

De la théorie à la pratique : HMS[®] des fondations isolantes.

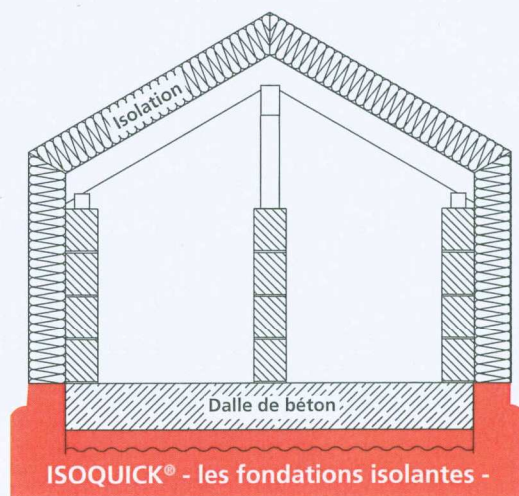
Une cuve en Peripor[®] encapsule en fondations la partie du bâtiment située sous terre puis, assure en surface la continuité de son isolation extérieure.

Résultat :

Une isolation globale sans discontinuité, sans pont thermique énergivore. En même temps, la protection contre l'infiltration d'humidité, donc contre la formation de moisissures se trouve renforcée.

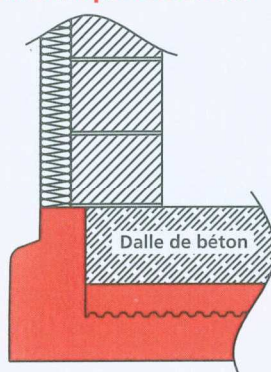
Les fondations isolantes ISOQUICK[®] constituent un système modulaire, sachant s'adapter précisément aux exigences des projets, aux plans de bâtiments les plus divers. Un système qui a su convaincre jusque dans les moindres détails :

- Pose sûre grâce à sa structure gaufrée en profils de pyramides tronquées
- Optimisation de coupes
- Pose rapide
- Formes sans discontinuités
- Raccords sans ponts thermiques
- Adaptation aux formes non rectangulaires

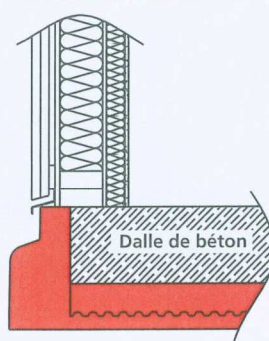


un système isolant complet

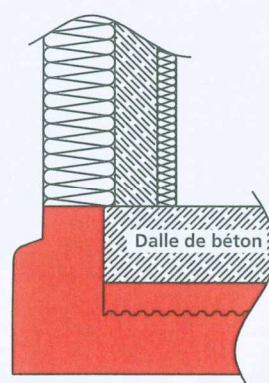
murs maçonnés avec
système d'isolation
thermique extérieur



construction en
ossature bois



éléments
banchés



HMS[®]
BAUSYSTEME

avec les meilleures recommandations



Surfaces non rectangulaires



Gymnase, Issum



Canada – Jeux olympiques de 2010



Individuel. Professionnel. Rapide.

Peripor®, un produit de la société BASF®, cet excellent matériau satisfait à toutes nos exigences en termes d'isolation, de résistance, de stabilité de forme mais aussi de préfabrication sur mesure, permettant une très grande précision de mise en œuvre.

La pose elle-même est réalisée en quelques heures. Le système ISOQUICK® peut être utilisé pour tous types de constructions tels que les bâtiments maçonnés, les éléments banchés, les ossatures bois, étant compatible avec les constructions conçus avec sous-sol.

Précision importante :

Nos exigences qualité au niveau du matériau nous engagent à sa mise en œuvre pour une sécurité maximum ce qui nous amène en toute logique à ne pouvoir proposer le système ISOQUICK® qu'en solution complète. Ainsi, les travaux nécessaires jusqu'à l'achèvement de l'installation sont effectués par des collaborateurs ISOQUICK® compétents, ce qui constitue un maillon important dans notre chaîne d'assurance qualité.



Jardin d'enfants, Haar, Allemagne

chantier HENRY, Irlande

chantier BÖHM, Allemagne

Penser plus loin - de manière globale.

Avoir une vue d'ensemble – faire évoluer de bonnes idées vers des solutions parfaites.

Au delà des fondations, nous poursuivons le même objectif, avec la même passion, dans les détails relatifs au raccordements entre fondations et murs. Forts de notre engagement et de notre expérience, nous apportons notre savoir-faire en nous consacrant à la résolution des problèmes extrêmes liés aux aléas statiques, aux charges ponctuelles difficiles ou autres défis technologiques.

Fabricant du système ISOQUICK®, nous ne nous limitons pas à notre cœur de métier et gardons toujours à l'esprit la globalité du produit fini, installé et livré. Responsables du devenir de votre projet, nous assumons avec toute la compétence requise les obligations d'un chantier de qualité, connaissant la quasi-impossibilité de retour ultérieur sur les fondations. N'est-ce pas là, la meilleure garantie de faire appel à des experts dès le début ?

Qualité. Certifiée selon l'exigence élevée des Normes Européennes.

Qualité est la valeur essentielle de notre vocation. Mais au delà de nos arguments positifs liés à notre propre expérience, sachez que nous sommes soumis régulièrement dans toutes nos procédures d'assurance qualité à des vérifications de bureaux de contrôles indépendants...avec succès !



Gymnase, Buir, Allemagne



chantier maison KERN, Allemagne



chantier DÖRFEL, Allemagne

Un climat idéal. Fondé sur une nouvelle façon de penser.

Une chaleur accueillante en période hivernale, une fraîcheur reposante durant les chaleurs d'été, un minimum de dépenses énergétiques, voilà ce qu'on attend d'une maison d'aujourd'hui.

Les niveaux élevés des techniques d'isolation et de ventilation des maisons passives ont démontré qu'il reste très difficile d'obtenir un climat d'habitation idéal en réalisant des économies d'énergie substantielles sans protection périphérique complète contre les influences extérieures.

Pour aller jusqu'au bout du concept de la protection périphérique, nous souhaitons attirer votre attention sur les fondations qui, bien que cachées à la vue, constituent un élément indispensable à une protection

optimale contre le froid et l'humidité. Sans isolation suffisante, les fondations peuvent rapidement constituer un pont thermique froid, devenir source de coûts supplémentaires et inutiles, en d'autres termes, abaisser la valeur résidentielle de votre habitation.

C'est précisément de cela que le système de fondations isolantes ISOQUICK® vous protège.

L'avance technologique obtenue par une approche systémique protégeant du froid, de la chaleur et de la condensation qui a déjà fait ses preuves sur des bâtiments de tout type de constructions, de tailles et de fonctions très différentes et variées. Bien entendu, en répondant aux normes d'évaluation très strictes de l'Union Européenne.

Plus qu'un détail :

Des modules à structure gaufrée en profils de pyramides tronquées protègent les fondations isolantes de tout risque de cisaillement et leurs garantissent ainsi une stabilité d'orientation.



Certificate

valid until 31 December 2010

Passive House
Institute
Dr. Wolfgang Feist
Rheinstraße 44/46
D-64283 Darmstadt



**Component
suitable for**

Passive Houses: Thermal-Bridge-Free Building Element Joint

Manufacturer: Isoquick GmbH & Co. KG

Product name: isoquick Thermally insulated tray system for load bearing foundation slabs.

The following criteria have been verified for the issuance of this certificate:

Regular heat transfer coefficient of the thermal envelope:

$$f * U_{\text{opaque}} \leq 0,15 \text{ W/(m}^2\text{K)} \text{ (f: temperature reduction factor)}$$

Avoidance of thermal bridges in Passive Houses:

$$\Psi_{\text{exterior}} \leq 0,01 \text{ W/(mK)} \text{ for all regular building element joints}$$

Temperatures of inner surfaces above 17°C (at $\vartheta_{\text{ext}} = -10^\circ\text{C}$ und $\vartheta_{\text{int}} = 20^\circ\text{C}$)

Airtightness of all regular components and all building element joints

Certified construction details according to the certification documents:

The thermally insulated tray system for foundation slabs, Isoquick, was evaluated for three different wall/floor interfaces (joints): insulated concrete forms (ICF), exterior insulation on masonry walls and lightweight wood construction. All the criteria required for the award of this certificate were met.

The certificate is to be used as follows:



**Component
Suitable
for
Passive Houses**
Dr. Wolfgang Feist

First thermal insulation tub to be given official seal

Thermal insulation for the base plate

Rarely do building owners know exactly what is going on under their base plate. Residents of passive houses, too, often have no idea if and how the components which are touching the ground, particularly the base plate, have to be insulated. In order to achieve efficient thermal insulation, however, it is imperative to integrate the entire building, including the base plate, in the insulated shell. What's more, it is vital that the thermal insulation underneath the base plate functions for the whole life cycle of the building. Another factor to consider is that the frost walls which used to be common do not offer the possibility of building without any thermal bridges. The load of the building is not transferred via strip foundations, but rather via the base plate and insulation over the entire subsoil. Therefore, the architect and building owner must have a guarantee that the material used will not lose its insulating effect by becoming compressed under the weight of the house.

ISOQUICK® - the smart solution

Such efficient and functional insulation does exist: ISOQUICK® is the smart solution used under the base plate which combines a whole series of advantages and functions.

As easy as Lego® bricks

The complete ISOQUICK® perimeter base tub for a single family home can be assembled in as little as three hours, fixing it firmly in position without the necessity to remove any formwork.

Suitable for passive houses

All the tested connections of the ISOQUICK® perimeter base tub are free of thermal bridges. The system is certified as a component suitable for passive houses by the German Passive House Institute.



It is possible to use ISOQUICK® in buildings with different levels without creating any thermal bridges.



Even big buildings – for example a kindergarten – with or without basement are perfectly insulated using ISOQUICK® modules.

High level of thermal insulation

With a lambda value of 0.038 W/(mK), the low thermal conductivity of the EPS boards is officially proven.

Saves on materials

When using the ISOQUICK® modules, no foundations are required, and the extensive erecting and removing of formwork is not necessary.

Independent of construction type

The ISOQUICK® system can be used with all construction types: solid, timber frame or timber plank construction or ICFs, with or without a cellar.

First national technical approval

After more than four years of examinations, the news finally came in March 2007: the company ISOQUICK® GmbH & Co. KG from Niederzissen was granted national technical approval for its now patented insulating base tub system by Deutsches Institut für Bautechnik (DIBt). The load-bearing and position-fixing function of the base tub was examined and confirmed. This gives the architect and building owner the guarantee that when the ISOQUICK® system is installed under base plates in two layers of up

to 300 mm, no negative material changes are to be expected due to static influences. The approval granted includes another simplification for structural engineers. For the first time, shearing stress, which is particularly common in buildings constructed on a slope, can be transferred into the construction ground via an insulating layer.

Furthermore, it is the first time that the approval has been awarded for an EPS perimeter insulation without a flat addition to the U value.

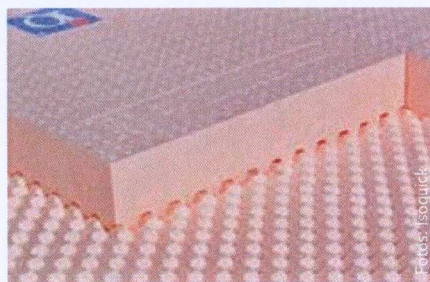
Even after the successful approval, the company ISOQUICK® GmbH & Co KG is working together closely with the approval authorities and is a partner in various longterm practical trials.

Information

The ISOQUICK® modules consist of Peripor®, a foam material from the BASF Styropor® family. ISOQUICK® is suitable for all construction and building types. There are numerous reference objects, ranging from single family homes and nursery schools to sports halls and large-scale commercial projects in Germany and elsewhere in Europe.



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An ingenious principle: this profile has made it possible to prove for the first time the required positional security with several layers of thermal insulation.



Warmth is everything

ISOQUICK® - for all wall constructions

Individuality is the expression of one's own personality, and is also reflected in the way a house is constructed. Whether your house is built using a timber frame, ICFs or as a solid house, all wall connections are of course easily possible. Due to the system, various insulation thicknesses can be used.

The transition to all wall structures is simple and made to measure, and most importantly free of thermal bridges. Depending on the statics of the house, the ISOQUICK® modules adjust to different concrete thicknesses.

ISOQUICK® - the right solution for every house

Wall construction: external rendering
Neopor ICF
Gypsum plaster

Hydrophobic base protection

Horizontal wall sealing according to DIN 18 195

Horizontal base plate sealing according to DIN 18 195

Reinforced concrete base plate $t=25$ cm

ISOQUICK® perimeter base tub $t=30$ cm

4/8 grit as formation
Crushed stoned as a layer breaking capillarity according to DIN EN ISO 13 793
Supply and disposal pipes can be laid within a sand bed in this layer.
Stable substructure
Lay a non-corroding earthing strap in the ground and have it going vertically upwards

Mineral, elastic coating with inlaid synthetic fabric
Protective foil / drain felt
GEO textile (if required)
Draining (if required)

Regional depth of frost penetration, e.g. 80 cm

Wall construction: external rendering
Thermal Insulation Wall
Gypsum plaster

Vertical wall sealing according to DIN 18 195

Hydrophobic base protection

Horizontal wall sealing according to DIN 18 195

Horizontal base plate sealing according to DIN 18 195

Reinforced concrete base plate $t=25$ cm

ISOQUICK® perimeter base tub $t=30$ cm

4/8 grit as formation
Crushed stoned as a layer breaking capillarity according to DIN EN ISO 13 793
Supply and disposal pipes can be laid within a sand bed in this layer.
Stable substructure
Lay a non-corroding earthing strap in the ground and have it going vertically upwards

Mineral, elastic coating with inlaid synthetic fabric
Protective foil / drain felt
GEO textile (if required)
Draining (if required)

Regional depth of frost penetration, e.g. 80 cm

Wall construction: External rendering on thermal insulation
Timberframe construction
Installation level
Interior wall finish

Hydrophobic base protection

Horizontal wall sealing according to DIN 18 195

Horizontal base plate sealing according to DIN 18 195

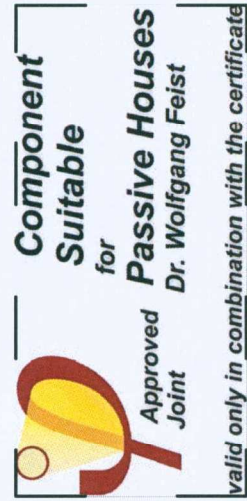
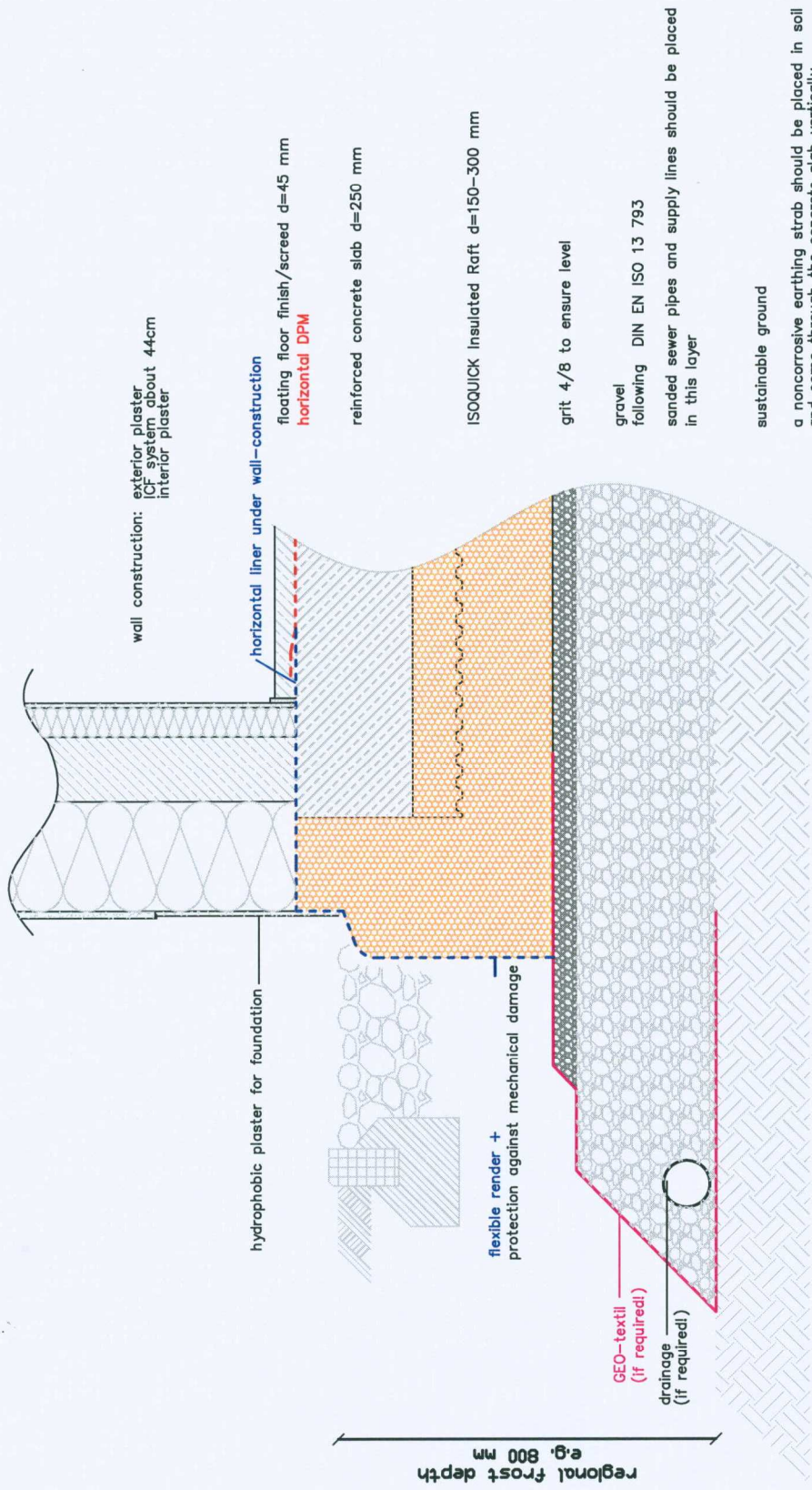
Reinforced concrete base plate $t=25$ cm

ISOQUICK® perimeter base tub $t=30$ cm

4/8 grit as formation
Crushed stoned as a layer breaking capillarity according to DIN EN ISO 13 793
Supply and disposal pipes can be laid within a sand bed in this layer.
Stable substructure
Lay a non-corroding earthing strap in the ground and have it going vertically upwards

Mineral, elastic coating with inlaid synthetic fabric
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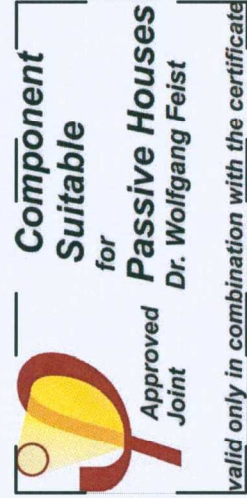
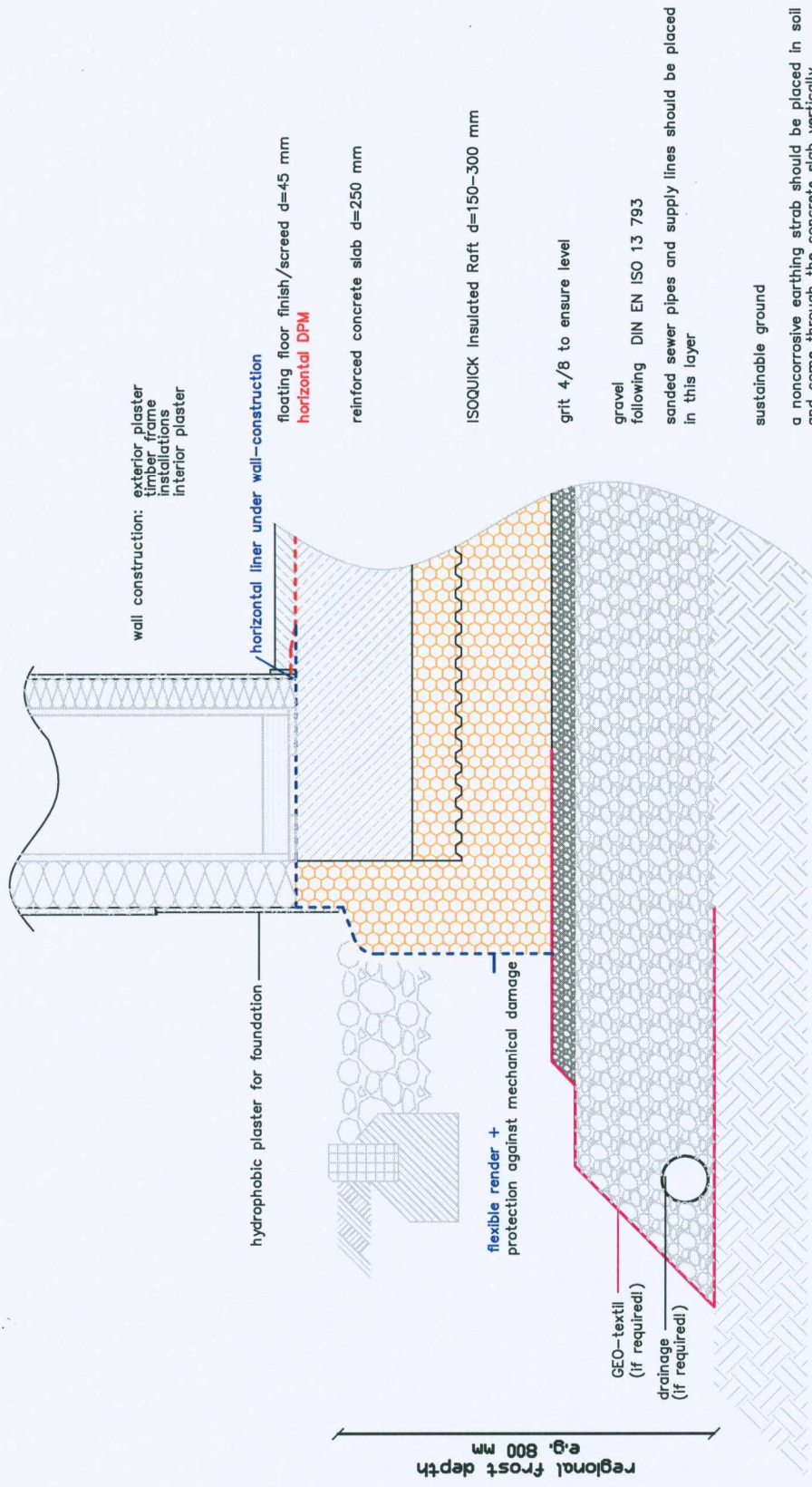
Regional depth of frost penetration, e.g. 80 cm



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Fax: +49 (0) 26 36 / 94 12 03	on a scale of 1:10
www.isoquick.de	

detail:

Connection between exterior wall and
ISOQUICK - The Insulated Raft -
ISOQUICK Insulated Raft, thickness: 300 mm
sidewise: 200 bzw. 300 mm



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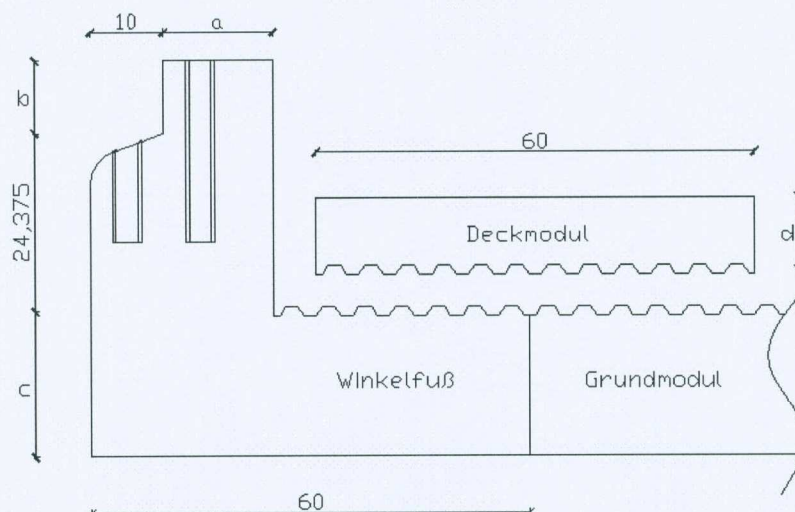
detail:

Connection between exterior wall and
ISOQUICK - The Insulated Raft -
ISOQUICK Insulated Raft, thickness: 300 mm
side view: 200 bzw. 300 mm



technical data sheet
ISOQUICK® Perimeter-Bodenwanne

Grund-Module GM	Deck-Module DM				Rand-Module RM	
Designation	unit	Description				
ISOQUICK® Grund-/Deck-Module Rand-Module		EPS – shaped part for thermal insulation of earthaffected construction				
Quality assurance association		Forschungsinstitut für Wärmeschutz München e.V. FIW following Z-23.34-1643				
admission No.:		Z-23.34-1643				
Raw-material		Peripor 300 by BASF				
size	m	1,20 x 0,60				
Cover surface	m²	0,72				
Raster	mm	50				
Compression stress under load rated value f_{cd} following DIN 1055-100	kN/m²	140				
Shearing stress rated value f_{vd}	kN/m²	20% from rated value of direct stress from the appropriate affecting combination				
Compressive modulus of elasticity of the compressed thermal insulation after 50 years E_{50}	kN/m²	10.000				
Thermal conductivity rated value λ	W/mK	0,038 no ΔU-value-addition (0,04 W/m²K)!				
Reaction to fire		B1 following DIN 4102-B1				
μ -value		40/100				
Article indication		G-/DM 05	G-/DM 10	G-/DM 15	G-/DM 20	
Total strength	mm	56,25	106,25	156,25	206,25	
Thermal insulation strength	mm	50	100	150	200	
Packing unit	Stk./Pal.	40	20	16	12	
Packing quantity	m²/Pal.	28,8	14,4	11,52	8,64	
Minimum		¼ Pal.	¼ Pal.	½ Pal.	½ Pal.	
Time required	With three persons 100 m² in 2,5-3 h for the entire Perimeter-Bodenwanne (RM including GM+DM)					
environment	Chemical and biologically neutrally FCKW-, HFCKW- und HFKW-free					
State of 01.04.2007						



technical data sheet ISOQUICK® Perimeter-Bodenwanne

	a	b	c	d	Con- crete	Insula- tion	R- value	$\Psi_{\text{stat-}}$ value	$\Psi_{\text{dyn-}}$ value	PHI- certification	
unit	cm	cm	cm	cm	cm	cm	m ² K/W	W/mK	W/mK		
name:											
RM 10-05	10	10,625	5	10	25	15	3,95				
RM 10-10	10	10,625	10	10	25	20	5,26				
RM 10-15	10	10,625	15	10	25	25	6,58				
RM 10-20	10	10,625	20	10	25	30	7,89	-0,009	-0,035	Fall III Variante I	
RM 15-05	15	10,625	5	10	25	15	3,95				
RM 15-10	15	10,625	10	10	25	20	5,26				
RM 15-15	15	10,625	15	10	25	25	6,58				
RM 15-20	15	10,625	20	10	25	30	7,89	-0,012	-0,036	Fall III Variante II	
RM 20-05	20	10,625	5	10	25	15	3,95				
RM 20-10	20	10,625	10	10	25	20	5,26				
RM 20-15	20	10,625	15	10	25	25	6,58				
RM 20-20	20	10,625	20	10	25	30	7,89	-0,033 -0,028	-0,027 -0,044	Fall I Fall II	
RM 10-05	10	10,625	5	15	20	20	5,26				
RM 10-10	10	10,625	10	15	20	25	6,58				
RM 10-15	10	10,625	15	15	20	30	7,89				
RM 10-20	10	10,625	20	15	20	35	9,21				
RM 15-05	15	10,625	5	15	20	20	5,26				
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RM 15-15	15	10,625	15	15	20	30	7,89				
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RM 20-15	20	10,625	15	15	20	30	7,89				
RM 20-20	20	10,625	20	15	20	35	9,21				
RM 10-05	10	10,625	5	5	30	10	2,63				
RM 10-10	10	10,625	10	5	30	15	3,95				
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RM 10-20	10	10,625	20	5	30	25	6,58				
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RM 15-20	15	10,625	20	5	30	25	6,58				
RM 20-05	20	10,625	5	5	30	10	2,63				
RM 20-10	20	10,625	10	5	30	15	3,95				
RM 20-15	20	10,625	15	5	30	20	5,26				
RM 20-20	20	10,625	20	5	30	25	6,58				

State 01.04.2007