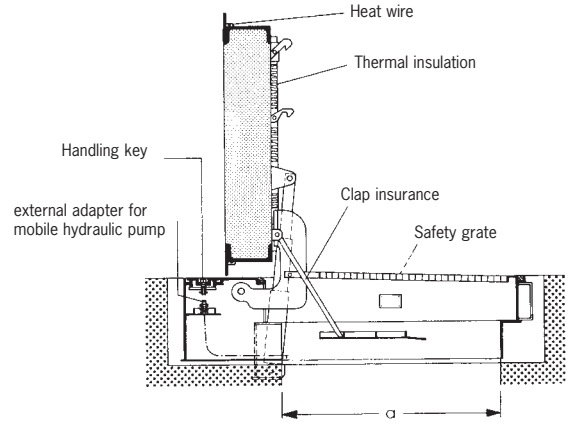
HD F900 galvanized

Access cover hydraulic without isolation and without heat wire.

<i>Dimensions axb</i>	<i>Weight (kg)</i>	<i>Part.- No.</i>
1000x1000	1440	60211
1000x2000	2290	60212

Access cover hydraulic with isolation and heat wire.

<i>Dimensions axb</i>	<i>Weight (kg)</i>	<i>Part.- No.</i>
1000x1000	1440	59022
1000x2000	2290	58714



Operation and Maintenance Manual

SERVOKAT® –GD Shaft Cover with opening support, resistant to rain-water, with air spring

General instructions

1. The SERVOKAT® shaft cover consists from galvanized steel or from stainless steel. The cover and frame are mutually connected by hinge. The in-built air springs enable attendance of the cover by one person.
2. The covers of **A 15 class, B 125 class, normal accomplishment**, can be open or closed from upper/lower side.
3. Covers of **D 400 class - normal accomplishment** - are due to the safety fitted with screw closures, which can be open/closed from upper side.
4. Covers of **A 15, B 125, D 400 class - emergency exit accomplishment** - can be opened/closed from upper side and quickly opened from bellow.
5. By assembly of galvanized covers in areas with more often dewing or other corrosive conditions, we recommend to fit the cover with additional protective coating, which is not part of the delivery.

Assembly

1. The cover must be mounted with slight elevation to prevent the remnants of the water on the cover.
Following instructions must be observed during built-in in the shafts from concrete produced in the place, bricked shaft and concrete ceilings.
2. The gap must be set beforehand (se pp. 2 to 4).
3. The cover must be fitted into the gap, opened and the internal casing inserted.
The cover must be opened only when the cover is in horizontal direction.
4. The cover must be levelled by the spirit-level.
The frame must be underpinned in the corners. (metal strips, flat iron; do not use mortar rubbish).

The cover must be closed before concreting.

The closures must be firmly tightened.

5. The gap must be poured by B 35 concrete, and inter-space bellow the frame must be entirely filled.
6. Loading of the cover can be realised after the concrete hardening; min. after 72 hours.
If needed, the rapid-hardening concrete can be used.
7. After concrete hardening, open cover, remove casing and clean the frame and cover in the area of fitting and sealing from concrete remnants.

Remove the bolts on the cover by means of counter-nut at covers of the B 125 class cover from stainless steel and of the D 400 class covers from galvanised steel / stainless steel.

Operation

Caution:

Operation safety of the cover depends on professional operation of the closures. If the safety screws are not firmly tightened, the safety tags of screw threads are damaged by dynamic strength. There is a danger of unwilling self-opening of the cover.

SERVOKAT® - GD A 15, B 125 class normal accomplishment

Opening from above

1. To loosen the closings by means of swivel and maintenance key no. 4143 by turning of locking pin counter clockwise.
2. The hang-up the hook of the key into swivel openings of the cover. To lift off the cover, until the anti-shut lock snaps.

Opening from below

1. To fit the double-ring key on the closure on the hexagon and turn counter clockwise, until the lock lever is tilt to the open position.
2. To lift off the cover from bellow, until the anti-shut lock snaps.

Closing from above

1. Before closing, the contact surfaces must be cleaned, sealing checked and repaired if damaged.
2. To turn the lock pins contraclockwise, until the lock lever is locked.
3. To hook-up the anti-shut lock. To shut the cover.
4. To tighten the lock pin by means of service key clockwise. Tightening torque must be cca 100 Nm.

Closing from bellow

1. To clean the contact surfaces before closing.
The sealing must be checked.
2. To turn the lock pins contraclockwise, until the lock lever is locked.
3. To hook-up the anti-shut lock. To shut the cover.
4. To turn the lock screw clockwise by means of the double-ring key. The tightening torque is cca 100 Nm; be careful not to enable the turning of the lock lever into the closing pocket in the frame.

SERVOKAT® - GD class D 400 normal accomplishment

Opening from above

1. To loosen the closings by means of swivel and maintenance key no. 4143 by turning of locking pin counter clockwise.
2. The hang-up the hook of the key into swivel openings of the cover. To lift off the cover, until the anti-shut lock snaps.

Closing (possible only from above)

1. Before closing, the contact surfaces must be cleaned, sealing checked and repaired if damaged.
To hook-up the anti-shut lock. To shut the cover.
2. To tighten the lock pin by means of service key clockwise. Tightening torque must be cca 100 Nm.

SERVOKAT® - GD class A, B, D emergency exit accomplishment

Opening from above

1. To loosen the closings by means of swivel and maintenance key no. 4143 by turning of locking pin counter clockwise.
2. The hang-up the hook of the key into swivel openings of the cover. To lift off the cover, until the anti-shut lock snaps.

Opening from below

1. To sway the lever (pos. 1) in the hinge direction, until the lock unit (pos. 2) is unlocked.
2. To lift off the cover, until the anti-shut lock snaps.

Closing (possible only from above)

1. To clean the contact surfaces before closing.
The sealing must be checked.
2. To screw-up the lock unit (pos. 2) from lock pin and to store it into the storage unit (pos. 3). To lock the lock unit by means of lever (pos. 1). Be aware, the lever must hang down after locking.
3. To hook-up the anti-shut lock. To shut the cover.
4. To turn the lock bolt by means of service key clockwise. Tightening torque must be cca 100 Nm.
5. If the cover was opened from above, skip point 2

Maintenance

Hinges, lock bolts, lift joint and slide surfaces must be lubricated every six months.

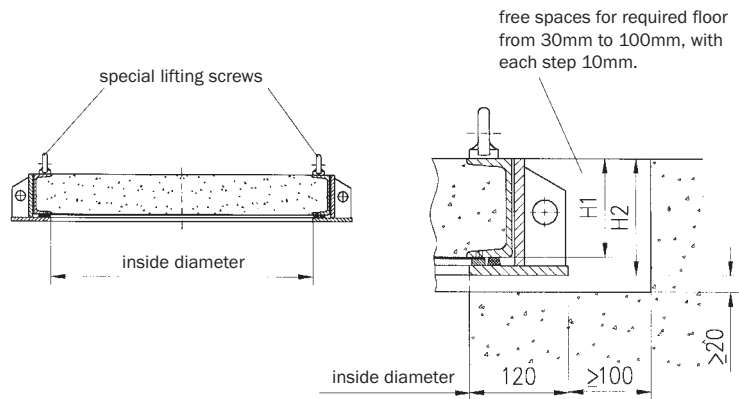
The sealing must be lubricated by talcum against freezing.

Bespoken covers

Standard

type		Individual parts. and nr. frames covers	
from A	to B		
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1500	1	2
1600 x 400	3000 x 800	1	2
1700 x 900	2600 x 1500	1	3
3100 x 400	4000 x 800	1	3
2700 x 900	3500 x 1500	1	4
3600 x 900	4000 x 1500	1	5

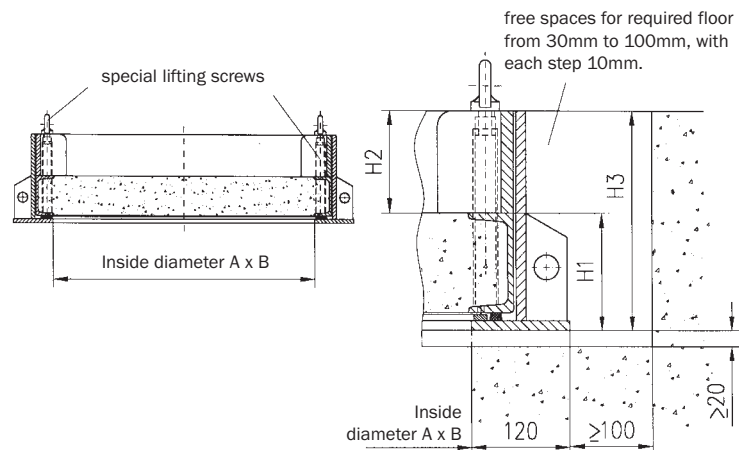
	125 kN	400 kN
H1	120 mm	180 mm
H2	142 mm	202 mm



Edge detail for selectable surfaces - standard

type		Individual parts. and nr. frames covers	
from A	to B		
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1500	1	2
1600 x 400	3000 x 800	1	2
1700 x 900	2600 x 1500	1	3
3100 x 400	4000 x 800	1	3
2700 x 900	3500 x 1500	1	4
3600 x 900	4000 x 1500	1	5

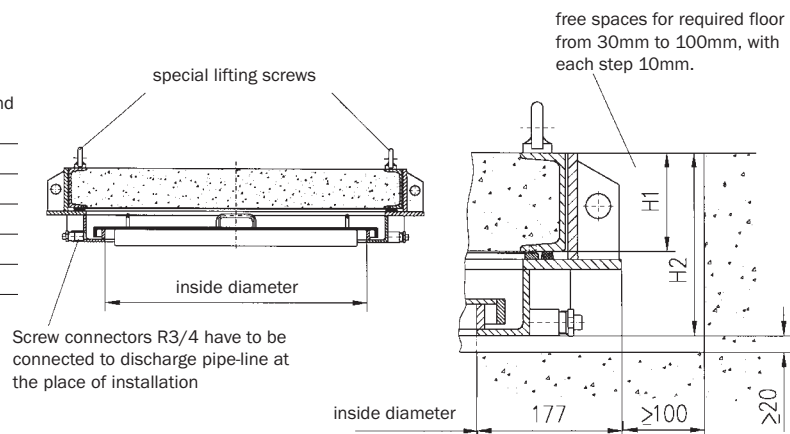
	125 kN	400 kN
H1	142 mm	202 mm
H2	30-100 mm	30-100 mm
H3	172-242 mm	232-302 mm



Floor water proof

type		Individual parts. and nr. frames covers	
from A	to B		
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1300	1	2
1600 x 400	2800 x 800	1	2
1700 x 900	2600 x 1300	1	3
2700 x 900	2800 x 1300	1	4

	125 kN	400 kN
H1	120 mm	180 mm
H2	222 mm	282 mm

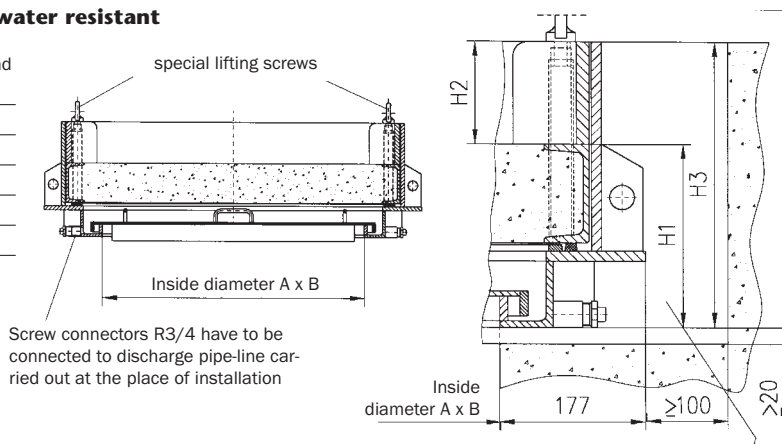


Bespoken covers

Edge detail for selectable surfaces - floorwater resistant

type		Individual parts. and	
from A	to B	nr. frames	covers
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1300	1	2
1600 x 400	2800 x 800	1	2
1700 x 900	2600 x 1300	1	3
2700 x 900	2800 x 1300	1	4

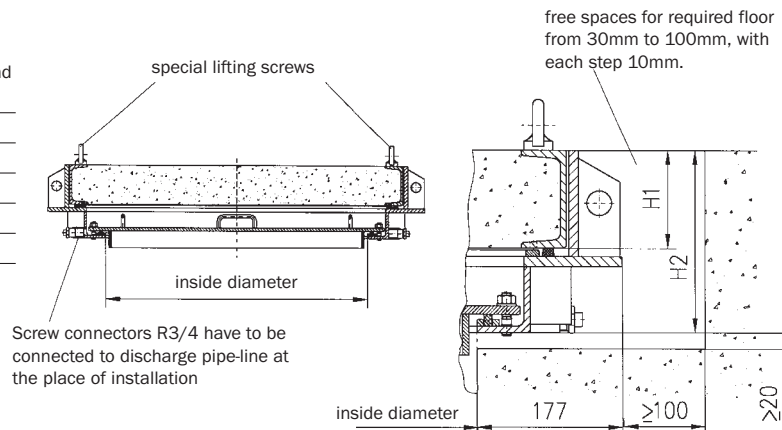
	125 kN	400 kN
H1	222 mm	282 mm
H2	30-100 mm	30-100 mm
H3	252-322 mm	312-382 mm



Resistant agains backpressure

type		Individual parts. and	
from A	to B	nr. frames	covers
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1300	1	2
1600 x 400	2800 x 800	1	2
1700 x 900	2600 x 1300	1	3
2700 x 900	2800 x 1300	1	4

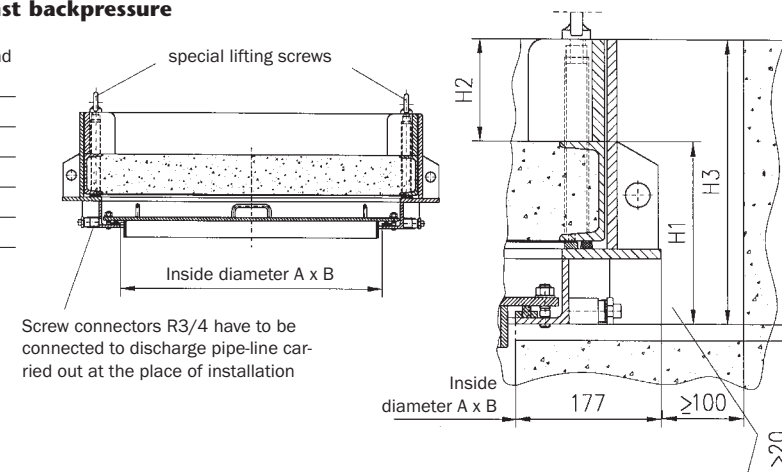
	125 kN	400 kN
H1	120 mm	180 mm
H2	222 mm	282 mm



Edge detail for selectable surfaces - against backpressure

type		Individual parts. and	
from A	to B	nr. frames	covers
400 x 400	1500 x 800	1	1
900 x 900	1600 x 1300	1	2
1600 x 400	2800 x 800	1	2
1700 x 900	2600 x 1300	1	3
2700 x 900	2800 x 1300	1	4

	125 kN	400 kN
H1	222 mm	282 mm
H2	30-100 mm	30-100 mm
H3	252-322 mm	312-382 mm



Bespoken covers

Installation and Operating Instructions

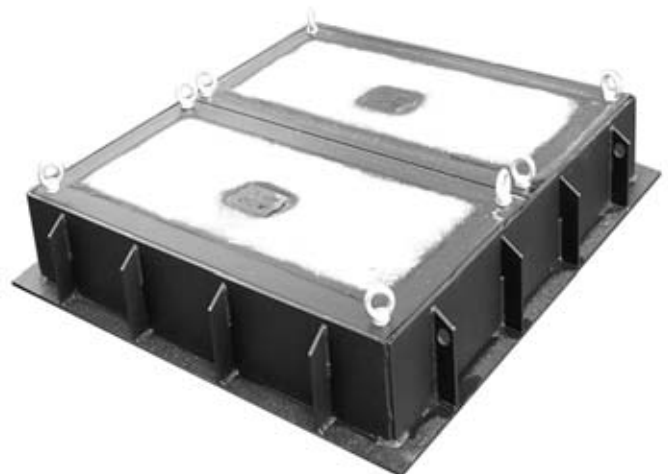
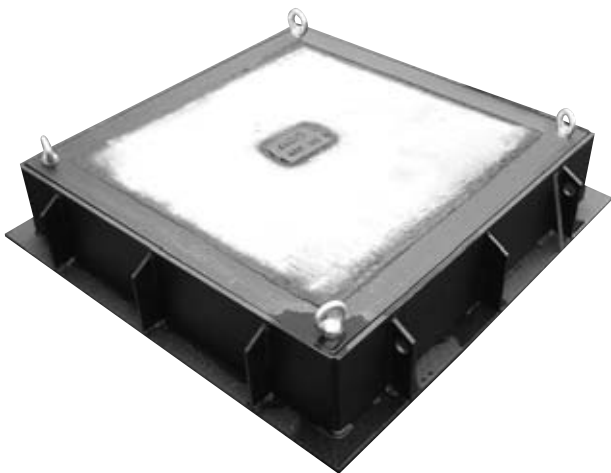
Reinforced-concrete tailor-made well covers

General instructions

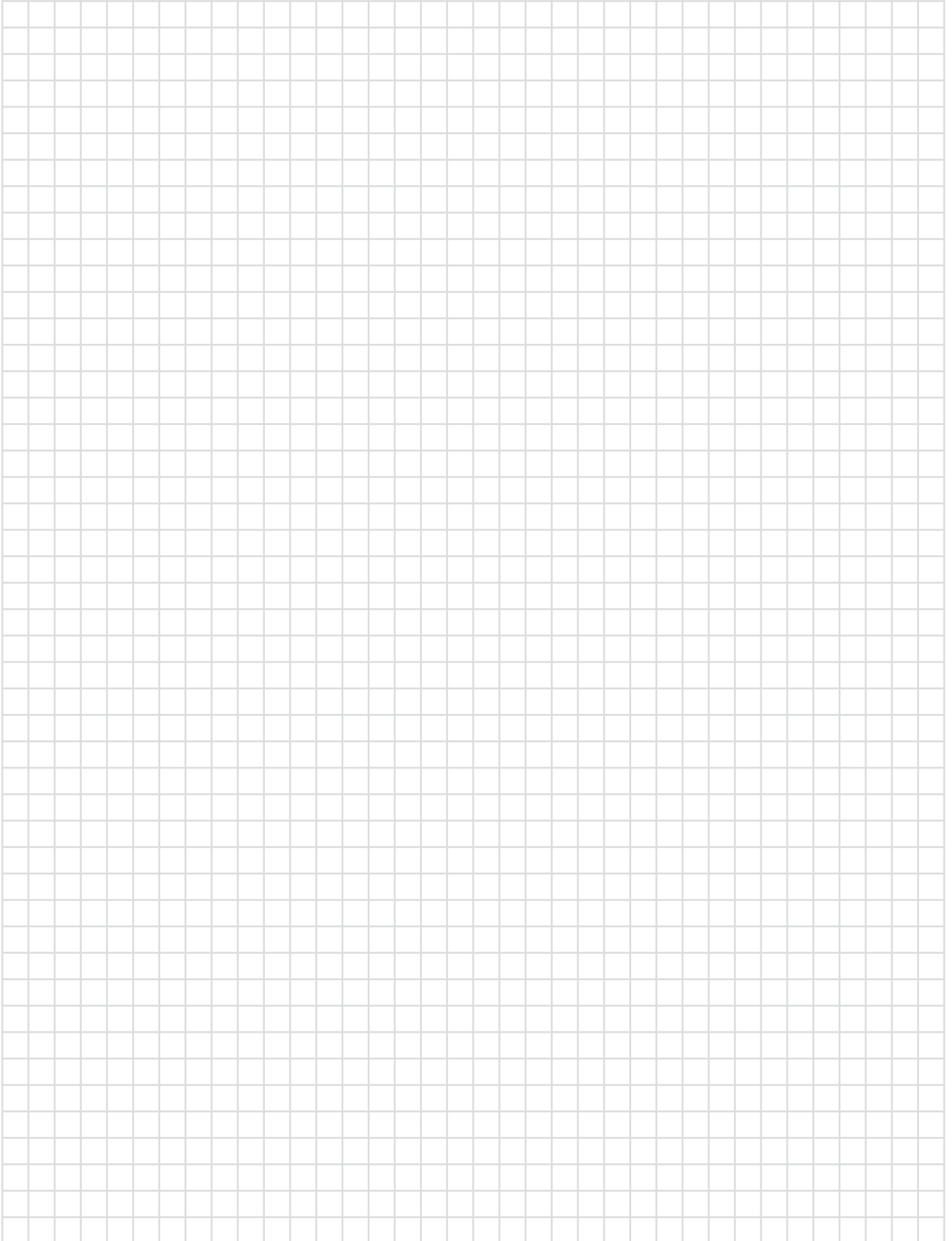
1. Covers consist of a frame, or frame elements which must be assembled on the construction site and of one or more lids.
2. The lid and frame are matched by the manufacturer.
3. The lids are fitted with threaded recesses and are to be removed with the help of suspension bolts. They must be screwed in up to the collar. The female threads are supported with hexagonal screws or plastic pins. They must be removed before lifting and reinstalled later on.
4. The covers in the design which is impermeable to surface water feature an overlapping lower lid, and the coverings in a design with protection from backwater feature a screwed inner lid with rubber sealing. Both these designs feature drilled holes situated in the lower frame. See Fig. on the rear page. There it is possible to connect the drainage pipelines for removal of water leaking through upper lid joints, the drainage pipeline is not included in the supply.
5. Do remember the installation hole. For dimensions see the approved drawing.
6. Check the parts for proper condition. Do not install any parts which are damaged.

Assembly

1. Install the frame into the hole, adapt it to the upper terrain level. Underpin in corners and on sides (metal sheet strap, flat steel plate)
2. Place the formwork to the inner sides of the frame. In the case of the covers impermeable to surface water and those with protection from backwater remove the inner lid beforehand. In the case of the design with protection from backwater install the inner lid again, after placing the formwork, and screw it. In the case of frames with anchor bolts tighten the nuts firmly only after the hardening time has elapsed.
3. Insert the lid. In the case of special designs it is necessary to respect the marking in question. Check the lid for proper position (it must not "rattle"), and if necessary level the frame again. For all coverings, insert shims (metal sheet straps) between the lid and the frame in order to maintain the appropriate clearance between the frame and the lid.
4. In the case of the covers impermeable to surface water and those with protection from backwater: remove the closing plug and connect the drainage line. Drainage pipeline connection: design impermeable to surface water: Rp3/4 or Rp1 design with protection from backwater: Rp3/4
5. Pour B 35 concrete into the hole, fill fully the intermediate area under the frame installation place.
6. Loading of the covering only after the lapsing of the concrete hardening time; not sooner than after 72 hours. If necessary, use fast-hardening bonding agent or mortar with an admixture of plastic materials.



Notes



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