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Magnets
Shutterings
Accessories
Productinformation



B.T. innovation GmbH

Originally founded in 1991 as a regional wholesaler for specialist building materials, in recent years B.T. innovation GmbH has developed into a competent partner on the international scene. Our partners include customers and dealers throughout the world. B.T.'s modern corporate philosophy means it has a proven track record of continuous development, coupled with constant expansion of the product range.

With our strong practical bias, we have discovered many workable, application-oriented solutions. Our enviable record of certifications, tests, approvals, utility models and patents under the auspices of building regulations speaks for itself.

B.T. innovation GmbH focuses equally on advice, development, production and supplies for construction companies and prefabricated concrete parts manufacturers. Direct performance of all the services and products we offer guarantees you competent advice and state-of-the-art products from a single source.

In the field of prefabricated concrete parts technology, we offer our customers a wide product spectrum, as well as advice, planning and implementation of new plants or changes to existing plants for manufacturing prefabricated concrete parts. This ranges from magnet technology through to a wide range of reasonably priced spacers, and includes complete shuttering systems, connection technology and seals.

Our products also offer the construction industry real solutions to problems, which ensure simple, reliable and cost-effective construction processes. Without constant development work and endless amounts of product information, it would be impossible to achieve the current capabilities of concrete construction. Increasing demands on the functionality, design and quality of building projects in concrete continually require new solutions, materials and techniques. Time and again new and further developments have meant we are able to provide impressive unique products for use on the building site.

We are pleased that you have looked at our catalogue and learned about our product innovations, and we hope that you will also soon join the ranks of our satisfied partners.

Our technicians provide on-site support at prefabricated parts plants, building companies and dealerships, and contribute to quick solutions to problems by giving competent advice. Technical and commercial staff ensure quick and reliable order processing.

B.T. innovation GmbH is certified to DIN ISO 9001.

Felix von Limburg

Chief Executive

B.T. innovation GmbH

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MagFly®-technology

Our patent for your efficiency



What is MagFly® technology?

MagFly® technology is a robust and compact solution which literally gets your magnetic system up on its feet. The secret behind this technology is our patented foot & spring system which makes child's play out of positioning magnets and/or shuttering precisely to the millimetre.

In the "neutral" position there is an air gap between the steel table and the magnet. This air gap means that the full magnetic force of the magnet does not come into play straight away, allowing it to be adjusted to the desired position without clamping. It is then activated by applying slight pressure. Only then does the full magnetic force become effective, which can be more than 30,000 N per magnet.

It started as an ingenious idea and turned into a success story, meanwhile becoming a standard for us: many of our magnet and shuttering solutions are now equipped with MagFly® technology as standard.

Advantages at a glance

- Extremely easy and precise positioning because the magnet more or less "glides" on the tilting table or steel pallet
- Precise fixing of the magnet by lightly pushing it; only then does the full magnetic force come into effect
- Simple visual checking to see if the magnet is "sitting" properly
- All the painstaking hammering into position usually required for rigging is dispensed with: this saves time, reduces wear and saves costs
- Compact construction without steel boxes or casings
- Full utilisation of the magnetic force by direct and positive connection between steel table, magnet and shuttering



Working method

for the example of the MagFly® AP

To position it, the magnet is pushed along the table with the hand or foot until it reaches the exact position required. Depending on the shuttering system or hold-down device used, this is also possible together with the shuttering.



Once the magnets, and the shuttering if applicable, have been precisely adjusted, the magnet is activated using the MagFly® technology by pressing it down with the hand or foot. Its full magnetic force now comes into play.



MagFly® magnets are removed by pulling the eccentric lever sharply upwards (depending on the model). This releases the magnet and sets it back on its feet.



MagFly® AP

Lightweight magnet technology



What is MagFly® AP?

Is it possible to even improve a good and successful clamping magnet? Yes it is! MagFly®AP is the logical development of the well-proven MagFly® universal magnet.

With an aluminium casing, high performance magnet materials and an integrated adapter for MultiForm and FlyFrame® shuttering systems, the new system magnet has come along as both a real powerhouse and a lightweight. With a magnetic force of 22,000 N and a weight of only 5.40 kg it has the best magnetic force to weight ratio of its class worldwide.

And, naturally, the most recent generation of magnets also boasts the proven MagFly® technology for easy positioning and adjustment of shuttering and magnets.

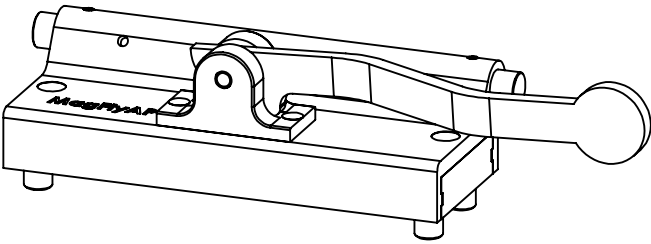
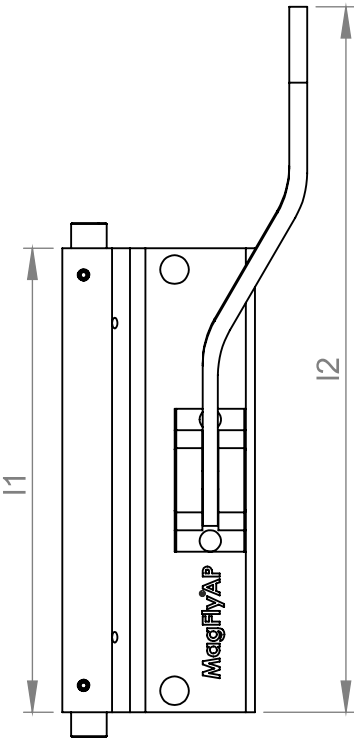
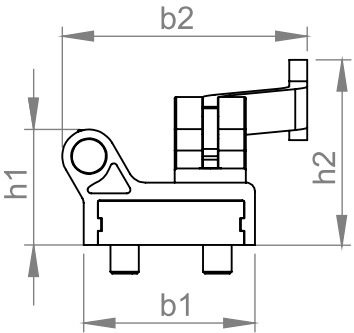
Advantages at a glance

- Good ergonomic design; its low weight and the new type of lever make child's play of carrying and handling
- Extremely light but enormously strong!
- Of course, the new MagFly®AP also offers integrated MagFly® technology for precise positioning
- Accurate fixing of the magnet by light pressure of the hand
- The permanently mounted eccentric lever makes additional tools for releasing the magnet unnecessary
- Compact design with integrated adapter for MultiForm and FlyFrame®



Technical data

Item number	Description	Mag. force [N]	Weight [kg]	l1 [mm]	l2 [mm]	b1 [mm]	b2 [mm]	h1 [mm]	h2 [mm]
8001067	MagFly® AP	22.000	5,4	260	385	96	130	76	100



Examples of application

MagFly® AP

Areas of application:

- 1 Because of their low weight, up to 4 magnets can now be carried at the same time.
- 2 MagFly® AP with FlyFrame®
- 3 MagFly® AP also offers the patented foot & spring system
- 4 Sandwich wall production with MagFly® AP and FlyFrame®
- 5 Rack system for MagFly® AP magnets
- 6 Production of supports with MultiForm and MagFly® AP on a tilting table
- 7 Use of MagFly® AP magnets in a pallet circulation system
- 8 Handcart for MagFly® AP rack
- 9 Solid wall production with MultiForm and MagFly® AP

2



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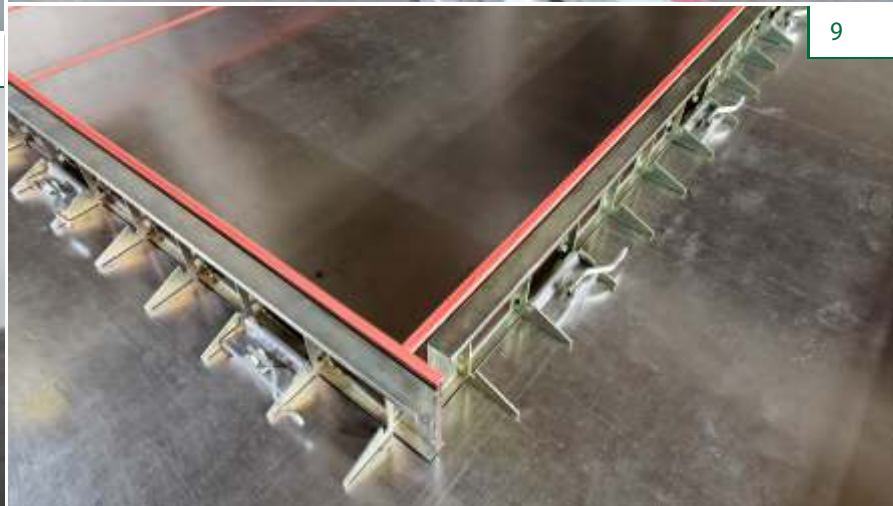
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Examples of application

with MagFly® AP



MagFly® universal magnet

The classic among magnetic systems



What is the MagFly® universal magnet?

The MagFly® universal magnet is a real classic. As the very first magnet, it was equipped with the patented MagFly® function, to which it now owes not only its name but also its success.

MagFly® universal magnets can be used for many purposes. Two M16x1.5 threaded holes are provided as standard for fitting adapters and accessories. Alternative threading positions and sizes are possible on request.

But we also offer a variety of magnetic strengths, sizes and designs to make sure that there is a suitable magnet available in each case for different applications.

MagFly® universal magnets can be used at ambient temperatures of up to 80° C. On request, special heat resistant designs are possible, e.g. for temperatures up to 120° C (type H) and 150° C (type SH).

High quality materials and the tension-resistant design ensure an extremely long working life.

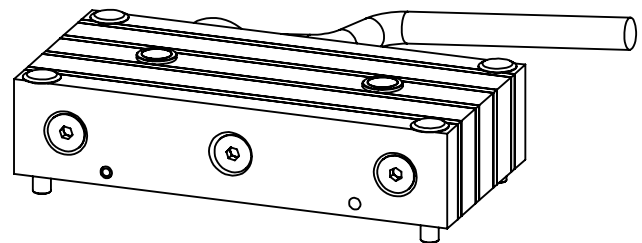
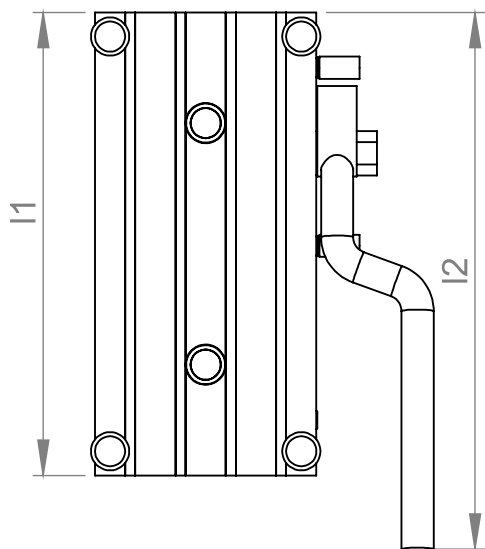
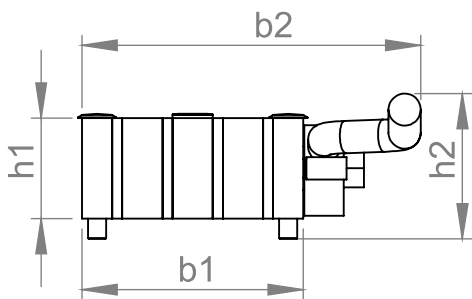
Advantages at a glance

- Ease of handling and precise positioning thanks to integrated MagFly® technology
- No additional tools required for release – the permanently fitted eccentric lever is not only practical, it saves time
- Multi-functional applications due to a comprehensive range of accessories and adapters
- Scalable for a variety of applications as different sizes and magnetic strengths are available according to requirements
- High quality materials and the tension-resistant design ensure an extremely long working life.



Technical data

Item number	Description	Mag. force [N]	Weight [kg]	l1 [mm]	l2 [mm]	b1 [mm]	b2 [mm]	h1 [mm]	h2 [mm]
8001052	MagFly® 1000 k	11.000	5,0	230	270	60	115	50	65
8001055	MagFly® 1600 k	16.000	7,5	230	270	85	140	50	65
8001060	MagFly® 2000 k	22.000	10,0	230	270	110	165	50	65
8001064	MagFly® 2500 k	27.000	12,5	230	270	135	190	50	65
8001065	MagFly® 3000 k	33.000	15,0	230	270	160	215	50	65

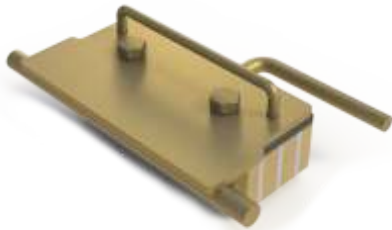


Accessories

With our patented magnetic system you can organise your production flexibly!

Below are some examples of our extensive range of accessories.

Individual adapters are available on request.



MultiForm system adapter



System adapter for BetoRatioForm® shuttering systems in longitudinal or lateral design, with additional stop brackets as an option



Thread pole in different lengths with top fixation



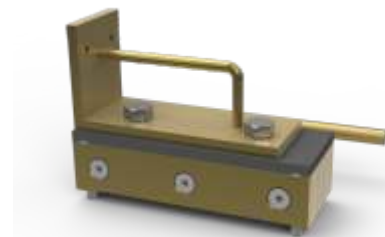
Adapter plate with coarse-threaded nut to take clients' coarse-threaded rods



Retractable adapter, bracing mechanism, optionally with normal or coarse threading



Rack for storing MagFly® clamping magnets with MultiForm adapter



Stop angle for longitudinal or lateral sides



Stop angle for corner connections



Adapter for holding down first shells of double walls during turning process

Individual solutions

with MagFly®

Areas of application:

- 1 MagFly® 2000 as a special design for use in garage formwork and room module shuttering
- 2 MagFly® 1600 – long design with adjustable hold-down device for the application of first shells in double-wall production
- 3 Detailed view of the MagFly® 1600 with hold-down device



Examples of application

with the MagFly® universal magnet

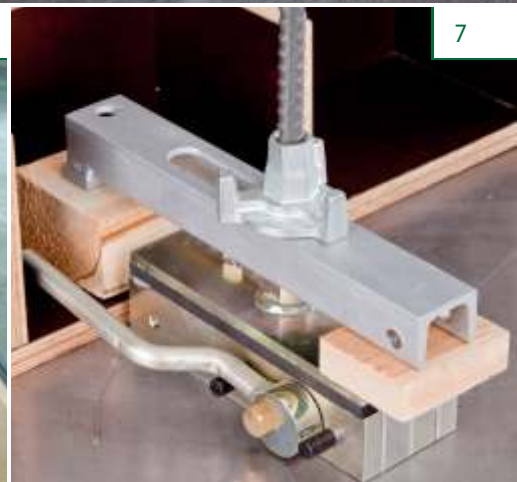
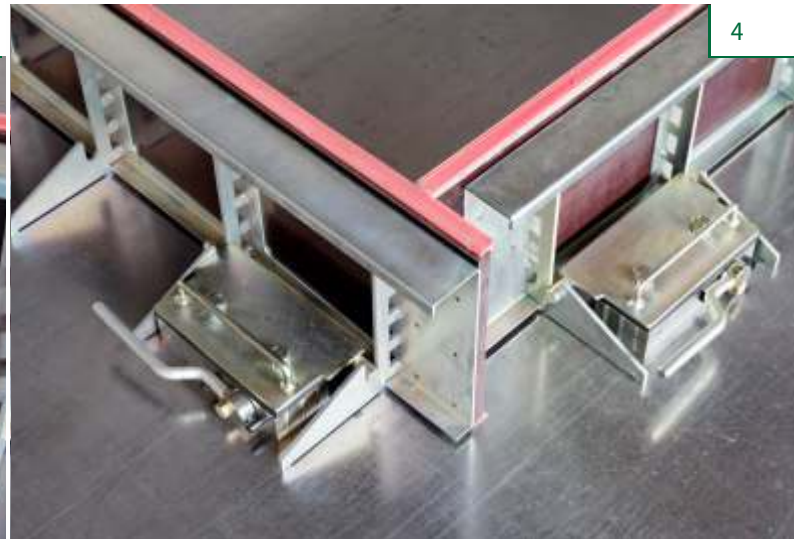
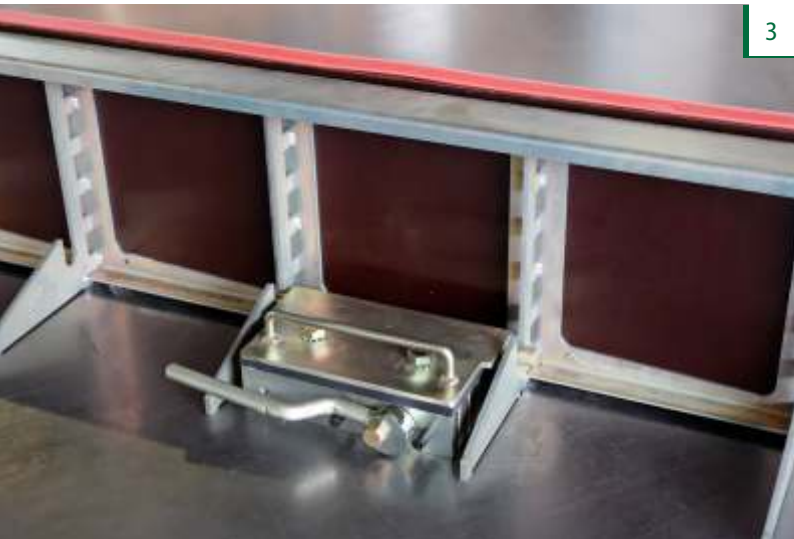
Areas of application:

- 1 MagFly® 1600 with MultiForm type 2
- 2 MagFly® 2000 with adapter and MultiForm type 1
- 3 Solid wall production MagFly® with MultiForm
- 4 Corner design
- 5 MagFly® with thread pole and top fixation
- 6 MagFly® 1600 with system adapter for BetoRatioForm® shuttering
- 7 MagFly® 1600 with adapter plate for coarse-threaded bracing rod
- 8 MagFly® 2000, retractable adapter with coarse threading
- 9 MagFly® and MultiForm on stairway shuttering



Examples of application

with the MagFly® universal magnet



Magnet type BR

Magnetic strips for U-profiles

What is a BR magnet?

The BR is a magnet which has been specially developed for applications in lateral and longitudinal stops and is mainly used in combination with U-profiles in the production of prefabricated ceilings and double walls.

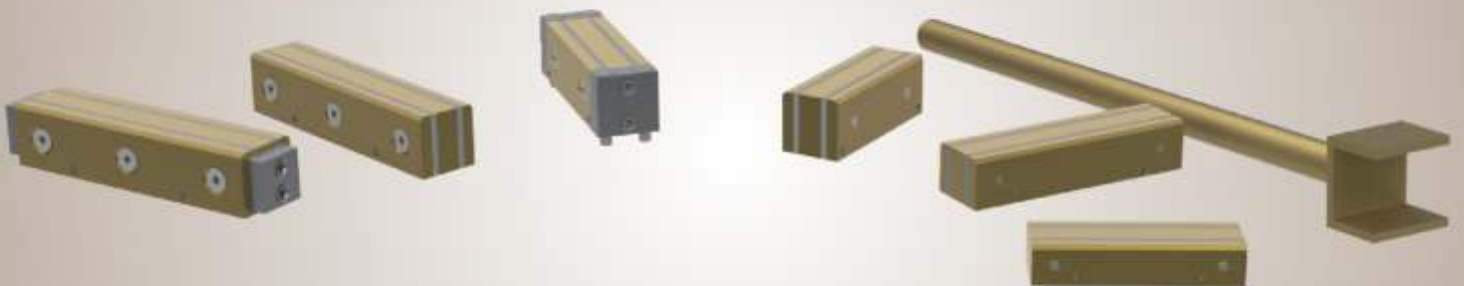
The magnet must be a 100 percent fit for the profile. Therefore the BR is available in a large number of different dimensions, magnetic forces and designs.

Depending on requirements and the client's wishes, the magnet can be supplied with chamfers along the length or on the front, non-magnetic cover plates or many other forms of processing.

The magnetic strip is easy to release by means of a release lever.

Advantages at a glance

- Suitable for use with circulation and robotic systems
- Multifunctional for various applications
- Also extremely suitable to replace or add to existing shuttering systems
- The high quality materials, compact design and excellent workmanship are a guarantee of high quality and a long working life
- Very easy to handle because of its low weight
- No bulging of the magnet material because of the compact design



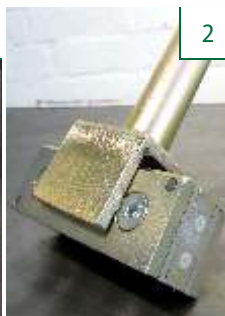
Technical data

Item number	Description	Mag. force [N]	Weight [kg]	l [mm]	b [mm]	h [mm]
8007075	BR 30/185	7.500	2,2	185	50	30
8007066	BR 40/153	7.500	2,5	153	50	40
8007065	BR 50/97	4.500	1,7	97	50	50
8007055	BR 50/140	6.500	2,5	140	50	50
8007058	BR 50/185	8.000	3,3	185	50	50
8007061	BR 50/230	10.000	4,1	230	50	50
8008056	Release		2,0			

Other magnetic forces and dimensions are available on request.

Examples of application

- 1 Magnet type BR 50/230 and type BR 50/140
- 2 Release device for simple release of magnets
- 3 BR magnet with cover plate and U-profile



Magnet type GB

System for fixing threaded sleeves

What is a GB magnet?

The GB magnet is used for fixing threaded sleeves, pigtail anchors etc., on both horizontal and vertical surfaces. It is available with different diameters and magnetic forces.

Its conical housing means that the GB is easy to release from the hardened concrete.

The GB magnet is made entirely of high-grade steel, it has a fully enclosed magnetic core and so guarantees a long working life.

The associated threaded rods are available in thread sizes from M 10 to M 36 and can be combined with all designs of the GB magnet. Other thread sizes are also available on request.

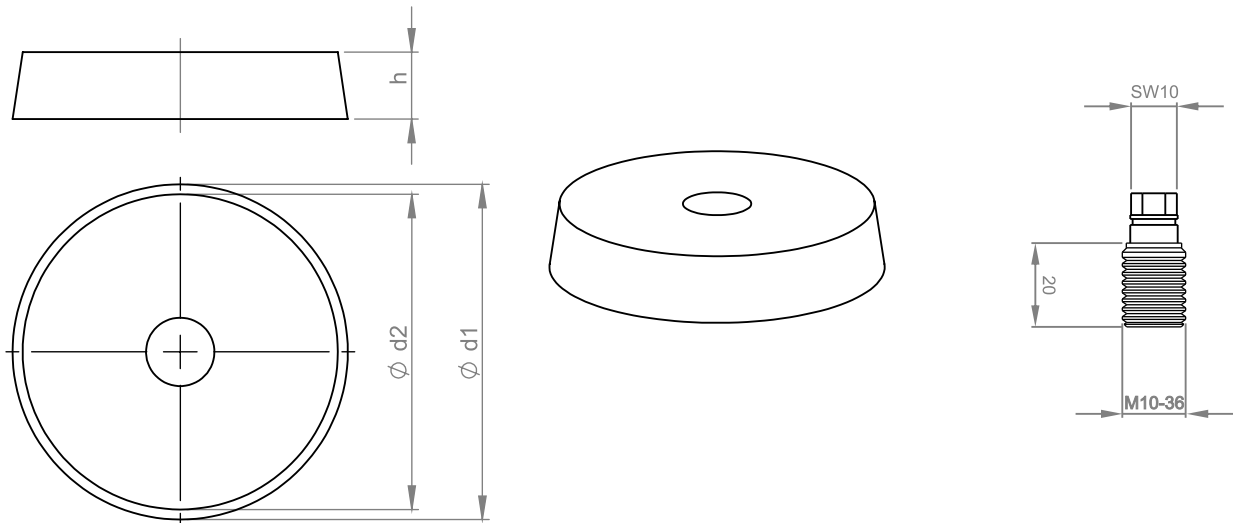
Advantages at a glance

- Extremely high magnetic force
- Conical construction for easy release from the hardened concrete
- High flexibility with exchangeable threaded rods
- Their ability to be reused means that they are environmentally friendly and cost effective



Technical data

Item number	Description	Mag. force [N]	Weight [kg]	Rec. thread	d1 [mm]	d2 [mm]	h [mm]
8005058	GB 50	650	0,13	M10 - M16	50	47	12
8005062	GB 64	1.000	0,23	M12 - M24	64	61	12
8005066	GB 80	1.500	0,40	M16 - M30	80	77	12
8005056	GB 106	1.900	0,75	M20 - M36	106	103	12



Examples of application

- 1 GB 64 with threaded rod M12 and locking ring
- 2 GB magnet with pigtail anchor or threaded sleeve
- 3 GB magnet with pigtail anchor



Magnet type KU

Magnetic recess unit for ball-headed anchor

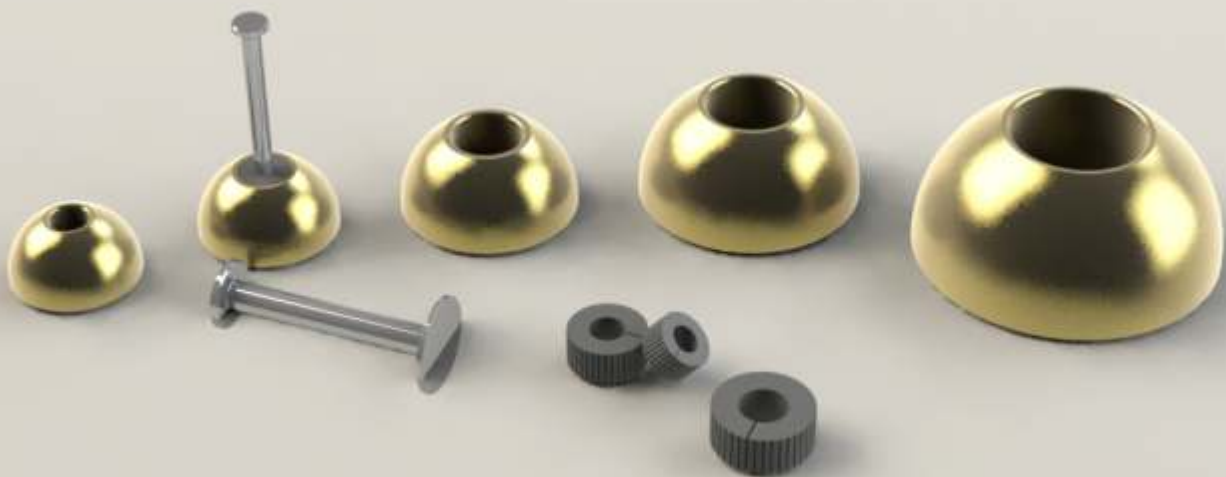
What is the KU magnet?

The KU magnet is used for holding ball-headed anchors. Depending on the size of the ball-headed anchor, we offer the magnets to fit with the optimum magnetic force in our range of products. In order to attach the ball-headed anchor to the magnet, the appropriate rubber holding band is supplied in each case.

The steel body is turned from high quality solid material and forms a homogeneous unit with the high performance core of the magnet. The attachment surface is completely sealed and therefore protects the core of the magnet against corrosion and damage. This increases the working life of the magnetic force considerably. The integrated internal thread allows the magnet to be smoothly released from the steel table.

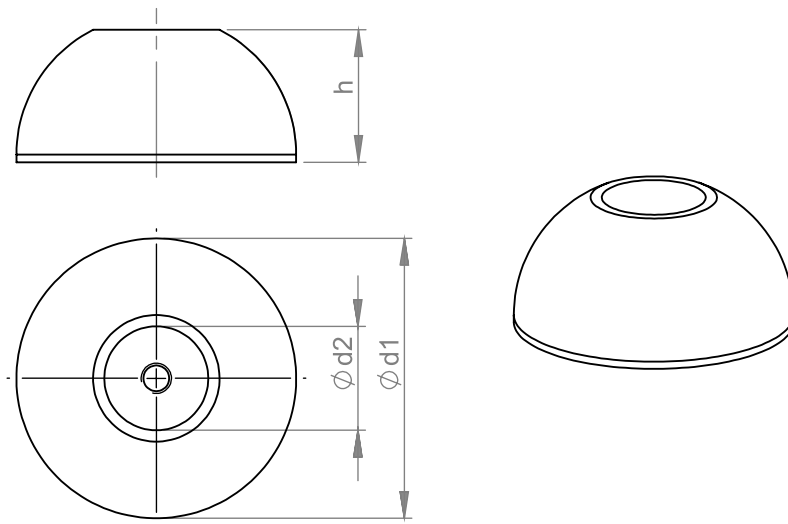
Advantages at a glance

- Combined recess former with magnet
- Internal thread for releasing the magnet
- Solid and stable design with a steel base to ensure a long working life
- Reusable, which means that it is environmentally friendly and cost effective



Technical data

Item number	Description	Anchor size	Mag. force [N]	Weight [kg]	d1 [mm]	d2 [mm]	h [mm]
8005072	KU 13	1,3 t	1.000	0,49	66	20,5	30,8
8005074	KU 25	2,5 t	1.000	0,65	74	27,5	33,0
8005075	KU 50	5,0 t	1.500	2,50	104	38,5	50,5
8005076	KU 75	7,5 t	2.000	3,30	118	48,5	53,0
8005098	KU 100	10,0 t	2.200	3,30	118	48,5	53,0



Examples of application

- 1 The KU is available in different sizes
- 2 After concreting
- 3 Assembly of the ball-headed anchor



Magnet type FP

The magnet for your formworks

What is the FP magnet?

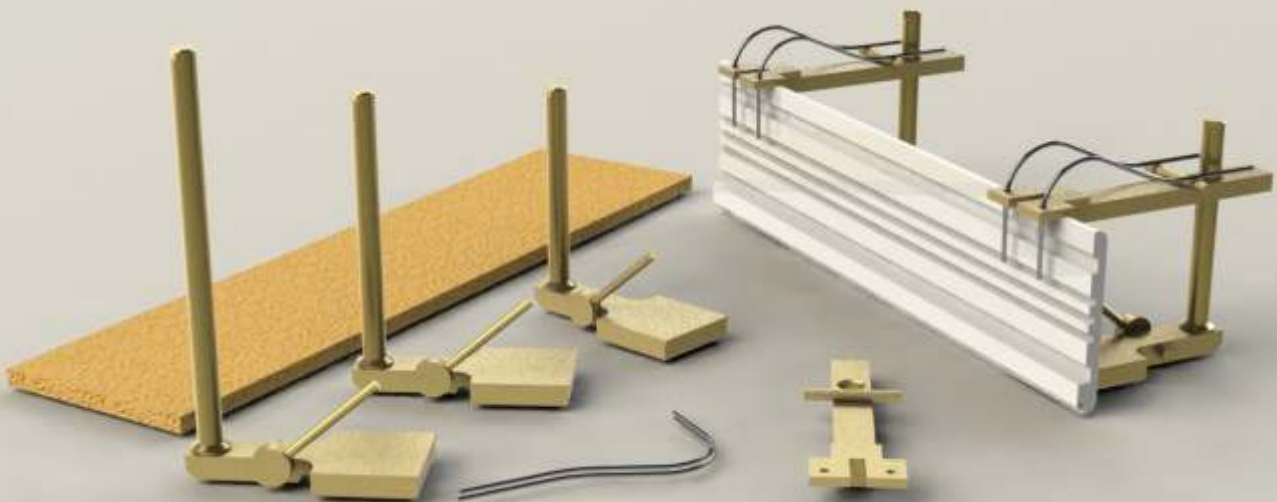
The FP magnet hold-down device has been especially developed for the installation of glass fibre reinforced formworks. Because of its compact construction it is also equally suitable for small recesses or light formwork in wood.

The FP magnet is optionally supplied with a 240 mm, 300 mm or 400 mm long thread pole. The special form of the hold-down device, in combination with tension springs supplied as standard, guarantees an absolutely secure fixing of the formwork.

The eccentric lever means that easy release is possible without additional tools.

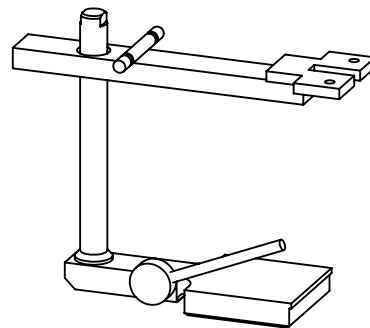
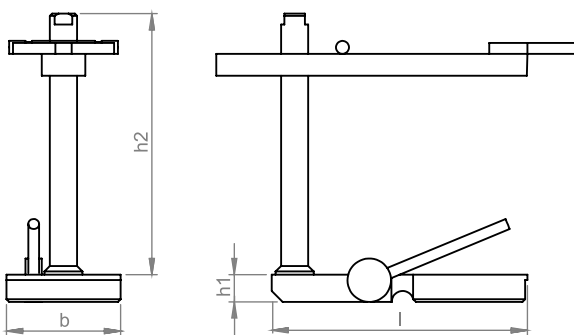
Advantages at a glance

- Light and handy
- Guarantees the precision and perpendicularity of the upturn simply and quickly
- Easy release with the integral eccentric lever



Technical data

Item number	Description	Mag. force [N]	Weight [kg]	l [mm]	b [mm]	h1 [mm]	h2 [mm]
8006051	FP 240	5.000	5,0	250	100	20	240
8006050	FP 300	5.000	7,5	250	100	20	300
8006053	FP 400	5.000	10,0	250	110	20	400



The type FP magnet consists of the magnetic foot, a thread pole bolt, the top fixation and two spring steel brackets for fixing the shuttering.

Examples of application

- 1 The type FP magnet after concreting
- 2 The type FP magnet with glass fibre reinforced upturns



Magnet type PL/E

The strong support magnet



What is the PL/E magnet?

The PL/E clamping magnet consists of a stable plastic housing with a high strength magnetic disk. This magnet also offers our MagFly® technology which makes handling so very easy. The magnet can be pushed along the steel table with ease and precisely positioned; after applying light pressure it applies its full magnetic force. Releasing the PL/E is done simply by operating the eccentric bracket with the hand or foot.

So the type PL/E becomes a multi-talented partner for a broad range of applications.

Ideal areas of use are for example shuttering supplements and window or door recesses in wood or aluminium. Because of its low weight and exceptional handling, the PL/E magnet can also be used as a supporting magnet for other purposes. For example the most widely varying shuttering can be fixed without major expense by simply screwing onto the plastic housing.

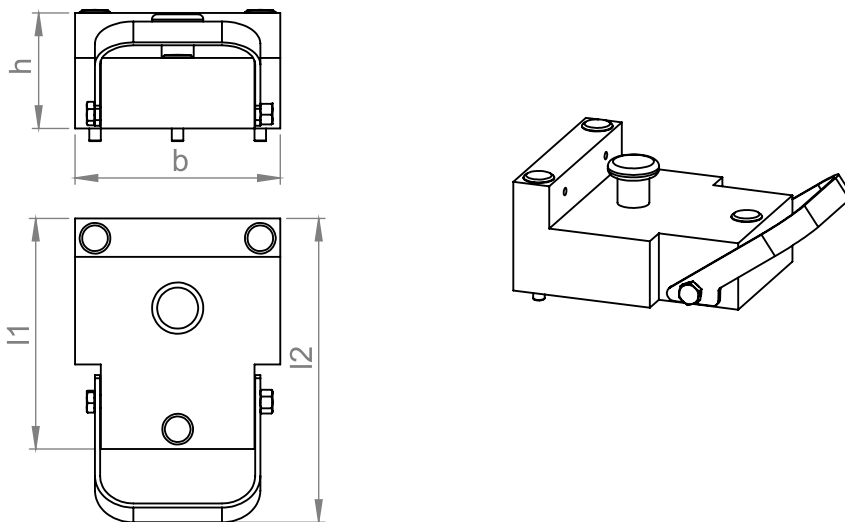
Advantages at a glance

- Fast and economical working with MagFly® technology
- Simple release by hand or foot with the eccentric bracket
- Low weight and therefore easy handling
- Ideal as a supporting magnet for fixing shuttering



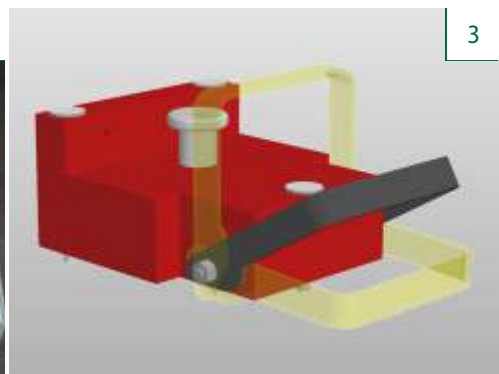
Technical data

Item number	Description	Mag. force [N]	Weight [kg]	l1 [mm]	l2 [mm]	b [mm]	h [mm]
8004052	PL/E 400	4.000	3,7	180	252	160	90
8004054	PL/E 650	6.500	3,7	180	252	160	90
8004053	PL/E 850	8.500	3,7	180	252	160	90



Examples of application

- 1 Integrated MagFly® technology for simple positioning
- 2 Aluminium window recessing with PL/E
- 3 How the eccentric bracket works



Magnet type E

For electrical sockets

- High quality steel base with high performance magnetic core
- Various exchangeable adapters for electrical sockets from different manufacturers
- Individual designs available on request



Magnet type AR

For spiral tubes

- High quality steel base with high performance magnetic core
- Exchangeable adapters for different tube diameters
- Individual designs available on request



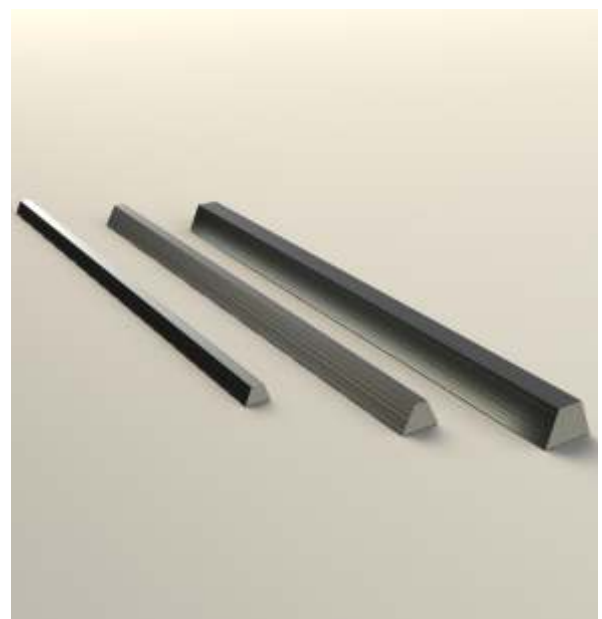
Magnetic chamfer strips

- Design in steel or plastic
- Different sizes, e.g. 10 x 10, 15 x 15, 20 x 20 mm
- Standard length 3,000 mm, other lengths on request
- Plastic strips optionally in flexible / bendable design



Magnetic trapezoid strips

- Trapezoid strips for shadow gaps in steel or plastic
- Different sizes (width bottom/top x height) e.g. 15/10 x 10, 20/10 x 10, 30/10 x 20, 40/20 x 20 mm
- Standard length 3,000 mm, other lengths on request
- Plastic strips optionally in flexible / bendable design



MultiForm

The innovative shuttering support system

What is MultiForm?

MultiForm is an innovative and universally usable shuttering support system for the production of solid walls, sandwich walls, landing slabs, balcony slabs and also buttresses, beams, sills and much more.

With MultiForm you can simplify your shuttering construction. The front of the shuttering support can be covered with a facing in wood, chipboard, plastic or steel. This is screwed into place from the back. In this way the formwork facing remains undamaged and indentations in the concrete produced by screw heads are a thing of the past. And with facing concrete, this means that time-consuming filling and sanding is no longer necessary.

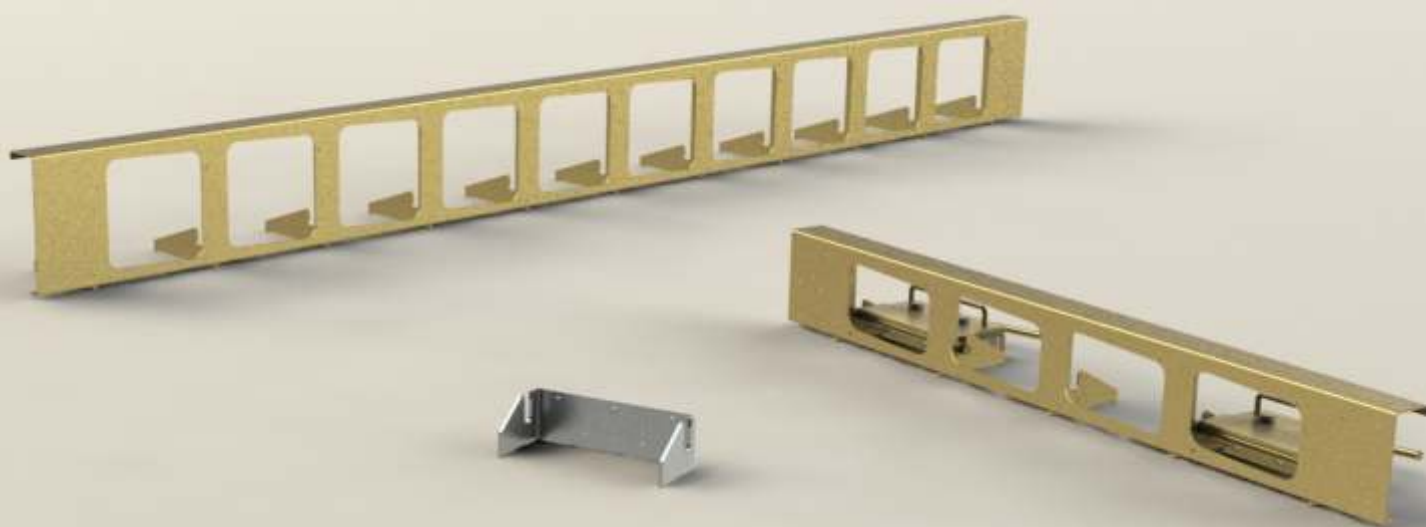
Hence MultiForm takes on a number of tasks at the same time. With its bracing function, MultiForm makes sure that your shuttering stands perpendicular. With its stable sheet construction it protects the formwork against twisting and bending. And finally MultiForm has holding devices for magnetic systems. MagFly® universal magnets with corresponding adapters or MagFly® AP magnets are easily fitted into the shuttering supports. Now the shuttering together with the magnets can be precisely positioned and adjusted before it is finally fixed by pressing down on the magnets.

MultiForm type 1 is a formwork angle for short lengths of shuttering, e.g. in recesses. MultiForm type 2 is available as rails in different heights.



Advantages at a glance

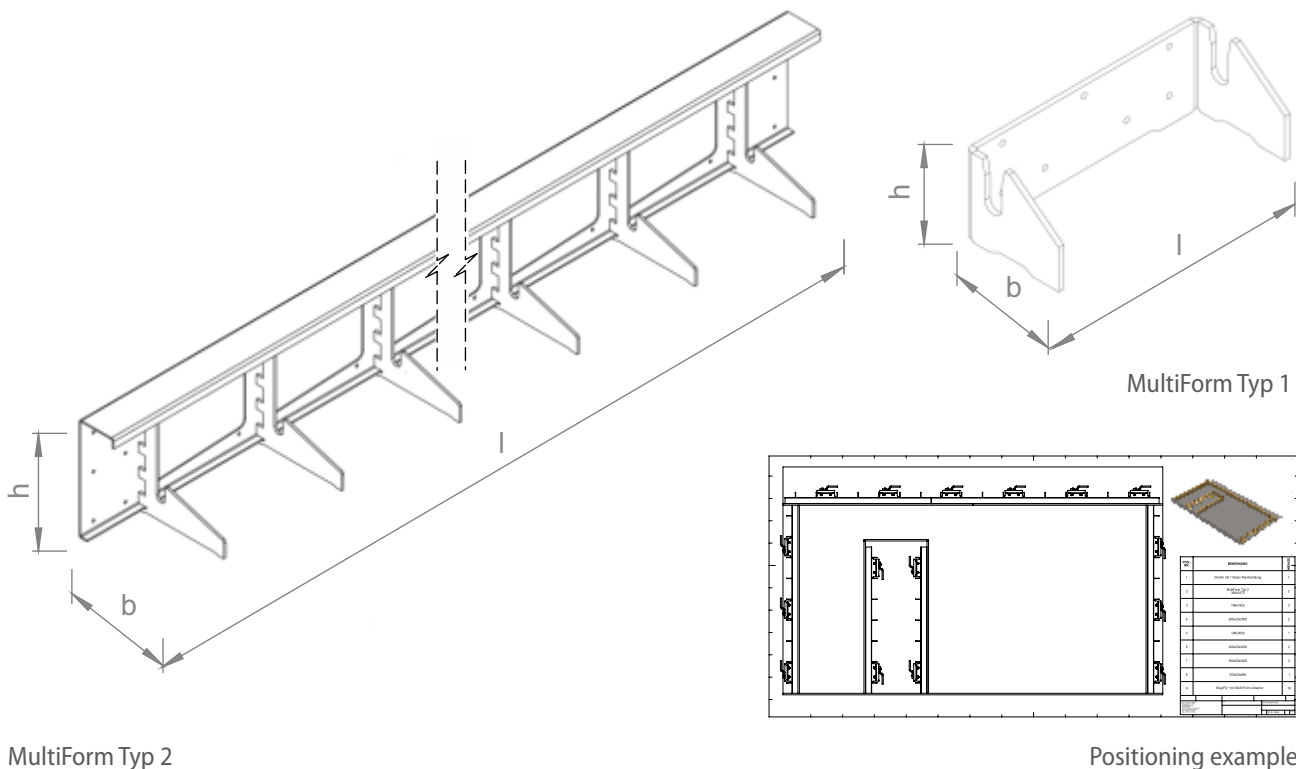
- Reduction in working time and material when constructing new shuttering
- The light weight means ease of handling, in most cases entirely without a crane
- Magnets and shuttering supports are not permanently connected together, which simplifies handling and allows for flexible use
- With the corresponding accessories, MultiForm can be used on the widest variety of basic shuttering systems, e.g. on table forms and tilting tables, circulating pallets, stairway formwork, wooden surfaces and much more
- Fast, simple and exact positioning by magnets with MagFly®-technology
- Shuttering heights from 10 to 60 cm can be produced



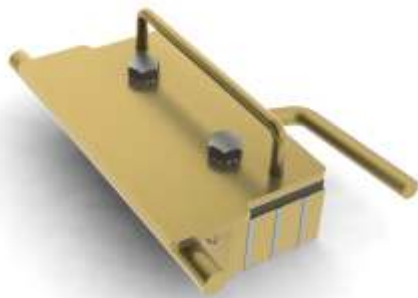
Technical data

Item number	Description	Weight [kg]	l [mm]	b [mm]	h [mm]
8101063	MultiForm Type 2 - 98/3000	12,9	3.000	150	98
8101085	MultiForm Type 2 - 148/3000	17,8	3.000	150	148
8101096	MultiForm Type 2 - 198/3000	19,4	3.000	150	198
8101107	MultiForm Type 2 - 248/3000	23,6	3.000	200	248
8101118	MultiForm Type 2 - 298/3000	25,0	3.000	200	298
8101122	MultiForm Type 2 - 348/3000	29,7	3.000	250	348
8101123	MultiForm Type 2 - 398/3000	32,8	3.000	250	398
8101125	MultiForm Type 2 - 448/3000	35,4	3.000	250	448
8101127	MultiForm Type 2 - 498/3000	38,5	3.000	250	498
8101133	MultiForm Type 1 - V2A	1,7	284	110	90
8101139	MultiForm Type 1 - galvanised steel	1,7	284	110	90

Other lengths on request.



Accessories



MagFly® with MultiForm adapter



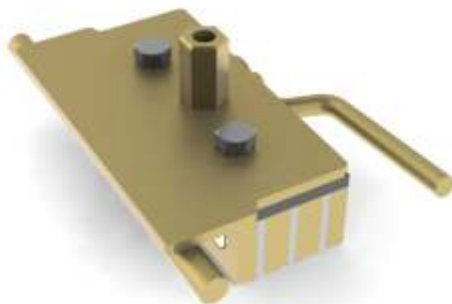
Tie point for MultiForm shuttering systems



MagFly® AP



MultiForm corner connection



Combi-adapter for MultiForm and coarse thread



MultiForm adapter for wood subsurface



MultiForm type 2 as formwork

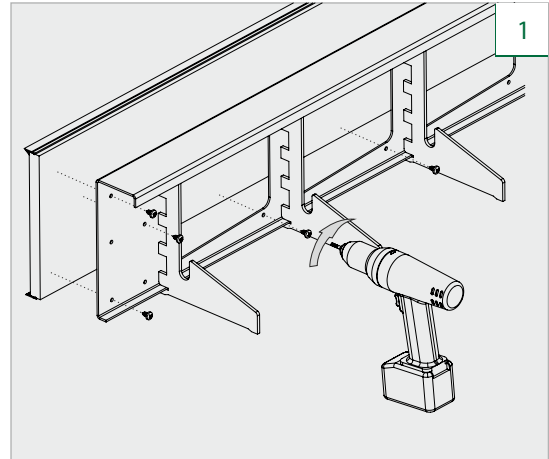


MultiForm type 1

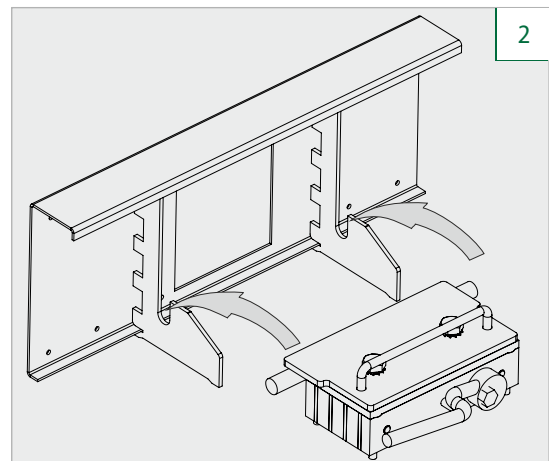
Assembly instructions

MultiForm

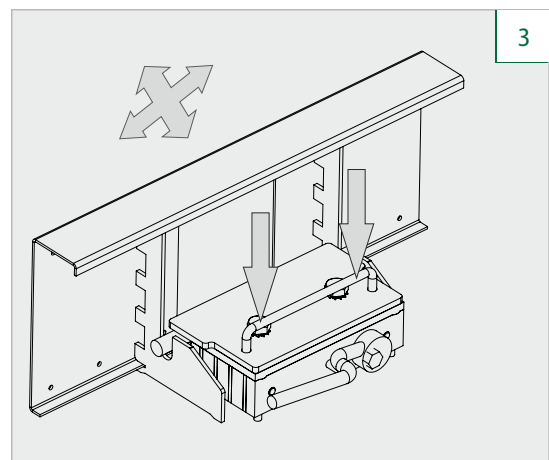
The formwork facing is simply placed in front of the MultiForm shuttering support and, using short screws, connected to the shuttering support from the back positively but not permanently. For this, depending on the application and the rigidity of the formwork facing, approx. 3-4 screws per linear metre are required.



The magnets are simply fitted into the shuttering support from behind.



With the magnets, the shuttering can be precisely adjusted before it is then finally fixed by pressing down on the MagFly® magnets.



Examples of application

with MultiForm

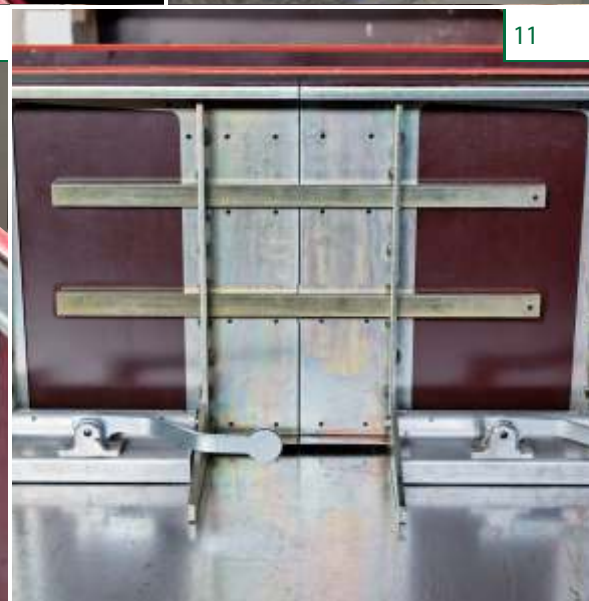
Areas of application:

- 1 MultiForm in sandwich wall production
- 2 MultiForm type 1
- 3 MultiForm type 2 with MagFly AP
- 4 MultiForm for high shuttering systems
- 5 Use in a pallet circulation system
- 6 MultiForm in solid wall production
- 7 Tie point
- 8 Rack system for MultiForm
- 9 Adapter for fixing MultiForm shuttering to a wood subsurface
- 10 Support shuttering with MultiForm
- 11 Connection point



Examples of application

with MultiForm



FlyFrame®

Light work with light shuttering



What is FlyFrame®?

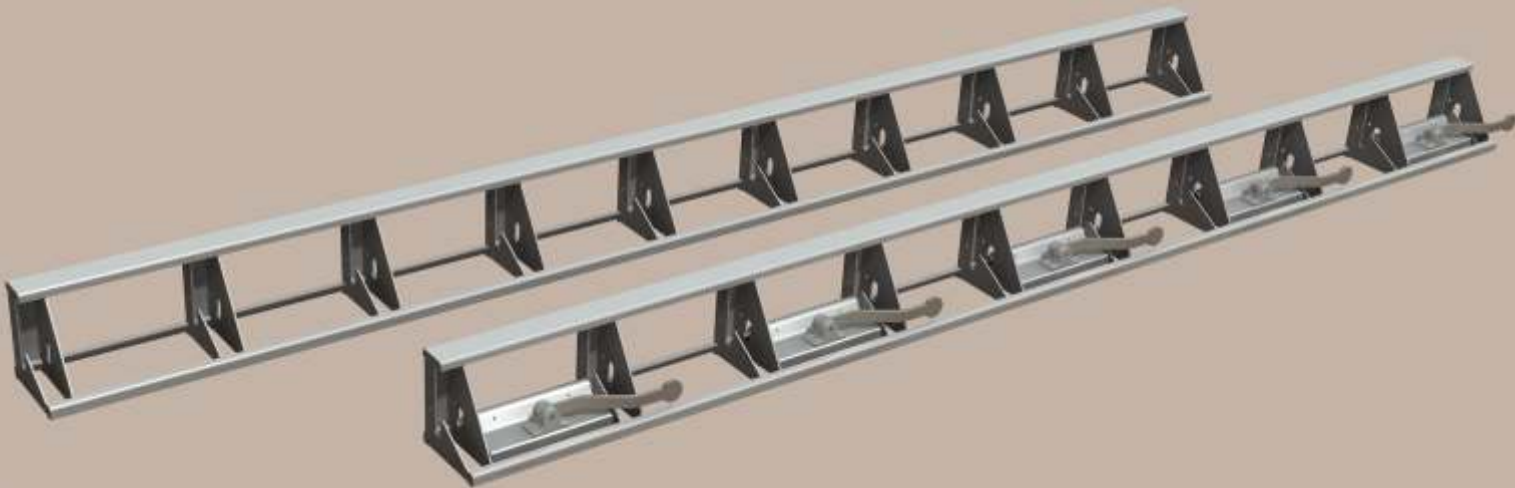
FlyFrame® is an ultra-light but nevertheless very stable shuttering support in hardened and specially coated aluminium. The formwork facing in wood or chipboard can be screwed on from behind so that the shuttering surface itself stays free of damage and screw heads. Large openings on the back of the FlyFrame® mean that it is possible to anchor even heavy installation elements from the back.

In order to meet the demand for low weight and the ease of handling associated with this, clamping magnets and shuttering supports are not permanently joined together or even screwed together. According to the proven principle, the magnets are simply fitted into the shuttering support from the back.

With the magnets, the shuttering can be precisely adjusted before it is then finally fixed by pressing down on the MagFly® AP magnets. Thus the system remains easy to handle, very flexible and extremely economic.

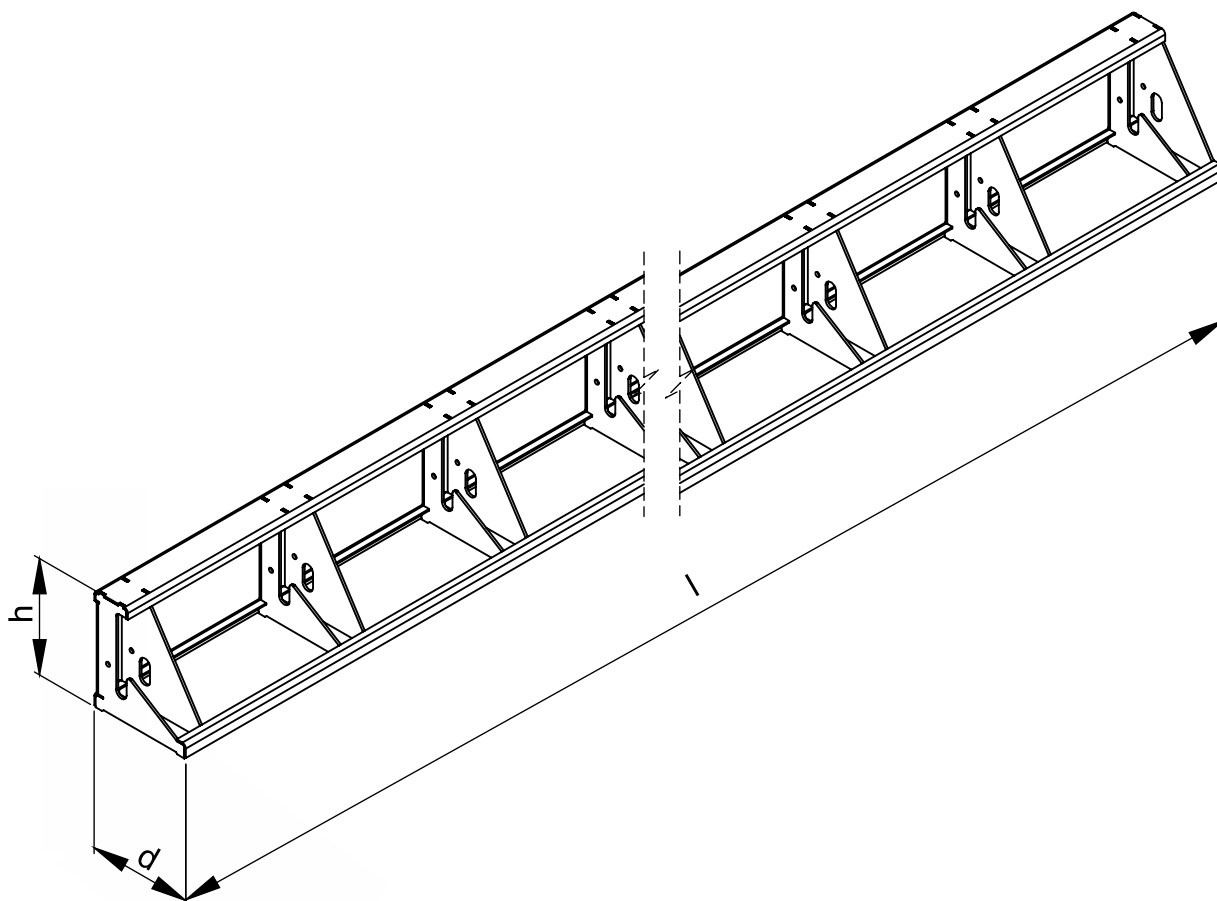
Advantages at a glance

- Good value
- Extremely light! Even long sections of shuttering can be moved without a crane.
- Fast and accurate working
- No screws between magnet and shuttering - Magnets are easily fitted
- Fast return on investment



Technical data

Item number	Description	Weight [kg]	l [mm]	b [mm]	h [mm]
8101134	FlyFrame® - 98/3000	8,1	3.000	180	98
8101135	FlyFrame® - 198/3000	9,7	3.000	180	198
8101136	FlyFrame® - 298/3000	11,3	3.000	180	298



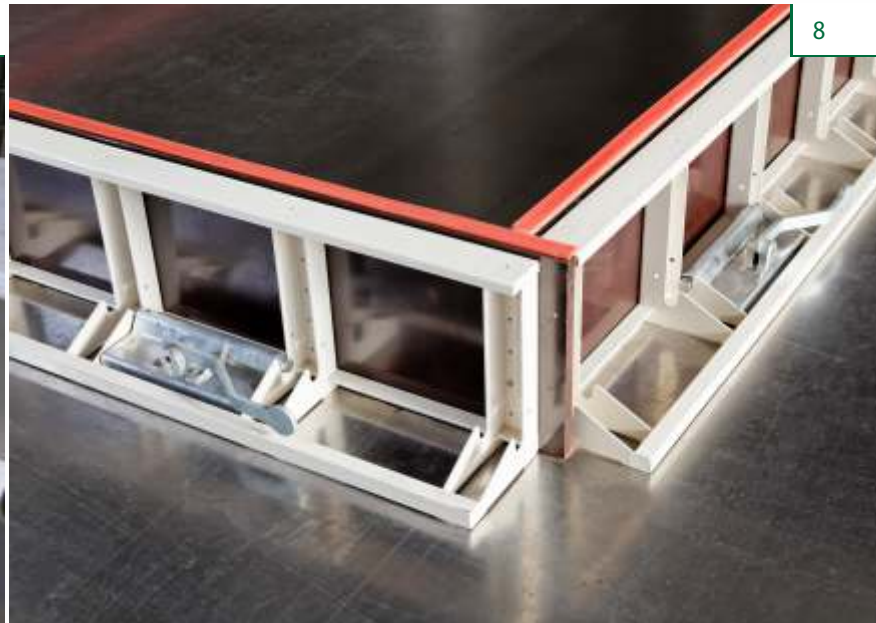
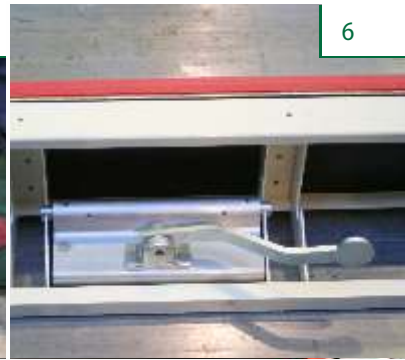
Examples of application

Areas of application:

- 1 Extremely light shuttering construction with FlyFrame® and MagFly® AP
- 2 Magnet and shuttering are not permanently joined together
- 3 1 worker can carry 6 m FlyFrame®
- 4 The magnets are easily fitted from the back
- 5 Together with the magnets the shuttering can be accurately adjusted
- 6 Fixing the magnet – Finished!
- 7 Sandwich wall production with MagFly® AP and FlyFrame®
- 8 Corner formation with FlyFrame®
- 9 FlyFrame® with MagFly® AP



Examples of application



MagFlex®

The patent for your curves



What is MagFlex®?

With the flexible MagFlex® shuttering system, any curves with a radius of 35 cm upwards can be formed. Thanks to its individual components, the formwork can be set up and aligned by one person without difficulty. Special fixing magnets with MagFly® technology ensure exact positioning and secure holding.

To compare: currently the conventional construction of circular or semi-circular formwork is very expensive and time-consuming. It is predominantly done with wood and the construction of the shuttering requires experienced and highly qualified personnel. Often the series factor is low, which means that output is also low and forming areas and personnel are taken up for a disproportionately long time.

With a combination of high-alloy spring steels and modern magnet technology we have managed to offer a system which reduces the time it takes to produce formwork with the outline complete to around 10 minutes. MagFlex® offers flexibility, reusability, easy handling, robustness and high precision in equal measure and thus meets all the requirements of modern shuttering.

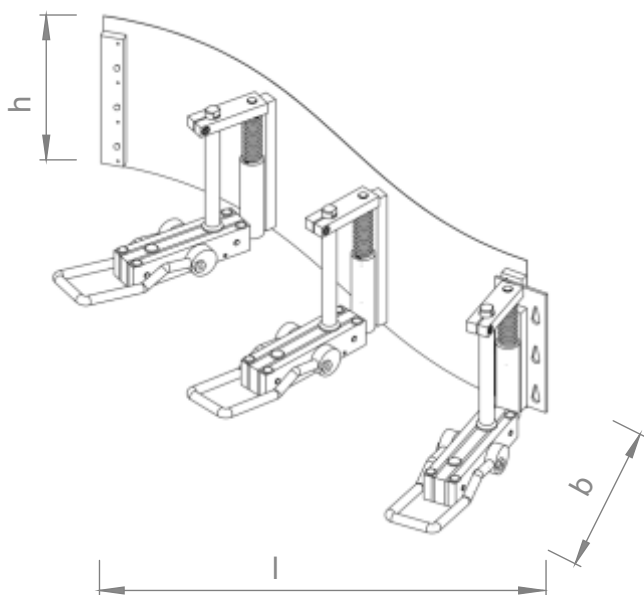
Advantages at a glance

- The individual components mean easy handling, effort-saving transport and space-saving storage
- Very fast completion of special formwork constructions
- Easy to position and adjust with the spring and eccentric lever components and robust fixing mechanism
- Very economic on account of speed, reusability and the considerable reduction in waste as compared with conventional shuttering



Technical data

Item number	Description	Number of magnets	Mag. force per magnet [N]	Weight [kg]	l [mm]	b [mm]	h [mm]
8109174	MagFlex® Type 1000	15	10.000	128	6.000	425	300



MagFlex® is delivered as a complete system and, as standard, consists of two 3 m long spring steel elements with a shuttering height of 30 cm, 15 fixing magnets with the patented MagFly® technology and a magnetic force of 10,000 N each, plus a connecting element for attaching the spring steel sheets together. Other heights and lengths are available on request.

The fixing magnets are not permanently attached to the shuttering. They can be taken out of the holding devices for transport and storage.

Examples of application

- 1 Shuttering for a landing slab with MagFlex®
- 2 Hold-down system with MagFly® technology
- 3 MagFlex® for any shapes of elements



MagSwing®

The switchable shuttering



What is MagSwing®?

MagSwing® is a shuttering system for prefabricated ceilings, double walls and special elements. The integrated magnets are mounted by means of a special patented construction in such a way that they can be activated by simple pressure of the hand or foot. To deactivate them, the magnets are simply fitted within the U-profile by means of a release mechanism. In the inactive position, the MagSwing® can then be easily removed from the table form.

In contrast to conventional systems, with this option no knob is necessary for releasing the magnet. Instead the magnets and switching mechanisms disappear into the profile. Depending on the client's requirements, MagSwing® can be produced in different dimensions with or without lateral chamfers.

To round off our range of products we naturally also offer U-profiles with integrated magnets, which are switched by means of a knob, as well as PE-profiles with integrated magnets. Each system can be produced in different dimensions with or without lateral chamfers according to the client's requirements.

Advantages at a glance

- High magnetic forces with the powerful and proven BT magnet technology
- Activation of the magnets by simple pressure of the hand or foot
- Direct positive connection between formwork, magnet and table by positive contact of magnet and U profile
- Available in all the usual shapes, lengths and shuttering heights



Technical data

Description	Magnets	Weight [kg]	l [mm]	b [mm]	h [mm]
MagSwing® 70 / 60 / 500	1	8,5	500	60	70
MagSwing® 70 / 60 / 750	1	9,7	750	60	70
MagSwing® 70 / 60 / 1000	2	17,0	1.000	60	70
MagSwing® 70 / 60 / 1500	2	19,5	1.500	60	70
MagSwing® 70 / 60 / 2000	2	22,0	2.000	60	70
MagSwing® 70 / 60 / 2500	2	24,5	2.500	60	70
MagSwing® 70 / 60 / 3000	3	33,0	3.000	60	70
MagSwing® 70 / 60 / 3500	3	35,5	3.500	60	70
MagSwing® 70 / 60 / 4000	3	38,0	4.000	60	70

Other dimensions are available on request.

Examples of application

- 1 MagSwing® in prefabricated ceiling and double wall production
- 2 MagSwing® in use in a pallet circulation system
- 3 Second shell of double wall with MagSwing®



Aluminum shuttering

What is the aluminum shuttering system?

The aluminum shuttering profile has been specially developed for use as lightweight concrete shuttering. This shuttering system consists of a hollow aluminum profile with integrated adjustable magnets. The aluminum profile, approx. 40 mm wide, is extremely space saving and can be concreted on both sides, as the magnets are built into the shuttering. So the surface can be used to its optimum level on the table forms.

Because of the use of aluminum, this system is extremely light and is therefore very good to handle. The shuttering can be set up extremely quickly as no further preparatory work is required and concreting can be done directly onto the profile.

The profile can be supplied in heights of 98 mm, 118 mm, 148 mm, 173 mm and 193 mm.

The integrated magnets each have a magnetic force of 4,000 N.

Because of its special coating, the aluminum shuttering is very easy to clean.

Advantages at a glance

- Extremely light, therefore easy to handle
- The integrated adjustable magnets ensure a firm hold
- Cleaning is simple because of a special coating
- Narrow, space-saving design



Lateral stops, U-profiles & individual solutions

Special designs

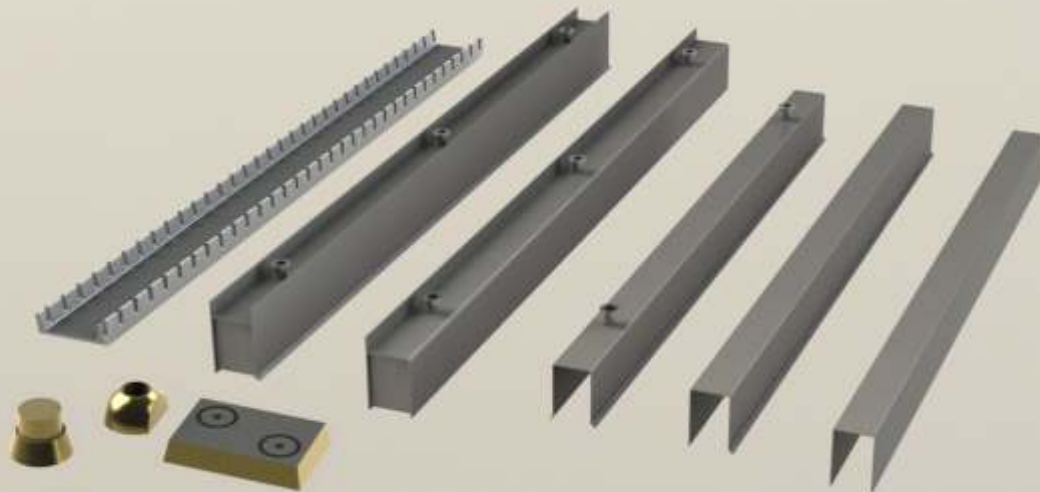
To complete our range, we naturally also offer you U-profile shuttering with and without integrated magnets, lateral stops and solid wall shuttering systems, as well as special magnets and much more.

Based on your specifications, we will develop the optimum solution for you.

All systems are produced and delivered in different dimensions and shapes according to the wishes of our clients.

Why choose B.T. innovation GmbH?

With our knowhow and our many years of experience we are in a position to respond to your requirements in developing new products and to render these in high quality. We use exclusively high quality materials which guarantee you a long working life, even for individual solutions. Talk to us! We look forward to your enquiry!



DowaTherm®

Double wall spacer

What is DowaTherm®?

The DowaTherm® double wall spacer comprises a special plastic base and a fibreglass rod made of a high-performance composite.

Its geometrical design means the spacer can be easily pushed under the first reinforcement layer, in accordance with the required concrete coverage. It stands vertically on the pallet and, without any additional fixing materials or auxiliary systems, ensures stability during the concreting process, as well as maintenance of the selected installation position.

The new retention system, a new design of the base with a two-hole mounting, enables the user to use GFRP rods with diameters of 8–10 mm in one base design.

The “DowaTherm Terminal” comprises the complex processing and storage system for the double wall spacers needed for double and thermal wall production.

The capacity of the whole storage unit enables simultaneous storage of up to 15,000 double wall spacers within a space requirement of just 1.5 m³.

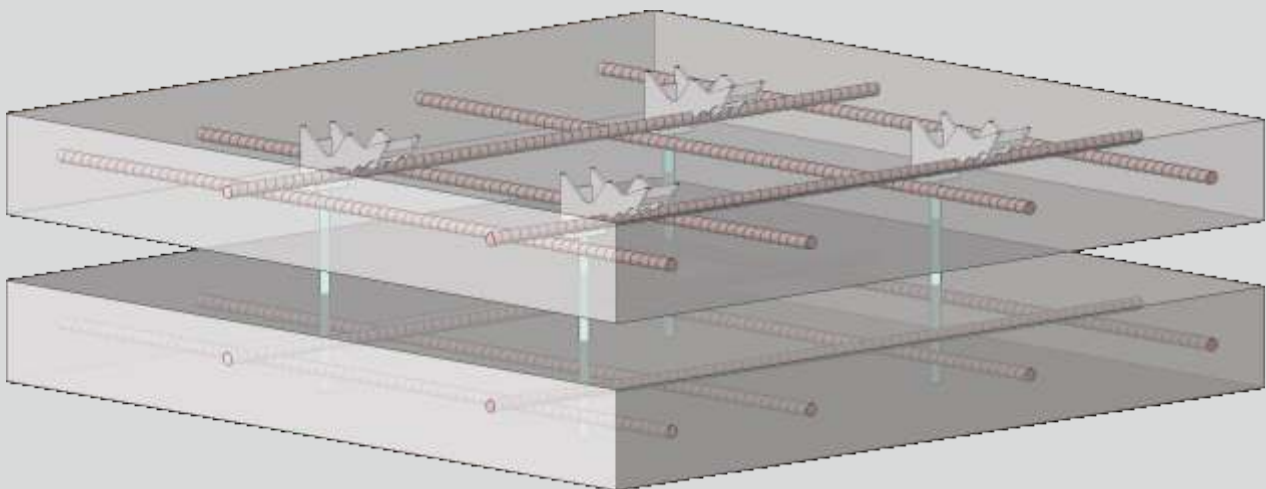
In the terminal, as part of the system, there is a pendulum saw which enables immediate, operational and dust-free creation of required special sizes with the least possible effort.

Advantages of DowaTherm®

- No cold bridges
- Specially suited to thermal wall production
- Concrete cover depths of 15; 20; 25; 30; 40; 50 mm
- Higher concrete bonding and better structural stability
- Two-hole design (just one base for either 8 or 10 mm rods)
- Hole design with longitudinal ribs ensures manual insertion of the rod without any additional resources with secure seating of the rod

Advantages of DowaTherm®-Terminal

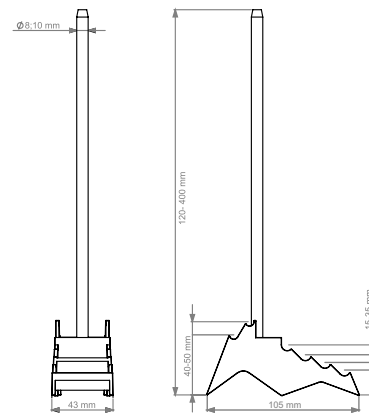
- Processing and stocking of the spacers with the smallest possible space requirement (1.5 m³ for approx. 15,000 spacers)
- Controllable and well-arranged storage
- Possibility for the immediate operational creation of the special sizes required with the least possible effort
- Easy and well-arranged loading of the storage unit



Technical data

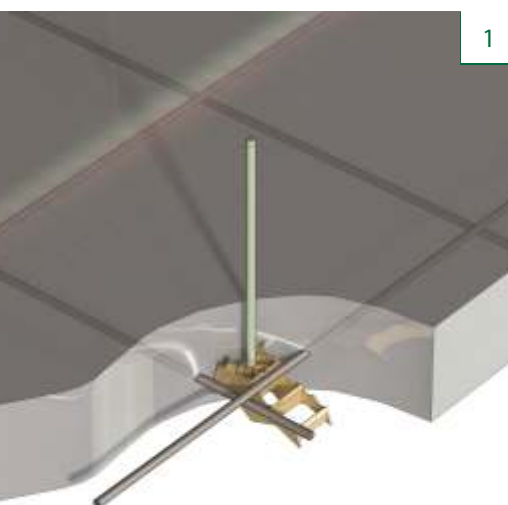
Technical data		
Rod diameter	8 mm	10 mm
Tolerance + mm	0,2	0,2
Weight + 4 % gr/mm	106,5	162,0
Wall thickness	Pressure resistance	
180 mm	10 kN	-
200 mm	9 kN	-
240 mm	7 kN	10 kN
250 mm	6 kN	9 kN
300 mm	-	8 kN
360 mm	-	6 kN
400 mm	-	5 kN

Material-specific technical data		
Glas content	80 % + 2,5 %	DIN EN ISO 1172
Density	ca. 2,1 gr/m ³	DIN 53479
Elongation at raupure	> 2,5 %	DIN EN ISO 527-4
Modulus of elasticity	> 50 Gpa	DIN EN ISO 527-4
Ultimate tensile strength	1500 + 5 %	DIN EN ISO 527-4
Thermal expansion	$6,6 \times 10^{-6} \text{ 1/}^\circ\text{C}$	DIN EN ISO 7991



- 1 Installation situation in the first shell
- 2 Installation situation in the second shell
- 3 Dowatherm®-Terminal with storage container and pendulum saw

Examples of application



BT-Spannschloss®

The bonding system for prefabricated concrete parts



What is the BT-Spannschloss®?

The BT-Spannschloss® is a turnbuckle which is part of an innovative clamping system including screw connections and anchors embedded in prefabricated concrete parts.

With the BT-Spannschloss® it is possible to create efficient, precise assemblies and make durable construction connections of prefabricated concrete parts in the easiest possible way where there is predominantly static load in the direction of the tensile and shear forces.

The BT-Spannschloss® is suitable for bearing major loads due to its specific form and the heavy-duty cast material used for manufacture.

In April 2010, the BT-Spannschloss® was awarded the general building regulations authorisation (no. Z-14.4-599) by the German Institute for Building Technology [DiBt], which means the basis for static verification of the selected construction connection was also established.

The BT-Spannschloss® is available in two sizes (M20; M16) and can be purchased in uncoated or galvanised form.

Request detailed documentation or visit our website at: www.bt-spannschloss.de

Advantages at a glance

- Can be combined with all authorised anchorage systems
- Approval from the DiBt (German Institute for Building Technology) Berlin
- No need for time-consuming individual solutions
- Precise positioning of the anchor in the manufacturing process via BT magnet technology
- Cost and time savings through reduction of assembly times and elimination of cure times
- Resistant to tensile and shear forces
- Static verification of the chosen construction connection



RubberElast®

The seal for prefabricated parts that will really amaze you

What is RubberElast®

In combination with RubberElast®, the BT-Spannschloss® can also be used for hydraulic structures, watertight cellars and where there are other construction requirements in the area of watertight structures.

RubberElast® is a sealant tape for joints between prefabricated concrete parts which is successful internationally. It is fitted by the customer simply by pressing onto the bed joint of a concrete section and makes a seal on the joint which is watertight against pressurised water through the contact pressure of the concrete parts. RubberElast® stands out due to it being extremely watertight and gastight, as well as to it having outstanding resistance to weather-related and mechanical wear. RubberElast® maintains its elasticity even at low temperatures. In addition to excellent adhesion to concrete, the sealing tape also shows outstanding adhesive properties to metals, glass and other materials.

RubberElast®, our innovative sealing tape for prefabricated concrete part joints, gives you a solution which enables you to make quick progress on your building work due to really easy handling and extremely flexible use.

The test certificate from the Brunswick Materials Testing Institute is a guarantee of its safety.



Request detailed documentation or visit our website at: www.rubberelast.de

Advantages at a glance

- General building regulations test certificate
- Extremely high watertightness and gastightness
- Excellent bonding through adhesion
- Quick processing, no tools needed
- Watertight immediately after fitting
- Still flexible at low temperatures
- Acid, alkali, salt and slurry resistant
- Weather resistant





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Maincatalog



Syflex®



BT-Spannschloss®



Sealing system

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