ISCHEBECK®
INFORM

Modular

Variety of sizes

Versatile

Modform Universal Formwork

For foundations, walls, supports, beams, shafts and columns

Modform Universal Formwork

Fast, reliable formwork, Modform makes a decisive contribution in this vital step towards cost reduction in concrete construction.

Modform Universal Formwork is an impressive indication of how one single formwork system can be put to universal use.

Benefits

- Can be man-handled
- Only one system on the building site
- The same parts are always used for different applications
- Suitable for small surfaces, and can also be extended to become a large-size formwork

Key features

- Designed for hand-set applications as well as crane dependant large-size formwork
- Modular design principle and well-balanced panel selection make gang-forming possible even for complicated layout plans
- Flat steel frame for guaranteed sturdiness and a long product life cycle
- Compatible with all PASCHAL systems
- Keybolt as a universal means of connection for all panels and accessories
- Large-size panel GE – pre-assembled Modular panels can stay together as units or are supplemented by larger GE panels, with unlimited compatibility

Accessories

Accessories include external and internal corners, filler posts, stop-ends, tie straps, tie rod guides, bracing channels and platform brackets (see page 6).

Modform Universal Formwork

Versatility

The Modform Universal Formwork has really earned its name, because this system is used all over the world on many different building sites where it demonstrates its versatility, adaptability and flexibility, for foundations, walls, shafts, round walls, columns or beams.

The degree of difficulty of the structures to be built can vary considerably, because the balanced range of panels means that the formwork can be adjusted ideally to all layouts and cross sections. The size of the structures to be built does not matter: small surfaces are not a problem for the Modular panels.

Panels and panel connections

Description

The steel frame of the Modform panels consists of 6mm thick flat steel with an inlay of 15mm thick 11-ply phenol resin-coated Finnish birch plywood.

There is a half tie hole on the side of each panel, so when two panels join it forms a full tie hole. The tie positions are located 125mm vertically from the bottom of the panel.

Key benefits

- Versatile fixing positions
- Keybolt allows for easy fixing of the panel and ancillary components
- Lightweight, man handled system at 35kg/m^2
- Space saving on site and during transportation with a 75mm deep steel panel frame
- Long service life

Concrete pressures

The maximum concrete pressure for the Modular panels is 35 kN/m^2 for the 1000mm wide panel according to DIN 18218 in full compliance with the tolerances of deflection according to DIN 18202, table 3, line 6. See table, below right.

For GE panels, the maximum concrete pressure is 60 kN/m^2.

Dimensions

The basic Modular Formwork panel measures 100 x 125 cm and weighs 49.5 kg.

GE panels are 200 (150) cm wide and 250 (275) cm high.

Technical data	
Panel widths (mm)	1000/500/400/300/200
Panel heights (mm)	1250/1000/750/625
Frame depth (mm)	75
Plywood	15mm thick, 11-ply birch plywood
Maximum concrete pressure*	35kN/m^2 according DIN 18218
Tolerances of deflection	According DIN 18202, table 3, line 6

*1000mm wide panel

Load capacities (kN/m^3)		
Panel widths (mm)	Panel heights (mm)	
	1000	1250
500	60	60
750	60	40
1000	60	30

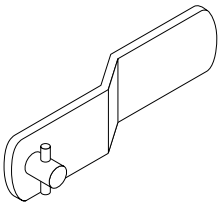
Notes:
The load capacity of the panels is calculated regarding to the yield point.
A safety factor of 1:1.5 has been taken.
Deflection according to DIN 18202, Tab. 3, Line 6.
The maximum value is 60kN/m^2.

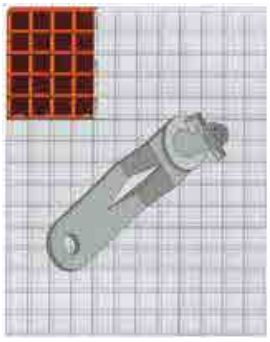
Keybolt

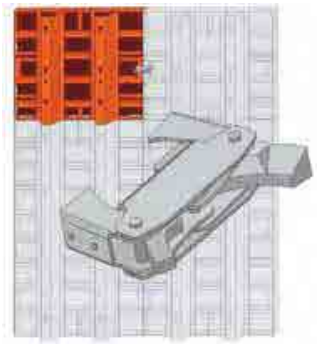
The keybolt provides a secure connection between panels, filler posts, tie straps and platform brackets. The keybolt connects when pushed through the purpose shaped hole in the panels steel frame. Once through the hole, the keybolt is rotated 90° to then lock the keybolt and secure the connection.

To disconnect the components, simply reverse the previous operation.

Alternatively, GE panels can also be joined together using the panel clamp GE (right).

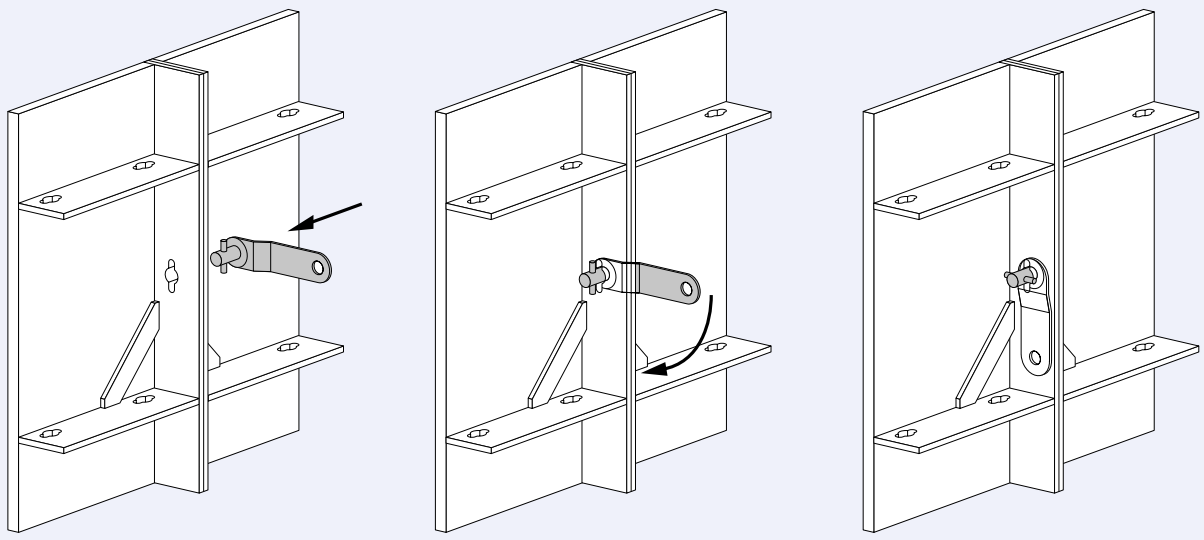






How the keybolts work

The below diagram shows the steps required to connect two panels together. The 90° rotation of the keybolt allows for a secure connection between the two panels.

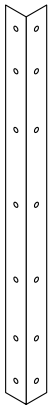


Ancillary components

External corner

Allows the external corner of the concrete wall to be formed, when connected to adjacent panels with the keybolts.

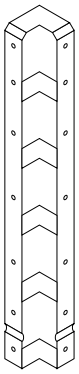
The external steel corner has keybolt positions to allow for a secure fixing to the Modform panels. The corner is used with smaller width panels and filler posts or timber to form the corners.



Internal corner

Enables the inside corner to be formed when connected to adjacent panels. The corner can be tied through.

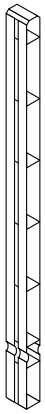
The steel framed corner is 15cm x 15cm and is used to form the internal face of corners. The tie holes are positioned 125mm vertically from the bottom of the panel and allow for the corners to be tied through, when connected to a Modform panel in order to form a full tie hole.



Filler posts

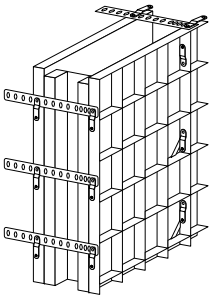
The filler post can be used to adjust to changes in the levels of a structure or when an infill is required.

5cm wide and help to form infills or where there are changes in levels. As with the panels these are joined together with keybolts and can be tied through.



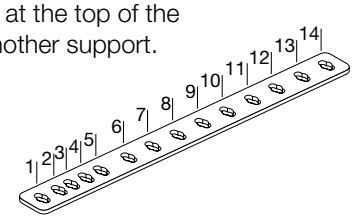
Stop-End

The tie strap is used as a stop-end support.



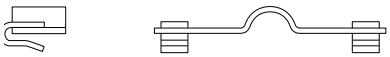
Tie Strap

The tie strap can be used at the top of the shutter in order to offer another support.



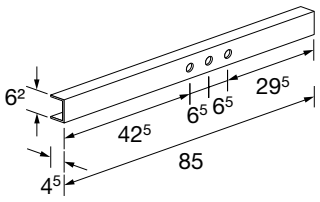
Tie Rod Guide

Allows the shutter to be tied through at the top.



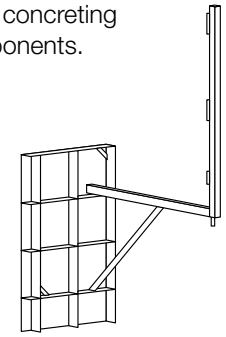
Bracing channel

The channel gives support to the hinged corner and timber infill's if required.



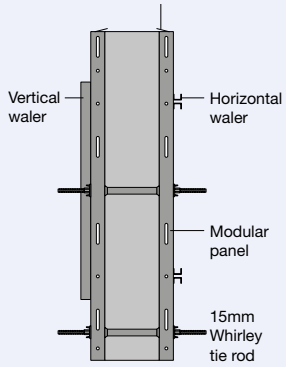
Platform bracket

The platform bracket allows the user to access the top of the panel for concreting works, or for the fixing of components.

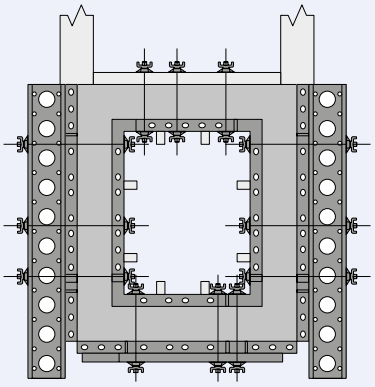


Typical details

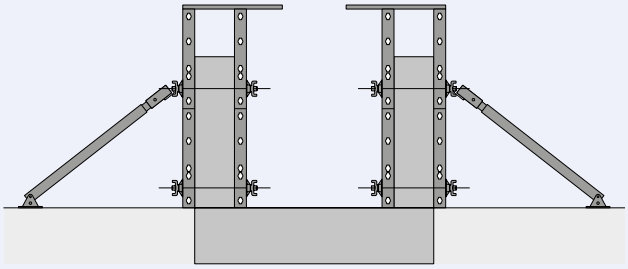
Typical section



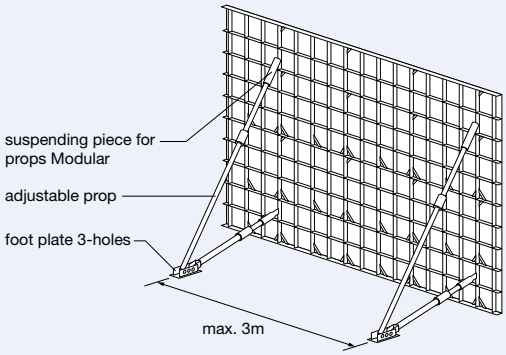
Typical shaft arrangement



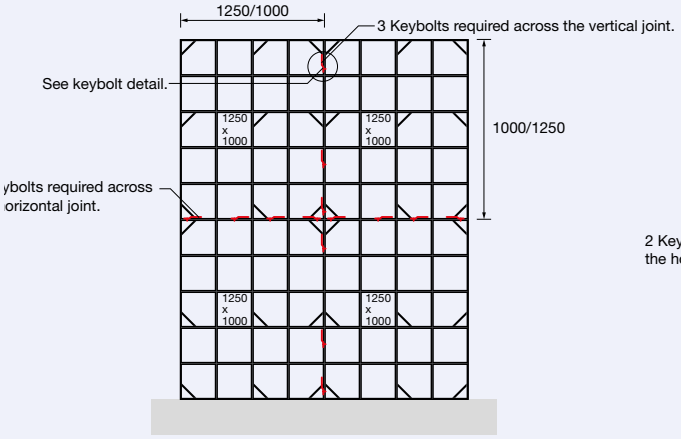
Marriage conveyor extension

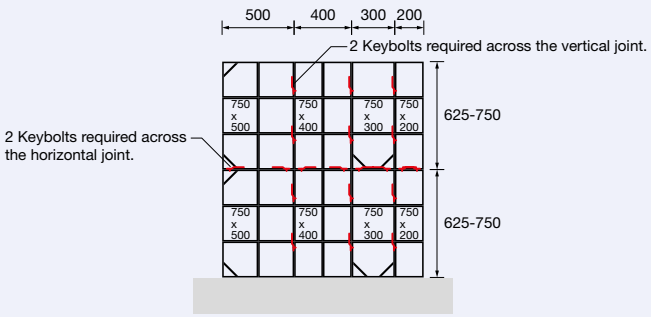


Propping arrangement



Typical keybolt connections
(varies according to panel size)





Typical applications

Foundations

The Modular Formwork starts showing its advantages even for foundations. The Modular system can be adjusted to any layout and every height. When you use this method for a systematic approach to the “basis”, you create the best prerequisites for good results throughout the building site. The foundation strap is a practical and low-priced alternative as formwork anchor for this application. It is easy to install, requires no additional connection pieces to the formwork panels and still reliably takes up all the forces. In addition, as lost anchor it saves additional working space and expensive excavation.

If a crane is not available when the foundations are formed, the light weight of the Modular panels means that they can easily be moved by hand.

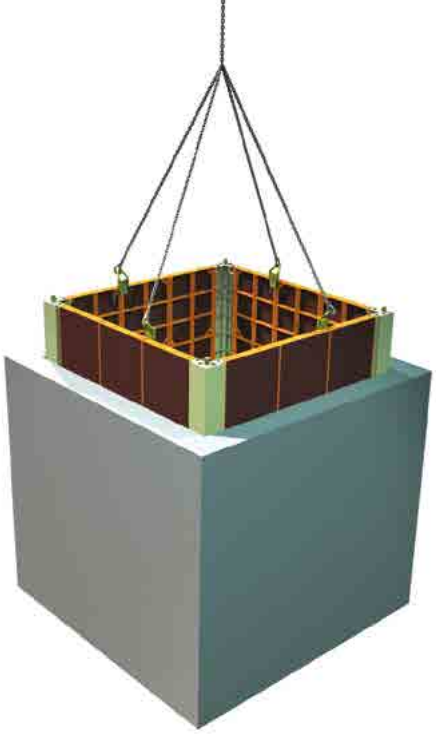
This means:

- An economic formwork system is already used in the early foundation stages
- Cost reductions compared to conventional formwork
- A crane is not necessary
- Foundation straps save additional working space and therefore excavation

Pouring height (cm)	Foundation straps (cm)
50	100
75	75
100	50
125	25

Wall formwork

Shafts can have different sizes, shapes and functions. From elevator shafts or staircases for structural engineering through to civil engineering projects such as collection shafts, distribution shafts or overflow tanks through to towers and silos. All these structures make tough demands on formwork when it comes to the system‘s ability to adjust to extremely confined space. Here in particular the Modular Formwork system demonstrates its advantages with the well balanced range of panels which can be adjusted to every dimension, every angle and every corner.



Shafts/civil engineering

Modular Formwork used in shaft construction means:

- The system can be adjusted to the most confined space
- The system includes dismantling possibilities
- Even small panel widths and low panel heights are available
- Fixing brackets for pipe lead-throughs

Modular dismantling inside corner post

- Optimised dismantling procedure
- Complete inner formwork can be moved as a whole unit
- Enormous time gains

The movable dismantling inside corner post greatly reduces time required to form and dismantle the inner formwork for lift shafts, stairway cores and structures with tight spaces.

There is a hexagonal nut at the upper side of the inside corner post which will be turned to dismantle (clockwise) for dismantling and anticlockwise for pushing in right position before concreting. A spanner size 36 or a tie rod DW15 put in the hole of the hexagonal nut will be sufficient for turning.

Typical projects

The Ischebeck Group

Founded in Germany over 120 years ago, Ischebeck is one of the world's principal manufacturers of formwork and falsework systems. Renowned internationally for its Titan support system, the group has a long standing tradition of innovation and engineering excellence. Product quality is a hallmark of the group and the company's manufacturing facilities are amongst the most advanced of their type.

Inform UK

Founded in 1982 Ischebeck Inform have, over the past 35 years, established ourselves as one of the leading suppliers of concrete reinforcement, accessories, and formwork systems to many areas within construction industry. An excellent choice of products are offered, all supported by first class technical support.

In 2006 Ischebeck Inform became part of the Ischebeck Titan Group, and together we were able to offer a greater choice of solutions to our customer base. Since this time, we have shared our extensive industry knowledge, expertise and collaborated on product development.

Inform UK innovations

Ischebeck Inform has a reputation of supplying truly innovative and specialist concreting products. Our team is dedicated to researching, carefully sourcing and testing products and technologies from around the world so we can offer you a range of solutions – from rapid slab construction with K-FORM UPVC Screed Rail to a whole new way of installing construction joints in base slabs and walls with our exclusive Recostal permanent stopend system. We bring you the most cutting-edge construction solutions that will help change the way you work.

Technical support

Focusing on your particular project requirements, we advise on best product selection and offer on-site support; our team is committed to ensuring that you maximise the benefits of choosing Ischebeck Inform.

ISCHEBECK® INFORM

INFORM (UK) Ltd.
Industrial Park, Ely Road, Waterbeach, Cambridge CB25 9PG
Tel +44 (0)1223 62330 **Fax** +44 (0)1223 440246
Email enquiries@informuk.co.uk **www.informuk.co.uk**